

All Patient Refined – Diagnosis Related Groups (APR-DRG) System

Puerto Rico Plan Vital

June 20, 2024

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Agenda

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Introductions

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Introductions - Roles

ASES



The Government Entity administering the health insurance system and the transition to an APR-DRG methodology.

Mercer



Actuarial firm contracting with ASES to design, develop and implement the APR-DRG system in Plan Vital. Providing consulting support through implementation.

Solventum
(formerly 3M)

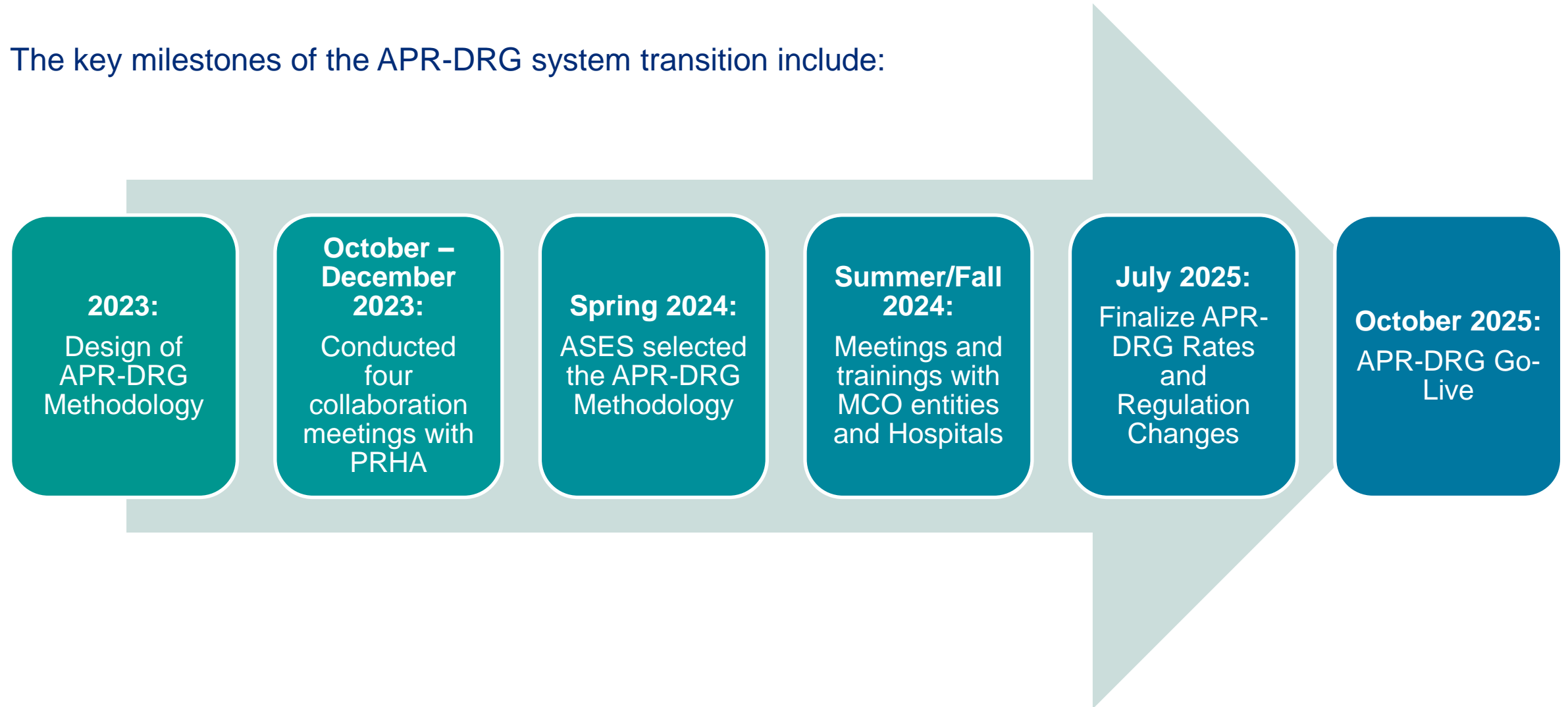


An organization that develops state or territory specific APR-DRG reimbursement software, including testing the APR-DRG software that is used by agencies, hospitals and health plans for inpatient hospital payment.

APR-DRG Methodology in Plan Vital

Milestones (2023-2025)

The key milestones of the APR-DRG system transition include:

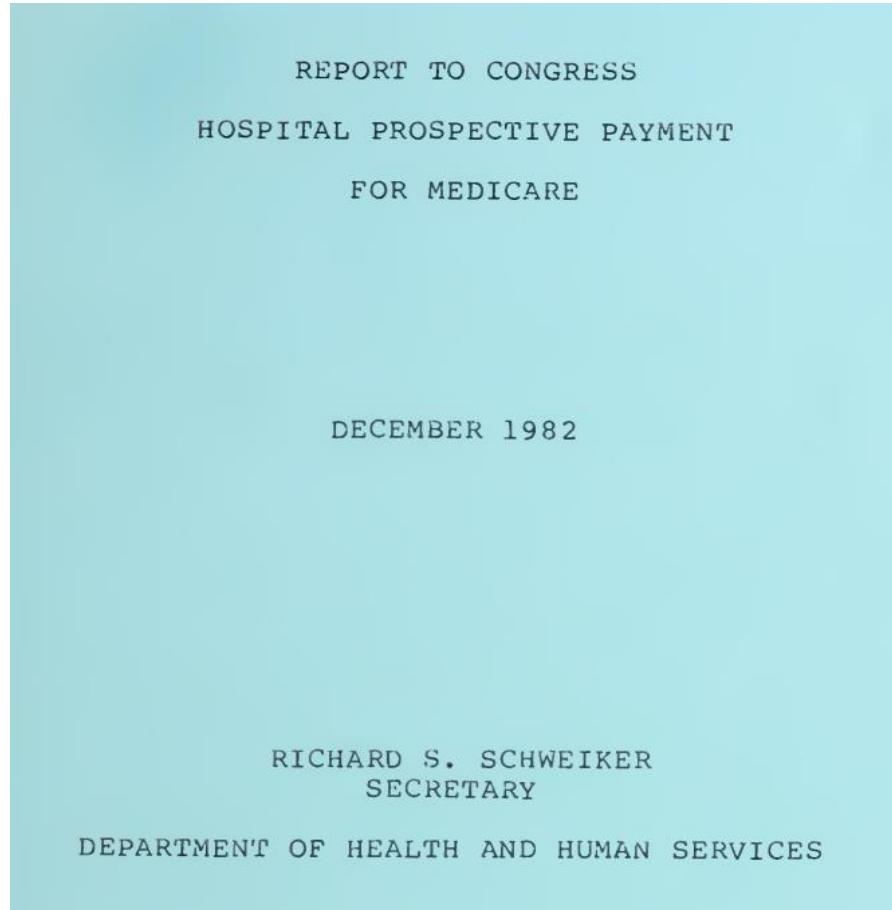


How Did We Get Here?

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Adoption of APR-DRG Methodology in Plan Vital

Guiding Principles – Adoption of Medicare IPPS Using DRGs

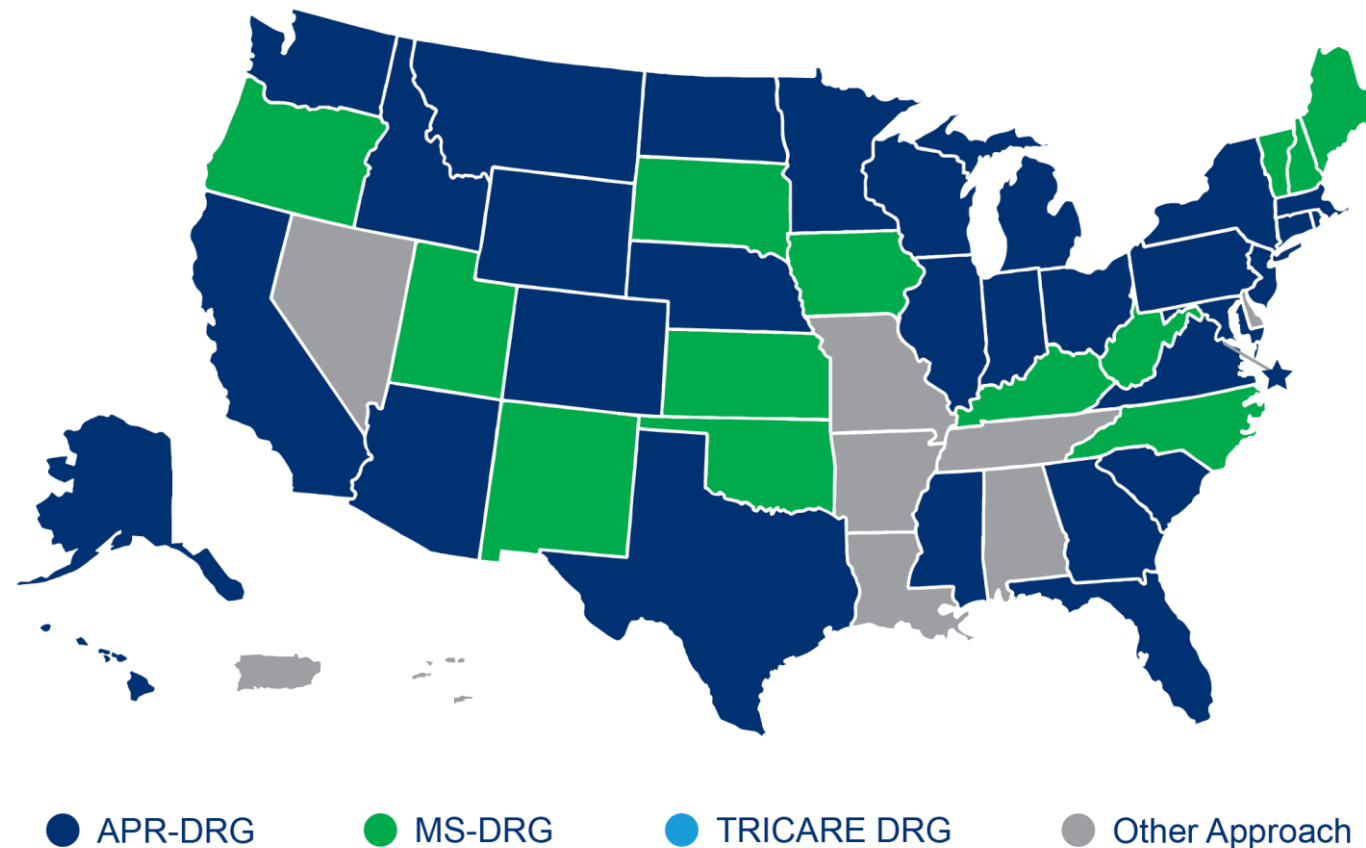


- **DRGs is a classification system that groups inpatient discharges for payment purposes and was originally adopted by Medicare in 1983.**
- **The DRG approach to prospective payments has the following advantages:**
 - It is easy to understand and simple to administer.
 - It can be implemented quickly.
 - It ensures both hospitals and the federal government a predictable payment for services.
 - It establishes the federal government as the prudent buyer of services.
 - It reduces the administrative burden on hospitals and provides rewards to hospital administrators to operate efficiently.
 - It will result in improved quality of care as hospitals begin to specialize in what they do best.
 - Beneficiary liability will be limited to the coinsurance and deductible payments mandated by Congress.

Adoption of APR-DRG Methodology in Plan Vital

Guiding Principles – Adoption of DRGs in Medicaid Programs

Medicare and most state Medicaid programs reimburse hospitals for inpatient services using prospective payments — specifically DRGs.



Adoption of APR-DRG Methodology in Plan Vital

Guiding Principles – FOMB Fiscal Plan Regarding DRGs

New Fiscal Plan for Puerto Rico

Restoring Growth and Prosperity

As Certified by The Financial Oversight and
Management Board for Puerto Rico

April 19, 2018

Reinvestment in health outcomes:

- “Reinvestment in ensuring success of healthcare reforms total \$353 million from FY 2018 to FY 2020, funded through increased revenues generate through labor reforms.”
- “Healthcare reinvestment is aimed at improving health outcomes for citizens who are most in need.”
- “Such expenditures will drive improved quality of life for Medicaid recipients and serve to control long term costs.”
- “Reinvestment areas include...:
 4. Developing value-based care models in conjunction with MCOs that will reduce long-term costs; for example, ensuring necessary infrastructure in place to implement Diagnosis Related Groups (DRG)⁶⁴ and High Cost, High Need (HCHN) coordination models.”

Adoption of APR-DRG Methodology in Plan Vital

Guiding Principles – FOMB Fiscal Plan Regarding DRGs

2020 Fiscal Plan for Puerto Rico

Restoring Growth and Prosperity

As certified by the Financial Oversight and Management
Board for Puerto Rico

May 27, 2020

As stated in the 2020 Fiscal Plan, ASES began development of a Diagnosis Related Group (DRG)-based payment model for the following purposes:

- Reimburse hospitals “a fixed amount to fully treat a patient with a given medical condition.”
- “[H]elp control medical costs by incentivizing providers to deliver cost-effective care without sacrificing quality.
“[I]mprove the effectiveness of Medicaid service delivery by standardizing the measurement of patient acuity across providers and reducing the administrative burden associated with reimbursements.”

ASES will begin testing this payment model in 2020 ahead of a launch in July 2021.

Adoption of APR-DRG Methodology in Plan Vital

Creation of the Short-Term Acute Care (STAC) Hospital Directed Payment

Primary Goals of the STAC Directed Payments:

ASES issues Normative Letter 20-1130 on November 30, 2020, providing instructions to the Plan Vital MCOs on the directed payment for short-term acute care (STAC) services provided by Puerto Rico hospitals during the period of January 1, 2020 through September 30, 2021.

To sustain access to inpatient hospital services under the Plan Vital program—particularly given the COVID-19 public health emergency

To support payment and delivery system transformation activities, including administrative and operational costs associated with transitioning to a DRG-based payment system for inpatient services

To incentivize hospitals to code completely and accurately (in preparation for the implementation of the DRG-based payment system) by incorporating a DRG case-mix component in the funds distribution formula

STAC Directed Payments (January 2020 – September 2024)

\$522 million

Source: ASES Normative Letter 20-1130

https://www.asespr.org/wp-content/uploads/2022/04/Normative-Letter-20-1130-SOP-STAC_Hospital-State-Directed-Payment.pdf

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Adoption of APR-DRG Methodology in Plan Vital

Guiding Principles – FOMB Fiscal Plan Regarding DRGs

2021 Fiscal Plan for Puerto Rico

**Restoring Growth
and Prosperity**

**As certified by the Financial Oversight and Management
Board for Puerto Rico**

April 23, 2021

ASES postponed the “go-live” date to October 2021, due to the “delicate position hospitals were in during” the COVID-19 pandemic.

Source: 2021 Fiscal Plan for Commonwealth of Puerto Rico, Page 245. 2022 Fiscal Plan for Commonwealth of Puerto Rico, Page 290
<https://oversightboard.pr.gov/fiscal-plans/>

2022 Fiscal Plan for Puerto Rico

**Restoring Growth
and Prosperity**

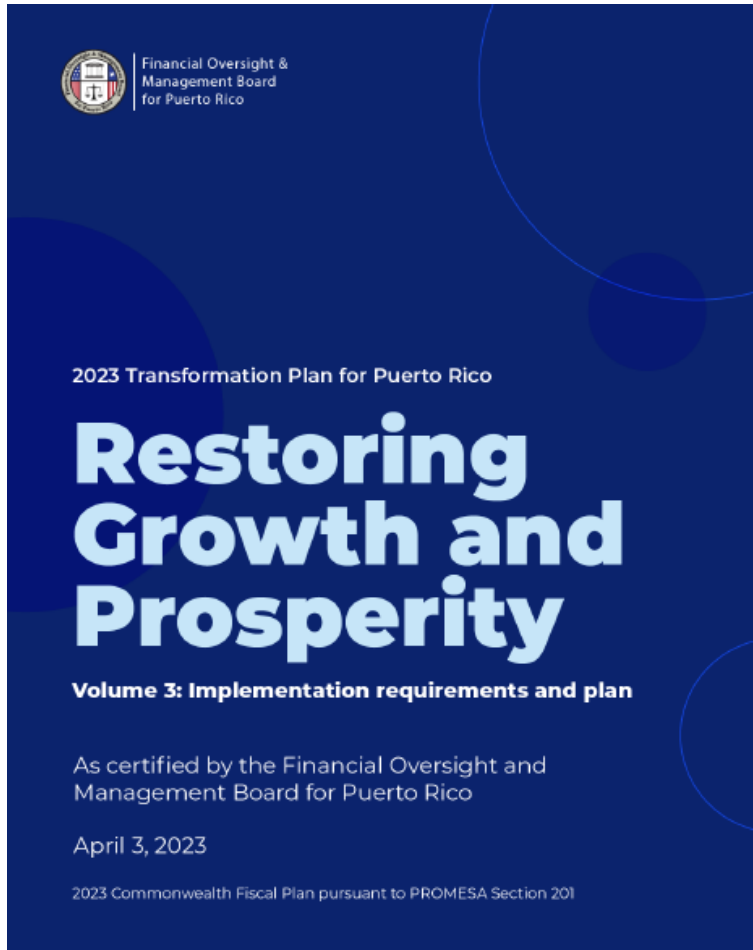
**As certified by the Financial Oversight and Management
Board for Puerto Rico**

January 27, 2022

ASES postponed the “go-live” date to October 2022, due to the “delicate position hospitals were in during” the COVID-19 pandemic.

Adoption of APR-DRG Methodology in Plan Vital

Guiding Principles – FOMB Fiscal Plan Regarding DRGs



ASES postponed the implementation of the DRG methodology until October 1, 2024, based on the Required implementation actions for Medicaid reform table on Volume 3, page 171 of the 2023 Fiscal Plan.

Adoption of APR-DRG Methodology in Plan Vital

Implementation Extension for DRG Methodology

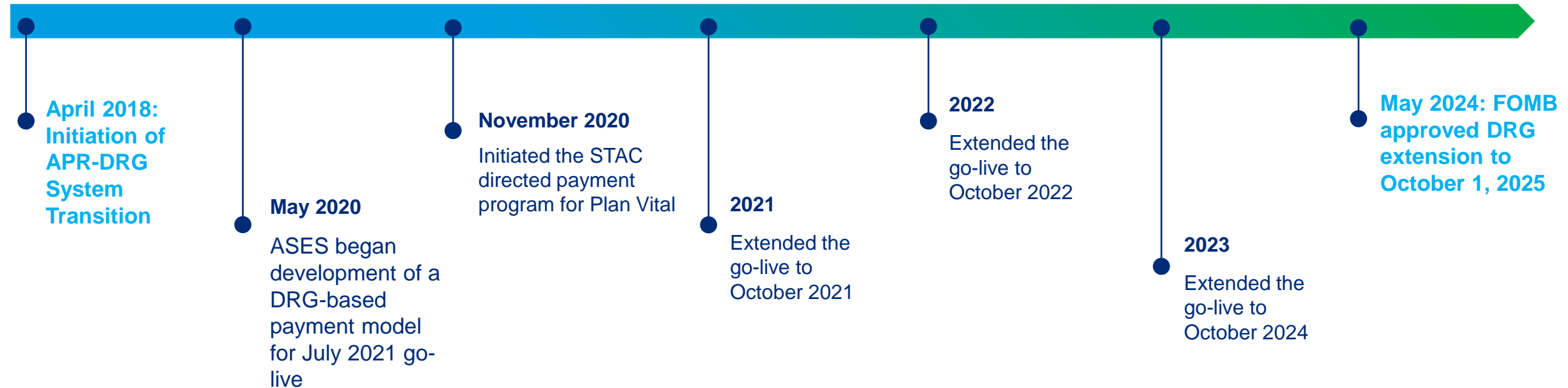


- ASES requested an extension for implementation of the DRG methodology on March 6, 2024.
- **FOMB granted approval on May 2, 2024, for the implementation of the DRG methodology to be extended to October 1, 2025.**
- FOMB acknowledges the “efforts that ASES and the Puerto Rico Hospital Association have made for the implementation of this payment model.”

Adoption of APR-DRG Methodology in Plan Vital

Timeline

Overall, below is the timeline for DRG implementation in Puerto Rico from 2018 to today:



Overview of All Patient Refined Diagnosis Related Groups (APR-DRG)



Introduction to APR-DRGs

APR-DRGs are the industry's leading clinical methodology for inpatient prospective payment system that enable resource utilization alignment and drive quality insights.



Clinically Meaningful

Classifies inpatient services based on clinical similarities and use of hospital resources by severity of illness and risk of mortality



All Populations

Developed to work across all populations including newborns, pediatrics, maternity, complexity and behavioral health



Flexible

Integrates with payment*, quality and cost-efficiency programs to drive improvements in clinical outcomes and operational efficiencies



Accurate

Clinical categorical approach allows for accurate prospective payment that align with resource utilization



Transparent

Detailed clinical logic, hierarchies and specifications are published in APR-DRG definitions manual which is updated regularly by Solventum's clinical experts

**There is no requirement for providers to purchase APR DRGs to receive claims payment.*

APR-DRG: Streamlined Payments & Rate Adjustments

Create fair comparisons of resource use

APR-DRGs cover all IP services to comprehensively categorize and bundle where appropriate.

Code updates are accounted for as released.

Severity adjustments take patient acuity into account so facilities with a complex case mix are accounted for in groupings.

An ICU indicator can show where the intense care may be needed or not.

Risk-adjustment for quality measures:

- Risk of Mortality (ROM)
- Potentially Preventable Complications (PPC)
- Potentially Preventable Readmissions and ED Visits (PPR & PPR ED)

APR-DRG Benefits Beyond Payment

Efficiency

- There are a manageable number of DRGs which encompass all patients seen on an inpatient basis.
- The patient characteristics used in the definition of the DRGs are limited to information routinely collected on hospital abstract systems.

Insights for Resource Management

- Each DRG contains patients with a similar pattern of resource intensity.
- Each DRG contains patients who are similar from a clinical perspective.
- Service line groupings yield standardization of payment, length of stay, cost center, and mortality across service lines which supports meaningful improvements in delivery of care as well as cost savings.

Insights for Utilization, Cost, & Quality

- Surgical mortality indicator enables accountability for safety and quality across physicians and facilities
- Closely integrated with methodologies used to measure hospital performance (complications, readmissions, mortality).


ICU Severity Indicator

- Improve ICU utilization of resources with this quality and cost efficiency measure.

Admission DRG

- Only utilizes conditions present on admission to allow for better risk stratification when evaluating complication and mortality rates.
-

APR-DRG Classification Data Elements



SOI and ROM depend on the patient's underlying problems.
High SOI and ROM are characterized by multiple serious diseases and the interaction among those diseases

Pre-MDC transplant, ECMO, etc.

Major Diagnostic Category (MDC)

- 01 Nervous System
- 02 Eye
- ...
- 24 HIV Infection
- 25 Trauma

Not assigned to MDC
(Dx and PDx Unrelated)



Base DRG

Total = 333
Medical = 194
Surgical = 139
Error = 2

(APR DRG v40 October 2022)



Four Severity of Illness (SOI) subclasses*

Subclass	Severity of Illness
1	Minor
2	Moderate
3	Major
4	Extreme

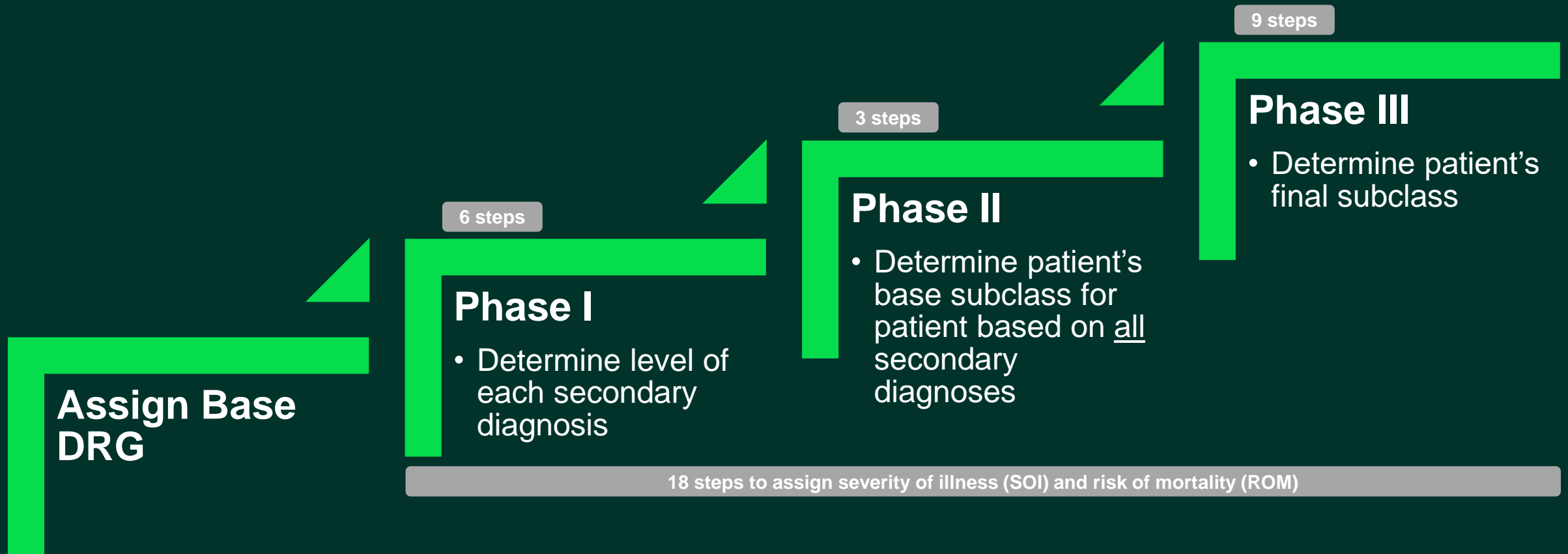
* Severity subclasses have APR DRG weights for each subclass

Four Risk of Mortality (ROM) subclasses**

Subclass	Risk of Mortality
1	Minor
2	Moderate
3	Major
4	Extreme

** Risk of mortality subclasses have benchmark mortality rates

APR-DRG Methodology Process Flow



APR-DRG Software

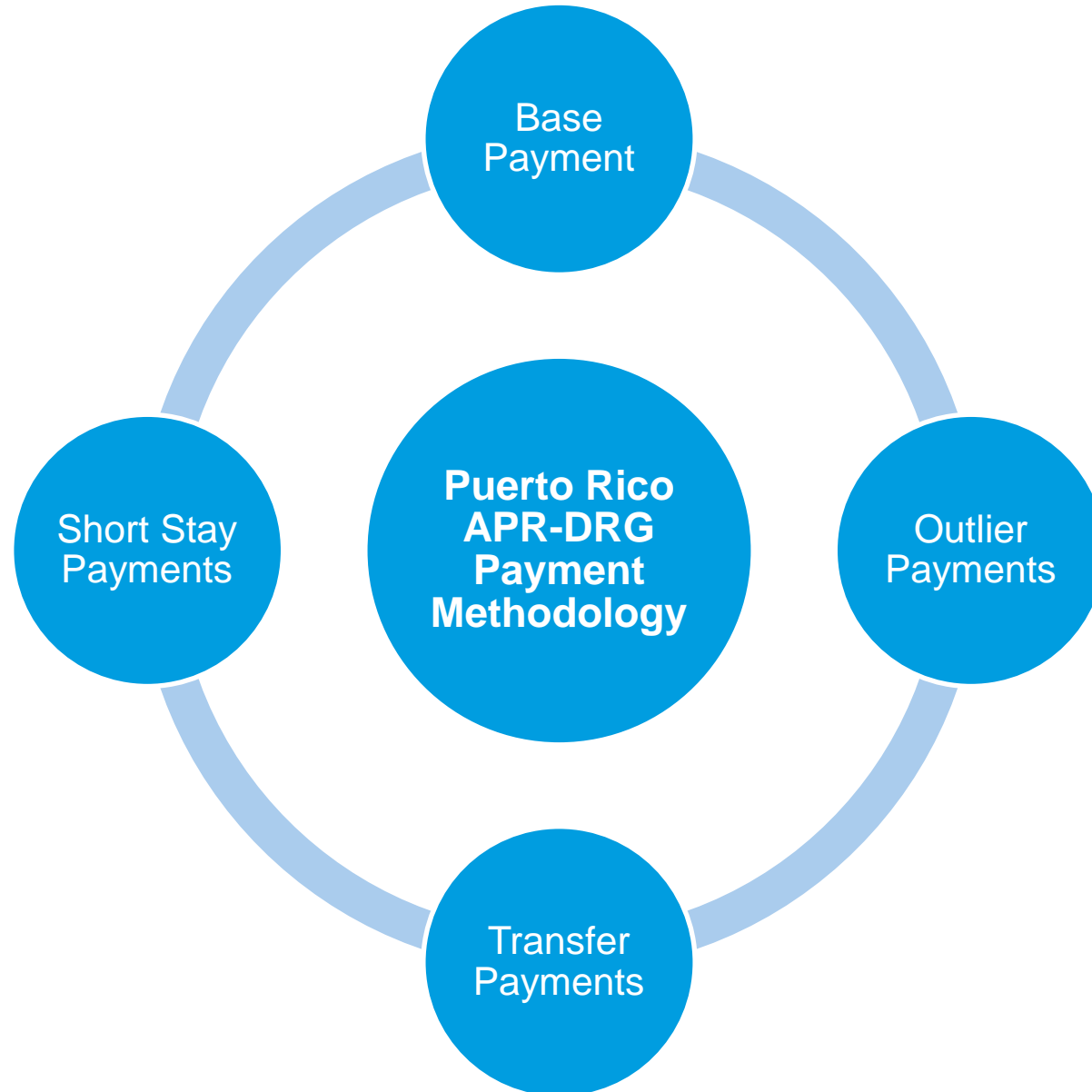
- Typically, several months before “go-live” date, the finalized software is made available to health plans and hospitals that wish to purchase it through the distributor for the island.
- NOTE: Hospitals are not required to purchase software to submit a claim or get paid by the APR-DRG payment method.
- Resources:
 - Patient Classification Methodologies Website (<https://patientclassificationmethodologies.3mhis.com>)
 - APR-DRG Methodology Overview
 - Definitions Manuals
 - Single Claim Interactive Grouper for DRG Assignment Review – users must register with website

More detailed information on APR DRG design and functionality can be found in the Appendix to this presentation.

ASES-Approved APR-DRG Methodology for Implementation



Key Components of the APR-DRG Payment Methodology



APR-DRG Payment Rate Calculations

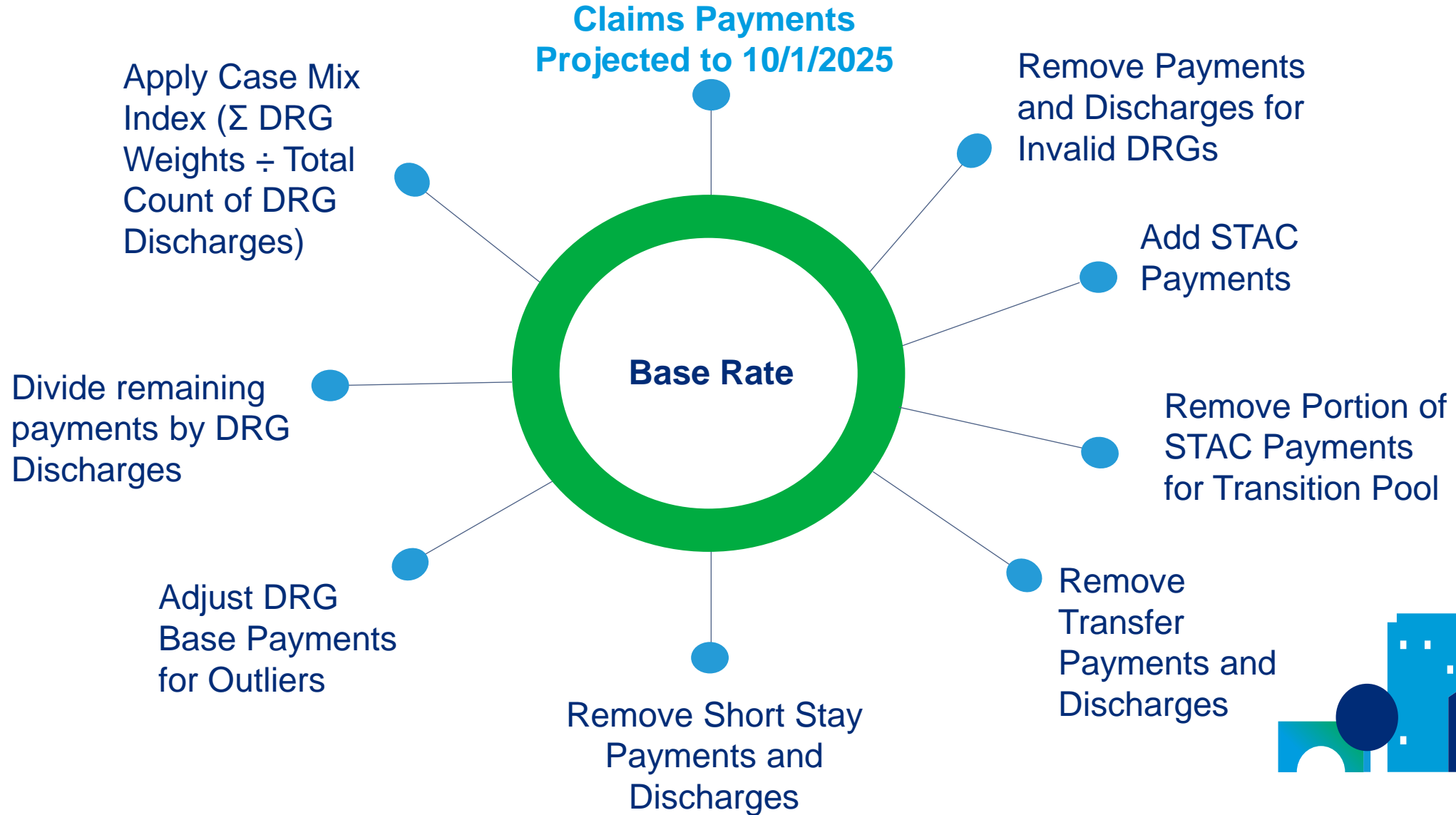
APR-DRG Base Payment Formula

Each inpatient hospital discharge receives a base payment.



- **Base Rate** – Standard dollar amount developed in program design. Can be a statewide rate, hospital-specific rates or peer group rates.
- **Relative Weight** – A factor that represents the average resource needs of the DRG. 3M develops national weights using data from all payers.
- **Policy Adjusters** – Options to enhance the base payment for specific providers and/or services, such as trauma providers or neonate DRGs.

Components of Base Rate Development

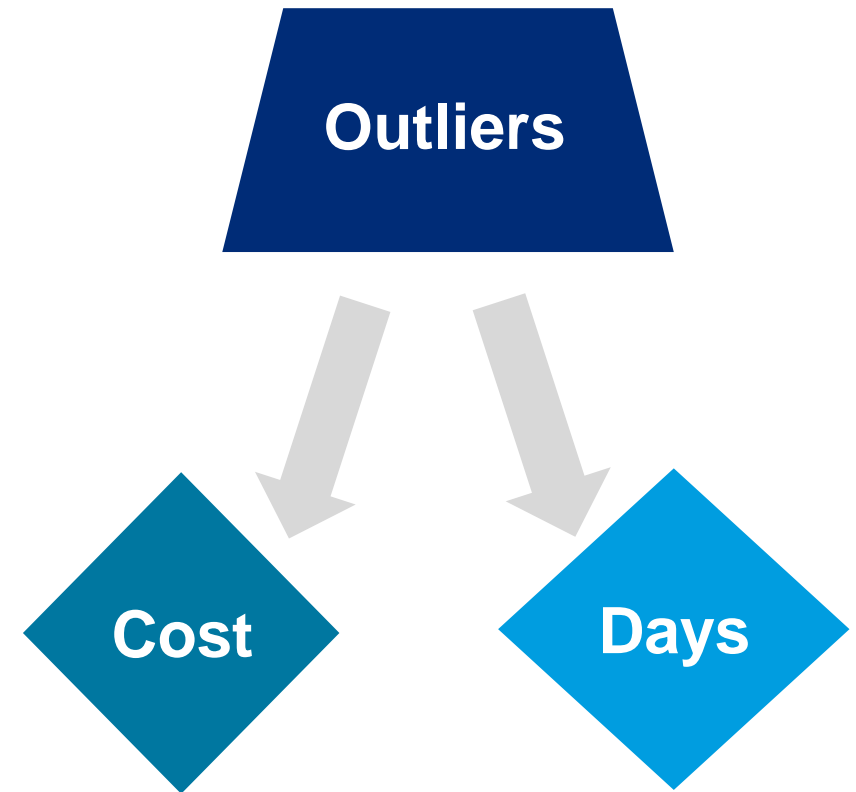


APR-DRG Special Payment Mechanisms

Options Available for Outliers

Outlier payments compensate hospitals on a fixed amount per DRG discharge with extra dollars for patient stays that substantially exceed the typical requirements for patient stays in the same DRG category.

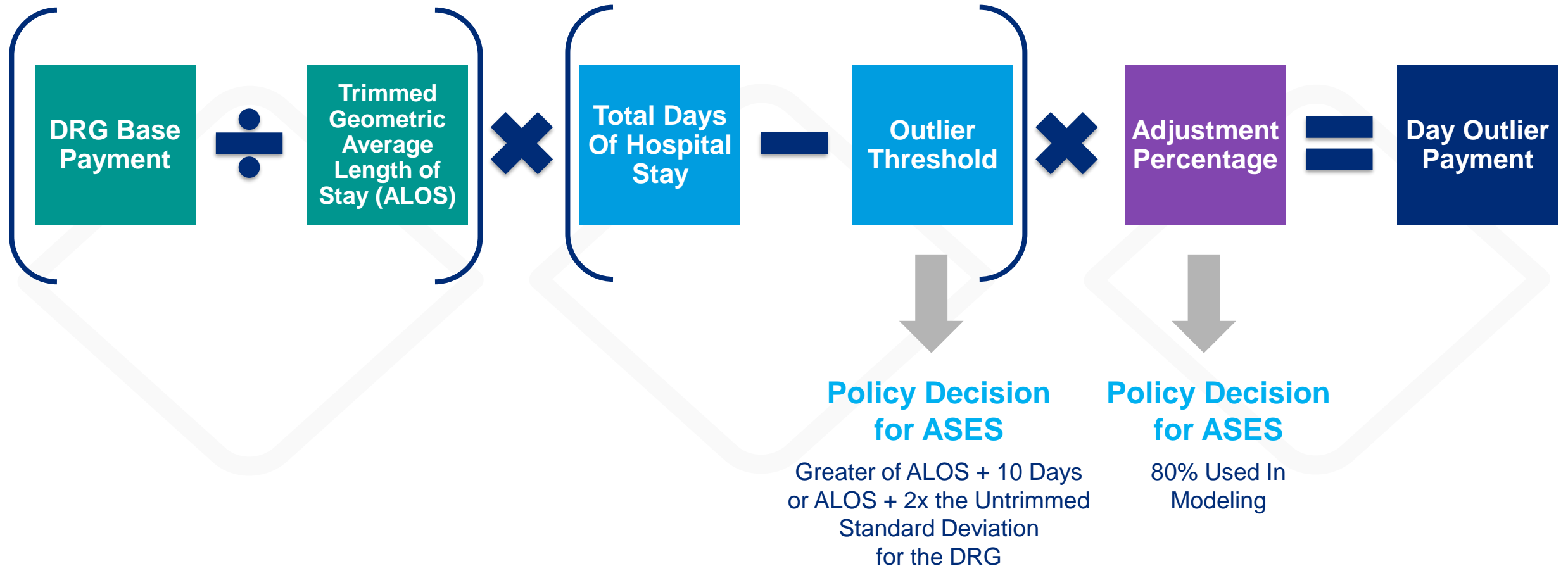
- **Cost Outliers** allow for reimbursement of cost to a hospital above a set cost threshold.
- **Day Outliers** allow for additional reimbursement of days over a set day threshold for the discharge.



APR-DRG Special Payment Mechanisms – Outlier Policy

Day Outlier Payment Formula

ASES-Selected Outlier Approach



APR-DRG Payment Rate Calculations – Examples

Transfer Payment Formula

Hospitals that transfer a patient to another hospital receive a prorated payment.
Determine the eligible stays based on patient discharge status codes 02, 05, 07, or 82.

The payment is the lessor of the following:



Or the calculated DRG Base Payment (Base Payment x DRG Weight).

APR-DRG Methodology Categories

Short Stay Provisions



Description

Policy to reimburse for low-cost, short-stay cases

Short-Stay Considerations:

1. Exclude APR-DRGs 626 and 640 to ensure normal newborns are not impacted with short-stay.
2. Set minimum threshold for cost incurred to ensure payments are not disproportionately high compared to the cost of services provided.
3. Cost based calculations preferred but due to coding issues with claims the application of days will need to be applied.

Threshold

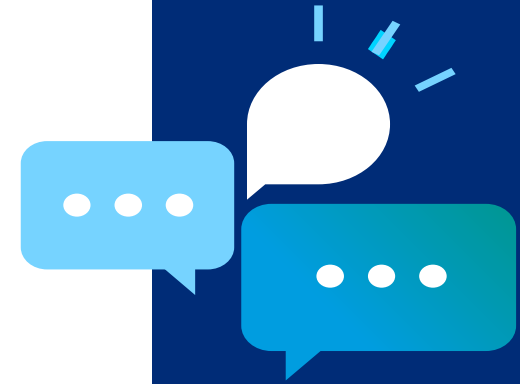
Geometric Trimmed Length of Stay less one standard deviation of the Geometric Trimmed Length of Stay

Calculation

Per Diem calculated based on
 $\text{DRG Base Payment} \div \text{Geometric Trimmed Length of Stay} \times \text{Days}$

Proposed Transition Methodology

APR-DRG Implementation in Plan Vital



Transition

Mercer proposes a transition period to an APR-DRG system to ease the conversion on hospitals from the current system.

The transition approach includes:

- A Transitional Payment Pool to provide additional reimbursement for hospitals with larger decreases in revenue.
 - The Transitional Payment Pool will ensure no hospital is disproportionately harmed in transition from the current per diem methodology to an APR-DRG system due to coding and documentation difficulties.
 - For Year 1 of the APR-DRG system, a portion of the funding traditionally allocated for STAC directed payments will be set aside.
 - The amount of funding in the Transitional Payment Pool will decrease over time.

The primary goal of the Transitional Payment Pool is to provide additional reimbursement to hospitals with larger reductions in payments under the APR-DRG system as compared to the prior system.

Proposed Transition Methodology

APR-DRG Implementation in Plan Vital



At the end of Year 1 of the APR-DRG system, the hospitals will be categorized into 3 groups:

- | | | | |
|---|---|---|--|
| 1 | If total APR-DRG payments are less than 95% of the payments made to the hospital under the prior system* | ▶ | Hospital receives Transitional Payment up to 95% of prior payments |
| 2 | If total APR-DRG payments are between 95% and 100% of the payments made to the hospital under the prior system* | ▶ | Hospital receives Transitional Payment only if funding remains after increasing payments to Group 1 |
| 3 | If total APR-DRG payments exceed 100% of the payments made to the hospital under the prior system* | ▶ | Hospital receives no Transitional Payment |

*Payments made to the hospital under the prior system equals the claim payments + STAC Directed Payments.

Overview of APR-DRG Design

Selected Methodology

Category	Criteria
Simulation Encounter Claim Period	Encounter claims with dates of discharge between January 1, 2021 and December 31, 2022, paid through December 31, 2023
DRG Grouper Version	APR-DRG (Version 40)
DRG Relative Weight Set	National relative weights from APR-DRG (Version 40)
Base Rate	Individual Hospital Base Rates
Short Stay Provisions	Pay a per diem payment for inpatient stays with a length of stay less than the DRG national average length of stay (minus one standard deviation)
Transfer Provisions	Hospital receiving the patient gets the full APR-DRG payment. Hospital transferring the patient gets the payment rate divided by the national average length of stay for the specific APR-DRG, multiplied by the total days of the discharge.
Partial Eligibility Provisions	For discharges that occur after the expiration of eligibility, the hospital shall receive a full APR-DRG payment if the length of stay under Medicaid eligibility is greater than the trimmed geometric average length of stay for the DRG. Outlier provisions will apply for length of stay under Medicaid eligibility. For discharges where the length of stay for Medicaid eligibility is less than the trimmed geometric average length of stay for the DRG, a per diem will be paid for each day under Medicaid eligibility.

Overview of APR-DRG Design

Selected Methodology

Category	Criteria
Outlier Provisions	<ul style="list-style-type: none">• Claims qualifying for an outlier payment must meet the threshold. Those that qualify then get the outlier payment calculation in addition to the standard DRG payment.• The threshold is greater of ALOS + 10 days or ALOS + two standard deviations. Outlier Payment is the hospital-specific average payment per day for APR-DRG times days exceeding the threshold, times 80%.
Policy Adjusters	None Included
Exclusions	<ul style="list-style-type: none">• Transplants• Stays where Admission Date = Discharge (pay under outpatient hospital methodology)• Specific drugs and injectables related to CAR T Cell Therapy, Hemophilia, Gene Therapy, and Long Acting Reversible Contraceptives
Bundling of Outpatient Services Prior to Admission	None Included
Interim Claims	Interim claims have been aggregated into final claim.

Overview of APR-DRG Design

Selected Methodology

Category	Criteria
Healthcare Acquired Conditions (HAC)	Consistent with MCO contractual language, prevent payment for all hospital acquired conditions as identified by Medicare other than deep vein thrombosis (DVT)/ Pulmonary Embolism (PE) following total knee replacement or hip replacement surgery in pediatric and obstetric patients for inpatient hospital services; and any incorrect surgical or other invasive procedure performed on a patient; any surgical or other invasive procedure performed on the incorrect body part; or any surgical or other invasive procedure performed on the incorrect patient for inpatient and non-institutional services.
Transitional Period	<i>Proposed approach under discussion with ASES.</i> Implementing a transition payment pool for Year 1 of APR-DRG system, where a portion of the funding traditionally allocated for STAC directed payments will be set aside, rather than incorporated into the DRG base payments. The transition payment pool will be used to mitigate any negative funding impacts from the change to the APR-DRG system for all facilities. The current withhold amount considered is \$60 million for Year 1.

Data Issues Impacting APR-DRG Payments

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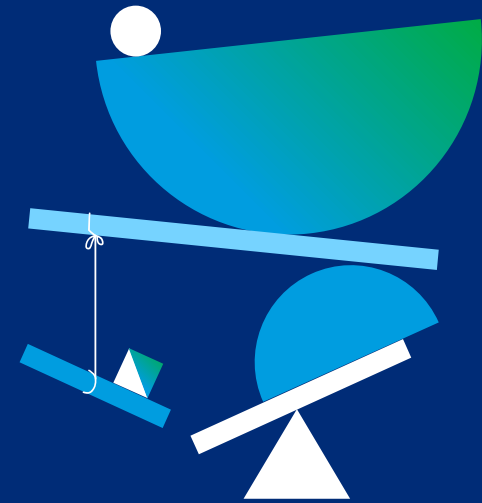
Success of Coding Under APR-DRGs

Quality of Coding is Important

- The success of APR-DRGs ultimately depends on:
 - Complete and accurate coding
 - Clinical specificity = coding specificity
- Documentation and coding must be done for all diagnoses and procedures, not just to the point of full reimbursement.

Examples That Can Cause Claim Denials or Claims Paid at a Lesser Amount Under APR-DRGs

- Severity of Illness and/or Risk of Mortality are not included on the claim.
- Correct Present on Admission (POA) indicator does not exist for each diagnosis on the claim.
- Incorrect Discharge Status identified on the claim.
- Medical necessity is not demonstrated by the documentation accompanying the claim.
- Submitted documentation contains inconsistent information compared to the claim.
- Improper sequencing of diagnosis codes.
- Medical records not certified by the physician.
- Lack of itemized list of all charges.
- Lack of physician progress notes.
- Lack of plan of care.



Plan Vital APR-DRG Simulation Versus National Standards

Severity of Illness

A comparison of the Severity of Illness level in Plan Vital encounter claims assigned using the APR-DRG methodology to those published nationally:

Severity of Illness	Plan Vital - Version 40		National Totals - Version 40		
	Total Count of Claims (CYs 2021 and 2022)	Percent to Total	Total Count of Claims	Percent to Total	Difference
1	109,569	56.4%	4,498,795	34.6%	63.1%
2	60,282	31.1%	4,836,294	37.2%	(16.4%)
3	19,415	10.0%	2,640,152	20.3%	(50.7%)
4	4,806	2.5%	1,032,039	7.9%	(68.7%)
Total	194,200	100.0%	13,007,280	100.0%	

Limitations with Plan Vital Encounter Data

- Hospital claims submitted to MCOs include the necessary information for payment under the current per diem methodology, however, for purposes of APR-DRGs:
 - There are missing or incomplete values on the encounter claims, such as discharge status code and present on admission indicators
 - Not all revenue codes and charges for an inpatient hospital stay are included on the claims
- Unknown age of newborn inpatient stays: Newborn stays are reported with Mother's Medicaid ID.
- MCOs have sub-capitated arrangements for some inpatient hospital services.

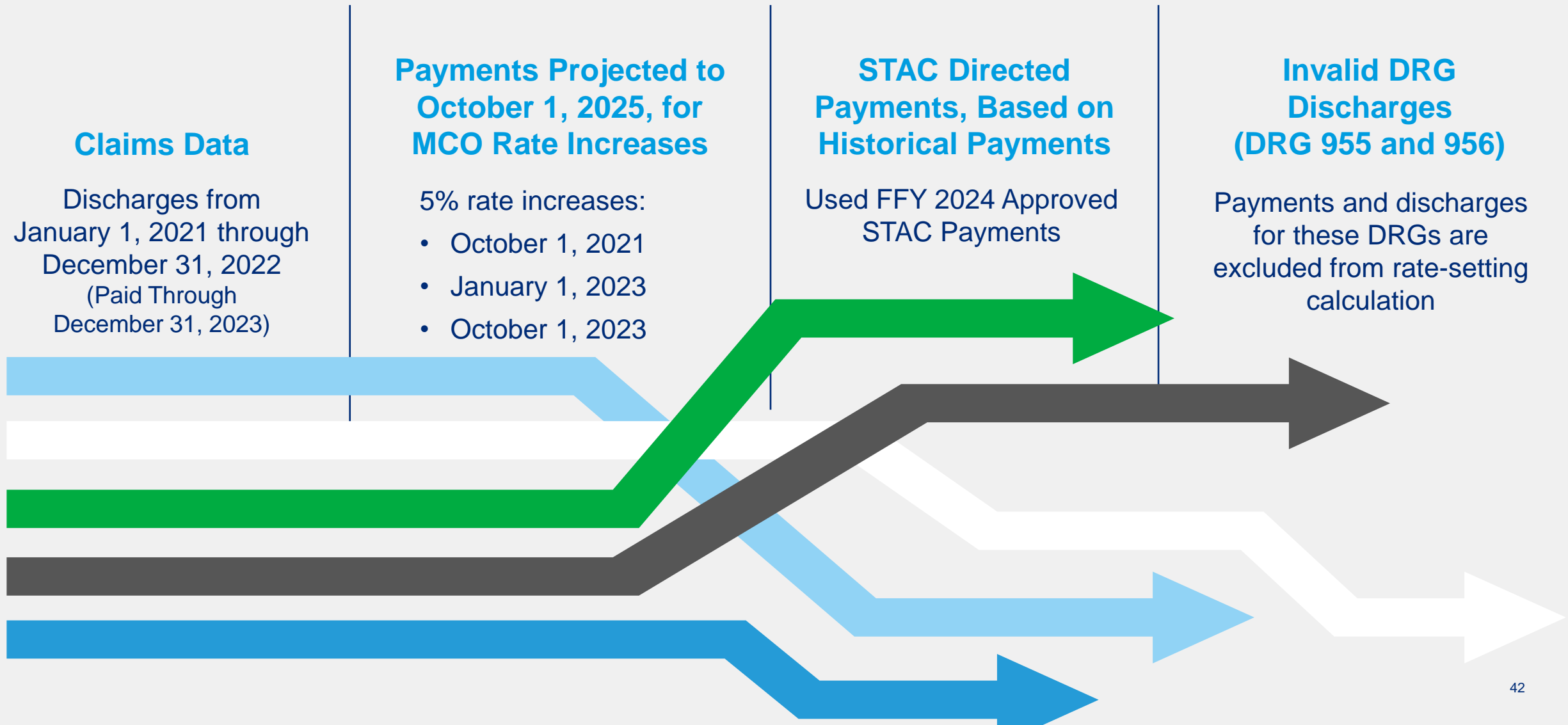


Results of APR-DRG Hospital Modeling

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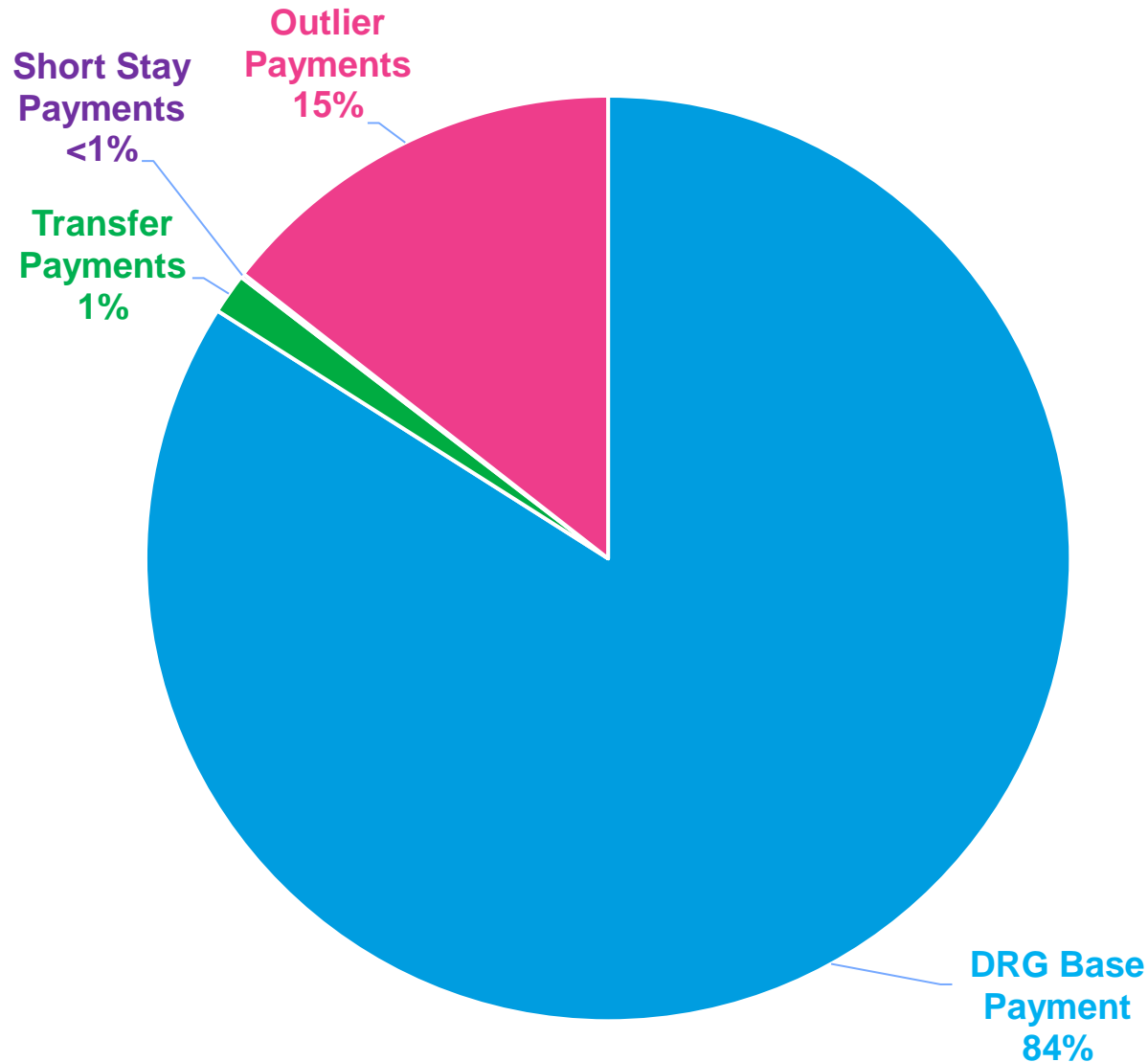
Basis of APR-DRG Payment Simulations

Payment Criteria for Model Simulation



APR-DRG Payment Results

Breakdown by DRG Payment Category

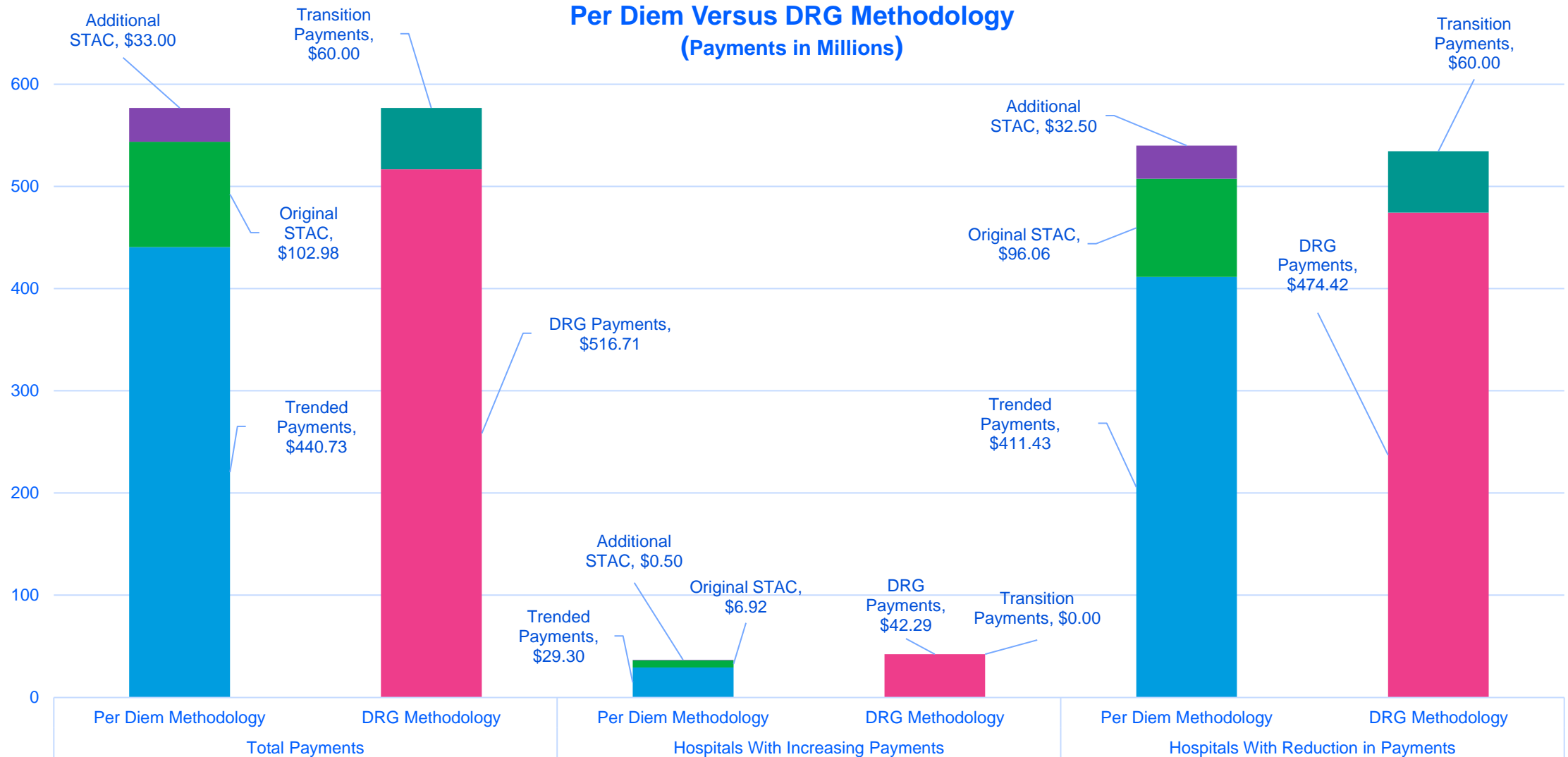


Payments by DRG Payment Category (Annualized)

DRG Payment Type	Amount
DRG Base Payment	\$434,006,318
Transfer Payments	\$7,312,656
Short Stay Payments	\$711,863
Outlier Payments	\$74,680,203
Total DRG Payments	\$516,711,040

APR-DRG Payment Results

Per Diem Methodology versus APR-DRG Results (Payments in Millions)



APR-DRG Payment Results

Breakdown of Hospitals By Base Rates Under APR-DRGs

Per Discharge Base Rates	Number of Hospital IDs	Percentage of Total
Less Than \$5,000	5	10.71%
\$5,000–\$7,000	42	73.21%
\$7,000–\$9,000	7	12.50%
Greater than \$9,000	2	3.57%
Total	56	100.0%

- **Maximum Base Rate:**
\$10,267.38
- **Minimum Base Rate:**
\$4,615.34
- **Reasons for Differences in Base Rates:**
 - *Differences in contracting of hospitals with Plan Vital MCOs.*
 - *Differences in length of stay of discharges by hospital.*

APR-DRG Payment Results

DRG Versus Per Diem: Claim Payments Only

	Number of Hospital IDs	Total DRG Payments	Total Trended Per Diem Payments	Variance	Variance Percentage
Per Discharge Base Rates	(A)	(B)	(C)	(D) = (B) – (C)	(E) = (D) / (C)
Less Than \$5,000	5	\$13,000,127	\$10,853,799	\$2,146,329	19.77%
\$5,000–\$7,000	42	\$349,871,530	\$301,032,396	\$48,839,134	16.22%
\$7,000–\$9,000	7	\$132,127,706	\$114,367,204	\$17,760,502	15.53%
Greater than \$9,000	2	\$21,711,677	\$14,479,279	\$7,232,398	49.95%
Total	56	\$516,711,040	\$440,732,678	\$75,978,362	17.24%

APR-DRG Payment Results

DRG Versus Per Diem (Before Transition Pool): [Claim Payments + STAC Directed Payments](#)

Per Discharge Base Rates	Number of Hospital IDs	Total DRG Payments	Total Trended Per Diem Payments + STAC Directed Payments	Variance	Variance Percentage
	(A)	(B)	(C)	(D) = (B) – (C)	(E) = (D) / (C)
Less Than \$5,000	5	\$13,000,127	\$15,964,986	(\$2,964,859)	(18.57%)
\$5,000–\$7,000	42	\$349,871,530	\$401,265,919	(\$51,394,389)	(12.81%)
\$7,000–\$9,000	7	\$132,127,706	\$141,006,467	(\$8,878,761)	(6.30%)
Greater than \$9,000	2	\$21,711,677	\$18,473,758	\$3,237,919	17.53%
Total	56	\$516,711,040	\$576,711,130	(\$60,000,090)	(10.40%)

Simulation Results for Rate Methodology

DRG Versus Per Diem: Claim Payments + Transition Payments

	Number of Hospital IDs	Total DRG Payments + Transition Payments	Total Trended Per Diem Payments + STAC Directed Payments	Variance	Variance Percentage
Per Discharge Base Rates	(A)	(B)	(C)	(D) = (B) – (C)	(E) = (D) / (C)
Less Than \$5,000	5	\$15,800,058	\$15,964,986	(\$164,928)	(1.03%)
\$5,000–\$7,000	42	\$397,120,589	\$401,265,919	(\$4,145,330)	(1.03%)
\$7,000–\$9,000	7	\$141,262,285	\$141,006,467	\$255,818	0.18%
Greater than \$9,000	2	\$22,528,199	\$18,473,758	\$4,054,441	21.95%
Total	56	\$576,711,131	\$576,711,130	\$1	0.00%

Estimated \$5.6 Million Needed In Additional Funding for All Hospitals to be Budget Neutral

Anticipated Next Steps



Moving Forward

Anticipated Next Steps

June 2024



- Meet with Plan Vital MCO entities to discuss the DRG methodology system and operational changes (system updates with Solventum)
- Meet with hospitals to review DRG methodology system

Late Summer/Fall 2024



- Continued conversations with MCO entities and hospitals
- Training sessions with hospitals related to DRG reimbursement and billing practices

July 2025



- Finalize Rates for Implementation using updated data
- Medicaid Regulation Updates: State Plan Amendment

Moving Forward

Anticipated Next Steps

To finalize the APR-DRG Rates for Implementation:

Update Claims Period:

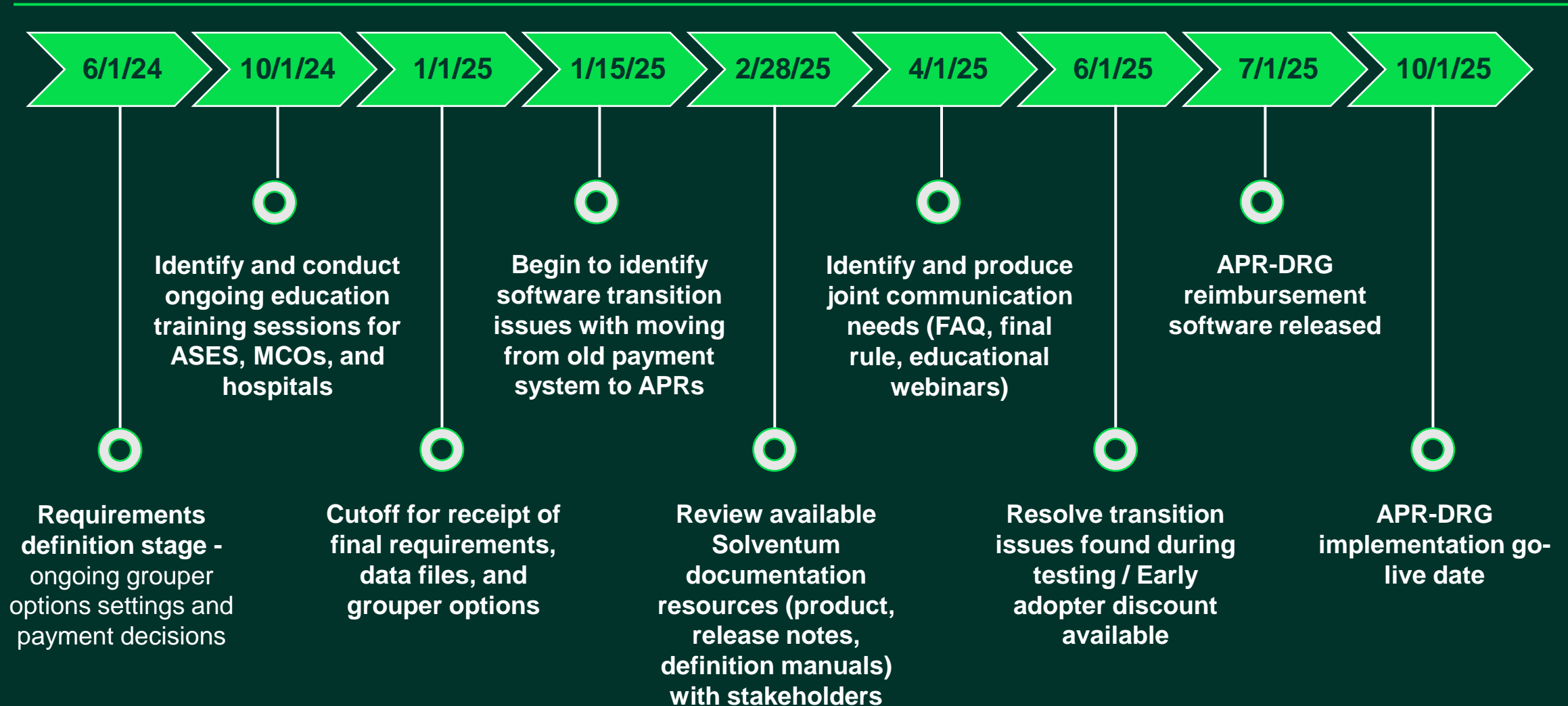
- From discharges Occurring in Calendar Year 2021 and 2022 encounter claims.
- To discharges Occurring in Calendar Year 2022 and 2023 (paid through December 2024)

Update the APR-DRG Grouper to recent version:

Currently using V40

Update the STAC Directed Payments Based on Most Recent Year

Next Steps – APR-DRG Software Development



If you have questions regarding the DRG Implementation, please submit using the form located at the link below:

[Plan Vital APR-DRG Implementation Questions](#)

ADMINISTRACIÓN DE
SEGUROS DE SALUD
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ASES



Appendix

Methodology Comparison

	APR DRG v40.0	MS DRG v41.1
Population	Designed for all populations and cover all inpatient services including maternity, infant and adolescent care	Designed for the Medicare population and Medicare coverage rules. Limited consideration in MS DRG design for newborns, neonatal care, pediatric or maternity populations
# DRGs	1,334 (333 base DRGs x 4 subclasses + 2 error)	772 (770 + 2 error)
DRG Type	Admission & discharge DRG	Only discharge DRG
Specificity	<ul style="list-style-type: none"> • Each base DRG has four severities of illness and risk of mortality: minor, moderate, major, extreme • SOI and ROM calculation varies depending on base DRG and interaction of comorbidities, along with patient age 	<ul style="list-style-type: none"> • Standard list of CCs and MCCs across base DRGs • Some base DRGs stand alone, some have base DRG + CC, some have base + CC + MCC • No splits by age
Quality Analysis	<ul style="list-style-type: none"> • DRG assignment is independent of mortality • Surgical Mortality Indicator • ICU Intensity Indicator • Admission DRG is risk adjustor for Risk of Mortality and Potentially Preventable Complications • Discharge DRG is risk adjustor for Potentially Preventable Readmissions 	<ul style="list-style-type: none"> • DRG assignment depends in part on mortality (MS DRGs not intended for use in measuring mortality) • Limited list of hospital-acquired conditions

Severity of Illness (SOI) and Risk of Mortality (ROM) are Independent

- The SOI and ROM subclasses are calculated separately and may be different from each other.
 - SOI reflects clinical characteristics and typical use of hospital resources.
 - ROM reflects clinical characteristics including age and mortality incidence.
- SOI and ROM depend on the patient's reason for admission (i.e., the base APR-DRG).
 - No single CC or MCC list.
- High SOI and ROM reflect multiple serious diseases and their interaction, especially across body systems.



SOI=3 Significant Organ
Decompensation

ROM=1 Low Risk of Mortality

Example of Severity of Illness Progression of Diagnosis

Four patients have pneumonia, but with differing secondary diagnoses

	Description	Patient 1	Patient 2	Patient 3	Patient 4
PDx	Viral Pneumonia, Unspecified	J129	J129	J129	J129
SDx1	Unspec Diastolic (Congestive) Heart Failure		I5030	I5030	I5030
SDx2	Acute Respiratory Failure with Hypoxia			J9601	J9601
SDx3	Cerebral Infarction, Unspecified				I639
MS DRG	Simple Pneumonia and Pleurisy	195	194 (w/CC)	193 (w/MCC)	193 (w/MCC)
	Relative Weight (v40)	0.6224	0.8191	1.3236	1.3236
APR DRG	Other Pneumonia	139-1	139-2	139-3	139-4
	Relative Weight (v40)	0.3917	0.5272	0.7526	1.1861

Notes:

- Dx = principal diagnosis, SDx=secondary diagnosis, CC=complication/comorbidity, MCC=major CC
- Actual payment rates equal the relative weight times a base rate, which varies from payer to payer
- MS DRG and APR DRG relative weights are on different scales; therefore, the absolute values are not comparable