CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES

REVIEW OF SFYS 2013-14 AND 2014-15 UTILIZATION AND PAYMENT

Prepared by Conduent for the Medi-Cal DRG Project

Version 1.2

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Feedback, questions, or general comments? Send e-mail to:

drg@dhcs.ca.gov

CONDUENT
Payment Method Development
34 N. Last Chance Gulch
Helena, MT 59601

Letter of Transmittal

July 06, 2017

Belinda Rowan
Chief Provider Payments and Policy Branch
Department of Health Care Services
State of California
1501 Capitol Avenue, MS 4504
Suite 71.3024
Sacramento, California 95899-7436

RE: Medi-Cal DRG Project: Review of SFYs 2013-14 and 2014-15 Utilization and Payment

Dear Belinda:

It is our pleasure to submit this documentation of inpatient payment during the first two years of the DRG payment method. We performed this work under the payment method development (PMD) consulting statement of work described in FI letter A-6214 dated July 21, 2016.

In performing our work, we have benefited greatly from the close collaboration we have enjoyed with Department staff and especially the DRG section. Members of the Department of Health Care Services (DHCS) and Conduent policy project teams are listed below.

We also would like to acknowledge our use of the APR-DRG grouping software created, owned, and licensed by the 3M Company. 3M always provides helpful assistance when requested, but bears no responsibility for the judgments we have made by using the 3M software.

Anyone with questions may feel free to contact me at 262.365.3592 or dawn.weimar@conduent.com.

Sincerely,

Dawn Weimar, RN
Managing Consultant

cc: John Mendoza, DHCS

Ryan Witz, DHCS

Lindy Harrington, DHCS

Maria Jaya, DHCS

James Mason, DHCS

David Paschall, Conduent

Marybeth Ryden, Conduent

DHCS

DHCS DRG Section

Loni Anderson, Health Program Specialist I

Karen del Gallego, Research Program Specialist II

Nzinga Griffin, Associate Governmental Program Analyst

Joanna Lin, Research Analyst II

Richard Luu, Associate Governmental Program Analyst

James Mason, Unit Chief

Cyrus Sanchez, Research Analyst II

Conduent Payment Method Development

Christine Bredfeldt, Senior Consultant

Darrell Bullocks, Senior Consultant

Bud Davies, Senior Consultant

Elizabeth Gillette, Consultant

Coley Hembree, Consultant

Kevin Quinn, Vice President

Angela Sims, Senior Analyst

Andrew Townsend, Consultant

Dawn Weimar, Managing Consultant

Acronyms

ALOS	Average length of stay
APR-DRG	All Patient Refined Diagnosis Related Group
CAMMIS	California Medicaid management information system
CAH	Critical access hospital (Medicare)
CCR	Cost-to-charge ratio
CCS	California Children's Services
CMS	Centers for Medicare and Medicaid Services
DHCS	California Department of Health Care Services
DPH	Designated public hospital
DRG	Diagnosis related group
FFS	Fee-for-service
FFY	Federal fiscal year (October-September)
FPL	Federal poverty level
GHPP	California Genetically Handicapped Persons Program
HIV	Human immunodeficiency virus
LIHP	Low income health program
LTAC	Long-term acute care hospital
MCC	Medicaid care category
MCE	Medicaid covered expansion
MCP	Managed care plan
MDC	Major diagnostic category
MIS-DSS	Medi-Cal management information system/decision support system
NDPH	Non-designated public hospital
NICU	Neonatal intensive care unit
NIS	National inpatient sample from the Agency for Healthcare Research and Quality
OSHPD	California Office of Statewide Health Planning and Development
SFY	California state fiscal year (July-June)
SNFD/DRG	Safety Net Finance Division of the California Department of Health Care Services/DRG Unit
SPA	State Plan Amendment

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1. Overview of DRG Payment

1.1 Organization of This Document

Effective for admissions on or after July 1, 2013, Medi-Cal has implemented payment by diagnosis related group (DRG) for hospital inpatient services received by fee-for-service (FFS) beneficiaries, replacing the Selective Provider Contracting Program that had been in place for almost 30 years. The change was authorized by Senate Bill 853 of the 2009-2010 Legislature as signed by the Governor on October 19, 2010.

The present document summarizes the first two years of experience with the new payment method. It is written for an audience of Medi-Cal beneficiaries, hospital staff, policymakers and others interested in the volume and nature of inpatient hospital services received by FFS beneficiaries and reimbursed under the DRG payment method.

- The remainder of Section 1 provides background on the DRG payment method.
- Section 2 provides an overview of DRG payment in state fiscal years (SFY) 2013-14 and 2014-15. The numbers reflect claims paid by April 30, 2016, plus an estimate of payments yet to occur for services provided in SFY 2014-15.
- Section 3 provides a more detailed look at utilization, based only on claims already paid for SFYs 2013-14 and 2014-15 services; these claims represent an estimated 100% of all stays in SFY 2013-14 and 99% of all stays in SFY 2014-15.
- An appendix includes the DRG pricing calculator, along with details on how we compile this dataset and calculate completion factors.

Questions or comments are welcome and may be directed to drg@dhcs.ca.gov.

1.2 Background on DRG Payment

1.2.1 DRG Payment

DRGs are often said to describe the "product of a hospital" where the "product" may be care for a patient with appendicitis or cesarean delivery of a baby. A grouping algorithm (Medi-Cal uses All Patient Refined Diagnosis Related Groups or APR-DRGs) assigns each stay to a single DRG based on clinical information on the claim submitted by the hospital, particularly diagnosis and procedure data. Payment by DRG was introduced at the national level by Medicare in 1983 and has since been used to calculate more than $2 trillion in payments worldwide.[1] 39 of the nation's 51 Medicaid programs use DRG payment. In addition to California, the APR-DRG algorithm is used by the District of Columbia, Florida, Illinois, New York, Texas and 18 other states.[2] Other states may use other DRG algorithms, especially the Medicare algorithm. California chose the APR-DRG algorithm because it is more appropriate for a Medicaid population.[3] The algorithm has 314 base DRGs (which may be thought as the reason for admission), each with four severity levels, for a total of 1,256 DRGs. The severity level scale ranges from 1 to 4, with 1 being the least and 4 the most severe, reflecting the complexity of care required.

The essence of DRG payment is quite simple: Each DRG has a relative weight that reflects the typical average hospital cost of that DRG relative to all hospital stays. When multiplied by a dollar denominated DRG base rate, the result is the DRG base payment. Consider the example of a cesarean section, severity 1, in the Los Angeles area in SFY 2013-14.

APR-DRG 540-1 DRG relative weight x DRG base rate = DRG base payment

APR-DRG 540-1 0.5237 x $7,200 = $3,770.64

In SFY 2013-14, the statewide DRG base rate was $6,223 ($10,218 for remote rural hospitals). For each hospital, the statewide base rate is adjusted to reflect differences in local area wages. In the above example, the base rate is adjusted for the Los Angeles wage area. The adjustment process and wage area assignments used by DHCS are based on the similar policy used by Medicare.

In general, individual hospital data such as length of stay, charges, or cost do not affect the DRG base payment. Hospitals, therefore, are rewarded for efficiency. And because sicker patients are assigned to higher-paying DRGs, a DRG payment method promotes access to care for the full spectrum of patients.

In certain cases, payments may be adjusted for some stays, most notably for "outlier" stays where the hospital's cost for a specific patient is much higher or lower than the DRG base payment. For these stays, an outlier adjustment is

made. The details of the payment method are most easily understood by viewing the Medi-Cal DRG Pricing Calculators, shown in Appendix A and available in interactive spreadsheet form on the DHCS DRG webpage under the appropriate year of DRG payment at www.dhcs.ca.gov/provgovpart/Pages/DRG.aspx.

1.2.2 Scope of DRG Payment

The DRG payment method applies to FFS stays at general acute care hospitals, both in- and out-of-state, with exceptions for being designated public hospitals (DPHs), as shown in Table 1.2.2.1. Non-designated public hospitals (NDPHs) were initially excluded from the DRG payment method, but, as of January 1, 2014, all NDPH admissions were included. Hospitals designated by Medicare as critical access hospitals (CAH) and long-term acute care (LTAC) hospitals are within the scope of DRG payment; DHCS does not recognize CAHs or LTACs as separate provider types. DHCS also does not recognize rehabilitation hospitals as a separate provider type, but rehabilitation stays in general are excluded from the DRG payment method.[4]

For the hospitals within the scope of the DRG payment method, essentially all inpatient services are subject to DRG payment. The only exceptions are psychiatric services, rehabilitation stays, and administrative days. In SFY 2013-14, the DRG payment method was used to price 428,816 stays with $3.690 billion in payment, paid through April 30, 2016. We estimate that in SFY 2014-15, the DRG payment method was used to price 407,950 stays with $3.629 billion in payment (This estimate is an extrapolation based on claims already submitted and paid through April 30, 2016). More than 400 California hospitals are eligible to receive DRG payment.

Table 1.2.2.1
Designated Public Hospitals Outside the Scope of DRG Payment

NPI	Hospital Name	OSHPD ID
1396764353	Alameda Co Med Ctr	106010846
1790781169	Arrowhead Reg Med Ctr	106364231
1497820203	Contra Costa Reg Med Ctr	106070924
1376623538	Kern Med Ctr	106150736
1497778401	LAC-Harbor UCLA Med Ctr	106191227
1417970567	LAC-Olive View-UCLA Med Ctr	106191231
1275540171	LAC-Rancho Los Amigos	106191306
1285647933	LAC-USC Med Ctr	106191228
1699979245	Natividad Med Ctr	106274043
1821159195	Riverside Co Reg Med Ctr	106334487
1164609962	San Francisco Gen Hosp	106380939
1275605180	San Joaquin Gen Hosp	106391010
1386713030	San Mateo Med Ctr	106410782
1063406551	Santa Clara Vly Med Ctr	106430883

Table 1.2.2.1
Designated Public Hospitals Outside the Scope of DRG Payment

NPI	Hospital Name	OSHPD ID
1427055839	Santa Monica-UCLA Med Ctr	106190687
1710918545	UC Davis Med Ctr	106341006
1689608150	UC Irvine Med Ctr	106301279
1184722779	UC SD Med Ctr-San Diego	106370782
1902803315	UCLA Med Ctr	106190796
1457450116	UCSF Med Ctr	106381154
1629167457	Ventura Co Med Ctr	106560481

Note:

1. Designated public hospitals are outside the scope of the DRG payment method, except that Medi-Cal managed care plans use DRG calculations to pay DPHs for emergency and post-stabilization services if the plan does not have a contract with the hospital.

In addition to Medi-Cal FFS beneficiaries, the DRG method is used to pay for care received by patients who are ineligible for Medi-Cal but have coverage through California Children's Services (CCS) or the Genetically Handicapped Persons Program (GHPP). These stays are included in the 428,816 Year 1 and 407,950 Year 2 stays.

The DRG method is also used by Medi-Cal managed care plans (MCPs) to pay hospitals (including designated public hospitals) outside their networks for emergency and post-stabilization services. Note that this document only includes FFS stays; all managed care stays, including those paid by APR-DRG for out-of-network care, are excluded.

1.2.3 Transition Period

To mitigate the impacts, both positive and negative, of the move from the previous payment method to DRG-based payment, DHCS implemented a three-year transition period.[5] Of the 332 California hospitals that were included in the ratesetting simulation for Year 1, 244 were designated as transition hospitals.[6] Except for NDPHs, DRG base rates were set with the intention of keeping DRG payment within plus or minus 5% of what would have been paid under the previous method, as estimated using the Year 1 ratesetting simulation dataset.[7] Based on the same simulation dataset, hospitals were advised in July 2013 of their projected base rates for Year 2 and Year 3.[8] For Year 2, projected DRG base rates were set with the intention that the change in payment per stay would be within plus or minus 5% of Year 1. Similarly, for Year 3, projected DRG base rates were set with the intention that the change in payment per stay would be within plus or minus 5% of Year 2. For NDPHs, Year 1 transition base rates were set with the aim of limiting changes in total payments to no more than plus or minus 2.5% in Year 1, plus or minus 5% in Year 2, and plus or minus 7.5% in Year 3.

Hospitals were advised that the projected rates were subject to change for the update periods shown in this report, as well as for reasons stemming from DHCS's monitoring of the new payment method after implementation. Although base rates were set with the intention of keeping changes in average payment per stay within specified bounds, a hospital's actual experience depends on volume, casemix, prevalence of outliers, cost per stay, etc. Hospitals were advised that there would be no reconciliation process comparing actual payments with simulated payments. For SFY 2014-15, 228 hospitals were paid using the transition methodology.

Per DHCS direction, DRG rates for SFYs 2013-14 and 2014-15 have been set with a goal of budget neutrality relative to the rates that were paid under the previous payment method as of June 30, 2013. Increases in payment due to increased utilization under the Affordable Care Act were not included in the budget neutrality calculation (see Section 2.3).

1.3 Summary of DRG Payment Policy Parameters

Table 1.3.1 shows the key policy parameters used in SFYs 2013-14 and 2014-15. Stability in DRG payment policy was the guiding principle during the first two years of DRG payment as demonstrated by consistency in the statewide base rate, policy adjusters and outlier payment structure. Annual updates were made to the DRG software, relative weights, outlier thresholds based upon charge inflation, as well as the continued transition of base rates for specific hospitals as mentioned in the previous section. Hospital-specific cost to charge ratios (CCRs) and wage area adjustments are updated annually. Minor changes were made to transfer status codes and wage area labor share based on national changes. Although document and coding adjustment was made in Year 1, no such adjustments occured in year 2. For further background on these parameters, see the Policy Design Document.

Table 1.3.1
Summary of Payment Policy Parameters

Simulation Parameters	FY 2013-14 Value (DRG Year 1)	FY 2014-15 Value (DRG Year 2)
Base Rates		
DRG base rate, statewide	$6,223	$6,289
DRG base rate, remote rural	$10,218	$10,640
DRG base rate, transition hospitals	Rates per January 2013 notice to hospitals (W206 5/13/13)	Rates per July 2013 notice to hospitals (W235 8/21/13)
DRG base rate, non-transition hospitals	$10,218 adjusted for FFY 2013 Medicare wage areas	$10,640 adjusted for FFY 2014 Medicare wage areas
Documentation & coding adjustment	-3.5% in Year 1	None
Technical Updates		
DRG grouper	APR-DRG V.29	APR-DRG V.31
DRG relative weights	V.29 APR-DRG national charge-based weights	V.31 APR-DRG national charge-based weights
Wage area adjustments	Per Medicare Impact File for FFY 2013; labor share is 68.8%	Per Medicare Impact File for FFY 2014; labor share is 69.6%
Transfer status codes	02, 05, 65 and 66	02, 05, 63, 65, 66, 82, 85, 91, 93, and 94
Outlier Policy Factors		
Expected charge inflation		5.1% Year 1 to Year 2
Cost to charge ratios	Hospital fiscal years ending in 2011 with some exceptions	Hospital fiscal years ending in 2012 with some exceptions
High side (provider loss) tiers and marginal cost (MC) factor	i.e.$0 - $40,000: no outlier payment	i.e.$0 - $42,040: no outlier payment
	i.e. $40,001 to $125,000: MC = 0.60	i.e. $42,041 to $131,375: MC = 0.60
	i.e. > $125,000: MC = 0.80	i.e. > $131,375: MC = 0.80
Low side (provider gain) tiers and marginal cost (MC) factor	i.e. $0 - $40,000: no outlier reduction	i.e. $0 - $42,040: no outlier reduction
	i.e. > $40,000: MC = 0.60	i.e. > $42,040: MC = 0.60
Other Policies		
Policy adjustor - neonate at designated NICU hospital	1.75	1.75

Table 1.3.1
Summary of Payment Policy Parameters

Simulation Parameters	FY 2013-14 Value (DRG Year 1)	FY 2014-15 Value (DRG Year 2)
Policy adjustor - neonate at other NICU hospital	1.25	1.25
Policy adjustor - age - pediatric, respiratory and miscellaneous	1.25	1.25
Pediatric age cutoff	< 21	< 21
Separately payable services, supplies and devices	Bone marrow search and acquisition costs, blood factors	Bone marrow search and acquisition costs, blood factors
Negotiated payment	In exceptional circumstances for out-of-state care	In exceptional circumstances for out-of-state care

1.4 Data Sources for This Analysis

In general, data for this document are for DRG stays with dates of admission from July 1, 2013, to June 30, 2014, (Year 1 of DRG payment SFY 2013-14) and July 1, 2014, to June 30, 2015 (Year 2 of DRG payment SFY 2014-15), paid through April 30, 2016. This volume represents 100% of the stays and payment for SFY 2013-14; an estimated 99% of stays and casemix; and 98% of payment, for stays in SFY 2014-15. The data analysis is also complicated by the fact that the implementation date was July 1, 2013, for most hospitals, then January 1, 2014, for NDPHs, as well as the ACA population becoming effective January 1, 2014.

Section 2 of this document compares actual and expected total stays and payment for services in SFYs 2013-14 and 2014-15. These comparisons take into account both claims paid and claims expected to be paid after April 30, 2016. The analysis in Section 3 uses claims paid by DRG through April 30, 2016, excluding NDPH FFS stays from July 1 to December 31, 2013 (stays not paid by DRG were not applicable to this analysis).

In reviewing this document, two key points about payment must be borne in mind:

- **Allowed vs. paid.** Throughout this document, “payment” refers to the amount actually paid, which equals the allowed amount minus any applicable deductions for patient share of cost and other health coverage. On average, the paid amount equals 98% of the allowed amount.
- **Supplementary payments.** “Payment” also refers to payment for specific services as calculated under the DRG payment method. DHCS also makes billions of dollars in supplementary payments to hospitals, that are outside the scope of this document. In some analyses, it would be essential to take into account both DRG payments and supplementary payments.

Table 1.4.1
Analytical Dataset for This Review

Category	DRG Year 1	DRG Year 2
Service period	FY 2013-14	FY 2014-15
Date paid through	4/30/2016	4/30/2016
Actual stays	428,816	405,372
Estimated stays	428,816	407,950
Percent complete (stays)	100.0%	99.4%
Actual payment	$3,690,726,335	$3,552,430,761
Estimated payment	$3,690,726,335	$3,629,072,752
Percent complete (payment)	100.0%	98%
NDPH stays	6 months starting 1/1/2014	Full year
ACA stays	6 months starting 1/1/2014	Full year

Notes:

1. Admission dates FY 2013-14 are 7/1/2013 to 6/30/2014; admission dates for FY 2014-15 are 7/1/2014 to 6/30/2015.
2. Source is MIS-DSS.
3. All data exclude designated public hospitals.
4. Includes all stays except interim claims, rehabilitation, and administrative days.
5. "Payment" refers to the paid amount, which equals about 98% of the allowed amount.

1.5 For Further Information

The following documents should be useful to readers interested in more detail on the DRG payment method. They are available on the DHCS DRG webpage at http://www.dhcs.ca.gov/provgovpart/pages/DRG.aspx.

- DRG Pricing Calculator: An interactive tool to estimate the price of a claim based on the APR-DRG, hospital characteristics, and clinical information.
- Frequently Asked Questions: A resource that describes the scope of the DRG payment method, impacts on provider billing, and other changes.
- Policy Design Document: A detailed document that describes all aspects leading up to and following the implementation of DRG payment.
- Medicaid State Plan Amendment (SPA)[9]:The document approved by CMS that authorizes Medi-Cal to implement DRG payment. Subsequent SPAs appear on the webpage for modifications to DRG payment.

2. Overview of Utilization and Payment

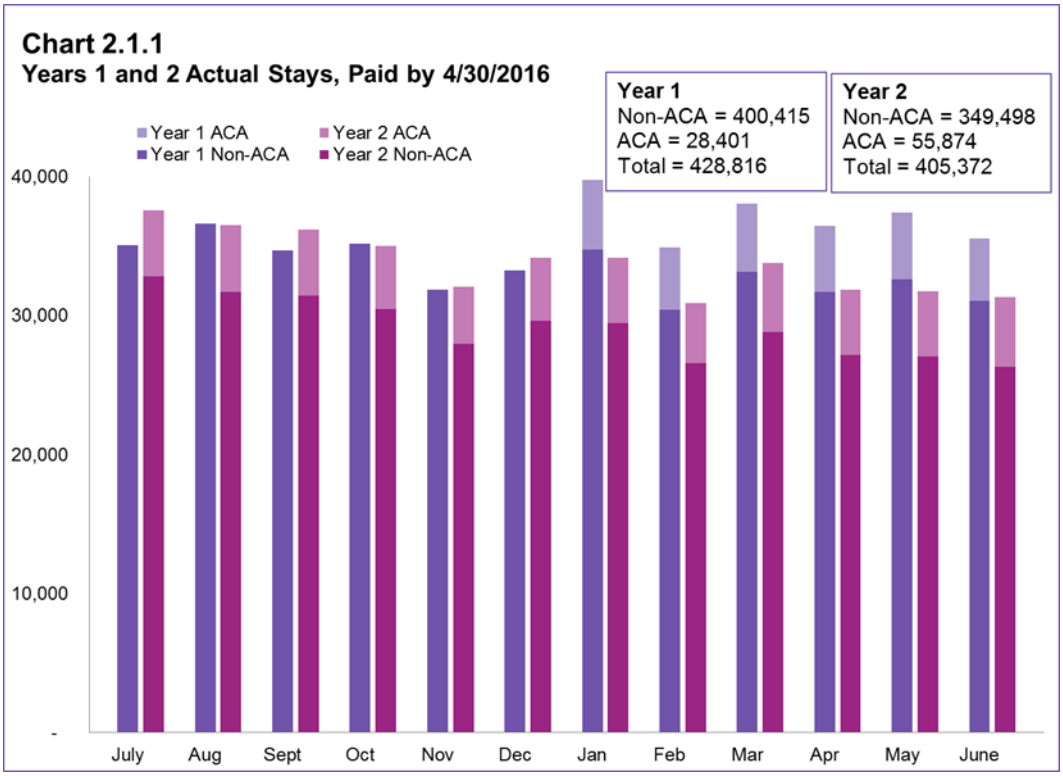
Years 1 and 2 of DRG payment exhibit more similarities than differences in utilization and how claims are paid. 80% of DRG claims are based solely upon a straight DRG calculation: the product of relative weight and the hospital-specific base price.

Additionally, there are remarkable similarities in the distribution of stays and payments from year to year for inpatient Fee-for-Service (FFS) care. $3.69 billion was paid in Year 1 while Year 2 estimates are $3.63 billion with 17% of overall payment paid under the outlier policy in both years. Though there is a slight decrease in historical Medi-Cal or non-ACA utilization, most likely due to a continued transition of beneficiaries to managed care, which the addition of the ACA population compensates. Overall casemix is stable at 0.88 from Year 1 to Year 2. ACA patients are older, sicker, and more expensive than the historical Medi-Cal population and would have likely been hospitalized anyway, most likely as uninsured persons.

2.1 Total Stays

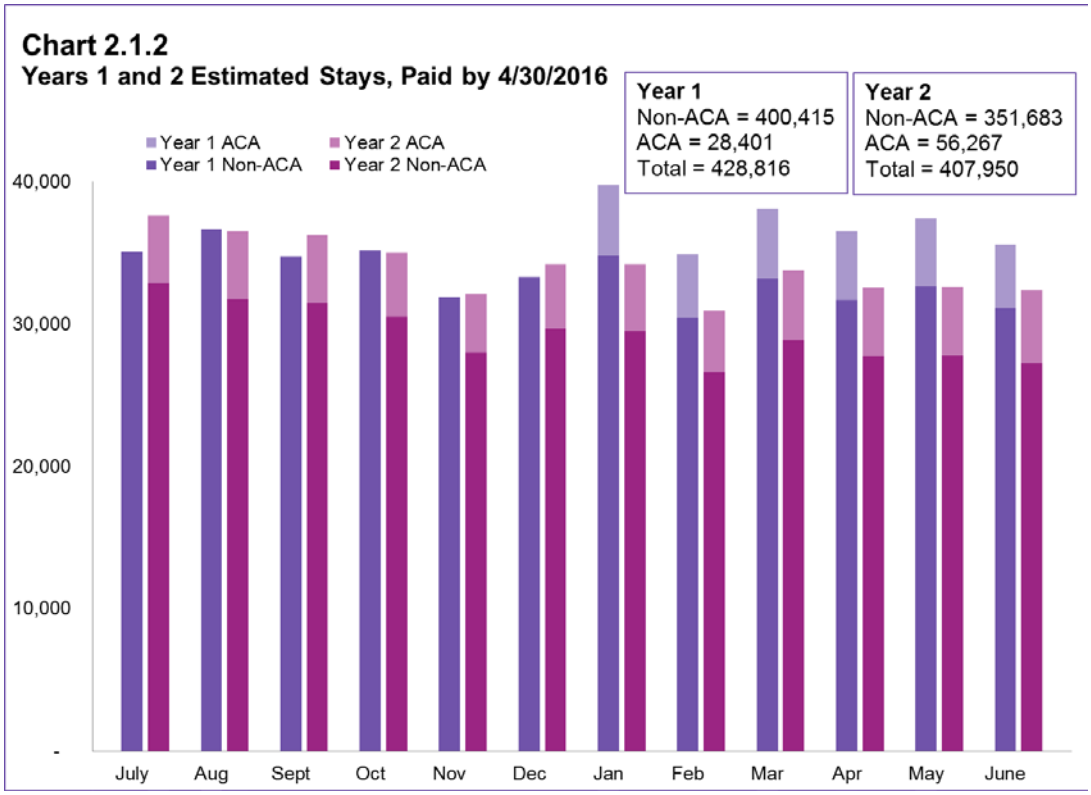
As of April 30, 2016, Medi-Cal had paid for 428,816 inpatient stays in Year 1 of DRG payment (SFY 2013-14) and 405,372 stays in Year 2 (SFY 2014-15), as shown in Chart 2.1.1. Stays in SFY 2013-14 include NDPH admissions prior to January 1, 2014. Stays in SFY 2014-15 are estimated to be 99% complete. Under the Affordable Care Act (ACA), Medi-Cal eligibility was expanded as of January 1, 2014.[10] The impact of the ACA optional expansion can be seen in the lighter colored sections of Chart 2.1.1. The optional expansion program made four categories of adults eligible for Medi-Cal services. These groups are identified using unique aid codes.

- L1 aid code: Low Income Health Program Medicaid Covered Expansion (MCE). Eligible recipients are ages 19-64 with family income at or below 138% of the Federal Poverty Level(FPL) and were enrolled in the MCE program on December 31, 2013.
- 7U aid code: CalFresh beneficiaries ages 19-65.
- M1 aid code: Adults with family income at or below 138% FPL who qualify for Medi-Cal coverage based on the ACA's expanded eligibility rules.
- M2 aid code: Undocumented adults with family income at or below 138% FPL. Only eligible for emergency, pregnancy-related and long term care services.



Year 1 is estimated to be complete, with all claims paid by April 30, 2016. Year 2 is estimated to be 99% complete, with 2,578 claims expected to be paid after April 30, 2016 (See Appendix C for the completion factors used in making the estimates). Chart 2.1.2 shows the actual 428,816 stays in Year 1 and the estimated 407,950 stays in Year 2.

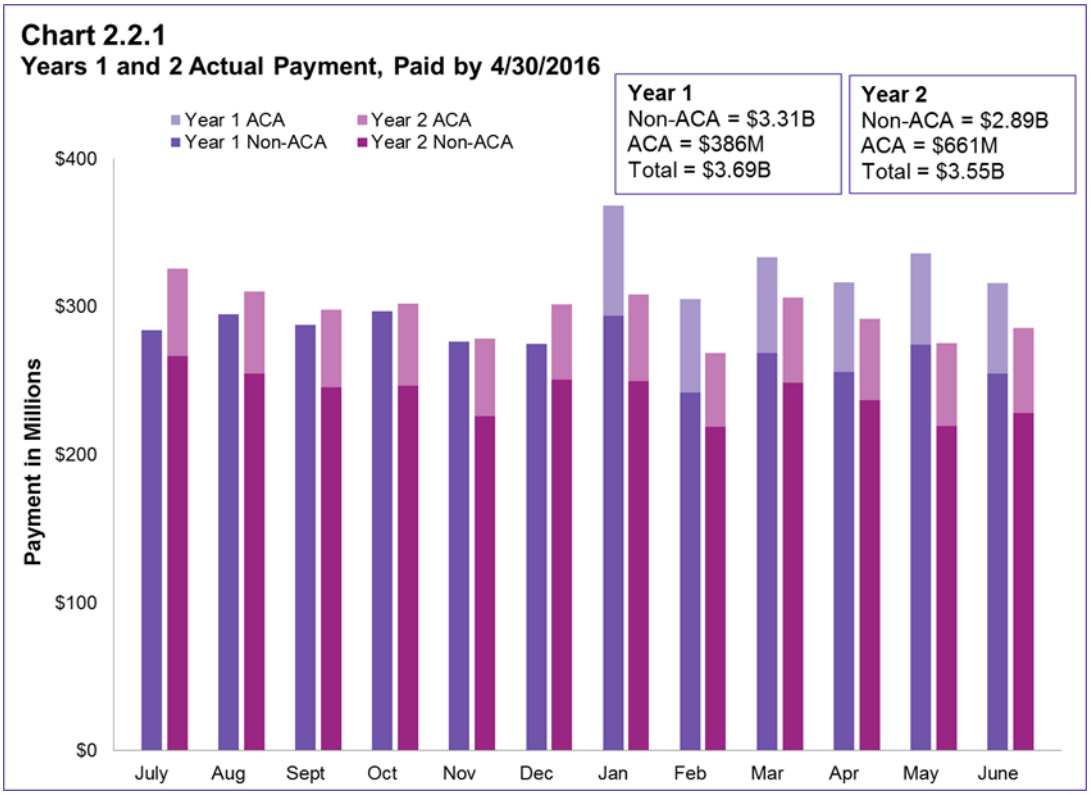
Of the 428,816 Year 1 stays, 28,401 were for beneficiaries newly eligible under the ACA from January 1, 2014, to June 30, 2015. Though it appears as if ACA stays have doubled from Year 1 to Year 2, that is due to only six months of eligibility in Year 1 vs. 12 months in Year 2. ACA stays averaged 4,700 stays per month in the first six months and continued this average consistently through Year 2. Year 2 is estimated to have 48,732 fewer non-ACA stays (a 12% decrease). Overall, there is about a 5% decrease in stays from Year 1 to Year 2.



2.2 Total Payment

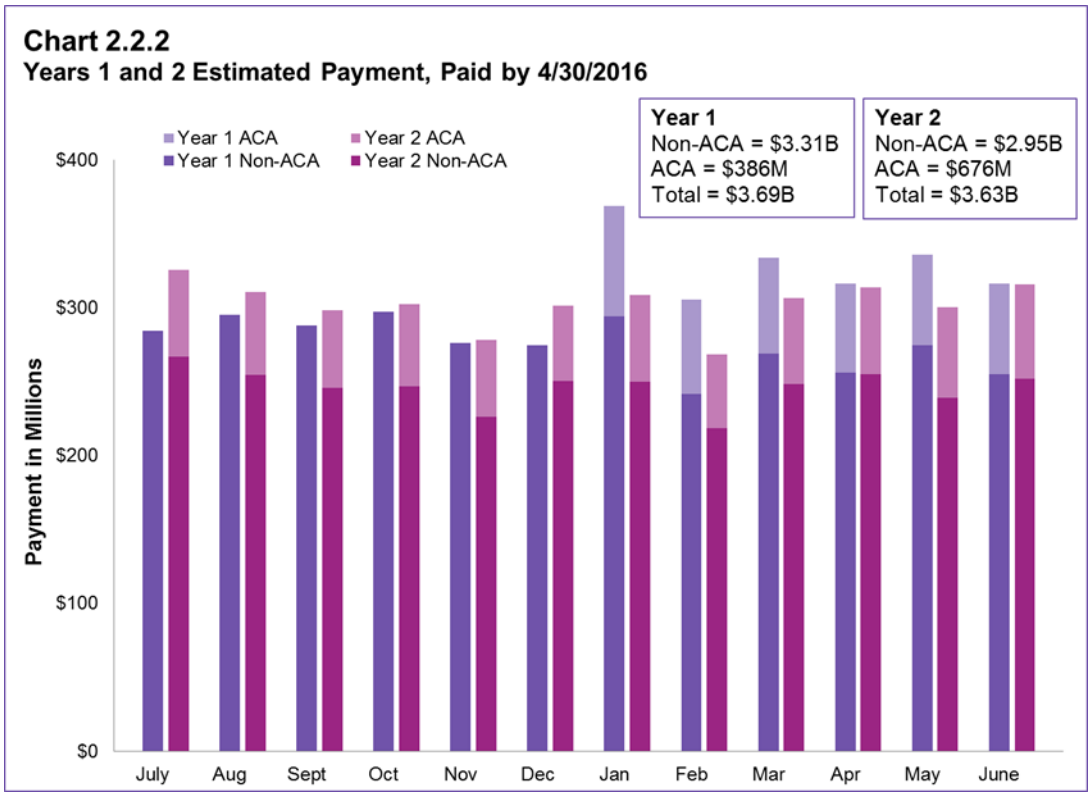
Actual payment for admissions in Year 1 (SFY 2013-14), was $3.69 billion, of which $386 million was for ACA stays between January 1 and June 30, 2014. Actual payment for Year 2 (SFY 2014-15) admissions, paid through April 30, 2016, was $3.55 billion with an ACA portion of $661 million. Year 2 payment is estimated to be 98% complete.

As with the actual and estimated stays charts, payment for ACA stays is shown in the lighter colored sections of the actual and estimated payment charts (Charts 2.2.1 and 2.2.2).



As with stays, we estimated total payment using completion factors that adjust for typical lags in claims submission and adjudication. Year 1 is 100% complete; Year 2 payment is estimated to be 98% complete by April 30, 2016 for SFY 2014-15 admissions. Chart 2.2.2 shows payment for Year 1 as $3.69 billion. For Year 2, estimated payment was $3.63 billion.

Of the $3.69 billion in Year 1 payment, an estimated $386 million was for beneficiaries newly eligible for Medi-Cal under the ACA. For Year 2 estimated payment of $3.63 billion, $676 million was for ACA beneficiaries. Year 2, therefore, has an estimated decrease of 11% in non-ACA payment, a 75% increase in ACA payment due largely to doubling the eligibility period for the ACA group, with an overall decrease in payment of 2%. More detail about the differences between ACA and non-ACA beneficiaries is in Section 3.15.

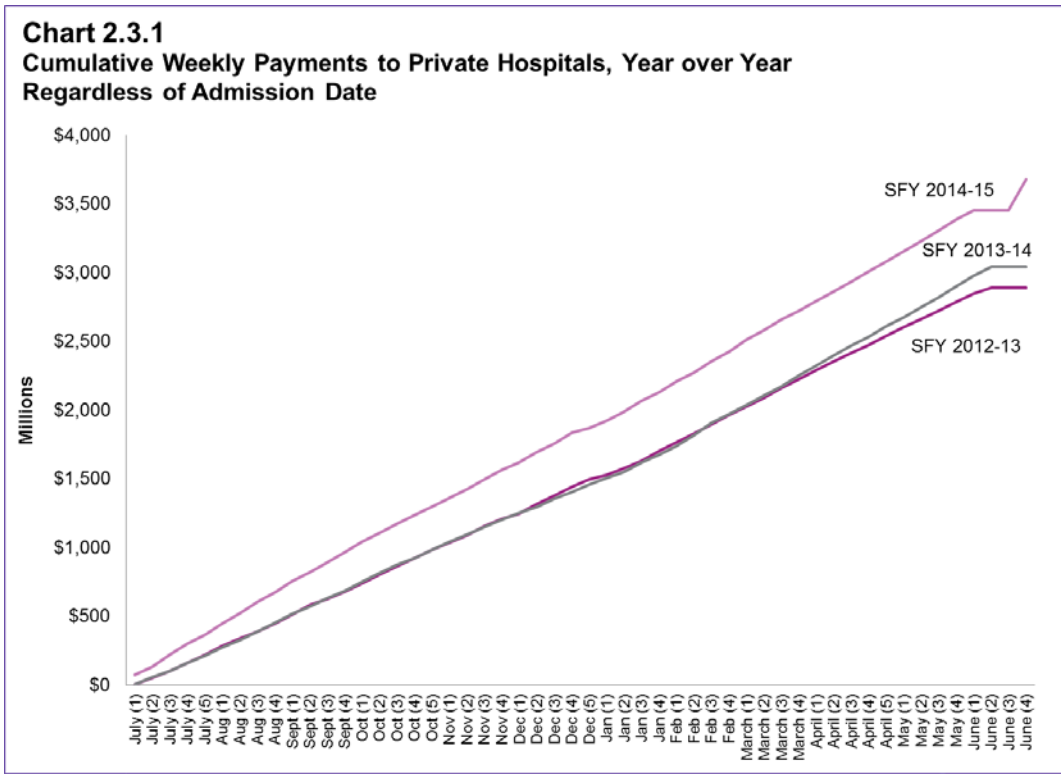


2.3 Payment Relative to Expectations

In implementing DRG payment July 1, 2013, the goal was budget neutrality relative to what would have been paid under the previous method as of June 30, 2013. The previous payment method was quite different in many respects, including not only incentives and pricing calculations but also billing rules. Before July 1, 2013, for example, hospitals often submitted multiple claims for different days of the same stay and mothers and normal newborns were billed on the same claim. The Medi-Cal claims processing system also stored only two diagnosis codes and two procedure codes per claim. Moreover, Medi-Cal was also undertaking a significant shift of FFS beneficiaries to managed care plans. Extensive analysis of the CY 2009 baseline dataset was necessary to simulate payment and set rates for implementation July 1, 2013.[11]

In such a dynamic environment, budget neutrality must be examined from several perspectives. In general, we value robustness in analyzing evidence on complex policy questions. Our conclusion is that budget neutrality was achieved, as evidenced by the following considerations.

Comparison with FY 2012-13. Chart 2.3.1 shows that FY 2013-14 cumulative weekly payments very closely tracked the previous year (payments prior to DRG implementation), except that the impact of additional ACA stays can be seen starting in January 2014. Increased utilization due to the ACA expansion was budgeted separately, so aggregate payment for non-ACA stays was very similar to what it had been the previous year. These two payment streams are distinguished by payment date, including all stays regardless of admission date. The trend of higher payments due to the ACA expansion continued in SFY 2014-15.



A precise comparison of payment for individual stays under the DRG method versus the previous method was not possible, due to differences in billing practices (especially for newborns), changes in treatment authorization rules, and growth in billed charges at hospitals that previously were non-contract and paid at a percentage of charges. Payment to non-contract hospitals also was previously subject to cost settlement, whereas payment under the DRG method is final, subject to certain exceptions. To the extent that a comparison was possible, it showed DRG payment overall was very similar to what would have been paid under the previous method using SFY 2012-13 rates.

Although DRG payment overall was budget neutral, some individual hospitals did see payment levels above or below projections. The projections had been based on CY 2009 utilization and payment trended forward to June 30, 2013. Differences between projections and actual experience reflected differences in volume, casemix, the managed care transition, and billed charges (which affect outlier payment under the DRG method).

3. DRG Payment

This section analyzes stays in Year 1 (SFY 2013-14) and Year 2 (SFY 2014-15) by DRG assignment, which is broken down by types of care.

SFY 2013-14 figures in this section do not include NDPH stays prior to January 1, 2014, because they were not paid by DRG, and, therefore, DRG assignment was not available. This differs from Section 2, which includes those stays to review budgetary concerns. Because these stays were not paid by DRG, they must be excluded in any analysis that is categorized by DRG.

3.1 Medicaid Care Category

Medicaid Care Category (MCC) is an algorithm developed by Conduent for purposes of analyzing Medicaid inpatient utilization.[12] Its 10 categories reflect the policy areas of a typical Medicaid program and the internal organization of a typical hospital. In purpose, it is similar to the familiar Major Diagnostic Category (MDC) scheme used by Medicare. The main differences are that we differentiate pediatric from adult patients, and normal newborns from sick newborns. Adult patients are those 21 years old and older; obstetric patients may be of any age. The number of MCCs (10 for California) is also more manageable than the number of MDCs (25).

Tables 3.1.1 to 3.1.2 and Charts 3.1.1 to 3.1.4 for Medi-Cal are quite typical of national Medicaid inpatient utilization, except for the exclusion of psychiatric stays that are paid separately in California. Obstetrics, pediatrics, and newborns account for 69% of all stays in Year 1 and 66% of all stays in Year 2. For these categories, Medi-Cal is a significant part of the market, especially when Medi-Cal managed care plans are also included (Managed care stays are excluded from all numbers in this report). Note that Table 3.1.1 provides a total payment number of $3.61 billion which is lower than the payment number in Section 2 of $3.69 billion due to the fact that NDPH non-DRG stays prior to January 1, 2014 are removed from this section.

While obstetrics and normal newborns represent 52% of all Year 1 stays and 48% of all Year 2 stays, they represent just 13% and 12% of all Year 1 and Year 2 payments, respectively. The reason is that these stays are typically short (two to four days) and relatively inexpensive. Neonate (sick newborn) stays, by contrast, represented 4% of Year 1 and Year 2 stays but 19% of payment in both years. For neonates, average length of stay was 17.4 days in Year 1 and 17.6 days in Year 2; average hospital charges were $209,793 in Year 1 and $224,856 in Year 2; average Medi-Cal payment was $38,293 in Year 1 and $39,988 in Year 2. Similarly, the miscellaneous pediatric and miscellaneous adult categories

represented 10% and 16% of Year 1 stays, respectively, but 19% and 28% of payment. For Year 2, the miscellaneous pediatric and miscellaneous adult categories represented 11% and 18% of stays respectively, but 20% and 27% of payment.

Table 3.1.1

Year 1 MISDSS Admissions, Paid Through 4/30/16 -- NDPH Stays Prior to 1/1/14 Excluded

MCC	Stays	Days	Charges	Payment	Casemix	Outlier Payment Pct.
Obstetrics	113,942	296,521	$2,857,266,585	$383,017,213	0.41	1%
Normal Newborn	103,091	234,264	$745,808,493	$102,883,588	0.12	2%
Misc Adult	66,618	475,170	$7,060,540,958	$1,001,604,731	1.66	21%
Misc Pediatric	42,885	237,637	$3,784,738,538	$697,845,116	1.39	27%
Gastroent Adult	26,588	122,137	$1,774,186,824	$251,533,036	1.16	9%
Circulatory Adult	20,620	92,028	$1,769,426,898	$222,625,565	1.34	13%
Neonate	17,810	309,893	$3,736,414,535	$681,995,277	2.97	18%
Resp Adult	14,020	89,723	$1,155,325,418	$148,574,947	1.24	14%
Resp Pediatric	9,802	53,086	$705,402,669	$111,051,380	1.00	24%
Other	2,292	11,534	$110,866,697	$12,698,032	0.65	9%
Total	**417,668**	**1,921,993**	**$23,699,977,615**	**$3,613,828,884**	**0.88**	**17%**

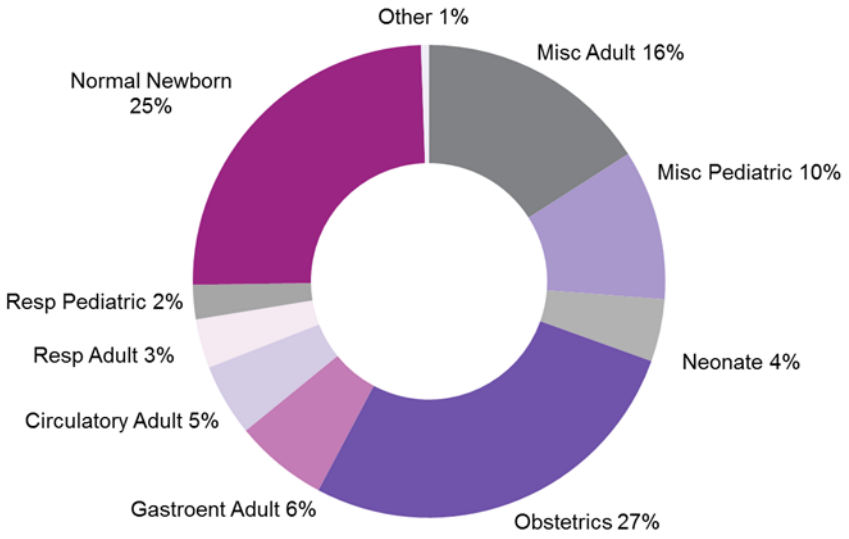
Table 3.1.2

Year 2 MISDSS Admissions, Paid Through 4/30/16

MCC	Stays	Days	Charges	Payment	Casemix	Outlier Payment Pct.
Obstetrics	100,722	260,495	$2,570,847,725	$330,818,532	0.41	1%
Normal Newborn	92,031	207,026	$691,011,415	$92,025,745	0.12	1%
Misc Adult	71,418	467,500	$7,264,517,932	$961,951,151	1.47	20%
Misc Pediatric	44,429	238,589	$4,115,767,124	$721,211,388	1.36	27%
Gastroent Adult	30,095	132,275	$1,978,274,064	$266,371,286	1.07	8%
Circulatory Adult	21,513	89,761	$1,831,468,923	$228,346,836	1.29	12%
Neonate	17,302	305,173	$3,890,460,542	$691,868,444	2.94	21%
Resp Adult	12,804	76,061	$1,006,659,385	$120,915,533	1.11	12%
Resp Pediatric	11,629	58,367	$788,331,946	$120,189,936	0.90	22%
Other	3,429	15,571	$172,171,240	$18,731,910	0.62	10%
Total	**405,372**	**1,850,818**	**$24,309,510,296**	**$3,552,430,761**	**0.88**	**17%**

Chart 3.1.1
Year 1 Stays by MCC

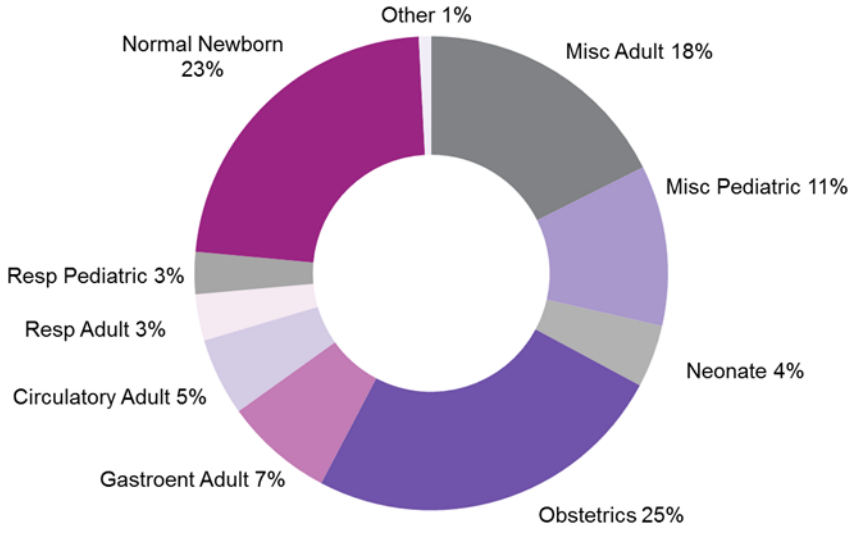
Total stays: 417,668
Paid claims through 4/30/16



Totals exclude NDPH stays prior to 1/1/14.

Chart 3.1.2
Year 2 Stays by MCC

Total stays: 405,372
Paid claims through 4/30/16



Year 2 stays are estimated to be 99% complete.

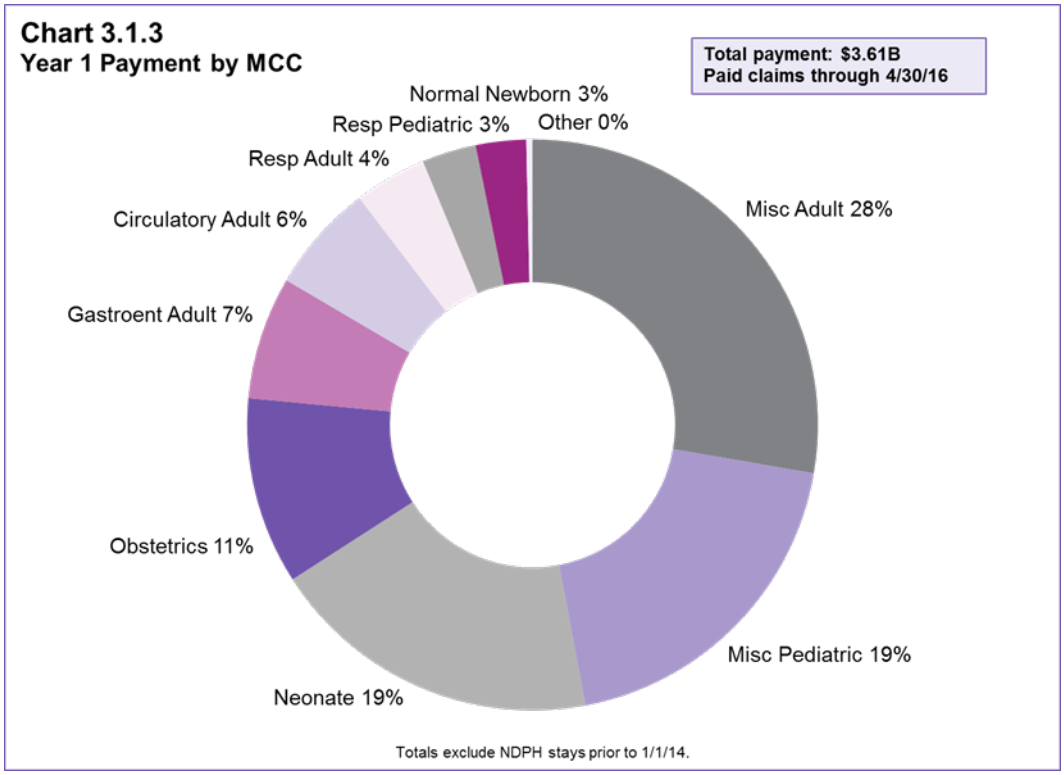


Chart 3.1.3
Year 1 Payment by MCC
Total payment: $3.61B
Paid claims through 4/30/16
Normal Newborn 3%
Resp Pediatric 3%
Other 0%
Resp Adult 4%
Circulatory Adult 6%
Misc Adult 28%
Gastroent Adult 7%
Obstetrics 11%
Misc Pediatric 19%
Neonate 19%
Totals exclude NDPH stays prior to 1/1/14.

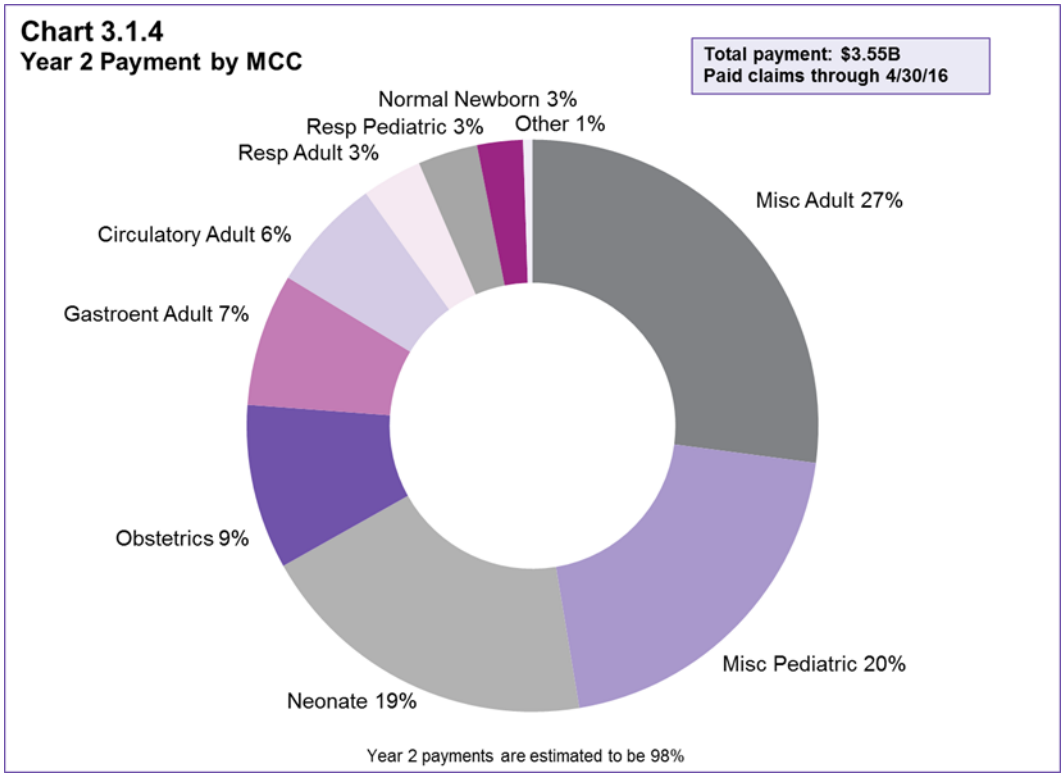
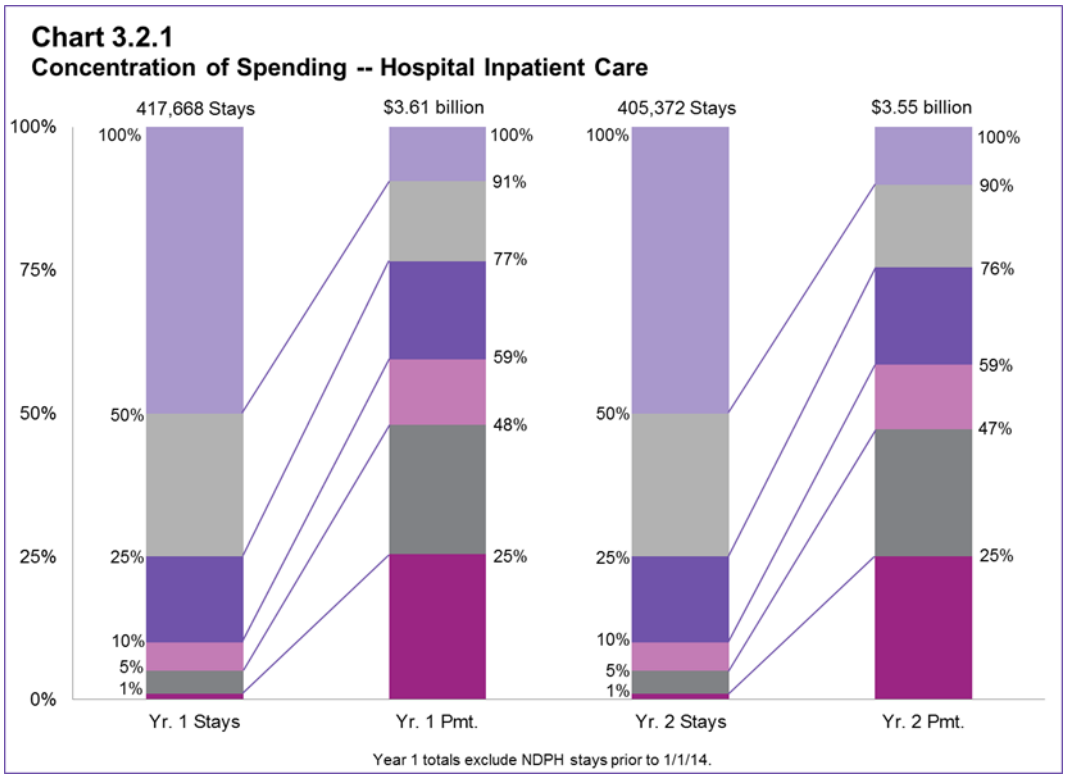


Chart 3.1.4
Year 2 Payment by MCC
Total payment: $3.55B
Paid claims through 4/30/16
Normal Newborn 3%
Resp Pediatric 3%
Other 1%
Resp Adult 3%
Misc Adult 27%
Circulatory Adult 6%
Gastroent Adult 7%
Obstetrics 9%
Misc Pediatric 20%
Neonate 19%
Year 2 payments are estimated to be 98%

3.2 The Concentration of Spending

Any analysis of healthcare spending must take into account the so-called concentration of spending.[13] At the national level, 5% of patients account for 50% of health care spending. This pattern tends to repeat itself in less aggregated analyses for different types of services and different populations. So it is with the Medi-Cal FFS inpatient hospital benefit, as shown in Chart 3.2.1. Five percent of the stays accounted for 48% of Medi-Cal payments in Year 1 and 47% of payments in Year 2. Indeed, the top 1% of stays accounted for 25% of payments in both years. The most expensive stays tend to be very sick newborns, multisystem traumas, and patients with co-occurring serious conditions, such as septicemia and organ failure. The least expensive 50% of stays, by contrast, are almost all deliveries and normal newborns. They accounted for about 10% of payments in each year.

Because the sickest patients are much more likely to have multiple admissions within a year, the spending pattern in Chart 3.2.1 would be even more concentrated if the left-hand column represented patients rather than stays



3.3 How Claims Were Paid

An advantage of DRG payment is its relative simplicity. Once the DRG is assigned to a stay, 80% of Year 1 claims and 79% of Year 2 claims priced very straightforwardly as the DRG base rate times the DRG relative weight. (See Charts 3.3.1 and 3.3.2.) For neonate and pediatric claims, which represented 14% of the total in Year 1 and 16% in Year 2, the relative weight multiplied by a "policy adjustor" that has the effect of increasing payment for these services where Medi-Cal is a significant part of the market. Payment calculations for the remaining claims, which involved outlier and/or transfer pricing calculations, were more complicated but nevertheless simple enough to be shown in a single-page pricing calculator (Appendix A).

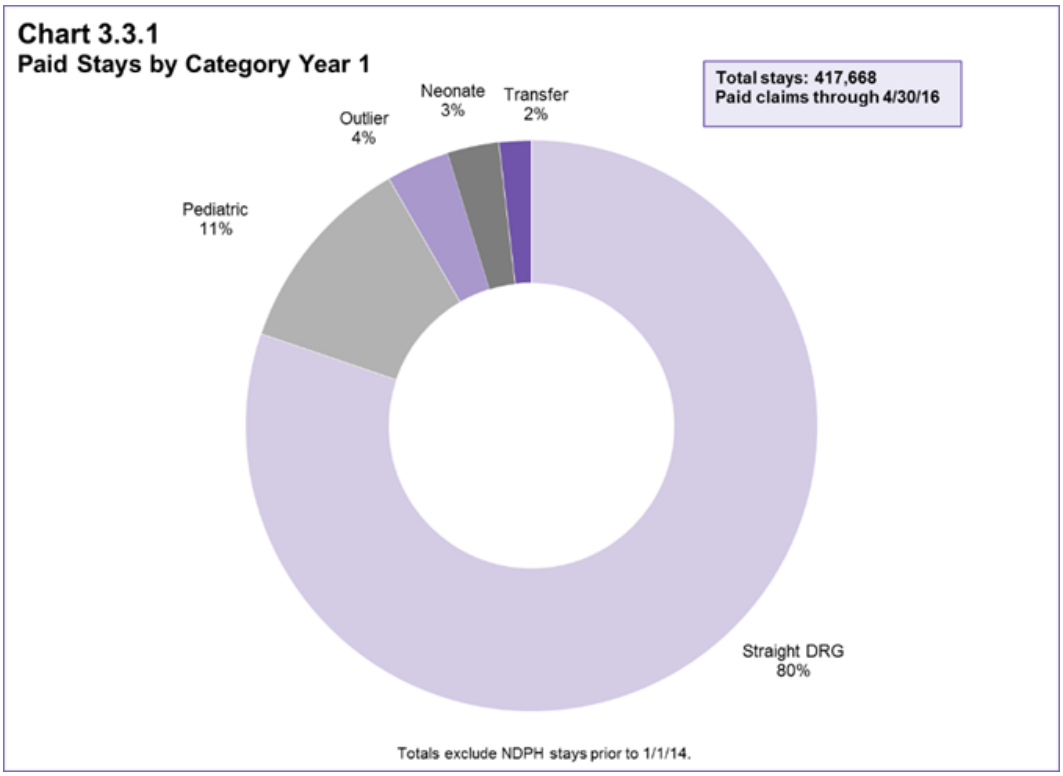


Chart 3.3.1
Paid Stays by Category Year 1
Total stays: 417,668
Paid claims through 4/30/16
Neonate 3%
Transfer 2%
Outlier 4%
Pediatric 11%
Straight DRG 80%
Totals exclude NDPH stays prior to 1/1/14.

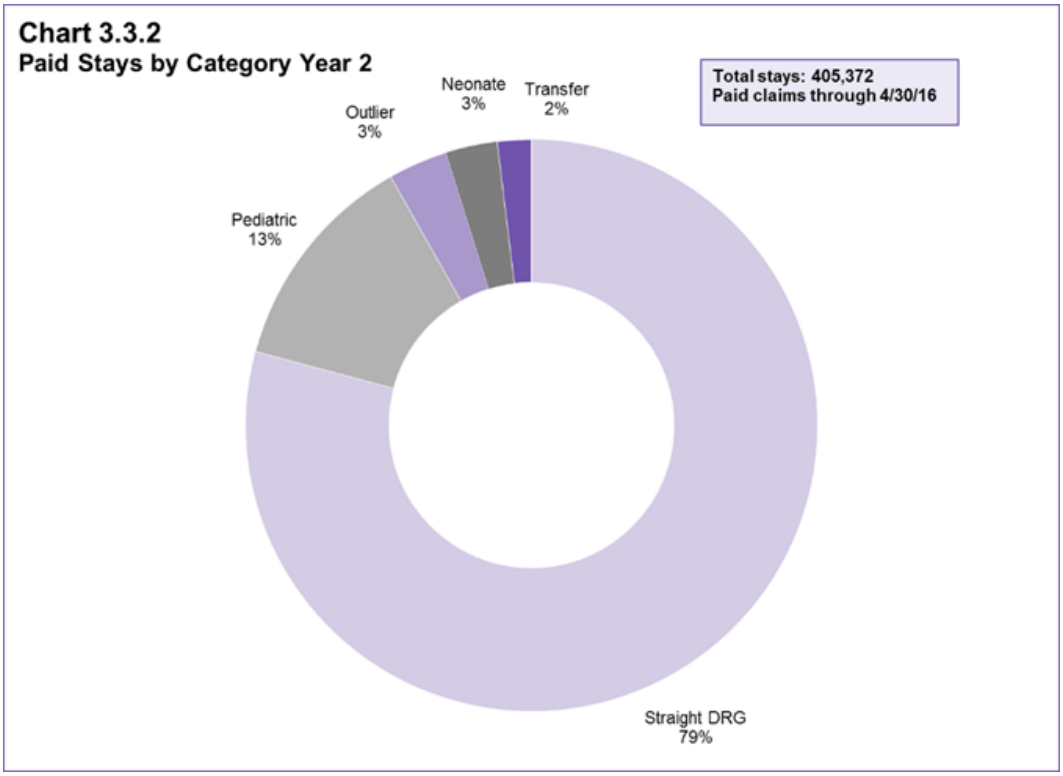


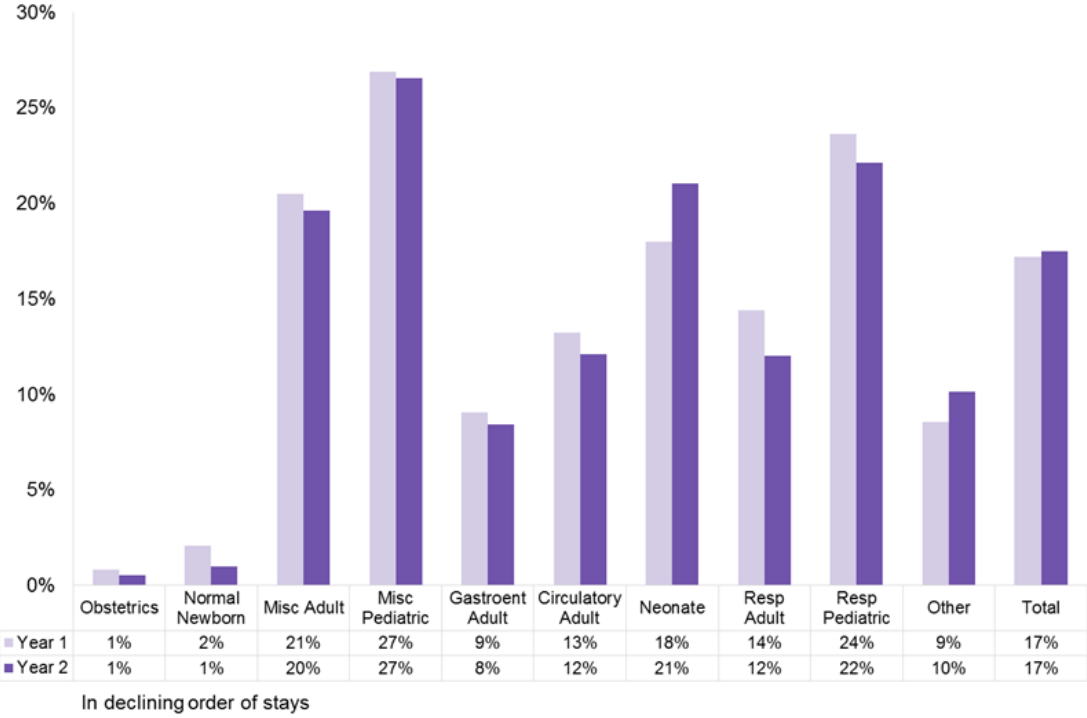
Chart 3.3.2
Paid Stays by Category Year 2
Total stays: 405,372
Paid claims through 4/30/16
Neonate 3%
Transfer 2%
Outlier 3%
Pediatric 13%
Straight DRG 79%

3.4 Outlier Payments

For exceptionally expensive stays that are not predicted by the grouping algorithm, Medi-Cal makes cost outlier payment adjustments, as do other DRG payers.[14] These are high-side outliers; there are also low-side outlier adjustments for exceptionally profitable stays. These are less important because of the statistical distribution of inpatient stays. As shown in the DRG Pricing Calculators in Appendix A, cost is estimated as charges on the claim times a hospital-specific cost-to-charge ratio (CCR). When a stay qualifies as a cost outlier, then an additional outlier payment is added to the DRG base payment.

Chart 3.4.1 shows that outlier payments represented 17% of overall total DRG payments in Years 1 and 2. This figure is just under the 18% that resulted from the simulation conducted before DRG implementation. As a general statement, a lower outlier percentage is desirable. The reason is that outlier payments depend on a hospital's own charges and cost, so excessive outlier payments can create undesirable incentives to increase charges and cost. We believe the lower percentage reflects a level of accuracy in grouping complex stays that was not possible in the simulation because of data limitations.

Chart 3.4.1
Outlier Percentage by Medicaid Care Category



	Obstetrics	Normal Newborn	Misc Adult	Misc Pediatric	Gastroent Adult	Circulatory Adult	Neonate	Resp Adult	Resp Pediatric	Other	Total
Year 1	1%	2%	21%	27%	9%	13%	18%	14%	24%	9%	17%
Year 2	1%	1%	20%	27%	8%	12%	21%	12%	22%	10%	17%

In declining order of stays

3.5 Obstetric Stays

In this and the following sections, we show data by Medicaid Care Category (MCC) and by base APR-DRG. Because DRG algorithms have come to define "the product of a hospital," they enable conversations among clinicians, administrators, and policy makers about inpatient hospital care. Table 3.5.1, for example, shows the Obstetrics care category, which represented 27% of stays and 11% of payment in Year 1 (SFY 2013-14) and 25% of stays and 9% of payment in Year 2 (SFY 2014-15). The table shows that, in both years, obstetric deliveries (APR-DRGs 540, 541, 542 and 560) comprises 92% of all obstetric stays with vaginal deliveries (APR-DRG 560) representing 65% and cesarean sections (APR-DRG 540) representing 33% of deliveries over both years.

In reviewing these tables by MCC, four reminders are pertinent:

Managed care stays are excluded. This document includes data only for the Medi-Cal FFS hospital inpatient benefit reimbursed under the DRG payment method. The managed care plans, of course, pay for a large volume of inpatient hospital care.

Payments exclude supplementary payments. DHCS pays billions of dollars to hospitals in supplementary payments that are separate from the claim payments shown in these tables. Any analysis of overall payment levels for hospital care must take these payments into account.

Billed charges are a misleading benchmark. On average, California hospitals set charges more than four times higher than their actual costs. Medi-Cal, Medicare, and many commercial payers appropriately pay substantially less than charges.

DRG detail is at the level of the base DRG. The APR-DRG system includes 314 base DRGs, each with four levels of severity of illness (minor, moderate, severe, and extreme). Table 3.5.1 shows results at the level of the base DRG, which can be thought of as the reason for the visit. It includes all four severity of illness levels.

Table 3.5.1

Medicaid Care Category: Obstetrics (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)

Sorted in Order of Declining Year 1 Stays

APR-DRG	Description	Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
		Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
560	Vaginal Del	67,705	59,845	2.2	2.2	0.33	0.32	$183,075,336	$156,155,983	$2,704	$2,609	0.2%	0.1%
540	Cesarean Del	34,438	30,339	3.5	3.4	0.57	0.58	$158,594,500	$138,010,921	$4,605	$4,549	1.1%	0.7%
566	Oth Antepartum Diags	5,148	4,502	2.5	2.6	0.36	0.36	$14,277,962	$12,749,738	$2,773	$2,832	0.9%	1.8%
541	Vag Del w Ster &/or D&C	2,264	2,153	2.4	2.4	0.51	0.52	$9,785,146	$9,377,601	$4,322	$4,356	0.1%	0.4%
563	Preterm Labor	1,508	1,347	2.4	2.5	0.33	0.33	$3,773,148	$3,442,181	$2,502	$2,555	0.8%	2.0%
561	Postpartum Diags w/o Proc	840	783	3.0	2.8	0.50	0.47	$3,478,053	$3,050,965	$4,141	$3,897	2.8%	8.3%
545	Ectopic Pregnancy Proc	532	477	2.0	2.0	0.77	0.77	$3,262,374	$2,888,039	$6,132	$6,055	0.5%	0.4%
544	D&C for Obstetric Diags	517	472	2.5	1.7	0.63	0.61	$2,676,957	$2,275,976	$5,178	$4,822	1.3%	0.4%
564	Abortion w/o D&C	370	315	1.5	1.4	0.33	0.33	$959,042	$818,987	$2,592	$2,600	0.0%	0.0%
546	Oth O.R. Proc for Ob Diag Exc Del	230	172	3.5	2.8	0.85	0.92	$2,066,216	$1,192,134	$8,984	$6,931	31.5%	1.7%
565	False Labor	218	171	1.2	1.3	0.16	0.15	$303,774	$194,124	$1,393	$1,135	0.0%	0.0%
542	Vag Del w Proc Exc Ster &/or D&C	172	146	2.8	2.8	0.48	0.51	$764,705	$661,884	$4,446	$4,533	1.6%	0.0%
Total		**113,942**	**100,722**	**2.6**	**2.6**	**0.41**	**0.41**	**$383,017,213**	**$330,818,532**	**$3,362**	**$3,284**	**0.8%**	**0.5%**

3.6 Normal Newborn Stays

DRGs 626 and 640 are "normal newborns," or, more correctly, newborns without a medical condition that would qualify them as a sick newborn according to our Medicaid Care Categories. Normal newborns represented 25% and 23% of stays in Years 1 and 2, respectively, and 3% of payments in both years. Of all newborn stays (normal newborn plus neonate), normal newborns represented 85% of stays but just 13% of payment in Year 1 and 84% of stays and 12% of payment in Year 2. Average length of stay was 2.3 days in SFY 2013-14 and 2.2 days in SFY 2014-15. As is true of most DRGs, casemix and outlier payments increase as severity of illness increases within these DRGs.

Table 3.6.1

Medicaid Care Category: Normal Newborn (DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)

Sorted in Order of Declining Year 1 Stays

		Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
APR-DRG	Description	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
640	Normal Newborn, Bwt >2499G	100,782	89,882	2.2	2.2	0.11	0.11	$94,124,626	$82,856,785	$934	$922	1.8%	0.4%
626	Norm Newborn, Bwt 2000-2499G	2,309	2,149	5.3	5.6	0.45	0.50	$8,758,961	$9,168,960	$3,793	$4,267	5.1%	6.6%
Total		**103,091**	**92,031**	**2.3**	**2.2**	**0.12**	**0.12**	**$102,883,588**	**$92,025,745**	**$998**	**$1,000**	**2.1%**	**1.0%**

3.7 Adult Miscellaneous Stays

The Adult Miscellaneous category includes stays for various diseases, some due to human immunodeficiency virus (HIV), stroke, and other medical conditions. It represented 16% and 18% of stays and 28% and 27% of payment in Years 1 and 2, respectively. There is a notable drop in average casemix from 1.66 in Year 1 to 1.47 in Year 2.

Table 3.7.1
Medicaid Care Category: Miscellaneous Adult (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

APR-DRG	Description	Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
		Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
720	Septicemia & Disseminated Inf	11,191	11,551	8.5	7.7	1.93	1.66	$181,564,103	$164,386,911	$16,224	$14,231	17.5%	16.3%
383	Cellulitis & Oth Bact Skin Inf	3,416	4,310	4.4	4.1	0.64	0.58	$18,444,171	$19,781,739	$5,399	$4,590	4.8%	1.6%
460	Renal Failure	2,676	2,566	5.8	5.1	0.98	0.92	$20,332,901	$18,434,512	$7,598	$7,184	8.0%	7.4%
463	Kidney & Urinary Tract Inf	2,543	2,609	3.8	3.7	0.66	0.61	$11,641,841	$11,560,941	$4,578	$4,431	2.4%	1.3%
420	Diabetes	2,429	2,769	3.3	3.3	0.67	0.63	$13,162,279	$14,163,838	$5,419	$5,115	2.6%	2.9%
045	CVA & Precereb Occl w Infarct	2,412	2,630	6.5	5.7	1.13	1.09	$21,929,219	$23,000,695	$9,092	$8,746	11.8%	9.3%
710	Inf & Parasit Dis Incl HIV w O.R. Proc	1,664	1,941	17.0	15.0	4.55	3.75	$73,683,395	$73,158,774	$44,281	$37,691	25.2%	25.4%
663	Oth Dis of Blood & Rel Organs	1,534	1,582	3.2	3.0	0.72	0.65	$7,728,333	$7,333,703	$5,038	$4,636	2.6%	1.4%
812	Poisoning of Medicinal Agents	1,366	1,533	4.1	3.5	0.82	0.78	$11,077,851	$10,223,735	$8,110	$6,669	16.3%	5.1%
425	Electrolyte Dis Exc Hypovolemia	1,341	1,356	3.5	3.8	0.70	0.69	$6,624,415	$7,036,435	$4,940	$5,189	3.7%	6.4%
053	Seizure	1,339	1,439	4.1	3.8	0.83	0.77	$8,697,073	$8,861,012	$6,495	$6,158	8.9%	8.0%
052	Nontraumatic Stupor & Coma	845	769	5.7	5.0	1.10	1.03	$7,226,588	$5,986,370	$8,552	$7,785	13.1%	7.5%
951	Mod Ext Proc Unrel to Diag	828	807	9.3	7.7	2.30	2.11	$16,798,746	$14,965,010	$20,288	$18,544	17.0%	12.6%
347	Oth Back & Neck Dis, Fx & Injuries	803	903	3.8	3.7	0.73	0.72	$4,316,135	$5,069,755	$5,375	$5,614	8.8%	2.4%
313	Knee & Lower Leg Procs Exc Foot	786	1,090	5.3	5.5	1.48	1.45	$10,563,624	$14,817,045	$13,440	$13,594	11.4%	10.2%
048	Nerve Disorders	779	862	4.2	3.7	0.78	0.74	$4,783,448	$4,892,509	$6,140	$5,676	4.8%	5.9%
861	Signs, Symptoms & Oth Factors	773	719	3.7	3.4	0.61	0.59	$3,620,181	$3,255,413	$4,683	$4,528	5.6%	1.3%
044	Intracranial Hemorrhage	759	798	9.3	9.2	1.80	1.56	$11,847,979	$12,652,430	$15,610	$15,855	15.6%	24.3%
308	Hip & Femur Procs for Trauma	737	777	6.7	6.9	1.66	1.66	$10,012,872	$10,982,645	$13,586	$14,135	10.3%	10.0%
721	Post-Op, Post-Trauma, Device Inf	729	693	9.0	7.3	1.52	1.29	$9,415,306	$6,969,885	$12,915	$10,058	20.4%	12.7%
351	Oth Muscskl & Connect Tis Diags	713	886	3.8	3.6	0.68	0.65	$3,758,102	$4,336,185	$5,271	$4,894	3.9%	1.5%
466	Complic Genitourin Dev Or Proc	686	657	5.6	5.5	1.28	1.16	$6,709,395	$5,979,105	$9,780	$9,101	9.5%	9.3%

Table 3.7.1

Medicaid Care Category: Miscellaneous Adult (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)

Sorted in Order of Declining Year 1 Stays

APR-DRG	Description	Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
		Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
021	Craniotomy Exc for Trauma	683	630	15.2	15.2	5.56	5.04	$35,831,977	$33,006,002	$52,463	$52,390	24.1%	31.1%
047	Transient Ischemia	627	627	2.4	2.3	0.65	0.63	$2,857,498	$2,916,990	$4,557	$4,652	0.8%	0.5%
468	Oth Kidney & Urinary Diags	613	669	4.5	3.9	0.81	0.77	$4,108,882	$4,021,405	$6,703	$6,011	9.9%	2.7%
Subtotal		**42,272**	**45,173**	**6.5**	**5.9**	**1.41**	**1.25**	**$506,736,313**	**$487,793,046**	**$11,988**	**$10,798**	**15.7%**	**14.7%**
Other Adult Misc. APR-DRGs (142)		24,346	26,245	8.3	7.6	2.09	1.85	$494,868,418	$474,158,105	$20,326	$18,067	25.4%	24.7%
Total		**66,618**	**71,418**	**7.1**	**6.5**	**1.66**	**1.47**	**$1,001,604,731**	**$961,951,151**	**$15,035**	**$13,469**	**20.5%**	**19.6%**

3.8 Pediatric Miscellaneous Stays

The Pediatric Miscellaneous category includes all stays for beneficiaries under age 21 except obstetrics, respiratory conditions, and newborns. It represented 10% of stays and 19% of payment in Year 1 and 11% of stays and 20% of payment in Year 2. In noting that chemotherapy was the most common DRG in this category, it is important to bear in mind that many children with cancer and other serious illnesses are covered by FFS Medi-Cal. The list of miscellaneous pediatric stays likely would be quite different if it also included all pediatric stays covered by the Medi-Cal managed care plans.

It is also important to note that the Pediatric Miscellaneous category does not include all the same DRGs as the Adult Miscellaneous category. While there is overlap, they are not broken down in the same way.

3M Health Information Systems (the developers of the APR-DRG algorithm) classifies DRGs as medical or procedural. Within the miscellaneous pediatric and respiratory pediatric categories, the most common procedural DRG was for appendectomies, with an average length of stay of 2.8 days in Years 1 and 2, and average Medi-Cal payment of $8,829 in Year 1 and $8,899 in Year 2.

Table 3.8.1
Medicaid Care Category: Miscellaneous Pediatric (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

APR-DRG	Description	Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
		Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
693	Chemotherapy	2,352	2,557	5.7	5.8	1.44	1.38	$33,430,391	$37,016,974	$14,214	$14,477	14.2%	19.2%
053	Seizure	2,022	2,342	3.1	2.9	0.77	0.80	$13,680,343	$17,186,187	$6,766	$7,338	7.9%	7.0%
420	Diabetes	1,801	1,987	2.9	2.8	0.50	0.51	$8,751,339	$9,920,378	$4,859	$4,993	2.3%	1.0%
463	Kidney & Urinary Tract Inf	1,613	1,558	4.1	3.8	0.55	0.54	$8,279,086	$8,433,832	$5,133	$5,413	2.3%	7.0%
225	Appendectomy	1,532	1,490	2.8	2.8	0.90	0.89	$13,525,852	$13,259,840	$8,829	$8,899	0.7%	0.6%
720	Septicemia & Disseminated Inf	1,009	1,284	8.9	8.2	1.47	1.41	$19,075,579	$23,252,125	$18,905	$18,109	32.2%	29.4%
249	Non-Bact Gastroenteritis, N & V	950	1,071	2.5	2.9	0.50	0.56	$4,313,989	$5,802,960	$4,541	$5,418	2.8%	9.4%
254	Oth Digestive Sys Diags	878	948	3.4	3.4	0.64	0.69	$5,352,688	$6,577,243	$6,096	$6,938	10.9%	12.4%
660	Maj Hem/Immun Diag	842	887	7.0	5.9	1.21	1.15	$12,172,790	$12,743,571	$14,457	$14,367	29.9%	32.8%
315	Shoulder & Arm Procs	809	853	1.7	1.6	1.11	1.18	$8,526,436	$9,565,674	$10,539	$11,214	1.3%	0.6%
722	Fever	777	825	2.6	2.5	0.46	0.46	$3,190,336	$3,571,200	$4,106	$4,329	1.4%	2.8%

Table 3.8.1
Medicaid Care Category: Miscellaneous Pediatric (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

APR-DRG	Description	Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
		Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
861	Signs, Symptoms & Oth Factors	769	774	3.0	3.0	0.53	0.53	$3,941,241	$3,941,641	$5,125	$5,093	7.1%	5.2%
662	Sickle Cell Anemia Crisis	656	645	4.8	5.1	0.77	0.73	$4,628,141	$4,415,894	$7,055	$6,846	2.5%	3.4%
383	Cellulitis & Oth Bact Skin Inf	654	685	3.3	3.4	0.52	0.53	$3,430,126	$3,693,944	$5,245	$5,393	6.5%	5.4%
309	Hip & Femur Procs Non-Trauma	620	627	3.5	3.1	1.46	1.52	$8,315,695	$9,077,969	$13,412	$14,478	7.1%	6.7%
222	Oth Stomach & Esophag Procs	561	555	3.0	2.9	0.97	0.98	$5,095,912	$4,998,382	$9,084	$9,006	4.4%	3.2%
313	Knee & Lower Leg Procs Exc Foot	543	587	3.4	3.1	1.29	1.34	$6,965,354	$7,675,489	$12,828	$13,076	4.6%	4.9%
346	Connective Tissue Dis	542	545	3.6	4.7	0.88	1.00	$4,535,831	$6,136,300	$8,369	$11,259	8.5%	22.1%
721	Post-Op, Post-Trauma, Device Inf	528	564	9.4	9.7	1.60	1.64	$8,817,383	$10,314,671	$16,700	$18,288	23.2%	23.4%
812	Poisoning of Medicinal Agents	523	593	2.2	2.4	0.54	0.55	$2,649,751	$3,082,924	$5,066	$5,199	0.6%	1.7%
021	Craniotomy Exc for Trauma	477	473	13.4	13.7	4.19	3.92	$22,640,317	$25,260,341	$47,464	$53,405	27.7%	38.1%
723	Viral Illness	471	481	3.0	2.7	0.57	0.57	$2,493,879	$2,712,905	$5,295	$5,640	6.6%	6.3%
663	Oth Dis of Blood & Rel Organs	469	494	3.4	3.0	0.58	0.59	$2,720,294	$2,863,230	$5,800	$5,796	10.0%	4.0%
421	Nutritional Dis	467	509	6.8	6.8	0.68	0.76	$3,599,524	$4,212,040	$7,708	$8,275	20.8%	15.9%
095	Cleft Lip & Palate Repair	463	424	1.5	1.8	0.74	0.69	$3,005,696	$2,682,297	$6,492	$6,326	1.9%	6.6%
Subtotal		**22,328**	**23,758**	**4.2**	**4.2**	**0.95**	**0.95**	**$213,137,971**	**$238,398,010**	**$9,546**	**$10,034**	**13.5%**	**15.9%**
Other Pediatric Misc. APR-DRGs (203)		20,557	20,671	7.0	6.7	1.87	1.84	$484,707,144	$482,813,378	$23,579	$23,357	32.8%	31.8%
Total		**42,885**	**44,429**	**5.5**	**5.4**	**1.39**	**1.36**	**$697,845,116**	**$721,211,388**	**$16,272**	**$16,233**	**26.9%**	**26.5%**

3.9 Adult Gastroenterology Stays

The Adult Gastroenterology includes disorders of the digestive and hepatobiliary systems. It represented 6% of stays and 7% of payment in Year 1 and 7% of both stays and payment in Year 2. Within the adult gastroenterology, circulatory and respiratory categories, the most common procedural DRG was for laparoscopic cholecystectomies (DRG 263), with average length of stay of 3.2 days in Years 1 and 2, and average Medi-Cal payment of $9,506 in Year 1 and $9,276 in Year 2.

Table 3.9.1
Medicaid Care Category: Gastroent Adult (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

APR-DRG	Description	Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
		Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
263	Laparoscopic Cholecystectomy	3,769	4,442	3.2	3.2	1.15	1.15	$35,828,940	$41,204,424	$9,506	$9,276	1.8%	0.7%
225	Appendectomy	2,017	2,621	2.4	2.5	0.93	0.90	$15,373,520	$19,375,950	$7,622	$7,393	1.2%	1.7%
282	Dis of Pancreas Exc Malig	1,995	2,672	4.3	4.1	0.91	0.82	$15,290,228	$17,924,529	$7,664	$6,708	5.6%	4.2%
241	Peptic Ulcer & Gastritis	1,537	1,827	3.7	3.6	0.91	0.85	$10,764,388	$11,892,849	$7,004	$6,509	3.4%	2.8%
254	Oth Digestive Sys Diags	1,506	1,590	3.9	3.3	0.75	0.70	$8,770,520	$8,735,425	$5,824	$5,494	6.6%	4.1%
279	Hepatic Coma & Oth Maj Liver Dis	1,225	1,248	6.1	6.3	1.40	1.31	$13,847,281	$12,922,531	$11,304	$10,355	12.8%	9.4%
247	Intestinal Obstruction	1,195	1,206	3.8	3.6	0.72	0.65	$6,706,084	$6,266,525	$5,612	$5,196	12.0%	4.5%
249	Non-Bact Gastroenteritis, N & V	1,192	1,316	2.9	2.7	0.53	0.52	$4,877,451	$5,324,854	$4,092	$4,046	0.7%	0.7%
253	Oth & Unspec GI Hemorrhage	1,189	1,324	4.0	4.0	0.96	0.92	$8,132,592	$9,214,102	$6,840	$6,959	2.9%	4.0%
284	Dis of Gallbladder	1,164	1,441	3.5	3.3	0.82	0.78	$6,944,856	$8,278,495	$5,966	$5,745	4.5%	3.0%
280	Alcoholic Liver Disease	1,064	1,342	6.4	6.0	1.32	1.25	$12,372,547	$14,247,372	$11,628	$10,617	10.8%	8.3%
221	Maj Small & Large Bowel Procs	940	998	11.7	11.5	2.83	2.55	$24,875,456	$24,327,185	$26,463	$24,376	18.5%	21.5%
251	Abdominal Pain	828	758	2.7	2.7	0.61	0.57	$3,661,396	$3,218,550	$4,422	$4,246	0.6%	1.2%
244	Diverticulitis & Diverticulosis	821	1,014	3.6	3.6	0.69	0.64	$4,557,892	$5,062,771	$5,552	$4,993	2.9%	0.2%
248	Maj Gastroint & Peritoneal Inf	693	723	6.5	6.5	1.15	1.03	$7,088,584	$6,118,951	$10,229	$8,463	12.1%	4.9%
283	Oth Dis of The Liver	636	627	4.3	4.5	1.10	1.08	$5,347,897	$5,239,944	$8,409	$8,357	4.4%	4.9%
243	Oth Esophageal Dis	582	607	3.0	3.0	0.80	0.73	$3,486,010	$3,307,445	$5,990	$5,449	0.8%	1.9%
252	Complic of GI Device or Proc	541	462	6.1	5.9	1.28	1.22	$4,845,552	$4,139,183	$8,957	$8,959	9.7%	8.2%
240	Digestive Malig	492	469	7.4	6.8	1.35	1.29	$4,936,732	$4,997,644	$10,034	$10,656	5.1%	8.9%
281	Malig of Hepatobiliary Sys	461	371	6.1	6.3	1.33	1.25	$4,680,978	$3,370,073	$10,154	$9,084	3.8%	3.8%

Table 3.9.1

Medicaid Care Category: Gastroent Adult (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)

Sorted in Order of Declining Year 1 Stays

APR-DRG	Description	Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
		Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
245	Inflammatory Bowel Disease	347	395	4.4	5.2	0.83	0.76	$2,309,786	$2,499,408	$6,656	$6,328	0.5%	2.4%
227	Oth Hernia Procs	290	258	4.5	4.6	1.37	1.38	$3,133,053	$2,736,617	$10,804	$10,607	2.6%	1.0%
228	Inguin, Fem & Umbil Hernia Procs	286	362	3.0	2.8	0.95	0.92	$2,190,539	$2,742,990	$7,659	$7,577	2.4%	3.2%
242	Maj Esophageal Dis	251	289	4.3	4.1	1.13	1.03	$2,244,613	$2,491,204	$8,943	$8,620	3.4%	3.1%
220	Maj Stomach & Esophag Procs	242	289	11.8	10.2	3.82	3.32	$8,017,064	$8,732,906	$33,128	$30,218	19.5%	13.8%
Subtotal		**25,263**	**28,651**	**4.4**	**4.2**	**1.07**	**1.01**	**$220,283,958**	**$234,371,927**	**$8,720**	**$8,180**	**7.1%**	**5.8%**
Other Gastroent Adult APR-DRGs (12)		1,325	1,444	8.8	8.0	2.81	2.36	$31,249,078	$31,999,359	$23,584	$22,160	22.8%	27.5%
Total		**26,588**	**30,095**	**4.6**	**4.4**	**1.16**	**1.07**	**$251,533,036**	**$266,371,286**	**$9,460**	**$8,851**	**9.1%**	**8.4%**

3.10 Adult Circulatory Stays

Table 3.10.1
Medicaid Care Category: Circulatory Adult (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

		Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
APR-DRG	Description	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
194	Heart Failure	4,824	4,784	4.8	4.5	0.95	0.87	$34,656,876	$33,201,194	$7,184	$6,940	7.2%	9.8%
203	Chest Pain	2,493	2,909	1.9	1.7	0.51	0.50	$9,124,872	$10,447,485	$3,660	$3,591	0.7%	0.1%
201	Cardiac Arrhythmias	1,783	1,809	3.3	3.2	0.68	0.63	$8,722,023	$8,439,807	$4,892	$4,665	2.1%	1.8%
198	Angina Pect & Atherosclerosis	1,699	1,675	2.2	2.2	0.53	0.51	$6,060,285	$5,848,689	$3,567	$3,492	0.7%	0.6%
190	Acute Myocardial Infarction	1,256	1,318	4.4	3.9	1.17	1.09	$11,330,394	$10,546,293	$9,021	$8,002	9.2%	7.9%
174	Percut CV Procs w Ami	1,237	1,480	4.0	3.6	2.46	2.34	$23,798,377	$27,504,488	$19,239	$18,584	9.2%	7.1%
197	Peripheral & Oth Vascular Dis	1,003	1,023	5.1	5.2	0.90	0.83	$7,329,017	$7,196,082	$7,307	$7,034	13.4%	15.5%
204	Syncope & Collapse	731	683	2.4	2.6	0.61	0.60	$2,968,681	$2,848,203	$4,061	$4,170	0.4%	0.4%
191	Cardiac Cath Exc Ischem Disease	655	811	6.6	5.5	1.77	1.66	$9,986,365	$10,910,187	$15,246	$13,453	18.2%	7.4%
175	Percut CV Procs w/o Ami	638	598	4.7	4.0	2.16	2.28	$10,050,515	$9,600,934	$15,753	$16,055	18.7%	8.1%
199	Hypertension	627	756	2.5	2.2	0.58	0.55	$2,658,046	$2,984,006	$4,239	$3,947	1.3%	0.0%
192	Cardiac Cath for Ischem Disease	617	642	2.8	2.6	1.00	0.99	$4,724,679	$4,577,715	$7,658	$7,130	2.2%	1.3%
173	Oth Vascular Procs	562	531	9.9	9.3	2.91	2.95	$14,095,989	$14,069,895	$25,082	$26,497	19.7%	19.3%
165	Coronary Bypass w Cath	385	454	12.4	11.5	5.17	5.17	$19,603,126	$21,945,347	$50,917	$48,338	23.7%	13.9%
207	Oth Circulatory Sys Diags	371	399	3.8	3.7	0.89	0.78	$2,414,852	$2,453,552	$6,509	$6,149	3.2%	6.1%
171	Pacemaker Impl w/o Ami Or Shock	280	269	4.9	4.8	2.01	2.01	$3,644,284	$3,835,399	$13,015	$14,258	4.8%	9.9%
161	Defib & Heart Assist Implant	266	250	8.4	9.4	6.21	6.42	$13,675,890	$15,479,390	$51,413	$61,918	14.0%	25.0%
166	Coronary Bypass w/o Cath	165	148	9.7	8.9	3.95	3.93	$5,990,460	$5,114,053	$36,306	$34,554	21.7%	20.4%
206	Complic of CV Device or Proc	164	142	6.5	6.9	1.36	1.12	$1,688,689	$1,480,809	$10,297	$10,428	10.8%	23.7%
180	Oth Circulatory Sys Procs	152	124	11.8	12.3	2.73	2.52	$4,175,401	$3,235,243	$27,470	$26,091	26.4%	32.4%
163	Cardiac Valve Procs w/o Cath	136	132	12.3	12.6	6.13	6.22	$7,773,364	$7,648,400	$57,157	$57,942	33.1%	28.5%
162	Cardiac Valve Procs w Cath	128	136	16.1	15.5	7.62	7.38	$8,546,171	$8,910,665	$66,767	$65,520	19.4%	16.0%
196	Cardiac Arrest	91	68	4.3	4.3	1.37	1.47	$1,142,234	$1,122,453	$12,552	$16,507	12.9%	29.5%
169	Maj Vascular Procs	74	80	9.9	10.6	4.75	4.64	$3,783,378	$4,190,362	$51,127	$52,380	25.9%	34.6%
200	Cardiac Structural Dis	70	56	4.8	4.7	0.95	0.86	$506,271	$351,356	$7,232	$6,274	40.7%	3.4%
Subtotal		**20,407**	**21,277**	**4.4**	**4.1**	**1.33**	**1.28**	**$218,450,237**	**$223,942,008**	**$10,705**	**$10,525**	**13.1%**	**12.1%**

Table 3.10.1
Medicaid Care Category: Circulatory Adult (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

APR-DRG	Description	Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
		Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
Other Circulatory Adult APR-DRGs (7)		213	236	7.4	8.3	2.39	2.21	$4,175,327	$4,404,828	$19,602	$18,665	21.1%	13.2%
Total		**20,620**	**21,513**	**4.5**	**4.2**	**1.34**	**1.29**	**$222,625,565**	**$228,346,836**	**$10,797**	**$10,614**	**13.2%**	**12.1%**

3.11 Neonate (Sick Newborn) Stays

The Neonate category includes stays for sick newborns. These stays may be at the birth hospital or the baby may have been transferred to a specialty center. The APR-DRG algorithm, which was developed by 3M and what is now the national Children's Hospital Association, defines "newborn" as babies within the first two weeks or month of life, depending on the specific condition. The neonate category represented 4% of stays but 19% of payment in both years. Sick babies, of course, tend to be very expensive. For example, DRG 588 includes babies born at less than 1,500 grams (3.3 pounds) who undergo a major procedure. Average length of stay for DRG 588 was 102.5 days with average payment of $346,433 in Year 1 and 95.8 days with average payment of $340,128 in Year 2.

Table 3.11.1
Medicaid Care Category: Neonate (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

		Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
APR-DRG	Description	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
639	Neo Bwt >2499G w Oth Sig Cond	2,812	2,551	6.3	6.6	0.54	0.60	$18,728,366	$18,976,086	$6,660	$7,439	13.5%	12.6%
636	Neo Bwt >2499G w Inf	2,315	2,294	7.5	7.4	0.88	0.89	$23,124,230	$23,198,241	$9,989	$10,113	3.0%	3.5%
581	Neo, Tsf<5 Days Old, Born Here	2,152	2,047	1.2	1.3	0.19	0.20	$3,656,314	$3,688,281	$1,699	$1,802	0.0%	0.0%
633	Neo Bwt >2499G w Maj Anomaly	1,747	1,654	10.3	10.2	1.51	1.53	$34,444,884	$35,637,472	$19,717	$21,546	20.0%	23.4%
634	Neo, Bwt >2499G w Maj Resp Cond	1,686	1,613	10.5	10.3	1.72	1.74	$35,132,085	$33,187,462	$20,838	$20,575	12.3%	9.6%
614	Neo Bwt 1500-1999G	1,089	1,123	17.9	18.2	1.99	2.18	$25,576,830	$28,640,872	$23,487	$25,504	8.2%	6.3%
625	Neo Bwt 2000-2499G w Oth Sig Cond	668	633	13.7	14.9	1.58	1.71	$11,814,739	$12,808,230	$17,687	$20,234	5.5%	10.7%
612	Neo Bwt 1500-1999G Maj Resp Cond	503	523	29.3	28.9	3.87	4.01	$23,967,290	$26,056,382	$47,649	$49,821	10.9%	11.1%
622	Neo Bwt 2000-2499G Maj Resp Cond	479	518	16.6	17.1	2.20	2.40	$12,626,294	$15,541,949	$26,360	$30,004	6.4%	11.3%
593	Neo Bwt 750-999G w/o Maj Proc	421	408	63.0	64.9	13.21	12.74	$66,758,117	$65,200,090	$158,570	$159,804	16.6%	20.5%
607	Neo Bwt 1250-1499G w Maj Problem	386	429	42.4	43.5	6.32	6.61	$30,882,525	$37,858,676	$80,007	$88,249	17.3%	16.5%
602	Neo Bwt 1000-1249G w Maj Problem	377	401	56.0	54.6	9.03	9.37	$43,994,523	$49,065,549	$116,696	$122,358	18.9%	17.7%
631	Neo Bwt >2499G w Oth Maj Proc	341	337	36.6	37.4	8.18	6.92	$40,718,517	$40,573,925	$119,409	$120,397	21.2%	33.9%
623	Neo Bwt 2000-2499G w Inf	308	318	13.3	14.3	1.68	1.60	$5,759,156	$6,053,853	$18,699	$19,037	5.4%	8.6%
621	Neo Bwt 2000-2499G w Maj Anomaly	298	260	18.4	17.8	2.85	2.83	$10,098,963	$9,384,860	$33,889	$36,096	17.4%	17.6%
611	Neo Bwt 1500-1999G w Maj Anomaly	288	260	29.6	29.0	4.78	4.61	$16,206,730	$14,596,670	$56,273	$56,141	16.0%	11.6%
608	Neo Bwt 1250-1499G	270	257	33.2	35.5	4.54	4.51	$14,638,984	$14,663,712	$54,218	$57,057	13.2%	14.9%
588	Neo Bwt <1500G w Maj Proc	251	225	102.5	95.8	25.42	23.29	$86,954,624	$76,528,811	$346,433	$340,128	18.3%	23.1%

Table 3.11.1
Medicaid Care Category: Neonate (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

		Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
APR-DRG	Description	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
630	Neo Bwt >2499G w Maj CV Proc	235	229	46.6	43.9	14.01	11.07	$52,670,821	$50,576,803	$224,131	$220,859	31.8%	45.0%
589	Neo Bwt <500G or <24 wks	227	158	24.8	18.7	4.78	3.65	$16,687,178	$10,447,113	$73,512	$66,121	38.0%	47.3%
613	Neo Bwt 1500-1999G w Inf	215	221	25.0	23.7	3.10	2.85	$8,106,730	$7,477,353	$37,706	$33,834	11.2%	8.6%
591	Neo Bwt 500-749G w/o Maj Proc	189	208	73.4	69.4	18.81	15.70	$40,659,992	$43,751,797	$215,132	$210,345	14.5%	26.0%
863	Neonatal Aftercare	153	163	30.0	26.2	3.88	3.87	$9,406,168	$8,388,970	$61,478	$51,466	26.7%	13.5%
609	Neo Bwt 1500-2499G w Maj Proc	143	172	56.3	54.0	12.07	11.83	$27,700,496	$34,438,778	$193,710	$200,225	33.8%	32.8%
603	Neo Bwt 1000-1249G	125	146	45.1	44.1	6.82	6.40	$10,117,013	$11,055,680	$80,936	$75,724	10.1%	15.6%
Subtotal		**17,678**	**17,148**	**17.4**	**17.7**	**2.94**	**2.90**	**$670,431,567**	**$677,797,617**	**$37,925**	**$39,526**	**17.8%**	**21.0%**
Other Neonate APR-DRGs (2)		132	154	13.2	12.7	6.06	6.85	$11,563,710	$14,070,827	$87,604	$91,369	28.8%	24.2%
Total		**17,810**	**17,302**	**17.4**	**17.6**	**2.97**	**2.94**	**$681,995,277**	**$691,868,444**	**$38,293**	**$39,988**	**18.0%**	**21.1%**

Chart 3.11.1 combines data for normal newborns and neonates to show the dramatic relationship between cost and birthweight. These figures combine the SFY 2013-14 and 2014-15 datasets to calculate average charges over the two-year period. Babies with a birthweight of at least 500 grams (1.1 pounds) have a good chance at viability, and on average expense falls sharply as gestational age lengthens and birthweight increases.

The chart includes only the hospital charges for the neonatal stay. The cost of neonatal physician care and any subsequent health care costs related to premature birth would also be of concern.

Chart 3.11.1
Average Hospital Charge per Newborn Stay by Birthweight

Based on 224,642 Medi-Cal FFS births in SFYs 2013-14 and 2014-15 paid through 4/30/16.

3.12 Adult Respiratory Stays

The Adult Respiratory category represented 3% of stays and 4% of payment in Year 1 and 3% of both stays and payment in Year 2

Table 3.12.1
Medicaid Care Category: Respiratory Adult (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

APR-DRG	Description	Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
		Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
139	Oth Pneumonia	3,343	2,862	4.9	4.7	0.87	0.80	$22,664,919	$17,486,398	$6,780	$6,110	6.0%	4.3%
140	COPD	2,752	2,325	4.2	4.1	0.80	0.74	$16,275,043	$13,325,730	$5,914	$5,731	4.1%	6.0%
133	Pulmon Edema & Resp Failure	1,680	1,542	7.6	6.8	1.42	1.25	$22,573,906	$17,004,578	$13,437	$11,028	21.5%	12.7%
137	Maj Resp Inf & Inflammations	1,219	1,048	9.5	9.7	1.45	1.35	$14,081,229	$12,740,690	$11,551	$12,157	11.0%	16.1%
141	Asthma	847	940	2.8	2.5	0.52	0.51	$3,419,308	$3,701,071	$4,037	$3,937	0.6%	0.3%
130	Resp Sys Diag w MV 96+ Hrs	706	537	22.7	20.6	4.94	4.60	$35,241,609	$25,726,547	$49,917	$47,908	27.9%	26.6%
144	Resp Symptoms & Minor Diags	672	658	2.8	3.0	0.60	0.56	$2,940,847	$2,632,919	$4,376	$4,001	2.0%	2.3%
134	Pulmonary Embolism	544	558	5.5	5.2	1.15	1.07	$5,229,579	$4,817,258	$9,613	$8,633	6.6%	3.9%
143	Oth Resp Diags Exc Minor	513	522	4.6	4.7	1.04	0.94	$4,219,866	$3,738,196	$8,226	$7,161	7.7%	4.1%
136	Resp Malig	427	394	7.2	8.0	1.30	1.24	$4,076,660	$3,994,001	$9,547	$10,137	5.0%	9.6%
113	Inf of Upper Resp Tract	367	465	2.7	2.7	0.52	0.45	$1,415,364	$1,582,213	$3,857	$3,403	0.5%	0.2%
135	Maj Chest & Resp Trauma	270	375	3.7	3.8	0.89	0.91	$2,051,748	$2,998,400	$7,599	$7,996	1.5%	1.9%
121	Oth Resp & Chest Procs	214	201	11.5	10.1	2.96	2.59	$5,728,350	$4,214,853	$26,768	$20,969	16.3%	11.2%
120	Maj Resp & Chest Procs	169	165	12.2	11.8	3.52	3.35	$5,787,883	$4,814,801	$34,248	$29,181	17.6%	8.6%
131	Cystic Fibrosis - Pulmon Dis	145	105	10.3	9.9	2.14	2.02	$1,656,011	$1,226,822	$11,421	$11,684	8.5%	6.6%
142	Interstitial & Alveolar Lung Dis	140	90	5.8	6.0	1.13	1.15	$1,117,512	$781,940	$7,982	$8,688	2.2%	5.9%
138	Bronchiolitis & RSV Pneumonia	12	16	4.3	5.8	0.85	0.66	$95,115	$69,673	$7,926	$4,355	14.8%	0.0%
132	Chronic Resp Dis Fm Perinatal	0	1	0.0	52.0	0.00	1.80	$0	$59,445	$0	$59,445	0.0%	83.4%
Total		**14,020**	**12,804**	**6.4**	**5.9**	**1.24**	**1.11**	**$148,574,947**	**$120,915,533**	**$10,597**	**$9,444**	**14.4%**	**12.0%**

3.13 Pediatric Respiratory Stays

The Pediatric Respiratory category represented 2% of stays and 3% of payment in Year 1 and 3% of both stays and payment in Year 2. Bronchiolitis and respiratory syncytial virus (RSV) pneumonia, which is common in infants and toddlers, was the most common DRG, with average length of stay of 3.3 days and average payment of $4,430 in Year 1, and average length of stay of 3.4 days and average payment of $4,457 in Year 2.

Table 3.13.1
Medicaid Care Category: Respiratory Pediatric (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Year 1 Stays

		Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
APR-DRG	Description	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
138	Bronchiolitis & RSV Pneumonia	2,329	3,436	3.3	3.4	0.46	0.44	$10,316,438	$15,314,477	$4,430	$4,457	4.4%	6.5%
139	Oth Pneumonia	1,589	1,733	4.3	4.1	0.73	0.72	$11,502,198	$12,396,891	$7,239	$7,153	10.0%	7.3%
113	Inf of Upper Resp Tract	1,296	1,441	2.7	2.7	0.48	0.47	$6,226,489	$6,770,369	$4,804	$4,698	12.4%	10.5%
141	Asthma	1,038	1,139	2.5	2.5	0.48	0.48	$4,923,058	$5,176,280	$4,743	$4,545	4.2%	2.5%
137	Maj Resp Inf & Inflammations	569	619	7.7	7.6	1.29	1.25	$7,567,709	$8,304,243	$13,300	$13,416	16.0%	16.4%
143	Oth Resp Diags Exc Minor	499	529	4.9	4.8	0.89	0.87	$4,447,600	$4,892,960	$8,913	$9,249	15.0%	15.1%
144	Resp Symptoms & Minor Diags	480	508	3.5	3.7	0.72	0.71	$2,953,065	$3,397,742	$6,152	$6,688	6.8%	7.9%
131	Cystic Fibrosis - Pulmon Dis	455	483	12.5	11.6	2.22	2.04	$10,357,640	$10,236,739	$22,764	$21,194	16.3%	16.6%
130	Resp Sys Diag w MV 96+ Hrs	437	459	19.3	18.9	4.60	4.42	$28,101,839	$30,426,298	$64,306	$66,288	40.6%	41.9%
133	Pulmon Edema & Resp Failure	327	448	6.5	6.0	1.50	1.34	$5,282,434	$6,384,147	$16,154	$14,250	25.8%	24.5%
132	Chronic Resp Dis Fm Perinatal	292	377	8.5	6.7	1.25	1.05	$4,739,759	$4,131,618	$16,232	$10,959	33.3%	16.1%
121	Oth Resp & Chest Procs	217	185	13.6	12.4	2.54	2.40	$9,163,890	$7,723,058	$42,230	$41,746	50.0%	48.9%
120	Maj Resp & Chest Procs	117	105	11.5	10.0	2.91	2.75	$3,997,390	$3,389,739	$34,166	$32,283	22.5%	24.0%
135	Maj Chest & Resp Trauma	81	81	3.5	3.4	0.91	0.85	$737,381	$659,413	$9,103	$8,141	0.0%	0.0%
140	COPD	28	34	6.9	6.9	0.74	0.75	$194,162	$350,043	$6,934	$10,295	5.3%	25.3%
134	Pulmonary Embolism	22	17	5.5	5.5	1.24	0.93	$239,285	$144,531	$10,877	$8,502	0.0%	0.0%
136	Resp Malig	14	14	10.2	8.9	1.32	1.37	$190,319	$288,493	$13,594	$20,607	22.3%	55.2%
142	Interstitial & Alveolar Lung Dis	12	21	6.2	5.2	1.11	1.09	$110,724	$202,895	$9,227	$9,662	20.7%	0.0%
Total		**9,802**	**11,629**	**5.4**	**5.0**	**1.00**	**0.90**	**$111,051,380**	**$120,189,936**	**$11,329**	**$10,335**	**23.6%**	**22.1%**

3.14 Other Stays

The Other Stays category represented less than 1% of both stays and payment in both years. It includes DRGs for substance abuse and psychiatric disorders. Although the counties have primary responsibility for mental health care under Medi-Cal, in certain limited circumstances, the stay may be covered by Medi-Cal.

Table 3.14.1
Medicaid Care Category: Other (Top 25 DRGs for Years 1 and 2, Sorted by Count of Year 1 Stays)
Sorted in Order of Declining Stays

		Stays		Avg. LOS		Casemix		Payment		Payment per Stay		Outlier Pct.	
APR-DRG	Description	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
775	Alcohol Abuse & Dependence	1,313	2,135	5.1	4.5	0.71	0.67	$8,245,316	$12,774,043	$6,280	$5,983	6.9%	7.8%
756	Acute Anxiety & Delirium States	169	227	2.2	2.4	0.50	0.47	$602,532	$814,946	$3,565	$3,590	3.4%	6.7%
770	Drug & Alcohol Abuse, AMA	151	274	2.7	2.6	0.41	0.42	$484,183	$939,598	$3,207	$3,429	1.8%	0.8%
773	Opioid Abuse & Dependence	137	140	4.7	4.5	0.53	0.50	$632,226	$602,033	$4,615	$4,300	4.2%	4.6%
776	Oth Drug Abuse & Dependence	93	121	3.1	3.9	0.58	0.51	$451,723	$591,542	$4,857	$4,889	0.0%	24.0%
751	Maj Depression	91	125	4.9	6.0	0.58	0.54	$383,756	$503,087	$4,217	$4,025	10.3%	5.3%
757	Organic Mental Health Disturb	77	66	10.1	11.1	0.77	0.76	$576,349	$501,818	$7,485	$7,603	39.2%	36.4%
750	Schizophrenia	62	106	7.7	6.9	0.80	0.79	$296,131	$519,275	$4,776	$4,899	3.8%	1.2%
753	Bipolar Dis	43	54	4.7	7.9	0.58	0.55	$160,005	$397,852	$3,721	$7,368	0.0%	49.4%
774	Cocaine Abuse & Dependence	43	63	12.3	3.2	0.59	0.52	$193,686	$241,231	$4,504	$3,829	0.0%	0.0%
760	Oth Mental Health Dis	34	29	8.1	4.2	0.67	0.73	$214,203	$144,462	$6,300	$4,981	39.1%	0.0%
755	Adjust Dis & Neuroses Exc Dep	20	27	3.6	4.4	0.41	0.39	$51,905	$76,457	$2,595	$2,832	0.0%	2.9%
754	Depression Exc Maj Dep	19	21	3.4	4.3	0.46	0.38	$45,157	$53,718	$2,377	$2,558	0.0%	0.0%
759	Eating Dis	11	17	11.4	20.2	1.61	1.30	$136,117	$363,230	$12,374	$21,366	41.8%	62.2%
758	Childhood Behavioral Dis	10	9	6.1	3.1	0.65	0.66	$43,170	$35,059	$4,317	$3,895	0.0%	0.0%
772	Alc & Drug Dep w Rehab Or Detox	7	5	6.6	7.4	0.57	0.69	$40,296	$27,954	$5,757	$5,591	0.0%	0.0%
740	Mental Illness Diag w O.R. Proc	6	7	11.0	10.9	2.31	2.06	$114,719	$136,833	$19,120	$19,548	36.1%	17.9%
752	Dis of Personality	6	3	2.3	4.7	0.53	0.43	$26,558	$8,773	$4,426	$2,924	0.0%	0.0%
Total		**2,292**	**3,429**	**5.0**	**4.5**	**0.65**	**0.62**	**$12,698,032**	**$18,731,910**	**$5,540**	**$5,463**	**8.6%**	**10.1%**

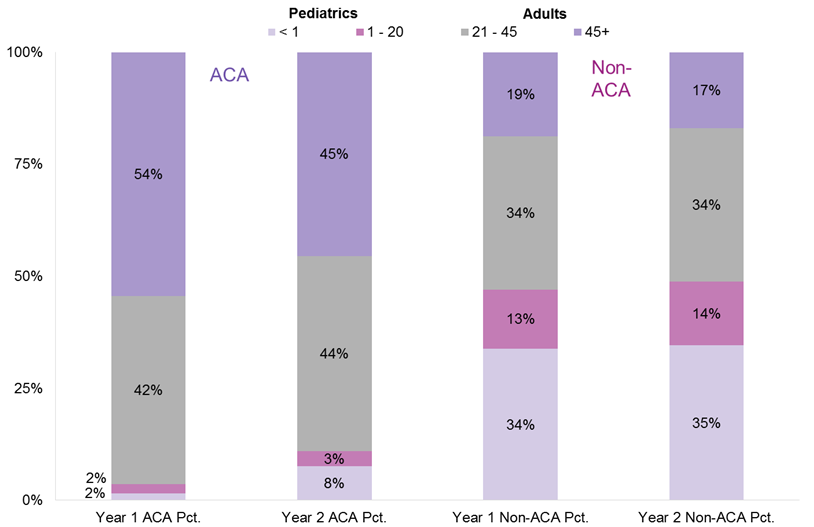
3.15 Differences Between Non-ACA and ACA Optional Populations

The Medi-Cal expansion under the Affordable Care Act implemented on January 1, 2014 meant that several populations became newly eligible for Medicaid. In the analytical dataset, there were 28,401 ACA stays in the six-month period between January 1 and June 30, 2014. For Year 2, there were 55,874 ACA stays, paid through April 30, 2016. Note that Year 1 data includes only six months of ACA eligibility while Year 2 includes admissions in all twelve months.

Of the 28,401 Year 1 stays, 86% were for adults age 19-64 (aid code M1) or for people eligible for CalFresh but not previously eligible for either Medi-Cal or the Low Income Health Program (LIHP) (aid code 7U); 6% were for people transitioning from LIHP (aid code L1); and 9% were for undocumented adults age 19-64 with restricted benefits (M2). Of the 55,874 Year 2 stays, 79% were for adults age 19- 64 (aid code M1) or for people eligible for CalFresh but not previously eligible for either Medi-Cal or LIHP (aid code 7U); 2% were for people transitioning from LIHP (aid code L1); and 19% were for undocumented adults age 19-64 with restricted benefits (aid code M2).

Chart 3.15.1 shows the patient age profile of the ACA stays compared with the non-ACA stays. On average, the ACA stays were for an older population with average age of 44 in Year 1 and 40 in Year 2; non-ACA stays had an average age of 24 in Year 1 and 23 in Year 2.

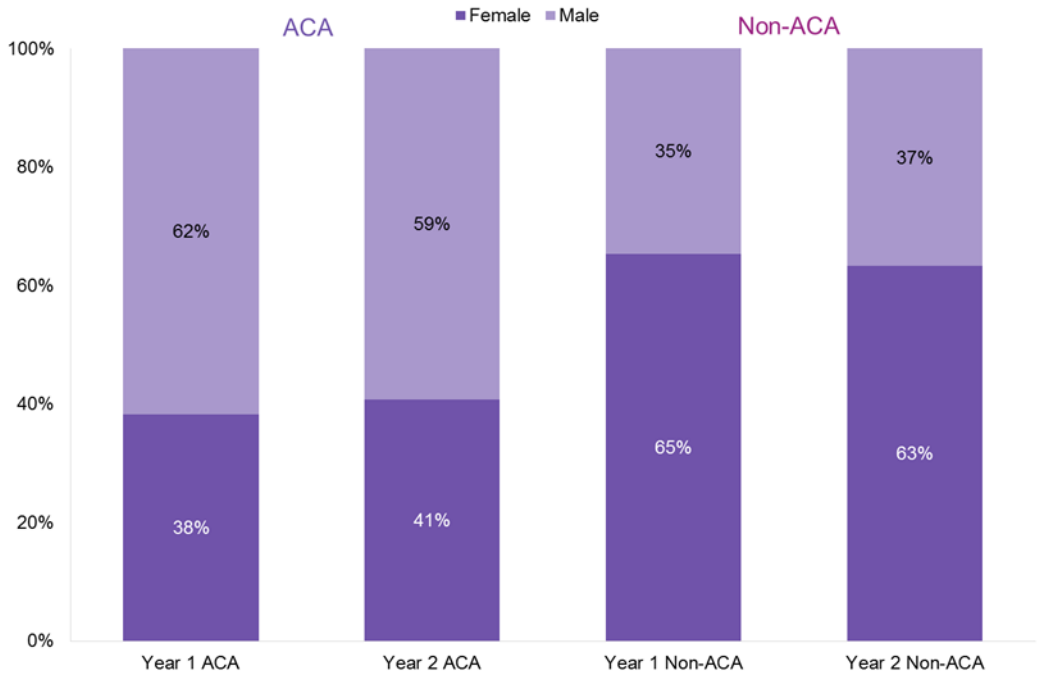
Chart 3.15.1
Years 1-2 Percent of ACA and Non-ACA Stays by Age



Gender mix also clearly differs between ACA and non-ACA populations. Historically, pregnant women and infants have been priority populations for Medicaid eligibility. Because of this pre-existing coverage, the number of women is higher in the non-ACA category, while men previously excluded from eligibility are taking advantage of coverage provided by ACA. Males accounted for the majority of ACA stays (62% of Year 1 and 59% of Year 2 stays), while females accounted for the majority of non-ACA stays (65% of Year 1 and 63% of Year 2 stays); see Chart 3.15.2. The demographic differences in the populations result in more serious illness and assigned DRGs for the ACA optional expansion population as demonstrated by a higher average casemix, length of stay, and payment.

Also noteworthy is the increase in infants from 2% to 8% under one year of age from Year 1 to Year 2, representing babies born to women insured under Medicaid expansion.

Chart 3.15.2
Percent of ACA and Non-ACA Stays by Gender



Tables 3.15.1 to 3.15.4 show the most common DRGs and the most expensive DRGs broken out by the ACA optional population and the non-ACA or historical Medi-Cal population. The prevalence of particularly serious DRGs (e.g., septicemia, ventilator patients, HIV, and heart failure) implies that many of the ACA patients would have been in the hospital with or without the ACA. Presumably, they would have been uninsured (except for the small number previously covered by the LIHP). For these stays, the ACA expansion generated payment to hospitals for care that otherwise likely would not have been directly compensated except for any money collected from patients. Also, please note that the much higher payment and stay count for ACA in Year 2 is due to that population being eligible over the entirety of Year 2, versus only six months of Year 1.

Table 3.15.1
Year 1 Top 10 Base APR-DRGs by Payments

DRG	Description	Stays	Payments
Non-ACA Population			
560	Vaginal Del	70,734	$194,726,096
720	Septicemia & Disseminated Inf	10,849	$177,450,774
540	Cesarean Del	36,012	$169,087,324
640	Normal Newborn, Bwt >2499G	100,853	$95,135,083
004	Trach, MV 96+ Hrs, w Ext Proc	398	$89,089,179
588	Neo Bwt <1500G w Maj Proc	249	$86,427,849
710	Inf & Parasit Dis Incl HIV w O.R. Proc	1,448	$72,420,448
593	Neo Bwt 750-999G w/o Maj Proc	430	$66,200,289
130	Resp Sys Diag w MV 96+ Hrs	1,074	$58,932,753
005	Trach, MV 96+ Hrs, w/o Ext Proc	484	$56,305,572
ACA Population			
004	Trach, MV 96+ Hrs, w Ext Proc	145	$30,299,452
720	Septicemia & Disseminated Inf	1,617	$27,228,414
710	Inf & Parasit Dis Incl HIV w O.R. Proc	402	$19,014,890
005	Trach, MV 96+ Hrs, w/o Ext Proc	102	$13,681,725
021	Craniotomy Exc for Trauma	182	$10,629,782
174	Percut CV Procs w Ami	418	$8,291,608
263	Laparoscopic Cholecystectomy	787	$8,062,255
911	Ext Trunk Procs Mult Sig Trauma	95	$8,054,448
912	Muscskl Procs Mult Sig Trauma	133	$7,228,933
165	Coronary Bypass w Cath	115	$6,510,914

Table 3.15.2
Year 2 Top 10 Base APR-DRGs by Payments

DRG	Description	Stays	Payments
Non-ACA Population			
560	Vaginal Del	57,352	$149,905,396
720	Septicemia & Disseminated Inf	9,906	$143,726,946
540	Cesarean Del	29,047	$132,089,694
640	Normal Newborn, Bwt >2499G	86,754	$79,959,563
588	Neo Bwt <1500G w Maj Proc	214	$73,371,873
004	Trach, MV 96+ Hrs, w Ext Proc	274	$64,710,850
593	Neo Bwt 750-999G w/o Maj Proc	384	$61,239,479
710	Inf & Parasit Dis Incl HIV w O.R. Proc	1,397	$57,658,624
630	Neo Bwt >2499G w Maj CV Proc	223	$49,698,147
130	Resp Sys Diag w MV 96+ Hrs	840	$48,799,103
ACA Population			
720	Septicemia & Disseminated Inf	2,929	$43,912,090
004	Trach, MV 96+ Hrs, w Ext Proc	215	$39,821,604
710	Inf & Parasit Dis Incl HIV w O.R. Proc	705	$28,314,464
005	Trach, MV 96+ Hrs, w/o Ext Proc	156	$21,536,684
021	Craniotomy Exc for Trauma	268	$14,436,451
912	Muscskl Procs Mult Sig Trauma	257	$13,879,641
174	Percut CV Procs w Ami	614	$12,285,909
263	Laparoscopic Cholecystectomy	1,213	$11,678,604
911	Ext Trunk Procs Mult Sig Trauma	138	$10,584,997
221	Maj Small & Large Bowel Procs	405	$10,115,489

Notes:
1. Total stays = 428,816; paid through 4/30/2016.
2. This table includes NDPH stays from Jul-Dec 2013. Inclusion or exclusion of NDPH stays would not affect this comparison.

Table 3.15.3

Year 1 Top 10 Base APR-DRGs by Stays

DRG	Description	Stays	Payments
Non-ACA Population			
640	Normal Newborn, Bwt >2499G	100,853	$95,135,083
560	Vaginal Del	70,734	$194,726,096
540	Cesarean Del	36,012	$169,087,324
720	Septicemia & Disseminated Inf	10,849	$177,450,774
566	Oth Antepartum Diags	5,330	$15,025,320
139	Oth Pneumonia	4,507	$31,372,230
194	Heart Failure	4,216	$31,091,258
463	Kidney & Urinary Tract Inf	4,033	$19,369,778
420	Diabetes	3,644	$18,736,645
263	Laparoscopic Cholecystectomy	3,511	$33,108,909
ACA Optional Population			
720	Septicemia & Disseminated Inf	1,617	$27,228,414
383	Cellulitis & Oth Bact Skin Inf	1,161	$5,847,944
194	Heart Failure	851	$6,464,598
263	Laparoscopic Cholecystectomy	787	$8,062,255
420	Diabetes	700	$3,910,873
775	Alcohol Abuse & Dependence	673	$4,389,104
282	Dis of Pancreas Exc Malig	631	$5,084,262
225	Appendectomy	621	$5,142,847
139	Oth Pneumonia	620	$4,404,991
045	CVA & Precereb Occl w Infarct	563	$5,239,960

Notes:

1. Total stays = 428,816; paid through 4/30/2016.

2. This table includes NDPH stays from Jul-Dec 2013. Inclusion or exclusion of NDPH stays would not affect this comparison.

Note:
1. Total stays = 405,372; paid through 4/30/2016.

Table 3.15.4

Year 2 Top 10 Base APR-DRGs by Stays

DRG	Description	Stays	Payments
Non-ACA Population			
640	Normal Newborn, Bwt >2499G	86,754	$79,959,563
560	Vaginal Del	57,352	$149,905,396
540	Cesarean Del	29,047	$132,089,694
720	Septicemia & Disseminated Inf	9,906	$143,726,946
566	Oth Antepartum Diags	4,106	$11,529,695
139	Oth Pneumonia	3,968	$25,876,049
463	Kidney & Urinary Tract Inf	3,661	$17,710,526
420	Diabetes	3,539	$17,796,741
263	Laparoscopic Cholecystectomy	3,539	$33,382,849
194	Heart Failure	3,451	$25,075,707
ACA Optional Population			
640	Normal Newborn, Bwt >2499G	3,128	$2,897,222
720	Septicemia & Disseminated Inf	2,929	$43,912,090
560	Vaginal Del	2,493	$6,250,587
383	Cellulitis & Oth Bact Skin Inf	1,867	$8,567,690
194	Heart Failure	1,412	$9,872,226
540	Cesarean Del	1,292	$5,921,226
420	Diabetes	1,217	$6,287,475
263	Laparoscopic Cholecystectomy	1,213	$11,678,604
775	Alcohol Abuse & Dependence	1,196	$7,588,184
282	Dis of Pancreas Exc Malig	1,078	$7,752,103

Note:

1. Total stays = 405,372; paid through 4/30/2016.

Appendix A. DRG Pricing Calculator

The DRG Pricing Calculator is probably the single most useful tool in understanding the DRG payment method. A version for each SFY is posted to the Medi-Cal DRG webpage at www.dhcs.ca.gov/provgovpart/Pages/DRG.aspx. The cover pages shown below provide context, while the calculators for each SFY show details of the pricing algorithm. The calculator spreadsheet files on the DRG webpage also include a list of APR-DRGs and a list of hospital-specific information that is not included here. The Year 1 cover and calculator tabs are shown below, followed by the Year 2 cover and calculator tabs.

The calculator is intended to mirror the calculations within the Medi-Cal claims processing system but in cases of disagreement, the claims system will be taken as correct. This caveat is particularly pertinent in moving from the allowed amount to the paid amount due to various adjustments, e.g., other health coverage, beneficiary's share of cost, and payment reductions due to timely filing. These adjustments can be complex. The DRG project changed the calculation of the allowed amount but not the logic between the allowed amount and the paid amount.

California Medicaid DRG Pricing Calculator

September 15, 2015

This file is designed to enable interested parties to predict payment under an APR-DRG payment method for inpatient fee-for-service stays covered by California Medicaid. The new payment method is effective with first date of service on or after July 1, 2013. The "Calculator" sheet incorporates the pricing logic for the DRG base payment, cost outlier payments, etc. The "DRG Table" sheet shows information specific to each APR-DRG.

Under DRG payment, the Medicaid claims processing system assigns each complete inpatient stay to an All Patient Refined Diagnosis Related Group (APR-DRG) based on the diagnoses and procedures on the claim. Hospitals need not put the DRG on the claim and need not purchase APR-DRG software. This pricing calculator spreadsheet includes the list of APR-DRGs and associated payment rates. It assumes the user knows which APR-DRG should be entered into the "calculator" sheet. For more information on APR-DRGs, contact 3M Health Information Systems, which developed the software and owns it.

This calculator spreadsheet is intended to be helpful to users, but it cannot capture all the editing and pricing complexity of the Medicaid claims processing system. In cases of difference, the claims processing system is correct.

1

A "Frequently Asked Questions" document is available and is essential in understanding the payment method. This DRG Pricing Calculator is also available in spreadsheet form as an interactive Excel file. To download either document, go to http://www.dhcs.ca.gov.

This spreadsheet includes data obtained through the use of proprietary computer software created, owned and licensed by the 3M Company. All copyrights in and to the 3M™ Software are owned by 3M. All rights reserved.

PLEASE NOTE THAT CHANGES REMAIN POSSIBLE BEFORE JULY 1, 2013

1	C	D	E	F	G
2	**Medi-Cal DRG Pricing Calculator**				
3	**Note: This calculator reflects DHCS decisions on the structure of the Medi-Cal fee-for-service DRG payment method that will be implemented July 1, 2013. Stays for administrative days and rehabilitation services will be paid by a per diem method.**				
4	***Indicates information to be input by the user.***				***Indicates payment policy parameters set by Medicaid***
5	**Information**		**Data**		**Comments or Formula**
6	**INFORMATION FROM THE HOSPITAL-- TO BE INPUT BY THE USER**				
7	Total charges		$100,000.00		UB-04 Form Locator 47
8	Hospital-specific cost-to-charge ratio		35.00%		Used to estimate the hospital's cost of this stay
9	Length of stay		1		Used for transfer pricing adjustment
10	Patient discharge status = 02, 05, 65 or 66? (transfer)		No		Used for transfer pricing adjustment
11	Patient age (in years)		15		Used for age adjustor
12	Other health coverage		$300.00		UB-04 Form Locator 54 for payments by third parties
13	Patient share of cost		$300.00		Includes spend-down or copayment
14	Is discharge status equal to 30?		No		Indicates an interim claim
15	Designated NICU facility		No		Policy adjustor for designated NICU facilities
16	APR-DRG		001-1		From separate APR-DRG grouping software
17	**APR-DRG INFORMATION**				
18	APR-DRG description		LIVER TRANSPLANT &/OR INTESTINAL TRANSPLANT		Look up from DRG table
19	Casemix relative weight--unadjusted		7.0839		Look up from DRG table
20	Service adjustor - hospital with designated NICU		1.0000		Look up from DRG table
21	Service adjustor - all other hospitals		1.0000		Look up from DRG table
22	Age adjustor		1.2500		Look up from DRG table
23	Payment relative weight		8.8549		IF E11<21, then if (E15="Yes"), then (E19*E20*E22), else (E19*E21*E22), else if (E15="Yes"), then (E19*E20), else (E19*E21)
24	Average length of stay for this APR-DRG		6.93		Look up from DRG table
25	**PAYMENT POLICY PARAMETERS SET BY MEDICAID--SUBJECT TO CHANGE**				
26	DRG base price		$7,200.00		Used for DRG base payment--see DRG base price tab
27	Cost outlier threshold 1		$40,000		Used for cost outlier adjustments
28	Cost outlier threshold 2		$125,000		Used for cost outlier adjustments
29	Marginal cost percentage_1		60%		Used for cost outlier adjustments
30	Marginal cost percentage_2		80%		Used for cost outlier adjustments
31	Casemix adjustment factor		1.00		Used to adjust DRG relative weights should a need arise, else leave set to 1.00.
32	Interim claim threshold		29		Used for pricing interim claims
33	Interim per diem amount		$600		Used for pricing interim claims
34	**IS THIS AN INTERIM CLAIM?**				
35	Is discharge status equal to 30?		No		Look up E14
36	Is length of stay > interim claim threshold?		N/A		IF E35="Yes", then if (E9 > E32), "Yes", else "No", else "N/A"
37	Skip to E65 for final interim claim payment amount		$0.00		IF E36="Yes", (E33*E9) rounded to 2 places, else 0
38	**WHAT IS THE DRG BASE PAYMENT?**				
39	DRG base payment for this claim		$63,755.10		E26*E23*E31
40	**IS A TRANSFER PAYMENT ADJUSTMENT MADE?**				
41	Is a transfer adjustment potentially applicable?		No		Look up E10
42	Calculated transfer payment adjustment		N/A		IF E41="Yes", then (E39/E24)*(E9+1) rounded to 2 places, else "NA"
43	Is transfer payment adjustment < allowed amount so far?		N/A		IF E42 ="N/A" then ,"N/A", else if (E42<E39), then "Yes" else "No"
44	Allowed amount after transfer adjustment		$63,755.10		IF E43= "Yes", then E42, else E39
45	**IS A COST OUTLIER ADJUSTMENT MADE?**				
46	Estimated cost of this case		$35,000.00		E7 * E8
47	Is estimated cost > allowed amount		Gain		IF E46 > E44 then "Loss" else "Gain"
48	***High-Side Outlier Payment When Payment Is Much Lower than Cost***				
49	Estimated loss on this case		N/A		IF E47 = "Loss", then (E46-E44), else "N/A"
50	Is loss > outlier threshold lower limit		N/A		IF E47 = "Loss", then if (E49 > E27), then "Yes", else "No", else "N/A"
51	DRG cost outlier payment increase 1		$0.00		IF E50 = "Yes", then if (E49<E28), then ((E49-E27)*E29), else ((E28-E27)*E29), else 0
52	DRG cost outlier payment increase 2		$0.00		IF E50="Yes", then if (E49>E28), then (E49-E28)*E30, rounded to 2 places else 0, else 0
53	***Low Side Outlier Payment When Payment Is Much Greater than Cost***				
54	Estimated gain on this case		$28,755.10		IF E47="Gain", then (E44-E46), else"N/A"
55	Is gain > outlier threshold		No		IF E47="Gain", then if (E54>E27), then "Yes", else "No", else "N/A"
56	DRG cost outlier payment decrease		$0.00		IF E47="Gain", then (if (E55="Yes"), then (E54-E27)*E29 rounded to 2
57	**ALLOWED AMOUNT AFTER TRANSFER AND OUTLIER ADJUSTMENTS**				
58	DRG payment so far		$63,755.10		IF E47="Loss", then (E44+E51+E52), else (E44-E56)
59	**CALCULATION OF ALLOWED AMOUNT AND REIMBURSEMENT AMOUNT**				
60	Add-on amount		$0.00		Hospital-specific payment separate from DRG payment (not used at this time)
61	Allowed amount		$63,755.10		Allowed amount = E58+E60
62	Other health coverage		$300.00		E12
63	Patient share of cost		$300.00		E13
64	"Lesser of" calculation		$63,755.10		Existing policy ensures that payment amount cannot exceed total charges. IF E61>E7, then E7, else E61
65	Payment amount		**$63,155.10**		If interim claim (E35="yes"), then interim claim (E37) amount as payment amount. Otherwise, subtract other health coverage (E62) and patient share of cost (E63) from "Lesser of" (E64) to obtain payment amount.

Medi-Cal DRG Pricing Calculator for FY 2014-15

Effective for Dates of Admission on or after July 1, 2014

September 25, 2015

This DRG Pricing Calculator is intended to enable hospitals and other interested parties to understand and predict estimated payment for inpatient stays covered by fee-for-service Medi-Cal. This version applies to stays with dates of admission on or after July 1, 2014, through June 30, 2015. Annual updates necessitate a new calculator that reflects new wage index values, hospital-specific base rates, and other changes. For stays with dates of admission prior to July 1, 2014, see the 2013 version of the calculator dated July 16, 2013, on the DHCS DRG webpage. The "Calculator" sheet incorporates the pricing logic for the DRG base payment, cost outlier payments, etc. The "DRG Table" sheet shows information specific to each DRG. The "Hospital Characteristics" sheet shows information specific to each hospital. "The FY 14-15 DRG Transition Rate" file can be found on the DRG webpage.

Under DRG payment, the Medicaid claims processing system assigns each complete inpatient stay to an All Patient Refined Diagnosis Related Group (APR-DRG) based on the diagnoses and procedures on the claim. (Note that Medi-Cal does not use Medicare DRGs, which were not designed for a Medicaid population.) Hospitals need not put the DRG on the claim and need not purchase APR-DRG software. The "Calculator" sheet assumes the user knows which APR-DRG applies to a particular stay. For more information on APR-DRGs, contact 3M Health Information Systems, which developed and owns the software.

This calculator is intended to be helpful to users to estimate pricing, but it cannot capture all the editing and pricing complexity of the Medicaid claims processing system. In cases of difference, the claims processing system is correct.

A "Frequently Asked Questions" document is available and is essential in understanding the payment method. This DRG Pricing Calculator is also available in spreadsheet form as an interactive Excel file. Both documents are at the Medi-Cal DRG page at http://www.dhcs.ca.gov. To sign up for the DRG listserve or to ask a DRG policy question, email drg@dhcs.ca.gov. (Do not send any protected health information by email.) For questions about claims, contact the Medi-Cal Telephone Service Center at 800.541.5555.

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A	B	C	D
2	**Medi-Cal DRG Pricing Calculator Effective Dates of Admission on or after July 1, 2014**		
3	**September 25, 2015**		
4	**Instructions:**		
5	1. The hospital or other user inputs data in cells C14-C23 & C33. Values for cell C33 can be found on the Hospital Characteristics tab.		
6	2. Medi-Cal payment policy parameters have already been entered in cells C34-C40.		
7	3. The calculator will show the predicted allowed amount and paid amount in cells C68 and C72 respectively.		
8	4. LOS = discharge date minus admission date. If a patient is admitted and discharged on the same day, the calculated LOS equals zero.		
9	5. "Transfer" discharge statuses include 02, 05,63, 65, 66, 82, 85, 91, 93, and 94.		
10	6. This calculator spreadsheet is intended to be helpful to users, but it cannot capture all the editing and pricing complexity of the Medicaid claims processing system. In cases of difference, the claims processing system is correct.		
11	*Indicates information to be input by the user.*		*Indicates payment policy parameters set by Medi-Cal*
12	Information	Data	COMMENTS OR FORMULA
13	**INFORMATION FROM THE HOSPITAL-- TO BE INPUT BY THE USER**		
14	Total charges	$100,000.00	UB-04 Form Locator 47
15	Hospital-specific cost-to-charge ratio	35.00%	Used to estimate the hospital's cost of this stay
16	Length of stay	1	See instruction 4; used for transfer pricing adjustment
17	Patient discharge status = transfer?	No	See instruction 5; used for transfer pricing adjustment
18	Patient age (in years)	15	Used for age adjustor
19	Other health coverage	$300.00	UB-04 Form Locator 54 for payments by third parties
20	Patient share of cost	$300.00	Includes spend-down or copayment
21	Is discharge status equal to 30?	No	Indicates an interim claim
22	Designated NICU facility	No	Policy adjustor for designated NICU facilities
23	APR-DRG	001-1	From separate APR-DRG grouping software
24	**APR-DRG INFORMATION**		
25	APR-DRG description	LIVER TRANSPLANT &/OR INTESTINAL TRANSPLANT	Look up from DRG table (Tab 3, Column B)
26	Casemix relative weight--unadjusted	6.6674	Look up from DRG table (Tab 3, Column D)
27	NICU service adjustor - hospital with designated NICU	1.0000	Look up from DRG table (Tab 3, Column I)
28	NICU service adjustor - all other hospitals	1.0000	Look up from DRG table (Tab 3, Column E)
29	Pediatric age adjustor	1.2500	Look up from DRG table (Tab 3, Column G)
30	Payment relative weight	8.3343	IF C18<21, then if (C22="Yes"), then (C26*C27*C29), else (C26*C28*C29), else if (C22="Yes"), then (C26*C27), else (C26*C28)
31	Average length of stay for this APR-DRG	7.6	Look up from DRG table (Tab 3, Column C)
32	**PAYMENT POLICY PARAMETERS SET BY MEDI-CAL**		
33	DRG base rate	$7,373	Specific to each hospital. (Tab 4, Row 14)
34	Cost outlier threshold 1	$42,040	Threshold qualifying high and low-cost outlier adjustments
35	Cost outlier threshold 2	$131,375	Threshold qualifying high-cost outlier adjustments
36	Marginal cost percentage_1	60%	Used for high and low-cost outlier adjustments
37	Marginal cost percentage_2	80%	Used for high-cost outlier adjustments
38	Casemix adjustment factor	1.00	Used to adjust DRG relative weights should a need arise, else leave set to 1.00.
39	Interim claim threshold	29	Threshold qualifying interim claims
40	Interim per diem amount	$600	Used for pricing interim claims
41	**IS THIS AN INTERIM CLAIM?**		
42	Is discharge status equal to 30?	No	Look up C21
43	Is length of stay > interim claim threshold?	N/A	IF C42="Yes", then if (C16 > C39), "Yes", else "No", else "N/A"
44	Skip to C72 for final interim claim payment amount	$0.00	IF C43="Yes", (C40*C16) rounded to 2 places, else 0
45	**WHAT IS THE DRG BASE PAYMENT?**		
46	DRG base payment for this claim	$61,448.43	C33*C30*C38
47	**IS A TRANSFER PAYMENT ADJUSTMENT MADE?**		
48	Is a transfer adjustment potentially applicable?	No	Look up C17
49	Calculated transfer payment adjustment	N/A	IF C48="Yes", then (C46/C31)*(C16+1) rounded to 2 places, else "NA"
50	Is transfer payment adjustment < allowed amount so far	N/A	IF C49 ="N/A" then ,"N/A", else if (C49<C46), then "Yes" else "No"
51	Allowed amount after transfer adjustment	$61,448.43	IF C50= "Yes", then C49, else C46
52	**IS A COST OUTLIER ADJUSTMENT MADE?**		
53	Estimated cost of this case	$35,000.00	C14*C15
54	Is estimated cost > allowed amount	Gain	IF C53 > C51 then "Loss" else "Gain"
55	***High-Side Outlier Payment When Payment Is Much Lower than Cost***		
56	Estimated loss on this case	N/A	IF C54 = "Loss", then (C53-C51), else "N/A"
57	Is loss > outlier threshold lower limit	N/A	IF C54 = "Loss", then if (C56 > C34), then "Yes", else "No", else "N/A"
58	DRG cost outlier payment increase 1	$0.00	IF C57 = "Yes", then if (C56<C35), then ((C56-C34)*C36), else ((C35-C34)*C36), else 0
59	DRG cost outlier payment increase 2	$0.00	IF C57="Yes", then if (C56>C35), then (C56-C35)*C37, rounded to 2 places else 0, else 0
60	***Low Side Outlier Payment When Payment Is Much Greater than Cost***		
61	Estimated gain on this case	$26,448.43	IF C54="Gain", then (C51-C53), else"N/A"
62	Is gain > outlier threshold	No	IF C54="Gain", then if (C61>C34), then "Yes", else "No", else "N/A"
63	DRG cost outlier payment decrease	$0.00	IF C54="Gain", then (if (C62="Yes"), then (C61-C34)*C36 rounded to 2
64	**ALLOWED AMOUNT AFTER TRANSFER AND OUTLIER ADJUSTMENTS**		
65	DRG payment so far	$61,448.43	IF C54="Loss", then (C51+C58+C59), else (C51-C63)
66	**CALCULATION OF ALLOWED AMOUNT AND REIMBURSEMENT AMOUNT**		
67	Add-on amount	$0.00	Hospital-specific payment separate from DRG payment (not used at this time)
68	Allowed amount	$61,448.43	Allowed amount = C65+C67
69	Other health coverage	$300.00	C19
70	Patient share of cost	$300.00	C20
71	"Lesser of" calculation	$61,448.43	Existing policy requires that payment amount cannot exceed total charges. IF C68>C14, then C14, else C68
72	Payment amount	**$60,848.43**	If interim claim (C42="yes"), then interim claim (C44) amount is the payment amount. Otherwise, subtract other health coverage (C69) and patient share of cost (C70) from "Lesser of" (C71) to obtain payment amount.

Appendix B. Reconciliation of Record Counts

Table B.1 shows the reconciliation of record counts for Years 1 and 2, respectively. It shows how many claims were excluded and the exclusion reason; how NDPH stays prior to January 1, 2014, were reconciled; and a breakdown of ACA optional stays and non-ACA stays.

Table B.1

Reconciliation of Record Counts

MIS/DSS Years 1 and 2 Dataset Paid Through 4/30/16

Category	Stays	Days	Charges	Payments	Comments
Total Years 1-2 Dataset	**1,168,747**	**135,184,533**	**$51,636,394,465**	**$7,751,648,169**	
Year 1 claims	637,592	132,142,806	$26,518,125,493	$4,091,077,571	
Year 1 exclusions	208,776	130,178,037	$2,411,881,633	$400,351,236	
Year 1 Claims after Exclusions	**428,816**	**1,964,769**	**$24,106,243,860**	**$3,690,726,335**	
Year 2 claims	531,155	3,041,727	$25,118,268,972	$3,660,570,599	
Year 2 exclusions	125,783	1,190,909	$808,758,675	$108,139,838	
Year 2 Claims after Exclusions	**405,372**	**1,850,818**	**$24,309,510,296**	**$3,552,430,761**	
Year 1 Excluded Claims					
Exclusion Reason	**Stays**	**Days**	**Charges**	**Payments**	**Comments**
Medicare crossover claim	153,434	810,086	$214,718,334	$71,704,469	Medicare ind = 1
DPH	20,531	114,626	$1,211,536,695	$175,957,731	
Stay adjusted	13,429	298,258	$2,347,773,043	$244,111,524	
Negative payment amount	9,479	248,044	-$2,325,069,972	-$243,007,587	
Admission prior 7/1/13	6,660	128,596,379	$569,186,770	$84,383,469	
Missing DRG	1,967	40,906	$190,736,090	$36,424,518	Rehab and admin claims
Missing DRG pricing indicator	979	29,676	$92,064,602	$18,060,950	
Still a patient	967	7,917	$68,217,097	$11,151,602	Discharge status = 30
Negative charge amount	743	8,088	-$12,530,711	$0	
RAD code w desc: 0457-NOPAY ANCILLARY S-VNT	434	20,381	$42,534,148	$0	
Admin or rehab stay	144	3,648	$6,930,387	$1,533,153	
Error DRG	7	22	$188,311	$24,508	
Excessive OB charge	1	3	$5,561,117	$3,290	
Program code 29 (FPACT)	1	3	$35,723	$3,609	
Total	**208,776**	**130,178,037**	**$2,411,881,633**	**$400,351,236**	

Note:

1. Some stays contain multiple exclusions. The order the exclusions are applied may affect counts in each category, but the overall number will not change.

Year 1 After Applying Above Exclusions: 428,816 Stays- DRG Payment v.s NDPH					
DRG or NDPH Non-DRG Paid	**Stays**	**Days**	**Charges**	**Payments**	**Comments**
Paid by DRG	417,668	1,921,993	$23,699,977,615	$3,613,828,884	Includes out-of-state, privates and NDPH hospital stays
NDPH (7/1/13 to 12/31/13)	11,148	42,776	$406,266,245	$76,897,451	7/1/13-12/31/13 admissions
Total	**428,816**	**1,964,769**	**$24,106,243,860**	**$3,690,726,335**	
Note:					
1. NDPH non-DRG paid admissions from 7/1/13-12/31/13 are used in budget analysis only (Section 2).					

Year 1 After Applying Above Exclusions: 428,816 Stays- ACA Breakdown					
ACA Optional or Non-ACA	**Stays**	**Days**	**Charges**	**Payments**	**Comments**
Non-ACA	400,415	1,797,422	$21,491,054,545	$3,305,037,811	
ACA	28,401	167,347	$2,615,189,315	$385,688,523	Aid codes: M1, 7U, L1, M2 and admissions on or after 1/1/14
Total	**428,816**	**1,964,769**	**$24,106,243,860**	**$3,690,726,335**	

Year 2 Excluded Claims					
Exclusion Reason	**Stays**	**Days**	**Charges**	**Payments**	**Comments**
Medicare crossover claim	101,700	551,390	$147,199,594	$51,582,617	Medicare ind = 1
Stay adjusted	9,140	232,616	$1,933,087,736	$151,010,989	
Negative payment amount	5,770	166,574	-$1,853,676,674	-$146,587,499	
RAD code w desc: 0457-NOPAY ANCILLARY S-VNT	5,768	155,631	$349,283,035	$0	
Missing DRG pricing indicator	2,491	59,024	$282,609,024	$50,915,740	
Negative charge amount	844	24,781	-$55,291,263	$0	
Missing DRG	70	893	$5,547,224	$1,217,990	Rehab and admin claims
Total	**125,783**	**1,190,909**	**$808,758,675**	**$108,139,838**	
Note:					
1. Some stays contain multiple exclusions. The order the exclusions are applied may affect counts in each category, but the overall number will not change.					

Year 2 After Applying Above Exclusions: 405,372 Stays					
ACA Optional or Non-ACA	**Stays**	**Days**	**Charges**	**Payments**	**Comments**
Non-ACA	349,498	1,537,417	$19,494,153,153	$2,891,900,513	
ACA	55,874	313,401	$4,815,357,143	$660,530,248	Aid codes: M1, 7U, L1, M2 and admissions on or after 1/1/14
Total	**405,372**	**1,850,818**	**$24,309,510,296**	**$3,552,430,761**	

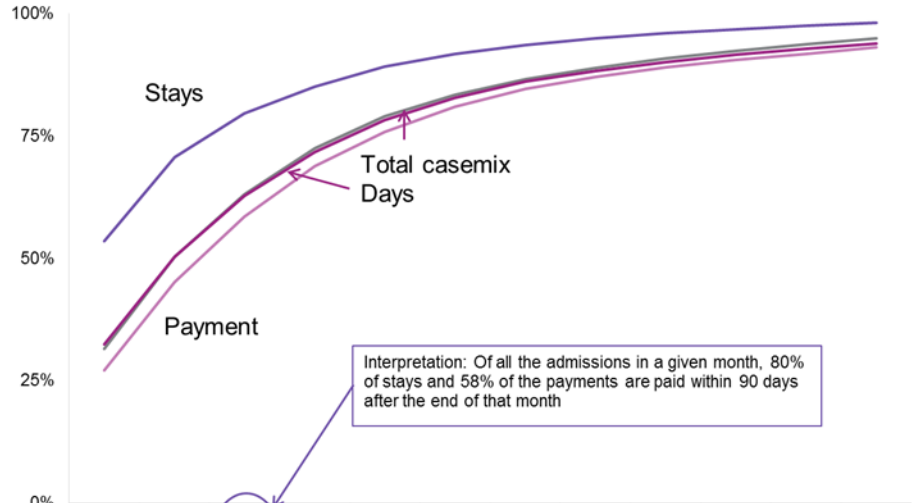
Appendix C. Completion Factors for Medi-Cal DRG Stays

Lags exist between the date of admission, the day patient is discharged from hospital, the day that the hospital submits the claim to Medi-Cal, and the day that Medi-Cal pays the claim. For patients admitted in January, by the end of April, 80% of the claims had been paid, accounting for 58% of payment. One reason for the difference is that the claim for a short stay can be submitted in January while the claim for a long stay may not be submitted until February, March or even later. Longer stays also generate longer and more complicated claims that may take hospitals longer to submit.

We used Medi-Cal claims to calculate separate completion factors for stays, payment, casemix and days. If, for example, a dataset created at the end of April showed 100 admissions in January with payment of $1,000,000, we would estimate that the complete January figures would end up at 100 / 0.80 = 125 stays and $1,000,000 / 0.58 = $1,724,138 in payment.

Please note: The lines for total casemix and days overlap in the completion factor chart below.

Completion Factors for Medi-Cal DRG Stays
Calculated from MIS-DSS July-Dec 2013 Admits Paid by Apr 30, 2016



	At 30 Days	At 60 Days	At 90 Days	At 120 Days	At 150 Days	At 180 Days	At 210 Days	At 240 Days	At 270 Days	At 300 Days	At 330 Days	At 360 Days
% Stays	54%	71%	80%	85%	89%	92%	94%	95%	96%	97%	97%	98%
% Payment	27%	45%	58%	69%	76%	81%	85%	87%	89%	91%	92%	93%
% Total Casemix	32%	50%	63%	72%	79%	83%	87%	89%	91%	92%	94%	95%
% Days	32%	50%	63%	72%	78%	83%	86%	88%	90%	92%	93%	94%

Completion factors are slightly high because they assume all claims had been paid by Apr 30, 2016.

Notes

[1] Kevin Quinn, "After the Revolution: DRGs at Age 30," Annals of Internal Medicine, Vol. 160, No. 6. March 18, 2014.

[2] Xerox Corporation, *How Medicaid Pays for Hospital Inpatient Care.* August 2015. https://www.xerox.com/downloads/services/brochure/state-inpatient-care-payments.pdf.

[3] Conduent, *Medi-Cal DRG Project: Policy Design Document,* Report to the California Department of Health Care Services (West Sacramento, CA: Conduent, May 1, 2012). Hereafter, *Policy Design Document.* Re Principles in Recommending Payment Policy, see §1.3.

[4] *Policy Design Document.* §5.5.

[5] *Policy Design Document*, §3.6.

[6] *Medi-Cal DRG Project: Base Prices for FY 2013-14.*

[7] The bounds for NDPHs differed, being plus or minus in Year 1 (defined as January 1-June 30, 2014), plus or minus 5% in Year 2, and plus or minus 7.5% in Year 3. Conduent State Healthcare. *DRG Base Prices for Years 2, 3 and 4*. Document W235. Memorandum to DHCS, August 21, 2013.

[8] *DRG Base Prices for Years 2, 3 and 4.*

[9] State Plan Amendment 13-004.

[10] "ACA stays" are identified by the aid code of the beneficiary.

[11] *Policy Design Document.*

[12] Kevin Quinn, "New Directions in Medicaid Payment for Hospital Care," *Health Affairs*. Vol. 27, No. 1. 269-280. January-February 2008.

[13] Stephen B. Cohen and Namrata Uberoi, *Differentials in the Concentration in the Level of Health Expenditures across Population Subgroups in the U.S., 2010*. Statistical Brief #421. August 2013. Agency for Healthcare Research and Quality, Rockville, MD.

[14] *Policy Design Document*, §4.2.