Arkansas DRG Conversion Plan

Prepared for:

Arkansas Department of Human Services

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1 Introduction

This report provides a Conversion Plan to the Arkansas Department of Human Services (DHS) for converting Arkansas Medicaid's inpatient hospital reimbursement methodology from the current per diem-based approach to a Diagnosis Related Group (DRG) methodology. This report in response to the Arkansas legislature, which in House Bill 1016 required that DHS, in coordination with the Arkansas Hospital Association, develop a plan for an inpatient DRG conversion by December 31, 2017. The mandated Conversion Plan included the following requirements:

- How supplemental payments to hospitals will be considered
- Whether funding for the transition to APR DRGs will be provided to hospitals
- Whether certain hospitals will be exempt from APR DRGs
- Estimated impacts of conversion for both general acute hospitals and CAHs

DHS engaged Navigant Consulting, Inc. (Navigant) to develop this Conversion Plan, conduct APR DRG payment simulation modeling and describe model findings, methodology options and implementation steps for consideration. It is important to note that payment simulation modeling, rates and other analysis conducted for this report are for the purposes of evaluating the feasibility of converting to a DRG system, and do not represent final rates, recommendations or decisions made by DHS.

This report describes which types of providers and services might be included in a change from the current per diem payment method to DRG payment. Also, included is a description of how DRG pricing differs from per diem pricing along with discussion of the various payment method design options applicable when using DRGs as a basis for reimbursement. Each design option has an impact on reimbursement to individual hospitals, and decisions on a full set of design options is required in order to estimate change in reimbursement for individual hospitals resulting from an implementation of DRG pricing.

DRG-based inpatient payment systems are the predominate methodology used by State Medicaid agencies nationally. Pricing for hospital inpatient services via DRGs provides a better correlation than per diem payments between the level of resources expended by the hospital when treating a patient and the reimbursement provided by Medicaid. DRG classifications also allow for easier tracking of the types of services being reimbursed by Medicaid and provide a foundation that can be used for measuring hospital quality of care and case mix adjusting those measures to allow for comparison across hospitals. DRG pricing may also provide an avenue through which some or all hospital supplemental payment funding can be moved into claim-based payment rates for inpatient admissions in preparation for the transition of traditional fee-for-service (FFS) populations into managed care, such as the implementation of the Provider-Led Arkansas Shared Savings Entity (PASSE).

Specifically, the first two chapters of the document provide background on DRG pricing that is helpful in evaluating the various pricing design considerations. Chapter 1 lists a series of criteria helpful in evaluating any Medicaid payment method and describes some of the areas in which options in a DRG pricing method affect the criteria. Chapter 2 describes the components of a standard DRG pricing calculation, including a few optional components, such as policy adjustors. Chapters 3 through 8 provide a comprehensive list of options available to customize a DRG pricing method considering the experience of other state Medicaid agencies and

Medicare. Chapter 9 describes the payment simulation model approach and model findings and Chapter 10 provides an overview of DRG implementation tasks and estimated time requirements. Appendix A includes summaries for three different payment simulation model versions. Appendix B includes a response from the Arkansas Hospital Association, based on their review of a draft of this report and a hospital stakeholder meeting conducted on December 12, 2017. Appendix C includes reference data used in report.

For each DRG payment design option described in this document, a discussion is provided that explains how the option will affect pricing and trade-offs of various choices. If the Arkansas Legislature and DHS decide to move forward with DRG pricing, then additional consideration and stakeholder discussions will be required to finalize the set of options that will comprise the full DRG pricing method for Arkansas Medicaid. In this report we have included recommendations for two major options for which we believe are the most appropriate for Arkansas Medicaid. Specifically we recommend use of All-Patient Refined Diagnosis Related Groups, or APR DRGs (as specified in the Legislation mandating this study) and the use of 3M APR DRG "standard" national weights. All other system parameters will require additional modeling, stakeholder input and DHS decision making before finalizing.

In Chapter 9 and in Appendix A, we provide results of three models in which we have selected a set of payment parameters and simulated DRG payments using these parameters. These models are intended as examples of how various design options and associated payment parameters can affect reimbursement for individual hospitals. We expect this information will be provided by DHS to the Arkansas Legislature, the Arkansas Hospital Association, and other interested stakeholders in early January 2018. Further stakeholder meetings and pricing modeling beyond that presented in this document will likely be needed to ensure that the final DRG payment method best meets the needs of the Arkansas Legislature, DHS, and the hospitals providing care for Arkansas Medicaid recipients. In addition, we aim to create a design that is sufficiently flexible to react to any changes required in future years through changes in configuration data, such as rates and policy adjustors, without requiring any additional changes to the software used to adjudicate claims beyond what we have already defined.

2 Evaluating a DRG Payment Method – Guiding Principles

Developing a Medicaid payment method requires balancing a variety of trade-offs and competing priorities, given limited available system funding. Payment methods have an impact on beneficiaries, medical providers, taxpayers, and program administrators, each with their own point of view on what makes a payment method successful. To balance the priorities of these different stakeholders, it is helpful to establish a set of guiding principles that describe the goals of the payment method and offer a structure against which various system design options can be evaluated. The list below offers a series of guiding principles and discusses how these principles can affect a DRG payment method.

- **Efficiency.** A payment method should be consistent with incentivizing hospital efficiency, rewarding hospitals that increase efficiency while continuing to provide quality care. To enable this, the payment method should minimize reliance on individual hospital charges or costs, and create opportunities for providers to increase margins by more effectively managing resources. For example, in the design of a DRG payment system, selecting a single standardized base rate can create incentives for hospitals to better manage their resources to achieve improved margins. Conversely, establishing facility-specific base rates that fluctuate annually with increases or decreases in facility-specific costs would provide little incentive for cost effectiveness.

- **Access.** A payment method should promote beneficiary access to care. This guiding principle is consistent with the requirements specified in federal regulation. In the State Plan for Medical Assistance (State Plan), DHS must make certain assurances to the Federal Centers for Medicare and Medicaid Services (CMS) with respect to its level of payments to Medicaid providers. In particular, the State Plan must:

  > "… provide such methods and procedures relating to the utilization of, and the payment for, care and services available under the plan … as may be necessary to safeguard against unnecessary utilization of such care and services and to assure that payments are consistent with efficiency, economy, and quality of care ***and are sufficient to enlist enough providers so that care and services are available under the plan at least to the extent that such care and services are available to the general population in the geographic area***[.]" 42 U.S.C. § 1396a(a)(30)(A) ("Section 30(A)") (emphasis added).

  Within a DRG payment method, policy adjustors, provider peer groups (used for setting base rates), and outlier payment parameters are items that can be adjusted to affect access to care.

- **Equity.** A payment method should generate fair payments across both hospitals and types of care. Generally, hospitals should be paid similar amounts for the same services, with the potential exception being when there are necessary and measurable differences in the costs associated with those similar services. Within a DRG payment method, the bulk of the payment amount for an individual hospital stay is calculated by multiplying a hospital base price times a DRG relative weight. The DRG relative weights are determined using average costs from many hospitals, so the relative weights help ensure similar payment for similar services, independent of where those services are provided. If adjustments do need to be made for reasonable, measurable differences in hospital cost structures, those can be made through modifications to the hospital base

price via rate adjustments (for example, wage area adjustments) and/or provider peer groupings (for example, giving all children's hospitals or all rural hospitals their own provider base rate).

- **Predictability.** A payment method should generate stable, predictable payments. Both the state Medicaid agency and the hospitals have to manage their budgets, and that can best be facilitated through a payment method which generates consistent, predictable reimbursements. DRG payment methods are predictable if patient acuity and volume are understood.

- **Transparency.** A payment method that is transparent promotes trust from hospital administrators, hospital clinicians, legislators, and Medicaid program administrators. A DRG payment method can be made transparent by selecting a DRG algorithm that is openly documented, and by making DRG relative weights, provider base rates, and pricing logic publicly available.

- **Simplicity.** A payment method that is relatively simple will be easier to implement, easier for hospitals to understand, and easier to administer and maintain. For a Medicaid program, implementing a new DRG payment method will require significant Medicaid Management Information System (MMIS) changes, regulation changes, and program monitoring changes. For hospitals, a new DRG payment method may impact medical coding practices, billing procedures, and internal information systems. The complexity of these changes is limited if the payment method is kept relatively simple. At the same time, over-simplifying the payment method may negatively impact payment equity and, in turn, negatively impact access to care.

- **Quality.** It is generally known that it is a mission of all hospitals to provide high quality care. Payment methods should be consistent with promoting quality care where possible. In truth, very few payment methods specifically reward quality. Most payment methods, including DRG payment methods, pay the same without regard to the provision of high quality care being provided. However, DRG payment methods categorize the complexity of the patient's illness as standard part of processing. This allows for case mix-based risk adjustment of quality measures which enables more fair comparison between hospitals that treat the most complex cases, versus those that treat primarily routine illnesses.

From a logistical point of view, a payment method is a framework or structure created to determine reimbursement for medical services and supplies. The structure includes organization of data, numerical formulas, and specific parameters or values used in the formulas. This structure should be carefully developed as it controls the distribution of large amounts of state and federal funding, and is intended to meet the needs of people and organizations with competing priorities. The guiding principles presented above can be helpful in evaluating various options for the payment structure so that the final design best meets the needs of beneficiaries, providers, taxpayers and program administrators.

3 Basics of a DRG Payment Method

This section describes the calculations performed in a typical DRG payment method. Ultimately, a payment method can be described as a series of calculations. As such, this section offers a context for how decisions on the various pricing options are applied to actually price claims. Discussions of each component within these calculations are provided in Chapter 7.

3.1 DRG Codes and Weights

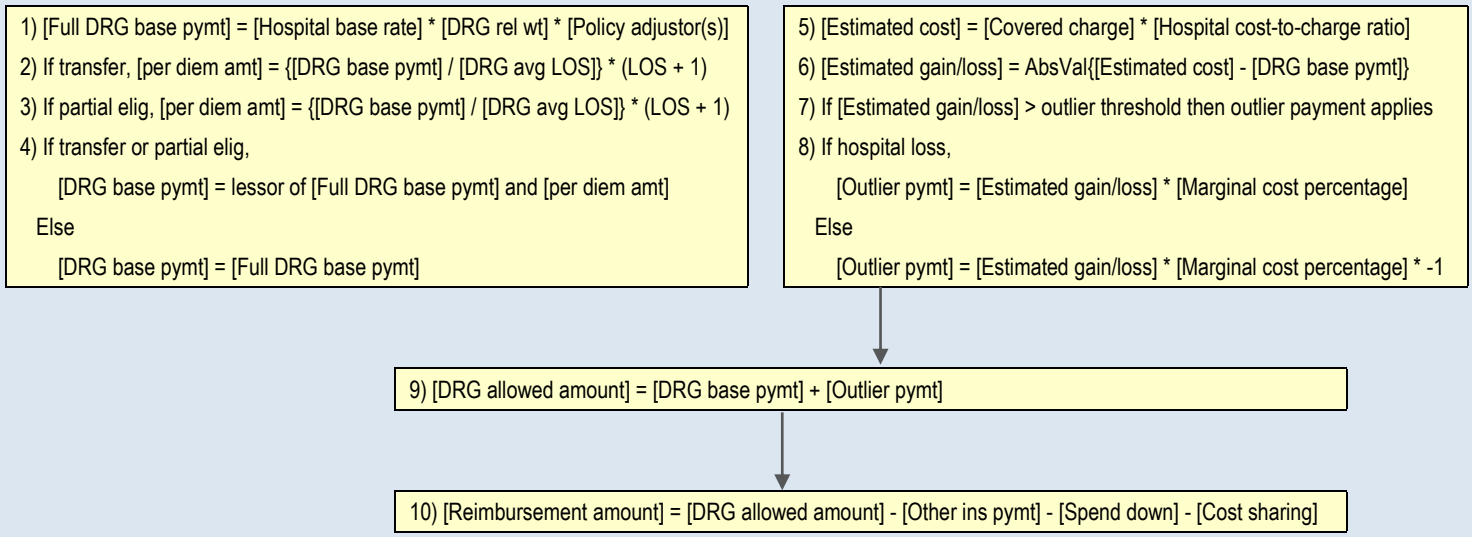
DRG payment methods involve classifying inpatient stays and then determining a price based on a combination of the classification and the hospital where the services were performed. Classification of the hospital stay is based on the diagnoses describing the patient's condition, the surgical procedures performed (if any), patient age, and discharge status. The classifications are labeled using codes referred to as DRG codes and the number of codes varies depending on the selected patient classification model. For example, the MS-DRG grouping method has 752 total valid codes, including base codes separated by severity into "no CC", "with CC" or "with major CC" (where "CC" stands for complications and comorbidities). Similarly, the APR DRG grouping method has 1,304 codes including 326 base codes each separated into four levels of Severity of Illness (SOI) levels: 1 - minor, 2- moderate, 3-major and 4-extreme.

Each DRG code is assigned a relative weight which is intended to indicate the average relative amount of hospital resources required to treat patients within that DRG category. These weights are relative to the overall average amount of hospital resources needed to treat a patient when looking across the full range of patients treated within an acute care inpatient setting. For example, a DRG weight of 2.0 would indicate an admission that requires twice the level of resources as an average admission, while a DRG weight of 0.5 would indicate an admission that requires half the level of resources as an average admission.

3.2 Summary of the DRG Pricing Formulas

A summary of a typical DRG pricing calculation is shown in Figure 3.2 and the formulas are described in more detail in the following sections.

Figure 3.2
Typical DRG Payment Formulas



3.3 Basic DRG Pricing Calculation

In a DRG pricing method, the vast majority of hospital stays are priced using a very simple formula. The formula is:

[DRG Base Payment] = [Hospital Base Rate] * [DRG Relative Weight] * [Policy Adjustor(s)]

Policy adjustors, which are discussed in the next section, are optional and in many cases and are set to 1.0, indicating no adjustment. If a policy adjustor of 1.0 is assumed, an example claim from a provider with a DRG base rate of $7,000 and a DRG with relative weight of 2.0 would yield a payment of $14,000. Similarly, an admission to the same provider that gets assigned a DRG with relative weight of 0.5 would yield a payment of $3,500. Although this calculation is quite simple, a great deal of effort goes into development of the DRG grouping algorithm (which determines the DRG code), assignment of relative weights to DRG codes, and assignment of base prices to hospitals.

3.4 Policy Adjustors

Medicaid agencies can make a policy decision to increase (or decrease) payments for particular types of hospital admissions to protect access for Medicaid beneficiaries. When increasing

payment for types of services, policy adjustors are used. There are four types of adjustors commonly used, and should be considered as options:

- Service adjustors
- Age/service adjustors
- Provider/service adjustors
- Provider adjustors

If implementing all four options for policy adjustors, the calculation of DRG base payment becomes:

[DRG Base Payment] = [Hospital Base Rate] * [DRG Relative Weight]
* [Service Adjustor] * [Age/Service Adjustor]
* [Provider/Service Adjustor]

or

[DRG Base Payment] = [Hospital Base Rate] * [DRG Relative Weight]
* Maximum of ([Service Adjustor], [Age/Service Adjustor],
[Provider/Service Adjustor])

Policy adjustors, in general, modify payment for specific types of services, patient ages and hospital types. Service adjustors apply for specific types of care independent of the recipient and provider. Age/service adjustors apply only for recipients within a specific age range. Any age range can be used, but Medicaid programs generally use this to increase payment for pediatric care. For Arkansas Medicaid, an age adjustor for children under the age of 1 would provide higher payment for these recipients consistent with current policy. Provider/service adjustors apply for specific services and only when care is delivered at a certain category of hospitals.

For example, if a Medicaid agency decided to increase payments for neonatal care using a service adjustor of 1.5, then the claim payment would be increased by 50 percent. In this situation, a claim submitted from a provider with base rate $7,000 and mapping to APR DRG 622-3 (Neonate birth weight 2000-2499 grams with major respiratory condition; relative weight = 3.1870 in version 35) the DRG base payment would be calculated as follows:

[Maximum Adjustor] = Max(1.5, 1.0, 1.0) = 1.5
[DRG Base Payment] = $7,000 * 3.1870 * 1.5
= $33,463.50

As a separate example, a Medicaid agency might decide to increase payment for pediatric care using an age/service adjustor of 1.25. In that case, a claim submitted from a provider with base rate $7,000, for a recipient age 10, and mapping to APR DRG 141-2 (Asthma; relative weight = 0.5467 in version 35) the DRG base payment would be:

[Maximum Adjustor] = Max(1.0, 1.25, 1.0) = 1.25
[DRG Base Payment] = $7,000 * 0.5467 * 1.25
= $4,783.63

A separate claim from the same hospital for a recipient age 35 (above the age adjustor cut-off) and mapping to the same APR DRG, 141-2, would generate a DRG base payment of:

[Maximum Adjustor] = Max(1.0, 1.0, 1.0) = 1.0
[DRG Base Payment] = $7,000 * 0.5467 * 1.0
= $3,826.90

3.5 Adjustments to DRG Base Payment

3.5.1 Transfer Claims

When processing claims for recipients transferred from one acute facility to another, most Medicaid DRG implementations have followed the Medicare model for payment adjustments. In this model, a payment amount is calculated using a per diem method and then compared to the DRG base payment. If the per diem payment, referred to as a transfer-adjusted base payment, is less than the DRG base payment, then the transfer-adjusted base payment is used. Using the DRG base payment and the DRG's average length of stay, a transfer-adjusted payment can be calculated as:

Transfer-Adjusted Base Payment = {[DRG Base Payment] / [DRG Average Length of Stay]} * {[Length of Stay] + 1}

Adding one to the length of stay takes into account the disproportionate amount of costs required in the first day of admission to complete the admission process and perform an initial diagnostic evaluation.

For example, APR DRG 602-3 (neonate birth weight 1000-1249 grams with respiratory distress syndrome, other major respiratory anomaly or other major anomaly) has relative weight 9.5578 and average length of stay equal to 57.88 days (in version 35). If a baby with this DRG is transferred out of a hospital after two days and the hospital's base price is $7,000 then,

Full DRG Base Payment = $7,000 * 9.5578 = $66,904.60
Transfer-Adjusted Base Payment = (66,904.60 / 57.88) * (2 + 1) = $3,467.76

In this example, the transfer-adjusted base payment is less and would be used in place of the full DRG base payment.

3.5.2 Partial Eligibility

If a recipient is only eligible for Medicaid payment for part of a hospital stay, then a full DRG payment may not be appropriate. A smaller payment may be acceptable as the hospital will be getting reimbursement for part of the stay from other sources, such as a Medicare.

Payment in a partial eligibility situation can be determined using the same approach as transfer claims – a per diem payment is calculated, compared to the full DRG base payment, and the lower of the two is used. The calculation of eligibility-adjusted base payment can be exactly the same as the transfer-adjusted base payment. That is,

Eligibility-Adjusted Base Payment = {[DRG Base Payment] / [DRG Average Length of Stay]} * {[Length of Stay] + 1}

Another option is to remove the "+ 1" from the number of days multiplier in cases where the Medicaid eligibility did not begin until after the day of admission. In that case the formula is,

Eligibility-Adjusted Base Payment = {[DRG Base Payment] / [DRG Average Length of Stay]} * [Length of Stay]

Payment in a partial eligibility situation can also be determined using a different method – a proration based on the number of days for which the recipient had eligibility. Under this method, a simple percentage is calculated by dividing the number of days of eligibility by the total days of the hospital stay. And then the full DRG payment gets reduced by this percentage. The formula under this method is,

Eligibility-Adjusted Base Payment = {[Medicaid Covered Days] / [Length of Stay]} * [DRG Base Payment]

Another possible proration formula compares Medicaid Covered Days to the DRG's Average Length of Stay, and pays less than full DRG payment only if the number of Medicaid Covered Days is Less than the DRG Average Length of Stay as follows:

Eligibility-Adjusted Base Payment = Minimum of
{[Medicaid Covered Days] / [DRG Avg Length of Stay]} * [DRG Base Payment]
And
[DRG Base Payment]

Partial eligibility scenarios may occur for a variety of reasons, including,

- Medicare Part A benefit expires in the middle of a hospital inpatient stay for a recipient dually eligible for Medicare and Medicaid
- A recipient fulfills spend down requirements during the middle of a hospital inpatient stay and thus, becomes eligible for Medicaid coverage for the later portion of a hospital admission
- Recipient is an undocumented alien, in which case Medicaid is only responsible for reimbursement for the emergency portion of the hospital stay

3.6 Provider Loss Outlier Payments

Inevitably, some claims will be submitted for extreme and unpredictable cases in which the standard DRG payment differs greatly from the level of resources expended by the hospital. For these cases, referred to as outliers, a DRG payment method can adjust payment upward to share in hospital losses. The Medicare model, also adopted by several states, is a cost-based outlier policy that employs a stop-loss threshold which generates outlier payments whenever the hospital's estimated loss is above a threshold. With this method, the formula for an outlier payment adjustment is:

[Hospital Loss] = ([Billed Charges] * [Cost to Charge Ratio]) - [DRG Base Payment]

If [Hospital Loss] > [Outlier Threshold] Then
[Outlier Pymt Adjstmnt] = ([Hospital Loss] – [Outlier Threshold]) * [Marginal Cost %]
Else
[Outlier Payment Adjstmnt] = 0

For example, an admission with charges of $200,000, at a hospital with cost-to-charge ratio equal to 0.30 and a DRG base payment of $5,000 has a hospital loss equal to $55,000 {($200,000 * 0.3) - $5,000}. If the Medicaid DRG policy included an outlier threshold of $30,000 and a marginal cost percentage of 70 percent then the outlier payment would be {($55,000 - $30,000) * 0.7) = $17,500. Thus the final payment to the provider would be ($5,000 + $17,500) = $22,500.

Some states also implement length of stay outlier payments. For example, Mississippi Medicaid uses a length of stay outlier policy for mental health services. If a hospital admission assigned a mental health APR DRG has a length of stay greater than 19 days, the Mississippi Medicaid policy applies an outlier per diem payment to days 20 through date of discharge.

3.7 DRG Price versus Final Reimbursement

The previous sections in Chapter 3 describe how the DRG price is calculated. This is the amount of money Medicaid is willing to pay for the services without consideration of any other forms of payment. This price is sometimes referred to as the Medicaid allowed amount. Final reimbursement for a claim equals the DRG price minus any other forms of payment such as payment from another insurance carrier, recipient spend down, and patient cost sharing, such as copays. Thus,

[Final Reimbursement] = [Allowed Amount] – [Other Ins Pymt] – [Spend Down] – [Cost Sharing]

3.8 Non-DRG Paid Claims

Depending on the payment policies set by the state, some acute care inpatient claims may fall outside the DRG payment. These may be claims for services or providers carved out of the DRG payment method, or they may be interim claims from providers for services that are included in DRG payment. Both carved out items and interim claims are commonly paid using a per diem model, although they can also be paid as a percentage of charges. If a per diem is used to reimburse interim claims, the per diem is set relatively low as it is intended to be a temporary, partial payment. The interim claim per diem gives hospitals some reimbursement for cash flow purposes, while still leaving the hospital incentive to submit a final claim when the recipient is discharged for final DRG payment.

4 Scope of DRG Payment Method

4.1 Affected Providers

4.1.1 Affected Providers - Discussion

DRG payment methods typically cover payments to general acute care inpatient facilities. Nursing home care and hospice care are normally paid outside of a DRG payment method.

There are other provider types, however, where the decision of inclusion or exclusion in DRG payment is less clear and varies among states using DRG payments. These provider types include:

- Physical rehabilitation
- Long term acute care
- Mental health and substance abuse facilities
- Psychiatric residential treatment facilities
- Critical access or rural hospitals
- Children's hospitals
- Cancer hospitals
- In-state / out-of-state / border hospitals
- Native American Indian hospitals
- Public hospitals

The first three provider types in the list above, physical rehabilitation, long term acute care, and mental health / substance abuse facilities all treat patients with highly variable and unpredictable lengths-of-stay. Because of this, some states choose to pay these providers with another method, such as a per diem method, instead of paying via DRGs. In addition, a hybrid option is possible where providers are paid per diem and the per diem amount is adjusted based on patient acuity, using DRG grouping to measure patient acuity. The APR DRG patient classification model, for example, contains 72 different APR DRG classifications and relative weights intended to reflect the resource intensity of different types of psychiatric patient care. The relative weights associated with the APR DRG classifications can be used to adjust the per diem, offering a higher per diem for above average relative weight and a lower per diem for below average relative weight.

The next three providers, critical access, children's, and cancer hospitals are all excluded from the Medicare DRG inpatient prospective payment system. For that reason, states can encounter resistance when including these providers in the Medicaid DRG payment method. Payment simulations are a valuable tool for reviewing payments to these providers under a DRG method and help to show whether or not DRGs will offer fair reimbursement. With the robustness of some DRG models, such as that reflected in the APR DRG algorithm, the simulations often do show DRG payment is a reasonable option. In addition, special considerations within the DRG payment method can be reviewed to ensure fair reimbursement if needed. For example, separate hospital base rates can be given for some or all of these categories of providers. Also, certain services can be given a service or age adjustor. In addition, certain services can be defined as separately billable on outpatient claims, such as organ search and acquisition costs, and blood factors, which is particularly appealing to cancer institutions. Making these kinds of payment adjustments within the overall DRG payment

method allows for special considerations to be made while still maintaining the simplicity of all or nearly all providers being paid using the same method.

Similarly, to maintain simplicity, most states pay in-state, border hospitals, and out-of-state hospitals via DRGs. The only decisions normally made based on general location of each hospital are selection of hospital base price and determination of cost-to-charge ratio. For out-of-state hospitals, normally a single hospital base price and a default cost-to-charge ratio are used. For example, the state's standard Medicare urban or rural cost-to-charge ratio can be assigned to each out-of-state hospital. However, border hospitals may have a sufficiently high volume of Medicaid recipients to justify treating them like in-state hospitals for the purpose of assigning base rates and cost-to-charge ratios.

Finally, many Medicaid agencies have separate policies associated with Native American Indian hospitals and public hospitals, so decisions need to be made on how these categories of providers will be affected by a DRG payment method.

4.2 Affected Services

4.2.1 Affected Services - Discussion

The list of services sometimes included and sometimes excluded from DRG payments is similar to the list of provider types open for debate. States vary on inclusion in DRG payment for the following list of services:

- Physical rehabilitation
- Mental health and substance abuse
- Unpredictable and expensive services and supplies such as blood factors and organ search and acquisition
- New technologies

As described in the previous section, a policy decision must be made relating to inclusion or exclusion of specialty rehabilitation and psychiatric institutions within a DRG payment method. In addition, a policy decision must be made for payment of rehabilitation and psychiatric services when performed within general acute care facilities. If volumes are low, the simplicity of including them in the DRG payment method are likely justifiable. However, if volumes are high, it will be more justifiable to pay these services using the same methodology as the specialty institutions and/or distinct part units (which may be DRG-exempt).

Unpredictable and expensive services and supplies such as blood factors and transplant organ searches create challenges for a DRG payment method. DRG payments are based on average resource usage and work very well when hospital admissions can be grouped into relatively homogeneous categories. However, some cases require resources far outside the norm, such as the cost of blood factors required when operating on a patient with a blood clotting problem. Medicare as an example has taken the stance that some unpredictable and/or expensive services do warrant payment above and beyond DRG payment. Specifically, Medicare's inpatient prospective payment system allows for separate payment for inpatient services under three circumstances:

- ***Organ acquisition.*** In most cases, these costs are reimbursed through the cost settlement process; for renal transplants, designated renal transplantation hospitals are paid adjusted rates.

- ***Blood clotting factors.*** Blood factors are paid based on a fee schedule (e.g., 95 percent of average wholesale price).
- ***New medical technology.*** Devices that meet very specific Medicare criteria related to newness, FDA approval, substantial clinical improvement and unusual costliness criteria, may qualify for add-on payments. Very few devices meet these criteria.

State Medicaid DRG payers, in contrast, often do not allow separate payment for unpredictable and expensive services because of both the concern over incentives and the added complexity to the payment method.

From the point of view of Arkansas Medicaid, items that occur in very low volumes might be reimbursed sufficiently through outlier payments. However, if volumes are high or are heavily concentrated at specific hospitals, outlier payments alone may not be sufficient. Instead, certain services and supplies can be carved out of the DRG payment and made separately payable. However, such a policy can be extremely challenging to implement in an MMIS. Other options such as different provider base rates, service adjustors, or multiple tiers in the outlier payment method (using a higher marginal cost percentage for very high losses) may generate fair payment and prove far simpler to implement.

New technologies can also be a challenge for a DRG payment. In theory, they may reduce cost of care, but in practice, they most often increase cost. Furthermore, DRG relative weights may lag slightly behind in capturing these costs because DRG relative weights are calculated using costs from historical claims. Thus, offering separate payment for new technologies is justifiable. However, the task of maintaining an ever-evolving list of new technologies is very challenging. In addition, estimating the budgetary impact to Medicaid for separately reimbursing new technologies is difficult to do accurately.

As with many policy decisions, the topic of unpredictable and expensive services requires a trade-off between the principles used to evaluate a payment method (described in Chapter 1). Allowing separate payment for unpredictable and expensive services diminishes the incentives for efficiency, reduces transparency, increases administrative burden, and increases complexity. On the other hand, access to care may be jeopardized if certain types of cases result in predictable and consistent losses, even with the case mix and outlier adjustments of a DRG payment method. An example is surgery for patients with hemophilia. The need for blood factors can sharply increase the hospital's cost even for otherwise routine surgeries.

4.3 Affected Beneficiaries / Medicaid Programs

4.3.1 Affected Beneficiaries / Medicaid Programs - Discussion

Medicaid agencies generally administer a variety of programs, usually with beneficiaries enrolled in only one program at a time. Common programs include fee-for-service, primary care case management, managed care, and Children's Health Insurance Program (CHIP). States often also administer smaller programs sometimes based on a waiver and sometimes paid for by separate funding sources than used for standard Medicaid. In addition, some Medicaid beneficiaries are eligible only for specific services, most notably emergency-only services. Lastly, some Medicaid beneficiaries are dually eligible for Medicaid and Medicare. For these beneficiaries, most healthcare services are paid primarily by Medicare with Medicaid acting as a supplementary payer, usually paying only the Medicare coinsurance and deductible amounts. However, there are certain services not covered by Medicare and cases where Medicare

benefits have been exhausted, in which case Medicaid becomes the primary payer. As part of a DRG payment method implementation, Medicaid agencies must determine which programs and/or eligibility categories will be included in the new payment method. The new payment policy must also decide how Medicare crossover claims (where Medicare was the primary payer) are affected. For simplicity of the payment methods, Medicaid programs typically aim to include all programs in the DRG payment method and make exceptions only when specific, justifiable reasons are identified.

4.4 Billing and Payment Review Changes

4.4.1 Billing and Payment Review Changes - Discussion

When moving from a per diem-based payment method to a DRG-based payment method, the unit of service that is tied to the payment methodology changes from a day to a complete hospital stay, or discharge. This often has implications on the service authorization process. In a per diem payment method, processes and systems are often installed to monitor the number of days of each hospital stay. Under a DRG payment method, length of stay is no longer a major contributor to payment. As a result, the Medicaid program no longer needs to emphasize careful control over the number of days authorized. Instead, Medicaid programs using a DRG payment method generally choose only to authorize hospital admissions, not the number of days following the admission. Thus, pre-admission review processes often change when shifting from per diem to DRG payment.

Similarly, post-admission review processes often change when shifting from per diem to DRG payment. Under a DRG payment method, hospital incentives to maximize reimbursement are different, and payment reviews should be adjusted accordingly. Medicaid programs using DRGs benefit from monitoring volumes of very expensive stays to avoid excessive outlier payments. Medicaid agencies using DRGs also monitor volume of unusually short stays to prevent inappropriately early discharges, and monitor volume of readmissions as hospitals receive separate payment for each admission/discharge occurrence.

DHS will also need to consider developing a readmission policy under the DRG payment methodology, as DRG-paid readmission payments are more impactful than short-stay per diem-paid readmissions under the current methodology. There are a number of types of readmission policies for consideration, including a) Claim Denial- or Consolidation-Based Policies, or b) Performance Measurement with Prospective Payment Adjustment. The first policy type focuses on payment penalties for individual readmissions deemed to be related to the initial admission, whereas the second policy type is a wholistic population-based approach focusing on rates of readmissions over time and provider performance relative to benchmarks. Payment policies that create incentives for reducing avoidable readmissions can deliver substantial cost savings, while at the same time providing the administrative capacity to measure and regulate the quality of care delivered to highly-vulnerable patients in acute and post-acute care (PAC) settings.

From the providers' perspective, hospitals will need to report diagnosis codes completely and in the correct order to receive appropriate payment under APR DRGs. For example, in the raw MMIS inpatient claims data we observed several thousand delivery-related claims where the reported primary diagnosis code was the delivery result (e.g. single live born) rather than the reason for admission (e.g. encounter for full-term delivery). Without adjustments, these claims would not receive a delivery-related DRG as appropriate (we made adjustments in the DRG model to appropriate assign these DRGs). Under actual claim payment processing, the MMIS will not make such adjustments; as such we expect providers will respond to a new DRG

system by improving their capture of the patient medical record and report diagnosis codes comprehensively and in the correct order.

5 DRG Grouping

The topic of DRG grouping breaks down into two major decision points. The first is which DRG grouping algorithm to use. Once that is decided, then the source of the DRG relative weights and average lengths of stay can be determined.

5.1 DRG Grouper

5.1.1 DRG Grouper - Discussion

5.1.1.1 Introduction

The goal of diagnosis related groupers is to define patients into categories based on similar clinical conditions and on similar levels of hospital resources required for treatment. These categories are identified using DRG codes, each of which is assigned a relative weight appropriate for the relative amount of hospital resources used to treat the patient. For example, if a DRG grouper assigns "patient A" to DRG 123 with relative weight 0.5, and assigns "patient B" to DRG 321 with relative weight 1.0, this indicates the average amount of hospital resources required to treat "patient A" is a half the amount of resources required to treat "patient B". These relative weights associated with DRGs are used in the calculation of reimbursement with the intent of paying more when the patient's care required more resources and less when the patient's care required fewer resources. Thus, from the point of view of hospital reimbursement, the best DRG grouper for a particular healthcare payer is the one that most accurately predicts the relative hospital resource usage for the full range of services reimbursed by the payer.

Given the importance of generating fair payment for services provided, the primary objective of a DRG grouper is to categorize hospital stays in a way that most accurately predicts relative hospital resource usage for the care provided to each patient. In addition, there are other benefits of DRG grouping such as contributing to measurement of hospital quality and categorizing the types of care reimbursed by the payer. Also, as with any tool, DRG groupers need to be evaluated in terms of long term viability and reliability. With all these thoughts in mind, the criteria recommended for evaluation of different DRG groupers are:

1. Accuracy categorizing relative cost of care for the full range of services reimbursed by the Medicaid agency, with particular concentration on the services for which Medicaid is a major player in the market
2. Long term viability in an ever-evolving healthcare industry
3. Ability to contribute to measurement of hospital quality
4. Familiarity and experience being used in the industry

5.1.1.2 Options

Given the need to for long-term viability and experience being used in the industry, we believe there are currently only two DRG algorithms available that are worthy of consideration. Those are All Patient Refined Diagnosis Related Groups (APR DRGs) and Medicare Severity Diagnosis Related Groups (MS-DRGs).[1]

[1] Other DRG algorithms include CMS-DRGs, AP-DRGs, Tricare DRGs, and APS-DRGs. CMS-DRGs and AP-DRGs have been phased out. Neither is actively being updated and neither was released with an ICD-10 compliant version. The Tricare DRG algorithm, which was developed and is currently maintained by 3M, uses generally the same DRG grouping logic as MS-DRGs, but has been enhanced to reflect the grouping logic of the obsolete AP-DRG model for pediatric and neonatal services. Based on our discussions with representatives from 3M, there has been relatively

These are compared in greater detail in Table 5.1.

Table 5.1 – Detailed Comparison of Select DRG Algorithms

Description	MS-DRGs V.35 (CMS - Maintained by 3M)	APR DRGs V.35 (Maintained by 3M and NACHRI)
Intended population	Medicare (age 65+ or under age 65 with disability)	All patient (based on the Nationwide Inpatient Sample)
Overall approach and treatment of complications and comorbidities (CCs)	Intended for use in Medicare Population. Includes 338 base DRGs, initially separated by severity into "no CC", "with CC" or "with major CC". Low volume DRGs were then combined.	Structure unrelated to Medicare. Includes 326 base DRGs, each with four severity levels. The is no CC or major CC list; instead, severity depends on the number and interaction of CCs.
Number of DRGs	752 valid codes	1,304 valid codes
Newborn DRGs	7 DRGs, no use of birth weight	28 base DRGs differentiated by birth weight range and other conditions, each with four levels of severity (total 112)
Psychiatric DRGs (including chemical dependency)	11 DRGs	18 DRGs, each with four levels of severity (total 72)
Payment use by Medicaid	KS, NC, NH, NM, OK, OR, SD, WV	*Operational:* AZ, CA, CO, CT, DC, FL, KY, IL, IN, MI, ND, NE, OH, MA, MD, MS, MT, NY, PA, RI, SC, TX, VA, WI, WA *Announced or Considering: AL,* WY
Other users	Medicare, hospitals	Hospitals, AHRQ, MedPAC, JCAHO, various state "report cards"
Uses in measuring hospital quality	Used as a risk adjustor in measuring readmissions. Used to reduce payment for hospital-acquired conditions.	Used as risk adjustor in measuring mortality, readmissions, complications

little investment focused on the Tricare DRG tool to bring it current with the standards established for more current models, particularly with respect to classifying neonatal and pediatric cases. The DRGs for those types of cases have been the same for many years and have not been (nor are they expected to be) updated with new research. Finally, we are not aware of any payer in the United States using APS-DRGs for payment purposes. For these reasons, we consider the CMS-DRG, AP-DRG, Tricare DRG, and APS-DRG algorithms to be unacceptable options.

5.1.1.3 Accuracy Categorizing Relative Cost with a Medicaid Population

The APR DRG algorithm is designed for a full beneficiary population. In addition, it includes significant granularities for sick newborns and pediatrics that are developed and maintained by the National Association of Children's Hospitals and Related Institutions (NACHRI) for 3M Health Information Systems. This is a good fit for a Medicaid population, which is heavily weighted towards newborns and children in the traditional model (excluding the Affordable Care Act (ACA) expansion population).

MS-DRGs, in contrast, are developed specifically for the elderly Medicare population. The DRGs are designed for beneficiaries over the age of 65 or who are disabled or suffering from end stage renal disease. In 2004 the Centers for Medicare and Medicaid Services (CMS) made a policy shift to no longer support the needs of all payers:

> "As previously stated, we do not have the data or the expertise to develop more extensive newborn and pediatric DRGs. Our mission in maintaining the Medicare DRGs is to serve the Medicare population." [2]

In 2007 CMS adopted its new Medicare Severity DRG algorithm (MS-DRGs) and made several statements underscoring the fact that MS-DRGs were developed only for the elderly Medicare population. Specifically, CMS noted:

> "The MS-DRGs were specifically designed for purposes of Medicare hospital inpatient services payment. As we stated above, we generally use MEDPAR data to evaluate possible DRG classification changes and recalibrate the DRG weights. The MEDPAR data only represent hospital inpatient utilization by Medicare beneficiaries. We do not have comprehensive data from non-Medicare payers to use for this purpose. The Medicare program only provides health insurance benefits for people over the age of 65 or who are disabled or suffering from end-stage renal disease. Therefore, newborns, maternity, and pediatric patients are not well represented in the MEDPAR data that we used in the design of the MS-DRGs. We simply do not have enough data to establish stable and reliable DRGs and relative weights to address the needs of non-Medicare payers for pediatric, newborn, and maternity patients. For this reason, we encourage those who want to use MS-DRGs for patient populations other than Medicare make the relevant refinements to our system so it better serves the needs of those patients." [3]

The number of newborn DRGs provides a useful contrast between the MS-DRG algorithm and an all-patient algorithm such as APR DRGs. MS-DRGs provide seven (7) DRG codes for the care of newborns while APR DRGs provide 112 DRG codes (28 base DRGs, each with four (4) levels of severity). In addition, MS-DRGs do not take birth weight into consideration when assigning a DRG despite the fact that birth weight has been widely accepted as a significant indicator of the viability and overall health of newborns (whereas APR DRGs use birth weight when assignment newborn DRGs).

[2] CMS, "Medicare Program; Changes to the Hospital Inpatient Prospective Payment Systems and Fiscal Year 2005 Rates; Final Rule," *Federal Register* 69:154 (Aug. 11, 2004), p. 48,939.
[3] CMS, "Medicare Program; Changes to the Hospital Inpatient Prospective Payment Systems and Fiscal Year 2008 Rates; Final Rule," *Federal Register* 72:162 (Aug. 22, 2007), p. 47,158.

5.1.1.4 Long Term Viability

As mentioned previously, CMS-DRGs and AP-DRGs have already been discontinued and are not compatible under ICD-10 coding. APR DRGs and MS-DRGs are heavily used, and widely accepted, so their viability is strong. Both have been released with ICD-10 compliant versions and are expected to be updated as necessary to follow future changes in healthcare payment strategies in the United States for years to come.

5.1.1.5 Applicability to Quality Measures

Incorporating hospital quality measures into payment systems has become increasingly common and sophisticated over the past decade. States face increasing pressure to demonstrate that Medicaid payments support quality care.[4] To fairly measure hospital quality, the quality measure should be risk adjusted (also referred to as case mix adjusted). For example, performing direct comparisons of mortality rates or complication rates between a cancer institute and a small rural hospital would be unfair unless they are case mix adjusted. In a situation where a cancer institute has a complication rate of 7 percent, and a small rural hospital has a complication rate of 5 percent, at face value, the complication rate of the cancer institute appears higher. However, when taking into consideration patient acuity between the two facilities, the complication rate at the cancer institute might prove to be lower than the rate at the rural hospital. APR DRGs are very commonly used for the purpose of case mix adjustment.

APR DRGs are also used as a basis for two quality measurement tools becoming increasing popular with Medicaid programs for measurement of hospital quality using medical claims data. Those tools are:

- **3M™ Potentially Preventable Complications (PPC) Grouping Software** – identifies complications that may have been avoided. This software first identifies conditions not present on admission and then determines whether those conditions were potentially preventable given the patient's reason for admission, procedures, and underlying medical conditions. It also flags Hospital Acquired Conditions monitored by CMS.
- **3M™ Potentially Preventable Readmission (PPR) Grouping Software** – identifies readmissions clinically related to previous admissions which were potentially preventable.

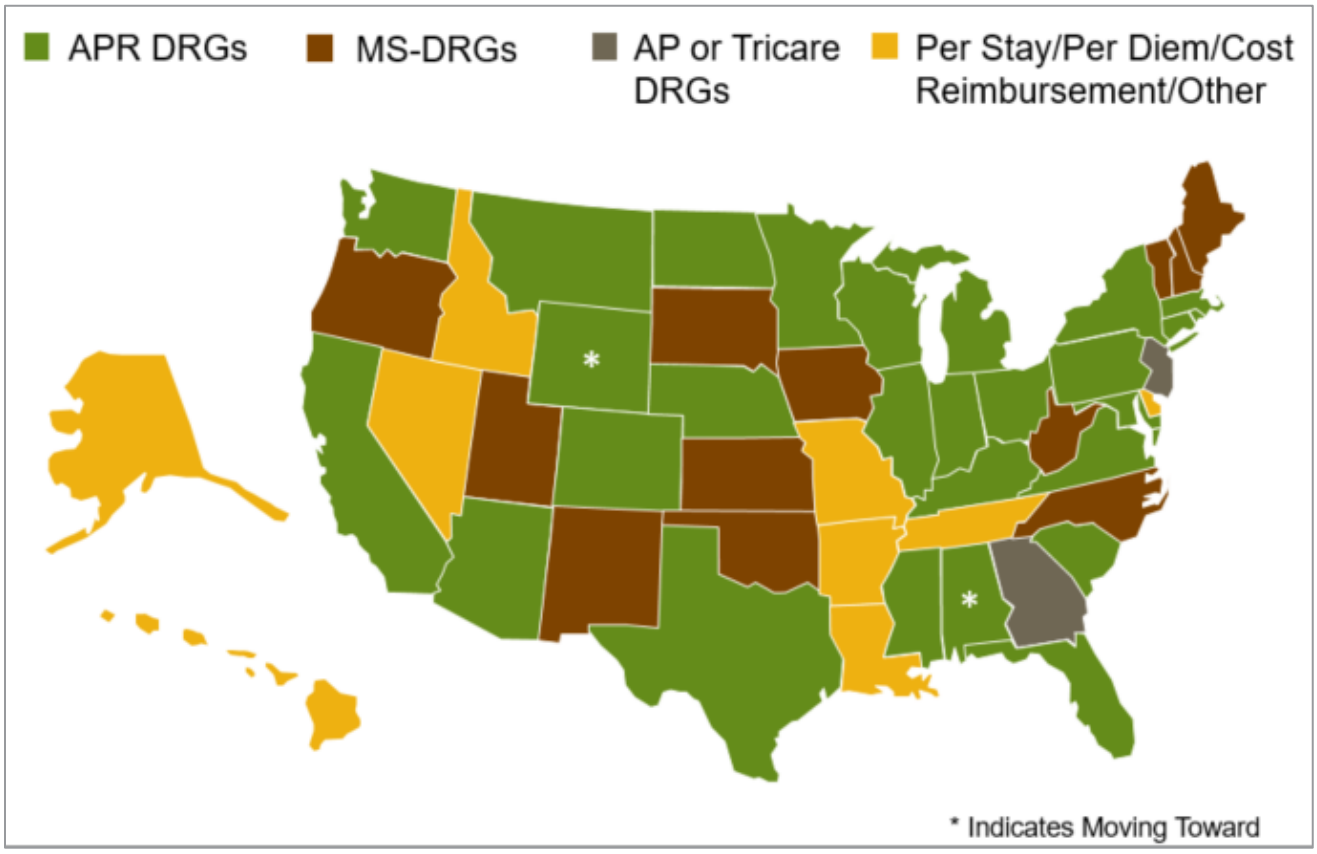
Both of the above software applications are currently used by several Medicaid agencies as part of payment policies that create incentives for reducing avoidable readmissions and associated costs, while at the same time providing the administrative capacity to measure and regulate the quality of care delivered to highly-vulnerable patients in acute and post-acute care (PAC) settings. Because the 3M PPC and PPR quality measurements are built "using the language of APR DRGs," implementing APR DRGs for payment can facilitate a move to PPC and PPR quality measures.

[4] Evidenced by section 2702 of the Patient Protection and Affordable Care Act prohibiting federal Medicaid payments for services treating healthcare-acquired conditions (effective July 1, 2012).

5.1.1.6 Prevalence in the Industry

APR DRGs are by far the preferred choice for state Medicaid agencies because of their applicability to the Medicaid population. Figure 5.1 shows how states currently pay for inpatient care, and shows over 25 state agencies currently using APR DRGs. APR DRGs have also been used to adjust for case mix differences in performance measures in Arkansas, Hawaii, Maryland, Massachusetts, New York, Texas and Utah.[5] MS-DRGs are the DRG algorithm implemented for Medicare. In addition, twelve state Medicaid agencies have chosen MS-DRGs and some, if not all of these, add customized state-only DRGs or other tools to more accurately categorize care for newborns.

Figure 5.1: Medicaid Inpatient Payment Methodologies by State



5.1.2 DRG Grouper - Recommendation

For a Medicaid population, the granularity and focus on newborn, maternity and pediatric services in the APR DRG grouper makes it the best option for use in inpatient claim reimbursement. The only other prevalent option in the industry, MS-DRGs are not well suited for a Medicaid population (at CMS's own admission). APR DRGs, in contrast, have sufficient granularity to categorize hospital stays and associated cost of care for the full range of beneficiaries served by Medicaid agencies. In fact, APR DRGs are particularly detailed for certain services in which Medicaid is a major payer, specifically sick newborns (neonates),

[5] Prepared by ACS for the California Department of Health Care Services. *Medi-Cal DRG Project Draft Policy Design Document*. January 10, 2012. Page 24.

obstetrics and pediatrics. APR DRGs are currently used by numerous state Medicaid agencies for claims payment and are planned for implementation in a few additional states. With its strong market share, APR DRGs are expected to be updated for future changes impacting the U.S. medical insurance industry, as was done with the implementation of ICD-10. And finally, APR DRGs are heavily used for risk adjustment and for hospital quality measures that are becoming more prevalent as a way to incent quality care.

5.2 DRG Relative Weights

5.2.1 DRG Relative Weights - Discussion

States have three options when selecting a set of relative weights for the DRGs they will be using:

a. Use national relative weights
b. Develop state-specific weights
c. Borrow state-specific weights developed by another payer or Medicaid program

National relative weights exist for APR DRGs, and MS-DRGs. For APR DRGs, 3M publishes national relative weights annually for each APR DRG grouper version release. 3M calculates national weights using the two most recent year's data from the National Inpatient Sample (NIS) maintained by the Agency for Healthcare Research and Quality (AHRQ). This data includes claims from all payer types (including Medicaid) and also includes Arkansas hospital experience.

3M calculates two sets of national weights for each APR DRG grouper version release, as follows:

- **"Standard" weights:** Calculated based on the average charges per discharge for each APR DRG divided by the national average charge per discharge (for all APR DRGs). The standard approach is the simplest and most commonly used of the two sets of national weights; however, it does not consider charge basis variation across facilities.

- ***"Hospital-Specific Relative Value", or "HSRV" weights:*** Alternative APR DRG weight set that measures and adjusts for the charge basis variation across hospitals. Like standard weights, the HSRV weights are based on average charges per DRG, except the charges are adjusted based on a regression analysis to standardize the charge basis across all facilities in the underlying NIS data. Due to its complexity, HSRV weights have not been adopted by State Medicaid agencies like the standard weights.

MS-DRG relative weights are also published each year by CMS for each MS-DRG grouper version release. CMS determines its MS-DRG weights using claims data from Medicare recipients (MEDPAR data).

National weights are relatively easy to adopt as they are calculated by external agencies. If using national relative weights, states can decide to use the "raw" values as they are published, or re-center the weights to the individual state's overall case mix. Re-centering the weights simply resets the average relative weight to 1.0 which makes the numbers easy to understand – relative weights less than 1.0 are below average and relative weights above 1.0 are above average. However, re-centering of the weights adds a small amount of administrative

complexity and makes comparison of Arkansas Medicaid case mix measurements to national benchmarks more difficult.

Instead of using national relative weights, states can choose to calculate their own weights. This option has the benefit of ensuring the weights accurately reflect costs of hospitals when treating patients that are unique to that state's Medicaid population. However, calculating state-specific weights requires significantly more effort from the Medicaid agency each time the State adopts a new grouper version. In addition, it offers the challenge of deciding what values to use for DRGs with statistically low volume in the Medicaid program. Even California, the largest Medicaid program in the country, found there were 463 APR DRGs with fewer than 30 stays in a single year (2009), including 46 APR DRGs with zero volume.[6] Arkansas Medicaid has significantly less enrollment than California and would have significantly more APR DRGs with insufficient volume to be used in calculation of state-specific weights. In cases with low volume, states can choose to use the national value, or prorate the weight from a similar DRG.

If choosing to use state-specific relative weights, decisions must also be made on how those weights will be calculated. The basis for weights can be charges or relative costs. Typically, relative weights come out similarly when using charges or costs, but using costs is far more defensible due to wide variation in hospital charge levels. When using costs, another necessary decision is defining how costs will be determined for the relative weight calculation. Further, the process for recalculating the weights would have to be performed periodically, usually annually.

The final option a state can select is to copy the relative weights from another Medicaid program. This has the advantage of limiting the effort a state expends to determine relative weights while allowing the weights used to be specific to a Medicaid program. Pennsylvania selected this option, and uses the state-specific APR DRG relative weights calculated by New York.

Once a DRG grouper is selected, a comparison can be made of national relative weights versus state-specific weights. Navigant has performed this type of comparison in the past and found the national weights and state-specific weights align very closely on the high volume and high cost DRGs.

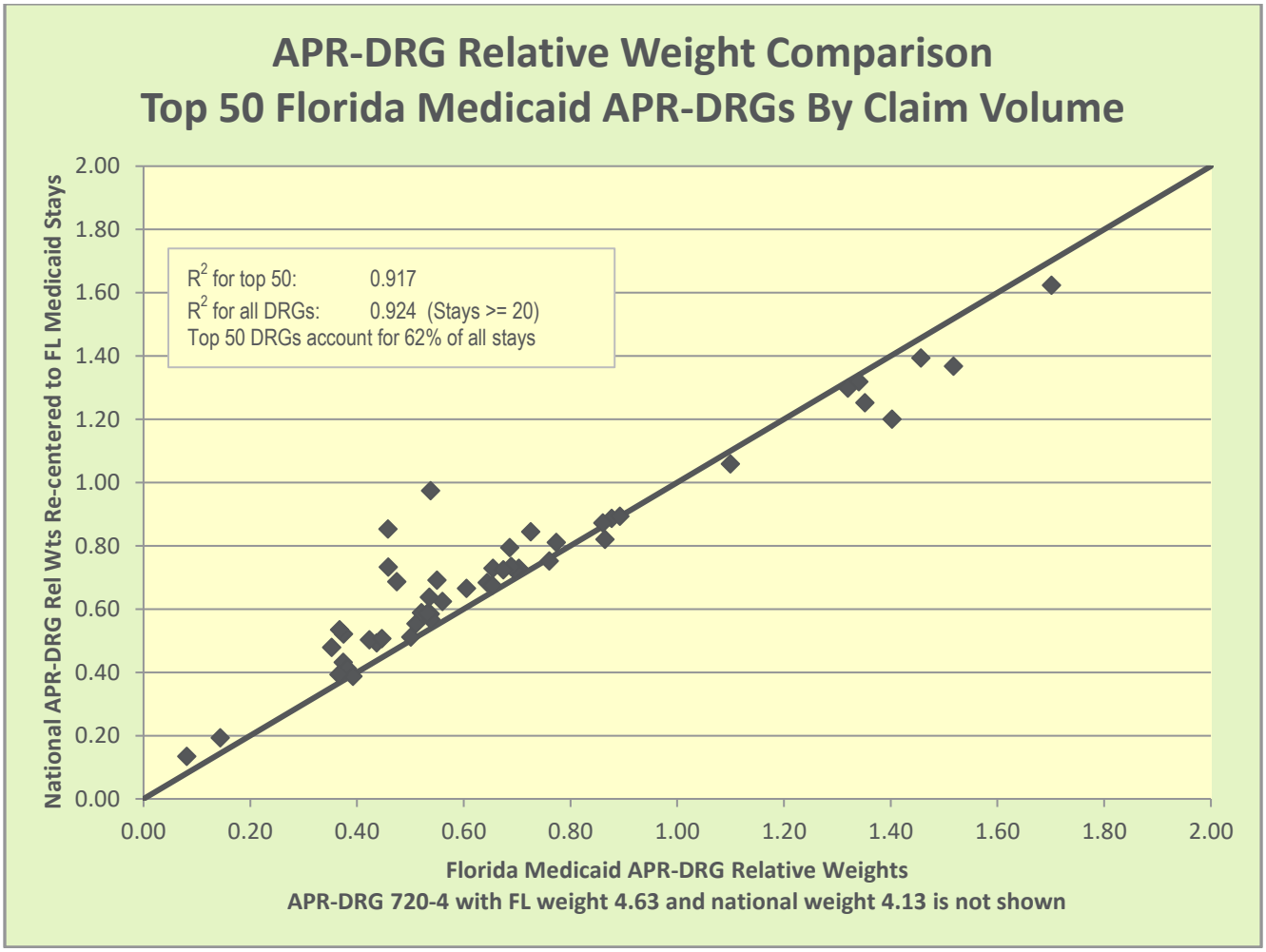
Similar to relative weights, average length of stay must also be determined for each DRG. Average length of stay is used in transfer and partial eligibility payment adjustments. Average length of stay can also be used in outlier calculations if day outliers are implemented. If using national relative weights, national average lengths of stay would also be available for use. Similarly, if borrowing from another state, both the relative weights and average lengths of stay could be borrowed. If, on the other hand, Arkansas Medicaid state-specific relative weights are selected, then state-specific average lengths of stay would also need to be calculated, including the challenge of deciding what to do with DRGs having statistically low volumes of observations.

5.2.2 DRG Relative Weights - Recommendation

Studies with other state Medicaid data have shown that state-specific weights and national weights align very well for high volume DRGs. An example of this type of analysis is shown in Figure 5.2 using Florida-specific relative weights. Also, as mentioned in the discussion section, using national weights requires less administrative burden and requires little or no manual adjustment for low-volume DRGs.

[6] Prepared by ACS for the California Department of Health Care Services. *Medi-Cal DRG Project Draft Policy Design Document*. January 10, 2012. Page 33.

Figure 5.2: Comparison of re-centered APR DRG "standard" national weights versus Florida Medicaid relative weights.



We have observed strong correlation in similar analyses in Arizona, California, Illinois, Minnesota, Washington and Wisconsin.

Given the strong correlation between Medicaid-specific weights and 3M national weights and the sample size issues from creating state-specific weights, we recommend adopting 3M's national weights for use by the Arkansas Medicaid program. Given the simplicity and wide-spread adoption of the standard weight set by Medicaid agencies compared to the HSRV weights, we recommend the standard national weight set for the Arkansas Medicaid program.

In addition, we do not recommend re-centering the national weights to 1.0 (by dividing each national relative weight by the Arkansas Medicaid overall average case mix). Re-centering the weights offers only a minor benefit of making 1.0 the average Arkansas Medicaid relative weight, numbers below 1.0 less than the average, and numbers above 1.0 greater than the average. At the same time, re-centering makes Arkansas weights different than national and other state weights making comparisons across states difficult. In addition, use of re-centered weights increases complexity because it requires all interested parties, including large hospital

chains and managed care plans who may already use APR DRGs, to use a separate, customized set of weights specifically for Arkansas Medicaid.

If Arkansas state-specific weights are used, there are 670 APR DRGs with volume below 20 stays in one year of fee-for-service data (using data from calendar year 2016). States typically use a minimum threshold between 10 and 30 stays as the minimum volume needed to calculate a state-specific relative weight. For this discussion, we have picked the midpoint of this range, or 20 stays. DRGs with less than 20 stays would need their relative weights determined using data "borrowed" from another source as a proxy. Also, any shift to managed care would result in the number of DRGs in the fee-for-service population that have a sample size of less than 20 stays to increase. Given these issues, state-specific weights would likely need to be calculated in the future using a combination of Medicaid fee-for-service and managed care claims to reach sufficient volume for relative weight calculations.

6 Provider Base Rates

Provider base rates are another significant contributor to the reimbursement amount on individual hospital stays and to Medicaid hospital inpatient reimbursement in aggregate. Thus selection of provider base rates is a critical step in ensuring fair reimbursement when implementing a DRG payment method. The simplest approach from the point of view of maintaining budget neutrality would be to assign each hospital its own base rate. However, this would defeat one of the basic goals of a DRG payment method – that is incentivizing and rewarding hospital efficiency. The opposite approach would be to develop a single base rate to be applied to all hospitals. Many Medicaid agencies have found a more practical approach is something in the middle in which a small number of standardized DRG base rates are created for a small number of categories of hospitals to address reasonable and measurable differences in cost. Some states further adjust for hospital cost by applying hospital-specific wage indices to the standardized base rates.

6.1 Provider Base Rate Categories

6.1.1 Provider Base Rate Categories - Discussion

Many Medicaid agencies implementing a DRG payment method have chosen to select different DRG base rates for different hospital categories or peer groups. Base rates determined separately for hospital peer groups can aid in protecting access to care at specific facilities, such as critical access, rural hospitals, and children's specialty hospitals. In addition, when looking at cost structures, separate base rates may be justifiable, for example, for trauma facilities and/or teaching hospitals. For teaching hospitals, Medicare provides additional payment, separate from the base rate. However, that additional payment can just as easily be incorporated into the base rate.[7]

A peer group can also be considered if there is a group of hospitals who treat very complicated, expensive cases and are expected to have an unusually high percentage of outlier payments. In most DRG implementations, outlier payments cover a lower percentage of hospital costs than standard DRG payments so high numbers of outlier stays become a burden to hospitals. One way to solve that problem is to give these hospitals a higher base rate, which will serve to reduce their percentage of outlier stays.

If separate base rates are selected for some groups of providers, we recommend the criteria used to categorize hospitals within groups be very clear and maintainable. Understandably, hospitals will be motivated to be defined into the peer group offering the most attractive reimbursement. Having clearly defined criteria for each grouping will help maintain the integrity of the payment policy and lessen the administrative burden of categorizing hospitals.

[7] For example, the California Department of Health Care Services implemented a separate base rate for remote rural hospitals to protect access to care. Florida Medicaid applied multipliers that increase the DRG base rates for rural and children's hospitals to maintain access to care for Medicaid recipients. In addition, Florida Medicaid applied multipliers that increase the DRG base rates for long term acute care and specialty rehabilitation hospitals to improve upon inequities in payment that had evolved over time. Arizona Medicaid chose to use a separate base rate for free-standing specialty hospitals, such as rehabilitation and surgical specialty hospitals, to maintain consistency with Arizona's pre-DRG payment method.

6.2 Standardized Base Rates with Wage Area Adjustments

6.2.1 Standardized Base Rates with Wage Area Adjustments - Discussion

Alternatively, the approach used by many states and by the Medicare program is to establish a single system-wide standardized amount, and adjust the standardized amount by each hospital's geographic wage area index or factor. The wage areas and associated wage indices can be state-defined values or can be linked to the Medicare values. Adjustment by wage area allows for higher payment in geographic regions that have historically reported higher wage rates for hospital employees.

Wage area indices act as multipliers to standardized base rate(s) and can be applied either to the entire base rate or to a portion of the base rate. For example, Medicare applies the wage area index only to a percentage of the standardized base rate where the percentage is a pre-determined estimate of the percentage of hospital costs attributed to labor. In particular, Medicare applies the wage index to 62.0 percent of the common base rate for hospitals with a wage index less than 1 and applies the wage index to 68.8 percent of the common base rate for hospitals with wage index greater than or equal to 1. For example, the base rate for a hospital with a wage index greater than 1 is:

Base rate = ([Common base rate] * [hospital wage index] * 0.688)
+ ([Common base rate] * 0.312)

Medicare wage indices in Federal Fiscal Year (FFY) 2018 for providers located in Arkansas Medicaid range from 0.7195 to 0.8733 and the average is 0.8051. The difference from the lowest wage index to the highest is 0.1538 which is just under 20 percent of the average (see Appendix C).

An alternative to adopting Medicare's wage indices would be to develop Arkansas-specific wage indices. However, determination of wage areas can be very complicated and would likely require DHS to take on a significant amount of administrative effort.

6.3 Funding for Provider Base Rates

6.3.1 Funding for Provider Base Rates - Discussion

Of the $857M in 2016 Arkansas Medicaid inpatient expenditures (per our models), $582M was in the form of claim-based payments, and $275M was in the form of supplemental payments. To develop a budget neutral DRG-based payment system – where aggregate modeled payments under DRGs are equal to payments under the current system – the starting point for the DRG funding pool is the claim payments under the current per diem system. For modeling purposes (as shown in Chapter 9 and in Appendix A), we have used the claim allowed amounts in the CY 2016 inpatient claims data to determine the claim-based funding pool.

For Arkansas Medicaid, however, there are significant funding streams outside of the claim-based payment pool in the form of supplemental payments. Much of the supplemental payment funding is based on cost-settlement payments and Access payments designed to reimburse provider classes up to the Medicaid Upper Payment Limit ("UPL"). Supplemental payments under the current system that are include in our DRG payment simulation modeling are as follows:

- Advance Tentative IP Payments

- Tentative Adult Expansion Payments
- Children's ACH Pediatric UPL Payments
- Hospital IP Access Payment UPL Payments
- Public IP UPL Payments
- Residential Treatment Unit Payments

The State may consider incorporating supplemental payment funding into the DRG payment system in the form of higher base rates (and by extension, higher claim-based payments). As discussed further in Chapter 9.3 and in shown in Appendix A, this shift in funding from lump sum payments based on cost-shortfalls to claim payments based on hospital case mix may result in significant fiscal impacts as supplemental payments are redistributed across providers under DRGs.

6.4 Per Diem Base Rates

6.4.1 Per Diem Base Rate - Discussion

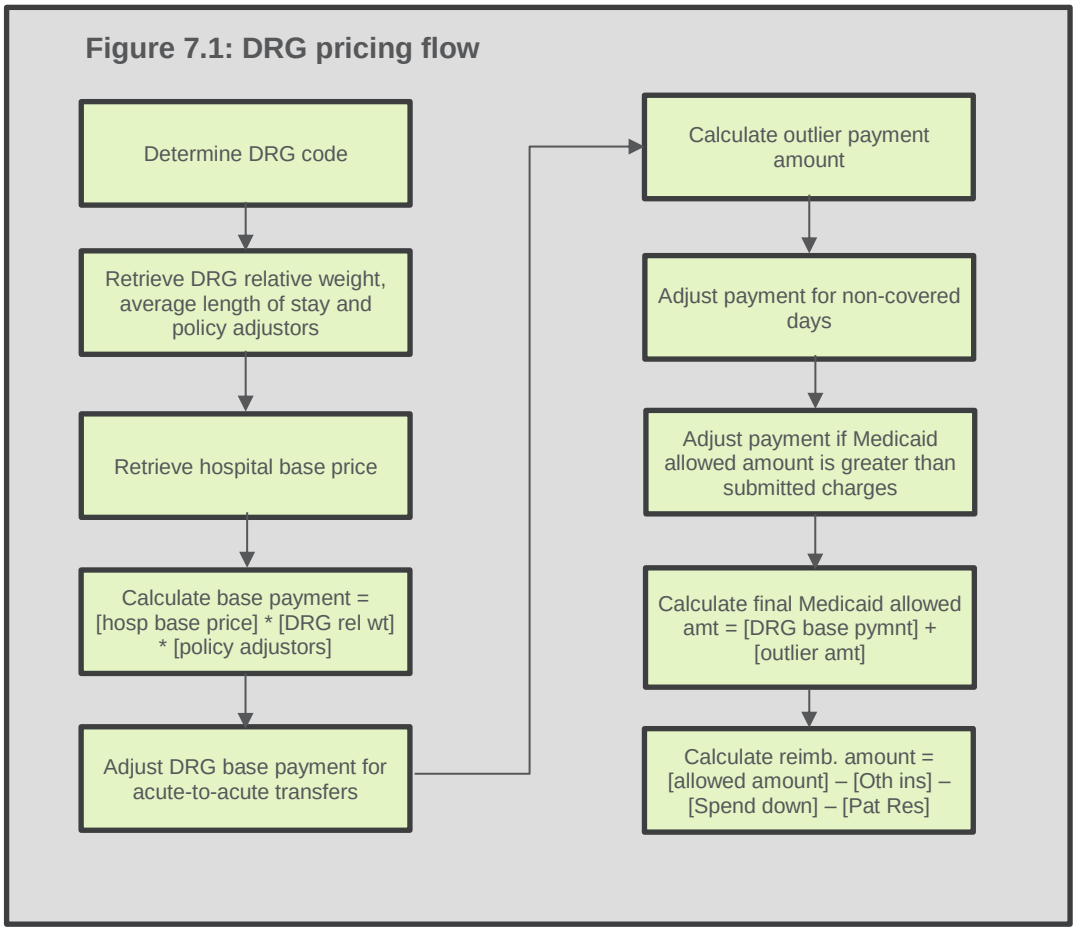
As mentioned previously, some provider types and some types of services may be carved out of the DRG payment method because they are more appropriately paid via another method. If such a decision is made, the carved-out services will presumably be paid per diem as that is the current DHS inpatient payment method, and per diem rates will need to be determined. The current method used to create per diem rates may be acceptable, in which case no changes need to be made. However, the current method may be unnecessarily cumbersome when applied to only a relatively small subset of inpatient stays, and, if so, DHS may want to consider adjusting the per diem rate setting process.

Options for setting per diem base rates include setting rates based on average hospital cost per day and using a graduated scale based on length of stay as Medicare uses for paying psychiatric services. In addition, the availability of DRG grouping allows the option of calculating case mix adjusted per diems, similar to the way Medicare pays for some services. Furthermore, for a limited number of specialty services, a percent of charges (cost based) method could be considered in place of a per diem payment method.

7 Pricing Logic

7.1 Pricing Flow

Figure 7.1 below shows the basic flow of DRG pricing logic. This flow may need to be customized slightly depending on the final DRG payment method design for Arkansas Medicaid.



DRG codes, DRG relative weights, and hospital base rates were discussed previously in Chapters 5 and 6. The following sections of this chapter discuss the rest of the factors involved in calculating a DRG-based price.

7.2 Policy Adjustors

7.2.1 Policy Adjustors - Discussion

Policy adjustors are multipliers applied to specific claims for the purpose of increasing or decreasing payment. Generally, policy adjustors are applied for specific types of care, either for all recipients receiving that care or for subsets of recipients. Four types of policy adjustors are commonly used:

- Service adjustors
- Age/service adjustors
- Provider/service adjustors
- Provider adjustors

Policy adjustors are an optional feature that can be used to help protect access to care for specific services. Often these are used for services where Medicaid funding can have a significant impact on beneficiary access, such as obstetrics, newborn care, mental health and pediatrics. The adjustors are above and beyond DRG relative weights and represent an explicit decision to direct funds to a particular group of patients who are otherwise clinically similar. Also, assuming a goal of budget neutrality, use of policy adjustors cause hospital base rates to be reduced having the effect of shifting some money from one area to another. We generally recommend including policy adjustor functionality in a DRG implementation because it creates an ability to meet current and future Medicaid program goals by adjusting payments without requiring significant software changes within the MMIS. However, policy adjustors do not necessarily need to be a major contributor to overall program reimbursements. They can be used sparingly to meet specific needs.

The first type of policy adjustor, service adjustor, works particularly well if there is a desire to increase payment for specifically targeted services, such as obstetrical and neonatal care.

The age/service adjustor is better suited if DHS desires to adjust payment for recipients within specific age categories, such as adjusting all pediatric services or adjusting for services provided to recipients under the age of one. Age/service adjustors provide a different payment for similar services when provided to one age category versus another. For example, a pediatric age/service adjustor of 1.25 on APR DRG 139-1 (pneumonia severity 1) would increase payment by 25 percent if the patient was a child. In contrast, an adult whose claim mapped to APR DRG 139-1 (pneumonia severity 1) would receive the DRG base payment without any adjustment. In truth, age/service adjustors can be applied to any age range, but are typically used by Medicaid programs to promote access for pediatric beneficiaries.

Provider/service adjustors can be used to increase (or decrease) payment for specific services when offered by specific groups of providers. For example, a Medicaid agency might choose to increase payment for neonatal care when offered at a specialty children's hospital which might incur greater costs to support clinical expertise and equipment needed to treat very sick children. In such a scenario, a provider/service adjustor could be used to increase payment for neonatal care when provided at children's hospitals without increasing payment for other types of care (such as normal deliveries) at the same hospitals.

Finally, provider adjustors can be used to increase (or decrease) payments for all services performed by specific individual providers or categories of providers. Provider adjustors differ from provider/service adjustors in that they apply for all stays at a particular hospital, not just stays for certain types of services. Provider adjustors serve the same purpose as applying different DRG base rates to different categories of hospitals, as they apply to every discharge for Medicaid recipients at the applicable hospitals. Even so, use of provider policy adjustors is sometimes politically more palatable than assigning different DRG base rates to different categories of hospitals.

Within DRG pricing calculations, the adjustors can affect the DRG base payment using the following formula:

[DRG Base Payment] = [Hospital Base Rate] * [DRG Relative Weight]
* [Service Adjustor] * [Age/Service Adjustor]
* [Provider/Service Adjustor] * [Provider Adjustor]

Or only the highest adjustor can be used, in which case the formula is,

[DRG Base Payment] = [Hospital Base Rate] * [DRG Relative Weight]
* Maximum of ([Service Adjustor], [Age/Service Adjustor],
[Provider/Service Adjustor], [Provider Adjustor])

For any particular service, one, two, three, or all four of the adjustors can be, and very commonly are, set to 1.0, thus creating no adjustment.

The types or categories of service for which policy adjustors are applied are identified by DRG codes. Each DRG code is assigned a DRG relative weight and three adjustor values: service, age, and provider. In theory, a Medicaid program could simply make adjustments to DRG relative weights outside the MMIS and avoid putting separate adjustor fields into the MMIS. However, this would upset the integrity of the DRG relative weights and is something we strongly discourage. DRG relative weights are intended to indicate relative hospital resource utilization and patient acuity, and can be used to measure hospital case mix. Those measurements would not be valid if the DRG relative weights were manipulated.

7.3 Transfer Payment Adjustments

7.3.1 Transfer Payment Adjustments - Discussion

DRG payments are designed to be a single payment for a complete stay in a hospital. Given this design, full DRG payments can be unnecessarily high if a patient is transferred from one acute care facility to another resulting in an unusually short length of stay at the “transferring from” hospital. To handle this situation, most Medicaid DRG implementations have followed the Medicare model in which a payment amount is calculated using a per diem method and then compared to the DRG base payment. The per diem payment is referred to as a transfer-adjusted base payment amount and, if less than the DRG base payment, is used in place of the DRG base payment. The formula used to calculate the transfer-adjusted base payment is:

Transfer Adjusted Base Pymt = {[DRG Base Payment] / [DRG Average Length Of Stay]}
* {[Length Of Stay] + 1}

Adding one to the length of stay takes into account the disproportionate amount of costs required in the first day of admission to complete the admission process and perform an initial diagnostic evaluation. Under this particular formula, the transfer adjusted base payment comes out less than the DRG base payment if the length of stay is less than the DRG’s average length of stay minus 1. Otherwise, the “transferring from” hospital receives full DRG payment.

For average length of stay data, DHS can use arithmetic or geometric averages from untrimmed or trimmed national data as published by 3M along with the national weights. In addition, statewide averages can be used, or national averages calculated using data from the Nationwide Inpatient Sample.

Transfer payment adjustments only apply to the transferring hospitals. Receiving hospitals are paid the full DRG amount.

The transfer payment adjustment process is used when a patient is transferred from one acute care setting to another. Transfers are identified in claims data through the discharge status and DHS's DRG payment policy will need to specify which discharge status codes apply to the transfer payment adjustment process. Possible status codes to include are:

- 02 – discharged/transferred to a short-term general hospital for inpatient care
- 05 – discharged/transferred to a designated cancer center or children's hospital
- 07 – left against medical advice (Medicare uses this value if the patient is admitted to another acute care hospital on the same day)
- 43 – discharged/transferred to a federal facility
- 62 – discharged/transferred to an inpatient rehabilitation facility or distinct part unit
- 63 – discharged/transferred to a long-term care hospital
- 65 – discharged/transferred to a psychiatric hospital or distinct part unit
- 66 – discharged/transferred to a critical access hospital
- 82 – Discharged/transferred to a short term general hospital for inpatient care with a planned acute care hospital inpatient readmission
- 85 – Discharged/transferred to a designated cancer center or children's hospital with a planned acute care hospital inpatient readmission
- 93 – Discharged/transferred to a psychiatric hospital/distinct part unit of a hospital with a planned acute care hospital inpatient readmission
- 94 – Discharged/transferred to a critical access hospital (CAH) with a planned acute care hospital inpatient readmission

DHS may also consider a "post-acute care transfer policy" similar to that used by Medicare. This policy reduces payment to hospitals for a specified list of DRGs (280 MS-DRGs in FFY 2018) when the patient is transferred to a particular type of hospital. The need for this policy arose from the disparate payment incentives facing acute care providers (paid per stay) and post-acute care providers (paid per day). For patients requiring both acute and post-acute care (as identified by the list of 280 MS-DRGs, for example, hip replacement), Medicare reduces payment to the hospital if a stay is particularly short and the patient is discharged to a post-acute setting. Patient discharge status codes that Medicare includes in its post-acute care transfer policy are:

- 03 – discharged/transferred to a skilled nursing facility
- 05 – discharged/transferred to a cancer or children's hospital
- 06 – discharged/transferred to a care of a home health agency (exceptions apply)
- 62 – discharged/transferred to a rehabilitation facility or distinct part unit
- 63 – discharged/transferred to a long-term care hospital
- 65 – discharged/transferred to a psychiatric hospital or distinct part unit
- 83 – discharged/transferred to a skilled nursing facility with a planned acute care hospital inpatient readmission
- 85 – discharged/transferred to a cancer center or children's hospital with a planned acute care hospital inpatient readmission
- 86 – discharged/transferred to a care of a home health agency with a planned acute care hospital inpatient readmission (exceptions apply)
- 90 – discharged/transferred to a rehabilitation facility or distinct part unit with a planned acute care hospital inpatient readmission

91 – discharged/transferred to a long-term care hospital with a planned acute care hospital inpatient readmission
93 – discharged/transferred to a psychiatric hospital or distinct part unit with a planned acute care hospital inpatient readmission [8]

Medicare has a large enough percentage of their population fitting this scenario to justify incurring the extra administrative complexity of this post-acute transfer policy. With the possible exception of transfers to psychiatric hospitals, Medicaid programs have a significantly lower percentage of their populations fitting this scenario, so the added complexity of this policy may be unwarranted.

7.4 Payment of Non-General Revenue Funds Distributed on a Claim-by-Claim Basis

7.4.1 Payment of Non-General Revenue Funds Distributed on a Claim-by-Claim Basis - Discussion

As mentioned previously, funds from inter-governmental transfers (IGTs) and hospital assessments make up a significant portion of the total reimbursements paid out through the Arkansas Medicaid program. Shifting some of these reimbursements away from periodic lump sum distributions and to the claim level payments will satisfy current CMS policy and will help facilitate a migration of recipients into the PASSE. Shifting payments to hospital claim payments can be done by making the funds available to increase the DRG base rate, or by paying per-claim-add-on payments that are separate from the DRG base rate. Adding the funds to the DRG base rate has the advantages of making outlier calculations more straightforward on individual claims and allowing for payment on individual claims to be increased or decreased based on the DRG relative weight. Whereas making the IGT/assessment-funded payments a per-claim-add-on, separate from the DRG base rate, has the advantage of making the accounting of these funds more straight forward.

For example, Florida Medicaid initially implemented its DRG payment method with two different per-claim add-on payments each with separate annual distribution amounts for different hospitals. Alabama Medicaid planned a flat percentage (about 12 percent) of the DRG payment to be distributed as a separate add-on payment. This option allowed the per-claim-add-on amount to be affected by patient acuity while still maintaining separate accounting of these funds.[9]

7.5 Other Per Claim Add-On Payments

7.5.1 Other Per Claim Add-On Payments - Discussion

In addition to distributing non-General Revenue Funds (GRF), some DRG installations include per-claim add-on payments, for other purposes. For example, Medicare offers per-claim add-on payments for direct graduate medical education costs (Medicare also provides payment adjustments for indirect medical education costs, capital, and disproportionate share hospitals,

[8] MLN Matters Number: SE0801, reissued on November 17, 2015; downloaded from https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNMattersArticles/downloads/SE1411.pdf on October 12, 2017.

[9] The Alabama Medicaid implementation of DRG payment is currently on hold pending decisions regarding implementation of Medicaid managed care.

but these adjustments are made to the common base rates [10]). Montana Medicaid provides separate add-on payments for medical education, capital, and disproportionate share payments. Similarly, Washington DC Medicaid provides per-claim add-on payments for medical education and capital. Other supplemental payments can also be distributed through add-on payments if distribution of the funds makes sense to be made on a per claim basis.

7.6 Outlier Payments

7.6.1 Outlier Payments - Discussion

In general, DRG payment is designed to pay based on average hospital resource usage, as is a per diem payment. DRG payment methods generally align payment with hospital resource usage slightly better than per diem methods. However, being based on averages, both methods will have cases in which payment is relatively low and cases where payment is relatively high. In general, adjustments to standard DRG payment should only be made when the difference between that payment and hospital cost is extreme.

For cases of extreme under payment, DRG payment methods typically include outlier provisions that adjust payment upward for stays that are unpredictably expensive. DRG groupers are limited to using only the information on medical insurance claims including principal diagnosis, procedures, age, complications and comorbidities (identified through secondary diagnosis codes), and discharge status. Given the tremendously wide range of cases seen in an inpatient setting, DRG grouping, although continually improving, does not always accurately predict hospital resource use. In those cases, where the prediction differs significantly from reality, outlier payments are used to generate a more reasonable reimbursement.

Medicare and many Medicaid agencies utilize a cost-based stop-loss model that applies outlier payments if the estimated loss to a hospital exceeds a dollar amount threshold. When the threshold is exceeded, remaining costs are reimbursed at some percentage. This percentage is referred to as a “marginal cost factor” because it is intended to cover only the marginal costs of the additional care. These costs include only variable costs such as staffing and supplies, not fixed costs such as buildings and equipment. Medicare’s marginal cost factor is 80 percent (90 percent for burns) and states’ values range from 50 percent to 100 percent, and sometimes vary by the type of service.

A variety of strategies are used to set the estimated loss threshold. Medicare uses a single threshold. California Medicaid has selected two thresholds, with one marginal cost percentage (60 percent) used for losses between threshold 1 and threshold 2 and a second marginal cost percentage (80 percent) applied for losses above threshold 2. Other states base the outlier threshold on the DRG relative weight, for example, Ohio and Washington, DC, while other states, for example Pennsylvania, set the outlier threshold to some percentage of the DRG base payment, such as 150 percent. Yet another example would be to set a small number of thresholds for different types of services so that less expensive services, such as mental health care, can be given a lower threshold than more expensive types of services.

Under the cost-based stop-loss outlier payment model, a method has to be selected for determining cost-to-charge ratios (CCRs) for purposes of estimating hospital cost. A single state-wide CCR can be used, separate CCRs for each hospital can be determined – one per hospital, or separate CCRs can be determined for each standard cost center for each hospital.

[10] Medicare Learning Network (MLN), *Acute Care Hospital Inpatient Prospective Payment System – Payment System Fact Sheet*, ICN 006815, February 2012.

The lower level of granularity in CCRs offers greater accuracy in estimating costs, but has the trade-off of requiring additional effort to periodically recalculate the values.

Less commonly, outlier cases are identified by length of stay being above a threshold number of days. For days above the threshold a per diem amount can be paid to help alleviate hospital losses. Rhode Island and Mississippi, for example, use a length of stay outlier threshold for mental health stays. Including a day outlier adds complexity to the overall payment method, but provides a more equitable outlier payments for services like mental health care, which are generally less expensive, and are less likely to hit a single cost outlier threshold.

Setting outlier threshold(s) and marginal cost percentage(s) are a policy decision. Generally, the values are set so that outlier payments are within a pre-determined range of total payments. For example, Medicare generally aims for an outlier payment percentage between 5 and 6 percent. Medicaid programs tend to have a slightly higher percentage of high-cost cases and generally aim for an outlier payment percentage between 5 and 10 percent. The percentage of payments made through outliers can be adjusted by increasing or decreasing the outlier threshold and/or increasing or decreasing the marginal cost percentage. As previously described in Chapter 3, a common formula used to calculate the outlier payment on a claim is:

[Outlier Pymt Adjstmnt] = {[Hospital Cost] – [DRG Payment] – [Outlier Threshold]} * [Marginal Cost %]

and outlier payments are only made if {[Hospital Cost] – [DRG Payment]} is greater than the outlier threshold. Payment simulations can be made in which the outlier threshold and the marginal cost percentage are adjusted until the desired outlier payment percentage is reached. Provider base rates and policy adjustors can also be manipulated resulting in an increase or decrease of total outlier payments.

From a policy perspective outlier payments are important to ensure access to care for very high cost cases. Providers need to know they will be compensated if they treat very sick individuals. However, paying too much out in the form of outliers removes provider incentives to contain costs as outlier payments are cost based – increasing when costs increase. In addition, in a budget neutral system, an increase in reimbursements paid out as outliers generates a reduction in provider base rates. These trade-offs are typically balanced in Medicaid programs by setting a target outlier payment in the range of 5 to 10 percent, and outlier threshold and marginal cost percentage are set to hit that target.

A completely different strategy for dealing with outlier cases is to shift them out of the DRG payment method and pay them with some other method, such as percentage of cost or per diem. These methods may be more amenable to hospitals; however, they remove some of the incentives to control costs provided by a DRG payment method. They also complicate the overall Medicaid inpatient payment method because individual providers are reimbursed using more than one process.

7.7 Provider Gain Adjustments

7.7.1 Provider Gain Adjustments - Discussion

Most outlier cases are stays where the costs to the hospital far outweigh the payment, but the opposite also occurs – where payment far exceeds hospital cost (this occurs most often with patients who expire). Medicaid agencies may implement a policy that adjusts payment

downward in these scenarios. Such a policy avoids potential negative publicity for a rare occurrence in which DRG payment is very high in relation to the hospital's charges and/or cost of care. In addition, this type of payment policy has the benefit of shifting money, albeit a relatively small amount of money, from highly profitable stays into other stays.

Downward payment adjustment may be implemented through a charge cap in which Medicaid allowed amount is capped at provider charges. A more sophisticated downward payment adjustment can be implemented using a "provider gain" cost outlier policy which works very much like the more common provider loss cost outlier policy. In a "provider gain" cost outlier policy, a provider gain threshold is set and a marginal cost factor is used to hold back some of the provider gain above the fixed gain threshold.

7.8 Short Stay Adjustments

7.8.1 Short Stay Adjustments - Discussion

The current per diem payment method provides a payment for each day a patient is in the hospital. Thus, hospitals can maximize payment by maximizing the number of days of a patient's stay. In contrast, a DRG payment method provides a payment for each hospital discharge (also can be thought of as payment per admission). Under a DRG payment method, hospitals can maximize payment in relation to cost by either limiting the length of stay, or where possible, maximizing the number of admissions/discharges. Some Medicaid agencies implement policies to reduce payment for very short stays to reduce this incentive and help ensure appropriate care is provided to each patient.

One potential payment policy that reduces this incentive is the "provider gain" outlier policy mentioned in the previous section. Another possibility implemented by some Medicaid agencies is a short-stay payment reduction policy. For example, Blue Cross and Blue Shield of Tennessee has a short stay policy that pays applicable claims via a per diem. To qualify as a short stay, the assigned APR DRG must have an average length of stay greater than five days and the actual length of stay for the hospital admission must be less than or equal to 20 percent of the DRG average length of stay (rounded down).[11]

7.9 Non-Covered Days Adjustments

7.9.1 Non-Covered Days Adjustments - Discussion

As mentioned in an earlier section related to transfer claims, a DRG payment is designed to be a single payment for a complete hospital stay. This kind of payment will be inappropriate if the recipient did not have Medicaid fee-for-service eligibility and benefit coverage for the entire stay. If some of the days of a stay are not covered then a reduction should be applied to the full DRG payment. Having eligibility for only part of a hospital stay is relatively rare in a Medicaid program, but can happen at times either because a recipient lost or gained Medicaid eligibility during the hospital stay or shifted from fee-for-service to managed care during the stay. In addition, some recipients have benefit coverage only for emergency services. If these recipients are deemed to be in an emergency medical condition for part, but not all of an inpatient stay, then the Medicaid payment should cover only part of the hospital stay. Thus, this scenario is very similar to a partial eligibility scenario. Recipients who are eligible only for emergency services include undocumented non-citizens.

[11] "Hospital Contract Modernization: Business Rules" presentation dated May 11, 2011 and downloaded from https://www.bcbst.com/providers/webinar/Webinar-5-11-11.pdf on October 12, 2017.

One option for reducing payment in this scenario is to perform calculations very much the same as those used with transfer claims. A per diem type of payment, referred to as the non-covered-day adjusted base payment, can be calculated and compared against the full DRG base payment. If the eligibility-adjusted base payment is less, it can be used in place of the full DRG base payment.

Another option would be to prorate the full DRG payment based on the number of covered days. For example, if a recipient is Medicaid fee-for-service eligible for 6 days out of a 10-day hospital stay, payment could be reduced to 60 percent of the full DRG payment. Similarly, if the recipient was covered only for emergency services and the recipient was deemed to be in an emergency medical condition for only 6 days of a 10 day stay, then payment could be reduced to 60 percent of the full DRG payment.

8 Other Considerations

8.1 Admit versus Discharge Date

8.1.1 Admit versus Discharge Date - Discussion

Initial implementation of DRG pricing and subsequent updates to DRG version and rates need to be implemented on specific dates that can be communicated to all interested stakeholders, including Medicaid policy, Medicaid fiscal agent, hospitals, hospital industry software developers, and PASSE plans. These implementation and version update dates are most commonly defined as "date-of-service cutovers." That is all claims with a date of service prior to the implementation date are processed one way and all claims with a date of service on or after the implementation date are processed a different way. When considering hospital claims which usually cover multiple dates of service, the DHS will need to determine whether to apply the date of admission or the date of discharge to the implementation/upgrade date.

8.2 Transitional Period

8.2.1 Transitional Period - Discussion

Making a change in payment method from per diem to DRGs has potential to result in significant redistribution of funds, especially if supplemental payment funding is included in the DRG payment system. Even if implemented with budget neutrality in aggregate for the Medicaid program, we expect some hospitals will receive higher payments under the new DRG method (when compared to legacy per diem payments) and some hospitals will receive lower payments. Such changes in payments are common in these types of transitions.

Some payers have established transitional policies to mitigate the impacts of such payment changes in the years immediately following implementation of a new DRG model. For example, when Medicare implemented DRGs for the first time, it provided a phase-in period of four years for the operating component of the new payment rates, and a 10-year period for the transition of the capital-related component of the rate. Some Medicaid programs, New York, Wisconsin, Arizona and California for example, have also used transition periods. On the other hand, other Medicaid programs, including those in Pennsylvania, Washington and Kentucky, have not provided for phase-ins or transitional periods. Similarly, when Medicare transitioned from the legacy CMS-DRG model to its new severity-based MS-DRG model, it did not use a transition period.

There are some advantages to utilizing transitional strategies. Phase-in or transitional periods provide time for providers to internally respond to anticipated changes in Medicaid funding. A transitional period allows time for providers to take the steps necessary to improve documentation and coding practices, and potentially implement improvements to operating performance relative to efficient delivery of services. In addition, a transition period gives hospitals time to make modifications to the complement of service lines offered in future periods – to the extent that Medicaid payments affect such decisions.

On the other hand, there are disadvantages to utilizing transitional strategies. From a payer perspective, transitional periods tend to increase the program administrative complexity of both policy implementation and system implementation. It also requires payers to either maintain two payment systems simultaneously (which would be required to blend payments between a per diem and DRG model), or alternatively, to determine hospital-specific base rates that would

effectively "build in" the transition to such rates. From the providers' perspective, hospitals that stand to see increased payments under the new payment model will not realize the full benefit of the change in payment model until after the transition period has run its course.

Mechanically there are two main approaches to applying transitional adjustments to claim payments, as follows:

- Claim payment adjustments to limit gains or losses to a floor or ceiling (only to hospitals beyond impact threshold, outside of gain/loss corridor). For example, the State could limit modeled payment increases to 5 percent and modeled payment decreases to -5 percent, with additional adjustments to make aggregate system payment payments budget neutral. Under this approach, hospitals within the corridor (in between the ceiling and floor) would not have an adjustment.

- Claim payment adjustments based on a percent of modeled payment change for all providers. For example, the State could adjust each provider's payment such that they have 50 percent of the modeled gain or loss.

If a transition period is established by Arkansas Medicaid, decisions will need to be made regarding whether the transition will be budget neutral or will include "new money" that will be available for some finite amount of time. Decisions also need to be made regarding the length of the transition, generally between one and three years, and the method of implementing the transition.

For example, during Florida Medicaid's implementation of DRG pricing, the Florida Legislature allocated $65 million in "new money" for one year to help offset hospital losses from DRGs. This money was distributed to hospitals in three tiers – 1) rural hospitals were given enough funds to cover any losses from the shift to DRG rates; 2) hospitals that experienced more than 10 percent or higher reductions in Medicaid inpatient reimbursements were given enough transitional funds to cover 24 percent of their payment reductions; 3) hospitals experiencing less than 10 percent reduction in Medicaid inpatient reimbursements were given enough transitional funds to cover 4 percent of their payment reductions. In addition for non-rural hospitals, the hospital needed a Medicaid inpatient payment reduction of at least $300,000 from the shift to DRG pricing to qualify for any of the transitional funds. Thus, the one year of available "new money" helped mitigate some, but certainly not all, of the payment reductions experienced by individual hospitals.[12]

As another example, California Medicaid (Medi-Cal) implemented a budget neutral transition period that lasted for three years. Medi-Cal's transition policy limited both increases and decreases in payments to individual hospitals for the first three years of DRG pricing. In year one, hospitals received a base price that was within 5 percent of the base price that would maintain their funding level compared to the prior methodology assuming the same patient acuity and volume of stays. This increase or decrease limit was set to 10 percent in year two and 15 percent in year three. In year four, all hospitals that have not already done so will transition to their appropriate base price. Hospitals with very low Medi-Cal volume did not qualify for the transition period.[13]

[12] Diagnosis Related Group Transitional Payments report submitted by the Florida Agency for Health Care Administration to the Florida Legislature on June 30, 2014.
[13] Medi-Cal DRG Executive Summary; downloaded from http://www.dhcs.ca.gov/provgovpart/Documents/DRG/DRGExecutiveSummary2-13-13.pdf on October 12, 2017.

8.3 Documentation and Coding Adjustment

8.3.1 Documentation and Coding Adjustment - Discussion

Under a DRG payment method, overall case mix (i.e. average DRG relative weight) has a significant impact on overall Medicaid payments. This can be seen when looking at the DRG base payment formula:

[DRG Base Payment] = [Hospital Base Rate] * [DRG Relative Weight] * [Policy Adjustor(s)]

While payments under a DRG payment method are also affected by policy adjustors, outlier payments, and transfer and non-covered days adjustments, these additional factors all have a relatively small impact on overall spending when compared with the impact resulting from changes in case mix. The significance of potential changes in case mix relative to overall Medicaid spending for inpatient hospital services punctuate the need to accurately estimate these values and to monitor them through the first few years of a DRG payment implementation. If case mix is significantly understated during the design process, resulting Medicaid spending will likely be well above estimates.

When considering the increases in case mix that will occur after implementation of the APR DRG model, there are generally two components. One component is attributable to actual changes in the patients' health status, where hospitals are required to expend more resources because patients they are treating are actually sicker – this component is commonly referred to as a "real" increase in acuity. And there is an expectation that case mix will increase slightly from year to year, all other things remaining equal. As an example, before Medicare's implementation of MS-DRGs in 2008, annual case mix increases ranged from -0.8 percent to 1.0 percent, and on average reflected 0.1 percent year-to-year change.[14] This slight increase may be the result of a number of factors, including the trend of providing more and more services efficiently and effectively in outpatient settings, leaving only sicker patients in the inpatient hospital setting. Increases can also be attributable to advances in medical technology that allow hospitals to be more effective in caring for the sickest of patients. A DRG system is generally designed to "self-adjust" for this type of case mix increase – as patients get sicker, they are classified into DRGs with higher relative weights, and as a result, payments for services increase. Payers must set rates appropriately, considering these small increases in case mix over time.

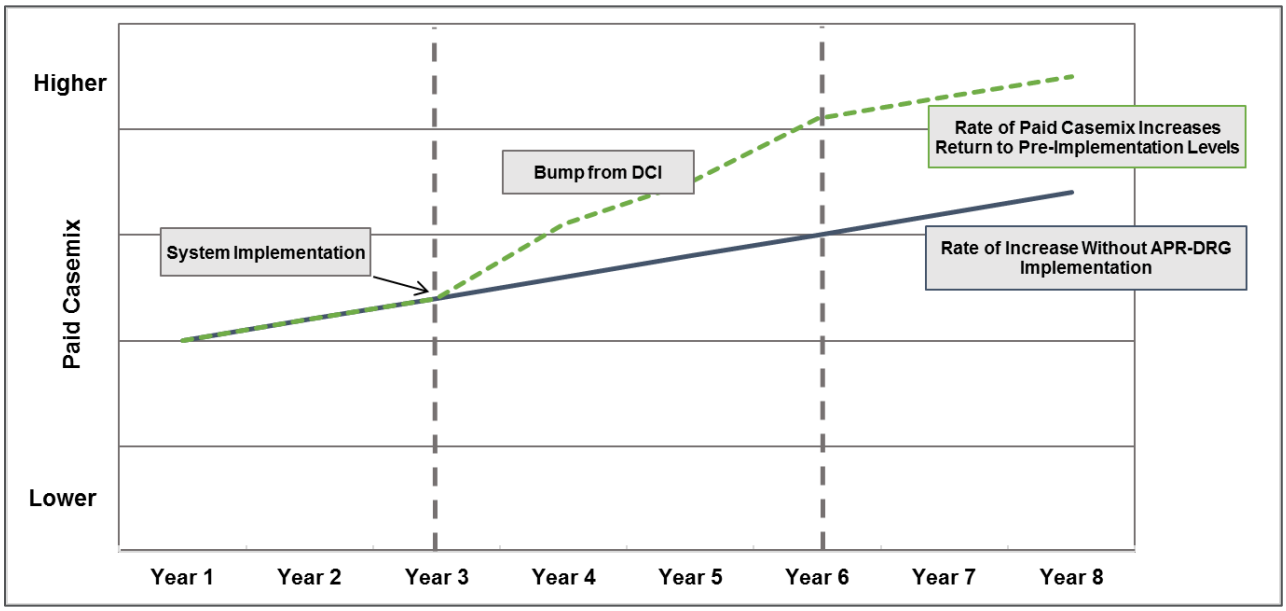
The other component of the increase in case mix can generally be attributable to documentation and coding improvements (DCI). During DHS's transitions from the legacy per diem payment model to a new APR DRG per discharge payment model, there is an expectation that DCI will result in the rate of increase in reported case mix being higher than it would have been if DHS had decided to maintain the current legacy per diem model. This increase in case mix can be attributed to improvements in medical record documentation and improvements in claim coding as Medicaid claim payment becomes dependent on the diagnosis and procedure codes on claims. These documentation and coding improvements are an appropriate and necessary response by providers to DHS's implementation of the APR DRG payment model.[15] However,

[14] Medicare Payment Advisory Commission (MedPAC), *Report to the Congress: Medicare Payment Policy* (March 2011), p. 49.
[15] Expected increases in case mix resulting from DCI should not be confused with case mix increases attributable to the term "DRG creep", which may be the result of inappropriate billing practices. Such inappropriate billing practices are intended to generate higher payment by billing for services in a way that provides for a higher payment rate (DRG

the underlying cause of this component increase is very different. It is due to better reporting, not to actual changes in types of patients treated. Also, the increase in case mix from DCI is expected to be much more significant than "real" case mix change, when comparing the first year of DRG implementation to the simulation dataset containing claims that were billed and paid under a per diem method. There is a risk that the case mix values reflected in the simulation data significantly understate the actual acuity of the patients served. This understatement is primarily the result of coding and documentation practices that were intended to support payment under the legacy per diem model, and not intended to support payment under an APR DRG model. The coding practices that are necessary to generate accurate payments under the two models are significantly different, with the standard under an APR DRG model being much higher.

The potential impact of this DCI on case mix is illustrated in Figure 8.3 below, using hypothetical values. As shown in the following illustration, it is our expectation that there will be an immediate "bump" in aggregate paid case mix in the first year following implementation of the new system, with smaller increases in following years, and with paid case mix increases trending back to pre-implementation levels once providers successfully improve their coding and documentation processes.

Figure 8.3 – Illustration of Potential Impacts to Paid Case Mix from DCI



Clearly, a potential financial risk to both the State and to the providers exists as a result of this situation. Understanding that the DRG payment rates that will be implemented will be based on payment simulation models that reflect a potentially understated case mix, the State will be at risk of overspending its budget in the event that actual case mix exceeds expected levels after the system's effective date. On the other hand, the providers are at risk if the opposite is true – that the simulation models used to set DRG payment rates overstate actual case mix, although

with higher relative weight) than what accurately reflects the condition and treatment of the patient, oftentimes accomplished through miscoding or inappropriate re-sequencing.

this scenario is less likely. In addition, providers are at risk if the State over compensates for anticipated changes in case mix. The challenge related to this issue is to implement a strategy that effectively mitigates the potential risk of overpayment (or underpayment) to both the State and to the providers.

Other government payers have experienced significant increases in paid case mix following system changes, as did the Medicare program when it transitioned to the MS-DRG payment model. In its March 2011 Report to the Congress, the Medicare Payment Advisory Commission (MedPAC[16]) reported that the "implementation of Medicare's MS-DRG model gave hospitals a financial incentive to improve medical record documentation and diagnosis coding to more fully account for each patient's severity of illness. While documentation and coding improvements (DCI) appropriately improve measurement of patient severity, they also can increase reported case mix under MS-DRGs even if patients' levels of illness and resource need are not different from prior years. The result was strong growth in payments per case in 2008 and 2009. Analysis by CMS found (and MedPAC's analysis concurred) that payments increased by a total of 5.8 percent over the two years due to coding improvements."[17] MedPAC's report characterized this increase as extraordinary since it "followed a decade in which the case-mix index declined in 5 of the 10 years and never grew by more than 1 percent in any year."[18]

At the state payer level, Florida Medicaid's experience provides another recent example of the potential impact on paid case mix resulting from a transition to APR DRGs. The Florida Medicaid program implemented an APR DRG payment system on July 1, 2013. Similar to Arkansas, Florida converted from a per diem payment method to a payment method based on APR DRG categorizations. Having information regarding experience from other state Medicaid DRG implementations, in its first year of DRG pricing, Florida Medicaid decided to plan for a case mix change of four percent from documentation and coding improvement and one percent from "real" case mix change, resulting in a total case mix adjustment of five percent. The "real" case mix adjustment was based on an assumed "real" case mix increase equal to one-third of one percent per year. The historical claim data used for rate setting included claims with dates of admission three years prior to "year 1" of DRG pricing, resulting in a total of one percent "real" case change.

To reduce risk for both the Medicaid agency and the hospital community, Florida Medicaid also included a provision to perform a mid-year adjustment if the assumptions regarding case mix change proved inaccurate. This provision provided authority to increase or decrease DRG base rates for the last quarter of the state fiscal year based on actual case mix experience measured on claims paid under the DRG payment method.

Florida Medicaid continued this basic strategy of assuming significant case mix change resulting from DCI and providing authority for mid-year payment adjustments for the first three years of their DRG implementation. Starting in year four, the historical claim data used for rate setting included claims billed and paid under DRG pricing. From that point forward, Florida Medicaid's DRG rate setting process no longer assumes any case mix change from DCI.

[16] MedPAC is an independent Congressional agency established by the Balanced Budget Act of 1997 (P.L. 105-33) to advise the U.S. Congress on issues affecting the Medicare program. The Commission's statutory mandate is quite broad: In addition to advising the Congress on payments to private health plans participating in Medicare and providers in Medicare's traditional fee-for-service program, MedPAC is also tasked with analyzing access to care, quality of care, and other issues affecting Medicare.
[17] MedPAC Report to Congress (March 2011), pages 39-40, *emphasis added*
[18] MedPAC Report to Congress (March 2011), page 49

The actual case mix in the first three years of DRG pricing for Florida Medicaid was higher than the case mix on the historical model claims used for rate setting as reflected in Table 8.3.

Table 8.3 - Case Mix Change Between Modeling Period and Claims Paid Under DRGs

Claim Payment SFY	Historical Model Data Used for Rate Setting	Increase in Case Mix Since Modeling Period
SFY 2014	SFY 2011	8.4%
SFY 2015	SFY 2012	9.1%
SFY 2016	SFY 2013	8.5%

Given the experience in year one (SFY 2014), Florida Medicaid increased their DCI estimate to a total of seven percent in years two and three (SFY 2015 and SFY 2016). Even with this change, actual case mix was higher than predicted and mid-year rate adjustments were performed in both years two and three. Mid-year rate adjustment was not performed in year one because actual case mix increase was not measured to be higher than five percent until the end of the fiscal year (at which time it was too late to make adjustments). Florida Medicaid used a date of admission cut-over to DRG pricing and the lag between date of admission and the time case mix could be measured on paid claims proved to be too long to allow for a mid-year base rate adjustment in year one.

Given the risk of payment increases driven by DCI, there are several options available to DHS as strategies to mitigate potential over or underpayment of services. These options are:

- ***Option 1***: Prospectively reduce either base rates or relative weights to reduce future payments to offset anticipated increases in payments resulting from DCI. This is generally the approach that was taken by CMS when it implemented the MS-DRG payment system for Medicare services. The key challenge with this option is accurately estimating in advance what the increases related to DCI will be in future periods.
- ***Option 2:*** Retroactively adjust either base rates or relative weights to offset actual increases in payments resulting from DCI. To implement this option, it would be necessary to first estimate what expected, or "real" case mix increases should be, based on historical trends. To the extent that actual case mix increases exceed the established case mix increase trend line, adjustments can be made. Adjustments could be made in the form of retroactive adjustments of historical claims (e.g., through mass adjustments to claims) or through reductions to future payments.
- ***Option 3***: Establish a hybrid strategy that establishes a prospective adjustment with a corridor (for example, the expected case mix in future periods based on historical trends, plus or minus a fixed percentage). Using this corridor, monitor actual paid case mix on a regular basis, and if it remains within the established corridor, make no adjustment going forward. If it falls outside of the established corridor, make an adjustment, either prospectively or retrospectively, to bring payments to where they would have been had the actual paid case mix not exceeded the upper bound of the corridor (or the lower bound of the corridor in the instance of a measured case mix reduction).

There are a number of variations that can be applied to each of these options.

8.4 Interim Claims and Late Charges

8.4.1 Interim Claims and Late Charges - Discussion

DRG payments are designed to be single payments for complete hospital stays. Thus, a final DRG payment reflecting all diagnoses and procedures cannot be determined until the patient is discharged. For most hospital stays, that is perfectly acceptable to both the provider and the Medicaid agency. However, for very long stays, waiting until discharge for payment from Medicaid can cause cash flow challenges for hospitals. This can be solved by allowing interim billing and payment. Unfortunately, generating final payment for a hospital stay after interim payments have been made can be a challenging task to implement in an MMIS and adds complexity to the overall DRG payment method. As a result, decisions related to interim claim payments are an important part of a DRG payment policy despite the fact that they affect a relatively small percentage of overall stays.

Current DHS allows for interim billing, and based on our review of the DRG model data, providers utilize interim billing extensively. Under the most extreme example, a provider submits separate interim claims for each individual day within the patient stay. This frequency of interim billing is not administratively feasible under per discharge APR DRG payment and will need to be reduced significantly.

If DHS decides to continue to allow interim payments, then a series of design decisions must be made. First, the threshold minimum number of days per interim claim must be decided – most states have selected 30 days when interim claims are accepted, although some states have made the limit as high as 180 days. Next the method of payment for interim claims must be determined. A per diem payment is used by some states, but is a very complicated option to implement in an MMIS. Another option is to pay the full DRG amount on the first interim claim, and then require the hospital to submit an adjustment of the original claim when submitting any subsequent interim claims. For example, if the length of stay limit for interim claims is 30 days, the first claim interim claim will be submitted with a length of stay of 30 days. If the patient is still in the hospital after 60 days, the hospital would submit an adjustment to the original claim that contained dates of service from date of admission to day 60. Medicaid would then recalculate DRG payment. Assuming the DRG assignment was the same on both claims, the adjusted claim would only include additional payment if the claim reached outlier status.

Late charges (claims with bill type 115) are also problematic in a DRG payment method. To accurately calculate DRG payment, including outlier payments, all charges for the hospital stay need to be submitted on a single claim. For this reason, late charges are typically not accepted by Medicaid agencies paying via DRGs.

8.5 Medicare Crossover Comparison Pricing

8.5.1 Medicare Crossover Comparison Pricing - Discussion

Many Medicaid programs have implemented Medicare crossover comparison pricing logic. This logic is applied specifically to Medicare crossover claims and compares the Medicare allowed amount to the Medicaid allowed amount. It then sets Medicaid reimbursement amount so that the total provider reimbursement, combining Medicare and Medicaid payments, reaches the lower of the two allowed amounts. If DHS uses this kind of pricing logic, then Medicare

crossover claims will need to be processed through the new DRG pricing method so that a DRG-based Medicaid allowed amount can be determined.

9 DRG Payment Simulation Model

9.1 DRG Model Analytical Dataset

9.1.1 DRG Model Analytical Dataset - Discussion

To estimate the fiscal impact of a new APR DRG payment system relative to the current inpatient per diem payment methodology and the current supplemental payment programs, we developed a DRG payment simulation model using CY 2016 Arkansas Medicaid inpatient FFS claims data. The DRG payment simulation model analytical dataset consists of inpatient FFS claims data, excluding crossover claims (for Medicaid-Medicare dual eligibles) provided by DHS and extracted from the MMIS.[19] We used the following steps to determine the net claim records utilized in the DRG payment simulation model analytical dataset:

- *Consolidated claims billed on an interim basis*: Claims data provided by DHS included multiple claims billed on an interim basis (the MMIS currently does not create a final consolidated claim record for all services provided during an inpatient stay). APR DRG pricing requires a single claim record for each admission; as such we consolidated interim billed claims into a single record for each admission for modeling purposes. We identified interim claims using a combination of claim attributes resulting in a "claim key" to aid in consolidation: recipient ID, provider ID and date of admission. When consolidating interim claims into a single record for each admission, we incorporated all unique data elements (e.g. diagnosis codes, procedure codes, date range, etc.) and summed all days, charges and payments to reflect the full inpatient stay visit period.

- *Excluded claims with dates of discharge outside of calendar year 2016*: Applied data filter to establish the most recently available and fully mature year coded under ICD-10.

- *Excluded psychiatric residential treatment facility claims*: One provider specialty type, 'Psychiatric Residential Treatment Facility,' was excluded as directed by DHS; all other inpatient provider types were included.

- *Excluded out of state providers not designated as a 'border' provider*: DHS designates all out-of-state hospitals located within 50 miles of the Arkansas state border that participate in the Arkansas Medicaid program as "border" providers. Border providers are essentially treated as in-state hospitals under the current payment methodology and were included in the model analytical dataset. For modeling purposes, all claims originating from out-of-state providers not designated as 'border' were excluded.

- *Excluded claims classified with an 'ungroupable' APR DRG*: Current billing requirements and MMIS infrastructure align with an inpatient hospital per diem approach, and in some limited instances, providers in the CY 2016 analytical claims data period did not report data sufficient to assign a valid APR DRG. The result of incomplete or conflicting information results in DRG designation "Ungroupable." Reasons for an Ungroupable status include but are not limited to: invalid recipient gender, invalid recipient age, invalid primary diagnosis and insufficient data to group the claim. Claims initially classified as Ungroupable were evaluated to identify patterns and select claims were adjusted and

[19] Inpatient hospital claims identified using the following category of services: '31' Inpatient Hospital, '33' Inpatient Psychiatric Under 21, '75' Pediatric Inpatient Hospital, '77' Rural Inpatient Hospitals, '87' Inpatient Arkansas Teaching Hospital, 'A1' Inpatient Hospital Transplant, 'CA' Critical Access Hospital.

"re-grouped" where appropriate. Claim adjustments used to assign valid DRGs include the following:

- If a newborn claim has a procedure code for a circumcision and the gender is captured as female (invalid recipient gender), the claim is adjusted to reflect 'male'
- If a mother's date of birth is captured on a newborn claim (invalid recipient age), the claim is adjusted to use first date of service as the date of birth
- In the raw MMIS inpatient claims data we observed several thousand delivery-related claims where the reported primary diagnosis code was the delivery result (e.g. single live born) rather than the reason for admission (e.g. encounter for full-term delivery). For these claims we re-sequenced the primary and secondary diagnosis codes and re-grouped in order to assign the appropriate delivery DRG.

- *Excluded claims where allowed amount is equal to $0*: When a claim is not denied but reflects a payment amount of $0, the claim was removed from the analytic dataset.

Table 9.1 below summarizes the claim consolidation and exclusion process:

Table 9.1 – Net Claims Included in Analytical Dataset

Description	Claims	Total Allowed Amount
Raw Claims Received	339,907	$ 1,224,707,877
Less collapsed interim claims	154,896	0
Net Claims with Consolidated Interim Claims	**185,011**	**$ 1,224,707,877**
Less exclusion 1: Claims outside CY 16 analysis period	86,784	$ 586,029,839
Less exclusion 2: Psych residential treatment facility	965	47,436,476
Less exclusion 3: Out of state non-border	915	7,949,401
Less exclusion 4: Ungroupable	85	1,476,784
Less exclusion 5: $0 allowed amount	148	0
Net Claims Included in Analytical Dataset	**96,114**	**$ 581,815,376**

9.2 Modeling Scenarios

9.2.1 Modeling Scenarios - Discussion

For modeling we simulated payment under various APR DRG payment scenarios for each claim in the analytical dataset. Per DHS direction, for evaluation purposes we used a standardized, simplified approach to payment system parameters in the models. All modeled scenarios included the following payment system parameters:

- APR DRG grouper version 35, the latest available grouper version
- APR DRG version 35 standard national weights and average lengths of stay
- Standardized DRG base rates consisting of statewide standardized amount, adjusted by hospital FFY 2018 Medicare IPPS wage index, solved for to achieve DHS' target expenditures under each scenario (budget neutral to current system expenditures in aggregate)
- Medicare-style cost-based outlier payment method with $30,000 fixed loss threshold and 80 percent marginal cost factor
- Medicare-style standard pro-rated transfer payment method[20]

For evaluation purposes, we developed three different model scenarios using the above parameters. As previously mentioned, we recommend use of All-Patient Refined Diagnosis Related Groups, or APR DRGs (as specified in the Legislation mandating this study) and the use of 3M APR DRG "standard" national weights. While the modeled scenarios provide examples of other system parameters, finalization of these parameters will require additional modeling, stakeholder input and DHS decision making. As such, these modeled scenarios were designed as examples for evaluation of select system parameters and do **not** represent a final or recommended set of model parameters or rates. Should the Arkansas Legislature and DHS decide to move forward with implement a DRG payment methodology, then additional consideration and stakeholder discussions will be required to finalize the set of options that will comprise the full DRG pricing method for Arkansas Medicaid.

The three modeled scenarios are as follows:

- ***Simulation 01 – Baseline Model Using Current System Allowed Amount for DRG Funding Pool***: DRG funding pool based on claim allowed amounts only ($581,815,376) as basis for the budget target. The "baseline" model does not include service line or population policy adjusters, and distributes payment across providers based on volume and case mix. The baseline model is not intended as a viable model for implementation, but rather as a starting point for evaluating where adjustments are needed in subsequent model scenarios.
- ***Simulation 02 – Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool***: DRG funding pool based on

[20] Transfer claim identification uses patient status code/patient discharge status code values: 02, 05, 65, 66, 82, 85, 93, 94. Transfer claims are paid the lesser of: the full DRG payment or the pro-rated per diem payment calculated as: (hospital base DRG payment divided by the national length of stay) times (actual length of stay plus one day)

combined claim allowed amounts ($581,815,376) and supplemental payments ($275,390,153) as basis for the budget target ($857,205,529). The "baseline" model does not include service line or population policy adjusters, and distributes payment across providers based on volume and case mix. The baseline model is not intended as a viable model for implementation, but rather as a starting point for evaluating where adjustments are needed in subsequent model scenarios.

- ***Simulation 03 – Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool***: Uses same combined claim allowed amount and supplemental payments as basis for DRG funding pool as Model 02 ($857,205,529). This alternative model introduces the following example policy adjuster factors applied to base DRG payments, determined to result in simulated DRG payments approximately equal to current system payments:

  - 1.90 for normal newborn DRG claims
  - 1.50 for neonatal DRG (NICU) claims
  - 1.30 for all non-NICU, pediatric claims where the recipient was less than 18 years of age
  - 1.0 factor for all other claims

  These modeled policy adjusters are for demonstration purposes; DHS may wish to explore additional, more-refined policy adjusters before finalizing system parameters.

Table 9.2 shows the aggregate totals for each of the three model versions:

Table 9.2 – Model Totals

Model Totals	Model 01 – Baseline with Claim Payments Only	Model 02 – Baseline with Claim and Supplemental Payments	Model 03 – Alternative with Claim and Supplemental Payments
CY 2016 Admissions	96,114	96,114	96,114
State-Wide Base Rate	**$ 7,212.36**	**$ 11,473.06**	**$ 9,876.72**
APR DRG v35 Case Mix	0.7218	0.7218	0.7218
Billed Charges Amount	$ 2,355,440,778	$ 2,355,440,778	$ 2,355,440,778
Current System Claim Allowed Amounts	$ 581,815,376	$ 581,815,376	$ 581,815,376
Gross Supplemental Payments	$ 0	$ 275,390,153	$ 275,390,153
Total DRG Funding Pool	**$ 581,815,376**	**$ 857,205,529**	**$ 857,205,529**
APR DRG Simulated Payment	$ 581,815,102	$ 857,205,122	$ 857,205,167
Estimated Payment Change	$ (274)	$ (408)	$ (363)
APR DRG Simulated Outlier Payment	$ 87,935,363	$ 71,565,950	$ 68,475,867
APR DRG Simulated Outlier Percentage	15.11%	8.35%	7.99%

9.3 Modeling Findings

9.3.1 Modeling Findings - Discussion

We discuss model findings and considerations as follows:

- Simulation Model 01 (Baseline Model Using Current System Allowed Amount for DRG Funding Pool) demonstrates that without policy adjusters there are significant negative payment changes for key high Medicaid utilization providers and key service lines such as neonatal, normal newborn and pediatrics. This baseline model supports the use of policy adjusters to enhance payment beyond the standard APR DRG case mix to mitigate impacts and preserve access to care.

- For Simulation Model 02 (Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool), the inclusion of supplemental payments yields a $4,260.70 increase in DRG base rate compared to Simulation Model 01. The higher DRG base rate results in a decrease in projected outlier payments as a

percent of total payments, down from approximately 15 percent in Model 01 to 8 percent to model 02. Like Model 01, this baseline model supports the use of policy adjusters to enhance payment beyond the standard APR DRG case mix to mitigate impacts and preserve access to care.

- For Simulation 03 (Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool), the selected policy adjusters address the negative payment changes for the key service lines of neonatal, normal newborn and pediatrics found in Model 02. However, negative impacts for other key service lines and high Medicaid utilization providers remain. To make the targeted enhanced payments from policy adjusters budget neutral, the modeled standardized DRG base rate was reduced by $1,596.34 compared to Model 02.

- The current per diem-based system has a wide range in average payment per day across providers (approximately $350 - $4,200). Transition to standardized payment rates under DRGs would result in significant payment impacts for providers at both ends of the current per diem rate spectrum. However, a standardize payment system that minimizes the range of provider payment rates and reduces reliance on provider-specific costs would be more consistent with the guiding principles of equity and incentivizing efficiency.

- While policy adjusters in Model 03 demonstrate how DHS can mitigate the impact of key Medicaid service lines under APR DRGs, there are still significant negative impacts for certain high Medicaid utilization providers that will require additional consideration, modeling and adjustments. In addition, provider-level impacts from transitioning supplemental payments into the DRG payment system would necessitate significant changes for payment streams such as the assessment and IGT programs that optimize funding sources outside of state GRF. For government-owned providers, the state share of these supplemental payments is in large part funded by IGTs. For privately-owned providers, the state share of these supplemental payments is in large part funded by hospital assessments. The IGTs and assessments would have to be re-determined in order to produce enough net positive impacts to make acceptable in the hospital community.

- We understand Arkansas Medicaid is planning to transition select populations to a Medicaid managed care program. Under Medicaid managed care, the flexibility for the Medicaid agencies to make supplemental payments to individual hospitals is significantly reduced. Within standard Medicaid rules (that is, without a Medicaid waiver), the state agency can only distribute supplemental payments directly to hospitals within Upper Payment Limit (UPL) limits, which apply only to the fee-for-service program. As the size of the fee-for-service program decreases (with corresponding increase in Medicaid managed care), the amount of funds that can be distributed through supplemental payments also decreases. The only exceptions to this rule, short of negotiating a Medicaid demonstration waiver, are supplemental payments for Graduate Medical Education for the Disproportionate Share Hospital program.

  Shifting some or all of supplemental payment funding into claim-based payments through the DRG base rate or other claim payment addon is a potential method to distribute these funds to hospitals in a Medicaid managed care environment. CMS is currently emphasizing to Medicaid agencies that the majority of Medicaid

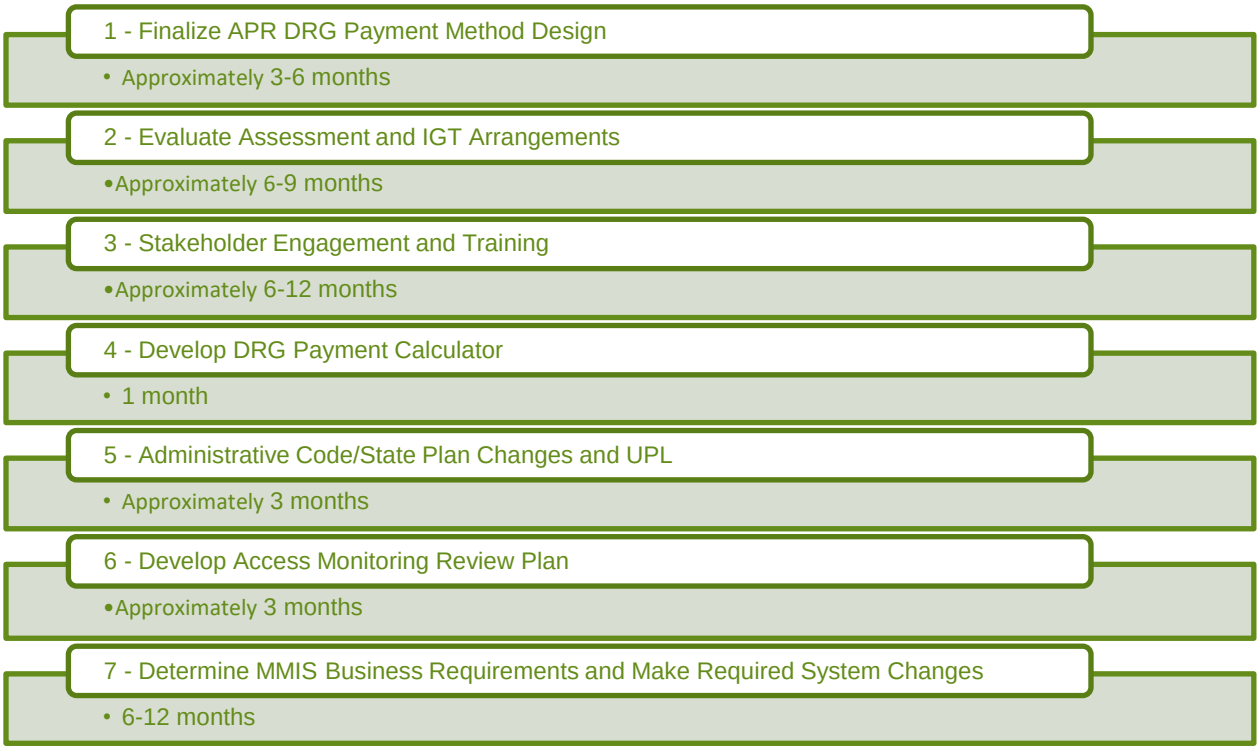
reimbursements need to be tied to utilization of services. In particular, under a Medicaid managed care environment, CMS has stated that pass-through supplemental payments included in managed care capitation rates will be phased out over the next few years. Instead, moving supplemental payments in Arkansas currently funded through non-GRF sources into per-claim payments is a permissible option to satisfy CMS's current policies and maintain funding levels. However, this method cannot guarantee the exact annual distribution of payments to each hospital.

- Given the federal limitations in place today and the planned movement toward implementation of the PASSE and other innovative service delivery models, Arkansas will need to develop strategies for repurposing traditional supplemental payment funding under alternative arrangements. The DRG conversion provides Arkansas with the opportunity to repurpose funds towards claim based payment. However, given Arkansas' reliance upon non-GRF funding sources (IGTs/ assessments), the State must find the balance between their policy objectives under transformational initiatives such as DRGs and managed care and the payment impacts to contributing providers (as the two may conflict). As Arkansas considers options, it is critical to have a strong understanding of provider payment impacts, federal limitations, and downstream impacts on funding sources.

10 DRG Implementation

Fully implementing a CMS-approved DRG methodology under DHS' FFS inpatient payment system will require several steps. This section describes key activities required for successful implementation and references estimated time requirements for each task. Implementation tasks are summarized in Figure 10.1 below. Generally, Tasks 1-3 can be conducted concurrently. Tasks 4-7, which can also be conducted concurrently, cannot begin until after Tasks 1 is complete.

Figure 10.1 – DRG Implementation Tasks



10.1 Task 1 – Finalize APR DRG Payment Method Design

10.1.1. Finalize APR DRG Model

Initial DRG conversion review included in this report consisted of baseline modeling without (Simulation 01) and with (Simulation 02) supplemental payments as well as policy adjuster considerations (Simulation 03) using calendar year 2016 claims. Additional modeling should evaluate the impact of all policy considerations prior to finalizing a payment model, evaluating impact through incremental and iterative simulations. In addition, before finalizing the DRG model, DHS may wish to use more recent claims data.

10.1.2. Validate Comprehensiveness and Accuracy of Coding in Final Model Dataset

Prior to finalizing a payment model, additional analyses surrounding documentation and coding may be warranted. Incomplete or inaccurate coding can have significant impacts on prospective rates and should be evaluated to ensure budget neutrality and equitable payments. As previously mentioned, initial evaluation of the model dataset identified several thousand claims where the delivery result (e.g. single live newborn) was reported as the primary diagnosis

rather than main reason for the hospitalization (e.g. vaginal delivery). In this example, literal processing of these claims based on reported diagnosis code order would result an APR DRG unrelated to obstetrics services. Coding practices should be investigated in terms of both accuracy and completeness, comparing to national standards, comparable Medicaid agencies (external validity) and between providers and provider types (internal validity).

10.2 Task 2 – Evaluate Assessment and IGT Arrangements

Transition to DRGs are likely to cause fiscal impacts that may require a new evaluation of the Access and UPL payments and the provider assessments and IGT arrangements that fund them. This will be particularly important should DHS decide to transition supplemental payment funding into the DRG system (as demonstrated in Simulations 02 and 03). Should DHS elect to include a portion of or all supplemental payment funding into the DRG system, a comprehensive review of the Access and UPL payment calculations is required including revisions to the assessment and IGT basis.

10.3 Task 3 – Stakeholder Engagement and Training

For the purposes of transparency and collection of input from the hospital community, a public stakeholder process is imperative. The type and frequency of stakeholder meetings vary by State and examples include:

- All-provider meeting(s): share key information such as timelines and key decisions
- Technical Advisory Group (TAG) meetings: solicitation of feedback during the iterative modeling process from a subset of stakeholders
- Hospital Association meetings: provide modeling update, solicitation of feedback and timeline status updates
- Legislative meeting(s): as needed, to highlight policies and budget implications

After finalization of DRG payment method design, hospital and support staff training is required prior to implementation. The approach for training also varies among States, often including a combination of on-site (“live”) and virtual (e.g. WebEx) meeting options. Multiple training sessions may be warranted to ensure adequate opportunities for attendance among stakeholders.

10.4 Task 4 – Develop DRG Payment Calculator

Upon completion of modeling, a DRG Calculator should be developed to demonstrate the price for a single inpatient claim. The DRG calculator is typically a Microsoft Excel based tool, and has proven extremely useful for all stakeholders, including the Medicaid Agency, hospitals, managed care plans and other impacted contractors (e.g. Medicaid Fiscal Agent, 3M). A DRG Calculator allows a user to enter specific claim fields (e.g. submitted charges, patient age, APR DRG) and after which, the tool will calculate claim payment, including documenting all incremental steps used to determine final payment. Note that the DRG Calculator does not group claims under APR DRGs (rather uses the APR DRG as an input for pricing); the user must separately group claims using 3M’s APR DRG software to obtain the APR DRG assignment. Wisconsin[21] and Florida[22] are example Medicaid agencies that update their calculators annually and provide the tools through their public website.

[21] https://www.forwardhealth.wi.gov/WIPortal/content/Provider/APRDRG/excel/WI_DRG_Calculator.xlsx.spage
[22] http://ahca.myflorida.com/medicaid/cost_reim/xls/FL_DRG_Calculator_SFY_2017-2018_2017-06-30_Final.xlsx

10.5 Task 5 - Administrative Code/State Plan Changes and UPL

The inpatient reimbursement section of the Arkansas Administrative Code and State Plan will require significant revisions for an APR DRG reimbursement system to be approved by the State and CMS. A vendor can assist the Division with updating the Arkansas Administrative Code and filing a State Plan Amendment (SPA) for the new inpatient system, ensuring accuracy and completeness.

CMS requires an inpatient Upper Payment Limit (UPL) demonstration showing that Medicaid payments do not exceed payments under Medicare in order to approve a State Plan Amendment involving a major change in payment method. DHS or a vendor will need to develop an inpatient UPL demonstration for the first state fiscal year of the new APR DRG system, using simulated payments under the new system.

10.6 Task 6 – Develop Access Monitoring Review Plan

The major SPA change for DRGs will likely result in CMS requiring DHS to develop an Access Monitoring Review Plan (AMRP) to meet new CMS requirements to document whether Medicaid payments are sufficient to enlist providers to assure beneficiary access to covered care and services consistent with section 1902(a)(30)(A) of the Social Security Act.

10.7 Task 7 – Determine MMIS Business Requirements and Make Required System Changes

A transition from a per diem to a DRG reimbursement methodology requires significant changes to the pricing logic within the MMIS. A business requirements document for MMIS developers is critical to ensure that payments calculated within the MMIS accurately mimic the payment method design determined in Task 1. The Business Requirements Document (BRD) details the payment method design in terms that can be translated into more technical specifications, which identify where and how the MMIS software will be changed. In particular, the BRD documents the data elements, claim edits and formulas needed for calculation of DRG reimbursement. Thus, the document cannot be finalized until after the payment method design is completed. Also, the document should identify existing claim edits that are applicable to the per diem payment method, but are not needed under a DRG payment method.

Once the business requirements document is complete, implementation of DRG pricing in an MMIS typically takes between six and twelve months. Changes needed in the MMIS include creation of an interface between the MMIS and DRG grouping software, which allows for a DRG code to be assigned to each claim during the process of adjudication. Generally, MMIS changes also include addition of new reference data, addition of logic used to determine the Medicaid allowed amount, and modification of reports and data extracts to include new data elements related to DRG pricing. Changes to an MMIS also usually involve changes to user manuals, billing manuals, claim suspense processing manuals, and call center response instructions. Although the MMIS changes will be significant, DHS's MMIS contractor recently went through APR DRG implementation in Wisconsin, demonstrating their ability to successfully implement this type of methodology.

Appendix A: Summary Results of DRG Modelling for Arkansas

Included in Appendix A are model summaries for each of the three model versions:

- Simulation 01 – Baseline Model Using Current System Allowed Amount for DRG Funding Pool
- Simulation 02 – Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool
- Simulation 03 – Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Report A: Model Parameters
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Simulation Parameters	All Providers	Comment
Stays	96,114	
State-Wide Base Rate	$ 7,212.36	
APR DRG v35 Case Mix	0.7218	
Billed Amt	$ 2,355,440,778	
Est Cost (Billed × CCR)	$ 702,127,500	
Allowed Amount	$ 581,815,376	Equals sum of per diem payments for claims with date of discharge in CY 2016
Est. Gross Supplemental Payment	$ -	
Total Est Claim Pmt	$ 581,815,376	Intention is budget neutrality
APR DRG Simulation Pmt	$ 581,815,102	
Pmt Change	$ (274)	
APR DRG Simulated Outlier Pmt	$ 87,935,363	
APR DRG Simulated Outlier Pct	15.11%	
Est Gross Supplemental Payment Included in Budget	No	
Wage Index Adjustment of Base Rate	Yes	
DRG Policy Adjustor(s)	No	
Age Policy Adjustor(s)	No	
Provider Policy Adjustor(s)	No	
Documentation and Coding Adjustment	No	
Relative Weights	APR v.35 National	
Transfer Payment Policy	Yes	Discharge status codes: '02', '05', '65', '66', '82', '85', '93', '94'
Outlier Policy	Yes: $30,000 / 80%	Medicare-like outlier policy: High side threshold (provider loss) and marginal cost (MC) percentage
Charge Cap Policy	No	

Report B: Summary of Simulation by Service Line - Sorted by Percent Change
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Service Line	Stays	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A	B	C	D	E	F	G	H = F + G	I	J = I - H	K = J ÷ H	L = H ÷ E	M = I ÷ E	N	O = N ÷ I
Circulatory Adult	3,876	1.40	$ 186,282,924	$ 46,152,874	$ 14,117,927	$ -	$ 14,117,927	$ 40,593,415	$ 26,475,488	188%	31%	88%	$ 1,836,648	5%
Misc Adult	15,042	1.25	$ 582,905,305	$ 156,550,791	$ 68,675,645	$ -	$ 68,675,645	$ 141,986,237	$ 73,310,593	107%	44%	91%	$ 8,331,623	6%
Gastroent Adult	4,406	1.01	$ 132,562,673	$ 35,411,072	$ 18,202,717	$ -	$ 18,202,717	$ 32,674,835	$ 14,472,118	80%	51%	92%	$ 709,043	2%
Resp Adult	3,262	0.98	$ 100,624,313	$ 27,237,552	$ 14,019,498	$ -	$ 14,019,498	$ 23,608,121	$ 9,588,623	68%	51%	87%	$ 841,661	4%
Rehab	4	1.58	$ 125,239	$ 33,314	$ 22,850	$ -	$ 22,850	$ 35,855	$ 13,005	57%	69%	108%	$ -	0%
Burns	104	3.34	$ 17,338,750	$ 7,695,418	$ 4,489,665	$ -	$ 4,489,665	$ 6,105,184	$ 1,615,519	36%	58%	79%	$ 3,610,935	59%
Obstetrics	16,137	0.43	$ 252,009,455	$ 63,674,029	$ 38,979,245	$ -	$ 38,979,245	$ 50,237,890	$ 11,258,645	29%	61%	79%	$ 161,956	0%
Substance Abuse	1,078	0.44	$ 13,048,107	$ 3,422,118	$ 3,553,115	$ -	$ 3,553,115	$ 3,417,639	$ (135,476)	-4%	104%	100%	$ -	0%
Misc Pediatric	6,697	1.12	$ 266,829,135	$ 101,270,801	$ 103,216,468	$ -	$ 103,216,468	$ 80,686,780	$ (22,529,688)	-22%	102%	80%	$ 27,057,435	34%
Neonate	3,627	2.38	$ 317,668,157	$ 100,514,948	$ 105,568,888	$ -	$ 105,568,888	$ 81,895,047	$ (23,673,841)	-22%	105%	81%	$ 23,235,789	28%
Mental Health Adult	6,795	0.52	$ 83,683,640	$ 22,662,377	$ 33,231,577	$ -	$ 33,231,577	$ 25,413,799	$ (7,817,778)	-24%	147%	112%	$ 97,866	0%
Transplant	38	12.23	$ 22,405,053	$ 7,280,569	$ 8,643,736	$ -	$ 8,643,736	$ 6,010,636	$ (2,633,099)	-30%	119%	83%	$ 2,659,683	44%
Resp Pediatric	3,347	0.66	$ 95,345,575	$ 37,923,007	$ 43,743,962	$ -	$ 43,743,962	$ 28,942,628	$ (14,801,334)	-34%	115%	76%	$ 13,155,789	45%
Normal Newborn	22,152	0.15	$ 113,047,651	$ 30,736,545	$ 46,011,027	$ -	$ 46,011,027	$ 24,063,568	$ (21,947,459)	-48%	150%	78%	$ 317,427	1%
Mental Health Pediatric	9,549	0.44	$ 171,564,802	$ 61,562,086	$ 79,339,057	$ -	$ 79,339,057	$ 36,143,468	$ (43,195,589)	-54%	129%	59%	$ 5,919,506	16%
Total	**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ -**	**$ 581,815,376**	**$ 581,815,102**	**$ (274)**	**0%**	**83%**	**83%**	**$ 87,935,363**	**15%**

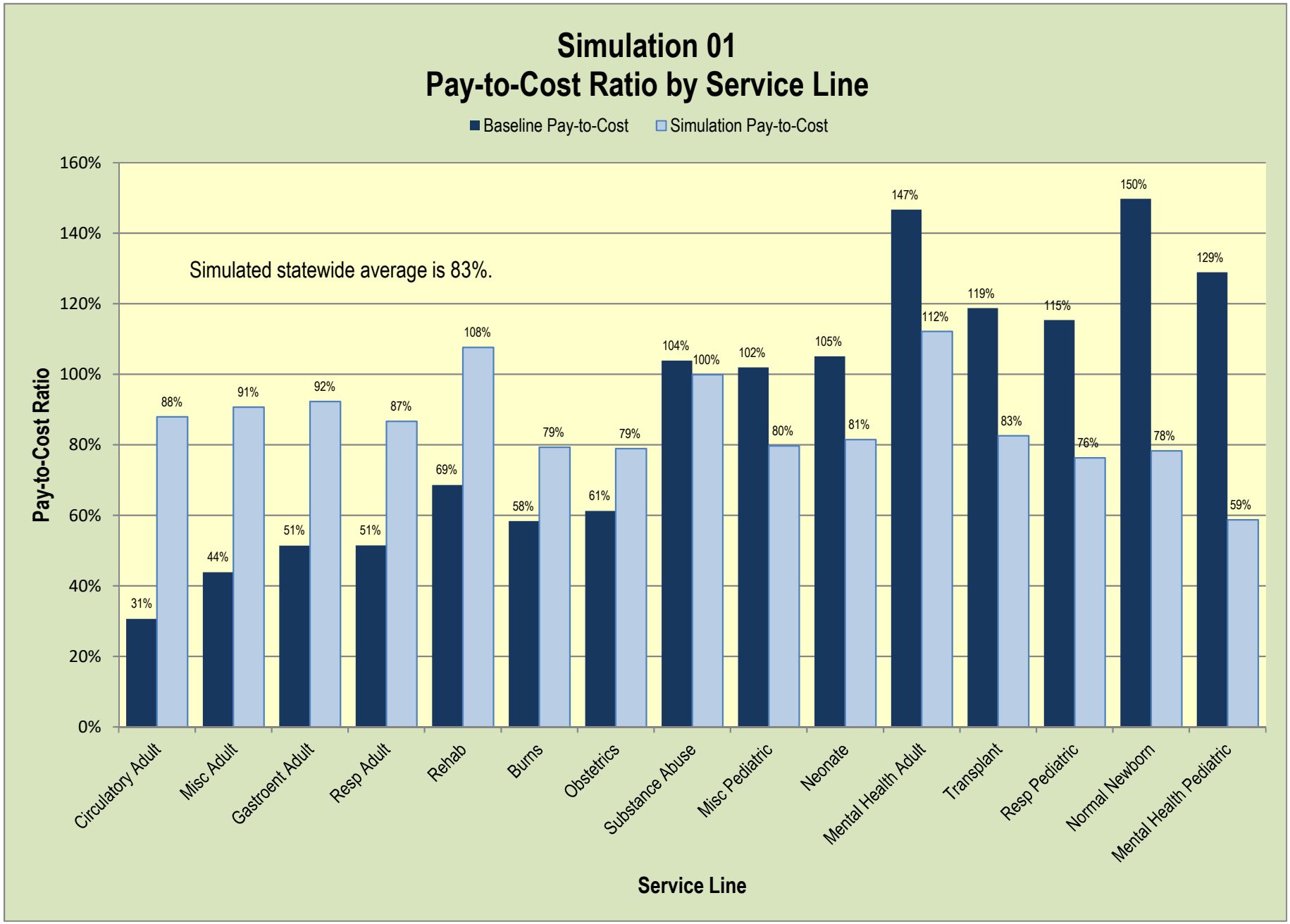
Notes:

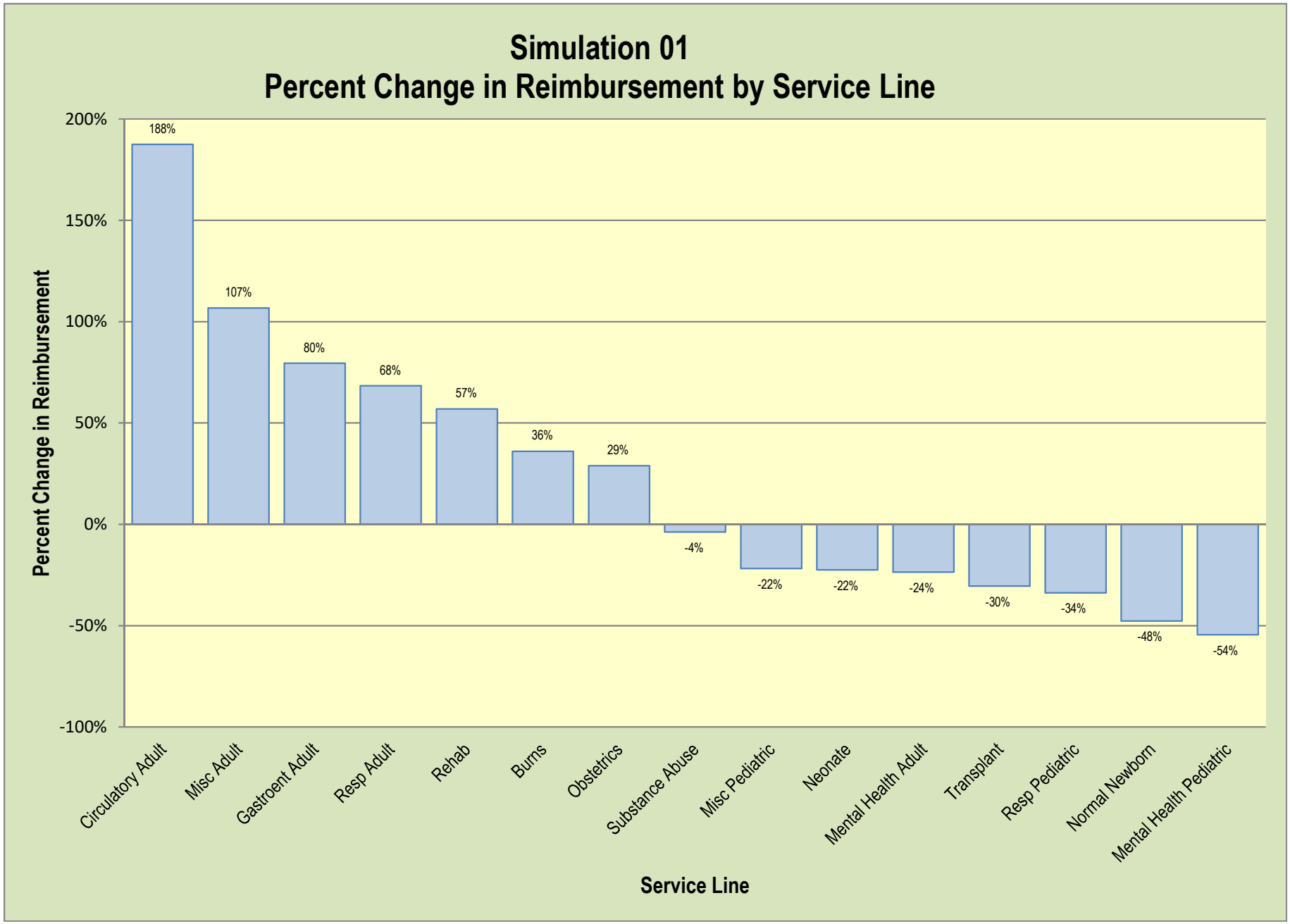
C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.


Simulation 01
Pay-to-Cost Ratio by Service Line
Baseline Pay-to-Cost
Simulation Pay-to-Cost
Simulated statewide average is 83%.
Pay-to-Cost Ratio
160%
140%
120%
100%
80%
60%
40%
20%
0%
31%
88%
44%
91%
51%
92%
51%
87%
69%
108%
58%
79%
61%
79%
104%
100%
102%
80%
105%
81%
147%
112%
119%
83%
115%
76%
150%
78%
129%
59%
Circulatory Adult
Misc Adult
Gastroent Adult
Resp Adult
Rehab
Burns
Obstetrics
Substance Abuse
Misc Pediatric
Neonate
Mental Health Adult
Transplant
Resp Pediatric
Normal Newborn
Mental Health Pediatric
Service Line


Simulation 01
Percent Change in Reimbursement by Service Line
Percent Change in Reimbursement
200%
150%
100%
50%
0%
-50%
-100%
188%
107%
80%
68%
57%
36%
29%
-4%
-22%
-22%
-24%
-30%
-34%
-48%
-54%
Circulatory Adult
Misc Adult
Gastroent Adult
Resp Adult
Rehab
Burns
Obstetrics
Substance Abuse
Misc Pediatric
Neonate
Mental Health Adult
Transplant
Resp Pediatric
Normal Newborn
Mental Health Pediatric
Service Line

Report C: Summary of Simulation by APR DRG Severity of Illness - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

SOI	SOI Desc.	Stays	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A		B	C	D	E	F	G	H = F + G	I	J = I - H	K = J ÷ H	L = H ÷ E	M = I ÷ E	N	O = N ÷ I
1	Minor	47,196	0.38	$ 587,155,224	$ 164,759,295	$ 143,914,115	$ -	$ 143,914,115	$ 131,480,607	$(12,433,508)	-9%	87%	80%	$ 3,541,326	3%
2	Moderate	33,902	0.66	$ 689,549,669	$ 200,032,722	$ 177,078,774	$ -	$ 177,078,774	$ 167,704,533	$ (9,374,241)	-5%	89%	84%	$ 8,138,663	5%
3	Major	11,929	1.37	$ 523,392,549	$ 156,534,361	$ 130,881,687	$ -	$ 130,881,687	$ 131,311,967	$ 430,280	0%	84%	84%	$ 15,189,852	12%
4	Extreme	3,087	4.20	$ 555,343,336	$ 180,801,122	$ 129,940,799	$ -	$ 129,940,799	$ 151,317,994	$ 21,377,195	16%	72%	84%	$ 61,065,521	40%
Total		**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ -**	**$ 581,815,376**	**$ 581,815,102**	**$ (274)**	**0%**	**83%**	**83%**	**$ 87,935,363**	**15%**

Notes:

A) Severity of illness (SOI)

C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.

Figure D
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

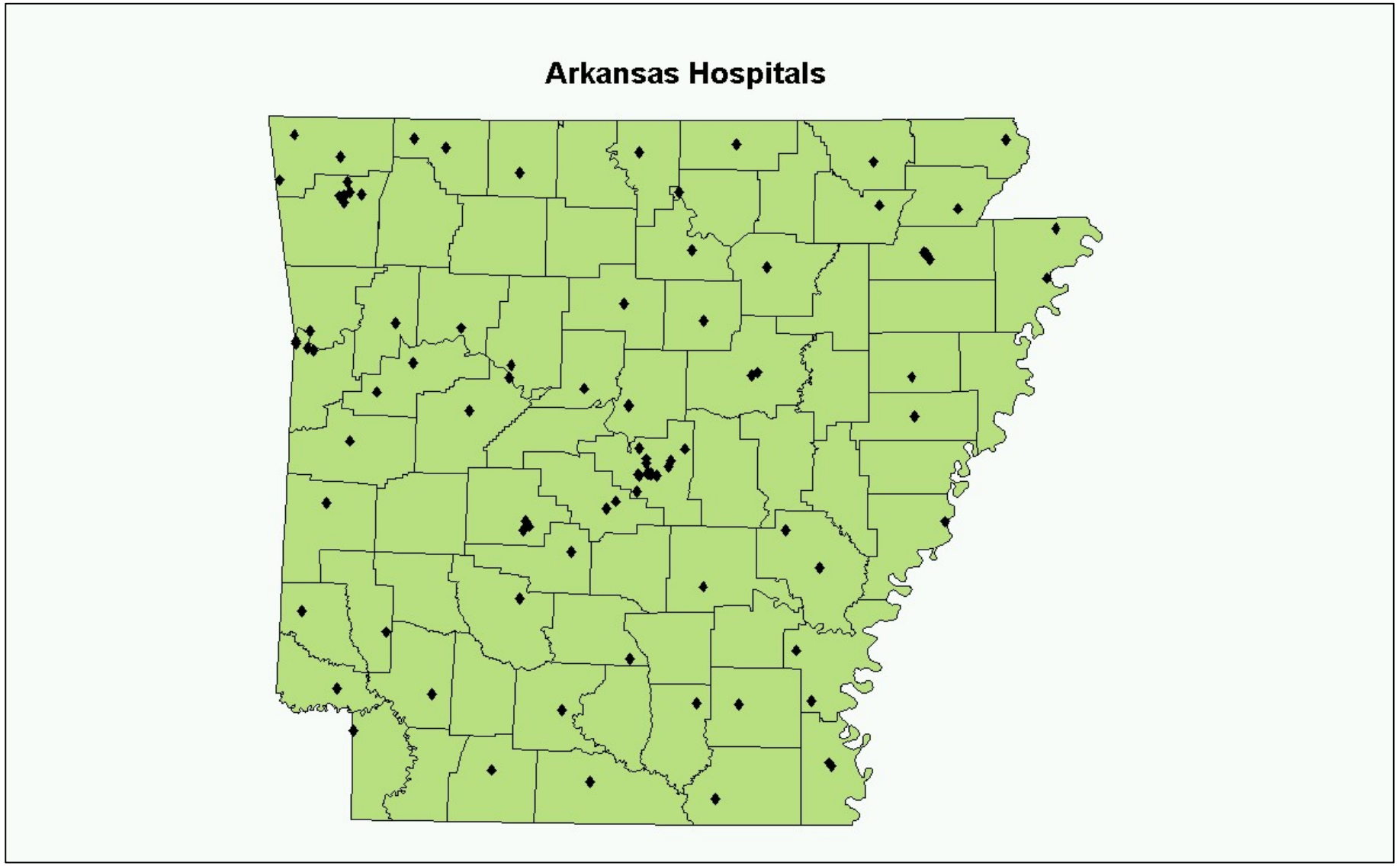
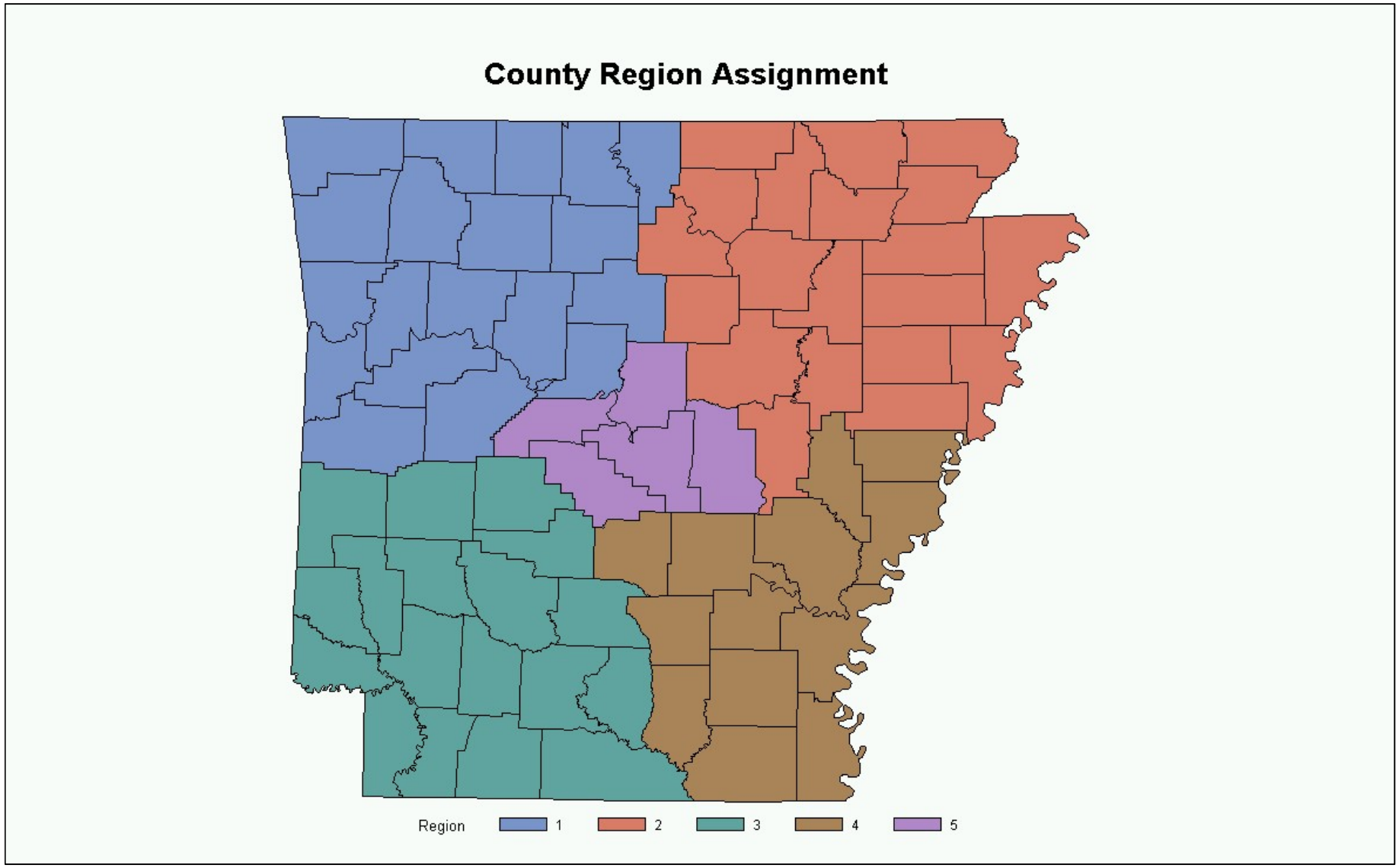


Figure D
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services



Report D: Summary of Simulation by Region - Sorted by Region
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: Data source is DRG Claims Dataset, CY 2016. Medicaid payments (allowed amount, does not include TPL) and estimated cost using Medicare cost-to-charge ratio where available, otherwise Navigant calculated CCRs from HCRIS Cost Report. Gross supplemental payments allocated to each model claim based on charges(not net of IGT or tax). Grouped under APR DRG version 35.

Region	Stays	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A	B	C	D	E	F	G	H = F + G	I	J = I - H	K = J ÷ H	L = H ÷ E	M = I ÷ E	N	O = N ÷ I
1 - North West	24,046	0.58	$ 523,137,922	$ 123,885,555	$ 77,034,128	$ -	$ 77,034,128	$ 104,809,536	$ 27,775,408	36%	62%	85%	$ 5,924,137	6%
2 - North East	16,033	0.57	$ 202,266,691	$ 67,409,696	$ 41,103,644	$ -	$ 41,103,644	$ 66,018,258	$ 24,914,614	61%	61%	98%	$ 899,940	1%
3 - South West	8,751	0.57	$ 170,003,106	$ 38,581,704	$ 26,377,561	$ -	$ 26,377,561	$ 36,244,827	$ 9,867,266	37%	68%	94%	$ 867,372	2%
4 - South East	4,880	0.53	$ 88,851,497	$ 24,784,369	$ 14,316,438	$ -	$ 14,316,438	$ 18,996,723	$ 4,680,285	33%	58%	77%	$ 523,415	3%
5 - Central	35,910	0.92	$ 1,132,797,927	$ 392,295,740	$ 386,988,604	$ -	$ 386,988,604	$ 308,796,390	$ (78,192,214)	-20%	99%	79%	$ 74,724,715	24%
Border	6,494	0.90	$ 238,383,635	$ 55,170,435	$ 35,995,001	$ -	$ 35,995,001	$ 46,949,368	$ 10,954,366	30%	65%	85%	$ 4,995,783	11%
Total	**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ -**	**$ 581,815,376**	**$ 581,815,102**	**$ (274)**	**0%**	**83%**	**83%**	**$ 87,935,363**	**15%**

Notes:

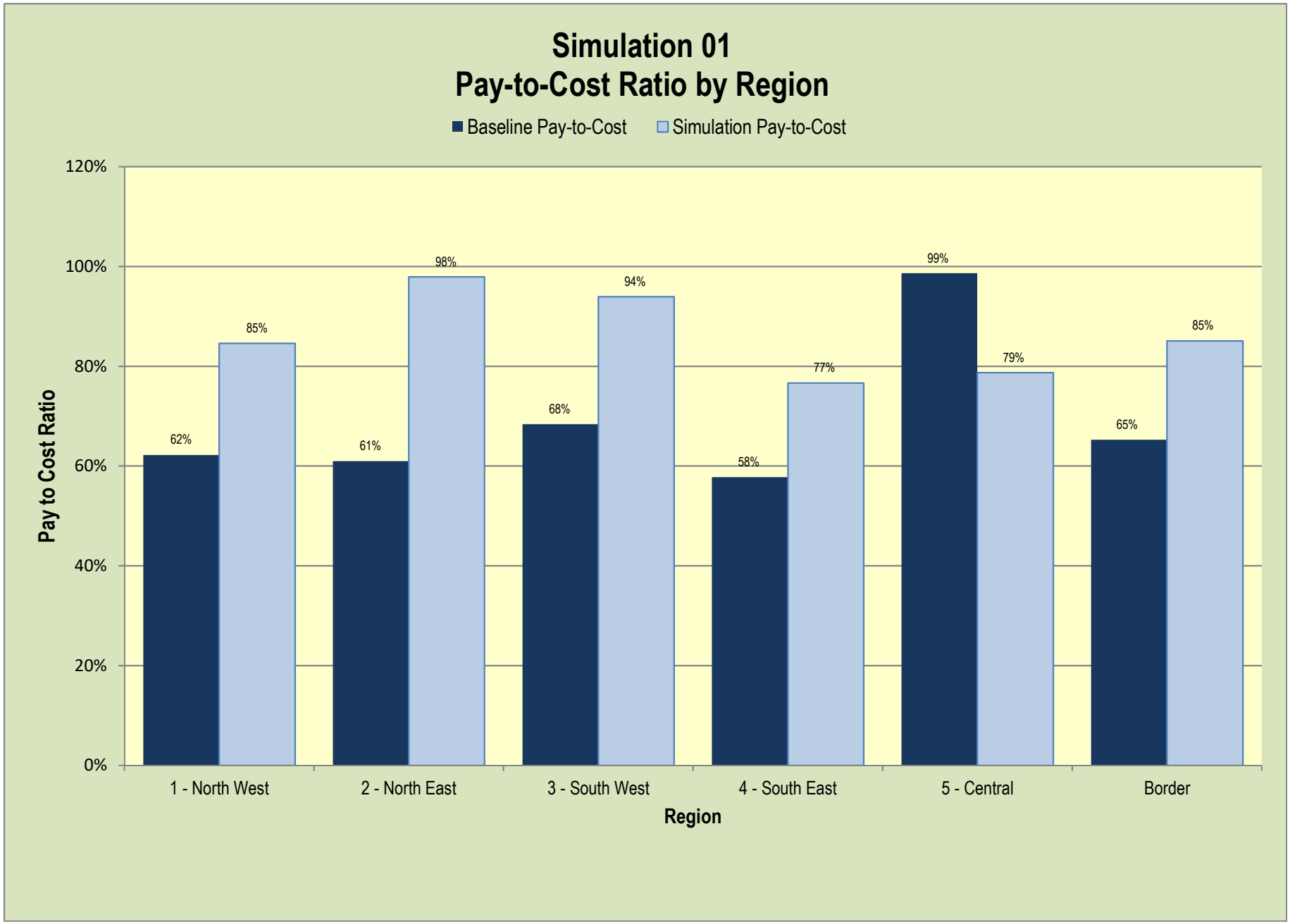
A) Region assignment developed by Navigant at the county level using provider phsyical address

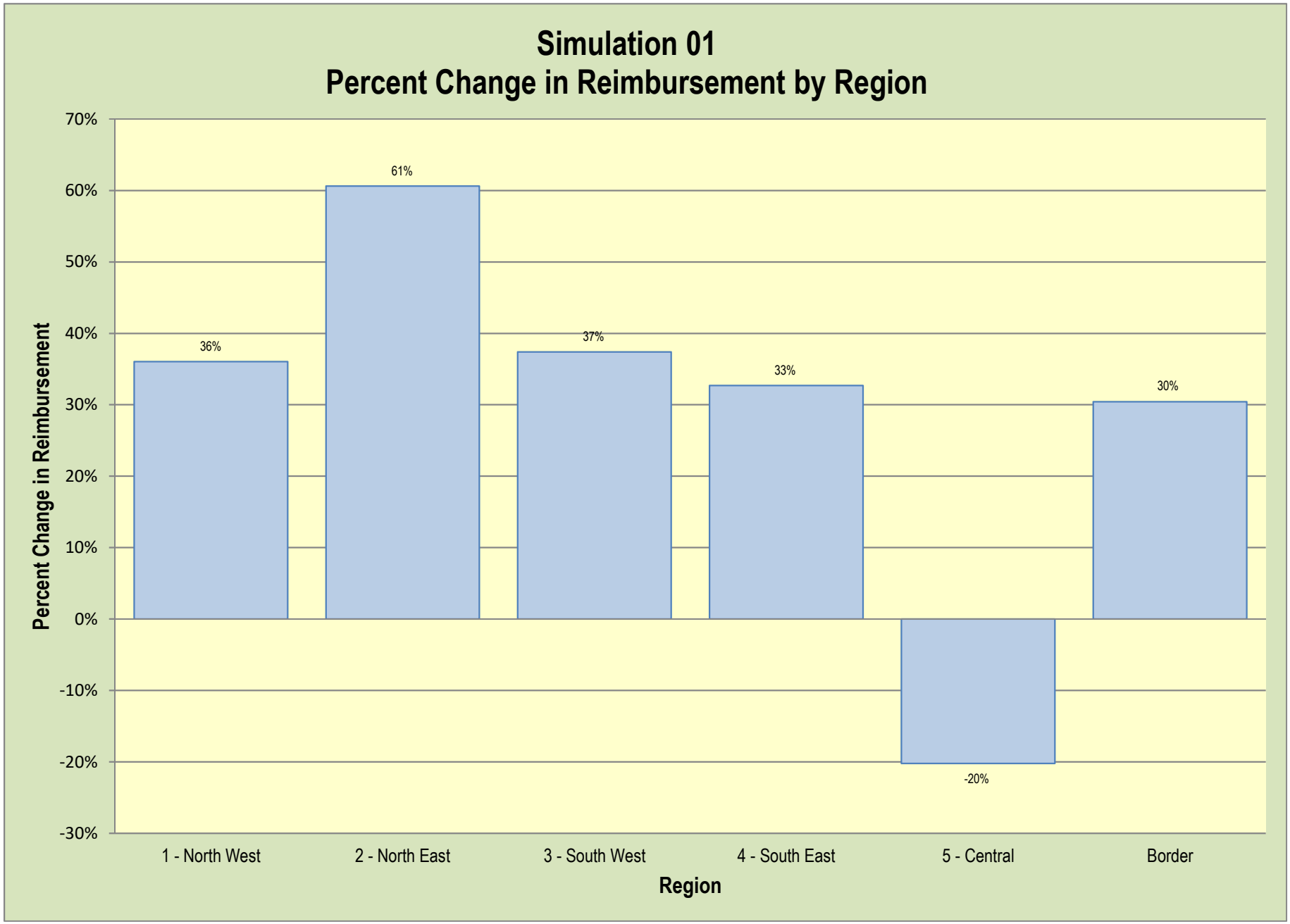
C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.


Simulation 01
Pay-to-Cost Ratio by Region
Baseline Pay-to-Cost
Simulation Pay-to-Cost
120%
100%
80%
60%
40%
20%
0%
Pay to Cost Ratio
62%
85%
61%
98%
68%
94%
58%
77%
99%
79%
65%
85%
1 - North West
2 - North East
3 - South West
4 - South East
5 - Central
Border
Region


Simulation 01
Percent Change in Reimbursement by Region
Percent Change in Reimbursement
70%
60%
50%
40%
30%
20%
10%
0%
-10%
-20%
-30%
36%
61%
37%
33%
-20%
30%
1 - North West
2 - North East
3 - South West
4 - South East
5 - Central
Border
Region

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
640	Neonate Birthwt >2499g, Normal Newborn Or Neonate W Other Problem	21,519	0.14	$ 104,674,466	$ 28,412,852	$ 42,037,457	$ 21,343,124	$ (20,694,333)	-49%	148%	75%	$ 310,919	1%
560	Vaginal Delivery	9,547	0.34	$ 129,744,421	$ 31,898,806	$ 18,560,119	$ 23,463,062	$ 4,902,943	26%	58%	74%	$ 7,981	0%
753	Bipolar Disorders	6,718	0.47	$ 108,898,977	$ 36,908,139	$ 46,341,919	$ 25,734,126	$ (20,607,793)	-44%	126%	70%	$ 3,085,998	12%
540	Cesarean Delivery	4,707	0.60	$ 96,765,701	$ 24,930,546	$ 14,274,394	$ 20,629,751	$ 6,355,357	45%	57%	83%	$ 139,222	1%
751	Major Depressive Disorders & Other/Unspecified Psychoses	3,209	0.46	$ 47,297,246	$ 15,739,124	$ 19,625,795	$ 11,433,240	$ (8,192,555)	-42%	125%	73%	$ 724,584	6%
754	Depression Except Major Depressive Disorder	2,771	0.33	$ 32,996,208	$ 10,679,330	$ 14,141,194	$ 7,167,714	$ (6,973,480)	-49%	132%	67%	$ 616,803	9%
750	Schizophrenia	1,734	0.73	$ 27,286,379	$ 7,822,690	$ 11,594,122	$ 9,154,546	$ (2,439,576)	-21%	148%	117%	$ 145,066	2%
720	Septicemia & Disseminated Infections	1,577	1.48	$ 83,617,903	$ 23,677,053	$ 14,017,375	$ 19,685,066	$ 5,667,691	40%	59%	83%	$ 3,325,500	17%
139	Other Pneumonia	1,413	0.66	$ 24,742,277	$ 7,438,540	$ 6,259,831	$ 6,842,986	$ 583,155	9%	84%	92%	$ 165,450	2%
138	Bronchiolitis & Rsv Pneumonia	1,174	0.46	$ 16,820,696	$ 6,269,603	$ 9,777,811	$ 4,780,889	$ (4,996,922)	-51%	156%	76%	$ 905,352	19%
420	Diabetes	1,166	0.59	$ 21,507,353	$ 6,288,781	$ 3,904,375	$ 4,925,058	$ 1,020,683	26%	62%	78%	$ -	0%
383	Cellulitis & Other Skin Infections	1,057	0.56	$ 17,721,371	$ 4,877,219	$ 4,334,140	$ 4,282,174	$ (51,966)	-1%	89%	88%	$ 8,481	0%
566	Other Antepartum Diagnoses	902	0.43	$ 10,710,644	$ 2,984,613	$ 3,376,296	$ 2,758,550	$ (617,746)	-18%	113%	92%	$ 14,753	1%
140	Chronic Obstructive Pulmonary Disease	876	0.71	$ 17,583,922	$ 4,892,172	$ 2,808,667	$ 4,460,959	$ 1,652,292	59%	57%	91%	$ -	0%
249	Other Gastroenteritis, Nausea & Vomiting	811	0.53	$ 10,625,411	$ 3,106,527	$ 3,334,385	$ 3,146,214	$ (188,171)	-6%	107%	101%	$ 44,863	1%
463	Kidney & Urinary Tract Infections	805	0.58	$ 12,263,617	$ 3,519,767	$ 3,631,843	$ 3,359,118	$ (272,725)	-8%	103%	95%	$ 10,185	0%
141	Asthma	758	0.48	$ 9,547,261	$ 3,004,804	$ 2,735,191	$ 2,650,780	$ (84,411)	-3%	91%	88%	$ 9,186	0%
194	Heart Failure	742	0.85	$ 19,338,513	$ 5,215,070	$ 3,006,867	$ 4,762,204	$ 1,755,337	58%	58%	91%	$ 219,500	5%
861	Signs, Symptoms & Other Factors Influencing Health Status	718	0.51	$ 9,214,124	$ 2,703,259	$ 2,410,492	$ 2,724,587	$ 314,095	13%	89%	101%	$ 91,332	3%
581	Neonate, Transferred < 5 Days Old, Born Here	709	0.18	$ 4,770,089	$ 1,419,952	$ 930,922	$ 899,250	$ (31,672)	-3%	66%	63%	$ -	0%
53	Seizure	708	0.74	$ 14,515,972	$ 4,864,701	$ 4,352,982	$ 4,332,295	$ (20,687)	0%	89%	89%	$ 549,826	13%
133	Respiratory Failure	674	1.14	$ 32,284,170	$ 10,253,029	$ 5,931,600	$ 7,267,424	$ 1,335,824	23%	58%	71%	$ 1,792,686	25%
634	Neonate, Birthwt >2499g W Resp Dist Synd/Oth Maj Resp Cond	658	1.56	$ 52,440,898	$ 15,726,430	$ 15,076,418	$ 10,123,243	$ (4,953,175)	-33%	96%	64%	$ 2,783,755	27%
626	Neonate Bwt 2000-2499g, Normal Newborn Or Neonate W Other Problem	633	0.60	$ 8,373,185	$ 2,323,693	$ 3,973,570	$ 2,720,444	$ (1,253,126)	-32%	171%	117%	$ 6,508	0%
812	Poisoning Of Medicinal Agents	590	0.67	$ 11,406,410	$ 3,083,797	$ 1,732,849	$ 2,871,511	$ 1,138,662	66%	56%	93%	$ 75,661	3%
755	Adjustment Disorders & Neuroses Except Depressive Diagnoses	572	0.38	$ 11,146,631	$ 4,081,027	$ 6,372,422	$ 2,109,638	$ (4,262,784)	-67%	156%	52%	$ 539,058	26%
254	Other Digestive System Diagnoses	536	0.70	$ 10,486,843	$ 3,055,600	$ 3,472,590	$ 2,771,633	$ (700,957)	-20%	114%	91%	$ 74,527	3%
662	Sickle Cell Anemia Crisis	534	0.73	$ 10,886,807	$ 3,290,553	$ 3,415,760	$ 2,803,857	$ (611,903)	-18%	104%	85%	$ 2,297	0%
282	Disorders Of Pancreas Except Malignancy	526	0.81	$ 12,652,256	$ 3,482,854	$ 2,398,115	$ 3,064,427	$ 666,312	28%	69%	88%	$ 36,049	1%
469	Acute Kidney Injury	500	0.84	$ 13,714,061	$ 3,687,873	$ 2,505,528	$ 3,191,486	$ 685,958	27%	68%	87%	$ 175,586	6%
752	Disorders Of Personality & Impulse Control	490	0.42	$ 6,461,982	$ 1,628,914	$ 2,838,113	$ 1,490,744	$ (1,347,369)	-47%	174%	92%	$ -	0%
633	Neonate Birthwt >2499g W Major Anomaly	474	1.46	$ 42,823,126	$ 14,996,891	$ 16,852,251	$ 10,402,892	$ (6,449,359)	-38%	112%	69%	$ 5,474,317	53%
639	Neonate Birthwt >2499g W Other Significant Condition	419	0.58	$ 12,442,615	$ 3,924,934	$ 5,170,153	$ 2,042,768	$ (3,127,385)	-60%	132%	52%	$ 283,555	14%
775	Alcohol Abuse & Dependence	415	0.52	$ 6,675,670	$ 1,670,388	$ 1,409,974	$ 1,547,221	$ 137,247	10%	84%	93%	$ -	0%
263	Cholecystectomy	406	1.25	$ 15,066,216	$ 3,828,132	$ 1,431,954	$ 3,682,689	$ 2,250,735	157%	37%	96%	$ 16,508	0%
758	Behavioral Disorders	400	0.49	$ 10,094,305	$ 3,732,793	$ 6,273,262	$ 1,860,649	$ (4,412,613)	-70%	168%	50%	$ 448,287	24%
45	Cva & Precerebral Occlusion W Infarct	373	1.08	$ 12,353,436	$ 3,338,521	$ 1,714,370	$ 2,982,018	$ 1,267,648	74%	51%	89%	$ 91,216	3%
817	Overdose	356	0.67	$ 7,092,341	$ 1,851,211	$ 1,129,623	$ 1,608,999	$ 479,376	42%	61%	87%	$ -	0%
113	Infections Of Upper Respiratory Tract	348	0.47	$ 4,705,814	$ 1,558,432	$ 1,969,315	$ 1,439,507	$ (529,808)	-27%	126%	92%	$ 272,227	19%
198	Angina Pectoris & Coronary Atherosclerosis	348	0.54	$ 7,041,440	$ 1,750,188	$ 634,216	$ 1,348,707	$ 714,491	113%	36%	77%	$ -	0%
422	Hypovolemia & Related Electrolyte Disorders	342	0.48	$ 3,618,040	$ 1,200,338	$ 1,855,745	$ 1,213,039	$ (642,706)	-35%	155%	101%	$ 28,060	2%
247	Intestinal Obstruction	327	0.67	$ 6,496,725	$ 1,962,884	$ 1,869,632	$ 1,628,211	$ (241,421)	-13%	95%	83%	$ 60,392	4%
302	Knee Joint Replacement	303	1.55	$ 14,507,178	$ 3,762,216	$ 724,470	$ 3,425,774	$ 2,701,304	373%	19%	91%	$ 47,525	1%
201	Cardiac Arrhythmia & Conduction Disorders	299	0.66	$ 6,584,400	$ 1,723,192	$ 1,029,182	$ 1,452,528	$ 423,346	41%	60%	84%	$ 29,749	2%
696	Other Chemotherapy	293	1.18	$ 11,656,418	$ 4,469,793	$ 3,237,933	$ 2,608,963	$ (628,970)	-19%	72%	58%	$ 116,381	4%

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Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

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Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
776	Other Drug Abuse & Dependence	285	0.44	$ 2,667,304	$ 767,306	$ 996,396	$ 901,879	$ (94,517)	-9%	130%	118%	$ -	0%
421	Malnutrition, Failure To Thrive & Other Nutritional Disorders	285	0.83	$ 6,977,841	$ 2,679,432	$ 6,876,248	$ 2,189,191	$ (4,687,057)	-68%	257%	82%	$ 490,972	22%
663	Other Anemia & Disorders Of Blood & Blood-Forming Organs	282	0.62	$ 5,746,568	$ 1,588,925	$ 1,207,772	$ 1,275,435	$ 67,663	6%	76%	80%	$ 12,862	1%
192	Cardiac Catheterization For Other Non-Coronary Conditions	281	1.47	$ 13,032,033	$ 2,957,549	$ 1,036,700	$ 2,961,486	$ 1,924,786	186%	35%	100%	$ 7,930	0%
241	Peptic Ulcer & Gastritis	280	0.84	$ 6,758,645	$ 1,794,890	$ 1,071,136	$ 1,698,450	$ 627,314	59%	60%	95%	$ 904	0%
203	Chest Pain	274	0.55	$ 3,639,023	$ 1,017,995	$ 474,638	$ 1,087,828	$ 613,190	129%	47%	107%	$ -	0%
850	Procedure W Diag Of Rehab, Aftercare Or Oth Contact W Health Service	256	1.66	$ 8,092,776	$ 2,560,476	$ 1,666,125	$ 3,725,100	$ 2,058,975	124%	65%	145%	$ 666,432	18%
190	Acute Myocardial Infarction	252	1.07	$ 13,157,406	$ 3,078,910	$ 804,008	$ 2,193,218	$ 1,389,210	173%	26%	71%	$ 273,789	12%
174	Percutaneous Coronary Intervention W Ami	251	2.21	$ 21,562,813	$ 4,718,548	$ 761,826	$ 4,022,933	$ 3,261,107	428%	16%	85%	$ 19,787	0%
313	Knee & Lower Leg Procedures Except Foot	247	1.45	$ 11,587,369	$ 3,162,097	$ 1,405,670	$ 2,670,901	$ 1,265,231	90%	44%	84%	$ 82,346	3%
364	Other Skin, Subcutaneous Tissue & Related Procedures	243	1.12	$ 8,742,760	$ 2,249,272	$ 1,254,389	$ 1,979,994	$ 725,605	58%	56%	88%	$ 47,037	2%
561	Postpartum & Post Abortion Diagnoses W/O Procedure	241	0.51	$ 3,637,730	$ 1,044,448	$ 846,388	$ 879,557	$ 33,169	4%	81%	84%	$ -	0%
710	Infectious & Parasitic Diseases Including Hiv W O.R. Procedure	234	3.54	$ 36,522,920	$ 10,373,660	$ 4,968,829	$ 8,706,978	$ 3,738,149	75%	48%	84%	$ 2,864,505	33%
773	Opioid Abuse & Dependence	232	0.35	$ 2,218,042	$ 577,346	$ 746,360	$ 583,825	$ (162,535)	-22%	129%	101%	$ -	0%
563	Preterm Labor	231	0.35	$ 2,421,532	$ 629,832	$ 775,356	$ 577,703	$ (197,653)	-25%	123%	92%	$ -	0%
253	Other & Unspecified Gastrointestinal Hemorrhage	214	0.83	$ 5,241,618	$ 1,364,605	$ 819,228	$ 1,254,878	$ 435,650	53%	60%	92%	$ -	0%
248	Major Gastrointestinal & Peritoneal Infections	210	0.82	$ 4,215,976	$ 1,376,154	$ 1,474,334	$ 1,242,210	$ (232,124)	-16%	107%	90%	$ 2,848	0%
756	Acute Anxiety & Delirium States	210	0.52	$ 4,404,202	$ 1,582,481	$ 2,137,007	$ 1,066,330	$ (1,070,677)	-50%	135%	67%	$ 310,236	29%
137	Major Respiratory Infections & Inflammations	207	1.22	$ 8,815,295	$ 2,244,194	$ 1,736,529	$ 1,956,167	$ 219,638	13%	77%	87%	$ 153,206	8%
660	Major Hematologic/Immunologic Diag Exc Sickle Cell Crisis & Coagul	206	1.17	$ 10,170,673	$ 3,866,613	$ 3,903,686	$ 2,795,808	$ (1,107,878)	-28%	101%	72%	$ 1,061,528	38%
304	Dorsal & Lumbar Fusion Proc Except For Curvature Of Back	206	3.33	$ 19,044,811	$ 5,165,736	$ 939,683	$ 5,051,087	$ 4,111,404	438%	18%	98%	$ 103,241	2%
199	Hypertension	205	0.59	$ 3,454,097	$ 964,924	$ 481,442	$ 869,994	$ 388,552	81%	50%	90%	$ -	0%
301	Hip Joint Replacement	205	1.61	$ 9,846,767	$ 2,873,751	$ 614,869	$ 2,492,587	$ 1,877,718	305%	21%	87%	$ 112,415	5%
722	Fever	201	0.51	$ 2,106,749	$ 558,647	$ 717,056	$ 739,948	$ 22,892	3%	128%	132%	$ -	0%
721	Post-Operative, Post-Traumatic, Other Device Infections	198	1.23	$ 6,868,354	$ 2,066,269	$ 1,884,637	$ 1,857,995	$ (26,642)	-1%	91%	90%	$ 118,496	6%
612	Neonate Bwt 1500-1999g W Resp Dist Synd/Oth Maj Resp Cond	195	4.43	$ 24,025,682	$ 6,985,964	$ 7,972,988	$ 6,670,322	$ (1,302,666)	-16%	114%	95%	$ 670,432	10%
21	Craniotomy Except For Trauma	195	3.75	$ 29,954,345	$ 9,398,883	$ 5,383,902	$ 7,487,824	$ 2,103,922	39%	57%	80%	$ 2,219,892	30%
951	Moderately Extensive Procedure Unrelated To Principal Diagnosis	194	2.13	$ 16,110,289	$ 5,281,778	$ 3,395,528	$ 4,436,385	$ 1,040,857	31%	64%	84%	$ 1,472,368	33%
321	Cervical Spinal Fusion & Other Back/Neck Proc Exc Disc Excis/Decomp	191	2.01	$ 11,550,328	$ 3,082,174	$ 585,607	$ 2,873,477	$ 2,287,870	391%	19%	93%	$ 99,345	3%
541	Vaginal Delivery W Sterilization &/Or D&c	186	0.55	$ 3,363,232	$ 855,211	$ 343,547	$ 738,683	$ 395,136	115%	40%	86%	$ -	0%
251	Abdominal Pain	182	0.60	$ 2,957,244	$ 835,474	$ 532,487	$ 776,882	$ 244,395	46%	64%	93%	$ 3,855	0%
614	Neonate Bwt 1500-1999g W Or W/O Other Significant Condition	180	2.02	$ 9,118,890	$ 2,650,582	$ 4,028,820	$ 2,640,669	$ (1,388,151)	-34%	152%	100%	$ 86,404	3%
143	Other Respiratory Diagnoses Except Signs, Symptoms & Minor Diagnoses	177	0.89	$ 5,474,346	$ 1,701,029	$ 1,963,413	$ 1,312,981	$ (650,432)	-33%	115%	77%	$ 183,904	14%
145	Acute Bronchitis And Related Symptoms	177	0.60	$ 2,569,965	$ 860,591	$ 722,411	$ 796,206	$ 73,795	10%	84%	93%	$ 28,552	4%
175	Percutaneous Coronary Intervention W/O Ami	176	2.24	$ 15,557,110	$ 3,490,099	$ 530,586	$ 2,901,552	$ 2,370,966	447%	15%	83%	$ 60,128	2%
470	Chronic Kidney Disease	175	0.90	$ 5,282,411	$ 1,439,680	$ 812,127	$ 1,252,258	$ 440,131	54%	56%	87%	$ 121,964	10%
351	Other Musculoskeletal System & Connective Tissue Diagnoses	173	0.64	$ 2,995,361	$ 940,285	$ 622,532	$ 834,156	$ 211,624	34%	66%	89%	$ 45,289	5%
542	Vaginal Delivery W Complicating Procedures Exc Sterilization &/Or D&c	170	0.46	$ 2,677,145	$ 653,421	$ 392,963	$ 557,992	$ 165,029	42%	60%	85%	$ -	0%
513	Uterine & Adnexa Procedures For Non-Malignancy Except Leiomyoma	169	0.92	$ 4,473,083	$ 1,199,942	$ 438,452	$ 1,123,878	$ 685,426	156%	37%	94%	$ -	0%
58	Other Disorders Of Nervous System	162	0.86	$ 4,262,755	$ 1,252,683	$ 1,019,526	$ 1,158,598	$ 139,072	14%	81%	92%	$ 173,431	15%
622	Neonate Bwt 2000-2499g W Resp Dist Synd/Oth Maj Resp Cond	160	2.40	$ 11,484,436	$ 3,103,088	$ 3,273,978	$ 2,794,278	$ (479,700)	-15%	106%	90%	$ 43,880	2%
54	Migraine & Other Headaches	155	0.64	$ 2,111,190	$ 602,225	$ 616,103	$ 714,525	$ 98,422	16%	102%	119%	$ -	0%
115	Other Ear, Nose, Mouth,throat & Cranial/Facial Diagnoses	153	0.69	$ 4,072,552	$ 1,412,697	$ 1,582,811	$ 1,205,558	$ (377,253)	-24%	112%	85%	$ 442,648	37%
197	Peripheral & Other Vascular Disorders	152	0.80	$ 4,601,984	$ 1,223,965	$ 704,452	$ 970,924	$ 266,472	38%	58%	79%	$ 101,850	10%
308	Hip & Femur Fracture Repair	152	1.45	$ 6,275,081	$ 1,809,438	$ 712,826	$ 1,603,159	$ 890,333	125%	39%	89%	$ 32,483	2%

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A		B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
233	Appendectomy With Complex Principal Diagnosis	152	1.12	$ 4,567,272	$ 1,280,470	$ 851,319	$ 1,224,127	$ 372,808	44%	66%	96%	$ -	0%
636	Neonate Birthwt >2499g W Congenital/Perinatal Infection	150	0.96	$ 5,811,744	$ 1,631,614	$ 1,958,404	$ 1,122,087	$ (836,317)	-43%	120%	69%	$ 89,891	8%
134	Pulmonary Embolism	149	1.04	$ 4,811,040	$ 1,264,634	$ 526,970	$ 1,112,934	$ 585,964	111%	42%	88%	$ 614	0%
757	Organic Mental Health Disturbances	149	0.75	$ 3,299,482	$ 1,089,410	$ 1,326,379	$ 906,715	$ (419,664)	-32%	122%	83%	$ 113,485	13%
231	Major Large Bowel Procedures	149	2.04	$ 8,894,511	$ 2,546,292	$ 1,364,664	$ 2,303,644	$ 938,980	69%	54%	90%	$ 114,936	5%
466	Malfunction, Reaction, Complic Of Genitourinary Device Or Proc	148	1.22	$ 4,117,922	$ 1,203,609	$ 891,281	$ 1,325,351	$ 434,070	49%	74%	110%	$ 30,401	2%
245	Inflammatory Bowel Disease	147	0.76	$ 3,760,759	$ 1,124,433	$ 1,173,330	$ 829,638	$ (343,692)	-29%	104%	74%	$ 29,315	4%
815	Other Injury, Poisoning & Toxic Effect Diagnoses	145	1.01	$ 6,612,522	$ 2,503,155	$ 2,961,159	$ 1,777,709	$ (1,183,450)	-40%	118%	71%	$ 727,811	41%
912	Musculoskeletal & Other Procedures For Multiple Significant Trauma	145	4.84	$ 26,696,480	$ 7,765,035	$ 3,328,034	$ 6,767,448	$ 3,439,414	103%	43%	87%	$ 1,784,182	26%
243	Other Esophageal Disorders	144	0.71	$ 2,530,749	$ 714,238	$ 765,589	$ 739,290	$ (26,299)	-3%	107%	104%	$ -	0%
347	Other Back & Neck Disorders, Fractures & Injuries	144	0.84	$ 4,421,288	$ 1,304,521	$ 781,264	$ 1,052,234	$ 270,970	35%	60%	81%	$ 184,226	18%
426	Non-Hypovolemic Sodium Disorders	143	0.63	$ 2,412,842	$ 799,984	$ 768,160	$ 649,820	$ (118,340)	-15%	96%	81%	$ 2,927	0%
280	Alcoholic Liver Disease	143	1.20	$ 4,275,470	$ 1,165,931	$ 653,074	$ 1,230,377	$ 577,303	88%	56%	106%	$ 20,047	2%
234	Appendectomy Without Complex Principal Diagnosis	140	0.92	$ 3,998,388	$ 960,146	$ 319,969	$ 930,013	$ 610,044	191%	33%	97%	$ -	0%
315	Shoulder, Upper Arm & Forearm Procedures Except Joint Replacement	139	1.48	$ 5,879,515	$ 1,624,942	$ 572,745	$ 1,533,716	$ 960,971	168%	35%	94%	$ 47,116	3%
723	Viral Illness	138	0.59	$ 1,922,495	$ 628,261	$ 911,596	$ 607,867	$ (303,729)	-33%	145%	97%	$ 20,826	3%
403	Procedures For Obesity	137	1.32	$ 5,723,069	$ 1,361,798	$ 200,852	$ 1,300,230	$ 1,099,378	547%	15%	95%	$ -	0%
230	Major Small Bowel Procedures	136	2.36	$ 11,131,685	$ 3,096,315	$ 1,738,297	$ 2,614,748	$ 876,451	50%	56%	84%	$ 308,436	12%
191	Cardiac Catheterization For Coronary Artery Disease	131	1.04	$ 4,934,401	$ 1,089,213	$ 263,765	$ 975,490	$ 711,725	270%	24%	90%	$ -	0%
385	Other Skin, Subcutaneous Tissue & Breast Disorders	129	0.53	$ 1,685,723	$ 521,880	$ 585,184	$ 492,899	$ (92,285)	-16%	112%	94%	$ -	0%
950	Extensive Procedure Unrelated To Principal Diagnosis	126	3.72	$ 19,739,893	$ 5,790,296	$ 4,113,806	$ 5,286,828	$ 1,173,022	29%	71%	91%	$ 1,923,562	36%
284	Disorders Of Gallbladder & Biliary Tract	125	0.97	$ 2,628,815	$ 762,069	$ 505,390	$ 865,204	$ 359,814	71%	66%	114%	$ 265	0%
425	Other Non-Hypovolemic Electrolyte Disorders	124	0.70	$ 2,798,921	$ 890,129	$ 756,028	$ 772,502	$ 16,474	2%	85%	87%	$ 155,023	20%
279	Hepatic Coma & Other Major Acute Liver Disorders	124	1.26	$ 3,450,405	$ 1,000,779	$ 570,914	$ 1,136,510	$ 565,596	99%	57%	114%	$ 19,061	2%
52	Alteration In Consciousness	122	0.91	$ 2,936,382	$ 835,432	$ 466,224	$ 798,773	$ 332,549	71%	56%	96%	$ 1,608	0%
283	Other Disorders Of The Liver	120	0.94	$ 2,375,978	$ 653,890	$ 470,170	$ 806,791	$ 336,621	72%	72%	123%	$ -	0%
816	Toxic Effects Of Non-Medicinal Substances	119	0.74	$ 3,416,107	$ 1,050,720	$ 507,776	$ 704,365	$ 196,589	39%	48%	67%	$ 73,250	10%
207	Other Circulatory System Diagnoses	117	0.78	$ 2,705,689	$ 843,365	$ 519,425	$ 722,311	$ 202,886	39%	62%	86%	$ 69,842	10%
344	Osteomyelitis, Septic Arthritis & Other Musculoskeletal Infections	116	1.09	$ 4,479,614	$ 1,513,845	$ 1,252,137	$ 1,142,286	$ (109,851)	-9%	83%	75%	$ 267,707	23%
724	Other Infectious & Parasitic Diseases	113	0.96	$ 2,374,631	$ 779,094	$ 1,316,941	$ 823,144	$ (493,797)	-37%	169%	106%	$ 45,423	6%
55	Head Trauma W Coma >1 Hr Or Hemorrhage	113	1.29	$ 6,053,478	$ 1,882,263	$ 1,295,269	$ 1,409,622	$ 114,353	9%	69%	75%	$ 358,313	25%
204	Syncope & Collapse	111	0.63	$ 1,674,658	$ 524,046	$ 248,146	$ 501,756	$ 253,610	102%	47%	96%	$ 190	0%
227	Hernia Procedures Except Inguinal, Femoral & Umbilical	110	1.29	$ 4,454,412	$ 1,164,554	$ 453,039	$ 1,021,197	$ 568,158	125%	39%	88%	$ -	0%
121	Other Respiratory & Chest Procedures	109	2.45	$ 14,239,671	$ 4,891,317	$ 3,659,549	$ 4,108,253	$ 448,704	12%	75%	84%	$ 2,223,712	54%
136	Respiratory Malignancy	107	1.29	$ 4,102,035	$ 1,141,700	$ 609,799	$ 1,070,661	$ 460,862	76%	53%	94%	$ 77,867	7%
48	Peripheral, Cranial & Autonomic Nerve Disorders	107	0.74	$ 2,106,741	$ 559,378	$ 297,757	$ 567,968	$ 270,211	91%	53%	102%	$ -	0%
930	Multiple Significant Trauma W/O O.R. Procedure	107	1.93	$ 4,729,394	$ 1,322,146	$ 743,620	$ 1,541,001	$ 797,381	107%	56%	117%	$ 57,965	4%
244	Diverticulitis & Diverticulosis	106	0.62	$ 2,110,948	$ 549,851	$ 352,627	$ 476,513	$ 123,886	35%	64%	87%	$ 1,210	0%
131	Cystic Fibrosis - Pulmonary Disease	106	2.07	$ 7,552,437	$ 2,941,706	$ 3,412,943	$ 2,007,404	$ (1,405,539)	-41%	116%	68%	$ 446,709	22%
314	Foot & Toe Procedures	105	1.32	$ 4,750,403	$ 1,190,364	$ 633,806	$ 1,004,238	$ 370,432	58%	53%	84%	$ 1,012	0%
130	Respiratory System Diagnosis W Ventilator Support 96+ Hours	104	4.35	$ 18,942,027	$ 7,558,692	$ 5,674,978	$ 5,826,150	$ 151,172	3%	75%	77%	$ 2,569,940	44%
166	Coronary Bypass W/O Ami Or Complex Pdx	101	4.13	$ 11,813,896	$ 3,394,673	$ 803,256	$ 3,069,651	$ 2,266,395	282%	24%	90%	$ 62,275	2%
518	Other Female Reproductive System & Related Procedures	95	0.99	$ 1,466,629	$ 466,862	$ 270,996	$ 679,490	$ 408,494	151%	58%	146%	$ -	0%
144	Respiratory Signs, Symptoms & Minor Diagnoses	94	0.60	$ 1,246,407	$ 453,112	$ 391,759	$ 425,969	$ 34,210	9%	86%	94%	$ 25,976	6%
181	Lower Extremity Arterial Procedures	92	2.31	$ 9,330,597	$ 2,243,945	$ 568,009	$ 1,630,167	$ 1,062,158	187%	25%	73%	$ 100,026	6%

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A		B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
380	Skin Ulcers	91	0.81	$ 2,763,598	$ 810,295	$ 521,968	$ 601,079	$ 79,111	15%	64%	74%	$ 84,149	14%
465	Urinary Stones & Acquired Upper Urinary Tract Obstruction	90	0.66	$ 1,752,671	$ 502,456	$ 262,638	$ 426,594	$ 163,956	62%	52%	85%	$ -	0%
135	Major Chest & Respiratory Trauma	89	1.04	$ 2,586,346	$ 743,757	$ 362,456	$ 699,309	$ 336,853	93%	49%	94%	$ 37,493	5%
47	Transient Ischemia	88	0.66	$ 1,758,614	$ 471,556	$ 164,603	$ 414,063	$ 249,460	152%	35%	88%	$ -	0%
695	Chemotherapy For Acute Leukemia	88	2.42	$ 3,834,412	$ 1,441,039	$ 1,792,028	$ 1,626,893	$ (165,135)	-9%	124%	113%	$ 91,635	6%
305	Amputation Of Lower Limb Except Toes	87	1.87	$ 4,475,015	$ 1,208,775	$ 614,063	$ 1,170,060	$ 555,997	91%	51%	97%	$ 3,126	0%
602	Neonate Bwt 1000-1249g W Resp Dist Synd/Oth Maj Resp Or Maj Anom	83	9.33	$ 18,893,535	$ 5,728,643	$ 6,609,180	$ 5,481,759	$ (1,127,421)	-17%	115%	96%	$ 452,647	8%
711	Post-Op, Post-Trauma, Other Device Infections W O.R. Procedure	82	2.27	$ 7,109,729	$ 1,996,265	$ 1,380,849	$ 1,640,125	$ 259,277	19%	69%	82%	$ 331,567	20%
593	Neonate Birthwt 750-999g W/O Major Procedure	82	13.16	$ 27,258,291	$ 8,326,173	$ 7,885,368	$ 7,924,125	$ 38,757	0%	95%	95%	$ 1,174,573	15%
625	Neonate Bwt 2000-2499g W Other Significant Condition	81	1.78	$ 4,360,240	$ 1,233,728	$ 1,720,273	$ 1,068,128	$ (652,145)	-38%	139%	87%	$ 34,008	3%
24	Extracranial Vascular Procedures	81	1.92	$ 5,334,088	$ 1,385,975	$ 282,970	$ 1,154,523	$ 871,553	308%	20%	83%	$ 31,832	3%
519	Uterine & Adnexa Procedures For Leiomyoma	79	0.94	$ 2,133,693	$ 545,019	$ 182,246	$ 535,913	$ 353,667	194%	33%	98%	$ -	0%
222	Other Stomach, Esophageal & Duodenal Procedures	79	1.53	$ 2,223,934	$ 699,483	$ 676,259	$ 879,586	$ 203,327	30%	97%	126%	$ 8,269	1%
132	Bpd & Oth Chronic Respiratory Diseases Arising In Perinatal Period	79	1.18	$ 18,679,665	$ 7,648,709	$ 9,099,897	$ 5,596,976	$ (3,502,921)	-38%	119%	73%	$ 4,926,673	88%
320	Other Musculoskeletal System & Connective Tissue Procedures	78	1.52	$ 4,249,256	$ 1,424,073	$ 654,766	$ 1,037,839	$ 383,073	59%	46%	73%	$ 181,987	18%
346	Connective Tissue Disorders	78	1.19	$ 2,592,894	$ 829,180	$ 809,882	$ 672,002	$ (137,880)	-17%	98%	81%	$ 33,440	5%
774	Cocaine Abuse & Dependence	78	0.39	$ 807,911	$ 231,633	$ 267,346	$ 221,282	$ (46,064)	-17%	115%	96%	$ -	0%
220	Major Stomach, Esophageal & Duodenal Procedures	77	2.93	$ 7,817,693	$ 1,953,909	$ 841,134	$ 1,806,980	$ 965,846	115%	43%	92%	$ 180,596	10%
51	Viral Meningitis	76	0.84	$ 1,382,709	$ 461,757	$ 613,836	$ 492,619	$ (121,217)	-20%	133%	107%	$ 32,453	7%
303	Dorsal & Lumbar Fusion Proc For Curvature Of Back	75	5.75	$ 10,281,587	$ 3,839,116	$ 1,137,608	$ 3,419,988	$ 2,282,380	201%	30%	89%	$ 312,259	9%
42	Degenerative Nervous System Disorders Exc Mult Sclerosis	74	0.95	$ 2,448,529	$ 801,338	$ 958,868	$ 619,475	$ (339,393)	-35%	120%	77%	$ 121,422	20%
384	Contusion, Open Wound & Other Trauma To Skin & Subcutaneous Tissue	74	0.69	$ 1,571,026	$ 401,250	$ 245,759	$ 365,803	$ 120,044	49%	61%	91%	$ -	0%
952	Nonextensive Procedure Unrelated To Principal Diagnosis	71	1.74	$ 4,092,861	$ 1,366,888	$ 1,096,064	$ 1,027,729	$ (68,335)	-6%	80%	75%	$ 151,987	15%
607	Neonate Bwt 1250-1499g W Resp Dist Synd/Oth Maj Resp Or Maj Anom	71	6.75	$ 12,894,606	$ 3,603,208	$ 4,404,165	$ 3,534,395	$ (869,770)	-20%	122%	98%	$ 197,699	6%
342	Fractures & Dislocations Except Femur, Pelvis & Back	71	0.60	$ 1,328,789	$ 334,479	$ 180,587	$ 305,308	$ 124,721	69%	54%	91%	$ -	0%
44	Intracranial Hemorrhage	70	1.74	$ 4,094,185	$ 1,155,294	$ 972,486	$ 977,138	$ 4,652	0%	84%	85%	$ 106,220	11%
281	Malignancy Of Hepatobiliary System & Pancreas	69	1.26	$ 1,879,455	$ 560,336	$ 412,384	$ 623,026	$ 210,642	51%	74%	111%	$ -	0%
531	Female Reproductive System Infections	69	0.59	$ 1,209,380	$ 314,267	$ 235,499	$ 294,937	$ 59,438	25%	75%	94%	$ -	0%
443	Kidney & Urinary Tract Procedures For Nonmalignancy	68	1.36	$ 2,188,602	$ 686,223	$ 386,119	$ 669,044	$ 282,925	73%	56%	97%	$ -	0%
165	Coronary Bypass W Ami Or Complex Pdx	68	5.07	$ 10,638,874	$ 2,647,029	$ 627,338	$ 2,512,240	$ 1,884,902	300%	24%	95%	$ 55,965	2%
182	Other Peripheral Vascular Procedures	67	3.13	$ 7,272,504	$ 2,306,337	$ 1,264,385	$ 2,043,245	$ 778,860	62%	55%	89%	$ 536,756	26%
760	Other Mental Health Disorders	67	0.62	$ 2,251,828	$ 692,718	$ 1,687,867	$ 320,594	$ (1,367,273)	-81%	244%	46%	$ 24,426	8%
532	Menstrual & Other Female Reproductive System Disorders	66	0.52	$ 1,765,251	$ 467,259	$ 184,805	$ 288,502	$ 103,697	56%	40%	62%	$ 38,786	13%
223	Other Small & Large Bowel Procedures	65	1.57	$ 2,873,951	$ 715,464	$ 395,496	$ 744,304	$ 348,808	88%	55%	104%	$ 7,186	1%
813	Other Complications Of Treatment	64	0.88	$ 1,743,969	$ 536,739	$ 490,313	$ 423,456	$ (66,857)	-14%	91%	79%	$ 16,570	4%
317	Tendon, Muscle & Other Soft Tissue Procedures	63	1.51	$ 2,925,046	$ 961,626	$ 449,883	$ 770,385	$ 320,502	71%	47%	80%	$ 90,785	12%
863	Neonatal Aftercare	62	3.67	$ 9,068,776	$ 3,012,601	$ 2,778,847	$ 2,445,513	$ (333,334)	-12%	92%	81%	$ 885,320	36%
22	Ventricular Shunt Procedures	61	1.85	$ 2,988,587	$ 988,693	$ 702,419	$ 886,938	$ 184,519	26%	71%	90%	$ 80,533	9%
309	Other Significant Hip & Femur Surgery	61	1.98	$ 3,053,300	$ 1,126,043	$ 546,317	$ 901,765	$ 355,448	65%	49%	80%	$ 28,789	3%
468	Other Kidney & Urinary Tract Diagnoses, Signs & Symptoms	61	0.83	$ 2,096,225	$ 564,128	$ 407,121	$ 429,413	$ 22,292	5%	72%	76%	$ 65,564	15%
252	Malfunction, Reaction & Complication Of Gi Device Or Procedure	60	1.03	$ 1,587,187	$ 457,727	$ 446,450	$ 449,188	$ 2,738	1%	98%	98%	$ 5,857	1%
911	Extensive Abdominal/Thoracic Procedures For Mult Significant Trauma	59	5.40	$ 10,062,915	$ 2,838,991	$ 1,144,176	$ 2,710,935	$ 1,566,759	137%	40%	95%	$ 472,774	17%
23	Spinal Procedures	57	2.47	$ 3,180,736	$ 1,019,371	$ 525,269	$ 1,015,259	$ 489,990	93%	52%	100%	$ 1,323	0%
82	Eye Infections And Other Eye Disorders	57	0.64	$ 1,719,871	$ 648,817	$ 937,553	$ 455,491	$ (482,062)	-51%	145%	70%	$ 193,779	43%
770	Drug & Alcohol Abuse Or Dependence, Left Against Medical Advice	57	0.28	$ 513,134	$ 133,324	$ 94,583	$ 114,638	$ 20,055	21%	71%	86%	$ -	0%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
361	Skin Graft For Skin & Subcutaneous Tissue Diagnoses	54	1.89	$ 3,718,454	$ 1,065,240	$ 456,336	$ 1,089,573	$ 633,237	139%	43%	102%	$ 354,135	33%
501	Male Reproductive System Diagnoses Except Malignancy	54	0.65	$ 1,125,808	$ 286,360	$ 168,247	$ 267,764	$ 99,517	59%	59%	94%	$ 16,734	6%
844	Partial Thickness Burns W/O Skin Graft	53	1.00	$ 2,770,784	$ 1,203,127	$ 645,669	$ 862,495	$ 216,826	34%	54%	72%	$ 487,621	57%
544	D&c, Aspiration Curettage Or Hysterotomy For Obstetric Diagnoses	53	0.66	$ 1,060,484	$ 260,062	$ 117,579	$ 253,708	$ 136,129	116%	45%	98%	$ -	0%
224	Peritoneal Adhesiolysis	52	1.68	$ 2,722,735	$ 823,974	$ 612,434	$ 660,579	$ 48,145	8%	74%	80%	$ 31,101	5%
793	Moderately Extensive Or Procedures For Other Complications Of Treatment	51	1.59	$ 2,522,372	$ 675,067	$ 417,365	$ 585,294	$ 167,929	40%	62%	87%	$ 1,373	0%
240	Digestive Malignancy	51	1.15	$ 1,649,867	$ 477,235	$ 262,680	$ 431,244	$ 168,564	64%	55%	90%	$ 11,435	3%
229	Other Digestive System & Abdominal Procedures	50	1.99	$ 2,429,314	$ 701,159	$ 370,010	$ 745,266	$ 375,256	101%	53%	106%	$ 30,892	4%
160	Major Cardiothoracic Repair Of Heart Anomaly	50	5.98	$ 13,127,559	$ 4,330,667	$ 1,964,038	$ 3,497,879	$ 1,533,841	78%	45%	81%	$ 1,342,616	38%
310	Intervertebral Disc Excision & Decompression	50	1.20	$ 2,300,325	$ 665,725	$ 190,154	$ 448,764	$ 258,610	136%	29%	67%	$ 14,994	3%
446	Urethral & Transurethral Procedures	49	1.02	$ 1,522,496	$ 383,792	$ 144,696	$ 365,265	$ 220,569	152%	38%	95%	$ 5,278	1%
98	Other Ear, Nose, Mouth & Throat Procedures	49	1.34	$ 1,746,669	$ 556,560	$ 393,461	$ 499,598	$ 106,137	27%	71%	90%	$ 27,725	6%
89	Major Cranial/Facial Bone Procedures	49	2.28	$ 2,839,989	$ 1,045,321	$ 479,220	$ 832,487	$ 353,267	74%	46%	80%	$ 28,445	3%
50	Non-Bacterial Infections Of Nervous System Exc Viral Meningitis	48	1.38	$ 2,519,164	$ 768,373	$ 563,339	$ 637,362	$ 74,023	13%	73%	83%	$ 173,565	27%
242	Major Esophageal Disorders	48	0.82	$ 1,374,797	$ 349,271	$ 189,603	$ 283,533	$ 93,930	50%	54%	81%	$ -	0%
661	Coagulation & Platelet Disorders	47	1.27	$ 1,192,547	$ 381,885	$ 253,463	$ 428,112	$ 174,649	69%	66%	112%	$ -	0%
206	Malfunction,reaction,complication Of Cardiac/Vasc Device Or Procedure	46	1.15	$ 3,034,846	$ 734,575	$ 398,371	$ 459,313	$ 60,942	15%	54%	63%	$ 81,207	18%
811	Allergic Reactions	46	0.58	$ 756,940	$ 216,054	$ 135,761	$ 192,610	$ 56,849	42%	63%	89%	$ -	0%
92	Facial Bone Procedures Except Major Cranial/Facial Bone Procedures	45	1.51	$ 2,496,160	$ 741,214	$ 204,474	$ 548,926	$ 344,452	168%	28%	74%	$ 57,791	11%
890	Hiv W Multiple Major Hiv Related Conditions	44	2.58	$ 4,265,096	$ 1,184,592	$ 462,318	$ 975,215	$ 512,897	111%	39%	82%	$ 166,137	17%
316	Hand & Wrist Procedures	44	1.03	$ 1,609,701	$ 450,410	$ 237,788	$ 341,679	$ 103,891	44%	53%	76%	$ 15,568	5%
20	Craniotomy For Trauma	44	3.98	$ 8,452,227	$ 2,521,674	$ 1,356,346	$ 1,977,345	$ 620,999	46%	54%	78%	$ 731,158	37%
424	Other Endocrine Disorders	42	0.88	$ 837,833	$ 326,375	$ 431,803	$ 339,322	$ (92,481)	-21%	132%	104%	$ 72,453	21%
43	Multiple Sclerosis & Other Demyelinating Diseases	42	1.09	$ 1,617,685	$ 438,811	$ 307,416	$ 346,702	$ 39,286	13%	70%	79%	$ 16,364	5%
200	Cardiac Structural & Valvular Disorders	42	1.12	$ 5,388,772	$ 2,308,872	$ 1,330,026	$ 1,263,959	$ (66,067)	-5%	58%	55%	$ 934,338	74%
611	Neonate Birthwt 1500-1999g W Major Anomaly	41	4.81	$ 4,710,701	$ 1,602,831	$ 2,284,222	$ 1,488,433	$ (795,789)	-35%	143%	93%	$ 113,282	8%
691	Lymphoma, Myeloma & Non-Acute Leukemia	41	1.74	$ 2,854,043	$ 964,255	$ 668,263	$ 657,318	$ (10,945)	-2%	69%	68%	$ 157,995	24%
589	Neonate Bwt <500g Or Ga <24 Weeks	40	6.01	$ 9,515,083	$ 3,154,237	$ 2,839,000	$ 3,165,995	$ 326,995	12%	90%	100%	$ 1,531,938	48%
349	Malfunction, Reaction, Complic Of Orthopedic Device Or Procedure	40	0.89	$ 1,054,597	$ 328,839	$ 193,267	$ 260,155	$ 66,888	35%	59%	79%	$ 4,881	2%
690	Acute Leukemia	40	4.74	$ 7,294,155	$ 2,776,869	$ 1,935,900	$ 2,037,873	$ 101,973	5%	70%	73%	$ 699,975	34%
862	Other Aftercare & Convalescence	39	0.77	$ 1,187,342	$ 349,406	$ 375,835	$ 209,402	$ (166,433)	-44%	108%	60%	$ -	0%
631	Neonate Birthwt >2499g W Other Major Procedure	39	7.13	$ 22,338,087	$ 7,563,603	$ 8,324,340	$ 5,640,719	$ (2,683,621)	-32%	110%	75%	$ 3,649,525	65%
41	Nervous System Malignancy	38	1.17	$ 975,184	$ 275,402	$ 164,716	$ 311,061	$ 146,345	89%	60%	113%	$ -	0%
462	Nephritis & Nephrosis	38	0.95	$ 818,493	$ 256,840	$ 349,571	$ 259,860	$ (89,711)	-26%	136%	101%	$ -	0%
49	Bacterial & Tuberculous Infections Of Nervous System	38	2.67	$ 3,917,669	$ 995,370	$ 653,935	$ 846,928	$ 192,993	30%	66%	85%	$ 143,283	17%
169	Major Abdominal Vascular Procedures	37	4.10	$ 8,317,549	$ 1,929,031	$ 429,389	$ 1,513,497	$ 1,084,108	252%	22%	78%	$ 418,233	28%
114	Dental Diseases And Disorders	37	0.57	$ 606,646	$ 166,196	$ 136,160	$ 152,852	$ 16,692	12%	82%	92%	$ -	0%
842	Burns With Skin Graft Except Extensive 3rd Degree Burns	37	3.11	$ 3,226,947	$ 1,157,482	$ 1,010,214	$ 865,489	$ (144,725)	-14%	87%	75%	$ 35,086	4%
142	Interstitial & Alveolar Lung Diseases	36	1.06	$ 1,006,082	$ 259,700	$ 173,807	$ 262,410	$ 88,603	51%	67%	101%	$ -	0%
810	Hemorrhage Or Hematoma Due To Complication	36	0.67	$ 764,780	$ 184,758	$ 134,529	$ 174,772	$ 40,243	30%	73%	95%	$ -	0%
57	Concussion, Closed Skull Fx Nos,uncomplicated Intracranial Injury, Coma < 1 Hr Or No Coma	36	1.05	$ 1,982,608	$ 592,349	$ 531,514	$ 465,821	$ (65,693)	-12%	90%	79%	$ 192,897	41%
163	Cardiac Valve Procedures W/O Ami Or Complex Pdx	36	5.82	$ 6,718,012	$ 2,064,640	$ 594,942	$ 1,778,111	$ 1,183,169	199%	29%	86%	$ 267,458	15%
381	Major Skin Disorders	34	0.62	$ 391,989	$ 144,780	$ 228,487	$ 152,850	$ (75,637)	-33%	158%	106%	$ -	0%
565	False Labor	34	0.16	$ 235,381	$ 72,773	$ 109,798	$ 40,068	$ (69,730)	-64%	151%	55%	$ -	0%
427	Thyroid Disorders	32	0.72	$ 752,475	$ 204,203	$ 108,597	$ 165,586	$ 56,989	52%	53%	81%	$ -	0%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

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Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
180	Other Circulatory System Procedures	32	2.08	$ 1,750,910	$ 487,449	$ 191,831	$ 507,474	$ 315,643	165%	39%	104%	$ 31,243	6%
623	Neonate Bwt 2000-2499g W Congenital/Perinatal Infection	32	1.69	$ 2,337,111	$ 402,763	$ 452,404	$ 390,203	$ (62,201)	-14%	112%	97%	$ -	0%
591	Neonate Birthwt 500-749g W/O Major Procedure	32	18.61	$ 10,679,677	$ 3,232,970	$ 2,142,855	$ 3,638,184	$ 1,495,329	70%	66%	113%	$ 441,638	12%
792	Extensive Or Procedures For Other Complications Of Treatment	32	2.57	$ 2,977,306	$ 1,023,851	$ 683,845	$ 777,861	$ 94,016	14%	67%	76%	$ 198,069	25%
97	Tonsil & Adenoid Procedures	31	0.70	$ 503,328	$ 177,926	$ 144,486	$ 155,831	$ 11,345	8%	81%	88%	$ -	0%
161	Cardiac Defibrillator & Heart Assist Implant	31	6.06	$ 5,092,239	$ 1,223,153	$ 174,845	$ 1,261,302	$ 1,086,457	621%	14%	103%	$ 37,341	3%
167	Other Cardiothoracic & Thoracic Vascular Procedures	30	4.29	$ 4,423,819	$ 1,592,297	$ 710,090	$ 1,167,201	$ 457,111	64%	45%	73%	$ 238,553	20%
546	Other O.R. Proc For Obstetric Diagnoses Except Delivery Diagnoses	29	0.82	$ 686,558	$ 177,569	$ 121,893	$ 171,527	$ 49,634	41%	69%	97%	$ -	0%
442	Kidney & Urinary Tract Procedures For Malignancy	28	1.92	$ 1,153,359	$ 375,232	$ 167,101	$ 388,625	$ 221,524	133%	45%	104%	$ -	0%
894	Hiv W One Signif Hiv Cond Or W/O Signif Related Cond	28	0.80	$ 706,812	$ 189,981	$ 114,577	$ 158,721	$ 44,144	39%	60%	84%	$ -	0%
5	Tracheostomy W Mv 96+ Hours W/O Extensive Procedure	27	9.65	$ 9,839,959	$ 3,164,818	$ 1,623,669	$ 2,802,719	$ 1,179,050	73%	51%	89%	$ 944,416	34%
621	Neonate Bwt 2000-2499g W Major Anomaly	27	2.36	$ 1,238,894	$ 399,767	$ 550,366	$ 462,333	$ (88,033)	-16%	138%	116%	$ 2,426	1%
608	Neonate Bwt 1250-1499g W Or W/O Other Significant Condition	27	4.43	$ 2,466,185	$ 698,376	$ 867,098	$ 847,168	$ (19,930)	-2%	124%	121%	$ -	0%
228	Inguinal, Femoral & Umbilical Hernia Procedures	27	1.01	$ 1,174,884	$ 319,653	$ 145,877	$ 214,686	$ 68,809	47%	46%	67%	$ 17,981	8%
423	Inborn Errors Of Metabolism	27	0.99	$ 3,546,128	$ 1,644,942	$ 202,271	$ 1,251,176	$ 1,048,905	519%	12%	76%	$ 1,058,799	85%
892	Hiv W Major Hiv Related Condition	26	1.32	$ 1,383,128	$ 332,634	$ 158,166	$ 263,349	$ 105,183	67%	48%	79%	$ 21,766	8%
343	Musculoskeletal Malignancy & Pathol Fracture D/T Muscskel Malig	25	1.28	$ 1,467,183	$ 482,976	$ 359,724	$ 306,757	$ (52,967)	-15%	74%	64%	$ 77,917	25%
196	Cardiac Arrest & Shock	23	1.70	$ 1,408,181	$ 386,285	$ 177,068	$ 304,591	$ 127,523	72%	46%	79%	$ 24,650	8%
340	Fracture Of Femur	22	0.58	$ 441,058	$ 122,855	$ 84,124	$ 89,900	$ 5,776	7%	68%	73%	$ -	0%
120	Major Respiratory & Chest Procedures	21	2.75	$ 2,846,778	$ 778,596	$ 308,990	$ 632,092	$ 323,102	105%	40%	81%	$ 215,395	34%
73	Orbit And Eye Procedures	20	1.11	$ 1,151,817	$ 338,970	$ 352,185	$ 235,590	$ (116,595)	-33%	104%	70%	$ 74,981	32%
341	Fracture Of Pelvis Or Dislocation Of Hip	20	0.55	$ 352,061	$ 100,850	$ 83,804	$ 79,625	$ (4,179)	-5%	83%	79%	$ -	0%
564	Abortion W/O D&c, Aspiration Curettage Or Hysterotomy	20	0.48	$ 284,936	$ 63,721	$ 32,523	$ 68,820	$ 36,297	112%	51%	108%	$ -	0%
171	Perm Cardiac Pacemaker Implant W/O Ami, Heart Failure Or Shock	19	1.70	$ 2,212,460	$ 646,157	$ 306,361	$ 523,448	$ 217,087	71%	47%	81%	$ 290,769	56%
681	Other O.R. Procedures For Lymphatic/Hematopoietic/Other Neoplasms	19	2.45	$ 1,452,940	$ 452,601	$ 235,853	$ 366,415	$ 130,562	55%	52%	81%	$ 37,277	10%
694	Lymphatic & Other Malignancies & Neoplasms Of Uncertain Behavior	19	1.41	$ 1,983,568	$ 785,083	$ 456,606	$ 532,808	$ 76,202	17%	58%	68%	$ 339,654	64%
530	Female Reproductive System Malignancy	19	1.02	$ 600,286	$ 156,756	$ 103,535	$ 135,744	$ 32,209	31%	66%	87%	$ -	0%
910	Craniotomy For Multiple Significant Trauma	19	8.47	$ 3,895,278	$ 1,182,097	$ 863,464	$ 1,303,661	$ 440,197	51%	73%	110%	$ 142,702	11%
40	Spinal Disorders & Injuries	18	1.93	$ 1,201,847	$ 329,043	$ 344,709	$ 263,106	$ (81,603)	-24%	105%	80%	$ 27,602	10%
312	Skin Graft, Except Hand, For Musculoskeletal & Connective Tissue Diagnoses	18	3.02	$ 1,110,323	$ 374,016	$ 267,938	$ 402,922	$ 134,984	50%	72%	108%	$ 11,343	3%
226	Anal Procedures	18	0.86	$ 530,074	$ 161,531	$ 107,912	$ 111,851	$ 3,939	4%	67%	69%	$ -	0%
322	Shoulder & Elbow Joint Replacement	17	1.60	$ 721,220	$ 213,278	$ 23,293	$ 196,085	$ 172,792	742%	11%	92%	$ -	0%
26	Other Nervous System & Related Procedures	17	1.80	$ 1,135,245	$ 377,654	$ 98,685	$ 236,771	$ 138,086	140%	26%	63%	$ 15,834	7%
740	Mental Illness Diagnosis W O.R. Procedure	17	1.87	$ 855,423	$ 163,087	$ 116,391	$ 228,969	$ 112,578	97%	71%	140%	$ -	0%
545	Ectopic Pregnancy Procedure	17	0.80	$ 421,692	$ 103,027	$ 28,389	$ 98,469	$ 70,080	247%	28%	96%	$ -	0%
404	Thyroid, Parathyroid & Thyroglossal Procedures	16	1.19	$ 757,846	$ 202,900	$ 117,448	$ 137,865	$ 20,417	17%	58%	68%	$ -	0%
264	Other Hepatobiliary, Pancreas & Abdominal Procedures	16	2.12	$ 819,725	$ 235,019	$ 111,352	$ 249,531	$ 138,179	124%	47%	106%	$ 4,759	2%
260	Major Pancreas, Liver & Shunt Procedures	16	2.67	$ 1,125,002	$ 323,275	$ 193,443	$ 309,843	$ 116,400	60%	60%	96%	$ 1,747	1%
193	Acute & Subacute Endocarditis	16	1.54	$ 910,747	$ 237,744	$ 328,554	$ 225,673	$ (102,881)	-31%	138%	95%	$ 48,069	21%
405	Other Procedures For Endocrine, Nutritional & Metabolic Disorders	15	2.54	$ 794,340	$ 198,610	$ 216,409	$ 274,711	$ 58,302	27%	109%	138%	$ -	0%
794	Non-Extensive Or Procedures For Other Complications Of Treatment	15	1.64	$ 949,119	$ 290,597	$ 297,446	$ 226,917	$ (70,529)	-24%	102%	78%	$ 49,924	22%
603	Neonate Birthwt 1000-1249g W Or W/O Other Significant Condition	15	6.19	$ 2,157,920	$ 591,705	$ 753,492	$ 619,552	$ (133,940)	-18%	127%	105%	$ 6,360	1%
9	Extracorporeal Membrane Oxygenation (Ecmo)	15	13.12	$ 6,360,328	$ 2,584,696	$ 815,791	$ 2,390,843	$ 1,575,052	193%	32%	93%	$ 971,300	41%
4	Tracheostomy W Mv 96+ Hours W Extensive Procedure	14	12.85	$ 5,436,682	$ 1,452,590	$ 440,959	$ 1,511,192	$ 1,070,233	243%	30%	104%	$ 213,431	14%
650	Splenectomy	14	2.18	$ 3,385,166	$ 1,616,638	$ 633,840	$ 1,314,130	$ 680,290	107%	39%	81%	$ 1,094,232	83%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A		B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
2	Heart &/Or Lung Transplant	14	18.95	$ 15,270,204	$ 5,054,710	$ 5,855,823	$ 4,218,187	$ (1,637,636)	-28%	116%	83%	$ 2,304,575	55%
651	Other Procedures Of Blood & Blood-Forming Organs	13	1.70	$ 637,660	$ 202,834	$ 98,396	$ 197,270	$ 98,874	100%	49%	97%	$ 37,613	19%
517	Dilation & Curettage For Non-Obstetric Diagnoses	13	0.83	$ 557,936	$ 143,030	$ 45,946	$ 81,351	$ 35,405	77%	32%	57%	$ 3,178	4%
484	Other Male Reproductive System & Related Procedures	12	1.35	$ 386,885	$ 115,135	$ 36,215	$ 116,997	$ 80,782	223%	31%	102%	$ -	0%
91	Other Major Head & Neck Procedures	12	2.64	$ 902,407	$ 283,931	$ 107,562	$ 242,628	$ 135,066	126%	38%	85%	$ 13,921	6%
630	Neonate Birthwt >2499g W Major Cardiovascular Procedure	12	9.11	$ 9,909,621	$ 4,308,182	$ 3,482,369	$ 3,344,935	$ (137,434)	-4%	81%	78%	$ 2,556,331	76%
110	Ear, Nose, Mouth, Throat, Cranial/Facial Malignancies	12	1.70	$ 880,912	$ 209,710	$ 83,169	$ 165,486	$ 82,317	99%	40%	79%	$ 24,735	15%
111	Vertigo & Other Labyrinth Disorders	11	0.56	$ 143,686	$ 32,270	$ 13,121	$ 44,734	$ 31,613	241%	41%	139%	$ -	0%
483	Penis, Testes & Scrotal Procedures	11	1.05	$ 433,538	$ 98,666	$ 39,980	$ 82,946	$ 42,966	107%	41%	84%	$ -	0%
261	Major Biliary Tract Procedures	11	2.23	$ 1,181,515	$ 310,451	$ 130,971	$ 213,526	$ 82,555	63%	42%	69%	$ 36,296	17%
1	Liver Transplant &/Or Intestinal Transplant	11	9.58	$ 3,662,777	$ 1,096,865	$ 1,637,211	$ 869,958	$ (767,253)	-47%	149%	79%	$ 109,803	13%
246	Gastrointestinal Vascular Insufficiency	11	0.83	$ 296,482	$ 69,867	$ 107,732	$ 63,841	$ (43,891)	-41%	154%	91%	$ -	0%
841	Extensive 3rd Degree Burns W Skin Graft	11	15.17	$ 11,281,385	$ 5,308,712	$ 2,823,936	$ 4,291,575	$ 1,467,639	52%	53%	81%	$ 3,088,228	72%
772	Alcohol & Drug Dependence W Rehab Or Rehab/Detox Therapy	11	0.67	$ 166,046	$ 42,121	$ 38,456	$ 48,793	$ 10,337	27%	91%	116%	$ -	0%
613	Neonate Birthwt 1500-1999g W Congenital/Perinatal Infection	10	3.11	$ 983,770	$ 249,976	$ 419,521	$ 239,264	$ (180,257)	-43%	168%	96%	$ 26,298	11%
382	Malignant Breast Disorders	10	0.96	$ 458,560	$ 98,755	$ 53,855	$ 69,444	$ 15,589	29%	55%	70%	$ -	0%
232	Gastric Fundoplication	10	1.55	$ 475,839	$ 132,819	$ 83,708	$ 113,346	$ 29,638	35%	63%	85%	$ 1,861	2%
162	Cardiac Valve Procedures W Ami Or Complex Pdx	10	7.98	$ 2,412,935	$ 599,612	$ 157,912	$ 575,432	$ 417,520	264%	26%	96%	$ -	0%
363	Breast Procedures Except Mastectomy	10	1.35	$ 283,568	$ 80,863	$ 31,307	$ 97,165	$ 65,858	210%	39%	120%	$ -	0%
56	Brain Contusion/Laceration & Complicated Skull Fx, Coma < 1 Hr Or No Coma	10	1.24	$ 267,711	$ 71,282	$ 37,216	$ 89,636	$ 52,420	141%	52%	126%	$ -	0%
512	Uterine & Adnexa Procedures For Non-Ovarian & Non-Adnexal Malig	9	1.39	$ 522,288	$ 144,256	$ 51,472	$ 105,654	$ 54,182	105%	36%	73%	$ 15,472	15%
444	Renal Dialysis Access Device And Vessel Repair	9	1.98	$ 826,728	$ 216,491	$ 77,867	$ 160,817	$ 82,950	107%	36%	74%	$ 32,297	20%
445	Other Bladder Procedures	9	1.65	$ 327,604	$ 84,683	$ 63,868	$ 107,217	$ 43,349	68%	75%	127%	$ -	0%
362	Mastectomy Procedures	9	1.51	$ 340,914	$ 87,324	$ 15,260	$ 97,768	$ 82,508	541%	17%	112%	$ -	0%
205	Cardiomyopathy	9	0.90	$ 447,534	$ 201,241	$ 108,665	$ 118,475	$ 9,810	9%	54%	59%	$ 60,135	51%
176	Cardiac Pacemaker & Defibrillator Device Replacement	9	3.93	$ 1,494,367	$ 490,658	$ 137,671	$ 363,917	$ 226,246	164%	28%	74%	$ 108,732	30%
447	Other Kidney, Urinary Tract & Related Procedures	8	2.34	$ 1,146,458	$ 248,229	$ 52,483	$ 193,291	$ 140,808	268%	21%	78%	$ 58,558	30%
580	Neonate, Transferred <5 Days Old, Not Born Here	8	0.36	$ 84,297	$ 21,802	$ 15,895	$ 20,804	$ 4,909	31%	73%	95%	$ -	0%
583	Neonate W Ecmo	8	11.10	$ 9,234,290	$ 3,192,278	$ 2,264,580	$ 2,508,309	$ 243,729	11%	71%	79%	$ 1,867,724	74%
500	Malignancy, Male Reproductive System	8	0.82	$ 715,188	$ 261,204	$ 293,357	$ 122,309	$ (171,048)	-58%	112%	47%	$ 75,157	61%
59	Anoxic & Other Severe Brain Damage	8	1.04	$ 236,238	$ 59,005	$ 40,576	$ 55,766	$ 15,190	37%	69%	95%	$ -	0%
441	Major Bladder Procedures	7	2.45	$ 383,855	$ 129,190	$ 83,679	$ 123,552	$ 39,873	48%	65%	96%	$ -	0%
461	Kidney & Urinary Tract Malignancy	7	1.05	$ 741,222	$ 232,004	$ 92,954	$ 154,993	$ 62,039	67%	40%	67%	$ 102,122	66%
10	Head Trauma With Deep Coma	7	9.14	$ 1,027,725	$ 286,114	$ 117,384	$ 367,290	$ 249,906	213%	41%	128%	$ 17,980	5%
759	Eating Disorders	7	1.48	$ 255,779	$ 104,748	$ 116,163	$ 84,002	$ (32,161)	-28%	111%	80%	$ 9,429	11%
8	Autologous Bone Marrow Transplant	7	7.70	$ 1,877,171	$ 604,484	$ 854,608	$ 518,615	$ (335,993)	-39%	141%	86%	$ 129,922	25%
46	Nonspecific Cva & Precerebral Occlusion W/O Infarct	6	0.86	$ 156,964	$ 47,959	$ 12,226	$ 37,371	$ 25,145	206%	25%	78%	$ -	0%
588	Neonate Bwt <1500g W Major Procedure	6	24.55	$ 5,007,329	$ 1,930,973	$ 1,676,183	$ 1,689,152	$ 12,969	1%	87%	87%	$ 626,737	37%
609	Neonate Bwt 1500-2499g W Major Procedure	6	10.48	$ 1,612,263	$ 821,679	$ 834,796	$ 690,567	$ (144,229)	-17%	102%	84%	$ 237,048	34%
680	Major O.R. Procedures For Lymphatic/Hematopoietic/Other Neoplasms	6	2.03	$ 331,425	$ 108,108	$ 81,819	$ 87,711	$ 5,892	7%	76%	81%	$ -	0%
514	Female Reproductive System Reconstructive Procedures	6	0.91	$ 320,911	$ 68,604	$ 12,995	$ 39,287	$ 26,292	202%	19%	57%	$ -	0%
401	Adrenal Procedures	6	1.45	$ 165,984	$ 60,513	$ 20,038	$ 62,627	$ 42,589	213%	33%	103%	$ -	0%
893	Hiv W Multiple Significant Hiv Related Conditions	5	1.56	$ 64,314	$ 21,361	$ 21,368	$ 56,348	$ 34,980	164%	100%	264%	$ -	0%
860	Rehabilitation	4	1.58	$ 125,239	$ 33,314	$ 22,850	$ 35,855	$ 13,005	57%	69%	108%	$ -	0%
440	Kidney Transplant	4	6.20	$ 1,150,226	$ 371,986	$ 145,848	$ 249,373	$ 103,525	71%	39%	67%	$ 70,566	28%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A		B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
95	Cleft Lip & Palate Repair	4	0.84	$ 164,195	$ 42,855	$ 12,056	$ 24,283	$ 12,227	101%	28%	57%	$ -	0%
177	Cardiac Pacemaker & Defibrillator Revision Except Device Replacement	4	1.80	$ 269,094	$ 116,745	$ 51,048	$ 74,266	$ 23,218	45%	44%	64%	$ 22,263	30%
170	Permanent Cardiac Pacemaker Implant W Ami, Heart Failure Or Shock	3	2.64	$ 353,620	$ 71,495	$ 13,000	$ 57,180	$ 44,180	340%	18%	80%	$ -	0%
843	Extensive 3rd Degree Or Full Thickness Burns W/O Skin Graft	3	3.96	$ 59,635	$ 26,097	$ 9,846	$ 85,626	$ 75,780	770%	38%	328%	$ -	0%
511	Uterine & Adnexa Procedures For Ovarian & Adnexal Malignancy	2	1.25	$ 79,478	$ 18,853	$ 11,232	$ 18,014	$ 6,782	60%	60%	96%	$ -	0%
510	Pelvic Evisceration, Radical Hysterectomy & Other Radical Gyn Procs	2	1.39	$ 74,999	$ 17,843	$ 5,642	$ 20,003	$ 14,361	255%	32%	112%	$ -	0%
480	Major Male Pelvic Procedures	2	1.71	$ 108,105	$ 25,099	$ 11,436	$ 24,698	$ 13,262	116%	46%	98%	$ -	0%
7	Allogeneic Bone Marrow Transplant	2	7.60	$ 444,675	$ 152,523	$ 150,246	$ 154,503	$ 4,257	3%	99%	101%	$ 44,818	29%
Total		**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ 581,815,102**	**$ (274)**	**0%**	**83%**	**83%**	**$ 87,935,363**	**15%**

Notes:

C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using Medicare cost-to-charge ratio where available, otherwise Navigant calculated CCRs from HCRIS Cost Report.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.

Report F - Summary of Simulation by Provider - Sorted by Provider Name
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Provider Medicaid ID	Provider Name	In / Border Indicator	Stays	Length of Stays	Covered Days	Per Diem Rate	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
		A	B	C	D	E	F	G	H	I	J	K = I + J	L	M = L - K	N = M ÷ K	O = K ÷ H	P = L ÷ H	Q	R = Q ÷ L
166379105	Advanced Care Hospital Of White	I	6	117	117	850	1.345	$ 667,525	$ 176,257	$ 43,900	$ -	$ 43,900	$ 58,186	$ 14,286	33%	25%	33%	$ -	0%
104269105	Arkansas Childrens Hospital	I	6,589	51,489	51,400	3,403	1.385	$ 418,402,497	$ 174,261,582	$ 194,686,294	$ -	$ 194,686,294	$ 128,439,790	$ (66,246,504)	-34%	112%	74%	$ 62,905,815	49%
131142105	Arkansas Hearthospital Llc	I	122	328	327	850	1.162	$ 3,878,482	$ 951,628	$ 273,100	$ -	$ 273,100	$ 1,022,665	$ 749,565	274%	29%	107%	$ -	0%
102528105	Arkansas Methodist Medicalcenter	I	1,425	3,188	3,165	757	0.460	$ 10,682,707	$ 3,932,304	$ 2,395,995	$ -	$ 2,395,995	$ 4,712,929	$ 2,316,934	97%	61%	120%	$ 3,450	0%
114301125	Arkansas Statehospital	I	39	4,789	4,783	680	0.590	$ 3,628,557	$ 2,041,099	$ 3,271,704	$ -	$ 3,271,704	$ 1,090,278	$ (2,181,426)	-67%	160%	53%	$ 924,452	85%
157876105	Arkansas Surgical Hospitalllc	I	12	34	34	850	1.448	$ 348,307	$ 91,210	$ 28,900	$ -	$ 28,900	$ 125,310	$ 96,410	334%	32%	137%	$ -	0%
100953105	Ashley Memorialhosp	I	307	841	841	2,150	0.430	$ 2,817,174	$ 1,224,655	$ 1,243,500	$ -	$ 1,243,500	$ 915,748	$ (327,752)	-26%	102%	75%	$ -	0%
184088105	Baptist Healthextended Care	I	10	88	88	850	1.344	$ 246,478	$ 72,710	$ 65,200	$ -	$ 65,200	$ 96,922	$ 31,722	49%	90%	133%	$ -	0%
101448105	Baptist Healthmedical Center (Arkadelphia)	I	735	1,385	1,383	1,561	0.329	$ 7,137,603	$ 1,835,576	$ 2,507,886	$ -	$ 2,507,886	$ 1,725,880	$ (782,006)	-31%	137%	94%	$ -	0%
104304105	Baptist Healthmedical Center (Little Rock)	I	5,030	30,540	30,352	1,025	1.129	$ 178,548,725	$ 46,278,137	$ 30,000,843	$ -	$ 30,000,843	$ 42,614,359	$ 12,613,516	42%	65%	92%	$ 2,122,942	5%
106664105	Baptist Healthmedical Center (North Little Rock	I	1,846	4,899	4,882	796	0.616	$ 31,864,442	$ 9,327,740	$ 3,734,452	$ -	$ 3,734,452	$ 8,188,210	$ 4,453,758	119%	40%	88%	$ 26,919	0%
130609105	Baptist Healthmedical Center (Heber Springs)	I	40	88	88	1,946	0.774	$ 557,924	$ 148,056	$ 198,900	$ -	$ 198,900	$ 206,297	$ 7,397	4%	134%	139%	$ -	0%
178730105	Baptist Healthmedical Center (Stuttgart)	I	422	1,026	1,026	850	0.383	$ 4,000,699	$ 2,509,169	$ 1,243,070	$ -	$ 1,243,070	$ 1,109,703	$ (133,367)	-11%	50%	44%	$ -	0%
217868105	Baptist Healthmedical Center (Conway)	I	41	155	155	850	0.990	$ 1,333,065	$ 541,219	$ 114,650	$ -	$ 114,650	$ 374,965	$ 260,315	227%	21%	69%	$ 84,643	23%
203334105	Baptist Healthmedical Center (Malvern)	I	697	3,227	3,197	850	0.526	$ 5,133,657	$ 2,350,971	$ 2,615,600	$ -	$ 2,615,600	$ 2,620,463	$ 4,863	0%	111%	111%	$ -	0%
107093105	Baptist Memorial Hospital	B	186	1,368	1,361	799	1.555	$ 11,549,533	$ 2,757,086	$ 1,109,000	$ -	$ 1,109,000	$ 2,212,783	$ 1,103,783	100%	40%	80%	$ 126,938	6%
101001105	Baxter Regionalmedical Center	I	1,330	3,148	3,126	950	0.636	$ 16,546,821	$ 5,641,006	$ 2,853,300	$ -	$ 2,853,300	$ 5,983,199	$ 3,129,899	110%	51%	106%	$ 24,774	0%
142700125	Bhc Pinnacle Pointe Hospitalinc	I	2,551	29,540	29,512	484	0.483	$ 39,243,285	$ 12,368,071	$ 13,245,609	$ -	$ 13,245,609	$ 9,411,339	$ (3,834,270)	-29%	107%	76%	$ 523,106	6%
148217105	Board Of Governors Of	I	19	30	30	2,760	0.587	$ 104,395	$ 59,185	$ 50,528	$ -	$ 50,528	$ 80,429	$ 29,901	59%	85%	136%	$ -	0%
133213105	Bradley Countymedical Center	I	209	398	398	1,967	0.373	$ 1,508,239	$ 655,789	$ 836,231	$ -	$ 836,231	$ 559,555	$ (276,676)	-33%	128%	85%	$ -	0%
159162125	Brentwood Acquisition Shreveport	B	3	23	23	487	0.650	$ 47,150	$ 8,824	$ 9,290	$ -	$ 9,290	$ 14,066	$ 4,776	51%	105%	159%	$ -	0%
115662125	Centers For Youth & Familiesinc	I	188	15,032	14,839	350	0.414	$ 5,193,650	$ 1,636,852	$ 5,193,650	$ -	$ 5,193,650	$ 561,528	$ (4,632,122)	-89%	317%	34%	$ -	0%
106600105	Chambers Memorial Hospital	I	232	605	605	850	0.578	$ 1,304,224	$ 805,706	$ 511,150	$ -	$ 511,150	$ 946,240	$ 435,090	85%	63%	117%	$ -	0%
102335105	Chi St Vincenthospital Hotspring	I	2,471	7,784	7,704	850	0.723	$ 52,638,148	$ 13,260,971	$ 6,511,750	$ -	$ 6,511,750	$ 12,861,792	$ 6,350,042	98%	49%	97%	$ 90,430	1%
181080105	Chicot Memorialmedical Center	I	100	301	297	1,700	0.628	$ 706,149	$ 256,330	$ 428,965	$ -	$ 428,965	$ 428,197	$ (768)	0%	167%	167%	$ -	0%
146008105	Christus St Michael Healthsystem	B	1,473	5,149	5,142	850	0.685	$ 40,027,298	$ 7,886,673	$ 4,737,952	$ -	$ 4,737,952	$ 7,375,820	$ 2,637,868	56%	60%	94%	$ 163,603	2%
102789105	Community Medical Center Ofizard	I	32	69	69	1,549	0.521	$ 148,957	$ 110,458	$ 101,601	$ -	$ 101,601	$ 116,748	$ 15,147	15%	92%	106%	$ -	0%
102178105	Conway Regionalmedical Ctrinc	I	1,820	4,402	4,395	850	0.505	$ 15,454,808	$ 5,969,255	$ 3,695,300	$ -	$ 3,695,300	$ 6,568,391	$ 2,873,091	78%	62%	110%	$ -	0%
157514105	De Queen Medical Center Inc	I	21	69	69	960	0.552	$ 212,726	$ 83,676	$ 61,826	$ -	$ 61,826	$ 83,633	$ 21,807	35%	74%	100%	$ -	0%
135726105	Delta Medical Center	B	210	1,614	1,613	599	0.590	$ 2,469,444	$ 1,093,884	$ 855,900	$ -	$ 855,900	$ 894,332	$ 38,432	4%	78%	82%	$ -	0%
102081105	Delta Memorialhospital	I	232	617	616	1,456	0.369	$ 1,319,922	$ 624,124	$ 1,101,850	$ -	$ 1,101,850	$ 617,528	$ (484,322)	-44%	177%	99%	$ -	0%
107848105	Delta Regionalmedical Center	B	140	443	438	850	0.598	$ 1,200,032	$ 409,211	$ 365,500	$ -	$ 365,500	$ 563,624	$ 198,124	54%	89%	138%	$ -	0%
146780105	Dewitt Hospitaland Nursinghome	I	17	47	47	1,635	0.457	$ 82,864	$ 66,667	$ 97,850	$ -	$ 97,850	$ 56,088	$ (41,762)	-43%	147%	84%	$ -	0%
196170105	Drew Memorial Hospital Inc	I	799	1,831	1,831	850	0.411	$ 6,453,131	$ 3,633,398	$ 1,526,400	$ -	$ 1,526,400	$ 2,317,442	$ 791,042	52%	42%	64%	$ 34,953	2%
168254105	Eureka Springshospital Llc	I	10	30	30	2,193	0.604	$ 92,020	$ 52,079	$ 47,736	$ -	$ 47,736	$ 43,534	$ (4,202)	-9%	92%	84%	$ -	0%
191343105	Five Rivers Medical Center	I	30	96	96	850	0.628	$ 299,592	$ 175,005	$ 80,750	$ -	$ 80,750	$ 134,290	$ 53,540	66%	46%	77%	$ -	0%
160836105	Forrest City Medical Center	I	1,654	3,647	3,644	761	0.323	$ 26,536,946	$ 6,423,360	$ 2,753,938	$ -	$ 2,753,938	$ 3,810,945	$ 1,057,007	38%	43%	59%	$ -	0%
180869105	Fort Smith Hmallc	I	2,676	9,349	9,225	797	0.671	$ 74,414,651	$ 14,599,573	$ 6,731,950	$ -	$ 6,731,950	$ 13,462,225	$ 6,730,275	100%	46%	92%	$ 647,101	5%
102256105	Fulton County Hospital	I	70	157	157	1,235	0.592	$ 335,593	$ 143,750	$ 158,352	$ -	$ 158,352	$ 295,515	$ 137,163	87%	110%	206%	$ -	0%
178791105	Great River Medical Center	I	832	1,696	1,695	850	0.503	$ 7,309,815	$ 2,473,692	$ 1,425,500	$ -	$ 1,425,500	$ 2,940,304	$ 1,514,804	106%	58%	119%	$ -	0%
146593105	Helena Regionalmedical Center	I	587	1,322	1,320	850	0.431	$ 12,120,962	$ 2,440,495	$ 1,260,022	$ -	$ 1,260,022	$ 1,790,683	$ 530,661	42%	52%	73%	$ -	0%
102665105	Howard Memorialhospital	I	36	109	109	5,178	0.817	$ 666,752	$ 230,925	$ 295,296	$ -	$ 295,296	$ 212,116	$ (83,180)	-28%	128%	92%	$ -	0%
102916105	Jefferson Regional Medicalcenter	I	2,166	7,593	7,493	850	0.681	$ 59,532,863	$ 13,229,029	$ 6,300,750	$ -	$ 6,300,750	$ 11,045,006	$ 4,744,256	75%	48%	83%	$ 488,462	4%
128851105	Johnson Regional Medical Center	I	681	1,491	1,490	850	0.409	$ 3,510,858	$ 2,046,902	$ 1,278,900	$ -	$ 1,278,900	$ 1,966,602	$ 687,702	54%	62%	96%	$ -	0%
118836125	Lakeland Hospital Acquisition Ll	B	125	880	880	601	0.457	$ 1,169,498	$ 338,744	$ 376,152	$ -	$ 376,152	$ 409,390	$ 33,238	9%	111%	121%	$ -	0%
142103125	Lakeside Behavioral Healthsystem	B	27	252	252	501	0.463	$ 532,200	$ 116,801	$ 130,992	$ -	$ 130,992	$ 90,101	$ (40,891)	-31%	112%	77%	$ -	0%
103130105	Lawrence Memorial Hospital	I	34	87	87	1,076	0.596	$ 173,309	$ 75,583	$ 133,084	$ -	$ 133,084	$ 143,063	$ 9,979	8%	176%	189%	$ -	0%
102366105	Leo N Levi Memorial Hospital	I	705	3,181	3,179	636	0.580	$ 4,412,996	$ 1,336,516	$ 2,430,084	$ -	$ 2,430,084	$ 2,942,663	$ 512,579	21%	182%	220%	$ -	0%
107962105	Lester E Cox Medical Centers	B	41	168	165	857	0.790	$ 1,214,367	$ 320,733	$ 135,285	$ -	$ 135,285	$ 232,927	$ 97,642	72%	42%	73%	$ -	0%
159664125	Liberty Healthcare Systemsllc	B	7	45	45	683	0.356	$ 81,000	$ 22,814	$ 23,430	$ -	$ 23,430	$ 17,974	$ (5,456)	-23%	103%	79%	$ -	0%
103203105	Little River Memorial Hospital	I	7	19	19	2,241	0.644	$ 68,730	$ 30,648	$ 60,648	$ -	$ 60,648	$ 32,514	$ (28,134)	-46%	198%	106%	$ -	0%
101580105	Magnolia Regional Medical Center	I	443	1,016	1,004	850	0.387	$ 2,792,215	$ 1,692,578	$ 928,100	$ -	$ 928,100	$ 1,222,421	$ 294,321	32%	55%	72%	$ -	0%
183068105	Mcgehee Hospital	I	41	92	92	3,700	0.530	$ 309,495	$ 144,712	$ 277,800	$ -	$ 277,800	$ 156,774	$ (121,026)	-44%	192%	108%	$ -	0%
130047105	Medical Centerof South Arkansas	I	1,014	2,267	2,265	850	0.556	$ 30,286,619	$ 4,650,104	$ 2,248,980	$ -	$ 2,248,980	$ 4,046,079	$ 1,797,099	80%	48%	87%	$ 69,796	2%

Report F - Summary of Simulation by Provider - Sorted by Provider Name
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Provider Medicaid ID	Provider Name	In / Border Indicator	Stays	Length of Stays	Covered Days	Per Diem Rate	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
		A	B	C	D	E	F	G	H	I	J	K = I + J	L	M = L - K	N = M ÷ K	O = K ÷ H	P = L ÷ H	Q	R = Q ÷ L
103816105	Mena Regional Health System	I	443	994	994	850	0.345	$ 2,615,242	$ 1,177,074	$ 734,616	$ -	$ 734,616	$ 1,098,442	$ 363,826	50%	62%	93%	$ -	0%
101363105	Mercy Hospitalberryville	I	26	76	75	2,391	0.631	$ 415,146	$ 145,953	$ 187,200	$ -	$ 187,200	$ 118,413	$ (68,787)	-37%	128%	81%	$ -	0%
204253105	Mercy Hospitalbooneville	I	13	46	46	2,862	0.617	$ 209,182	$ 98,389	$ 123,812	$ -	$ 123,812	$ 57,887	$ (65,925)	-53%	126%	59%	$ -	0%
105691105	Mercy Hospitalfort Smith	I	2,831	10,720	10,660	890	0.670	$ 51,866,128	$ 18,490,188	$ 9,017,800	$ -	$ 9,017,800	$ 14,353,748	$ 5,335,948	59%	49%	78%	$ 801,787	6%
101109105	Mercy Hospitalnorthwest Arkansas	I	2,174	6,025	5,984	850	0.604	$ 30,805,503	$ 8,625,172	$ 5,114,350	$ -	$ 5,114,350	$ 9,320,273	$ 4,205,923	82%	59%	108%	$ 66,551	1%
102232105	Mercy Hospitalozark	I	8	16	16	2,785	0.524	$ 63,160	$ 25,391	$ 39,728	$ -	$ 39,728	$ 30,213	$ (9,515)	-24%	156%	119%	$ -	0%
103238105	Mercy Hospitalparis	I	1	2	2	6,179	0.623	$ 9,630	$ 3,035	$ 7,530	$ -	$ 7,530	$ 4,494	$ (3,036)	-40%	248%	148%	$ -	0%
107971105	Mercy Hospitalspringfield	B	174	1,253	1,251	850	2.096	$ 13,726,336	$ 4,198,107	$ 1,133,081	$ -	$ 1,133,081	$ 3,132,417	$ 1,999,336	176%	27%	75%	$ 504,307	16%
105514105	Mercy Hospitalwaldron	I	16	48	47	2,816	0.635	$ 154,613	$ 65,695	$ 103,400	$ -	$ 103,400	$ 73,317	$ (30,083)	-29%	157%	112%	$ -	0%
107115105	Methodist Healthcare Memphishosp	B	1,423	8,904	8,808	1,700	1.283	$ 83,913,614	$ 21,793,005	$ 13,575,979	$ -	$ 13,575,979	$ 16,432,573	$ 2,856,594	21%	62%	75%	$ 3,281,797	20%
152280105	National Park Medical Center	I	1,169	3,443	3,408	850	0.624	$ 48,509,114	$ 4,800,041	$ 2,864,816	$ -	$ 2,864,816	$ 5,338,688	$ 2,473,872	86%	60%	111%	$ 96,487	2%
192756105	Nea Baptist Memorial Hospital	I	1,404	4,320	4,267	850	0.682	$ 27,116,508	$ 7,475,322	$ 3,512,750	$ -	$ 3,512,750	$ 7,024,958	$ 3,512,208	100%	47%	94%	$ 181,701	3%
131319105	North Arkansasregional Medical	I	1,135	2,014	2,014	850	0.354	$ 9,602,466	$ 3,424,434	$ 1,700,000	$ -	$ 1,700,000	$ 2,956,609	$ 1,256,609	74%	50%	86%	$ 67,513	2%
193063105	North Metro Medical Center	I	295	1,002	998	850	0.632	$ 4,689,021	$ 2,623,820	$ 812,850	$ -	$ 812,850	$ 1,439,130	$ 626,280	77%	31%	55%	$ 100,601	7%
165955105	Northwest Arkansas Hospitalsllc (Springdale)	I	1,576	5,927	5,891	902	0.722	$ 59,750,776	$ 8,939,521	$ 4,995,040	$ -	$ 4,995,040	$ 8,271,577	$ 3,276,537	66%	56%	93%	$ 79,305	1%
166699105	Northwest Arkansas Hospitalsllc (Springdale)	I	2,535	7,513	7,510	3,608	0.398	$ 67,427,524	$ 10,056,725	$ 6,685,990	$ -	$ 6,685,990	$ 7,444,430	$ 758,440	11%	66%	74%	$ 365,037	5%
168846105	Northwest Arkansas Hospitalsllc (Bentonville)	I	1,280	3,121	3,109	902	0.575	$ 39,319,905	$ 5,872,084	$ 2,699,570	$ -	$ 2,699,570	$ 5,431,856	$ 2,732,286	101%	46%	93%	$ 204,296	4%
215698105	Northwest Health Physiciansspeci	I	48	52	52	850	1.357	$ 1,512,248	$ 541,155	$ 44,200	$ -	$ 44,200	$ 469,847	$ 425,647	963%	8%	87%	$ -	0%
210599125	Oakridge Behavioral Center	I	313	2,282	2,282	725	0.415	$ 2,492,024	$ 1,381,240	$ 1,468,157	$ -	$ 1,468,157	$ 961,101	$ (507,056)	-35%	106%	70%	$ 23,834	2%
103629105	Ouachita Countymedical Center	I	407	939	939	850	0.411	$ 3,203,059	$ 1,664,564	$ 803,150	$ -	$ 803,150	$ 1,186,184	$ 383,034	48%	48%	71%	$ -	0%
106200105	Ozark Health Medical Center	I	26	73	73	1,873	0.912	$ 260,913	$ 103,273	$ 86,586	$ -	$ 86,586	$ 159,946	$ 73,360	85%	84%	155%	$ -	0%
175808105	Ozarks Community Hospital Of	I	38	158	157	2,942	0.578	$ 864,033	$ 464,325	$ 389,188	$ -	$ 389,188	$ 203,106	$ (186,082)	-48%	84%	44%	$ 45,289	22%
142135125	Parkwood Behavioral Healthsystem	B	4	128	128	605	0.414	$ 110,291	$ 34,878	$ 44,678	$ -	$ 44,678	$ 11,955	$ (32,723)	-73%	128%	34%	$ -	0%
180190105	Physicians Specialty Hospital Ll	I	4	4	4	850	1.298	$ 73,701	$ 24,100	$ 3,400	$ -	$ 3,400	$ 37,451	$ 34,051	1002%	14%	155%	$ -	0%
101505105	Piggott Community Hospital	I	27	92	83	1,583	0.565	$ 151,048	$ 101,826	$ 93,288	$ -	$ 93,288	$ 109,173	$ 15,885	17%	92%	107%	$ -	0%
107963105	Poplar Bluff Regional Medical	B	316	793	788	726	0.401	$ 8,880,365	$ 1,340,450	$ 640,950	$ -	$ 640,950	$ 904,232	$ 263,282	41%	48%	67%	$ -	0%
107092105	Regional Med Ctr At Memphis	B	805	4,228	4,200	850	1.211	$ 32,688,400	$ 6,450,791	$ 3,848,700	$ -	$ 3,848,700	$ 7,574,283	$ 3,725,583	97%	60%	117%	$ 762,679	10%
165429105	River Valley Medical Center	I	40	131	131	1,327	0.661	$ 473,551	$ 174,984	$ 283,210	$ -	$ 283,210	$ 190,630	$ (92,580)	-33%	162%	109%	$ -	0%
182577125	Riverview Behavioral Health	I	447	7,722	7,721	725	0.445	$ 9,205,391	$ 4,518,845	$ 3,710,781	$ -	$ 3,710,781	$ 2,044,205	$ (1,666,576)	-45%	82%	45%	$ 610,659	30%
182644105	Saint Francis Hospital	B	273	1,241	1,238	850	0.817	$ 12,223,978	$ 1,785,550	$ 968,800	$ -	$ 968,800	$ 1,663,569	$ 694,769	72%	54%	93%	$ 57,423	3%
129187105	Saline Memorialhospital (Benton)	I	1,112	3,248	3,238	1,700	0.544	$ 11,227,361	$ 3,799,163	$ 2,613,037	$ -	$ 2,613,037	$ 4,296,444	$ 1,683,407	64%	69%	113%	$ 10,804	0%
220053105	Saline Memorialhospital (Benton)	I	1	1	1	893	0.319	$ 5,697	$ 1,840	$ 893	$ -	$ 893	$ 2,300	$ 1,407	158%	49%	125%	$ -	0%
181275105	Select Specialty Hospital Ftsmit	I	1	2	2	850	2.124	$ 13,224	$ 4,168	$ 1,700	$ -	$ 1,700	$ 15,317	$ 13,617	801%	41%	368%	$ -	0%
177289105	Siloam Springsregional Hospital	I	563	957	957	850	0.324	$ 7,215,432	$ 1,687,108	$ 748,610	$ -	$ 748,610	$ 1,289,660	$ 541,050	72%	44%	76%	$ -	0%
178790105	South Mississippi County Medical	I	54	140	138	2,052	0.553	$ 577,739	$ 213,305	$ 194,556	$ -	$ 194,556	$ 213,158	$ 18,602	10%	91%	100%	$ -	0%
101870105	Sparks Medicalcenter Van Buren	I	131	371	371	850	0.489	$ 2,729,268	$ 543,829	$ 317,050	$ -	$ 317,050	$ 461,324	$ 144,274	46%	58%	85%	$ -	0%
182423125	Springwoods Behavioral Health	I	366	2,882	2,861	725	0.413	$ 4,075,125	$ 1,756,677	$ 1,678,664	$ -	$ 1,678,664	$ 1,090,409	$ (588,255)	-35%	96%	62%	$ -	0%
142757105	St Bernard Community Hospital Co	I	43	148	148	1,317	0.654	$ 230,794	$ 120,074	$ 194,100	$ -	$ 194,100	$ 202,303	$ 8,203	4%	162%	168%	$ -	0%
101693105	St Bernards Medical Center	I	4,293	14,976	14,913	850	0.731	$ 44,611,845	$ 23,192,378	$ 12,450,600	$ -	$ 12,450,600	$ 22,959,857	$ 10,509,257	84%	54%	99%	$ 546,534	2%
109910105	St Jude Childrens Researchhospit	B	70	347	347	4,500	1.368	$ 2,863,753	$ 902,552	$ 1,472,100	$ -	$ 1,472,100	$ 764,475	$ (707,625)	-48%	163%	85%	$ 73,816	10%
152329105	St Marys Regional Medical Center	I	2,155	6,662	6,652	789	0.464	$ 42,222,457	$ 6,614,665	$ 5,811,722	$ -	$ 5,811,722	$ 7,219,785	$ 1,408,063	24%	88%	109%	$ 89,423	1%
104268105	St Vincent Infirmary Medicalctr	I	3,480	20,135	19,745	850	0.895	$ 110,330,102	$ 27,640,337	$ 16,165,250	$ -	$ 16,165,250	$ 23,730,780	$ 7,565,530	47%	58%	86%	$ 1,328,935	6%
138525105	St Vincent Medical Center	I	162	564	561	850	1.049	$ 4,812,556	$ 1,528,753	$ 473,300	$ -	$ 473,300	$ 1,200,107	$ 726,807	154%	31%	79%	$ 15,911	1%
101615105	St Vincent Morrilton	I	65	184	181	2,079	1.001	$ 1,002,774	$ 310,495	$ 360,984	$ -	$ 360,984	$ 440,090	$ 79,106	22%	116%	142%	$ -	0%
157571105	Stone County Medical Center	I	42	112	107	1,870	0.634	$ 589,252	$ 197,634	$ 207,778	$ -	$ 207,778	$ 191,777	$ (16,001)	-8%	105%	97%	$ -	0%
105312125	The Bridgeway Llc	I	909	9,591	9,560	735	0.426	$ 13,289,760	$ 3,969,077	$ 4,682,157	$ -	$ 4,682,157	$ 2,892,327	$ (1,789,830)	-38%	118%	73%	$ 99,665	3%

Report F - Summary of Simulation by Provider - Sorted by Provider Name
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 01 - Baseline Model Using Current System Allowed Amount for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Provider Medicaid ID	Provider Name	In / Border Indicator	Stays	Length of Stays	Covered Days	Per Diem Rate	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
		A	B	C	D	E	F	G	H	I	J	K = I + J	L	M = L - K	N = M ÷ K	O = K ÷ H	P = L ÷ H	Q	R = Q ÷ L
154265125	Uhs Of Benton Llc	I	1,118	8,768	8,728	545	0.347	$ 9,407,392	$ 2,964,871	$ 4,219,131	$ -	$ 4,219,131	$ 2,806,853	$ (1,412,278)	-33%	142%	95%	$ 9,540	0%
145121125	United Methodist Behavioral	I	1,592	16,800	15,944	606	0.364	$ 19,692,981	$ 6,206,519	$ 8,071,469	$ -	$ 8,071,469	$ 4,463,870	$ (3,607,599)	-45%	130%	72%	$ 286,383	6%
209821105	Unity Health Harris Medicalcente	I	819	1,688	1,684	850	0.409	$ 6,779,418	$ 1,368,674	$ 1,312,800	$ -	$ 1,312,800	$ 2,368,964	$ 1,056,164	80%	96%	173%	$ -	0%
104266105	Univ Hospitalof Arkansas	I	8,870	50,088	49,642	1,734	1.015	$ 253,816,110	$ 87,694,481	$ 88,256,165	$ -	$ 88,256,165	$ 69,011,168	$ (19,244,997)	-22%	101%	79%	$ 6,285,000	9%
193673125	Valley Behavioral Health System	I	790	16,820	16,802	725	0.466	$ 19,263,611	$ 8,100,629	$ 7,572,770	$ -	$ 7,572,770	$ 4,068,268	$ (3,504,502)	-46%	93%	50%	$ 1,413,845	35%
140704125	Vantage Point Of Northwestarkans	I	825	21,023	21,018	725	0.499	$ 24,415,185	$ 10,456,147	$ 9,494,556	$ -	$ 9,494,556	$ 4,917,029	$ (4,577,527)	-48%	91%	47%	$ 1,959,514	40%
179951105	Wadley Regionalmedical Center	B	1,146	3,477	3,462	850	0.538	$ 21,677,477	$ 4,446,870	$ 2,558,312	$ -	$ 2,558,312	$ 4,433,639	$ 1,875,327	73%	58%	100%	$ 17,819	0%
197302105	Wadley Regionalmedical Center At	I	137	667	666	850	0.789	$ 3,016,458	$ 890,030	$ 553,500	$ -	$ 553,500	$ 749,319	$ 195,819	35%	62%	84%	$ -	0%
106294105	Washington Regional Medicalcente	I	2,470	9,548	9,477	850	0.776	$ 63,523,793	$ 14,212,148	$ 8,144,032	$ -	$ 8,144,032	$ 13,782,058	$ 5,638,026	69%	57%	97%	$ 159,701	1%
129186105	White County Medical Center	I	3,093	10,453	10,385	850	0.539	$ 48,498,634	$ 11,969,062	$ 9,782,095	$ -	$ 9,782,095	$ 11,932,003	$ 2,149,908	22%	82%	100%	$ 29,800	0%
102716105	White River Medical Center	I	1,822	5,429	5,411	850	0.581	$ 24,507,061	$ 7,731,717	$ 4,595,500	$ -	$ 4,595,500	$ 7,636,687	$ 3,041,187	66%	59%	99%	$ 114,620	2%
113493125	Youth Home Inc	I	123	21,268	21,094	350	0.518	$ 7,384,650	$ 2,327,376	$ 7,384,650	$ -	$ 7,384,650	$ 459,653	$ (6,924,997)	-94%	317%	20%	$ -	0%
119304725	Youth Villagesinc	B	71	11,579	11,454	350	0.418	$ 4,008,900	$ 1,263,461	$ 4,008,900	$ -	$ 4,008,900	$ 221,208	$ (3,787,692)	-94%	317%	18%	$ 7,401	3%
Total			**96,114**	**519,356**	**515,625**		**0.722**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ -**	**$ 581,815,376**	**$ 581,815,102**	**$ (274)**	**0%**	**83%**	**83%**	**$ 87,935,363**	**15%**

Notes:

A) In-state (I) and border provider (B) status. Out of state, non-border providers not shown.

F) Average APR DRG Weight.

G) Billed Amount as submitted without inflation.

H) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

I) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.

Report A: Model Parameters
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Simulation Parameters	All Providers	Comment
Stays	96,114	
State-Wide Base Rate	$ 11,473.06	
APR DRG v35 Case Mix	0.7218	
Billed Amt	$ 2,355,440,778	
Est Cost (Billed × CCR)	$ 702,127,500	
Allowed Amount	$ 581,815,376	Equals sum of per diem payments for claims with date of discharge in CY 2016
Est. Gross Supplemental Payment	$ 275,390,153	Est. Gross supplemental payments allocated to each model claim based on charges(not net of IGT or tax)
Total Est Claim Pmt	$ 857,205,529	Intention is budget neutrality
APR DRG Simulation Pmt	$ 857,205,122	
Pmt Change	$ (408)	
APR DRG Simulated Outlier Pmt	$ 71,565,950	
APR DRG Simulated Outlier Pct	8.35%	
Est Gross Supplemental Payment Included in Budget	Yes	
Wage Index Adjustment of Base Rate	Yes	
DRG Policy Adjustor(s)	No	
Age Policy Adjustor(s)	No	
Provider Policy Adjustor(s)	No	
Documentation and Coding Adjustment	No	
Relative Weights	APR v.35 National	
Transfer Payment Policy	Yes	Discharge status codes: '02', '05', '65', '66', '82', '85', '93', '94'
Outlier Policy	Yes: $30,000 / 80%	Medicare-like outlier policy: High side threshold (provider loss) and marginal cost (MC) percentage
Charge Cap Policy	No	

Report B: Summary of Simulation by Service Line - Sorted by Percent Change
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Service Line	Stays	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A	B	C	D	E	F	G	H = F + G	I	J = I - H	K = J ÷ H	L = H ÷ E	M = I ÷ E	N	O = N ÷ I
Circulatory Adult	3,876	1.40	$ 186,282,924	$ 46,152,874	$ 14,117,927	$ 22,045,057	$ 36,162,984	$ 62,884,645	$ 26,721,662	74%	78%	136%	$ 1,232,404	2%
Misc Adult	15,042	1.25	$ 582,905,305	$ 156,550,791	$ 68,675,645	$ 69,866,813	$ 138,542,458	$ 217,885,852	$ 79,343,394	57%	88%	139%	$ 5,274,967	2%
Rehab	4	1.58	$ 125,239	$ 33,314	$ 22,850	$ 13,791	$ 36,641	$ 57,037	$ 20,396	56%	110%	171%	$ -	0%
Gastroent Adult	4,406	1.01	$ 132,562,673	$ 35,411,072	$ 18,202,717	$ 17,058,399	$ 35,261,116	$ 51,246,827	$ 15,985,711	45%	100%	145%	$ 397,158	1%
Resp Adult	3,262	0.98	$ 100,624,313	$ 27,237,552	$ 14,019,498	$ 13,821,350	$ 27,840,848	$ 36,875,310	$ 9,034,462	32%	102%	135%	$ 659,623	2%
Obstetrics	16,137	0.43	$ 252,009,455	$ 63,674,029	$ 38,979,245	$ 31,922,790	$ 70,902,035	$ 79,792,894	$ 8,890,859	13%	111%	125%	$ 133,832	0%
Burns	104	3.34	$ 17,338,750	$ 7,695,418	$ 4,489,665	$ 1,836,036	$ 6,325,701	$ 7,036,118	$ 710,417	11%	82%	91%	$ 3,068,397	44%
Substance Abuse	1,078	0.44	$ 13,048,107	$ 3,422,118	$ 3,553,115	$ 1,701,703	$ 5,254,818	$ 5,436,659	$ 181,841	3%	154%	159%	$ -	0%
Mental Health Adult	6,795	0.52	$ 83,683,640	$ 22,662,377	$ 33,231,577	$ 13,862,123	$ 47,093,700	$ 40,348,742	$ (6,744,957)	-14%	208%	178%	$ 77,535	0%
Misc Pediatric	6,697	1.12	$ 266,829,135	$ 101,270,801	$ 103,216,468	$ 25,736,548	$ 128,953,015	$ 108,752,118	$ (20,200,898)	-16%	127%	107%	$ 23,441,285	22%
Neonate	3,627	2.38	$ 317,668,157	$ 100,514,948	$ 105,568,888	$ 26,602,544	$ 132,171,432	$ 110,990,401	$ (21,181,031)	-16%	131%	110%	$ 17,678,048	16%
Resp Pediatric	3,347	0.66	$ 95,345,575	$ 37,923,007	$ 43,743,962	$ 9,868,068	$ 53,612,030	$ 37,212,013	$ (16,400,017)	-31%	141%	98%	$ 12,099,114	33%
Transplant	38	12.23	$ 22,405,053	$ 7,280,569	$ 8,643,736	$ 1,858,508	$ 10,502,243	$ 7,173,332	$ (3,328,911)	-32%	144%	99%	$ 1,842,806	26%
Normal newborn	22,152	0.15	$ 113,047,651	$ 30,736,545	$ 46,011,027	$ 15,921,268	$ 61,932,295	$ 38,074,160	$ (23,858,135)	-39%	201%	124%	$ 300,092	1%
Mental Health Pediatric	9,549	0.44	$ 171,564,802	$ 61,562,086	$ 79,339,057	$ 23,275,157	$ 102,614,214	$ 53,439,013	$ (49,175,201)	-48%	167%	87%	$ 5,360,688	10%
Total	**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ 275,390,153**	**$ 857,205,529**	**$ 857,205,122**	**$ (408)**	**0%**	**122%**	**122%**	**$ 71,565,950**	**8%**

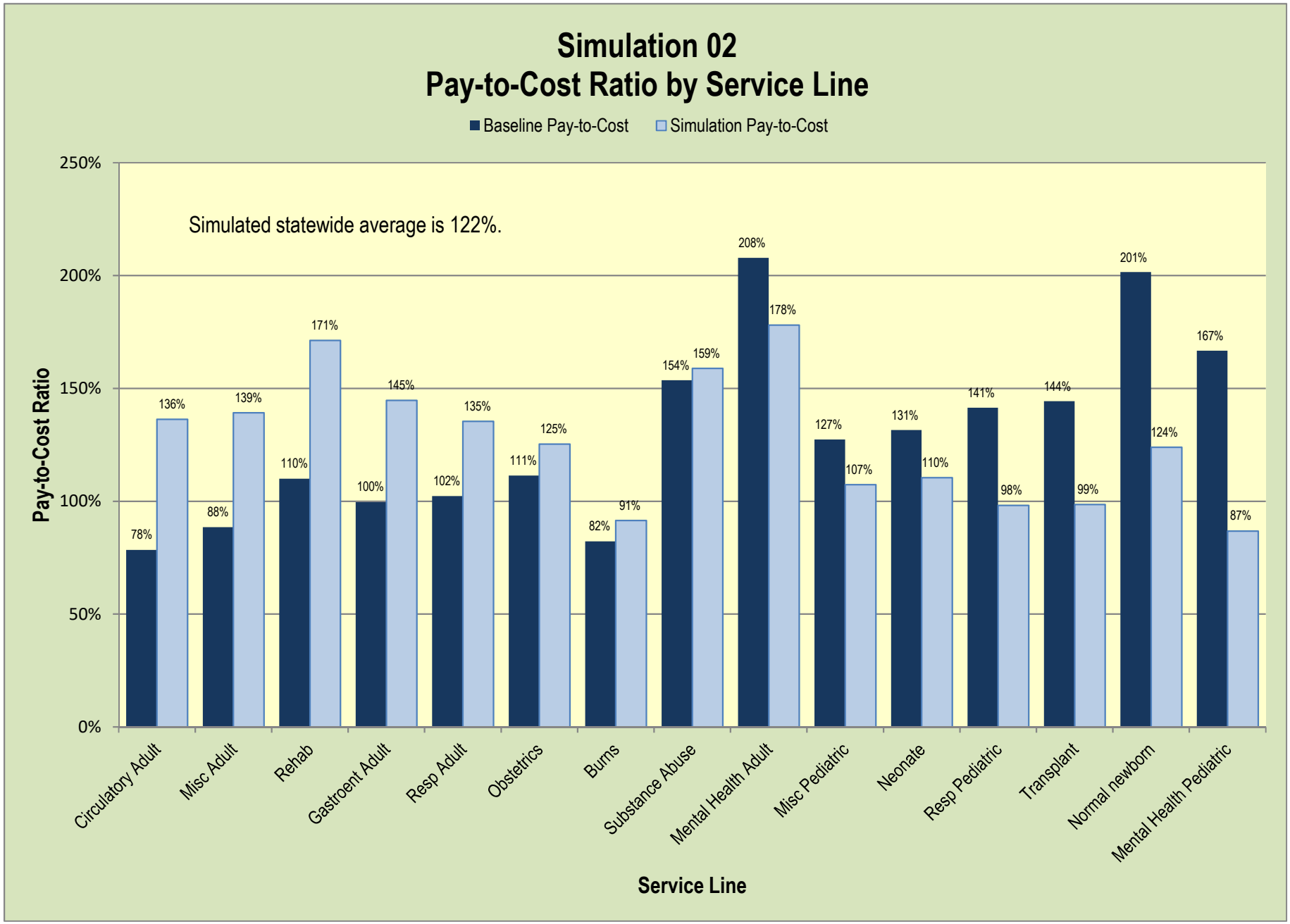
Notes:

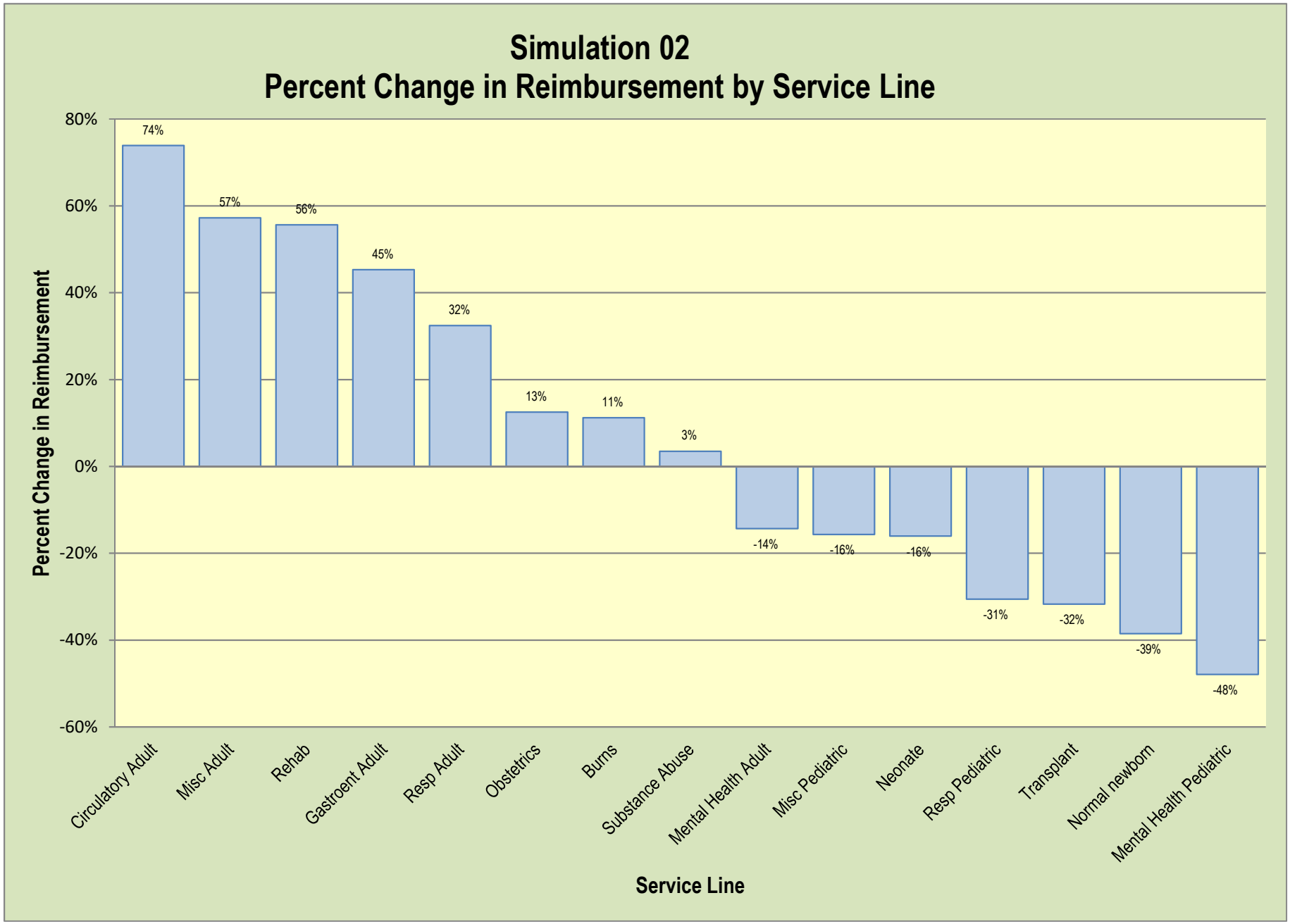
C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.


Simulation 02
Pay-to-Cost Ratio by Service Line
Baseline Pay-to-Cost
Simulation Pay-to-Cost
Simulated statewide average is 122%.
Pay-to-Cost Ratio
250%
200%
150%
100%
50%
0%
78%
136%
88%
139%
110%
171%
100%
145%
102%
135%
111%
125%
82%
91%
154%
159%
208%
178%
127%
107%
131%
110%
141%
98%
144%
99%
201%
124%
167%
87%
Circulatory Adult
Misc Adult
Rehab
Gastroent Adult
Resp Adult
Obstetrics
Burns
Substance Abuse
Mental Health Adult
Misc Pediatric
Neonate
Resp Pediatric
Transplant
Normal newborn
Mental Health Pediatric
Service Line


Simulation 02
Percent Change in Reimbursement by Service Line
Percent Change in Reimbursement
80%
60%
40%
20%
0%
-20%
-40%
-60%
74%
57%
56%
45%
32%
13%
11%
3%
-14%
-16%
-16%
-31%
-32%
-39%
-48%
Circulatory Adult
Misc Adult
Rehab
Gastroent Adult
Resp Adult
Obstetrics
Burns
Substance Abuse
Mental Health Adult
Misc Pediatric
Neonate
Resp Pediatric
Transplant
Normal newborn
Mental Health Pediatric
Service Line

Report C: Summary of Simulation by APR DRG Severity of Illness - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

SOI	SOI Desc.	Stays	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A		B	C	D	E	F	G	H = F + G	I	J = I - H	K = J ÷ H	L = H ÷ E	M = I ÷ E	N	O = N ÷ I
1	Minor	47,196	0.38	$ 587,155,224	$ 164,759,295	$143,914,115	$ 83,109,415	$227,023,530	$206,642,216	$(20,381,314)	-9%	138%	125%	$ 3,123,032	2%
2	Moderate	33,902	0.66	$ 689,549,669	$ 200,032,722	$177,078,774	$ 82,705,204	$259,783,978	$260,482,567	$ 698,588	0%	130%	130%	$ 6,652,933	3%
3	Major	11,929	1.37	$ 523,392,549	$ 156,534,361	$130,881,687	$ 55,388,894	$186,270,582	$196,322,290	$ 10,051,708	5%	119%	125%	$ 11,600,974	6%
4	Extreme	3,087	4.20	$ 555,343,336	$ 180,801,122	$129,940,799	$ 54,186,640	$184,127,439	$193,758,049	$ 9,630,610	5%	102%	107%	$ 50,189,011	26%
Total		**96,114**	**0.72**	**$2,355,440,778**	**$ 702,127,500**	**$581,815,376**	**$275,390,153**	**$857,205,529**	**$857,205,122**	**$ (408)**	**0%**	**122%**	**122%**	**$ 71,565,950**	**8%**

Notes:

A) Severity of illness (SOI)

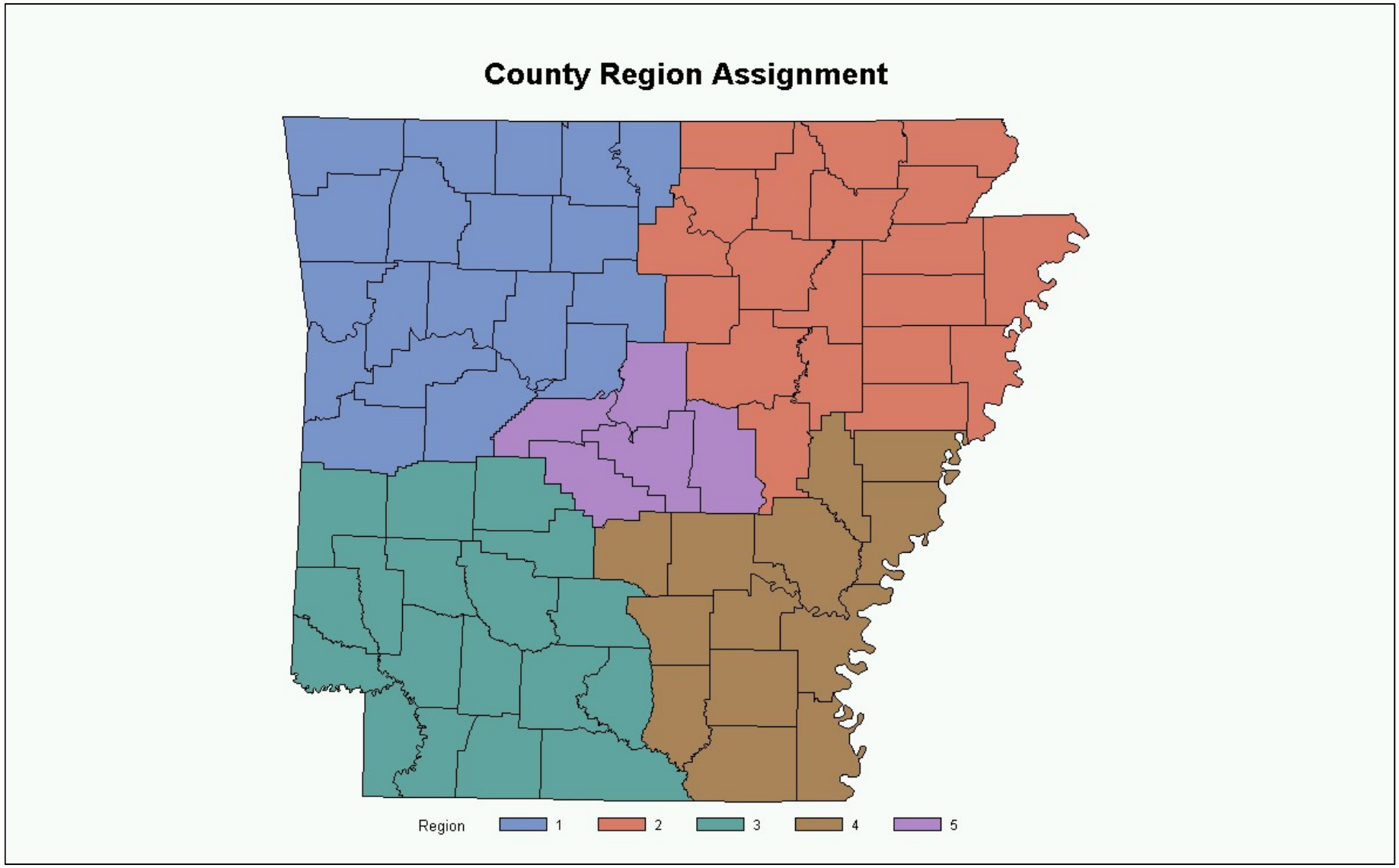
C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.

Figure D
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services



Report D: Summary of Simulation by Region - Sorted by Region
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: Data source is DRG Claims Dataset, CY 2016. Medicaid payments (allowed amount, does not include TPL) and estimated cost using Medicare cost-to-charge ratio where available, otherwise Navigant calculated CCRs from HCRIS Cost Report. Gross supplemental payments allocated to each model claim based on charges(not net of IGT or tax). Grouped under APR DRG version 35.

Region	Stays	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A	B	C	D	E	F	G	H = F + G	I	J = I - H	K = J ÷ H	L = H ÷ E	M = I ÷ E	N	O = N ÷ I
1 - North West	24,046	0.58	$ 523,137,922	$ 123,885,555	$ 77,034,128	$ 62,717,882	$ 139,752,010	$ 161,961,497	$ 22,209,487	16%	113%	131%	$ 4,659,390	3%
2 - North East	16,033	0.57	$ 202,266,691	$ 67,409,696	$ 41,103,644	$ 43,500,295	$ 84,603,939	$ 104,072,789	$ 19,468,850	23%	126%	154%	$ 485,772	0%
3 - South West	8,751	0.57	$ 170,003,106	$ 38,581,704	$ 26,377,561	$ 25,927,729	$ 52,305,290	$ 56,962,623	$ 4,657,333	9%	136%	148%	$ 685,935	1%
4 - South East	4,880	0.53	$ 88,851,497	$ 24,784,369	$ 14,316,438	$ 15,020,996	$ 29,337,434	$ 29,760,685	$ 423,251	1%	118%	120%	$ 374,271	1%
5 - Central	35,910	0.92	$ 1,132,797,927	$ 392,295,740	$ 386,988,604	$ 115,673,425	$ 502,662,029	$ 434,235,657	$ (68,426,371)	-14%	128%	111%	$ 61,886,373	14%
Border	6,494	0.90	$ 238,383,635	$ 55,170,435	$ 35,995,001	$ 12,549,826	$ 48,544,827	$ 70,211,871	$ 21,667,043	45%	88%	127%	$ 3,474,209	5%
Total	**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ 275,390,153**	**$ 857,205,529**	**$ 857,205,122**	**$ (408)**	**0%**	**122%**	**122%**	**$ 71,565,950**	**8%**

Notes:

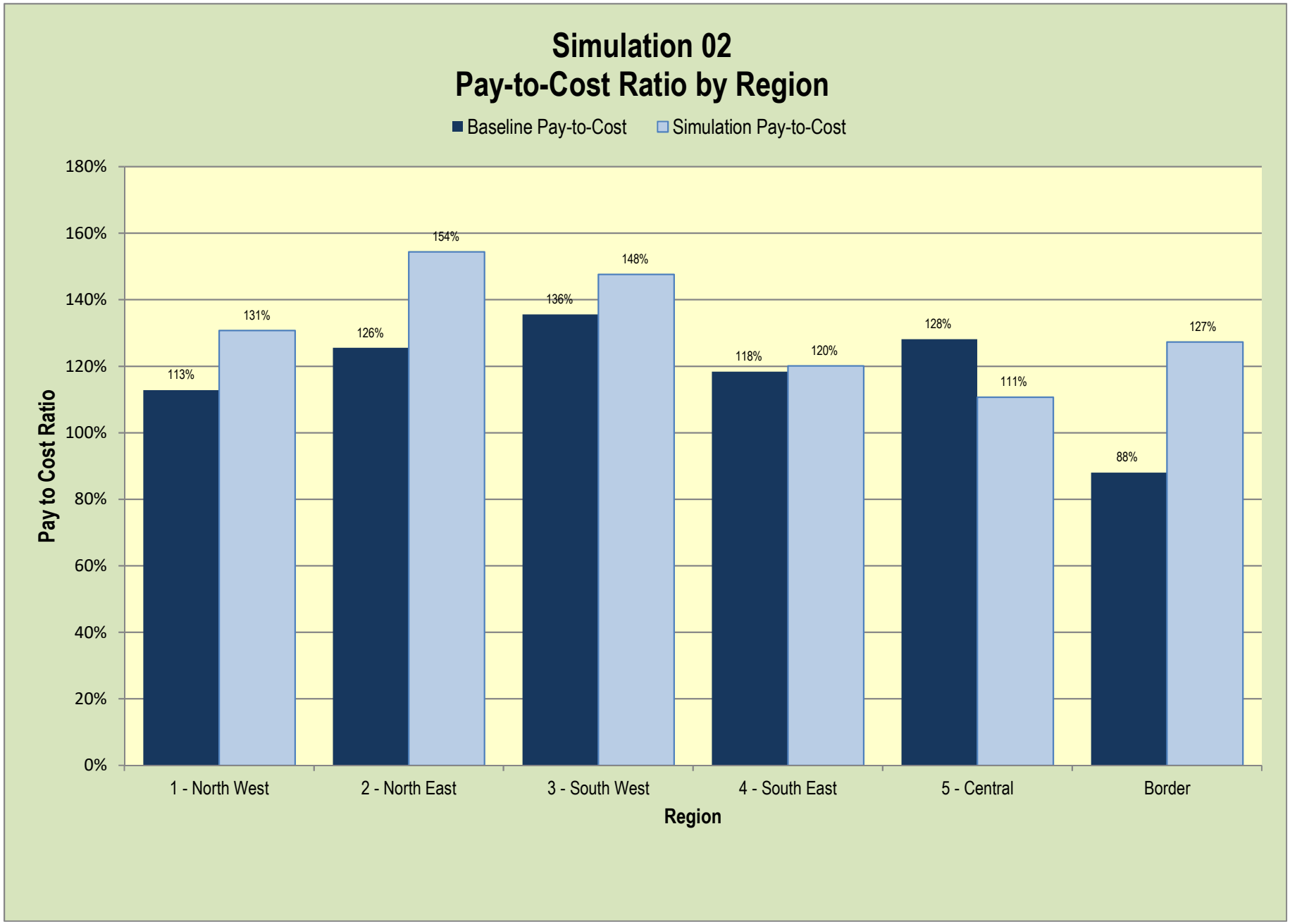
A) Region assignment developed by Navigant at the county level using provider phsyical address

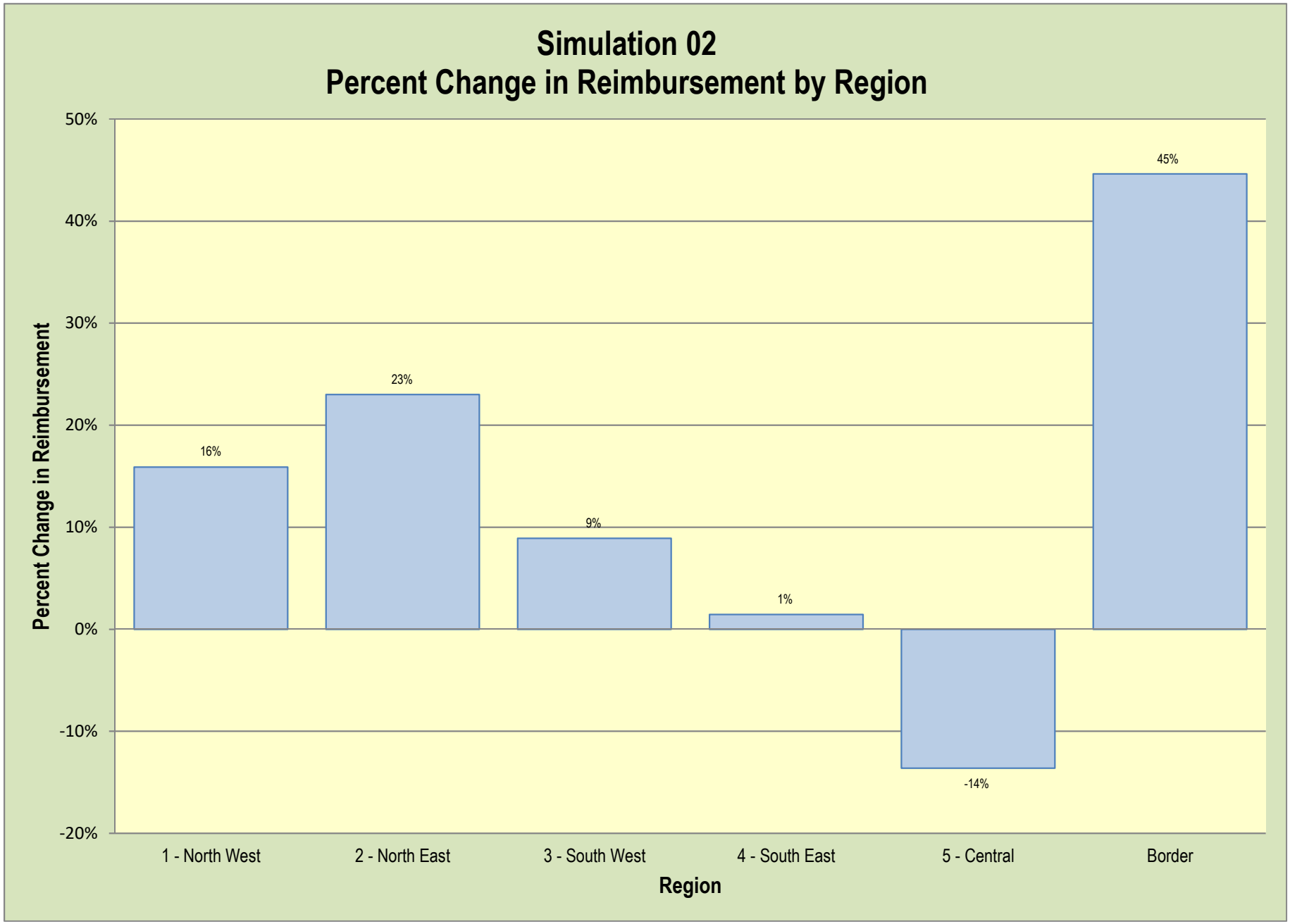
C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.


Simulation 02
Pay-to-Cost Ratio by Region
Baseline Pay-to-Cost
Simulation Pay-to-Cost
Pay to Cost Ratio
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
113%
131%
126%
154%
136%
148%
118%
120%
128%
111%
88%
127%
1 - North West
2 - North East
3 - South West
4 - South East
5 - Central
Border
Region


Simulation 02
Percent Change in Reimbursement by Region
Percent Change in Reimbursement
50%
40%
30%
20%
10%
0%
-10%
-20%
16%
23%
9%
1%
-14%
45%
1 - North West
2 - North East
3 - South West
4 - South East
5 - Central
Border
Region

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A		B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
640	Neonate Birthwt >2499g, Normal Newborn Or Neonate W Other Problem	21,519	0.14	$ 104,674,466	$ 28,412,852	$ 57,131,191	$ 33,754,502	$ (23,376,689)	-41%	201%	119%	$ 297,539	1%
560	Vaginal Delivery	9,547	0.34	$ 129,744,421	$ 31,898,806	$ 34,906,812	$ 37,316,681	$ 2,409,869	7%	109%	117%	$ 4,972	0%
753	Bipolar Disorders	6,718	0.47	$ 108,898,977	$ 36,908,139	$ 62,479,744	$ 38,790,086	$ (23,689,658)	-38%	169%	105%	$ 2,763,183	7%
540	Cesarean Delivery	4,707	0.60	$ 96,765,701	$ 24,930,546	$ 26,668,657	$ 32,711,760	$ 6,043,102	23%	107%	131%	$ 116,104	0%
751	Major Depressive Disorders & Other/Unspecified Psychoses	3,209	0.46	$ 47,297,246	$ 15,739,124	$ 26,382,276	$ 17,682,733	$ (8,699,543)	-33%	168%	112%	$ 647,890	4%
754	Depression Except Major Depressive Disorder	2,771	0.33	$ 32,996,208	$ 10,679,330	$ 20,168,085	$ 10,997,640	$ (9,170,446)	-45%	189%	103%	$ 576,792	5%
750	Schizophrenia	1,734	0.73	$ 27,286,379	$ 7,822,690	$ 15,831,570	$ 14,445,443	$ (1,386,127)	-9%	202%	185%	$ 113,609	1%
720	Septicemia & Disseminated Infections	1,577	1.48	$ 83,617,903	$ 23,677,053	$ 23,666,911	$ 28,890,707	$ 5,223,797	22%	100%	122%	$ 2,866,829	10%
139	Other Pneumonia	1,413	0.66	$ 24,742,277	$ 7,438,540	$ 10,164,793	$ 10,765,809	$ 601,016	6%	137%	145%	$ 143,526	1%
138	Bronchiolitis & Rsv Pneumonia	1,174	0.46	$ 16,820,696	$ 6,269,603	$ 11,666,986	$ 6,968,481	$ (4,698,505)	-40%	186%	111%	$ 803,544	12%
420	Diabetes	1,166	0.59	$ 21,507,353	$ 6,288,781	$ 6,870,572	$ 7,834,462	$ 963,890	14%	109%	125%	$ -	0%
383	Cellulitis & Other Skin Infections	1,057	0.56	$ 17,721,371	$ 4,877,219	$ 6,899,408	$ 6,801,291	$ (98,117)	-1%	141%	139%	$ 2,918	0%
566	Other Antepartum Diagnoses	902	0.43	$ 10,710,644	$ 2,984,613	$ 4,626,624	$ 4,377,357	$ (249,267)	-5%	155%	147%	$ 12,756	0%
140	Chronic Obstructive Pulmonary Disease	876	0.71	$ 17,583,922	$ 4,892,172	$ 5,706,890	$ 7,096,209	$ 1,389,319	24%	117%	145%	$ -	0%
249	Other Gastroenteritis, Nausea & Vomiting	811	0.53	$ 10,625,411	$ 3,106,527	$ 4,862,942	$ 4,970,171	$ 107,229	2%	157%	160%	$ 36,713	1%
463	Kidney & Urinary Tract Infections	805	0.58	$ 12,263,617	$ 3,519,767	$ 5,346,105	$ 5,327,548	$ (18,557)	0%	152%	151%	$ 253	0%
141	Asthma	758	0.48	$ 9,547,261	$ 3,004,804	$ 3,877,193	$ 4,202,576	$ 325,383	8%	129%	140%	$ 487	0%
194	Heart Failure	742	0.85	$ 19,338,513	$ 5,215,070	$ 5,434,509	$ 7,427,072	$ 1,992,564	37%	104%	142%	$ 200,827	3%
861	Signs, Symptoms & Other Factors Influencing Health Status	718	0.51	$ 9,214,124	$ 2,703,259	$ 4,394,713	$ 4,271,269	$ (123,445)	-3%	163%	158%	$ 82,377	2%
581	Neonate, Transferred < 5 Days Old, Born Here	709	0.18	$ 4,770,089	$ 1,419,952	$ 1,699,600	$ 1,430,533	$ (269,067)	-16%	120%	101%	$ -	0%
53	Seizure	708	0.74	$ 14,515,972	$ 4,864,701	$ 5,802,003	$ 6,512,165	$ 710,163	12%	119%	134%	$ 495,243	8%
133	Respiratory Failure	674	1.14	$ 32,284,170	$ 10,253,029	$ 9,698,907	$ 10,311,849	$ 612,942	6%	95%	101%	$ 1,602,931	16%
634	Neonate, Birthwt >2499g W Resp Dist Synd/Oth Maj Resp Cond	658	1.56	$ 52,440,898	$ 15,726,430	$ 19,605,687	$ 13,707,284	$ (5,898,403)	-30%	125%	87%	$ 2,031,949	15%
626	Neonate Bwt 2000-2499g, Normal Newborn Or Neonate W Other Problem	633	0.60	$ 8,373,185	$ 2,323,693	$ 4,801,104	$ 4,319,658	$ (481,446)	-10%	207%	186%	$ 2,553	0%
812	Poisoning Of Medicinal Agents	590	0.67	$ 11,406,410	$ 3,083,797	$ 3,089,242	$ 4,494,769	$ 1,405,526	45%	100%	146%	$ 47,311	1%
755	Adjustment Disorders & Neuroses Except Depressive Diagnoses	572	0.38	$ 11,146,631	$ 4,081,027	$ 7,406,524	$ 2,999,030	$ (4,407,494)	-60%	181%	73%	$ 500,636	17%
254	Other Digestive System Diagnoses	536	0.70	$ 10,486,843	$ 3,055,600	$ 4,656,784	$ 4,338,872	$ (317,912)	-7%	152%	142%	$ 48,443	1%
662	Sickle Cell Anemia Crisis	534	0.73	$ 10,886,807	$ 3,290,553	$ 4,874,460	$ 4,456,597	$ (417,864)	-9%	148%	135%	$ -	0%
282	Disorders Of Pancreas Except Malignancy	526	0.81	$ 12,652,256	$ 3,482,854	$ 4,225,914	$ 4,829,078	$ 603,163	14%	121%	139%	$ 11,624	0%
469	Acute Kidney Injury	500	0.84	$ 13,714,061	$ 3,687,873	$ 4,092,597	$ 4,932,132	$ 839,535	21%	111%	134%	$ 134,545	3%
752	Disorders Of Personality & Impulse Control	490	0.42	$ 6,461,982	$ 1,628,914	$ 3,475,475	$ 2,371,421	$ (1,104,053)	-32%	213%	146%	$ -	0%
633	Neonate Birthwt >2499g W Major Anomaly	474	1.46	$ 42,823,126	$ 14,996,891	$ 20,857,560	$ 12,488,365	$ (8,369,195)	-40%	139%	83%	$ 4,648,244	37%
639	Neonate Birthwt >2499g W Other Significant Condition	419	0.58	$ 12,442,615	$ 3,924,934	$ 6,377,276	$ 3,032,196	$ (3,345,080)	-52%	162%	77%	$ 233,687	8%
775	Alcohol Abuse & Dependence	415	0.52	$ 6,675,670	$ 1,670,388	$ 2,273,754	$ 2,461,293	$ 187,540	8%	136%	147%	$ -	0%
263	Cholecystectomy	406	1.25	$ 15,066,216	$ 3,828,132	$ 3,488,845	$ 5,839,566	$ 2,350,721	67%	91%	153%	$ 7,585	0%
758	Behavioral Disorders	400	0.49	$ 10,094,305	$ 3,732,793	$ 7,392,666	$ 2,664,939	$ (4,727,727)	-64%	198%	71%	$ 418,252	16%
45	Cva & Precerebral Occlusion W Infarct	373	1.08	$ 12,353,436	$ 3,338,521	$ 3,072,885	$ 4,683,913	$ 1,611,028	52%	92%	140%	$ 85,376	2%
817	Overdose	356	0.67	$ 7,092,341	$ 1,851,211	$ 1,988,223	$ 2,559,515	$ 571,292	29%	107%	138%	$ -	0%
198	Angina Pectoris & Coronary Atherosclerosis	348	0.54	$ 7,041,440	$ 1,750,188	$ 1,477,135	$ 2,145,491	$ 668,356	45%	84%	123%	$ -	0%
113	Infections Of Upper Respiratory Tract	348	0.47	$ 4,705,814	$ 1,558,432	$ 2,552,741	$ 2,111,997	$ (440,744)	-17%	164%	136%	$ 255,084	12%
422	Hypovolemia & Related Electrolyte Disorders	342	0.48	$ 3,618,040	$ 1,200,338	$ 2,399,833	$ 1,907,159	$ (492,674)	-21%	200%	159%	$ 22,184	1%
247	Intestinal Obstruction	327	0.67	$ 6,496,725	$ 1,962,884	$ 2,762,739	$ 2,542,295	$ (220,445)	-8%	141%	130%	$ 48,298	2%
302	Knee Joint Replacement	303	1.55	$ 14,507,178	$ 3,762,216	$ 2,649,701	$ 5,402,199	$ 2,752,498	104%	70%	144%	$ 28,285	1%
201	Cardiac Arrhythmia & Conduction Disorders	299	0.66	$ 6,584,400	$ 1,723,192	$ 1,781,174	$ 2,281,709	$ 500,535	28%	103%	132%	$ 18,455	1%
696	Other Chemotherapy	293	1.18	$ 11,656,418	$ 4,469,793	$ 4,370,360	$ 4,044,987	$ (325,372)	-7%	98%	90%	$ 79,936	2%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
421	Malnutrition, Failure To Thrive & Other Nutritional Disorders	285	0.83	$ 6,977,841	$ 2,679,432	$ 7,708,534	$ 3,142,331	$ (4,566,203)	-59%	288%	117%	$ 440,881	14%
776	Other Drug Abuse & Dependence	285	0.44	$ 2,667,304	$ 767,306	$ 1,387,989	$ 1,434,655	$ 46,665	3%	181%	187%	$ -	0%
663	Other Anemia & Disorders Of Blood & Blood-Forming Organs	282	0.62	$ 5,746,568	$ 1,588,925	$ 1,905,930	$ 2,013,438	$ 107,509	6%	120%	127%	$ 4,979	0%
192	Cardiac Catheterization For Other Non-Coronary Conditions	281	1.47	$ 13,032,033	$ 2,957,549	$ 2,415,731	$ 4,698,367	$ 2,282,636	94%	82%	159%	$ -	0%
241	Peptic Ulcer & Gastritis	280	0.84	$ 6,758,645	$ 1,794,890	$ 1,864,599	$ 2,700,395	$ 835,797	45%	104%	150%	$ -	0%
203	Chest Pain	274	0.55	$ 3,639,023	$ 1,017,995	$ 990,387	$ 1,730,463	$ 740,075	75%	97%	170%	$ -	0%
850	Procedure W Diag Of Rehab, Aftercare Or Oth Contact W Health Service	256	1.66	$ 8,092,776	$ 2,560,476	$ 3,085,421	$ 5,468,669	$ 2,383,248	77%	121%	214%	$ 603,107	11%
190	Acute Myocardial Infarction	252	1.07	$ 13,157,406	$ 3,078,910	$ 2,167,781	$ 3,311,432	$ 1,143,652	53%	70%	108%	$ 258,082	8%
174	Percutaneous Coronary Intervention W Ami	251	2.21	$ 21,562,813	$ 4,718,548	$ 3,531,112	$ 6,371,821	$ 2,840,709	80%	75%	135%	$ 3,816	0%
313	Knee & Lower Leg Procedures Except Foot	247	1.45	$ 11,587,369	$ 3,162,097	$ 2,837,491	$ 4,166,477	$ 1,328,986	47%	90%	132%	$ 48,767	1%
364	Other Skin, Subcutaneous Tissue & Related Procedures	243	1.12	$ 8,742,760	$ 2,249,272	$ 2,376,339	$ 3,107,201	$ 730,862	31%	106%	138%	$ 32,343	1%
561	Postpartum & Post Abortion Diagnoses W/O Procedure	241	0.51	$ 3,637,730	$ 1,044,448	$ 1,346,938	$ 1,399,146	$ 52,207	4%	129%	134%	$ -	0%
710	Infectious & Parasitic Diseases Including Hiv W O.R. Procedure	234	3.54	$ 36,522,920	$ 10,373,660	$ 9,134,993	$ 11,548,046	$ 2,413,053	26%	88%	111%	$ 2,254,134	20%
773	Opioid Abuse & Dependence	232	0.35	$ 2,218,042	$ 577,346	$ 1,021,616	$ 928,719	$ (92,898)	-9%	177%	161%	$ -	0%
563	Preterm Labor	231	0.35	$ 2,421,532	$ 629,832	$ 1,022,889	$ 918,953	$ (103,936)	-10%	162%	146%	$ -	0%
253	Other & Unspecified Gastrointestinal Hemorrhage	214	0.83	$ 5,241,618	$ 1,364,605	$ 1,410,620	$ 1,996,179	$ 585,559	42%	103%	146%	$ -	0%
248	Major Gastrointestinal & Peritoneal Infections	210	0.82	$ 4,215,976	$ 1,376,154	$ 1,994,044	$ 1,971,529	$ (22,515)	-1%	145%	143%	$ -	0%
756	Acute Anxiety & Delirium States	210	0.52	$ 4,404,202	$ 1,582,481	$ 2,598,231	$ 1,501,297	$ (1,096,933)	-42%	164%	95%	$ 298,535	20%
137	Major Respiratory Infections & Inflammations	207	1.22	$ 8,815,295	$ 2,244,194	$ 2,861,505	$ 2,989,115	$ 127,610	4%	128%	133%	$ 121,034	4%
660	Major Hematologic/Immunologic Diag Exc Sickle Cell Crisis & Coagul	206	1.17	$ 10,170,673	$ 3,866,613	$ 4,921,262	$ 3,734,246	$ (1,187,016)	-24%	127%	97%	$ 975,425	26%
304	Dorsal & Lumbar Fusion Proc Except For Curvature Of Back	206	3.33	$ 19,044,811	$ 5,165,736	$ 2,605,447	$ 7,910,655	$ 5,305,208	204%	50%	153%	$ 39,878	1%
301	Hip Joint Replacement	205	1.61	$ 9,846,767	$ 2,873,751	$ 1,888,756	$ 3,880,438	$ 1,991,682	105%	66%	135%	$ 94,156	2%
199	Hypertension	205	0.59	$ 3,454,097	$ 964,924	$ 945,717	$ 1,383,938	$ 438,221	46%	98%	143%	$ -	0%
722	Fever	201	0.51	$ 2,106,749	$ 558,647	$ 924,270	$ 1,177,089	$ 252,819	27%	165%	211%	$ -	0%
721	Post-Operative, Post-Traumatic, Other Device Infections	198	1.23	$ 6,868,354	$ 2,066,269	$ 2,554,886	$ 2,863,002	$ 308,116	12%	124%	139%	$ 95,888	3%
612	Neonate Bwt 1500-1999g W Resp Dist Synd/Oth Maj Resp Cond	195	4.43	$ 24,025,682	$ 6,985,964	$ 9,711,218	$ 9,891,881	$ 180,663	2%	139%	142%	$ 347,528	4%
21	Craniotomy Except For Trauma	195	3.75	$ 29,954,345	$ 9,398,883	$ 7,869,236	$ 10,115,145	$ 2,245,909	29%	84%	108%	$ 1,735,174	17%
951	Moderately Extensive Procedure Unrelated To Principal Diagnosis	194	2.13	$ 16,110,289	$ 5,281,778	$ 5,190,691	$ 6,008,384	$ 817,693	16%	98%	114%	$ 1,293,356	22%
321	Cervical Spinal Fusion & Other Back/Neck Proc Exc Disc Excis/Decomp	191	2.01	$ 11,550,328	$ 3,082,174	$ 1,618,268	$ 4,461,210	$ 2,842,942	176%	53%	145%	$ 48,254	1%
541	Vaginal Delivery W Sterilization &/Or D&c	186	0.55	$ 3,363,232	$ 855,211	$ 896,217	$ 1,175,071	$ 278,855	31%	105%	137%	$ -	0%
251	Abdominal Pain	182	0.60	$ 2,957,244	$ 835,474	$ 927,406	$ 1,229,704	$ 302,299	33%	111%	147%	$ -	0%
614	Neonate Bwt 1500-1999g W Or W/O Other Significant Condition	180	2.02	$ 9,118,890	$ 2,650,582	$ 4,765,614	$ 4,108,962	$ (656,651)	-14%	180%	155%	$ 45,771	1%
143	Other Respiratory Diagnoses Except Signs, Symptoms & Minor Diagnoses	177	0.89	$ 5,474,346	$ 1,701,029	$ 2,547,592	$ 1,942,755	$ (604,837)	-24%	150%	114%	$ 146,662	8%
145	Acute Bronchitis And Related Symptoms	177	0.60	$ 2,569,965	$ 860,591	$ 1,136,990	$ 1,240,729	$ 103,739	9%	132%	144%	$ 19,581	2%
175	Percutaneous Coronary Intervention W/O Ami	176	2.24	$ 15,557,110	$ 3,490,099	$ 3,003,193	$ 4,537,082	$ 1,533,888	51%	86%	130%	$ 17,098	0%
470	Chronic Kidney Disease	175	0.90	$ 5,282,411	$ 1,439,680	$ 1,359,290	$ 1,909,747	$ 550,457	40%	94%	133%	$ 111,745	6%
351	Other Musculoskeletal System & Connective Tissue Diagnoses	173	0.64	$ 2,995,361	$ 940,285	$ 974,836	$ 1,296,653	$ 321,817	33%	104%	138%	$ 41,777	3%
542	Vaginal Delivery W Complicating Procedures Exc Sterilization &/Or D&c	170	0.46	$ 2,677,145	$ 653,421	$ 682,902	$ 887,634	$ 204,732	30%	105%	136%	$ -	0%
513	Uterine & Adnexa Procedures For Non-Malignancy Except Leiomyoma	169	0.92	$ 4,473,083	$ 1,199,942	$ 1,160,798	$ 1,787,800	$ 627,001	54%	97%	149%	$ -	0%
58	Other Disorders Of Nervous System	162	0.86	$ 4,262,755	$ 1,252,683	$ 1,442,566	$ 1,732,012	$ 289,446	20%	115%	138%	$ 164,852	10%
622	Neonate Bwt 2000-2499g W Resp Dist Synd/Oth Maj Resp Cond	160	2.40	$ 11,484,436	$ 3,103,088	$ 4,070,400	$ 4,381,317	$ 310,917	8%	131%	141%	$ 6,127	0%
54	Migraine & Other Headaches	155	0.64	$ 2,111,190	$ 602,225	$ 861,052	$ 1,136,628	$ 275,577	32%	143%	189%	$ -	0%
115	Other Ear, Nose, Mouth,throat & Cranial/Facial Diagnoses	153	0.69	$ 4,072,552	$ 1,412,697	$ 2,035,531	$ 1,632,581	$ (402,950)	-20%	144%	116%	$ 418,969	26%
233	Appendectomy With Complex Principal Diagnosis	152	1.12	$ 4,567,272	$ 1,280,470	$ 1,458,103	$ 1,947,266	$ 489,163	34%	114%	152%	$ -	0%
197	Peripheral & Other Vascular Disorders	152	0.80	$ 4,601,984	$ 1,223,965	$ 1,239,745	$ 1,470,374	$ 230,629	19%	101%	120%	$ 87,908	6%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
308	Hip & Femur Fracture Repair	152	1.45	$ 6,275,081	$ 1,809,438	$ 1,570,414	$ 2,513,204	$ 942,791	60%	87%	139%	$ 14,645	1%
636	Neonate Birthwt >2499g W Congenital/Perinatal Infection	150	0.96	$ 5,811,744	$ 1,631,614	$ 2,369,480	$ 1,699,934	$ (669,546)	-28%	145%	104%	$ 57,965	3%
231	Major Large Bowel Procedures	149	2.04	$ 8,894,511	$ 2,546,292	$ 2,440,658	$ 3,560,740	$ 1,120,082	46%	96%	140%	$ 79,050	2%
757	Organic Mental Health Disturbances	149	0.75	$ 3,299,482	$ 1,089,410	$ 1,801,763	$ 1,357,984	$ (443,780)	-25%	165%	125%	$ 96,140	7%
134	Pulmonary Embolism	149	1.04	$ 4,811,040	$ 1,264,634	$ 1,098,300	$ 1,769,417	$ 671,117	61%	87%	140%	$ -	0%
466	Malfunction, Reaction, Complic Of Genitourinary Device Or Proc	148	1.22	$ 4,117,922	$ 1,203,609	$ 1,296,957	$ 2,084,121	$ 787,163	61%	108%	173%	$ 24,171	1%
245	Inflammatory Bowel Disease	147	0.76	$ 3,760,759	$ 1,124,433	$ 1,515,438	$ 1,296,323	$ (219,115)	-14%	135%	115%	$ 23,213	2%
912	Musculoskeletal & Other Procedures For Multiple Significant Trauma	145	4.84	$ 26,696,480	$ 7,765,035	$ 6,604,503	$ 9,304,858	$ 2,700,355	41%	85%	120%	$ 1,377,729	15%
815	Other Injury, Poisoning & Toxic Effect Diagnoses	145	1.01	$ 6,612,522	$ 2,503,155	$ 3,661,153	$ 2,288,149	$ (1,373,005)	-38%	146%	91%	$ 618,040	27%
243	Other Esophageal Disorders	144	0.71	$ 2,530,749	$ 714,238	$ 1,079,474	$ 1,176,038	$ 96,564	9%	151%	165%	$ -	0%
347	Other Back & Neck Disorders, Fractures & Injuries	144	0.84	$ 4,421,288	$ 1,304,521	$ 1,391,213	$ 1,539,269	$ 148,055	11%	107%	118%	$ 158,480	10%
426	Non-Hypovolemic Sodium Disorders	143	0.63	$ 2,412,842	$ 799,984	$ 1,094,538	$ 1,029,581	$ (64,957)	-6%	137%	129%	$ 522	0%
280	Alcoholic Liver Disease	143	1.20	$ 4,275,470	$ 1,165,931	$ 1,174,874	$ 1,935,857	$ 760,983	65%	101%	166%	$ 10,520	1%
234	Appendectomy Without Complex Principal Diagnosis	140	0.92	$ 3,998,388	$ 960,146	$ 793,979	$ 1,479,423	$ 685,444	86%	83%	154%	$ -	0%
315	Shoulder, Upper Arm & Forearm Procedures Except Joint Replacement	139	1.48	$ 5,879,515	$ 1,624,942	$ 1,288,973	$ 2,396,018	$ 1,107,045	86%	79%	147%	$ 31,222	1%
723	Viral Illness	138	0.59	$ 1,922,495	$ 628,261	$ 1,163,930	$ 936,304	$ (227,626)	-20%	185%	149%	$ 2,470	0%
403	Procedures For Obesity	137	1.32	$ 5,723,069	$ 1,361,798	$ 796,812	$ 2,068,341	$ 1,271,529	160%	59%	152%	$ -	0%
230	Major Small Bowel Procedures	136	2.36	$ 11,131,685	$ 3,096,315	$ 2,867,834	$ 3,891,937	$ 1,024,102	36%	93%	126%	$ 223,173	6%
191	Cardiac Catheterization For Coronary Artery Disease	131	1.04	$ 4,934,401	$ 1,089,213	$ 869,469	$ 1,551,751	$ 682,282	78%	80%	142%	$ -	0%
385	Other Skin, Subcutaneous Tissue & Breast Disorders	129	0.53	$ 1,685,723	$ 521,880	$ 805,594	$ 784,089	$ (21,505)	-3%	154%	150%	$ -	0%
950	Extensive Procedure Unrelated To Principal Diagnosis	126	3.72	$ 19,739,893	$ 5,790,296	$ 6,509,578	$ 6,970,922	$ 461,344	7%	112%	120%	$ 1,620,812	23%
284	Disorders Of Gallbladder & Biliary Tract	125	0.97	$ 2,628,815	$ 762,069	$ 839,135	$ 1,375,895	$ 536,760	64%	110%	181%	$ -	0%
425	Other Non-Hypovolemic Electrolyte Disorders	124	0.70	$ 2,798,921	$ 890,129	$ 1,069,543	$ 1,128,102	$ 58,559	5%	120%	127%	$ 145,836	13%
279	Hepatic Coma & Other Major Acute Liver Disorders	124	1.26	$ 3,450,405	$ 1,000,779	$ 962,172	$ 1,794,202	$ 832,030	86%	96%	179%	$ 16,612	1%
52	Alteration In Consciousness	122	0.91	$ 2,936,382	$ 835,432	$ 857,146	$ 1,268,080	$ 410,934	48%	103%	152%	$ -	0%
283	Other Disorders Of The Liver	120	0.94	$ 2,375,978	$ 653,890	$ 725,335	$ 1,283,403	$ 558,068	77%	111%	196%	$ -	0%
816	Toxic Effects Of Non-Medicinal Substances	119	0.74	$ 3,416,107	$ 1,050,720	$ 854,031	$ 1,066,343	$ 212,312	25%	81%	101%	$ 62,394	6%
207	Other Circulatory System Diagnoses	117	0.78	$ 2,705,689	$ 843,365	$ 877,558	$ 1,098,000	$ 220,442	25%	104%	130%	$ 60,077	5%
344	Osteomyelitis, Septic Arthritis & Other Musculoskeletal Infections	116	1.09	$ 4,479,614	$ 1,513,845	$ 1,805,739	$ 1,634,381	$ (171,357)	-9%	119%	108%	$ 243,133	15%
55	Head Trauma W Coma >1 Hr Or Hemorrhage	113	1.29	$ 6,053,478	$ 1,882,263	$ 1,991,311	$ 1,950,234	$ (41,077)	-2%	106%	104%	$ 277,853	14%
724	Other Infectious & Parasitic Diseases	113	0.96	$ 2,374,631	$ 779,094	$ 1,575,878	$ 1,262,250	$ (313,628)	-20%	202%	162%	$ 25,099	2%
204	Syncope & Collapse	111	0.63	$ 1,674,658	$ 524,046	$ 468,294	$ 797,858	$ 329,564	70%	89%	152%	$ -	0%
227	Hernia Procedures Except Inguinal, Femoral & Umbilical	110	1.29	$ 4,454,412	$ 1,164,554	$ 1,085,433	$ 1,624,467	$ 539,034	50%	93%	139%	$ -	0%
121	Other Respiratory & Chest Procedures	109	2.45	$ 14,239,671	$ 4,891,317	$ 5,119,749	$ 5,106,506	$ (13,243)	0%	105%	104%	$ 2,108,675	41%
136	Respiratory Malignancy	107	1.29	$ 4,102,035	$ 1,141,700	$ 1,051,356	$ 1,649,070	$ 597,714	57%	92%	144%	$ 69,771	4%
48	Peripheral, Cranial & Autonomic Nerve Disorders	107	0.74	$ 2,106,741	$ 559,378	$ 620,289	$ 903,488	$ 283,199	46%	111%	162%	$ -	0%
930	Multiple Significant Trauma W/O O.R. Procedure	107	1.93	$ 4,729,394	$ 1,322,146	$ 1,312,946	$ 2,395,193	$ 1,082,247	82%	99%	181%	$ 36,047	2%
244	Diverticulitis & Diverticulosis	106	0.62	$ 2,110,948	$ 549,851	$ 625,772	$ 756,090	$ 130,318	21%	114%	138%	$ -	0%
131	Cystic Fibrosis - Pulmonary Disease	106	2.07	$ 7,552,437	$ 2,941,706	$ 4,104,390	$ 2,835,293	$ (1,269,097)	-31%	140%	96%	$ 352,616	12%
314	Foot & Toe Procedures	105	1.32	$ 4,750,403	$ 1,190,364	$ 1,350,576	$ 1,595,880	$ 245,303	18%	113%	134%	$ -	0%
130	Respiratory System Diagnosis W Ventilator Support 96+ Hours	104	4.35	$ 18,942,027	$ 7,558,692	$ 7,475,176	$ 7,300,969	$ (174,207)	-2%	99%	97%	$ 2,121,148	29%
166	Coronary Bypass W/O Ami Or Complex Pdx	101	4.13	$ 11,813,896	$ 3,394,673	$ 2,142,765	$ 4,787,005	$ 2,644,240	123%	63%	141%	$ 3,018	0%
518	Other Female Reproductive System & Related Procedures	95	0.99	$ 1,466,629	$ 466,862	$ 541,144	$ 1,080,899	$ 539,755	100%	116%	232%	$ -	0%
144	Respiratory Signs, Symptoms & Minor Diagnoses	94	0.60	$ 1,246,407	$ 453,112	$ 563,213	$ 656,767	$ 93,554	17%	124%	145%	$ 20,473	3%
181	Lower Extremity Arterial Procedures	92	2.31	$ 9,330,597	$ 2,243,945	$ 1,377,244	$ 2,483,951	$ 1,106,707	80%	61%	111%	$ 49,871	2%

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Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

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Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
380	Skin Ulcers	91	0.81	$ 2,763,598	$ 810,295	$ 939,128	$ 892,371	$ (46,758)	-5%	116%	110%	$ 70,062	8%
465	Urinary Stones & Acquired Upper Urinary Tract Obstruction	90	0.66	$ 1,752,671	$ 502,456	$ 498,523	$ 678,598	$ 180,074	36%	99%	135%	$ -	0%
135	Major Chest & Respiratory Trauma	89	1.04	$ 2,586,346	$ 743,757	$ 756,558	$ 1,082,040	$ 325,482	43%	102%	145%	$ 29,258	3%
695	Chemotherapy For Acute Leukemia	88	2.42	$ 3,834,412	$ 1,441,039	$ 2,137,063	$ 2,494,368	$ 357,306	17%	148%	173%	$ 52,162	2%
47	Transient Ischemia	88	0.66	$ 1,758,614	$ 471,556	$ 373,768	$ 658,668	$ 284,900	76%	79%	140%	$ -	0%
305	Amputation Of Lower Limb Except Toes	87	1.87	$ 4,475,015	$ 1,208,775	$ 1,106,425	$ 1,856,300	$ 749,875	68%	92%	154%	$ -	0%
602	Neonate Bwt 1000-1249g W Resp Dist Synd/Oth Maj Resp Or Maj Anom	83	9.33	$ 18,893,535	$ 5,728,643	$ 7,969,842	$ 8,132,497	$ 162,655	2%	139%	142%	$ 132,434	2%
593	Neonate Birthwt 750-999g W/O Major Procedure	82	13.16	$ 27,258,291	$ 8,326,173	$ 10,004,109	$ 11,296,299	$ 1,292,189	13%	120%	136%	$ 559,446	5%
711	Post-Op, Post-Trauma, Other Device Infections W O.R. Procedure	82	2.27	$ 7,109,729	$ 1,996,265	$ 2,029,433	$ 2,326,734	$ 297,301	15%	102%	117%	$ 245,155	11%
625	Neonate Bwt 2000-2499g W Other Significant Condition	81	1.78	$ 4,360,240	$ 1,233,728	$ 2,039,362	$ 1,666,510	$ (372,853)	-18%	165%	135%	$ 21,490	1%
24	Extracranial Vascular Procedures	81	1.92	$ 5,334,088	$ 1,385,975	$ 717,174	$ 1,807,286	$ 1,090,112	152%	52%	130%	$ 21,370	1%
519	Uterine & Adnexa Procedures For Leiomyoma	79	0.94	$ 2,133,693	$ 545,019	$ 470,294	$ 852,498	$ 382,204	81%	86%	156%	$ -	0%
132	Bpd & Oth Chronic Respiratory Diseases Arising In Perinatal Period	79	1.18	$ 18,679,665	$ 7,648,709	$ 11,052,621	$ 5,873,106	$ (5,179,515)	-47%	145%	77%	$ 4,806,816	82%
222	Other Stomach, Esophageal & Duodenal Procedures	79	1.53	$ 2,223,934	$ 699,483	$ 967,570	$ 1,386,053	$ 418,483	43%	138%	198%	$ -	0%
320	Other Musculoskeletal System & Connective Tissue Procedures	78	1.52	$ 4,249,256	$ 1,424,073	$ 1,127,673	$ 1,464,964	$ 337,291	30%	79%	103%	$ 103,516	7%
346	Connective Tissue Disorders	78	1.19	$ 2,592,894	$ 829,180	$ 1,069,409	$ 1,029,023	$ (40,386)	-4%	129%	124%	$ 13,231	1%
774	Cocaine Abuse & Dependence	78	0.39	$ 807,911	$ 231,633	$ 351,722	$ 352,009	$ 287	0%	152%	152%	$ -	0%
220	Major Stomach, Esophageal & Duodenal Procedures	77	2.93	$ 7,817,693	$ 1,953,909	$ 1,576,856	$ 2,673,743	$ 1,096,887	70%	81%	137%	$ 86,566	3%
51	Viral Meningitis	76	0.84	$ 1,382,709	$ 461,757	$ 761,037	$ 755,115	$ (5,922)	-1%	165%	164%	$ 23,100	3%
303	Dorsal & Lumbar Fusion Proc For Curvature Of Back	75	5.75	$ 10,281,587	$ 3,839,116	$ 1,951,130	$ 5,075,868	$ 3,124,738	160%	51%	132%	$ 132,247	3%
42	Degenerative Nervous System Disorders Exc Mult Sclerosis	74	0.95	$ 2,448,529	$ 801,338	$ 1,214,504	$ 884,081	$ (330,424)	-27%	152%	110%	$ 91,802	10%
384	Contusion, Open Wound & Other Trauma To Skin & Subcutaneous Tissue	74	0.69	$ 1,571,026	$ 401,250	$ 429,668	$ 581,895	$ 152,227	35%	107%	145%	$ -	0%
607	Neonate Bwt 1250-1499g W Resp Dist Synd/Oth Maj Resp Or Maj Anom	71	6.75	$ 12,894,606	$ 3,603,208	$ 5,277,189	$ 5,371,076	$ 93,887	2%	146%	149%	$ 63,225	1%
952	Nonextensive Procedure Unrelated To Principal Diagnosis	71	1.74	$ 4,092,861	$ 1,366,888	$ 1,581,380	$ 1,501,463	$ (79,917)	-5%	116%	110%	$ 108,373	7%
342	Fractures & Dislocations Except Femur, Pelvis & Back	71	0.60	$ 1,328,789	$ 334,479	$ 362,405	$ 485,676	$ 123,272	34%	108%	145%	$ -	0%
44	Intracranial Hemorrhage	70	1.74	$ 4,094,185	$ 1,155,294	$ 1,304,782	$ 1,463,574	$ 158,792	12%	113%	127%	$ 78,157	5%
531	Female Reproductive System Infections	69	0.59	$ 1,209,380	$ 314,267	$ 396,127	$ 469,172	$ 73,046	18%	126%	149%	$ -	0%
281	Malignancy Of Hepatobiliary System & Pancreas	69	1.26	$ 1,879,455	$ 560,336	$ 612,850	$ 991,069	$ 378,219	62%	109%	177%	$ -	0%
443	Kidney & Urinary Tract Procedures For Nonmalignancy	68	1.36	$ 2,188,602	$ 686,223	$ 640,465	$ 1,064,285	$ 423,819	66%	93%	155%	$ -	0%
165	Coronary Bypass W Ami Or Complex Pdx	68	5.07	$ 10,638,874	$ 2,647,029	$ 1,670,772	$ 3,935,852	$ 2,265,081	136%	63%	149%	$ 28,534	1%
182	Other Peripheral Vascular Procedures	67	3.13	$ 7,272,504	$ 2,306,337	$ 1,972,988	$ 2,872,711	$ 899,723	46%	86%	125%	$ 476,267	17%
760	Other Mental Health Disorders	67	0.62	$ 2,251,828	$ 692,718	$ 1,796,383	$ 489,712	$ (1,306,671)	-73%	259%	71%	$ 18,576	4%
532	Menstrual & Other Female Reproductive System Disorders	66	0.52	$ 1,765,251	$ 467,259	$ 387,647	$ 430,018	$ 42,372	11%	83%	92%	$ 32,779	8%
223	Other Small & Large Bowel Procedures	65	1.57	$ 2,873,951	$ 715,464	$ 760,642	$ 1,174,832	$ 414,190	54%	106%	164%	$ 2,263	0%
813	Other Complications Of Treatment	64	0.88	$ 1,743,969	$ 536,739	$ 683,605	$ 654,521	$ (29,084)	-4%	127%	122%	$ 7,260	1%
317	Tendon, Muscle & Other Soft Tissue Procedures	63	1.51	$ 2,925,046	$ 961,626	$ 752,121	$ 1,150,750	$ 398,629	53%	78%	120%	$ 69,678	6%
863	Neonatal Aftercare	62	3.67	$ 9,068,776	$ 3,012,601	$ 3,454,013	$ 3,213,816	$ (240,196)	-7%	115%	107%	$ 731,939	23%
468	Other Kidney & Urinary Tract Diagnoses, Signs & Symptoms	61	0.83	$ 2,096,225	$ 564,128	$ 766,876	$ 633,971	$ (132,905)	-17%	136%	112%	$ 55,180	9%
22	Ventricular Shunt Procedures	61	1.85	$ 2,988,587	$ 988,693	$ 977,422	$ 1,348,726	$ 371,304	38%	99%	136%	$ 65,937	5%
309	Other Significant Hip & Femur Surgery	61	1.98	$ 3,053,300	$ 1,126,043	$ 852,886	$ 1,399,016	$ 546,131	64%	76%	124%	$ 10,328	1%
252	Malfunction, Reaction & Complication Of Gi Device Or Procedure	60	1.03	$ 1,587,187	$ 457,727	$ 663,827	$ 707,029	$ 43,202	7%	145%	154%	$ 1,797	0%
911	Extensive Abdominal/Thoracic Procedures For Mult Significant Trauma	59	5.40	$ 10,062,915	$ 2,838,991	$ 2,313,283	$ 3,840,534	$ 1,527,251	66%	81%	135%	$ 280,176	7%
770	Drug & Alcohol Abuse Or Dependence, Left Against Medical Advice	57	0.28	$ 513,134	$ 133,324	$ 163,348	$ 182,365	$ 19,017	12%	123%	137%	$ -	0%
23	Spinal Procedures	57	2.47	$ 3,180,736	$ 1,019,371	$ 850,427	$ 1,612,923	$ 762,495	90%	83%	158%	$ -	0%
82	Eye Infections And Other Eye Disorders	57	0.64	$ 1,719,871	$ 648,817	$ 1,110,620	$ 599,385	$ (511,235)	-46%	171%	92%	$ 183,066	31%

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	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
501	Male Reproductive System Diagnoses Except Malignancy	54	0.65	$ 1,125,808	$ 286,360	$ 307,093	$ 408,074	$ 100,980	33%	107%	143%	$ 8,752	2%
361	Skin Graft For Skin & Subcutaneous Tissue Diagnoses	54	1.89	$ 3,718,454	$ 1,065,240	$ 852,323	$ 1,488,279	$ 635,955	75%	80%	140%	$ 318,382	21%
544	D&c, Aspiration Curettage Or Hysterotomy For Obstetric Diagnoses	53	0.66	$ 1,060,484	$ 260,062	$ 253,871	$ 403,586	$ 149,714	59%	98%	155%	$ -	0%
844	Partial Thickness Burns W/O Skin Graft	53	1.00	$ 2,770,784	$ 1,203,127	$ 893,548	$ 1,064,210	$ 170,663	19%	74%	88%	$ 467,882	44%
224	Peritoneal Adhesiolysis	52	1.68	$ 2,722,735	$ 823,974	$ 969,505	$ 1,013,387	$ 43,882	5%	118%	123%	$ 12,040	1%
240	Digestive Malignancy	51	1.15	$ 1,649,867	$ 477,235	$ 446,345	$ 669,835	$ 223,490	50%	94%	140%	$ 2,031	0%
793	Moderately Extensive Or Procedures For Other Complications Of Treatment	51	1.59	$ 2,522,372	$ 675,067	$ 665,662	$ 928,875	$ 263,213	40%	99%	138%	$ -	0%
229	Other Digestive System & Abdominal Procedures	50	1.99	$ 2,429,314	$ 701,159	$ 632,641	$ 1,149,845	$ 517,204	82%	90%	164%	$ 13,449	1%
310	Intervertebral Disc Excision & Decompression	50	1.20	$ 2,300,325	$ 665,725	$ 396,197	$ 691,775	$ 295,578	75%	60%	104%	$ 1,758	0%
160	Major Cardiothoracic Repair Of Heart Anomaly	50	5.98	$ 13,127,559	$ 4,330,667	$ 3,009,365	$ 4,524,437	$ 1,515,072	50%	69%	104%	$ 1,095,957	24%
446	Urethral & Transurethral Procedures	49	1.02	$ 1,522,496	$ 383,792	$ 321,468	$ 572,871	$ 251,403	78%	84%	149%	$ 220	0%
89	Major Cranial/Facial Bone Procedures	49	2.28	$ 2,839,989	$ 1,045,321	$ 763,454	$ 1,296,253	$ 532,799	70%	73%	124%	$ 17,225	1%
98	Other Ear, Nose, Mouth & Throat Procedures	49	1.34	$ 1,746,669	$ 556,560	$ 553,028	$ 770,944	$ 217,916	39%	99%	139%	$ 20,319	3%
242	Major Esophageal Disorders	48	0.82	$ 1,374,797	$ 349,271	$ 343,003	$ 451,029	$ 108,026	31%	98%	129%	$ -	0%
50	Non-Bacterial Infections Of Nervous System Exc Viral Meningitis	48	1.38	$ 2,519,164	$ 768,373	$ 725,695	$ 886,270	$ 160,575	22%	94%	115%	$ 148,482	17%
661	Coagulation & Platelet Disorders	47	1.27	$ 1,192,547	$ 381,885	$ 385,372	$ 681,015	$ 295,643	77%	101%	178%	$ -	0%
206	Malfunction,reaction,complication Of Cardiac/Vasc Device Or Procedure	46	1.15	$ 3,034,846	$ 734,575	$ 659,117	$ 663,547	$ 4,431	1%	90%	90%	$ 62,075	9%
811	Allergic Reactions	46	0.58	$ 756,940	$ 216,054	$ 239,021	$ 306,391	$ 67,370	28%	111%	142%	$ -	0%
92	Facial Bone Procedures Except Major Cranial/Facial Bone Procedures	45	1.51	$ 2,496,160	$ 741,214	$ 485,767	$ 819,937	$ 334,170	69%	66%	111%	$ 38,665	5%
316	Hand & Wrist Procedures	44	1.03	$ 1,609,701	$ 450,410	$ 409,313	$ 531,633	$ 122,321	30%	91%	118%	$ 12,870	2%
890	Hiv W Multiple Major Hiv Related Conditions	44	2.58	$ 4,265,096	$ 1,184,592	$ 894,579	$ 1,384,148	$ 489,569	55%	76%	117%	$ 97,103	7%
20	Craniotomy For Trauma	44	3.98	$ 8,452,227	$ 2,521,674	$ 2,063,862	$ 2,566,724	$ 502,862	24%	82%	102%	$ 584,357	23%
200	Cardiac Structural & Valvular Disorders	42	1.12	$ 5,388,772	$ 2,308,872	$ 1,867,880	$ 1,369,758	$ (498,122)	-27%	81%	59%	$ 845,416	62%
424	Other Endocrine Disorders	42	0.88	$ 837,833	$ 326,375	$ 534,616	$ 493,443	$ (41,173)	-8%	164%	151%	$ 68,921	14%
43	Multiple Sclerosis & Other Demyelinating Diseases	42	1.09	$ 1,617,685	$ 438,811	$ 431,024	$ 529,574	$ 98,550	23%	98%	121%	$ 4,090	1%
611	Neonate Birthwt 1500-1999g W Major Anomaly	41	4.81	$ 4,710,701	$ 1,602,831	$ 2,681,669	$ 2,222,447	$ (459,222)	-17%	167%	139%	$ 34,928	2%
691	Lymphoma, Myeloma & Non-Acute Leukemia	41	1.74	$ 2,854,043	$ 964,255	$ 931,696	$ 926,184	$ (5,512)	-1%	97%	96%	$ 131,879	14%
589	Neonate Bwt <500g Or Ga <24 Weeks	40	6.01	$ 9,515,083	$ 3,154,237	$ 3,726,375	$ 3,864,740	$ 138,365	4%	118%	123%	$ 1,265,365	33%
349	Malfunction, Reaction, Complic Of Orthopedic Device Or Procedure	40	0.89	$ 1,054,597	$ 328,839	$ 322,164	$ 407,151	$ 84,987	26%	98%	124%	$ 1,080	0%
690	Acute Leukemia	40	4.74	$ 7,294,155	$ 2,776,869	$ 2,628,866	$ 2,592,112	$ (36,753)	-1%	95%	93%	$ 463,851	18%
631	Neonate Birthwt >2499g W Other Major Procedure	39	7.13	$ 22,338,087	$ 7,563,603	$ 10,051,947	$ 6,054,524	$ (3,997,423)	-40%	133%	80%	$ 2,887,034	48%
862	Other Aftercare & Convalescence	39	0.77	$ 1,187,342	$ 349,406	$ 525,089	$ 333,107	$ (191,981)	-37%	150%	95%	$ -	0%
462	Nephritis & Nephrosis	38	0.95	$ 818,493	$ 256,840	$ 417,323	$ 413,374	$ (3,949)	-1%	162%	161%	$ -	0%
49	Bacterial & Tuberculous Infections Of Nervous System	38	2.67	$ 3,917,669	$ 995,370	$ 877,209	$ 1,237,723	$ 360,514	41%	88%	124%	$ 118,405	10%
41	Nervous System Malignancy	38	1.17	$ 975,184	$ 275,402	$ 259,016	$ 494,820	$ 235,804	91%	94%	180%	$ -	0%
114	Dental Diseases And Disorders	37	0.57	$ 606,646	$ 166,196	$ 229,053	$ 243,151	$ 14,098	6%	138%	146%	$ -	0%
842	Burns With Skin Graft Except Extensive 3rd Degree Burns	37	3.11	$ 3,226,947	$ 1,157,482	$ 1,412,300	$ 1,328,193	$ (84,107)	-6%	122%	115%	$ 7,232	1%
169	Major Abdominal Vascular Procedures	37	4.10	$ 8,317,549	$ 1,929,031	$ 1,619,718	$ 2,053,292	$ 433,574	27%	84%	106%	$ 311,002	15%
142	Interstitial & Alveolar Lung Diseases	36	1.06	$ 1,006,082	$ 259,700	$ 279,145	$ 417,429	$ 138,285	50%	107%	161%	$ -	0%
810	Hemorrhage Or Hematoma Due To Complication	36	0.67	$ 764,780	$ 184,758	$ 220,070	$ 278,016	$ 57,947	26%	119%	150%	$ -	0%
163	Cardiac Valve Procedures W/O Ami Or Complex Pdx	36	5.82	$ 6,718,012	$ 2,064,640	$ 1,290,804	$ 2,547,468	$ 1,256,665	97%	63%	123%	$ 144,397	6%
57	Concussion, Closed Skull Fx Nos,uncomplicated Intracranial Injury, Coma < 1 Hr Or No Coma	36	1.05	$ 1,982,608	$ 592,349	$ 704,909	$ 606,067	$ (98,843)	-14%	119%	102%	$ 171,913	28%
565	False Labor	34	0.16	$ 235,381	$ 72,773	$ 137,020	$ 63,736	$ (73,285)	-53%	188%	88%	$ -	0%
381	Major Skin Disorders	34	0.62	$ 391,989	$ 144,780	$ 273,235	$ 243,150	$ (30,085)	-11%	189%	168%	$ -	0%
623	Neonate Bwt 2000-2499g W Congenital/Perinatal Infection	32	1.69	$ 2,337,111	$ 402,763	$ 481,280	$ 620,710	$ 139,430	29%	119%	154%	$ -	0%

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591	Neonate Birthwt 500-749g W/O Major Procedure	32	18.61	$ 10,679,677	$ 3,232,970	$ 2,963,401	$ 5,250,428	$ 2,287,027	77%	92%	162%	$ 165,526	3%
427	Thyroid Disorders	32	0.72	$ 752,475	$ 204,203	$ 215,114	$ 263,401	$ 48,287	22%	105%	129%	$ -	0%
180	Other Circulatory System Procedures	32	2.08	$ 1,750,910	$ 487,449	$ 366,361	$ 774,802	$ 408,441	111%	75%	159%	$ 17,240	2%
792	Extensive Or Procedures For Other Complications Of Treatment	32	2.57	$ 2,977,306	$ 1,023,851	$ 917,160	$ 1,061,662	$ 144,502	16%	90%	104%	$ 139,361	13%
97	Tonsil & Adenoid Procedures	31	0.70	$ 503,328	$ 177,926	$ 202,350	$ 247,888	$ 45,537	23%	114%	139%	$ -	0%
161	Cardiac Defibrillator & Heart Assist Implant	31	6.06	$ 5,092,239	$ 1,223,153	$ 698,599	$ 1,956,012	$ 1,257,413	180%	57%	160%	$ 8,998	0%
167	Other Cardiothoracic & Thoracic Vascular Procedures	30	4.29	$ 4,423,819	$ 1,592,297	$ 1,135,604	$ 1,597,451	$ 461,847	41%	71%	100%	$ 120,205	8%
546	Other O.R. Proc For Obstetric Diagnoses Except Delivery Diagnoses	29	0.82	$ 686,558	$ 177,569	$ 202,662	$ 272,857	$ 70,195	35%	114%	154%	$ -	0%
442	Kidney & Urinary Tract Procedures For Malignancy	28	1.92	$ 1,153,359	$ 375,232	$ 296,491	$ 618,203	$ 321,712	109%	79%	165%	$ -	0%
894	Hiv W One Signif Hiv Cond Or W/O Signif Related Cond	28	0.80	$ 706,812	$ 189,981	$ 191,399	$ 252,481	$ 61,083	32%	101%	133%	$ -	0%
621	Neonate Bwt 2000-2499g W Major Anomaly	27	2.36	$ 1,238,894	$ 399,767	$ 670,174	$ 731,595	$ 61,422	9%	168%	183%	$ -	0%
608	Neonate Bwt 1250-1499g W Or W/O Other Significant Condition	27	4.43	$ 2,466,185	$ 698,376	$ 1,099,530	$ 1,347,635	$ 248,104	23%	157%	193%	$ -	0%
228	Inguinal, Femoral & Umbilical Hernia Procedures	27	1.01	$ 1,174,884	$ 319,653	$ 264,281	$ 325,541	$ 61,260	23%	83%	102%	$ 12,631	4%
423	Inborn Errors Of Metabolism	27	0.99	$ 3,546,128	$ 1,644,942	$ 549,013	$ 1,339,926	$ 790,913	144%	33%	81%	$ 1,033,898	77%
5	Tracheostomy W Mv 96+ Hours W/O Extensive Procedure	27	9.65	$ 9,839,959	$ 3,164,818	$ 2,516,020	$ 3,718,995	$ 1,202,975	48%	80%	118%	$ 762,903	21%
892	Hiv W Major Hiv Related Condition	26	1.32	$ 1,383,128	$ 332,634	$ 356,323	$ 395,958	$ 39,635	11%	107%	119%	$ 11,663	3%
343	Musculoskeletal Malignancy & Pathol Fracture D/T Muscskel Malig	25	1.28	$ 1,467,183	$ 482,976	$ 502,204	$ 433,776	$ (68,428)	-14%	104%	90%	$ 69,746	16%
196	Cardiac Arrest & Shock	23	1.70	$ 1,408,181	$ 386,285	$ 341,926	$ 450,174	$ 108,248	32%	89%	117%	$ 4,856	1%
340	Fracture Of Femur	22	0.58	$ 441,058	$ 122,855	$ 134,203	$ 143,011	$ 8,808	7%	109%	116%	$ -	0%
120	Major Respiratory & Chest Procedures	21	2.75	$ 2,846,778	$ 778,596	$ 495,331	$ 849,247	$ 353,916	71%	64%	109%	$ 186,388	22%
564	Abortion W/O D&c, Aspiration Curettage Or Hysterotomy	20	0.48	$ 284,936	$ 63,721	$ 62,233	$ 109,476	$ 47,243	76%	98%	172%	$ -	0%
341	Fracture Of Pelvis Or Dislocation Of Hip	20	0.55	$ 352,061	$ 100,850	$ 131,542	$ 126,665	$ (4,877)	-4%	130%	126%	$ -	0%
73	Orbit And Eye Procedures	20	1.11	$ 1,151,817	$ 338,970	$ 451,189	$ 324,498	$ (126,691)	-28%	133%	96%	$ 69,008	21%
530	Female Reproductive System Malignancy	19	1.02	$ 600,286	$ 156,756	$ 178,695	$ 215,935	$ 37,240	21%	114%	138%	$ -	0%
910	Craniotomy For Multiple Significant Trauma	19	8.47	$ 3,895,278	$ 1,182,097	$ 1,338,386	$ 1,916,095	$ 577,709	43%	113%	162%	$ 69,299	4%
171	Perm Cardiac Pacemaker Implant W/O Ami, Heart Failure Or Shock	19	1.70	$ 2,212,460	$ 646,157	$ 558,036	$ 647,650	$ 89,614	16%	86%	100%	$ 277,516	43%
694	Lymphatic & Other Malignancies & Neoplasms Of Uncertain Behavior	19	1.41	$ 1,983,568	$ 785,083	$ 652,787	$ 624,169	$ (28,618)	-4%	83%	80%	$ 316,910	51%
681	Other O.R. Procedures For Lymphatic/Hematopoietic/Other Neoplasms	19	2.45	$ 1,452,940	$ 452,601	$ 373,755	$ 551,450	$ 177,695	48%	83%	122%	$ 27,875	5%
40	Spinal Disorders & Injuries	18	1.93	$ 1,201,847	$ 329,043	$ 510,045	$ 388,162	$ (121,883)	-24%	155%	118%	$ 13,533	3%
226	Anal Procedures	18	0.86	$ 530,074	$ 161,531	$ 155,733	$ 177,926	$ 22,193	14%	96%	110%	$ -	0%
312	Skin Graft, Except Hand, For Musculoskeletal & Connective Tissue Diagnoses	18	3.02	$ 1,110,323	$ 374,016	$ 377,221	$ 626,742	$ 249,521	66%	101%	168%	$ 3,837	1%
26	Other Nervous System & Related Procedures	17	1.80	$ 1,135,245	$ 377,654	$ 173,043	$ 360,985	$ 187,942	109%	46%	96%	$ 9,532	3%
545	Ectopic Pregnancy Procedure	17	0.80	$ 421,692	$ 103,027	$ 95,209	$ 156,639	$ 61,430	65%	92%	152%	$ -	0%
322	Shoulder & Elbow Joint Replacement	17	1.60	$ 721,220	$ 213,278	$ 148,120	$ 311,923	$ 163,804	111%	69%	146%	$ -	0%
740	Mental Illness Diagnosis W O.R. Procedure	17	1.87	$ 855,423	$ 163,087	$ 233,220	$ 364,233	$ 131,013	56%	143%	223%	$ -	0%
260	Major Pancreas, Liver & Shunt Procedures	16	2.67	$ 1,125,002	$ 323,275	$ 293,082	$ 490,104	$ 197,021	67%	91%	152%	$ -	0%
404	Thyroid, Parathyroid & Thyroglossal Procedures	16	1.19	$ 757,846	$ 202,900	$ 177,505	$ 219,308	$ 41,804	24%	87%	108%	$ -	0%
193	Acute & Subacute Endocarditis	16	1.54	$ 910,747	$ 237,744	$ 425,602	$ 320,366	$ (105,236)	-25%	179%	135%	$ 37,843	12%
264	Other Hepatobiliary, Pancreas & Abdominal Procedures	16	2.12	$ 819,725	$ 235,019	$ 215,981	$ 389,372	$ 173,391	80%	92%	166%	$ -	0%
9	Extracorporeal Membrane Oxygenation (Ecmo)	15	13.12	$ 6,360,328	$ 2,584,696	$ 1,394,655	$ 2,903,435	$ 1,508,780	108%	54%	112%	$ 645,299	22%
603	Neonate Birthwt 1000-1249g W Or W/O Other Significant Condition	15	6.19	$ 2,157,920	$ 591,705	$ 993,441	$ 975,435	$ (18,006)	-2%	168%	165%	$ -	0%
405	Other Procedures For Endocrine, Nutritional & Metabolic Disorders	15	2.54	$ 794,340	$ 198,610	$ 303,089	$ 436,994	$ 133,905	44%	153%	220%	$ -	0%
794	Non-Extensive Or Procedures For Other Complications Of Treatment	15	1.64	$ 949,119	$ 290,597	$ 377,938	$ 317,459	$ (60,479)	-16%	130%	109%	$ 35,906	11%
4	Tracheostomy W Mv 96+ Hours W Extensive Procedure	14	12.85	$ 5,436,682	$ 1,452,590	$ 890,471	$ 2,146,564	$ 1,256,093	141%	61%	148%	$ 82,152	4%
2	Heart &/Or Lung Transplant	14	18.95	$ 15,270,204	$ 5,054,710	$ 7,289,460	$ 4,763,001	$ (2,526,458)	-35%	144%	94%	$ 1,718,924	36%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A		B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
650	Splenectomy	14	2.18	$ 3,385,166	$ 1,616,638	$ 1,001,383	$ 1,427,282	$ 425,898	43%	62%	88%	$ 1,077,477	75%
517	Dilation & Curettage For Non-Obstetric Diagnoses	13	0.83	$ 557,936	$ 143,030	$ 105,323	$ 124,356	$ 19,033	18%	74%	87%	$ -	0%
651	Other Procedures Of Blood & Blood-Forming Organs	13	1.70	$ 637,660	$ 202,834	$ 152,465	$ 282,945	$ 130,480	86%	75%	139%	$ 28,970	10%
630	Neonate Birthwt >2499g W Major Cardiovascular Procedure	12	9.11	$ 9,909,621	$ 4,308,182	$ 4,493,865	$ 3,498,148	$ (995,717)	-22%	104%	81%	$ 2,243,675	64%
484	Other Male Reproductive System & Related Procedures	12	1.35	$ 386,885	$ 115,135	$ 84,856	$ 186,114	$ 101,258	119%	74%	162%	$ -	0%
110	Ear, Nose, Mouth, Throat, Cranial/Facial Malignancies	12	1.70	$ 880,912	$ 209,710	$ 174,258	$ 240,305	$ 66,047	38%	83%	115%	$ 16,406	7%
91	Other Major Head & Neck Procedures	12	2.64	$ 902,407	$ 283,931	$ 142,884	$ 363,816	$ 220,932	155%	50%	128%	$ -	0%
261	Major Biliary Tract Procedures	11	2.23	$ 1,181,515	$ 310,451	$ 247,298	$ 308,883	$ 61,585	25%	80%	99%	$ 26,956	9%
246	Gastrointestinal Vascular Insufficiency	11	0.83	$ 296,482	$ 69,867	$ 129,457	$ 101,554	$ (27,903)	-22%	185%	145%	$ -	0%
483	Penis, Testes & Scrotal Procedures	11	1.05	$ 433,538	$ 98,666	$ 77,640	$ 131,944	$ 54,304	70%	79%	134%	$ -	0%
111	Vertigo & Other Labyrinth Disorders	11	0.56	$ 143,686	$ 32,270	$ 31,909	$ 71,161	$ 39,252	123%	99%	221%	$ -	0%
1	Liver Transplant &/Or Intestinal Transplant	11	9.58	$ 3,662,777	$ 1,096,865	$ 1,778,024	$ 1,226,854	$ (551,170)	-31%	162%	112%	$ 17,636	1%
841	Extensive 3rd Degree Burns W Skin Graft	11	15.17	$ 11,281,385	$ 5,308,712	$ 4,003,771	$ 4,507,506	$ 503,735	13%	75%	85%	$ 2,593,282	58%
772	Alcohol & Drug Dependence W Rehab Or Rehab/Detox Therapy	11	0.67	$ 166,046	$ 42,121	$ 56,389	$ 77,619	$ 21,229	38%	134%	184%	$ -	0%
56	Brain Contusion/Laceration & Complicated Skull Fx, Coma < 1 Hr Or No Coma	10	1.24	$ 267,711	$ 71,282	$ 65,012	$ 142,587	$ 77,575	119%	91%	200%	$ -	0%
613	Neonate Birthwt 1500-1999g W Congenital/Perinatal Infection	10	3.11	$ 983,770	$ 249,976	$ 483,261	$ 346,805	$ (136,456)	-28%	193%	139%	$ 8,028	2%
232	Gastric Fundoplication	10	1.55	$ 475,839	$ 132,819	$ 124,350	$ 177,345	$ 52,995	43%	94%	134%	$ -	0%
382	Malignant Breast Disorders	10	0.96	$ 458,560	$ 98,755	$ 102,540	$ 110,470	$ 7,930	8%	104%	112%	$ -	0%
363	Breast Procedures Except Mastectomy	10	1.35	$ 283,568	$ 80,863	$ 61,486	$ 154,565	$ 93,079	151%	76%	191%	$ -	0%
162	Cardiac Valve Procedures W Ami Or Complex Pdx	10	7.98	$ 2,412,935	$ 599,612	$ 404,964	$ 915,367	$ 510,404	126%	68%	153%	$ -	0%
512	Uterine & Adnexa Procedures For Non-Ovarian & Non-Adnexal Malig	9	1.39	$ 522,288	$ 144,256	$ 72,856	$ 154,477	$ 81,621	112%	51%	107%	$ 11,019	7%
205	Cardiomyopathy	9	0.90	$ 447,534	$ 201,241	$ 155,736	$ 144,329	$ (11,408)	-7%	77%	72%	$ 51,526	36%
445	Other Bladder Procedures	9	1.65	$ 327,604	$ 84,683	$ 100,616	$ 170,554	$ 69,938	70%	119%	201%	$ -	0%
444	Renal Dialysis Access Device And Vessel Repair	9	1.98	$ 826,728	$ 216,491	$ 142,766	$ 228,824	$ 86,058	60%	66%	106%	$ 24,380	11%
362	Mastectomy Procedures	9	1.51	$ 340,914	$ 87,324	$ 54,451	$ 155,525	$ 101,073	186%	62%	178%	$ -	0%
176	Cardiac Pacemaker & Defibrillator Device Replacement	9	3.93	$ 1,494,367	$ 490,658	$ 330,003	$ 468,225	$ 138,222	42%	67%	95%	$ 62,289	13%
583	Neonate W Ecmo	8	11.10	$ 9,234,290	$ 3,192,278	$ 3,230,325	$ 2,627,586	$ (602,739)	-19%	101%	82%	$ 1,608,576	61%
580	Neonate, Transferred <5 Days Old, Not Born Here	8	0.36	$ 84,297	$ 21,802	$ 23,366	$ 33,094	$ 9,728	42%	107%	152%	$ -	0%
500	Malignancy, Male Reproductive System	8	0.82	$ 715,188	$ 261,204	$ 367,196	$ 141,863	$ (225,332)	-61%	141%	54%	$ 66,856	47%
447	Other Kidney, Urinary Tract & Related Procedures	8	2.34	$ 1,146,458	$ 248,229	$ 319,854	$ 256,870	$ (62,984)	-20%	129%	103%	$ 42,544	17%
59	Anoxic & Other Severe Brain Damage	8	1.04	$ 236,238	$ 59,005	$ 66,614	$ 88,710	$ 22,096	33%	113%	150%	$ -	0%
8	Autologous Bone Marrow Transplant	7	7.70	$ 1,877,171	$ 604,484	$ 997,329	$ 675,397	$ (321,932)	-32%	165%	112%	$ 57,084	8%
461	Kidney & Urinary Tract Malignancy	7	1.05	$ 741,222	$ 232,004	$ 188,270	$ 182,000	$ (6,270)	-3%	81%	78%	$ 97,894	54%
441	Major Bladder Procedures	7	2.45	$ 383,855	$ 129,190	$ 107,307	$ 196,539	$ 89,233	83%	83%	152%	$ -	0%
759	Eating Disorders	7	1.48	$ 255,779	$ 104,748	$ 141,976	$ 123,237	$ (18,739)	-13%	136%	118%	$ 4,611	4%
10	Head Trauma With Deep Coma	7	9.14	$ 1,027,725	$ 286,114	$ 206,184	$ 555,665	$ 349,481	170%	72%	194%	$ -	0%
609	Neonate Bwt 1500-2499g W Major Procedure	6	10.48	$ 1,612,263	$ 821,679	$ 990,409	$ 859,936	$ (130,474)	-13%	121%	105%	$ 138,501	16%
588	Neonate Bwt <1500g W Major Procedure	6	24.55	$ 5,007,329	$ 1,930,973	$ 2,081,037	$ 2,136,648	$ 55,611	3%	108%	111%	$ 446,611	21%
514	Female Reproductive System Reconstructive Procedures	6	0.91	$ 320,911	$ 68,604	$ 34,816	$ 62,496	$ 27,680	80%	51%	91%	$ -	0%
46	Nonspecific Cva & Precerebral Occlusion W/O Infarct	6	0.86	$ 156,964	$ 47,959	$ 20,085	$ 59,449	$ 39,364	196%	42%	124%	$ -	0%
401	Adrenal Procedures	6	1.45	$ 165,984	$ 60,513	$ 35,030	$ 99,623	$ 64,593	184%	58%	165%	$ -	0%
680	Major O.R. Procedures For Lymphatic/Hematopoietic/Other Neoplasms	6	2.03	$ 331,425	$ 108,108	$ 102,515	$ 139,526	$ 37,011	36%	95%	129%	$ -	0%
893	Hiv W Multiple Significant Hiv Related Conditions	5	1.56	$ 64,314	$ 21,361	$ 28,172	$ 89,636	$ 61,464	218%	132%	420%	$ -	0%
440	Kidney Transplant	4	6.20	$ 1,150,226	$ 371,986	$ 255,101	$ 318,156	$ 63,055	25%	69%	86%	$ 33,718	11%
95	Cleft Lip & Palate Repair	4	0.84	$ 164,195	$ 42,855	$ 13,930	$ 38,629	$ 24,699	177%	33%	90%	$ -	0%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A		B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
177	Cardiac Pacemaker & Defibrillator Revision Except Device Replacement	4	1.80	$ 269,094	$ 116,745	$ 80,511	$ 97,324	$ 16,813	21%	69%	83%	$ 14,600	15%
860	Rehabilitation	4	1.58	$ 125,239	$ 33,314	$ 36,641	$ 57,037	$ 20,396	56%	110%	171%	$ -	0%
843	Extensive 3rd Degree Or Full Thickness Burns W/O Skin Graft	3	3.96	$ 59,635	$ 26,097	$ 16,083	$ 136,209	$ 120,127	747%	62%	522%	$ -	0%
170	Permanent Cardiac Pacemaker Implant W Ami, Heart Failure Or Shock	3	2.64	$ 353,620	$ 71,495	$ 62,609	$ 90,958	$ 28,350	45%	88%	127%	$ -	0%
511	Uterine & Adnexa Procedures For Ovarian & Adnexal Malignancy	2	1.25	$ 79,478	$ 18,853	$ 19,677	$ 28,655	$ 8,978	46%	104%	152%	$ -	0%
510	Pelvic Evisceration, Radical Hysterectomy & Other Radical Gyn Procs	2	1.39	$ 74,999	$ 17,843	$ 10,542	$ 31,821	$ 21,279	202%	59%	178%	$ -	0%
480	Major Male Pelvic Procedures	2	1.71	$ 108,105	$ 25,099	$ 18,482	$ 39,288	$ 20,806	113%	74%	157%	$ -	0%
7	Allogeneic Bone Marrow Transplant	2	7.60	$ 444,675	$ 152,523	$ 182,330	$ 189,925	$ 7,595	4%	120%	125%	$ 15,443	8%
Total		**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 857,205,529**	**$ 857,205,122**	**$ (408)**	**0%**	**122%**	**122%**	**$ 71,565,950**	**8%**

Notes:

C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using Medicare cost-to-charge ratio where available, otherwise Navigant calculated CCRs from HCRIS Cost Report.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.

Report F - Summary of Simulation by Provider - Sorted by Provider Name
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Provider Medicaid ID	Provider Name	In / Border Indicator	Stays	Length of Stays	Covered Days	Per Diem Rate	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
		A	B	C	D	E	F	G	H	I	J	K = I + J	L	M = L - K	N = M ÷ K	O = K ÷ H	P = L ÷ H	Q	R = Q ÷ L
166379105	Advanced Care Hospital Of White	I	6	117	117	850	1.345	$ 667,525	$ 176,257	$ 43,900	$ -	$ 43,900	$ 92,559	$ 48,659	111%	25%	53%	$ -	0%
104269105	Arkansas Childrens Hospital	I	6,589	51,489	51,400	3,403	1.385	$ 418,402,497	$ 174,261,582	$ 194,686,294	$ 43,757,553	$ 238,443,847	$ 158,477,458	$(79,966,390)	-34%	137%	91%	$54,229,306	34%
131142105	Arkansas Hearthospital Llc	I	122	328	327	850	1.162	$ 3,878,482	$ 951,628	$ 273,100	$ -	$ 273,100	$ 1,626,801	$ 1,353,701	496%	29%	171%	$ -	0%
102528105	Arkansas Methodist Medicalcenter	I	1,425	3,188	3,165	757	0.460	$ 10,682,707	$ 3,932,304	$ 2,395,995	$ 3,753,934	$ 6,149,929	$ 7,491,636	$ 1,341,707	22%	156%	191%	$ -	0%
114301125	Arkansas Statehospital	I	39	4,789	4,783	680	0.590	$ 3,628,557	$ 2,041,099	$ 3,271,704	$ 205,231	$ 3,476,935	$ 1,142,389	$ (2,334,546)	-67%	170%	56%	$ 878,601	77%
157876105	Arkansas Surgical Hospitallc	I	12	34	34	850	1.448	$ 348,307	$ 91,210	$ 28,900	$ 127,285	$ 156,185	$ 199,337	$ 43,152	28%	171%	219%	$ -	0%
100953105	Ashley Memorialhosp	I	307	841	841	2,150	0.430	$ 2,817,174	$ 1,224,655	$ 1,243,500	$ 1,218,308	$ 2,461,808	$ 1,456,730	$ (1,005,077)	-41%	201%	119%	$ -	0%
184088105	Baptist Healthextended Care	I	10	88	88	850	1.344	$ 246,478	$ 72,710	$ 65,200	$ -	$ 65,200	$ 154,178	$ 88,978	136%	90%	212%	$ -	0%
101448105	Baptist Healthmedical Center (Arkadelphia)	I	735	1,385	1,383	1,561	0.329	$ 7,137,603	$ 1,835,576	$ 2,507,886	$ 2,339,657	$ 4,847,543	$ 2,745,461	$ (2,102,082)	-43%	264%	150%	$ -	0%
104304105	Baptist Healthmedical Center (Little Rock)	I	5,030	30,540	30,352	1,025	1.129	$ 178,548,725	$ 46,278,137	$ 30,000,843	$ 12,565,837	$ 42,566,680	$ 65,561,031	$ 22,994,351	54%	92%	142%	$ 1,149,299	2%
106664105	Baptist Healthmedical Center (North Little Rock)	I	1,846	4,899	4,882	796	0.616	$ 31,864,442	$ 9,327,740	$ 3,734,452	$ 5,874,631	$ 9,609,083	$ 12,988,961	$ 3,379,878	35%	103%	139%	$ 6,366	0%
130609105	Baptist Healthmedical Center (Heber Springs)	I	40	88	88	1,946	0.774	$ 557,924	$ 148,056	$ 198,900	$ 120,470	$ 319,370	$ 328,167	$ 8,797	3%	216%	222%	$ -	0%
178730105	Baptist Healthmedical Center (Stuttgart)	I	422	1,026	1,026	850	0.383	$ 4,000,699	$ 2,509,169	$ 1,243,070	$ 1,317,144	$ 2,560,214	$ 1,765,266	$ (794,948)	-31%	102%	70%	$ -	0%
217868105	Baptist Healthmedical Center (Conway)	I	41	155	155	850	0.990	$ 1,333,065	$ 541,219	$ 114,650	$ 564,321	$ 678,971	$ 524,324	$ (154,647)	-23%	125%	97%	$ 62,495	12%
203334105	Baptist Healthmedical Center (Malvern)	I	697	3,227	3,197	850	0.526	$ 5,133,657	$ 2,350,971	$ 2,615,600	$ 1,142,567	$ 3,758,167	$ 4,168,511	$ 410,344	11%	160%	177%	$ -	0%
107093105	Baptist Memorial Hospital	B	186	1,368	1,361	799	1.555	$ 11,549,533	$ 2,757,086	$ 1,109,000	$ 14,955	$ 1,123,955	$ 3,365,747	$ 2,241,792	199%	41%	122%	$ 47,693	1%
101001105	Baxter Regionalmedical Center	I	1,330	3,148	3,126	950	0.636	$ 16,546,821	$ 5,641,006	$ 2,853,300	$ 3,466,361	$ 6,319,661	$ 9,491,106	$ 3,171,445	50%	112%	168%	$ 12,707	0%
142700125	Bhc Pinnacle Pointe Hospitalinc	I	2,551	29,540	29,512	484	0.483	$ 39,243,285	$ 12,368,071	$ 13,245,609	$ 5,666,811	$ 18,912,420	$ 14,584,511	$ (4,327,909)	-23%	153%	118%	$ 445,738	3%
148217105	Board Of Governors Of	I	19	30	30	2,760	0.587	$ 104,395	$ 59,185	$ 50,528	$ 37,425	$ 87,953	$ 127,942	$ 39,989	45%	149%	216%	$ -	0%
133213105	Bradley Countymedical Center	I	209	398	398	1,967	0.373	$ 1,508,239	$ 655,789	$ 836,231	$ 920,537	$ 1,756,768	$ 890,113	$ (866,655)	-49%	268%	136%	$ -	0%
159162125	Brentwood Acquisition Shreveport	B	3	23	23	487	0.650	$ 47,150	$ 8,824	$ 9,290	$ -	$ 9,290	$ 22,375	$ 13,085	141%	105%	254%	$ -	0%
115662125	Centers For Youth & Familiesinc	I	188	15,032	14,839	350	0.414	$ 5,193,650	$ 1,636,852	$ 5,193,650	$ -	$ 5,193,650	$ 893,245	$ (4,300,405)	-83%	317%	55%	$ -	0%
106600105	Chambers Memorial Hospital	I	232	605	605	850	0.578	$ 1,304,224	$ 805,706	$ 511,150	$ 651,274	$ 1,162,424	$ 1,505,225	$ 342,801	29%	144%	187%	$ -	0%
102335105	Chi St Vincenthospital Hotspring	I	2,471	7,784	7,704	850	0.723	$ 52,638,148	$ 13,260,971	$ 6,511,750	$ 6,190,619	$ 12,702,369	$ 20,348,847	$ 7,646,477	60%	96%	153%	$ 32,787	0%
181080105	Chicot Memorialmedical Center	I	100	301	297	1,700	0.628	$ 706,149	$ 256,330	$ 428,965	$ 718,154	$ 1,147,119	$ 681,154	$ (465,966)	-41%	448%	266%	$ -	0%
146008105	Christus St Michael Healthsystem	B	1,473	5,149	5,142	850	0.685	$ 40,027,298	$ 7,886,673	$ 4,737,952	$ 274,669	$ 5,012,621	$ 11,574,139	$ 6,561,518	131%	64%	147%	$ 101,292	1%
102789105	Community Medical Center Ofizard	I	32	69	69	1,549	0.521	$ 148,957	$ 110,458	$ 101,601	$ 82,099	$ 183,700	$ 185,719	$ 2,019	1%	166%	168%	$ -	0%
102178105	Conway Regionalmedical Ctrinc	I	1,820	4,402	4,395	850	0.505	$ 15,454,808	$ 5,969,255	$ 3,695,300	$ 4,779,967	$ 8,475,267	$ 10,448,701	$ 1,973,434	23%	142%	175%	$ -	0%
157514105	De Queen Medical Center Inc	I	21	69	69	960	0.552	$ 212,726	$ 83,676	$ 61,826	$ 75,616	$ 137,442	$ 133,040	$ (4,402)	-3%	164%	159%	$ -	0%
135726105	Delta Medical Center	B	210	1,614	1,613	599	0.590	$ 2,469,444	$ 1,093,884	$ 855,900	$ -	$ 855,900	$ 1,422,662	$ 566,762	66%	78%	130%	$ -	0%
102081105	Delta Memorialhospital	I	232	617	616	1,456	0.369	$ 1,319,922	$ 624,124	$ 1,101,850	$ 653,874	$ 1,755,724	$ 982,330	$ (773,395)	-44%	281%	157%	$ -	0%
107848105	Delta Regionalmedical Center	B	140	443	438	850	0.598	$ 1,200,032	$ 409,211	$ 365,500	$ -	$ 365,500	$ 896,585	$ 531,085	145%	89%	219%	$ -	0%
146780105	Dewitt Hospitaland Nursinghome	I	17	47	47	1,635	0.457	$ 82,864	$ 66,667	$ 97,850	$ 114,776	$ 212,626	$ 89,221	$ (123,405)	-58%	319%	134%	$ -	0%
196170105	Drew Memorial Hospital Inc	I	799	1,831	1,831	850	0.411	$ 6,453,131	$ 3,633,398	$ 1,526,400	$ 2,382,799	$ 3,909,199	$ 3,653,448	$ (255,751)	-7%	108%	101%	$ 22,581	1%
168254105	Eureka Springshospital Llc	I	10	30	30	2,193	0.604	$ 92,020	$ 52,079	$ 47,736	$ 27,665	$ 75,401	$ 69,253	$ (6,148)	-8%	145%	133%	$ -	0%
191343105	Five Rivers Medical Center	I	30	96	96	850	0.628	$ 299,592	$ 175,005	$ 80,750	$ 104,049	$ 184,799	$ 213,623	$ 28,824	16%	106%	122%	$ -	0%
160836105	Forrest City Medical Center	I	1,654	3,647	3,644	761	0.323	$ 26,536,946	$ 6,423,360	$ 2,753,938	$ 4,366,763	$ 7,120,701	$ 6,062,291	$ (1,058,411)	-15%	111%	94%	$ -	0%
180869105	Fort Smith Hmallc	I	2,676	9,349	9,225	797	0.671	$ 74,414,651	$ 14,599,573	$ 6,731,950	$ 7,835,692	$ 14,567,642	$ 20,848,115	$ 6,280,473	43%	100%	143%	$ 462,449	2%
102256105	Fulton County Hospital	I	70	157	157	1,235	0.592	$ 335,593	$ 143,750	$ 158,352	$ 27,692	$ 186,044	$ 470,089	$ 284,045	153%	129%	327%	$ -	0%
178791105	Great River Medical Center	I	832	1,696	1,695	850	0.503	$ 7,309,815	$ 2,473,692	$ 1,425,500	$ 4,944,392	$ 6,369,892	$ 4,677,271	$ (1,692,621)	-27%	258%	189%	$ -	0%
146593105	Helena Regionalmedical Center	I	587	1,322	1,320	850	0.431	$ 12,120,962	$ 2,440,495	$ 1,260,022	$ 1,672,148	$ 2,932,170	$ 2,848,530	$ (83,640)	-3%	120%	117%	$ -	0%
102665105	Howard Memorialhospital	I	36	109	109	5,178	0.817	$ 666,752	$ 230,925	$ 295,296	$ 91,905	$ 387,201	$ 337,423	$ (49,777)	-13%	168%	146%	$ -	0%
102916105	Jefferson Regional Medicalcenter	I	2,166	7,593	7,493	850	0.681	$ 59,532,863	$ 13,229,029	$ 6,300,750	$ 5,893,442	$ 12,194,192	$ 17,144,505	$ 4,950,313	41%	92%	130%	$ 351,690	2%
128851105	Johnson Regional Medical Center	I	681	1,491	1,490	850	0.409	$ 3,510,858	$ 2,046,902	$ 1,278,900	$ 1,579,180	$ 2,858,080	$ 3,128,369	$ 270,289	9%	140%	153%	$ -	0%
118836125	Lakeland Hospital Acquisition Ll	B	125	880	880	601	0.457	$ 1,169,498	$ 338,744	$ 376,152	$ -	$ 376,152	$ 651,230	$ 275,078	73%	111%	192%	$ -	0%
142103125	Lakeside Behavioral Healthsystem	B	27	252	252	501	0.463	$ 532,200	$ 116,801	$ 130,992	$ -	$ 130,992	$ 143,327	$ 12,335	9%	112%	123%	$ -	0%
103130105	Lawrence Memorial Hospital	I	34	87	87	1,076	0.596	$ 173,309	$ 75,583	$ 133,084	$ -	$ 133,084	$ 227,577	$ 94,493	71%	176%	301%	$ -	0%
102366105	Leo N Levi Memorial Hospital	I	705	3,181	3,179	636	0.580	$ 4,412,996	$ 1,336,516	$ 2,430,084	$ 1,944,490	$ 4,374,574	$ 4,681,010	$ 306,436	7%	327%	350%	$ -	0%
107962105	Lester E Cox Medical Centers	B	41	168	165	857	0.790	$ 1,214,367	$ 320,733	$ 135,285	$ 2,097	$ 137,382	$ 370,529	$ 233,147	170%	43%	116%	$ -	0%
159664125	Liberty Healthcare Systemsllc	B	7	45	45	683	0.356	$ 81,000	$ 22,814	$ 23,430	$ -	$ 23,430	$ 28,592	$ 5,162	22%	103%	125%	$ -	0%
103203105	Little River Memorial Hospital	I	7	19	19	2,241	0.644	$ 68,730	$ 30,648	$ 60,648	$ -	$ 60,648	$ 51,721	$ (8,927)	-15%	198%	169%	$ -	0%
101580105	Magnolia Regional Medical Center	I	443	1,016	1,004	850	0.387	$ 2,792,215	$ 1,692,578	$ 928,100	$ 2,197,486	$ 3,125,586	$ 1,944,565	$ (1,181,021)	-38%	185%	115%	$ -	0%
183068105	Mcgehee Hospital	I	41	92	92	3,700	0.530	$ 309,495	$ 144,712	$ 277,800	$ 129,813	$ 407,613	$ 249,389	$ (158,224)	-39%	282%	172%	$ -	0%

Report F - Summary of Simulation by Provider - Sorted by Provider Name
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Provider Medicaid ID	Provider Name	In / Border Indicator	Stays	Length of Stays	Covered Days	Per Diem Rate	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
		A	B	C	D	E	F	G	H	I	J	K = I + J	L	M = L - K	N = M ÷ K	O = K ÷ H	P = L ÷ H	Q	R = Q ÷ L
130047105	Medical Centerof South Arkansas	I	1,014	2,267	2,265	850	0.556	$ 30,286,619	$ 4,650,104	$ 2,248,980	$ 2,870,566	$ 5,119,546	$ 6,362,692	$ 1,243,146	24%	110%	137%	$ 37,407	1%
103816105	Mena Regional Health System	I	443	994	994	850	0.345	$ 2,615,242	$ 1,177,074	$ 734,616	$ 3,201,428	$ 3,936,044	$ 1,747,351	$ (2,188,693)	-56%	334%	148%	$ -	0%
101363105	Mercy Hospitalberryville	I	26	76	75	2,391	0.631	$ 415,146	$ 145,953	$ 187,200	$ 164,814	$ 352,014	$ 188,366	$ (163,649)	-46%	241%	129%	$ -	0%
204253105	Mercy Hospitalbooneville	I	13	46	46	2,862	0.617	$ 209,182	$ 98,389	$ 123,812	$ 72,608	$ 196,420	$ 92,083	$ (104,337)	-53%	200%	94%	$ -	0%
105691105	Mercy Hospitalfort Smith	I	2,831	10,720	10,660	890	0.670	$ 51,866,128	$ 18,490,188	$ 9,017,800	$ 7,088,021	$ 16,105,821	$ 22,059,827	$ 5,954,006	37%	87%	119%	$ 502,009	2%
101109105	Mercy Hospitalnorthwest Arkansas	I	2,174	6,025	5,984	850	0.604	$ 30,805,503	$ 8,625,172	$ 5,114,350	$ 5,001,929	$ 10,116,279	$ 14,746,176	$ 4,629,896	46%	117%	171%	$ 25,774	0%
102232105	Mercy Hospitalozark	I	8	16	16	2,785	0.524	$ 63,160	$ 25,391	$ 39,728	$ 45,366	$ 85,094	$ 48,061	$ (37,033)	-44%	335%	189%	$ -	0%
103238105	Mercy Hospitalparis	I	1	2	2	6,179	0.623	$ 9,630	$ 3,035	$ 7,530	$ 6,297	$ 13,827	$ 7,149	$ (6,678)	-48%	456%	236%	$ -	0%
107971105	Mercy Hospitalspringfield	B	174	1,253	1,251	850	2.096	$ 13,726,336	$ 4,198,107	$ 1,133,081	$ 107,752	$ 1,240,833	$ 4,377,937	$ 3,137,104	253%	30%	104%	$ 197,273	5%
105514105	Mercy Hospitalwaldron	I	16	48	47	2,816	0.635	$ 154,613	$ 65,695	$ 103,400	$ 100,895	$ 204,295	$ 116,630	$ (87,666)	-43%	311%	178%	$ -	0%
107115105	Methodist Healthcare Memphishosp	B	1,423	8,904	8,808	1,700	1.283	$ 83,913,614	$ 21,793,005	$ 13,575,979	$ 957,483	$ 14,533,462	$ 23,472,114	$ 8,938,651	62%	67%	108%	$ 2,552,524	11%
152280105	National Park Medical Center	I	1,169	3,443	3,408	850	0.624	$ 48,509,114	$ 4,800,041	$ 2,864,816	$ 2,992,243	$ 5,857,059	$ 8,393,159	$ 2,536,100	43%	122%	175%	$ 54,119	1%
192756105	Nea Baptist Memorial Hospital	I	1,404	4,320	4,267	850	0.682	$ 27,116,508	$ 7,475,322	$ 3,512,750	$ 2,986,021	$ 6,498,771	$ 10,973,904	$ 4,475,133	69%	87%	147%	$ 87,968	1%
131319105	North Arkansasregional Medical	I	1,135	2,014	2,014	850	0.354	$ 9,602,466	$ 3,424,434	$ 1,700,000	$ 3,756,450	$ 5,456,450	$ 4,655,816	$ (800,634)	-15%	159%	136%	$ 59,965	1%
193063105	North Metro Medical Center	I	295	1,002	998	850	0.632	$ 4,689,021	$ 2,623,820	$ 812,850	$ 202,185	$ 1,015,035	$ 2,221,215	$ 1,206,180	119%	39%	85%	$ 91,951	4%
165955105	Northwest Arkansas Hospitalsllc (Springdale)	I	1,576	5,927	5,891	902	0.722	$ 59,750,776	$ 8,939,521	$ 4,995,040	$ 14,507,379	$ 19,502,419	$ 13,056,175	$ (6,446,245)	-33%	218%	146%	$ 24,322	0%
166699105	Northwest Arkansas Hospitalsllc (Springdale)	I	2,535	7,513	7,510	3,608	0.398	$ 67,427,524	$ 10,056,725	$ 6,685,990	$ -	$ 6,685,990	$ 11,453,377	$ 4,767,387	71%	66%	114%	$ 191,798	2%
168846105	Northwest Arkansas Hospitalsllc (Bentonville)	I	1,280	3,121	3,109	902	0.575	$ 39,319,905	$ 5,872,084	$ 2,699,570	$ -	$ 2,699,570	$ 8,459,516	$ 5,759,946	213%	46%	144%	$ 143,765	2%
215698105	Northwest Health Physiciansspeci	I	48	52	52	850	1.357	$ 1,512,248	$ 541,155	$ 44,200	$ 17,002	$ 61,202	$ 747,410	$ 686,208	1121%	11%	138%	$ -	0%
210599125	Oakridge Behavioral Center	I	313	2,282	2,282	725	0.415	$ 2,492,024	$ 1,381,240	$ 1,468,157	$ 1,444,289	$ 2,912,446	$ 1,512,422	$ (1,400,024)	-48%	211%	109%	$ 21,477	1%
103629105	Ouachita Countymedical Center	I	407	939	939	850	0.411	$ 3,203,059	$ 1,664,564	$ 803,150	$ 1,437,214	$ 2,240,364	$ 1,886,916	$ (353,448)	-16%	135%	113%	$ -	0%
106200105	Ozark Health Medical Center	I	26	73	73	1,873	0.912	$ 260,913	$ 103,273	$ 86,586	$ 145,341	$ 231,927	$ 254,433	$ 22,507	10%	225%	246%	$ -	0%
175808105	Ozarks Community Hospital Of	I	38	158	157	2,942	0.578	$ 864,033	$ 464,325	$ 389,188	$ 91,631	$ 480,819	$ 292,822	$ (187,997)	-39%	104%	63%	$ 41,777	14%
142135125	Parkwood Behavioral Healthsystem	B	4	128	128	605	0.414	$ 110,291	$ 34,878	$ 44,678	$ 14,196	$ 58,874	$ 19,018	$ (39,856)	-68%	169%	55%	$ -	0%
180190105	Physicians Specialty Hospital Ll	I	4	4	4	850	1.298	$ 73,701	$ 24,100	$ 3,400	$ 17,712	$ 21,112	$ 59,575	$ 38,463	182%	88%	247%	$ -	0%
101505105	Piggott Community Hospital	I	27	92	83	1,583	0.565	$ 151,048	$ 101,826	$ 93,288	$ 9,851	$ 103,139	$ 173,668	$ 70,529	68%	101%	171%	$ -	0%
107963105	Poplar Bluff Regional Medical	B	316	793	788	726	0.401	$ 8,880,365	$ 1,340,450	$ 640,950	$ 105,270	$ 746,220	$ 1,438,406	$ 692,186	93%	56%	107%	$ -	0%
107092105	Regional Med Ctr At Memphis	B	805	4,228	4,200	850	1.211	$ 32,688,400	$ 6,450,791	$ 3,848,700	$ 10,541,049	$ 14,389,749	$ 11,344,052	$ (3,045,697)	-21%	223%	176%	$ 508,481	4%
165429105	River Valley Medical Center	I	40	131	131	1,327	0.661	$ 473,551	$ 174,984	$ 283,210	$ 70,127	$ 353,337	$ 303,245	$ (50,092)	-14%	202%	173%	$ -	0%
182577125	Riverview Behavioral Health	I	447	7,722	7,721	725	0.445	$ 9,205,391	$ 4,518,845	$ 3,710,781	$ 1,097,974	$ 4,808,755	$ 2,842,008	$ (1,966,748)	-41%	106%	63%	$ 561,623	20%
182644105	Saint Francis Hospital	B	273	1,241	1,238	850	0.817	$ 12,223,978	$ 1,785,550	$ 968,800	$ -	$ 968,800	$ 2,569,787	$ 1,600,987	165%	54%	144%	$ 14,822	1%
129187105	Saline Memorialhospital (Benton)	I	1,112	3,248	3,238	1,700	0.544	$ 11,227,361	$ 3,799,163	$ 2,613,037	$ 3,329,531	$ 5,942,568	$ 6,817,379	$ 874,811	15%	156%	179%	$ -	0%
220053105	Saline Memorialhospital (Benton)	I	1	1	1	893	0.319	$ 5,697	$ 1,840	$ 893	$ -	$ 893	$ 3,659	$ 2,766	310%	49%	199%	$ -	0%
181275105	Select Specialty Hospital Ftsmit	I	1	2	2	850	2.124	$ 13,224	$ 4,168	$ 1,700	$ -	$ 1,700	$ 24,365	$ 22,665	1333%	41%	585%	$ -	0%
177289105	Siloam Springsregional Hospital	I	563	957	957	850	0.324	$ 7,215,432	$ 1,687,108	$ 748,610	$ 1,560,488	$ 2,309,098	$ 2,051,526	$ (257,572)	-11%	137%	122%	$ -	0%
178790105	South Mississippi County Medical	I	54	140	138	2,052	0.553	$ 577,739	$ 213,305	$ 194,556	$ 35,705	$ 230,261	$ 339,081	$ 108,820	47%	108%	159%	$ -	0%
101870105	Sparks Medicalcenter Van Buren	I	131	371	371	850	0.489	$ 2,729,268	$ 543,829	$ 317,050	$ 500,042	$ 817,092	$ 733,856	$ (83,236)	-10%	150%	135%	$ -	0%
182423125	Springwoods Behavioral Health	I	366	2,882	2,861	725	0.413	$ 4,075,125	$ 1,756,677	$ 1,678,664	$ 1,017,420	$ 2,696,084	$ 1,734,555	$ (961,528)	-36%	153%	99%	$ -	0%
142757105	St Bernard Community Hospital Co	I	43	148	148	1,317	0.654	$ 230,794	$ 120,074	$ 194,100	$ 107,746	$ 301,846	$ 321,813	$ 19,967	7%	251%	268%	$ -	0%
101693105	St Bernards Medical Center	I	4,293	14,976	14,913	850	0.731	$ 44,611,845	$ 23,192,378	$ 12,450,600	$ 11,237,252	$ 23,687,852	$ 35,968,863	$ 12,281,012	52%	102%	155%	$ 314,864	1%
109910105	St Jude Childrens Researchhospit	B	70	347	347	4,500	1.368	$ 2,863,753	$ 902,552	$ 1,472,100	$ 114,002	$ 1,586,102	$ 1,146,110	$ (439,992)	-28%	176%	127%	$ 47,447	4%
152329105	St Marys Regional Medical Center	I	2,155	6,662	6,652	789	0.464	$ 42,222,457	$ 6,614,665	$ 5,811,722	$ 5,234,128	$ 11,045,850	$ 11,406,583	$ 360,734	3%	167%	172%	$ 63,922	1%
104268105	St Vincent Infirmary Medicalctr	I	3,480	20,135	19,745	850	0.895	$ 110,330,102	$ 27,640,337	$ 16,165,250	$ 9,874,852	$ 26,040,102	$ 36,394,520	$ 10,354,418	40%	94%	132%	$ 758,781	2%
138525105	St Vincent Medical Center	I	162	564	561	850	1.049	$ 4,812,556	$ 1,528,753	$ 473,300	$ 269,287	$ 742,587	$ 1,895,421	$ 1,152,833	155%	49%	124%	$ 11,663	1%
101615105	St Vincent Morrilton	I	65	184	181	2,079	1.001	$ 1,002,774	$ 310,495	$ 360,984	$ 141,441	$ 502,425	$ 700,073	$ 197,648	39%	162%	225%	$ -	0%
157571105	Stone County Medical Center	I	42	112	107	1,870	0.634	$ 589,252	$ 197,634	$ 207,778	$ 131,546	$ 339,324	$ 305,069	$ (34,254)	-10%	172%	154%	$ -	0%
105312125	The Bridgeway Llc	I	909	9,591	9,560	735	0.426	$ 13,289,760	$ 3,969,077	$ 4,682,157	$ 2,694,937	$ 7,377,094	$ 4,524,442	$ (2,852,651)	-39%	186%	114%	$ 82,060	2%
154265125	Uhs Of Benton Llc	I	1,118	8,768	8,728	545	0.347	$ 9,407,392	$ 2,964,871	$ 4,219,131	$ 3,173,129	$ 7,392,260	$ 4,455,405	$ (2,936,855)	-40%	249%	150%	$ 5,594	0%
145121125	United Methodist Behavioral	I	1,592	16,800	15,944	606	0.364	$ 19,692,981	$ 6,206,519	$ 8,071,469	$ 4,274,608	$ 12,346,077	$ 6,888,320	$ (5,457,757)	-44%	199%	111%	$ 243,016	4%
209821105	Unity Health Harris Medicalcente	I	819	1,688	1,684	850	0.409	$ 6,779,418	$ 1,368,674	$ 1,312,800	$ 388,769	$ 1,701,569	$ 3,768,450	$ 2,066,881	121%	124%	275%	$ -	0%
104266105	Univ Hospitalof Arkansas	I	8,870	50,088	49,642	1,734	1.015	$ 253,816,110	$ 87,694,481	$ 88,256,165	$ 18,313,259	$ 106,569,424	$ 103,703,169	$ (2,866,255)	-3%	122%	118%	$ 3,921,502	4%
193673125	Valley Behavioral Health System	I	790	16,820	16,802	725	0.466	$ 19,263,611	$ 8,100,629	$ 7,572,770	$ 1,618,519	$ 9,191,289	$ 5,497,390	$ (3,693,899)	-40%	113%	68%	$ 1,274,902	23%
140704125	Vantage Point Of Northwestarkans	I	825	21,023	21,018	725	0.499	$ 24,415,185	$ 10,456,147	$ 9,494,556	$ 1,785,676	$ 11,280,232	$ 6,498,753	$ (4,781,479)	-42%	108%	62%	$ 1,794,118	28%

Report F - Summary of Simulation by Provider - Sorted by Provider Name
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 02 - Baseline Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Provider Medicaid ID	Provider Name	In / Border Indicator	Stays	Length of Stays	Covered Days	Per Diem Rate	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
		A	B	C	D	E	F	G	H	I	J	K = I + J	L	M = L - K	N = M ÷ K	O = K ÷ H	P = L ÷ H	Q	R = Q ÷ L
179951105	Wadley Regionalmedical Center	B	1,146	3,477	3,462	850	0.538	$ 21,677,477	$ 4,446,870	$ 2,558,312	$ 418,353	$ 2,976,665	$ 7,024,474	$ 4,047,809	136%	67%	158%	$ -	0%
197302105	Wadley Regionalmedical Center At	I	137	667	666	850	0.789	$ 3,016,458	$ 890,030	$ 553,500	$ 308,540	$ 862,040	$ 1,191,977	$ 329,937	38%	97%	134%	$ -	0%
106294105	Washington Regional Medicalcente	I	2,470	9,548	9,477	850	0.776	$ 63,523,793	$ 14,212,148	$ 8,144,032	$ 6,214,426	$ 14,358,458	$ 21,731,668	$ 7,373,210	51%	101%	153%	$ 61,880	0%
129186105	White County Medical Center	I	3,093	10,453	10,385	850	0.539	$ 48,498,634	$ 11,969,062	$ 9,782,095	$ 8,160,694	$ 17,942,789	$ 18,954,473	$ 1,011,685	6%	150%	158%	$ 21,085	0%
102716105	White River Medical Center	I	1,822	5,429	5,411	850	0.581	$ 24,507,061	$ 7,731,717	$ 4,595,500	$ 5,599,025	$ 10,194,525	$ 12,006,114	$ 1,811,589	18%	132%	155%	$ 40,376	0%
113493125	Youth Home Inc	I	123	21,268	21,094	350	0.518	$ 7,384,650	$ 2,327,376	$ 7,384,650	$ -	$ 7,384,650	$ 731,191	$ (6,653,459)	-90%	317%	31%	$ -	0%
119304725	Youth Villagesinc	B	71	11,579	11,454	350	0.418	$ 4,008,900	$ 1,263,461	$ 4,008,900	$ -	$ 4,008,900	$ 344,788	$ (3,664,112)	-91%	317%	27%	$ 4,678	1%
Total			**96,114**	**519,356**	**515,625**		**0.722**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ 275,390,153**	**$ 857,205,529**	**$ 857,205,122**	**$ (408)**	**0%**	**122%**	**122%**	**$71,565,950**	**8%**

Notes:

A) In-state (I) and border provider (B) status. Out of state, non-border providers not shown.

F) Average APR DRG Weight.

G) Billed Amount as submitted without inflation.

H) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

I) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.

Report A: Model Parameters
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Simulation Parameters	All Providers	Comment
Stays	96,114	
State-Wide Base Rate	$ 9,876.72	
APR DRG v35 Case Mix	0.7218	
Billed Amt	$ 2,355,440,778	
Est Cost (Billed × CCR)	$ 702,127,500	
Allowed Amount	$ 581,815,376	Equals sum of per diem payments for claims with date of discharge in CY 2016
Est. Gross Supplemental Payment	$ 275,390,153	Est. Gross supplemental payments allocated to each model claim based on charges(not net of IGT or tax)
Total Est Claim Pmt	$ 857,205,529	Intention is budget neutrality
APR DRG Simulation Pmt	$ 857,205,167	
Pmt Change	$ (363)	
APR DRG Simulated Outlier Pmt	$ 68,475,867	
APR DRG Simulated Outlier Pct	7.99%	
Est Gross Supplemental Payment Included in Budget	Yes	
Wage Index Adjustment of Base Rate	Yes	
DRG Policy Adjustor(s)	Yes	Applied 1.90 factor to Normal Newborn Services and 1.50 factor to Neonate Services
Age Policy Adjustor(s)	Yes	Applied 1.30 factor to Pediatric Services
Provider Policy Adjustor(s)	No	
Documentation and Coding Adjustment	No	
Relative Weights	APR v.35 National	
Transfer Payment Policy	Yes	Discharge status codes: '02', '05', '65', '66', '82', '85', '93', '94'
Outlier Policy	Yes: $30,000 / 80%	Medicare-like outlier policy: High side threshold (provider loss) and marginal cost (MC) percentage
Charge Cap Policy	No	

Report B: Summary of Simulation by Service Line - Sorted by Percent Change
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Service Line	Stays	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A	B	C	D	E	F	G	H = F + G	I	J = I - H	K = J ÷ H	L = H ÷ E	M = I ÷ E	N	O = N ÷ I
Circulatory Adult	3,876	1.40	$ 186,282,924	$ 46,152,874	$ 14,117,927	$ 22,045,057	$ 36,162,984	$ 54,479,826	$ 18,316,842	51%	78%	118%	$ 1,405,725	3%
Misc Adult	15,042	1.25	$ 582,905,305	$ 156,550,791	$ 68,675,645	$ 69,866,813	$ 138,542,458	$ 189,235,359	$ 50,692,901	37%	88%	121%	$ 6,206,751	3%
Rehab	4	1.58	$ 125,239	$ 33,314	$ 22,850	$ 13,791	$ 36,641	$ 49,101	$ 12,460	34%	110%	147%	$ -	0%
Gastroent Adult	4,406	1.01	$ 132,562,673	$ 35,411,072	$ 18,202,717	$ 17,058,399	$ 35,261,116	$ 44,269,278	$ 9,008,162	26%	100%	125%	$ 494,759	1%
Resp Adult	3,262	0.98	$ 100,624,313	$ 27,237,552	$ 14,019,498	$ 13,821,350	$ 27,840,848	$ 31,895,114	$ 4,054,266	15%	102%	117%	$ 718,510	2%
Burns	104	3.34	$ 17,338,750	$ 7,695,418	$ 4,489,665	$ 1,836,036	$ 6,325,701	$ 6,980,435	$ 654,734	10%	82%	91%	$ 3,026,151	43%
Neonate	3,627	2.38	$ 317,668,157	$ 100,514,948	$ 105,568,888	$ 26,602,544	$ 132,171,432	$ 135,386,143	$ 3,214,711	2%	131%	135%	$ 14,892,563	11%
Normal newborn	22,152	0.15	$ 113,047,651	$ 30,736,545	$ 46,011,027	$ 15,921,268	$ 61,932,295	$ 62,058,891	$ 126,596	0%	201%	202%	$ 274,638	0%
Obstetrics	16,137	0.43	$ 252,009,455	$ 63,674,029	$ 38,979,245	$ 31,922,790	$ 70,902,035	$ 69,687,644	$ (1,214,391)	-2%	111%	109%	$ 143,965	0%
Misc Pediatric	6,697	1.12	$ 266,829,135	$ 101,270,801	$ 103,216,468	$ 25,736,548	$ 128,953,015	$ 117,922,277	$ (11,030,738)	-9%	127%	116%	$ 22,449,089	19%
Substance Abuse	1,078	0.44	$ 13,048,107	$ 3,422,118	$ 3,553,115	$ 1,701,703	$ 5,254,818	$ 4,698,655	$ (556,162)	-11%	154%	137%	$ -	0%
Resp Pediatric	3,347	0.66	$ 95,345,575	$ 37,923,007	$ 43,743,962	$ 9,868,068	$ 53,612,030	$ 39,903,430	$ (13,708,600)	-26%	141%	105%	$ 11,799,053	30%
Mental Health Adult	6,795	0.52	$ 83,683,640	$ 22,662,377	$ 33,231,577	$ 13,862,123	$ 47,093,700	$ 34,753,237	$ (12,340,462)	-26%	208%	153%	$ 85,152	0%
Transplant	38	12.23	$ 22,405,053	$ 7,280,569	$ 8,643,736	$ 1,858,508	$ 10,502,243	$ 6,891,078	$ (3,611,165)	-34%	144%	95%	$ 1,790,689	26%
Mental Health Pediatric	9,549	0.44	$ 171,564,802	$ 61,562,086	$ 79,339,057	$ 23,275,157	$ 102,614,214	$ 58,994,698	$ (43,619,516)	-43%	167%	96%	$ 5,188,822	9%
Total	**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ 275,390,153**	**$ 857,205,529**	**$ 857,205,167**	**$ (363)**	**0%**	**122%**	**122%**	**$ 68,475,867**	**8.0%**

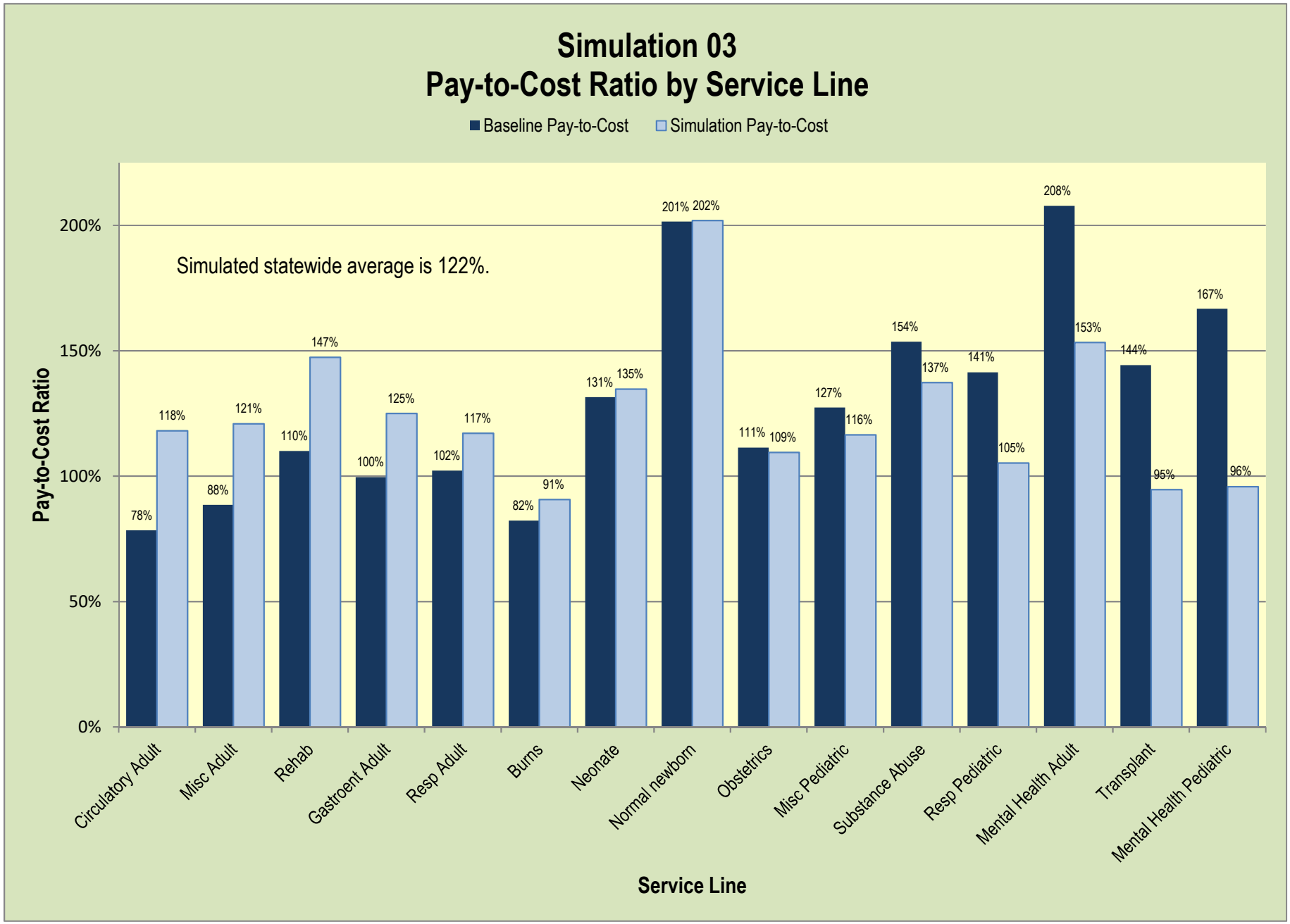
Notes:

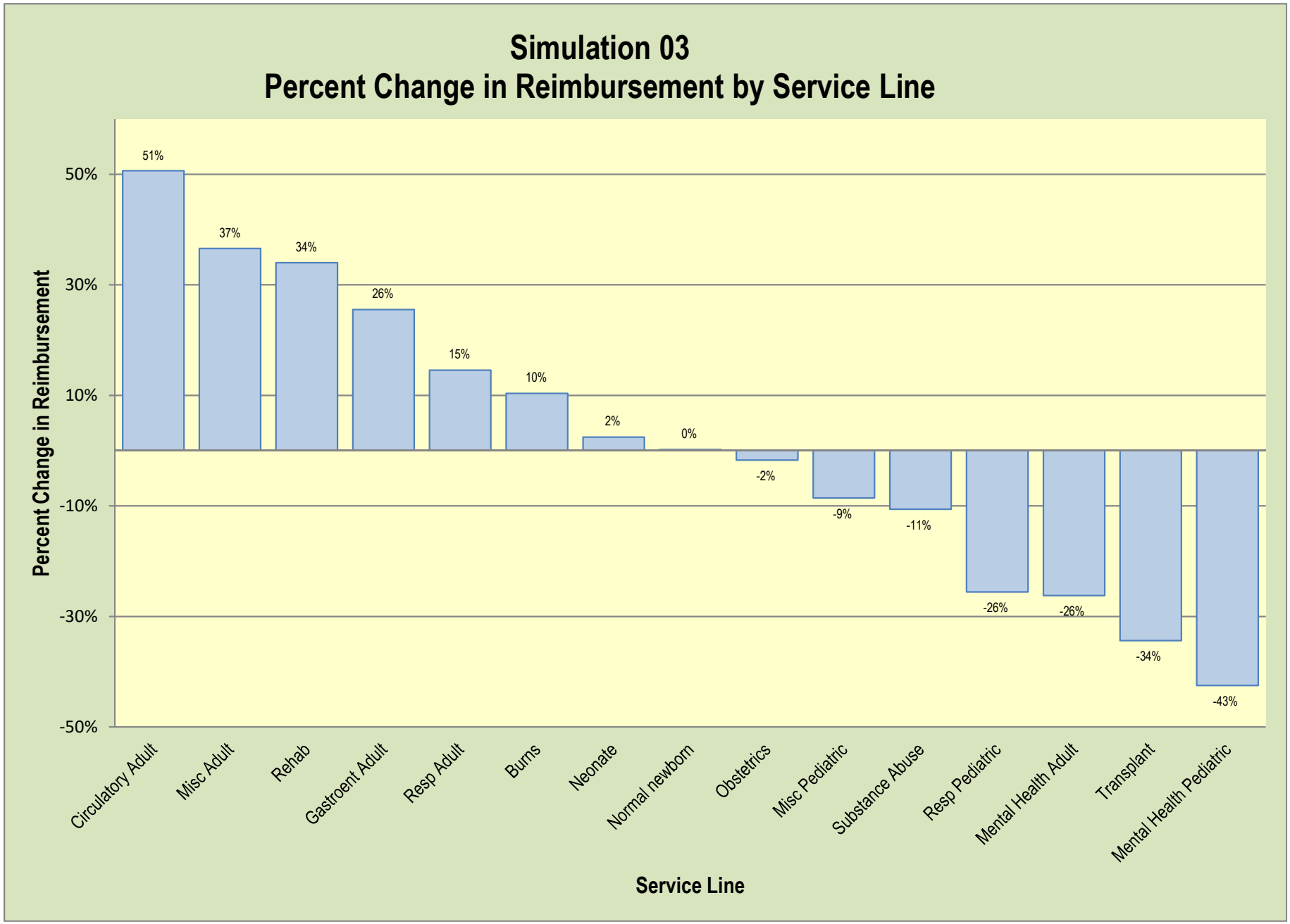
C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.


Simulation 03
Pay-to-Cost Ratio by Service Line
Baseline Pay-to-Cost
Simulation Pay-to-Cost
Simulated statewide average is 122%.
Pay-to-Cost Ratio
200%
150%
100%
50%
0%
78%
118%
88%
121%
110%
147%
100%
125%
102%
117%
82%
91%
131%
135%
201%
202%
111%
109%
127%
116%
154%
137%
141%
105%
208%
153%
144%
95%
167%
96%
Circulatory Adult
Misc Adult
Rehab
Gastroent Adult
Resp Adult
Burns
Neonate
Normal newborn
Obstetrics
Misc Pediatric
Substance Abuse
Resp Pediatric
Mental Health Adult
Transplant
Mental Health Pediatric
Service Line


Simulation 03
Percent Change in Reimbursement by Service Line
Percent Change in Reimbursement
50%
30%
10%
-10%
-30%
-50%
51%
37%
34%
26%
15%
10%
2%
0%
-2%
-9%
-11%
-26%
-26%
-34%
-43%
Circulatory Adult
Misc Adult
Rehab
Gastroent Adult
Resp Adult
Burns
Neonate
Normal newborn
Obstetrics
Misc Pediatric
Substance Abuse
Resp Pediatric
Mental Health Adult
Transplant
Mental Health Pediatric
Service Line

Report C: Summary of Simulation by APR DRG Severity of Illness - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

SOI	SOI Desc.	Stays	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A		B	C	D	E	F	G	H = F + G	I	J = I - H	K = J ÷ H	L = H ÷ E	M = I ÷ E	N	O = N ÷ I
1	Minor	47,196	0.38	$ 587,155,224	$ 164,759,295	$143,914,115	$ 83,109,415	$227,023,530	$210,494,230	$(16,529,300)	-7%	138%	128%	$ 3,041,368	1%
2	Moderate	33,902	0.66	$ 689,549,669	$ 200,032,722	$177,078,774	$ 82,705,204	$259,783,978	$256,499,433	$ (3,284,545)	-1%	130%	128%	$ 6,260,344	2%
3	Major	11,929	1.37	$ 523,392,549	$ 156,534,361	$130,881,687	$ 55,388,894	$186,270,582	$198,545,524	$ 12,274,942	7%	119%	127%	$ 11,027,308	6%
4	Extreme	3,087	4.20	$ 555,343,336	$ 180,801,122	$129,940,799	$ 54,186,640	$184,127,439	$191,665,979	$ 7,538,540	4%	102%	106%	$ 48,146,847	25%
Total		**96,114**	**0.72**	**$2,355,440,778**	**$ 702,127,500**	**$581,815,376**	**$275,390,153**	**$857,205,529**	**$857,205,167**	**$ (363)**	**0%**	**122%**	**122%**	**$ 68,475,867**	**8%**

Notes:

A) Severity of illness (SOI)

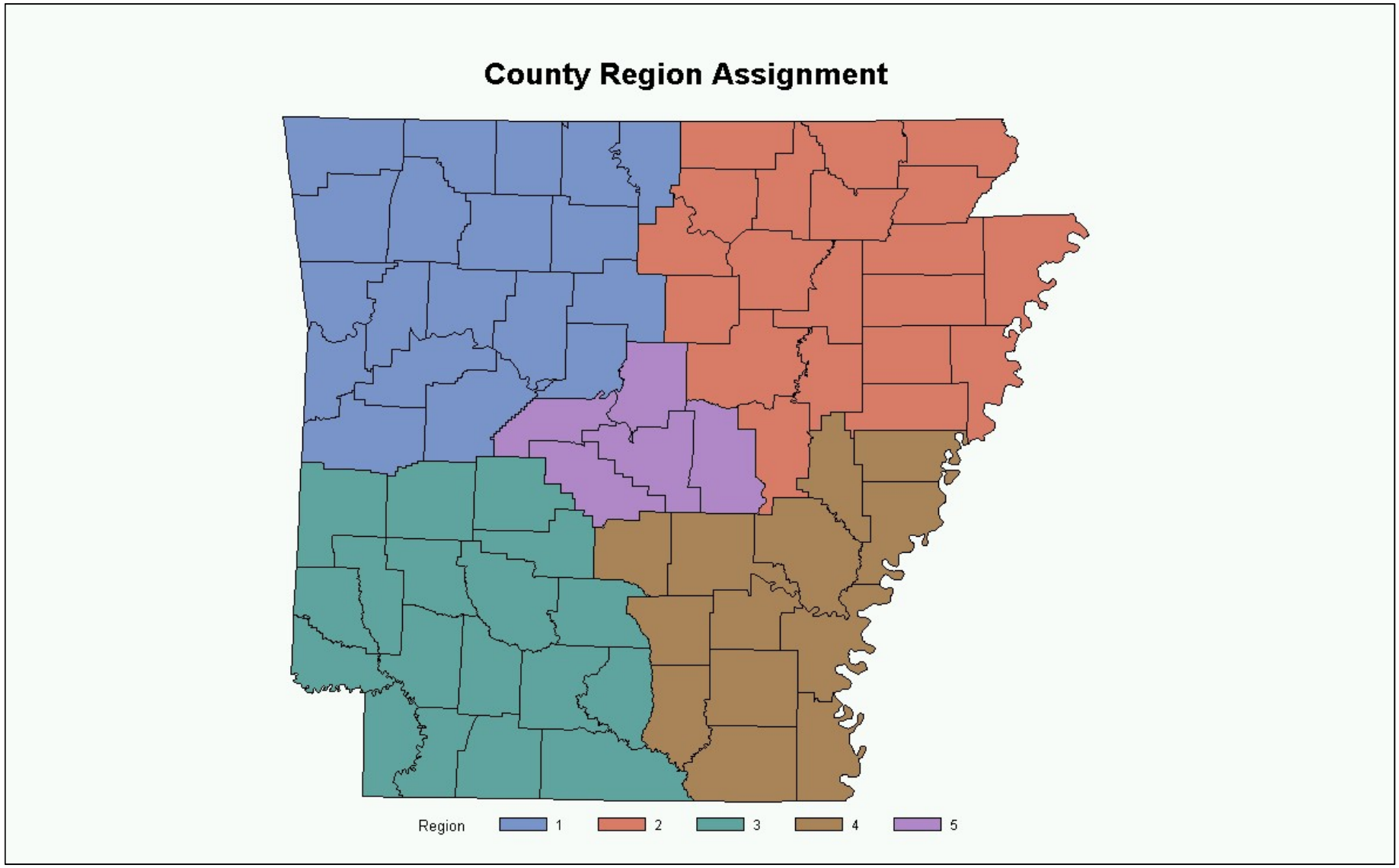
C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.

Figure D
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services



Report D: Summary of Simulation by Region - Sorted by Region
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: Data source is DRG Claims Dataset, CY 2016. Medicaid payments (allowed amount, does not include TPL) and estimated cost using Medicare cost-to-charge ratio where available, otherwise Navigant calculated CCRs from HCRIS Cost Report. Gross supplemental payments allocated to each model claim based on charges(not net of IGT or tax). Grouped under APR DRG version 35.

Region	Stays	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A	B	C	D	E	F	G	H = F + G	I	J = I - H	K = J ÷ H	L = H ÷ E	M = I ÷ E	N	O = N ÷ I
1 - North West	24,046	0.58	$ 523,137,922	$ 123,885,555	$ 77,034,128	$ 62,717,882	$ 139,752,010	$ 160,295,433	$ 20,543,423	15%	113%	129%	$ 4,545,536	3%
2 - North East	16,033	0.57	$ 202,266,691	$ 67,409,696	$ 41,103,644	$ 43,500,295	$ 84,603,939	$ 99,214,011	$ 14,610,071	17%	126%	147%	$ 572,767	1%
3 - South West	8,751	0.57	$ 170,003,106	$ 38,581,704	$ 26,377,561	$ 25,927,729	$ 52,305,290	$ 53,427,970	$ 1,122,680	2%	136%	138%	$ 705,967	1%
4 - South East	4,880	0.53	$ 88,851,497	$ 24,784,369	$ 14,316,438	$ 15,020,996	$ 29,337,434	$ 28,094,577	$ (1,242,857)	-4%	118%	113%	$ 419,656	1%
5 - Central	35,910	0.92	$ 1,132,797,927	$ 392,295,740	$ 386,988,604	$ 115,673,425	$ 502,662,029	$ 445,015,032	$ (57,646,997)	-11%	128%	113%	$ 58,702,386	13%
Border	6,494	0.90	$ 238,383,635	$ 55,170,435	$ 35,995,001	$ 12,549,826	$ 48,544,827	$ 71,158,144	$ 22,613,316	47%	88%	129%	$ 3,529,555	5%
Total	**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ 275,390,153**	**$ 857,205,529**	**$ 857,205,167**	**$ (363)**	**0%**	**122%**	**122%**	**$ 68,475,867**	**8%**

Notes:

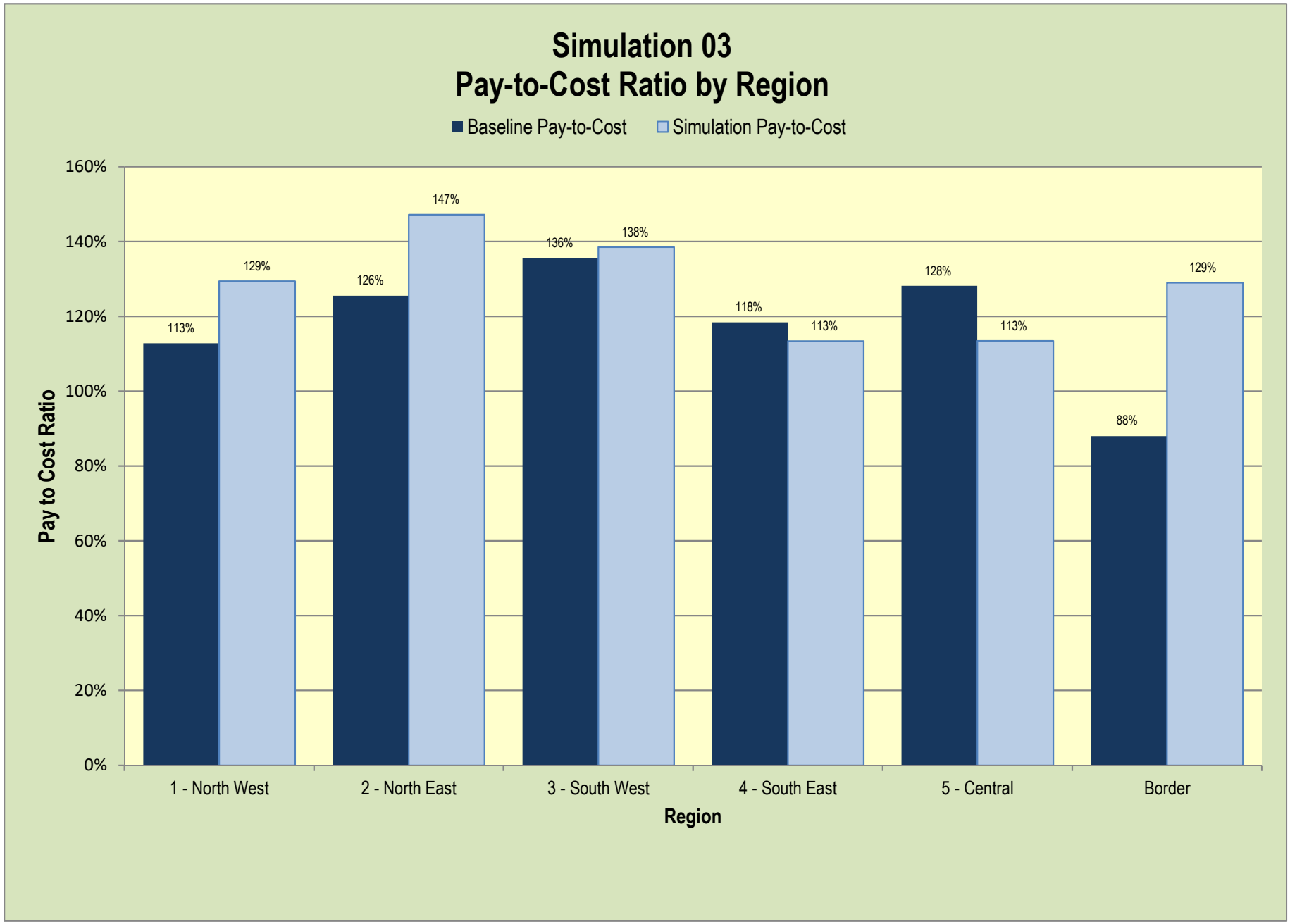
A) Region assignment developed by Navigant at the county level using provider phsyical address

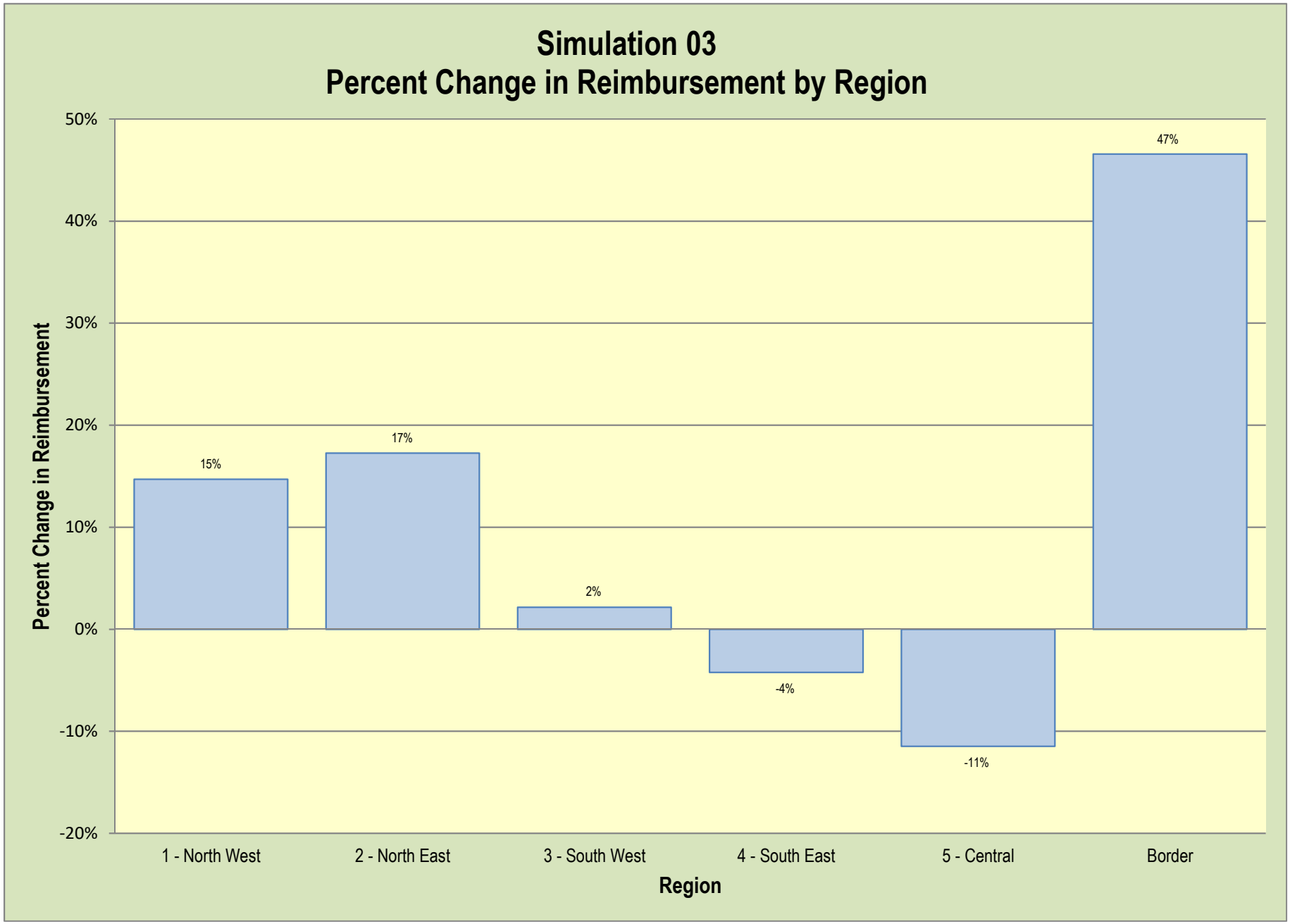
C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.


Simulation 03
Pay-to-Cost Ratio by Region
Baseline Pay-to-Cost
Simulation Pay-to-Cost
160%
140%
120%
100%
80%
60%
40%
20%
0%
Pay to Cost Ratio
113%
129%
126%
147%
136%
138%
118%
113%
128%
113%
88%
129%
1 - North West
2 - North East
3 - South West
4 - South East
5 - Central
Border
Region


Simulation 03
Percent Change in Reimbursement by Region
Percent Change in Reimbursement
50%
40%
30%
20%
10%
0%
-10%
-20%
15%
17%
2%
-4%
-11%
47%
1 - North West
2 - North East
3 - South West
4 - South East
5 - Central
Border
Region

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
640	Neonate Birthwt >2499g, Normal Newborn Or Neonate W Other Problem	21,519	0.14	$ 104,674,466	$ 28,412,852	$ 57,131,191	$ 54,997,583	$ (2,133,608)	-4%	201%	194%	$ 274,638	0%
560	Vaginal Delivery	9,547	0.34	$ 129,744,421	$ 31,898,806	$ 34,906,812	$ 32,704,894	$ (2,201,918)	-6%	109%	103%	$ 6,100	0%
753	Bipolar Disorders	6,718	0.47	$ 108,898,977	$ 36,908,139	$ 62,479,744	$ 40,604,286	$ (21,875,458)	-35%	169%	110%	$ 2,663,234	7%
540	Cesarean Delivery	4,707	0.60	$ 96,765,701	$ 24,930,546	$ 26,668,657	$ 28,447,892	$ 1,779,235	7%	107%	114%	$ 124,361	0%
751	Major Depressive Disorders & Other/Unspecified Psychoses	3,209	0.46	$ 47,297,246	$ 15,739,124	$ 26,382,276	$ 17,608,142	$ (8,774,134)	-33%	168%	112%	$ 624,930	4%
754	Depression Except Major Depressive Disorder	2,771	0.33	$ 32,996,208	$ 10,679,330	$ 20,168,085	$ 11,343,239	$ (8,824,847)	-44%	189%	106%	$ 564,332	5%
750	Schizophrenia	1,734	0.73	$ 27,286,379	$ 7,822,690	$ 15,831,570	$ 12,620,222	$ (3,211,348)	-20%	202%	161%	$ 116,794	1%
720	Septicemia & Disseminated Infections	1,577	1.48	$ 83,617,903	$ 23,677,053	$ 23,666,911	$ 25,876,151	$ 2,209,240	9%	100%	109%	$ 2,884,443	11%
139	Other Pneumonia	1,413	0.66	$ 24,742,277	$ 7,438,540	$ 10,164,793	$ 10,523,412	$ 358,619	4%	137%	141%	$ 142,383	1%
138	Bronchiolitis & Rsv Pneumonia	1,174	0.46	$ 16,820,696	$ 6,269,603	$ 11,666,986	$ 7,657,460	$ (4,009,526)	-34%	186%	122%	$ 781,459	10%
420	Diabetes	1,166	0.59	$ 21,507,353	$ 6,288,781	$ 6,870,572	$ 7,076,100	$ 205,528	3%	109%	113%	$ -	0%
383	Cellulitis & Other Skin Infections	1,057	0.56	$ 17,721,371	$ 4,877,219	$ 6,899,408	$ 6,319,410	$ (579,999)	-8%	141%	130%	$ 2,273	0%
566	Other Antepartum Diagnoses	902	0.43	$ 10,710,644	$ 2,984,613	$ 4,626,624	$ 3,829,634	$ (796,990)	-17%	155%	128%	$ 13,504	0%
140	Chronic Obstructive Pulmonary Disease	876	0.71	$ 17,583,922	$ 4,892,172	$ 5,706,890	$ 6,108,837	$ 401,947	7%	117%	125%	$ -	0%
249	Other Gastroenteritis, Nausea & Vomiting	811	0.53	$ 10,625,411	$ 3,106,527	$ 4,862,942	$ 4,857,284	$ (5,658)	0%	157%	156%	$ 39,767	1%
463	Kidney & Urinary Tract Infections	805	0.58	$ 12,263,617	$ 3,519,767	$ 5,346,105	$ 5,053,057	$ (293,048)	-5%	152%	144%	$ -	0%
141	Asthma	758	0.48	$ 9,547,261	$ 3,004,804	$ 3,877,193	$ 4,409,286	$ 532,093	14%	129%	147%	$ 69	0%
194	Heart Failure	742	0.85	$ 19,338,513	$ 5,215,070	$ 5,434,509	$ 6,429,006	$ 994,497	18%	104%	123%	$ 206,274	3%
861	Signs, Symptoms & Other Factors Influencing Health Status	718	0.51	$ 9,214,124	$ 2,703,259	$ 4,394,713	$ 3,901,361	$ (493,352)	-11%	163%	144%	$ 81,458	2%
581	Neonate, Transferred < 5 Days Old, Born Here	709	0.18	$ 4,770,089	$ 1,419,952	$ 1,699,600	$ 1,847,247	$ 147,647	9%	120%	130%	$ -	0%
53	Seizure	708	0.74	$ 14,515,972	$ 4,864,701	$ 5,802,003	$ 6,381,776	$ 579,773	10%	119%	131%	$ 483,973	8%
133	Respiratory Failure	674	1.14	$ 32,284,170	$ 10,253,029	$ 9,698,907	$ 9,495,653	$ (203,254)	-2%	95%	93%	$ 1,588,633	17%
634	Neonate, Birthwt >2499g W Resp Dist Synd/Oth Maj Resp Cond	658	1.56	$ 52,440,898	$ 15,726,430	$ 19,605,687	$ 16,653,940	$ (2,951,747)	-15%	125%	106%	$ 1,577,661	9%
626	Neonate Bwt 2000-2499g, Normal Newborn Or Neonate W Other Problem	633	0.60	$ 8,373,185	$ 2,323,693	$ 4,801,104	$ 7,061,308	$ 2,260,204	47%	207%	304%	$ -	0%
812	Poisoning Of Medicinal Agents	590	0.67	$ 11,406,410	$ 3,083,797	$ 3,089,242	$ 4,051,262	$ 962,020	31%	100%	131%	$ 57,361	1%
755	Adjustment Disorders & Neuroses Except Depressive Diagnoses	572	0.38	$ 11,146,631	$ 4,081,027	$ 7,406,524	$ 3,053,280	$ (4,353,244)	-59%	181%	75%	$ 488,313	16%
254	Other Digestive System Diagnoses	536	0.70	$ 10,486,843	$ 3,055,600	$ 4,656,784	$ 4,206,669	$ (450,115)	-10%	152%	138%	$ 51,386	1%
662	Sickle Cell Anemia Crisis	534	0.73	$ 10,886,807	$ 3,290,553	$ 4,874,460	$ 4,169,187	$ (705,273)	-14%	148%	127%	$ -	0%
282	Disorders Of Pancreas Except Malignancy	526	0.81	$ 12,652,256	$ 3,482,854	$ 4,225,914	$ 4,249,395	$ 23,480	1%	121%	122%	$ 17,484	0%
469	Acute Kidney Injury	500	0.84	$ 13,714,061	$ 3,687,873	$ 4,092,597	$ 4,337,920	$ 245,323	6%	111%	118%	$ 135,076	3%
752	Disorders Of Personality & Impulse Control	490	0.42	$ 6,461,982	$ 1,628,914	$ 3,475,475	$ 2,044,994	$ (1,430,480)	-41%	213%	126%	$ -	0%
633	Neonate Birthwt >2499g W Major Anomaly	474	1.46	$ 42,823,126	$ 14,996,891	$ 20,857,560	$ 14,244,183	$ (6,613,377)	-32%	139%	95%	$ 4,120,257	29%
639	Neonate Birthwt >2499g W Other Significant Condition	419	0.58	$ 12,442,615	$ 3,924,934	$ 6,377,276	$ 3,822,531	$ (2,554,745)	-40%	162%	97%	$ 208,865	5%
775	Alcohol Abuse & Dependence	415	0.52	$ 6,675,670	$ 1,670,388	$ 2,273,754	$ 2,121,680	$ (152,074)	-7%	136%	127%	$ -	0%
263	Cholecystectomy	406	1.25	$ 15,066,216	$ 3,828,132	$ 3,488,845	$ 5,125,984	$ 1,637,139	47%	91%	134%	$ 9,187	0%
758	Behavioral Disorders	400	0.49	$ 10,094,305	$ 3,732,793	$ 7,392,666	$ 2,849,329	$ (4,543,337)	-61%	198%	76%	$ 409,208	14%
45	Cva & Precerebral Occlusion W Infarct	373	1.08	$ 12,353,436	$ 3,338,521	$ 3,072,885	$ 4,058,111	$ 985,226	32%	92%	122%	$ 83,950	2%
817	Overdose	356	0.67	$ 7,092,341	$ 1,851,211	$ 1,988,223	$ 2,273,166	$ 284,942	14%	107%	123%	$ -	0%
198	Angina Pectoris & Coronary Atherosclerosis	348	0.54	$ 7,041,440	$ 1,750,188	$ 1,477,135	$ 1,846,976	$ 369,841	25%	84%	106%	$ -	0%
113	Infections Of Upper Respiratory Tract	348	0.47	$ 4,705,814	$ 1,558,432	$ 2,552,741	$ 2,249,392	$ (303,349)	-12%	164%	144%	$ 250,768	11%
422	Hypovolemia & Related Electrolyte Disorders	342	0.48	$ 3,618,040	$ 1,200,338	$ 2,399,833	$ 1,959,427	$ (440,405)	-18%	200%	163%	$ 21,145	1%
247	Intestinal Obstruction	327	0.67	$ 6,496,725	$ 1,962,884	$ 2,762,739	$ 2,335,053	$ (427,686)	-15%	141%	119%	$ 47,050	2%
302	Knee Joint Replacement	303	1.55	$ 14,507,178	$ 3,762,216	$ 2,649,701	$ 4,662,964	$ 2,013,263	76%	70%	124%	$ 30,537	1%
201	Cardiac Arrhythmia & Conduction Disorders	299	0.66	$ 6,584,400	$ 1,723,192	$ 1,781,174	$ 2,018,099	$ 236,926	13%	103%	117%	$ 20,289	1%
696	Other Chemotherapy	293	1.18	$ 11,656,418	$ 4,469,793	$ 4,370,360	$ 4,190,119	$ (180,241)	-4%	98%	94%	$ 73,268	2%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
421	Malnutrition, Failure To Thrive & Other Nutritional Disorders	285	0.83	$ 6,977,841	$ 2,679,432	$ 7,708,534	$ 3,399,217	$ (4,309,317)	-56%	288%	127%	$ 433,081	13%
776	Other Drug Abuse & Dependence	285	0.44	$ 2,667,304	$ 767,306	$ 1,387,989	$ 1,249,601	$ (138,388)	-10%	181%	163%	$ -	0%
663	Other Anemia & Disorders Of Blood & Blood-Forming Organs	282	0.62	$ 5,746,568	$ 1,588,925	$ 1,905,930	$ 1,881,409	$ (24,521)	-1%	120%	118%	$ 4,441	0%
192	Cardiac Catheterization For Other Non-Coronary Conditions	281	1.47	$ 13,032,033	$ 2,957,549	$ 2,415,731	$ 4,059,592	$ 1,643,862	68%	82%	137%	$ 154	0%
241	Peptic Ulcer & Gastritis	280	0.84	$ 6,758,645	$ 1,794,890	$ 1,864,599	$ 2,389,642	$ 525,043	28%	104%	133%	$ -	0%
203	Chest Pain	274	0.55	$ 3,639,023	$ 1,017,995	$ 990,387	$ 1,495,609	$ 505,222	51%	97%	147%	$ -	0%
850	Procedure W Diag Of Rehab, Aftercare Or Oth Contact W Health Service	256	1.66	$ 8,092,776	$ 2,560,476	$ 3,085,421	$ 4,905,722	$ 1,820,301	59%	121%	192%	$ 589,210	12%
190	Acute Myocardial Infarction	252	1.07	$ 13,157,406	$ 3,078,910	$ 2,167,781	$ 2,892,497	$ 724,717	33%	70%	94%	$ 263,967	9%
174	Percutaneous Coronary Intervention W Ami	251	2.21	$ 21,562,813	$ 4,718,548	$ 3,531,112	$ 5,488,381	$ 1,957,269	55%	75%	116%	$ 6,406	0%
313	Knee & Lower Leg Procedures Except Foot	247	1.45	$ 11,587,369	$ 3,162,097	$ 2,837,491	$ 3,783,012	$ 945,521	33%	90%	120%	$ 51,542	1%
364	Other Skin, Subcutaneous Tissue & Related Procedures	243	1.12	$ 8,742,760	$ 2,249,272	$ 2,376,339	$ 2,804,600	$ 428,261	18%	106%	125%	$ 36,692	1%
561	Postpartum & Post Abortion Diagnoses W/O Procedure	241	0.51	$ 3,637,730	$ 1,044,448	$ 1,346,938	$ 1,219,815	$ (127,123)	-9%	129%	117%	$ -	0%
710	Infectious & Parasitic Diseases Including Hiv W O.R. Procedure	234	3.54	$ 36,522,920	$ 10,373,660	$ 9,134,993	$ 10,590,912	$ 1,455,920	16%	88%	102%	$ 2,358,043	22%
773	Opioid Abuse & Dependence	232	0.35	$ 2,218,042	$ 577,346	$ 1,021,616	$ 800,534	$ (221,082)	-22%	177%	139%	$ -	0%
563	Preterm Labor	231	0.35	$ 2,421,532	$ 629,832	$ 1,022,889	$ 810,985	$ (211,905)	-21%	162%	129%	$ -	0%
253	Other & Unspecified Gastrointestinal Hemorrhage	214	0.83	$ 5,241,618	$ 1,364,605	$ 1,410,620	$ 1,756,188	$ 345,568	24%	103%	129%	$ -	0%
248	Major Gastrointestinal & Peritoneal Infections	210	0.82	$ 4,215,976	$ 1,376,154	$ 1,994,044	$ 1,904,853	$ (89,192)	-4%	145%	138%	$ -	0%
756	Acute Anxiety & Delirium States	210	0.52	$ 4,404,202	$ 1,582,481	$ 2,598,231	$ 1,430,720	$ (1,167,511)	-45%	164%	90%	$ 294,782	21%
137	Major Respiratory Infections & Inflammations	207	1.22	$ 8,815,295	$ 2,244,194	$ 2,861,505	$ 2,765,275	$ (96,230)	-3%	128%	123%	$ 120,130	4%
660	Major Hematologic/Immunologic Diag Exc Sickle Cell Crisis & Coagul	206	1.17	$ 10,170,673	$ 3,866,613	$ 4,921,262	$ 3,753,860	$ (1,167,401)	-24%	127%	97%	$ 967,641	26%
304	Dorsal & Lumbar Fusion Proc Except For Curvature Of Back	206	3.33	$ 19,044,811	$ 5,165,736	$ 2,605,447	$ 6,883,923	$ 4,278,476	164%	50%	133%	$ 49,905	1%
301	Hip Joint Replacement	205	1.61	$ 9,846,767	$ 2,873,751	$ 1,888,756	$ 3,372,904	$ 1,484,148	79%	66%	117%	$ 93,030	3%
199	Hypertension	205	0.59	$ 3,454,097	$ 964,924	$ 945,717	$ 1,193,071	$ 247,354	26%	98%	124%	$ -	0%
722	Fever	201	0.51	$ 2,106,749	$ 558,647	$ 924,270	$ 1,266,107	$ 341,837	37%	165%	227%	$ -	0%
721	Post-Operative, Post-Traumatic, Other Device Infections	198	1.23	$ 6,868,354	$ 2,066,269	$ 2,554,886	$ 2,659,947	$ 105,061	4%	124%	129%	$ 91,280	3%
612	Neonate Bwt 1500-1999g W Resp Dist Synd/Oth Maj Resp Cond	195	4.43	$ 24,025,682	$ 6,985,964	$ 9,711,218	$ 12,532,365	$ 2,821,147	29%	139%	179%	$ 207,823	2%
21	Craniotomy Except For Trauma	195	3.75	$ 29,954,345	$ 9,398,883	$ 7,869,236	$ 9,521,956	$ 1,652,720	21%	84%	101%	$ 1,754,831	18%
951	Moderately Extensive Procedure Unrelated To Principal Diagnosis	194	2.13	$ 16,110,289	$ 5,281,778	$ 5,190,691	$ 5,617,540	$ 426,849	8%	98%	106%	$ 1,296,948	23%
321	Cervical Spinal Fusion & Other Back/Neck Proc Exc Disc Excis/Decomp	191	2.01	$ 11,550,328	$ 3,082,174	$ 1,618,268	$ 3,895,043	$ 2,276,775	141%	53%	126%	$ 61,830	2%
541	Vaginal Delivery W Sterilization &/Or D&c	186	0.55	$ 3,363,232	$ 855,211	$ 896,217	$ 1,013,254	$ 117,037	13%	105%	118%	$ -	0%
251	Abdominal Pain	182	0.60	$ 2,957,244	$ 835,474	$ 927,406	$ 1,084,126	$ 156,720	17%	111%	130%	$ -	0%
614	Neonate Bwt 1500-1999g W Or W/O Other Significant Condition	180	2.02	$ 9,118,890	$ 2,650,582	$ 4,765,614	$ 5,270,827	$ 505,213	11%	180%	199%	$ 24,069	0%
143	Other Respiratory Diagnoses Except Signs, Symptoms & Minor Diagnoses	177	0.89	$ 5,474,346	$ 1,701,029	$ 2,547,592	$ 1,881,624	$ (665,968)	-26%	150%	111%	$ 135,199	7%
145	Acute Bronchitis And Related Symptoms	177	0.60	$ 2,569,965	$ 860,591	$ 1,136,990	$ 1,177,180	$ 40,190	4%	132%	137%	$ 16,703	1%
175	Percutaneous Coronary Intervention W/O Ami	176	2.24	$ 15,557,110	$ 3,490,099	$ 3,003,193	$ 3,921,637	$ 918,443	31%	86%	112%	$ 30,552	1%
470	Chronic Kidney Disease	175	0.90	$ 5,282,411	$ 1,439,680	$ 1,359,290	$ 1,683,040	$ 323,750	24%	94%	117%	$ 110,733	7%
351	Other Musculoskeletal System & Connective Tissue Diagnoses	173	0.64	$ 2,995,361	$ 940,285	$ 974,836	$ 1,197,125	$ 222,290	23%	104%	127%	$ 43,093	4%
542	Vaginal Delivery W Complicating Procedures Exc Sterilization &/Or D&c	170	0.46	$ 2,677,145	$ 653,421	$ 682,902	$ 787,728	$ 104,826	15%	105%	121%	$ -	0%
513	Uterine & Adnexa Procedures For Non-Malignancy Except Leiomyoma	169	0.92	$ 4,473,083	$ 1,199,942	$ 1,160,798	$ 1,557,965	$ 397,167	34%	97%	130%	$ -	0%
58	Other Disorders Of Nervous System	162	0.86	$ 4,262,755	$ 1,252,683	$ 1,442,566	$ 1,625,507	$ 182,941	13%	115%	130%	$ 162,100	10%
622	Neonate Bwt 2000-2499g W Resp Dist Synd/Oth Maj Resp Cond	160	2.40	$ 11,484,436	$ 3,103,088	$ 4,070,400	$ 5,649,645	$ 1,579,245	39%	131%	182%	$ -	0%
54	Migraine & Other Headaches	155	0.64	$ 2,111,190	$ 602,225	$ 861,052	$ 1,065,274	$ 204,223	24%	143%	177%	$ -	0%
115	Other Ear, Nose, Mouth,throat & Cranial/Facial Diagnoses	153	0.69	$ 4,072,552	$ 1,412,697	$ 2,035,531	$ 1,644,708	$ (390,823)	-19%	144%	116%	$ 411,374	25%
233	Appendectomy With Complex Principal Diagnosis	152	1.12	$ 4,567,272	$ 1,280,470	$ 1,458,103	$ 2,021,855	$ 563,751	39%	114%	158%	$ -	0%
197	Peripheral & Other Vascular Disorders	152	0.80	$ 4,601,984	$ 1,223,965	$ 1,239,745	$ 1,299,652	$ 59,907	5%	101%	106%	$ 83,708	6%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
308	Hip & Femur Fracture Repair	152	1.45	$ 6,275,081	$ 1,809,438	$ 1,570,414	$ 2,398,600	$ 828,186	53%	87%	133%	$ 10,893	0%
636	Neonate Birthwt >2499g W Congenital/Perinatal Infection	150	0.96	$ 5,811,744	$ 1,631,614	$ 2,369,480	$ 2,156,622	$ (212,858)	-9%	145%	132%	$ 36,336	2%
231	Major Large Bowel Procedures	149	2.04	$ 8,894,511	$ 2,546,292	$ 2,440,658	$ 3,274,848	$ 834,190	34%	96%	129%	$ 82,088	3%
757	Organic Mental Health Disturbances	149	0.75	$ 3,299,482	$ 1,089,410	$ 1,801,763	$ 1,236,692	$ (565,071)	-31%	165%	114%	$ 91,011	7%
134	Pulmonary Embolism	149	1.04	$ 4,811,040	$ 1,264,634	$ 1,098,300	$ 1,523,226	$ 424,926	39%	87%	120%	$ -	0%
466	Malfunction, Reaction, Complic Of Genitourinary Device Or Proc	148	1.22	$ 4,117,922	$ 1,203,609	$ 1,296,957	$ 1,815,970	$ 519,013	40%	108%	151%	$ 22,957	1%
245	Inflammatory Bowel Disease	147	0.76	$ 3,760,759	$ 1,124,433	$ 1,515,438	$ 1,191,266	$ (324,172)	-21%	135%	106%	$ 21,256	2%
912	Musculoskeletal & Other Procedures For Multiple Significant Trauma	145	4.84	$ 26,696,480	$ 7,765,035	$ 6,604,503	$ 8,643,680	$ 2,039,176	31%	85%	111%	$ 1,442,365	17%
815	Other Injury, Poisoning & Toxic Effect Diagnoses	145	1.01	$ 6,612,522	$ 2,503,155	$ 3,661,153	$ 2,330,220	$ (1,330,933)	-36%	146%	93%	$ 587,736	25%
243	Other Esophageal Disorders	144	0.71	$ 2,530,749	$ 714,238	$ 1,079,474	$ 1,122,142	$ 42,668	4%	151%	157%	$ -	0%
347	Other Back & Neck Disorders, Fractures & Injuries	144	0.84	$ 4,421,288	$ 1,304,521	$ 1,391,213	$ 1,406,937	$ 15,724	1%	107%	108%	$ 161,049	11%
426	Non-Hypovolemic Sodium Disorders	143	0.63	$ 2,412,842	$ 799,984	$ 1,094,538	$ 937,055	$ (157,483)	-14%	137%	117%	$ -	0%
280	Alcoholic Liver Disease	143	1.20	$ 4,275,470	$ 1,165,931	$ 1,174,874	$ 1,671,530	$ 496,656	42%	101%	143%	$ 14,089	1%
234	Appendectomy Without Complex Principal Diagnosis	140	0.92	$ 3,998,388	$ 960,146	$ 793,979	$ 1,474,401	$ 680,422	86%	83%	154%	$ -	0%
315	Shoulder, Upper Arm & Forearm Procedures Except Joint Replacement	139	1.48	$ 5,879,515	$ 1,624,942	$ 1,288,973	$ 2,154,122	$ 865,149	67%	79%	133%	$ 34,058	2%
723	Viral Illness	138	0.59	$ 1,922,495	$ 628,261	$ 1,163,930	$ 991,802	$ (172,128)	-15%	185%	158%	$ 1,904	0%
403	Procedures For Obesity	137	1.32	$ 5,723,069	$ 1,361,798	$ 796,812	$ 1,780,542	$ 983,730	123%	59%	131%	$ -	0%
230	Major Small Bowel Procedures	136	2.36	$ 11,131,685	$ 3,096,315	$ 2,867,834	$ 3,555,856	$ 688,021	24%	93%	115%	$ 237,385	7%
191	Cardiac Catheterization For Coronary Artery Disease	131	1.04	$ 4,934,401	$ 1,089,213	$ 869,469	$ 1,335,843	$ 466,375	54%	80%	123%	$ -	0%
385	Other Skin, Subcutaneous Tissue & Breast Disorders	129	0.53	$ 1,685,723	$ 521,880	$ 805,594	$ 746,205	$ (59,389)	-7%	154%	143%	$ -	0%
950	Extensive Procedure Unrelated To Principal Diagnosis	126	3.72	$ 19,739,893	$ 5,790,296	$ 6,509,578	$ 6,524,693	$ 15,115	0%	112%	113%	$ 1,600,861	25%
284	Disorders Of Gallbladder & Biliary Tract	125	0.97	$ 2,628,815	$ 762,069	$ 839,135	$ 1,225,442	$ 386,307	46%	110%	161%	$ -	0%
425	Other Non-Hypovolemic Electrolyte Disorders	124	0.70	$ 2,798,921	$ 890,129	$ 1,069,543	$ 1,009,857	$ (59,686)	-6%	120%	113%	$ 142,889	14%
279	Hepatic Coma & Other Major Acute Liver Disorders	124	1.26	$ 3,450,405	$ 1,000,779	$ 962,172	$ 1,551,357	$ 589,185	61%	96%	155%	$ 17,530	1%
52	Alteration In Consciousness	122	0.91	$ 2,936,382	$ 835,432	$ 857,146	$ 1,125,997	$ 268,851	31%	103%	135%	$ -	0%
283	Other Disorders Of The Liver	120	0.94	$ 2,375,978	$ 653,890	$ 725,335	$ 1,142,992	$ 417,657	58%	111%	175%	$ -	0%
816	Toxic Effects Of Non-Medicinal Substances	119	0.74	$ 3,416,107	$ 1,050,720	$ 854,031	$ 976,512	$ 122,481	14%	81%	93%	$ 60,014	6%
207	Other Circulatory System Diagnoses	117	0.78	$ 2,705,689	$ 843,365	$ 877,558	$ 1,000,480	$ 122,922	14%	104%	119%	$ 56,945	6%
344	Osteomyelitis, Septic Arthritis & Other Musculoskeletal Infections	116	1.09	$ 4,479,614	$ 1,513,845	$ 1,805,739	$ 1,549,021	$ (256,718)	-14%	119%	102%	$ 238,842	15%
55	Head Trauma W Coma >1 Hr Or Hemorrhage	113	1.29	$ 6,053,478	$ 1,882,263	$ 1,991,311	$ 1,853,989	$ (137,323)	-7%	106%	98%	$ 258,292	14%
724	Other Infectious & Parasitic Diseases	113	0.96	$ 2,374,631	$ 779,094	$ 1,575,878	$ 1,321,885	$ (253,994)	-16%	202%	170%	$ 19,026	1%
204	Syncope & Collapse	111	0.63	$ 1,674,658	$ 524,046	$ 468,294	$ 697,091	$ 228,797	49%	89%	133%	$ -	0%
227	Hernia Procedures Except Inguinal, Femoral & Umbilical	110	1.29	$ 4,454,412	$ 1,164,554	$ 1,085,433	$ 1,415,565	$ 330,132	30%	93%	122%	$ -	0%
121	Other Respiratory & Chest Procedures	109	2.45	$ 14,239,671	$ 4,891,317	$ 5,119,749	$ 4,796,730	$ (323,019)	-6%	105%	98%	$ 2,088,491	44%
136	Respiratory Malignancy	107	1.29	$ 4,102,035	$ 1,141,700	$ 1,051,356	$ 1,432,080	$ 380,724	36%	92%	125%	$ 72,529	5%
48	Peripheral, Cranial & Autonomic Nerve Disorders	107	0.74	$ 2,106,741	$ 559,378	$ 620,289	$ 779,831	$ 159,541	26%	111%	139%	$ -	0%
930	Multiple Significant Trauma W/O O.R. Procedure	107	1.93	$ 4,729,394	$ 1,322,146	$ 1,312,946	$ 2,225,549	$ 912,603	70%	99%	168%	$ 33,162	1%
244	Diverticulitis & Diverticulosis	106	0.62	$ 2,110,948	$ 549,851	$ 625,772	$ 650,890	$ 25,117	4%	114%	118%	$ -	0%
131	Cystic Fibrosis - Pulmonary Disease	106	2.07	$ 7,552,437	$ 2,941,706	$ 4,104,390	$ 2,799,197	$ (1,305,194)	-32%	140%	95%	$ 336,193	12%
314	Foot & Toe Procedures	105	1.32	$ 4,750,403	$ 1,190,364	$ 1,350,576	$ 1,407,326	$ 56,750	4%	113%	118%	$ -	0%
130	Respiratory System Diagnosis W Ventilator Support 96+ Hours	104	4.35	$ 18,942,027	$ 7,558,692	$ 7,475,176	$ 7,191,313	$ (283,863)	-4%	99%	95%	$ 2,011,198	28%
166	Coronary Bypass W/O Ami Or Complex Pdx	101	4.13	$ 11,813,896	$ 3,394,673	$ 2,142,765	$ 4,129,394	$ 1,986,629	93%	63%	122%	$ 11,046	0%
518	Other Female Reproductive System & Related Procedures	95	0.99	$ 1,466,629	$ 466,862	$ 541,144	$ 944,162	$ 403,018	74%	116%	202%	$ -	0%
144	Respiratory Signs, Symptoms & Minor Diagnoses	94	0.60	$ 1,246,407	$ 453,112	$ 563,213	$ 680,635	$ 117,421	21%	124%	150%	$ 19,551	3%
181	Lower Extremity Arterial Procedures	92	2.31	$ 9,330,597	$ 2,243,945	$ 1,377,244	$ 2,159,647	$ 782,403	57%	61%	96%	$ 58,357	3%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
380	Skin Ulcers	91	0.81	$ 2,763,598	$ 810,295	$ 939,128	$ 790,891	$ (148,238)	-16%	116%	98%	$ 75,168	10%
465	Urinary Stones & Acquired Upper Urinary Tract Obstruction	90	0.66	$ 1,752,671	$ 502,456	$ 498,523	$ 597,716	$ 99,193	20%	99%	119%	$ -	0%
135	Major Chest & Respiratory Trauma	89	1.04	$ 2,586,346	$ 743,757	$ 756,558	$ 969,803	$ 213,245	28%	102%	130%	$ 26,617	3%
695	Chemotherapy For Acute Leukemia	88	2.42	$ 3,834,412	$ 1,441,039	$ 2,137,063	$ 2,700,745	$ 563,683	26%	148%	187%	$ 56,198	2%
47	Transient Ischemia	88	0.66	$ 1,758,614	$ 471,556	$ 373,768	$ 567,027	$ 193,259	52%	79%	120%	$ -	0%
305	Amputation Of Lower Limb Except Toes	87	1.87	$ 4,475,015	$ 1,208,775	$ 1,106,425	$ 1,608,145	$ 501,720	45%	92%	133%	$ -	0%
602	Neonate Bwt 1000-1249g W Resp Dist Synd/Oth Maj Resp Or Maj Anom	83	9.33	$ 18,893,535	$ 5,728,643	$ 7,969,842	$ 10,411,627	$ 2,441,785	31%	139%	182%	$ 81,201	1%
593	Neonate Birthwt 750-999g W/O Major Procedure	82	13.16	$ 27,258,291	$ 8,326,173	$ 10,004,109	$ 14,160,751	$ 4,156,641	42%	120%	170%	$ 296,330	2%
711	Post-Op, Post-Trauma, Other Device Infections W O.R. Procedure	82	2.27	$ 7,109,729	$ 1,996,265	$ 2,029,433	$ 2,194,518	$ 165,085	8%	102%	110%	$ 264,935	12%
625	Neonate Bwt 2000-2499g W Other Significant Condition	81	1.78	$ 4,360,240	$ 1,233,728	$ 2,039,362	$ 2,141,806	$ 102,443	5%	165%	174%	$ 17,599	1%
24	Extracranial Vascular Procedures	81	1.92	$ 5,334,088	$ 1,385,975	$ 717,174	$ 1,560,779	$ 843,605	118%	52%	113%	$ 23,355	1%
519	Uterine & Adnexa Procedures For Leiomyoma	79	0.94	$ 2,133,693	$ 545,019	$ 470,294	$ 733,885	$ 263,591	56%	86%	135%	$ -	0%
132	Bpd & Oth Chronic Respiratory Diseases Arising In Perinatal Period	79	1.18	$ 18,679,665	$ 7,648,709	$ 11,052,621	$ 5,963,134	$ (5,089,486)	-46%	145%	78%	$ 4,769,823	80%
222	Other Stomach, Esophageal & Duodenal Procedures	79	1.53	$ 2,223,934	$ 699,483	$ 967,570	$ 1,416,702	$ 449,132	46%	138%	203%	$ -	0%
320	Other Musculoskeletal System & Connective Tissue Procedures	78	1.52	$ 4,249,256	$ 1,424,073	$ 1,127,673	$ 1,361,597	$ 233,925	21%	79%	96%	$ 81,884	6%
346	Connective Tissue Disorders	78	1.19	$ 2,592,894	$ 829,180	$ 1,069,409	$ 983,919	$ (85,490)	-8%	129%	119%	$ 15,846	2%
774	Cocaine Abuse & Dependence	78	0.39	$ 807,911	$ 231,633	$ 351,722	$ 303,027	$ (48,695)	-14%	152%	131%	$ -	0%
220	Major Stomach, Esophageal & Duodenal Procedures	77	2.93	$ 7,817,693	$ 1,953,909	$ 1,576,856	$ 2,363,271	$ 786,415	50%	81%	121%	$ 117,290	5%
51	Viral Meningitis	76	0.84	$ 1,382,709	$ 461,757	$ 761,037	$ 794,851	$ 33,815	4%	165%	172%	$ 20,100	3%
303	Dorsal & Lumbar Fusion Proc For Curvature Of Back	75	5.75	$ 10,281,587	$ 3,839,116	$ 1,951,130	$ 5,526,705	$ 3,575,576	183%	51%	144%	$ 112,118	2%
42	Degenerative Nervous System Disorders Exc Mult Sclerosis	74	0.95	$ 2,448,529	$ 801,338	$ 1,214,504	$ 827,116	$ (387,388)	-32%	152%	103%	$ 97,303	12%
384	Contusion, Open Wound & Other Trauma To Skin & Subcutaneous Tissue	74	0.69	$ 1,571,026	$ 401,250	$ 429,668	$ 529,097	$ 99,429	23%	107%	132%	$ -	0%
607	Neonate Bwt 1250-1499g W Resp Dist Synd/Oth Maj Resp Or Maj Anom	71	6.75	$ 12,894,606	$ 3,603,208	$ 5,277,189	$ 6,900,352	$ 1,623,162	31%	146%	192%	$ 46,368	1%
952	Nonextensive Procedure Unrelated To Principal Diagnosis	71	1.74	$ 4,092,861	$ 1,366,888	$ 1,581,380	$ 1,433,995	$ (147,385)	-9%	116%	105%	$ 105,256	7%
342	Fractures & Dislocations Except Femur, Pelvis & Back	71	0.60	$ 1,328,789	$ 334,479	$ 362,405	$ 436,634	$ 74,230	20%	108%	131%	$ -	0%
44	Intracranial Hemorrhage	70	1.74	$ 4,094,185	$ 1,155,294	$ 1,304,782	$ 1,324,710	$ 19,929	2%	113%	115%	$ 76,962	6%
531	Female Reproductive System Infections	69	0.59	$ 1,209,380	$ 314,267	$ 396,127	$ 428,137	$ 32,011	8%	126%	136%	$ -	0%
281	Malignancy Of Hepatobiliary System & Pancreas	69	1.26	$ 1,879,455	$ 560,336	$ 612,850	$ 861,102	$ 248,251	41%	109%	154%	$ -	0%
443	Kidney & Urinary Tract Procedures For Nonmalignancy	68	1.36	$ 2,188,602	$ 686,223	$ 640,465	$ 994,544	$ 354,078	55%	93%	145%	$ -	0%
165	Coronary Bypass W Ami Or Complex Pdx	68	5.07	$ 10,638,874	$ 2,647,029	$ 1,670,772	$ 3,402,481	$ 1,731,709	104%	63%	129%	$ 38,811	1%
182	Other Peripheral Vascular Procedures	67	3.13	$ 7,272,504	$ 2,306,337	$ 1,972,988	$ 2,653,292	$ 680,303	34%	86%	115%	$ 465,968	18%
760	Other Mental Health Disorders	67	0.62	$ 2,251,828	$ 692,718	$ 1,796,383	$ 509,108	$ (1,287,275)	-72%	259%	73%	$ 18,305	4%
532	Menstrual & Other Female Reproductive System Disorders	66	0.52	$ 1,765,251	$ 467,259	$ 387,647	$ 385,324	$ (2,323)	-1%	83%	82%	$ 35,030	9%
223	Other Small & Large Bowel Procedures	65	1.57	$ 2,873,951	$ 715,464	$ 760,642	$ 1,064,594	$ 303,952	40%	106%	149%	$ 4,107	0%
813	Other Complications Of Treatment	64	0.88	$ 1,743,969	$ 536,739	$ 683,605	$ 597,253	$ (86,352)	-13%	127%	111%	$ 7,117	1%
317	Tendon, Muscle & Other Soft Tissue Procedures	63	1.51	$ 2,925,046	$ 961,626	$ 752,121	$ 1,079,337	$ 327,217	44%	78%	112%	$ 63,012	6%
863	Neonatal Aftercare	62	3.67	$ 9,068,776	$ 3,012,601	$ 3,454,013	$ 3,861,318	$ 407,305	12%	115%	128%	$ 656,484	17%
468	Other Kidney & Urinary Tract Diagnoses, Signs & Symptoms	61	0.83	$ 2,096,225	$ 564,128	$ 766,876	$ 587,075	$ (179,801)	-23%	136%	104%	$ 56,761	10%
22	Ventricular Shunt Procedures	61	1.85	$ 2,988,587	$ 988,693	$ 977,422	$ 1,382,470	$ 405,048	41%	99%	140%	$ 65,021	5%
309	Other Significant Hip & Femur Surgery	61	1.98	$ 3,053,300	$ 1,126,043	$ 852,886	$ 1,359,010	$ 506,125	59%	76%	121%	$ 12,285	1%
252	Malfunction, Reaction & Complication Of Gi Device Or Procedure	60	1.03	$ 1,587,187	$ 457,727	$ 663,827	$ 640,375	$ (23,452)	-4%	145%	140%	$ 495	0%
911	Extensive Abdominal/Thoracic Procedures For Mult Significant Trauma	59	5.40	$ 10,062,915	$ 2,838,991	$ 2,313,283	$ 3,516,075	$ 1,202,792	52%	81%	124%	$ 317,963	9%
770	Drug & Alcohol Abuse Or Dependence, Left Against Medical Advice	57	0.28	$ 513,134	$ 133,324	$ 163,348	$ 156,995	$ (6,352)	-4%	123%	118%	$ -	0%
23	Spinal Procedures	57	2.47	$ 3,180,736	$ 1,019,371	$ 850,427	$ 1,551,193	$ 700,766	82%	83%	152%	$ -	0%
82	Eye Infections And Other Eye Disorders	57	0.64	$ 1,719,871	$ 648,817	$ 1,110,620	$ 593,741	$ (516,879)	-47%	171%	92%	$ 179,630	30%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
501	Male Reproductive System Diagnoses Except Malignancy	54	0.65	$ 1,125,808	$ 286,360	$ 307,093	$ 369,140	$ 62,046	20%	107%	129%	$ 11,743	3%
361	Skin Graft For Skin & Subcutaneous Tissue Diagnoses	54	1.89	$ 3,718,454	$ 1,065,240	$ 852,323	$ 1,381,376	$ 529,053	62%	80%	130%	$ 331,115	24%
544	D&c, Aspiration Curettage Or Hysterotomy For Obstetric Diagnoses	53	0.66	$ 1,060,484	$ 260,062	$ 253,871	$ 349,031	$ 95,159	37%	98%	134%	$ -	0%
844	Partial Thickness Burns W/O Skin Graft	53	1.00	$ 2,770,784	$ 1,203,127	$ 893,548	$ 1,039,542	$ 145,994	16%	74%	86%	$ 475,278	46%
224	Peritoneal Adhesiolysis	52	1.68	$ 2,722,735	$ 823,974	$ 969,505	$ 938,454	$ (31,051)	-3%	118%	114%	$ 6,677	1%
240	Digestive Malignancy	51	1.15	$ 1,649,867	$ 477,235	$ 446,345	$ 580,442	$ 134,097	30%	94%	122%	$ 5,554	1%
793	Moderately Extensive Or Procedures For Other Complications Of Treatment	51	1.59	$ 2,522,372	$ 675,067	$ 665,662	$ 846,956	$ 181,293	27%	99%	125%	$ -	0%
229	Other Digestive System & Abdominal Procedures	50	1.99	$ 2,429,314	$ 701,159	$ 632,641	$ 1,042,140	$ 409,499	65%	90%	149%	$ 19,984	2%
310	Intervertebral Disc Excision & Decompression	50	1.20	$ 2,300,325	$ 665,725	$ 396,197	$ 607,474	$ 211,277	53%	60%	91%	$ -	0%
160	Major Cardiothoracic Repair Of Heart Anomaly	50	5.98	$ 13,127,559	$ 4,330,667	$ 3,009,365	$ 4,494,258	$ 1,484,893	49%	69%	104%	$ 1,086,455	24%
446	Urethral & Transurethral Procedures	49	1.02	$ 1,522,496	$ 383,792	$ 321,468	$ 499,486	$ 178,018	55%	84%	130%	$ 2,115	0%
89	Major Cranial/Facial Bone Procedures	49	2.28	$ 2,839,989	$ 1,045,321	$ 763,454	$ 1,365,439	$ 601,984	79%	73%	131%	$ 14,205	1%
98	Other Ear, Nose, Mouth & Throat Procedures	49	1.34	$ 1,746,669	$ 556,560	$ 553,028	$ 747,216	$ 194,188	35%	99%	134%	$ 22,782	3%
242	Major Esophageal Disorders	48	0.82	$ 1,374,797	$ 349,271	$ 343,003	$ 393,562	$ 50,559	15%	98%	113%	$ -	0%
50	Non-Bacterial Infections Of Nervous System Exc Viral Meningitis	48	1.38	$ 2,519,164	$ 768,373	$ 725,695	$ 895,043	$ 169,348	23%	94%	116%	$ 150,225	17%
661	Coagulation & Platelet Disorders	47	1.27	$ 1,192,547	$ 381,885	$ 385,372	$ 686,055	$ 300,683	78%	101%	180%	$ -	0%
206	Malfunction,reaction,complication Of Cardiac/Vasc Device Or Procedure	46	1.15	$ 3,034,846	$ 734,575	$ 659,117	$ 629,524	$ (29,593)	-4%	90%	86%	$ 63,706	10%
811	Allergic Reactions	46	0.58	$ 756,940	$ 216,054	$ 239,021	$ 286,813	$ 47,792	20%	111%	133%	$ -	0%
92	Facial Bone Procedures Except Major Cranial/Facial Bone Procedures	45	1.51	$ 2,496,160	$ 741,214	$ 485,767	$ 786,123	$ 300,356	62%	66%	106%	$ 33,154	4%
316	Hand & Wrist Procedures	44	1.03	$ 1,609,701	$ 450,410	$ 409,313	$ 482,665	$ 73,352	18%	91%	107%	$ 12,005	2%
890	Hiv W Multiple Major Hiv Related Conditions	44	2.58	$ 4,265,096	$ 1,184,592	$ 894,579	$ 1,228,338	$ 333,760	37%	76%	104%	$ 120,371	10%
20	Craniotomy For Trauma	44	3.98	$ 8,452,227	$ 2,521,674	$ 2,063,862	$ 2,421,987	$ 358,124	17%	82%	96%	$ 602,391	25%
200	Cardiac Structural & Valvular Disorders	42	1.12	$ 5,388,772	$ 2,308,872	$ 1,867,880	$ 1,383,255	$ (484,625)	-26%	81%	60%	$ 818,894	59%
424	Other Endocrine Disorders	42	0.88	$ 837,833	$ 326,375	$ 534,616	$ 473,697	$ (60,919)	-11%	164%	145%	$ 67,788	14%
43	Multiple Sclerosis & Other Demyelinating Diseases	42	1.09	$ 1,617,685	$ 438,811	$ 431,024	$ 472,929	$ 41,905	10%	98%	108%	$ 8,689	2%
611	Neonate Birthwt 1500-1999g W Major Anomaly	41	4.81	$ 4,710,701	$ 1,602,831	$ 2,681,669	$ 2,826,003	$ 144,334	5%	167%	176%	$ 1,277	0%
691	Lymphoma, Myeloma & Non-Acute Leukemia	41	1.74	$ 2,854,043	$ 964,255	$ 931,696	$ 851,370	$ (80,326)	-9%	97%	88%	$ 128,941	15%
589	Neonate Bwt <500g Or Ga <24 Weeks	40	6.01	$ 9,515,083	$ 3,154,237	$ 3,726,375	$ 4,433,197	$ 706,821	19%	118%	141%	$ 1,076,644	24%
349	Malfunction, Reaction, Complic Of Orthopedic Device Or Procedure	40	0.89	$ 1,054,597	$ 328,839	$ 322,164	$ 354,241	$ 32,078	10%	98%	108%	$ 2,504	1%
690	Acute Leukemia	40	4.74	$ 7,294,155	$ 2,776,869	$ 2,628,866	$ 2,590,672	$ (38,194)	-1%	95%	93%	$ 411,958	16%
631	Neonate Birthwt >2499g W Other Major Procedure	39	7.13	$ 22,338,087	$ 7,563,603	$ 10,051,947	$ 6,533,758	$ (3,518,188)	-35%	133%	86%	$ 2,443,606	37%
862	Other Aftercare & Convalescence	39	0.77	$ 1,187,342	$ 349,406	$ 525,089	$ 303,699	$ (221,390)	-42%	150%	87%	$ -	0%
462	Nephritis & Nephrosis	38	0.95	$ 818,493	$ 256,840	$ 417,323	$ 422,135	$ 4,812	1%	162%	164%	$ -	0%
49	Bacterial & Tuberculous Infections Of Nervous System	38	2.67	$ 3,917,669	$ 995,370	$ 877,209	$ 1,218,268	$ 341,059	39%	88%	122%	$ 127,536	10%
41	Nervous System Malignancy	38	1.17	$ 975,184	$ 275,402	$ 259,016	$ 441,654	$ 182,638	71%	94%	160%	$ -	0%
114	Dental Diseases And Disorders	37	0.57	$ 606,646	$ 166,196	$ 229,053	$ 231,384	$ 2,331	1%	138%	139%	$ -	0%
842	Burns With Skin Graft Except Extensive 3rd Degree Burns	37	3.11	$ 3,226,947	$ 1,157,482	$ 1,412,300	$ 1,265,174	$ (147,126)	-10%	122%	109%	$ 9,734	1%
169	Major Abdominal Vascular Procedures	37	4.10	$ 8,317,549	$ 1,929,031	$ 1,619,718	$ 1,850,505	$ 230,786	14%	84%	96%	$ 350,632	19%
142	Interstitial & Alveolar Lung Diseases	36	1.06	$ 1,006,082	$ 259,700	$ 279,145	$ 367,829	$ 88,684	32%	107%	142%	$ -	0%
810	Hemorrhage Or Hematoma Due To Complication	36	0.67	$ 764,780	$ 184,758	$ 220,070	$ 253,286	$ 33,216	15%	119%	137%	$ -	0%
163	Cardiac Valve Procedures W/O Ami Or Complex Pdx	36	5.82	$ 6,718,012	$ 2,064,640	$ 1,290,804	$ 2,312,676	$ 1,021,873	79%	63%	112%	$ 146,542	6%
57	Concussion, Closed Skull Fx Nos,uncomplicated Intracranial Injury, Coma < 1 Hr Or No Coma	36	1.05	$ 1,982,608	$ 592,349	$ 704,909	$ 594,988	$ (109,921)	-16%	119%	100%	$ 170,846	29%
565	False Labor	34	0.16	$ 235,381	$ 72,773	$ 137,020	$ 55,701	$ (81,319)	-59%	188%	77%	$ -	0%
381	Major Skin Disorders	34	0.62	$ 391,989	$ 144,780	$ 273,235	$ 254,172	$ (19,064)	-7%	189%	176%	$ -	0%
623	Neonate Bwt 2000-2499g W Congenital/Perinatal Infection	32	1.69	$ 2,337,111	$ 402,763	$ 481,280	$ 801,521	$ 320,241	67%	119%	199%	$ -	0%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
591	Neonate Birthwt 500-749g W/O Major Procedure	32	18.61	$ 10,679,677	$ 3,232,970	$ 2,963,401	$ 6,656,406	$ 3,693,005	125%	92%	206%	$ 90,308	1%
427	Thyroid Disorders	32	0.72	$ 752,475	$ 204,203	$ 215,114	$ 226,752	$ 11,639	5%	105%	111%	$ -	0%
180	Other Circulatory System Procedures	32	2.08	$ 1,750,910	$ 487,449	$ 366,361	$ 686,814	$ 320,454	87%	75%	141%	$ 22,487	3%
792	Extensive Or Procedures For Other Complications Of Treatment	32	2.57	$ 2,977,306	$ 1,023,851	$ 917,160	$ 1,027,416	$ 110,256	12%	90%	100%	$ 121,782	12%
97	Tonsil & Adenoid Procedures	31	0.70	$ 503,328	$ 177,926	$ 202,350	$ 263,877	$ 61,527	30%	114%	148%	$ -	0%
161	Cardiac Defibrillator & Heart Assist Implant	31	6.06	$ 5,092,239	$ 1,223,153	$ 698,599	$ 1,695,730	$ 997,132	143%	57%	139%	$ 19,617	1%
167	Other Cardiothoracic & Thoracic Vascular Procedures	30	4.29	$ 4,423,819	$ 1,592,297	$ 1,135,604	$ 1,649,705	$ 514,100	45%	71%	104%	$ 87,409	5%
546	Other O.R. Proc For Obstetric Diagnoses Except Delivery Diagnoses	29	0.82	$ 686,558	$ 177,569	$ 202,662	$ 237,359	$ 34,697	17%	114%	134%	$ -	0%
442	Kidney & Urinary Tract Procedures For Malignancy	28	1.92	$ 1,153,359	$ 375,232	$ 296,491	$ 557,527	$ 261,036	88%	79%	149%	$ -	0%
894	Hiv W One Signif Hiv Cond Or W/O Signif Related Cond	28	0.80	$ 706,812	$ 189,981	$ 191,399	$ 217,351	$ 25,953	14%	101%	114%	$ -	0%
621	Neonate Bwt 2000-2499g W Major Anomaly	27	2.36	$ 1,238,894	$ 399,767	$ 670,174	$ 944,705	$ 274,532	41%	168%	236%	$ -	0%
608	Neonate Bwt 1250-1499g W Or W/O Other Significant Condition	27	4.43	$ 2,466,185	$ 698,376	$ 1,099,530	$ 1,740,189	$ 640,659	58%	157%	249%	$ -	0%
228	Inguinal, Femoral & Umbilical Hernia Procedures	27	1.01	$ 1,174,884	$ 319,653	$ 264,281	$ 294,891	$ 30,610	12%	83%	92%	$ 10,915	4%
423	Inborn Errors Of Metabolism	27	0.99	$ 3,546,128	$ 1,644,942	$ 549,013	$ 1,330,578	$ 781,565	142%	33%	81%	$ 1,040,311	78%
5	Tracheostomy W Mv 96+ Hours W/O Extensive Procedure	27	9.65	$ 9,839,959	$ 3,164,818	$ 2,516,020	$ 3,389,647	$ 873,626	35%	80%	107%	$ 766,750	23%
892	Hiv W Major Hiv Related Condition	26	1.32	$ 1,383,128	$ 332,634	$ 356,323	$ 344,703	$ (11,620)	-3%	107%	104%	$ 13,876	4%
343	Musculoskeletal Malignancy & Pathol Fracture D/T Muscskel Malig	25	1.28	$ 1,467,183	$ 482,976	$ 502,204	$ 399,082	$ (103,122)	-21%	104%	83%	$ 67,126	17%
196	Cardiac Arrest & Shock	23	1.70	$ 1,408,181	$ 386,285	$ 341,926	$ 407,604	$ 65,678	19%	89%	106%	$ 5,390	1%
340	Fracture Of Femur	22	0.58	$ 441,058	$ 122,855	$ 134,203	$ 143,205	$ 9,003	7%	109%	117%	$ -	0%
120	Major Respiratory & Chest Procedures	21	2.75	$ 2,846,778	$ 778,596	$ 495,331	$ 776,282	$ 280,951	57%	64%	100%	$ 184,434	24%
564	Abortion W/O D&c, Aspiration Curettage Or Hysterotomy	20	0.48	$ 284,936	$ 63,721	$ 62,233	$ 96,506	$ 34,273	55%	98%	151%	$ -	0%
341	Fracture Of Pelvis Or Dislocation Of Hip	20	0.55	$ 352,061	$ 100,850	$ 131,542	$ 113,693	$ (17,848)	-14%	130%	113%	$ -	0%
73	Orbit And Eye Procedures	20	1.11	$ 1,151,817	$ 338,970	$ 451,189	$ 312,837	$ (138,352)	-31%	133%	92%	$ 67,092	21%
530	Female Reproductive System Malignancy	19	1.02	$ 600,286	$ 156,756	$ 178,695	$ 185,891	$ 7,196	4%	114%	119%	$ -	0%
910	Craniotomy For Multiple Significant Trauma	19	8.47	$ 3,895,278	$ 1,182,097	$ 1,338,386	$ 1,774,925	$ 436,540	33%	113%	150%	$ 54,844	3%
171	Perm Cardiac Pacemaker Implant W/O Ami, Heart Failure Or Shock	19	1.70	$ 2,212,460	$ 646,157	$ 558,036	$ 603,419	$ 45,383	8%	86%	93%	$ 273,266	45%
694	Lymphatic & Other Malignancies & Neoplasms Of Uncertain Behavior	19	1.41	$ 1,983,568	$ 785,083	$ 652,787	$ 591,203	$ (61,584)	-9%	83%	75%	$ 318,503	54%
681	Other O.R. Procedures For Lymphatic/Hematopoietic/Other Neoplasms	19	2.45	$ 1,452,940	$ 452,601	$ 373,755	$ 504,564	$ 130,809	35%	83%	111%	$ 24,859	5%
40	Spinal Disorders & Injuries	18	1.93	$ 1,201,847	$ 329,043	$ 510,045	$ 362,007	$ (148,038)	-29%	155%	110%	$ 18,804	5%
226	Anal Procedures	18	0.86	$ 530,074	$ 161,531	$ 155,733	$ 155,956	$ 223	0%	96%	97%	$ -	0%
312	Skin Graft, Except Hand, For Musculoskeletal & Connective Tissue Diagnoses	18	3.02	$ 1,110,323	$ 374,016	$ 377,221	$ 578,177	$ 200,955	53%	101%	155%	$ 1,429	0%
26	Other Nervous System & Related Procedures	17	1.80	$ 1,135,245	$ 377,654	$ 173,043	$ 341,803	$ 168,760	98%	46%	91%	$ 8,113	2%
545	Ectopic Pregnancy Procedure	17	0.80	$ 421,692	$ 103,027	$ 95,209	$ 134,845	$ 39,636	42%	92%	131%	$ -	0%
322	Shoulder & Elbow Joint Replacement	17	1.60	$ 721,220	$ 213,278	$ 148,120	$ 268,523	$ 120,404	81%	69%	126%	$ -	0%
740	Mental Illness Diagnosis W O.R. Procedure	17	1.87	$ 855,423	$ 163,087	$ 233,220	$ 321,356	$ 88,135	38%	143%	197%	$ -	0%
260	Major Pancreas, Liver & Shunt Procedures	16	2.67	$ 1,125,002	$ 323,275	$ 293,082	$ 451,935	$ 158,852	54%	91%	140%	$ -	0%
404	Thyroid, Parathyroid & Thyroglossal Procedures	16	1.19	$ 757,846	$ 202,900	$ 177,505	$ 195,195	$ 17,691	10%	87%	96%	$ -	0%
193	Acute & Subacute Endocarditis	16	1.54	$ 910,747	$ 237,744	$ 425,602	$ 297,401	$ (128,201)	-30%	179%	125%	$ 34,563	12%
264	Other Hepatobiliary, Pancreas & Abdominal Procedures	16	2.12	$ 819,725	$ 235,019	$ 215,981	$ 351,823	$ 135,842	63%	92%	150%	$ -	0%
9	Extracorporeal Membrane Oxygenation (Ecmo)	15	13.12	$ 6,360,328	$ 2,584,696	$ 1,394,655	$ 2,907,263	$ 1,512,608	108%	54%	112%	$ 619,549	21%
603	Neonate Birthwt 1000-1249g W Or W/O Other Significant Condition	15	6.19	$ 2,157,920	$ 591,705	$ 993,441	$ 1,259,573	$ 266,132	27%	168%	213%	$ -	0%
405	Other Procedures For Endocrine, Nutritional & Metabolic Disorders	15	2.54	$ 794,340	$ 198,610	$ 303,089	$ 407,235	$ 104,145	34%	153%	205%	$ -	0%
794	Non-Extensive Or Procedures For Other Complications Of Treatment	15	1.64	$ 949,119	$ 290,597	$ 377,938	$ 289,931	$ (88,007)	-23%	130%	100%	$ 31,410	11%
4	Tracheostomy W Mv 96+ Hours W Extensive Procedure	14	12.85	$ 5,436,682	$ 1,452,590	$ 890,471	$ 1,903,350	$ 1,012,879	114%	61%	131%	$ 126,177	7%
2	Heart &/Or Lung Transplant	14	18.95	$ 15,270,204	$ 5,054,710	$ 7,289,460	$ 4,669,269	$ (2,620,191)	-36%	144%	92%	$ 1,632,724	35%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

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Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
	A	B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
650	Splenectomy	14	2.18	$ 3,385,166	$ 1,616,638	$ 1,001,383	$ 1,403,987	$ 402,603	40%	62%	87%	$ 1,072,102	76%
517	Dilation & Curettage For Non-Obstetric Diagnoses	13	0.83	$ 557,936	$ 143,030	$ 105,323	$ 107,052	$ 1,729	2%	74%	75%	$ -	0%
651	Other Procedures Of Blood & Blood-Forming Organs	13	1.70	$ 637,660	$ 202,834	$ 152,465	$ 272,068	$ 119,603	78%	75%	134%	$ 32,208	12%
630	Neonate Birthwt >2499g W Major Cardiovascular Procedure	12	9.11	$ 9,909,621	$ 4,308,182	$ 4,493,865	$ 3,660,547	$ (833,318)	-19%	104%	85%	$ 2,040,656	56%
484	Other Male Reproductive System & Related Procedures	12	1.35	$ 386,885	$ 115,135	$ 84,856	$ 160,218	$ 75,362	89%	74%	139%	$ -	0%
110	Ear, Nose, Mouth, Throat, Cranial/Facial Malignancies	12	1.70	$ 880,912	$ 209,710	$ 174,258	$ 212,273	$ 38,015	22%	83%	101%	$ 19,526	9%
91	Other Major Head & Neck Procedures	12	2.64	$ 902,407	$ 283,931	$ 142,884	$ 328,262	$ 185,378	130%	50%	116%	$ 2,421	1%
261	Major Biliary Tract Procedures	11	2.23	$ 1,181,515	$ 310,451	$ 247,298	$ 278,525	$ 31,227	13%	80%	90%	$ 30,455	11%
246	Gastrointestinal Vascular Insufficiency	11	0.83	$ 296,482	$ 69,867	$ 129,457	$ 94,847	$ (34,611)	-27%	185%	136%	$ -	0%
483	Penis, Testes & Scrotal Procedures	11	1.05	$ 433,538	$ 98,666	$ 77,640	$ 116,011	$ 38,371	49%	79%	118%	$ -	0%
111	Vertigo & Other Labyrinth Disorders	11	0.56	$ 143,686	$ 32,270	$ 31,909	$ 61,260	$ 29,351	92%	99%	190%	$ -	0%
1	Liver Transplant &/Or Intestinal Transplant	11	9.58	$ 3,662,777	$ 1,096,865	$ 1,778,024	$ 1,086,000	$ (692,024)	-39%	162%	99%	$ 45,031	4%
841	Extensive 3rd Degree Burns W Skin Graft	11	15.17	$ 11,281,385	$ 5,308,712	$ 4,003,771	$ 4,558,462	$ 554,691	14%	75%	86%	$ 2,541,140	56%
772	Alcohol & Drug Dependence W Rehab Or Rehab/Detox Therapy	11	0.67	$ 166,046	$ 42,121	$ 56,389	$ 66,818	$ 10,429	18%	134%	159%	$ -	0%
56	Brain Contusion/Laceration & Complicated Skull Fx, Coma < 1 Hr Or No Coma	10	1.24	$ 267,711	$ 71,282	$ 65,012	$ 133,790	$ 68,779	106%	91%	188%	$ -	0%
613	Neonate Birthwt 1500-1999g W Congenital/Perinatal Infection	10	3.11	$ 983,770	$ 249,976	$ 483,261	$ 437,460	$ (45,801)	-9%	193%	175%	$ -	0%
232	Gastric Fundoplication	10	1.55	$ 475,839	$ 132,819	$ 124,350	$ 159,743	$ 35,393	28%	94%	120%	$ -	0%
382	Malignant Breast Disorders	10	0.96	$ 458,560	$ 98,755	$ 102,540	$ 95,099	$ (7,441)	-7%	104%	96%	$ -	0%
363	Breast Procedures Except Mastectomy	10	1.35	$ 283,568	$ 80,863	$ 61,486	$ 133,059	$ 71,573	116%	76%	165%	$ -	0%
162	Cardiac Valve Procedures W Ami Or Complex Pdx	10	7.98	$ 2,412,935	$ 599,612	$ 404,964	$ 806,751	$ 401,787	99%	68%	135%	$ -	0%
512	Uterine & Adnexa Procedures For Non-Ovarian & Non-Adnexal Malig	9	1.39	$ 522,288	$ 144,256	$ 72,856	$ 136,185	$ 63,329	87%	51%	94%	$ 12,687	9%
205	Cardiomyopathy	9	0.90	$ 447,534	$ 201,241	$ 155,736	$ 142,432	$ (13,304)	-9%	77%	71%	$ 48,764	34%
445	Other Bladder Procedures	9	1.65	$ 327,604	$ 84,683	$ 100,616	$ 166,532	$ 65,916	66%	119%	197%	$ -	0%
444	Renal Dialysis Access Device And Vessel Repair	9	1.98	$ 826,728	$ 216,491	$ 142,766	$ 203,344	$ 60,578	42%	66%	94%	$ 27,346	13%
362	Mastectomy Procedures	9	1.51	$ 340,914	$ 87,324	$ 54,451	$ 133,885	$ 79,434	146%	62%	153%	$ -	0%
176	Cardiac Pacemaker & Defibrillator Device Replacement	9	3.93	$ 1,494,367	$ 490,658	$ 330,003	$ 451,110	$ 121,107	37%	67%	92%	$ 59,957	13%
583	Neonate W Ecmo	8	11.10	$ 9,234,290	$ 3,192,278	$ 3,230,325	$ 2,804,503	$ (425,822)	-13%	101%	88%	$ 1,488,663	53%
580	Neonate, Transferred <5 Days Old, Not Born Here	8	0.36	$ 84,297	$ 21,802	$ 23,366	$ 42,735	$ 19,368	83%	107%	196%	$ -	0%
500	Malignancy, Male Reproductive System	8	0.82	$ 715,188	$ 261,204	$ 367,196	$ 139,088	$ (228,108)	-62%	141%	53%	$ 65,088	47%
447	Other Kidney, Urinary Tract & Related Procedures	8	2.34	$ 1,146,458	$ 248,229	$ 319,854	$ 237,634	$ (82,220)	-26%	129%	96%	$ 48,544	20%
59	Anoxic & Other Severe Brain Damage	8	1.04	$ 236,238	$ 59,005	$ 66,614	$ 81,953	$ 15,339	23%	113%	139%	$ -	0%
8	Autologous Bone Marrow Transplant	7	7.70	$ 1,877,171	$ 604,484	$ 997,329	$ 642,893	$ (354,435)	-36%	165%	106%	$ 59,047	9%
461	Kidney & Urinary Tract Malignancy	7	1.05	$ 741,222	$ 232,004	$ 188,270	$ 174,248	$ (14,022)	-7%	81%	75%	$ 96,538	55%
441	Major Bladder Procedures	7	2.45	$ 383,855	$ 129,190	$ 107,307	$ 206,802	$ 99,495	93%	83%	160%	$ -	0%
759	Eating Disorders	7	1.48	$ 255,779	$ 104,748	$ 141,976	$ 126,569	$ (15,408)	-11%	136%	121%	$ 3,065	2%
10	Head Trauma With Deep Coma	7	9.14	$ 1,027,725	$ 286,114	$ 206,184	$ 508,501	$ 302,317	147%	72%	178%	$ -	0%
609	Neonate Bwt 1500-2499g W Major Procedure	6	10.48	$ 1,612,263	$ 821,679	$ 990,409	$ 1,029,028	$ 38,619	4%	121%	125%	$ 97,445	9%
588	Neonate Bwt <1500g W Major Procedure	6	24.55	$ 5,007,329	$ 1,930,973	$ 2,081,037	$ 2,563,304	$ 482,267	23%	108%	133%	$ 380,972	15%
514	Female Reproductive System Reconstructive Procedures	6	0.91	$ 320,911	$ 68,604	$ 34,816	$ 53,800	$ 18,984	55%	51%	78%	$ -	0%
46	Nonspecific Cva & Precerebral Occlusion W/O Infarct	6	0.86	$ 156,964	$ 47,959	$ 20,085	$ 51,177	$ 31,093	155%	42%	107%	$ -	0%
401	Adrenal Procedures	6	1.45	$ 165,984	$ 60,513	$ 35,030	$ 90,050	$ 55,020	157%	58%	149%	$ -	0%
680	Major O.R. Procedures For Lymphatic/Hematopoietic/Other Neoplasms	6	2.03	$ 331,425	$ 108,108	$ 102,515	$ 126,211	$ 23,696	23%	95%	117%	$ -	0%
893	Hiv W Multiple Significant Hiv Related Conditions	5	1.56	$ 64,314	$ 21,361	$ 28,172	$ 77,164	$ 48,992	174%	132%	361%	$ -	0%
440	Kidney Transplant	4	6.20	$ 1,150,226	$ 371,986	$ 255,101	$ 316,263	$ 61,162	24%	69%	85%	$ 27,438	9%
95	Cleft Lip & Palate Repair	4	0.84	$ 164,195	$ 42,855	$ 13,930	$ 43,230	$ 29,301	210%	33%	101%	$ -	0%

Report E - Summary of Simulation by APR DRG - Sorted by Stays
Preliminary Medicaid APR DRG Analyses
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Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

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Base APR DRG	APR DRG Description	Stays	Casemix	Charges	Estimated Cost	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
A		B	C	D	E	F	G	H = G - F	I = H ÷ F	J = F ÷ E	K = G ÷ E	L	M = L ÷ G
177	Cardiac Pacemaker & Defibrillator Revision Except Device Replacement	4	1.80	$ 269,094	$ 116,745	$ 80,511	$ 96,678	$ 16,167	20%	69%	83%	$ 12,142	13%
860	Rehabilitation	4	1.58	$ 125,239	$ 33,314	$ 36,641	$ 49,101	$ 12,460	34%	110%	147%	$ -	0%
843	Extensive 3rd Degree Or Full Thickness Burns W/O Skin Graft	3	3.96	$ 59,635	$ 26,097	$ 16,083	$ 117,257	$ 101,175	629%	62%	449%	$ -	0%
170	Permanent Cardiac Pacemaker Implant W Ami, Heart Failure Or Shock	3	2.64	$ 353,620	$ 71,495	$ 62,609	$ 78,302	$ 15,694	25%	88%	110%	$ -	0%
511	Uterine & Adnexa Procedures For Ovarian & Adnexal Malignancy	2	1.25	$ 79,478	$ 18,853	$ 19,677	$ 24,668	$ 4,991	25%	104%	131%	$ -	0%
510	Pelvic Evisceration, Radical Hysterectomy & Other Radical Gyn Procs	2	1.39	$ 74,999	$ 17,843	$ 10,542	$ 27,393	$ 16,851	160%	59%	154%	$ -	0%
480	Major Male Pelvic Procedures	2	1.71	$ 108,105	$ 25,099	$ 18,482	$ 33,822	$ 15,340	83%	74%	135%	$ -	0%
7	Allogeneic Bone Marrow Transplant	2	7.60	$ 444,675	$ 152,523	$ 182,330	$ 176,653	$ (5,676)	-3%	120%	116%	$ 26,449	15%
Total		**96,114**	**0.72**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 857,205,529**	**$ 857,205,167**	**$ (363)**	**0%**	**122%**	**122%**	**$ 68,475,867**	**8%**

Notes:

C) Average APR DRG Weight.

D) Billed Amount as submitted without inflation.

E) Estimated cost using Medicare cost-to-charge ratio where available, otherwise Navigant calculated CCRs from HCRIS Cost Report.

F) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.

Report F - Summary of Simulation by Provider - Sorted by Provider Name
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Provider Medicaid ID	Provider Name	In / Border Indicator	Stays	Length of Stays	Covered Days	Per Diem Rate	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
		A	B	C	D	E	F	G	H	I	J	K = I + J	L	M = L - K	N = M ÷ K	O = K ÷ H	P = L ÷ H	Q	R = Q ÷ L
166379105	Advanced Care Hospital Of White	I	6	117	117	850	1.345	$ 667,525	$ 176,257	$ 43,900	$ -	$ 43,900	$ 79,680	$ 35,780	82%	25%	45%	$ -	0%
104269105	Arkansas Childrens Hospital	I	6,589	51,489	51,400	3,403	1.385	$ 418,402,497	$ 174,261,582	$ 194,686,294	$ 43,757,553	$ 238,443,847	$ 170,161,466	$ (68,282,382)	-29%	137%	98%	$ 51,167,730	30%
131142105	Arkansas Hearthospital Llc	I	122	328	327	850	1.162	$ 3,878,482	$ 951,628	$ 273,100	$ -	$ 273,100	$ 1,400,453	$ 1,127,353	413%	29%	147%	$ -	0%
102528105	Arkansas Methodist Medicalcenter	I	1,425	3,188	3,165	757	0.460	$ 10,682,707	$ 3,932,304	$ 2,395,995	$ 3,753,934	$ 6,149,929	$ 7,585,297	$ 1,435,368	23%	156%	193%	$ -	0%
114301125	Arkansas Statehospital	I	39	4,789	4,783	680	0.590	$ 3,628,557	$ 2,041,099	$ 3,271,704	$ 205,231	$ 3,476,935	$ 1,136,615	$ (2,340,320)	-67%	170%	56%	$ 865,624	76%
157876105	Arkansas Surgical Hospitalllc	I	12	34	34	850	1.448	$ 348,307	$ 91,210	$ 28,900	$ 127,285	$ 156,185	$ 171,602	$ 15,417	10%	171%	188%	$ -	0%
100953105	Ashley Memorialhosp	I	307	841	841	2,150	0.430	$ 2,817,174	$ 1,224,655	$ 1,243,500	$ 1,218,308	$ 2,461,808	$ 1,397,826	$ (1,063,982)	-43%	201%	114%	$ -	0%
184088105	Baptist Healthextended Care	I	10	88	88	850	1.344	$ 246,478	$ 72,710	$ 65,200	$ -	$ 65,200	$ 132,726	$ 67,526	104%	90%	183%	$ -	0%
101448105	Baptist Healthmedical Center (Arkadelphia)	I	735	1,385	1,383	1,561	0.329	$ 7,137,603	$ 1,835,576	$ 2,507,886	$ 2,339,657	$ 4,847,543	$ 2,944,983	$ (1,902,560)	-39%	264%	160%	$ -	0%
104304105	Baptist Healthmedical Center (Little Rock)	I	5,030	30,540	30,352	1,025	1.129	$ 178,548,725	$ 46,278,137	$ 30,000,843	$ 12,565,837	$ 42,566,680	$ 67,233,609	$ 24,666,929	58%	92%	145%	$ 1,069,599	2%
106664105	Baptist Healthmedical Center (North Little Rock)	I	1,846	4,899	4,882	796	0.616	$ 31,864,442	$ 9,327,740	$ 3,734,452	$ 5,874,631	$ 9,609,083	$ 12,157,018	$ 2,547,935	27%	103%	130%	$ 13,085	0%
130609105	Baptist Healthmedical Center (Heber Springs)	I	40	88	88	1,946	0.774	$ 557,924	$ 148,056	$ 198,900	$ 120,470	$ 319,370	$ 282,505	$ (36,864)	-12%	216%	191%	$ -	0%
178730105	Baptist Healthmedical Center (Stuttgart)	I	422	1,026	1,026	850	0.383	$ 4,000,699	$ 2,509,169	$ 1,243,070	$ 1,317,144	$ 2,560,214	$ 1,760,006	$ (800,208)	-31%	102%	70%	$ -	0%
217868105	Baptist Healthmedical Center (Conway)	I	41	155	155	850	0.990	$ 1,333,065	$ 541,219	$ 114,650	$ 564,321	$ 678,971	$ 468,364	$ (210,607)	-31%	125%	87%	$ 70,793	15%
203334105	Baptist Healthmedical Center (Malvern)	I	697	3,227	3,197	850	0.526	$ 5,133,657	$ 2,350,971	$ 2,615,600	$ 1,142,567	$ 3,758,167	$ 3,590,861	$ (167,305)	-4%	160%	153%	$ -	0%
107093105	Baptist Memorial Hospital	B	186	1,368	1,361	799	1.555	$ 11,549,533	$ 2,757,086	$ 1,109,000	$ 14,955	$ 1,123,955	$ 3,300,289	$ 2,176,334	194%	41%	120%	$ 57,313	2%
101001105	Baxter Regionalmedical Center	I	1,330	3,148	3,126	950	0.636	$ 16,546,821	$ 5,641,006	$ 2,853,300	$ 3,466,361	$ 6,319,661	$ 9,112,585	$ 2,792,924	44%	112%	162%	$ 16,916	0%
142700125	Bhc Pinnacle Pointe Hospitalinc	I	2,551	29,540	29,512	484	0.483	$ 39,243,285	$ 12,368,071	$ 13,245,609	$ 5,666,811	$ 18,912,420	$ 16,245,390	$ (2,667,030)	-14%	153%	131%	$ 422,223	3%
148217105	Board Of Governors Of	I	19	30	30	2,760	0.587	$ 104,395	$ 59,185	$ 50,528	$ 37,425	$ 87,953	$ 115,899	$ 27,946	32%	149%	196%	$ -	0%
133213105	Bradley Countymedical Center	I	209	398	398	1,967	0.373	$ 1,508,239	$ 655,789	$ 836,231	$ 920,537	$ 1,756,768	$ 881,086	$ (875,682)	-50%	268%	134%	$ -	0%
159162125	Brentwood Acquisition Shreveport	B	3	23	23	487	0.650	$ 47,150	$ 8,824	$ 9,290	$ -	$ 9,290	$ 25,040	$ 15,750	170%	105%	284%	$ -	0%
115662125	Centers For Youth & Familiesinc	I	188	15,032	14,839	350	0.414	$ 5,193,650	$ 1,636,852	$ 5,193,650	$ -	$ 5,193,650	$ 999,648	$ (4,194,002)	-81%	317%	61%	$ -	0%
106600105	Chambers Memorial Hospital	I	232	605	605	850	0.578	$ 1,304,224	$ 805,706	$ 511,150	$ 651,274	$ 1,162,424	$ 1,383,241	$ 220,816	19%	144%	172%	$ -	0%
102335105	Chi St Vincenthospital Hotspring	I	2,471	7,784	7,704	850	0.723	$ 52,638,148	$ 13,260,971	$ 6,511,750	$ 6,190,619	$ 12,702,369	$ 18,718,820	$ 6,016,450	47%	96%	141%	$ 45,424	0%
181080105	Chicot Memorialmedical Center	I	100	301	297	1,700	0.628	$ 706,149	$ 256,330	$ 428,965	$ 718,154	$ 1,147,119	$ 615,383	$ (531,737)	-46%	448%	240%	$ -	0%
146008105	Christus St Michael Healthsystem	B	1,473	5,149	5,142	850	0.685	$ 40,027,298	$ 7,886,673	$ 4,737,952	$ 274,669	$ 5,012,621	$ 11,293,781	$ 6,281,160	125%	64%	143%	$ 121,276	1%
102789105	Community Medical Center Ofizard	I	32	69	69	1,549	0.521	$ 148,957	$ 110,458	$ 101,601	$ 82,099	$ 183,700	$ 169,114	$ (14,586)	-8%	166%	153%	$ -	0%
102178105	Conway Regionalmedical Ctrinc	I	1,820	4,402	4,395	850	0.505	$ 15,454,808	$ 5,969,255	$ 3,695,300	$ 4,779,967	$ 8,475,267	$ 10,316,760	$ 1,841,493	22%	142%	173%	$ -	0%
157514105	De Queen Medical Center Inc	I	21	69	69	960	0.552	$ 212,726	$ 83,676	$ 61,826	$ 75,616	$ 137,442	$ 116,831	$ (20,611)	-15%	164%	140%	$ -	0%
135726105	Delta Medical Center	B	210	1,614	1,613	599	0.590	$ 2,469,444	$ 1,093,884	$ 855,900	$ -	$ 855,900	$ 1,224,715	$ 368,815	43%	78%	112%	$ -	0%
102081105	Delta Memorialhospital	I	232	617	616	1,456	0.369	$ 1,319,922	$ 624,124	$ 1,101,850	$ 653,874	$ 1,755,724	$ 936,046	$ (819,679)	-47%	281%	150%	$ -	0%
107848105	Delta Regionalmedical Center	B	140	443	438	850	0.598	$ 1,200,032	$ 409,211	$ 365,500	$ -	$ 365,500	$ 951,461	$ 585,961	160%	89%	233%	$ -	0%
146780105	Dewitt Hospitaland Nursinghome	I	17	47	47	1,635	0.457	$ 82,864	$ 66,667	$ 97,850	$ 114,776	$ 212,626	$ 78,080	$ (134,546)	-63%	319%	117%	$ -	0%
196170105	Drew Memorial Hospital Inc	I	799	1,831	1,831	850	0.411	$ 6,453,131	$ 3,633,398	$ 1,526,400	$ 2,382,799	$ 3,909,199	$ 3,622,371	$ (286,828)	-7%	108%	100%	$ 27,044	1%
168254105	Eureka Springshospital Llc	I	10	30	30	2,193	0.604	$ 92,020	$ 52,079	$ 47,736	$ 27,665	$ 75,401	$ 59,617	$ (15,784)	-21%	145%	114%	$ -	0%
191343105	Five Rivers Medical Center	I	30	96	96	850	0.628	$ 299,592	$ 175,005	$ 80,750	$ 104,049	$ 184,799	$ 185,692	$ 893	0%	106%	106%	$ -	0%
160836105	Forrest City Medical Center	I	1,654	3,647	3,644	761	0.323	$ 26,536,946	$ 6,423,360	$ 2,753,938	$ 4,366,763	$ 7,120,701	$ 6,433,418	$ (687,283)	-10%	111%	100%	$ -	0%
180869105	Fort Smith Hmallc	I	2,676	9,349	9,225	797	0.671	$ 74,414,651	$ 14,599,573	$ 6,731,950	$ 7,835,692	$ 14,567,642	$ 19,465,341	$ 4,897,699	34%	100%	133%	$ 520,704	3%
102256105	Fulton County Hospital	I	70	157	157	1,235	0.592	$ 335,593	$ 143,750	$ 158,352	$ 27,692	$ 186,044	$ 417,875	$ 231,831	125%	129%	291%	$ -	0%
178791105	Great River Medical Center	I	832	1,696	1,695	850	0.503	$ 7,309,815	$ 2,473,692	$ 1,425,500	$ 4,944,392	$ 6,369,892	$ 4,396,853	$ (1,973,039)	-31%	258%	178%	$ -	0%
146593105	Helena Regionalmedical Center	I	587	1,322	1,320	850	0.431	$ 12,120,962	$ 2,440,495	$ 1,260,022	$ 1,672,148	$ 2,932,170	$ 2,770,712	$ (161,458)	-6%	120%	114%	$ -	0%
102665105	Howard Memorialhospital	I	36	109	109	5,178	0.817	$ 666,752	$ 230,925	$ 295,296	$ 91,905	$ 387,201	$ 302,716	$ (84,485)	-22%	168%	131%	$ -	0%
102916105	Jefferson Regional Medicalcenter	I	2,166	7,593	7,493	850	0.681	$ 59,532,863	$ 13,229,029	$ 6,300,750	$ 5,893,442	$ 12,194,192	$ 15,802,298	$ 3,608,107	30%	92%	119%	$ 392,612	2%
128851105	Johnson Regional Medical Center	I	681	1,491	1,490	850	0.409	$ 3,510,858	$ 2,046,902	$ 1,278,900	$ 1,579,180	$ 2,858,080	$ 3,085,156	$ 227,076	8%	140%	151%	$ -	0%
118836125	Lakeland Hospital Acquisition Ll	B	125	880	880	601	0.457	$ 1,169,498	$ 338,744	$ 376,152	$ -	$ 376,152	$ 728,809	$ 352,657	94%	111%	215%	$ -	0%
142103125	Lakeside Behavioral Healthsystem	B	27	252	252	501	0.463	$ 532,200	$ 116,801	$ 130,992	$ -	$ 130,992	$ 160,402	$ 29,410	22%	112%	137%	$ -	0%
103130105	Lawrence Memorial Hospital	I	34	87	87	1,076	0.596	$ 173,309	$ 75,583	$ 133,084	$ -	$ 133,084	$ 197,661	$ 64,577	49%	176%	262%	$ -	0%
102366105	Leo N Levi Memorial Hospital	I	705	3,181	3,179	636	0.580	$ 4,412,996	$ 1,336,516	$ 2,430,084	$ 1,944,490	$ 4,374,574	$ 4,029,718	$ (344,855)	-8%	327%	302%	$ -	0%
107962105	Lester E Cox Medical Centers	B	41	168	165	857	0.790	$ 1,214,367	$ 320,733	$ 135,285	$ 2,097	$ 137,382	$ 338,102	$ 200,720	146%	43%	105%	$ -	0%
159664125	Liberty Healthcare Systemsllc	B	7	45	45	683	0.356	$ 81,000	$ 22,814	$ 23,430	$ -	$ 23,430	$ 31,998	$ 8,568	37%	103%	140%	$ -	0%
103203105	Little River Memorial Hospital	I	7	19	19	2,241	0.644	$ 68,730	$ 30,648	$ 60,648	$ -	$ 60,648	$ 45,656	$ (14,992)	-25%	198%	149%	$ -	0%
101580105	Magnolia Regional Medical Center	I	443	1,016	1,004	850	0.387	$ 2,792,215	$ 1,692,578	$ 928,100	$ 2,197,486	$ 3,125,586	$ 1,900,776	$ (1,224,809)	-39%	185%	112%	$ -	0%
183068105	Mcgehee Hospital	I	41	92	92	3,700	0.530	$ 309,495	$ 144,712	$ 277,800	$ 129,813	$ 407,613	$ 230,769	$ (176,844)	-43%	282%	159%	$ -	0%

Report F - Summary of Simulation by Provider - Sorted by Provider Name
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Provider Medicaid ID	Provider Name	In / Border Indicator	Stays	Length of Stays	Covered Days	Per Diem Rate	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
		A	B	C	D	E	F	G	H	I	J	K = I + J	L	M = L - K	N = M ÷ K	O = K ÷ H	P = L ÷ H	Q	R = Q ÷ L
130047105	Medical Centerof South Arkansas	I	1,014	2,267	2,265	850	0.556	$ 30,286,619	$ 4,650,104	$ 2,248,980	$ 2,870,566	$ 5,119,546	$ 6,171,225	$ 1,051,679	21%	110%	133%	$ 46,034	1%
103816105	Mena Regional Health System	I	443	994	994	850	0.345	$ 2,615,242	$ 1,177,074	$ 734,616	$ 3,201,428	$ 3,936,044	$ 1,748,549	$ (2,187,495)	-56%	334%	149%	$ -	0%
101363105	Mercy Hospitalberryville	I	26	76	75	2,391	0.631	$ 415,146	$ 145,953	$ 187,200	$ 164,814	$ 352,014	$ 167,933	$ (184,082)	-52%	241%	115%	$ -	0%
204253105	Mercy Hospitalbooneville	I	13	46	46	2,862	0.617	$ 209,182	$ 98,389	$ 123,812	$ 72,608	$ 196,420	$ 82,195	$ (114,225)	-58%	200%	84%	$ -	0%
105691105	Mercy Hospitalfort Smith	I	2,831	10,720	10,660	890	0.670	$ 51,866,128	$ 18,490,188	$ 9,017,800	$ 7,088,021	$ 16,105,821	$ 22,231,435	$ 6,125,614	38%	87%	120%	$ 424,504	2%
101109105	Mercy Hospitalnorthwest Arkansas	I	2,174	6,025	5,984	850	0.604	$ 30,805,503	$ 8,625,172	$ 5,114,350	$ 5,001,929	$ 10,116,279	$ 14,817,472	$ 4,701,192	46%	117%	172%	$ 37,733	0%
102232105	Mercy Hospitalozark	I	8	16	16	2,785	0.524	$ 63,160	$ 25,391	$ 39,728	$ 45,366	$ 85,094	$ 41,374	$ (43,720)	-51%	335%	163%	$ -	0%
103238105	Mercy Hospitalparis	I	1	2	2	6,179	0.623	$ 9,630	$ 3,035	$ 7,530	$ 6,297	$ 13,827	$ 6,154	$ (7,673)	-55%	456%	203%	$ -	0%
107971105	Mercy Hospitalspringfield	B	174	1,253	1,251	850	2.096	$ 13,726,336	$ 4,198,107	$ 1,133,081	$ 107,752	$ 1,240,833	$ 4,253,477	$ 3,012,644	243%	30%	101%	$ 267,449	6%
105514105	Mercy Hospitalwaldron	I	16	48	47	2,816	0.635	$ 154,613	$ 65,695	$ 103,400	$ 100,895	$ 204,295	$ 104,009	$ (100,286)	-49%	311%	158%	$ -	0%
107115105	Methodist Healthcare Memphishosp	B	1,423	8,904	8,808	1,700	1.283	$ 83,913,614	$ 21,793,005	$ 13,575,979	$ 957,483	$ 14,533,462	$ 24,103,919	$ 9,570,456	66%	67%	111%	$ 2,402,096	10%
152280105	National Park Medical Center	I	1,169	3,443	3,408	850	0.624	$ 48,509,114	$ 4,800,041	$ 2,864,816	$ 2,992,243	$ 5,857,059	$ 7,843,882	$ 1,986,822	34%	122%	163%	$ 68,040	1%
192756105	Nea Baptist Memorial Hospital	I	1,404	4,320	4,267	850	0.682	$ 27,116,508	$ 7,475,322	$ 3,512,750	$ 2,986,021	$ 6,498,771	$ 10,292,702	$ 3,793,931	58%	87%	138%	$ 117,660	1%
131319105	North Arkansasregional Medical	I	1,135	2,014	2,014	850	0.354	$ 9,602,466	$ 3,424,434	$ 1,700,000	$ 3,756,450	$ 5,456,450	$ 4,862,205	$ (594,245)	-11%	159%	142%	$ 62,793	1%
193063105	North Metro Medical Center	I	295	1,002	998	850	0.632	$ 4,689,021	$ 2,623,820	$ 812,850	$ 202,185	$ 1,015,035	$ 1,937,866	$ 922,831	91%	39%	74%	$ 94,853	5%
165955105	Northwest Arkansas Hospitalsllc (Springdale)	I	1,576	5,927	5,891	902	0.722	$ 59,750,776	$ 8,939,521	$ 4,995,040	$ 14,507,379	$ 19,502,419	$ 11,354,685	$ (8,147,735)	-42%	218%	127%	$ 36,810	0%
166699105	Northwest Arkansas Hospitalsllc (Springdale)	I	2,535	7,513	7,510	3,608	0.398	$ 67,427,524	$ 10,056,725	$ 6,685,990	$ -	$ 6,685,990	$ 13,302,215	$ 6,616,225	99%	66%	132%	$ 112,443	1%
168846105	Northwest Arkansas Hospitalsllc (Bentonville)	I	1,280	3,121	3,109	902	0.575	$ 39,319,905	$ 5,872,084	$ 2,699,570	$ -	$ 2,699,570	$ 8,313,872	$ 5,614,302	208%	46%	142%	$ 160,196	2%
215698105	Northwest Health Physiciansspeci	I	48	52	52	850	1.357	$ 1,512,248	$ 541,155	$ 44,200	$ 17,002	$ 61,202	$ 643,413	$ 582,211	951%	11%	119%	$ -	0%
210599125	Oakridge Behavioral Center	I	313	2,282	2,282	725	0.415	$ 2,492,024	$ 1,381,240	$ 1,468,157	$ 1,444,289	$ 2,912,446	$ 1,689,281	$ (1,223,165)	-42%	211%	122%	$ 20,722	1%
103629105	Ouachita Countymedical Center	I	407	939	939	850	0.411	$ 3,203,059	$ 1,664,564	$ 803,150	$ 1,437,214	$ 2,240,364	$ 1,798,421	$ (441,943)	-20%	135%	108%	$ -	0%
106200105	Ozark Health Medical Center	I	26	73	73	1,873	0.912	$ 260,913	$ 103,273	$ 86,586	$ 145,341	$ 231,927	$ 224,160	$ (7,766)	-3%	225%	217%	$ -	0%
175808105	Ozarks Community Hospital Of	I	38	158	157	2,942	0.578	$ 864,033	$ 464,325	$ 389,188	$ 91,631	$ 480,819	$ 263,211	$ (217,607)	-45%	104%	57%	$ 43,093	16%
142135125	Parkwood Behavioral Healthsystem	B	4	128	128	605	0.414	$ 110,291	$ 34,878	$ 44,678	$ 14,196	$ 58,874	$ 21,283	$ (37,591)	-64%	169%	61%	$ -	0%
180190105	Physicians Specialty Hospital Ll	I	4	4	4	850	1.298	$ 73,701	$ 24,100	$ 3,400	$ 17,712	$ 21,112	$ 51,286	$ 30,173	143%	88%	213%	$ -	0%
101505105	Piggott Community Hospital	I	27	92	83	1,583	0.565	$ 151,048	$ 101,826	$ 93,288	$ 9,851	$ 103,139	$ 151,923	$ 48,784	47%	101%	149%	$ -	0%
107963105	Poplar Bluff Regional Medical	B	316	793	788	726	0.401	$ 8,880,365	$ 1,340,450	$ 640,950	$ 105,270	$ 746,220	$ 1,424,391	$ 678,171	91%	56%	106%	$ -	0%
107092105	Regional Med Ctr At Memphis	B	805	4,228	4,200	850	1.211	$ 32,688,400	$ 6,450,791	$ 3,848,700	$ 10,541,049	$ 14,389,749	$ 12,303,116	$ (2,086,633)	-15%	223%	191%	$ 590,439	5%
165429105	River Valley Medical Center	I	40	131	131	1,327	0.661	$ 473,551	$ 174,984	$ 283,210	$ 70,127	$ 353,337	$ 261,051	$ (92,286)	-26%	202%	149%	$ -	0%
182577125	Riverview Behavioral Health	I	447	7,722	7,721	725	0.445	$ 9,205,391	$ 4,518,845	$ 3,710,781	$ 1,097,974	$ 4,808,755	$ 3,071,313	$ (1,737,442)	-36%	106%	68%	$ 546,469	18%
182644105	Saint Francis Hospital	B	273	1,241	1,238	850	0.817	$ 12,223,978	$ 1,785,550	$ 968,800	$ -	$ 968,800	$ 2,420,057	$ 1,451,257	150%	54%	136%	$ 29,246	1%
129187105	Saline Memorialhospital (Benton)	I	1,112	3,248	3,238	1,700	0.544	$ 11,227,361	$ 3,799,163	$ 2,613,037	$ 3,329,531	$ 5,942,568	$ 6,288,169	$ 345,601	6%	156%	166%	$ -	0%
220053105	Saline Memorialhospital (Benton)	I	1	1	1	893	0.319	$ 5,697	$ 1,840	$ 893	$ -	$ 893	$ 3,150	$ 2,257	253%	49%	171%	$ -	0%
181275105	Select Specialty Hospital Ftsmit	I	1	2	2	850	2.124	$ 13,224	$ 4,168	$ 1,700	$ -	$ 1,700	$ 20,975	$ 19,275	1134%	41%	503%	$ -	0%
177289105	Siloam Springsregional Hospital	I	563	957	957	850	0.324	$ 7,215,432	$ 1,687,108	$ 748,610	$ 1,560,488	$ 2,309,098	$ 2,125,211	$ (183,887)	-8%	137%	126%	$ -	0%
178790105	South Mississippi County Medical	I	54	140	138	2,052	0.553	$ 577,739	$ 213,305	$ 194,556	$ 35,705	$ 230,261	$ 301,208	$ 70,947	31%	108%	141%	$ -	0%
101870105	Sparks Medicalcenter Van Buren	I	131	371	371	850	0.489	$ 2,729,268	$ 543,829	$ 317,050	$ 500,042	$ 817,092	$ 636,648	$ (180,444)	-22%	150%	117%	$ -	0%
182423125	Springwoods Behavioral Health	I	366	2,882	2,861	725	0.413	$ 4,075,125	$ 1,756,677	$ 1,678,664	$ 1,017,420	$ 2,696,084	$ 1,892,357	$ (803,727)	-30%	153%	108%	$ -	0%
142757105	St Bernard Community Hospital Co	I	43	148	148	1,317	0.654	$ 230,794	$ 120,074	$ 194,100	$ 107,746	$ 301,846	$ 283,564	$ (18,282)	-6%	251%	236%	$ -	0%
101693105	St Bernards Medical Center	I	4,293	14,976	14,913	850	0.731	$ 44,611,845	$ 23,192,378	$ 12,450,600	$ 11,237,252	$ 23,687,852	$ 33,743,803	$ 10,055,951	42%	102%	145%	$ 344,462	1%
109910105	St Jude Childrens Researchhospit	B	70	347	347	4,500	1.368	$ 2,863,753	$ 902,552	$ 1,472,100	$ 114,002	$ 1,586,102	$ 1,246,280	$ (339,822)	-21%	176%	138%	$ 51,022	4%
152329105	St Marys Regional Medical Center	I	2,155	6,662	6,652	789	0.464	$ 42,222,457	$ 6,614,665	$ 5,811,722	$ 5,234,128	$ 11,045,850	$ 11,259,158	$ 213,308	2%	167%	170%	$ 68,632	1%
104268105	St Vincent Infirmary Medicalctr	I	3,480	20,135	19,745	850	0.895	$ 110,330,102	$ 27,640,337	$ 16,165,250	$ 9,874,852	$ 26,040,102	$ 32,724,243	$ 6,684,140	26%	94%	118%	$ 930,243	3%
138525105	St Vincent Medical Center	I	162	564	561	850	1.049	$ 4,812,556	$ 1,528,753	$ 473,300	$ 269,287	$ 742,587	$ 1,640,675	$ 898,087	121%	49%	107%	$ 13,254	1%
101615105	St Vincent Morrilton	I	65	184	181	2,079	1.001	$ 1,002,774	$ 310,495	$ 360,984	$ 141,441	$ 502,425	$ 602,665	$ 100,240	20%	162%	194%	$ -	0%
157571105	Stone County Medical Center	I	42	112	107	1,870	0.634	$ 589,252	$ 197,634	$ 207,778	$ 131,546	$ 339,324	$ 272,772	$ (66,552)	-20%	172%	138%	$ -	0%
105312125	The Bridgeway Llc	I	909	9,591	9,560	735	0.426	$ 13,289,760	$ 3,969,077	$ 4,682,157	$ 2,694,937	$ 7,377,094	$ 4,897,539	$ (2,479,555)	-34%	186%	123%	$ 76,680	2%
154265125	Uhs Of Benton Llc	I	1,118	8,768	8,728	545	0.347	$ 9,407,392	$ 2,964,871	$ 4,219,131	$ 3,173,129	$ 7,392,260	$ 4,811,026	$ (2,581,234)	-35%	249%	162%	$ 4,704	0%
145121125	United Methodist Behavioral	I	1,592	16,800	15,944	606	0.364	$ 19,692,981	$ 6,206,519	$ 8,071,469	$ 4,274,608	$ 12,346,077	$ 7,666,142	$ (4,679,935)	-38%	199%	124%	$ 229,190	3%
209821105	Unity Health Harris Medicalcente	I	819	1,688	1,684	850	0.409	$ 6,779,418	$ 1,368,674	$ 1,312,800	$ 388,769	$ 1,701,569	$ 3,800,756	$ 2,099,187	123%	124%	278%	$ -	0%
104266105	Univ Hospitalof Arkansas	I	8,870	50,088	49,642	1,734	1.015	$ 253,816,110	$ 87,694,481	$ 88,256,165	$ 18,313,259	$ 106,569,424	$ 103,804,277	$ (2,765,146)	-3%	122%	118%	$ 3,744,407	4%
193673125	Valley Behavioral Health System	I	790	16,820	16,802	725	0.466	$ 19,263,611	$ 8,100,629	$ 7,572,770	$ 1,618,519	$ 9,191,289	$ 5,917,324	$ (3,273,965)	-36%	113%	73%	$ 1,231,250	21%
140704125	Vantage Point Of Northwestarkans	I	825	21,023	21,018	725	0.499	$ 24,415,185	$ 10,456,147	$ 9,494,556	$ 1,785,676	$ 11,280,232	$ 6,976,087	$ (4,304,146)	-38%	108%	67%	$ 1,744,340	25%

Report F - Summary of Simulation by Provider - Sorted by Provider Name
Preliminary Medicaid APR DRG Analyses
Arkansas Department of Human Services

Simulation 03 - Alternative Model Using Current System Allowed Amount Plus Supplemental Payments for DRG Funding Pool

Note: APR DRG Claims Dataset uses calendar year 2016 paid claims. Medicaid payments reflects full allowed amount (prior to TPL and/or copayments) and cost is estimated using Medicare cost-to-charge ratio times as submitted charges (uninflated). When included, gross supplemental payments allocated to each model claim based on charges (not net of IGT or tax). All claims grouped under APR DRG version 35 with 3M national weights.

Provider Medicaid ID	Provider Name	In / Border Indicator	Stays	Length of Stays	Covered Days	Per Diem Rate	Casemix	Charges	Estimated Cost	Allowed Amount	Gross Supplemental Payment	Proposed Baseline Payment	Simulated Payment	Change	Percent Change	Baseline Pay / Cost	Simulated Pay / Cost	Simulated Outlier Payment	Sim Outlier % of Pymt
		A	B	C	D	E	F	G	H	I	J	K = I + J	L	M = L - K	N = M ÷ K	O = K ÷ H	P = L ÷ H	Q	R = Q ÷ L
179951105	Wadley Regionalmedical Center	B	1,146	3,477	3,462	850	0.538	$ 21,677,477	$ 4,446,870	$ 2,558,312	$ 418,353	$ 2,976,665	$ 6,946,291	$ 3,969,626	133%	67%	156%	$ 6,605	0%
197302105	Wadley Regionalmedical Center At	I	137	667	666	850	0.789	$ 3,016,458	$ 890,030	$ 553,500	$ 308,540	$ 862,040	$ 1,028,319	$ 166,279	19%	97%	116%	$ -	0%
106294105	Washington Regional Medicalcente	I	2,470	9,548	9,477	850	0.776	$ 63,523,793	$ 14,212,148	$ 8,144,032	$ 6,214,426	$ 14,358,458	$ 21,032,403	$ 6,673,945	46%	101%	148%	$ 86,122	0%
129186105	White County Medical Center	I	3,093	10,453	10,385	850	0.539	$ 48,498,634	$ 11,969,062	$ 9,782,095	$ 8,160,694	$ 17,942,789	$ 17,703,441	$ (239,347)	-1%	150%	148%	$ 24,054	0%
102716105	White River Medical Center	I	1,822	5,429	5,411	850	0.581	$ 24,507,061	$ 7,731,717	$ 4,595,500	$ 5,599,025	$ 10,194,525	$ 11,226,466	$ 1,031,941	10%	132%	145%	$ 65,869	1%
113493125	Youth Home Inc	I	123	21,268	21,094	350	0.518	$ 7,384,650	$ 2,327,376	$ 7,384,650	$ -	$ 7,384,650	$ 818,294	$ (6,566,356)	-89%	317%	35%	$ -	0%
119304725	Youth Villagesinc	B	71	11,579	11,454	350	0.418	$ 4,008,900	$ 1,263,461	$ 4,008,900	$ -	$ 4,008,900	$ 384,735	$ (3,624,165)	-90%	317%	30%	$ 4,110	1%
Total			**96,114**	**519,356**	**515,625**		**0.722**	**$ 2,355,440,778**	**$ 702,127,500**	**$ 581,815,376**	**$ 275,390,153**	**$ 857,205,529**	**$ 857,205,167**	**$ (363)**	**0%**	**122%**	**122%**	**$ 68,475,867**	**8%**

Notes:

A) In-state (I) and border provider (B) status. Out of state, non-border providers not shown.

F) Average APR DRG Weight.

G) Billed Amount as submitted without inflation.

H) Estimated cost using FFY 2017 Medicare IPPS PUF cost-to-charge ratio or most currently available HCRIS cost report data (July 2017 release) for providers not participating in IPPS.

I) Full Medicaid Allowed Amount, not reflecting TPL or co-payments.

Appendix B: Arkansas Hospital Association Response

Response from the Arkansas Hospital Association, based on their review of a draft of this report and a hospital stakeholder meeting conducted on December 12, 2017, is included as follows.

ROBERT "BO" RYALL
President & CEO

December 18, 2017

Ms. Cindy Gillespie, Director
Arkansas Department of Human Services
P.O. Box 1437 (Slot S295)
Little Rock, Arkansas 72203-1437

Director Gillespie:

The Arkansas Hospital Association (AHA), on behalf of its 100 member organizations and their combined 45,000-plus employees, appreciates the opportunity to comment on the inpatient All-Patient Refined Diagnosis Related Groups (APR-DRG) study and the potential impact to Arkansas hospitals from the proposed change to the Arkansas Medicaid reimbursement methodology for inpatient hospital stays.

As a membership organization with a mission to safeguard hospitals' operational effectiveness in advancing the health and well-being of their communities, the AHA has significant concerns about the adequacy and sufficiency of the reimbursement rates Arkansas Medicaid pays to Arkansas's hospitals. In fact, based on the most current data available, traditional Arkansas Medicaid rates only reimburse the state's hospitals for 65% of costs[1]. AHA's concern is first and foremost with payment levels, rather than payment methods. The proposed reimbursement methodology change from the current per diem-based rate to the APR-DRG methodology will not address or ameliorate the long-standing underpayments for inpatient hospital services by the Medicaid agency. Rather, it merely results in a redistribution among the state's hospitals of an already significantly inadequate funding amount.

AHA is concerned that continued insufficient Medicaid reimbursement rates for inpatient hospital services will ultimately harm access to needed hospital services for the state's most vulnerable populations. Under federal Medicaid law, the state Medicaid agency is required to ensure that payment rates are adequate to ensure that Medicaid beneficiaries have the same access to care as others in the community[2]. If hospitals continue to receive such significant underpayments from Medicaid, it could have negative implications for Medicaid enrollees' access to essential care.

[1] BKD, LLP, "Preserving the Arkansas Health Care Safety Net through Reasonable Reimbursement for Hospitals: Follow-up to Studies of Arkansas Medicaid Hospital Reimbursement of 2002, 2004, 2006, & 2012, using 2013 Data", BKD LLP study for the Arkansas Hospital Association, 2015. These rates do not include supplemental payments that partially offset losses through the Provider Assessment Program.
[2] 42 U.S.C. 1396a(a)(30)(A).

Policy decisions regarding payment parameters (excluded services and providers, outlier policies, transfer policies, policy adjustors) will have implications for hospital payment rates and these decisions may have down-stream implications for access to care. Exemptions for certain providers (such as critical access hospitals and other safety-net hospitals) may be required to ensure continued access to care. Additionally, policy adjustments may be needed to ensure continued access to certain services. The APR-DRG reimbursement system is based on acuity and reimburses more for high acuity cases. In some cases, this would provide increased reimbursement (e.g. joint replacement surgeries where the current Medicaid reimbursement system does not cover the cost of implants used in the surgery); however, other low-acuity, essential services could be reimbursed at a lower rate. One example is maternity services. Arkansas Medicaid is the primary payer of births in the state of Arkansas and, according to the most recent data, pays for approximately 60% of all births in the state[3]. Most childbirths are lower acuity and the reimbursement under the APR-DRG (without a pediatric adjustment) would result in a reduction in payment to Arkansas's hospitals for these essential services. Many states have recently seen a reduction in access to maternity care, particularly in rural areas[4], and AHA worries that without appropriate policy adjustments to the base APR-DRG reimbursement model, Arkansas could also experience unintended consequences, such as a reduction in access to maternity care. Similarly, adjustments for graduate medical education (both MD and DO programs) would be needed to avoid exacerbating the state's healthcare workforce shortage.

Aside from the significant challenges and resources needed to finalize an agreed upon APR-DRG system (defining exemptions, determining weights, selecting appropriate policy adjustors), implementing a new payment methodology would require additional administrative capacity and resources and would increase administrative costs for both DHS and hospitals. AHA has concerns both about DHS internal capacity – given the numerous and high priority initiatives the Department is currently undertaking (Arkansas Works revisions, MMIS conversion, possible transition to a new eligibility platform) – and of the state's hospitals to absorb the additional costs and ability to obtain the sophisticated coding expertise the APR-DRG system would require.

The state's hospitals are already overwhelmed by excessive regulatory requirements. In fact, a recent study commissioned by the American Hospital Association found that hospitals are required to comply with 629 discrete regulatory requirements across nine areas from four different federal agencies. Regulatory compliance costs an average-sized community hospital $7.6 million annually, and this equates to $1,200 every time a patient is admitted to a hospital. Reducing hospitals' administrative burden would enable providers to focus on patient care, and

[3] Arkansas Department of Human Services, Arkansas Medicaid Program Overview, SFY 2016. Available from: https://www.medicaid.state.ar.us/Download/general/MOBSFY2016.pdf.

[4] Hung, P., Kozhimannil, K. B., Casey, M. M. and Moscovice, I. S. (2016), Why Are Obstetric Units in Rural Hospitals Closing Their Doors?., Health Serv Res, 51: 1546–1560. doi:10.1111/1475-6773.12441.

reinvest resources to improve care, improve health and reduce costs[5]. The payment methodology transition would add to, rather than reduce, hospitals' administrative burdens and would do so without necessarily improving quality of care.

Lastly, it is imperative that payment levels and not just payment methods, are considered as the state reviews hospital reimbursement issues. We sincerely look forward to working collaboratively with DHS to ensure that any approved changes to the Arkansas inpatient hospital reimbursement system are designed and implemented appropriately. Should the transition be pursued, AHA feels strongly that adequate implementation time would be required along with a phased-in approach that provides appropriate payment safeguards for hospitals (such as transitional funding and payment corridors). Payment methodology transition will succeed only if a strong and on-going collaborative process is used before decisions are finalized. Adequate time for a robust educational process would also be needed. We feel confident that DHS and Arkansas hospitals share the goal of promoting access to quality inpatient hospital services and ensuring that Arkansas's hospitals remain viable and continue to serve efficiently and effectively as the safety net for our healthcare system.

Sincerely,

Bo Ryall

BR/ae

[5] American Hospital Association, "Regulatory Overload: Assessing the Regulatory Burden on Health Systems, Hospitals and Post-acute Care Providers", October 2017. Available from: http://www.aha.org/content/17/regulatory-overload-report.pdf.

Appendix C: Supporting Data

CMS Wage Index by CBSA (FY18) - Arkansas

CBSA	Area Name	Wage Index	Reclassified Wage Index
22220	Fayetteville-Springdale-Rogers, AR-MO	0.8619	0.8619
22900	Fort Smith, AR-OK	0.7195	
26300	Hot Springs, AR	0.8733	0.8521
27860	Jonesboro, AR	0.7809	0.7809
30780	Little Rock-North Little Rock-Conway, AR	0.8296	0.8160
32820	Memphis, TN-MS-AR	0.8764	0.8521
33740	Monroe, LA		0.7996
38220	Pine Bluff, AR	0.7893	
44180	Springfield, MO		0.8353
45500	Texarkana, TX-AR	0.8198	
04	ARKANSAS	0.7195	

Source: CMS Final Rule, Table 3-Correction Notice Wage Index Table by CBSA-FY 2018

County to Region Assignment

County Name	County Code	Region
Arkansas	1	4 - South East
Ashley	3	4 - South East
Baxter	5	1 - North West
Benton	7	1 - North West
Boone	9	1 - North West
Bradley	11	4 - South East
Calhoun	13	3 - South West
Carroll	15	1 - North West
Chicot	17	4 - South East
Clark	19	3 - South West
Clay	21	2 - North East
Cleburne	23	2 - North East
Cleveland	25	4 - South East
Columbia	27	3 - South West
Conway	29	1 - North West
Craighead	31	2 - North East
Crawford	33	1 - North West
Crittenden	35	2 - North East
Cross	37	2 - North East
Dallas	39	3 - South West
Desha	41	4 - South East
Drew	43	4 - South East
Faulkner	45	5 - Central
Franklin	47	1 - North West
Fulton	49	2 - North East
Garland	51	3 - South West
Grant	53	4 - South East
Greene	55	2 - North East
Hempstead	57	3 - South West
Hot Spring	59	3 - South West
Howard	61	3 - South West
Independence	63	2 - North East
Izard	65	2 - North East
Jackson	67	2 - North East
Jefferson	69	4 - South East
Johnson	71	1 - North West
Lafayette	73	3 - South West
Lawrence	75	2 - North East
Lee	77	4 - South East
Lincoln	79	4 - South East
Little River	81	3 - South West
Logan	83	1 - North West
Lonoke	85	5 - Central

County Name	County Code	Region
Madison	87	1 - North West
Marion	89	1 - North West
Miller	91	3 - South West
Mississippi	93	2 - North East
Monroe	95	4 - South East
Montgomery	97	3 - South West
Nevada	99	3 - South West
Newton	101	1 - North West
Ouachita	103	3 - South West
Perry	105	5 - Central
Phillips	107	4 - South East
Pike	109	3 - South West
Poinsett	111	2 - North East
Polk	113	3 - South West
Pope	115	1 - North West
Prairie	117	2 - North East
Pulaski	119	5 - Central
Randolph	121	2 - North East
Saline	125	5 - Central
Scott	127	1 - North West
Searcy	129	1 - North West
Sebastian	131	1 - North West
Sevier	133	3 - South West
Sharp	135	2 - North East
St Francis	123	2 - North East
Stone	137	2 - North East
Union	139	3 - South West
Van Buren	141	1 - North West
Washington	143	1 - North West
White	145	2 - North East
Woodruff	147	2 - North East
Yell	149	1 - North West
All other	All other	Border