

# **Final Recommendation for Market Shift Consolidation**

June 12, 2019

Health Services Cost Review Commission

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## Key Methodology Concepts and Definitions

1. Variable Cost Factor – The percentage of charges required to reimburse a hospital for the variable costs (supplies, drugs, etc.) associated with increases in volume. The standard by which the industry and the Commission evaluates volume funding adequacy is 50 percent, as 50 percent of all service charges on average covers fixed costs and 50 percent covers variable costs. This value is not uniform by service line.
2. Effective Variable Cost Factor – The percentage of charges that are reimbursed when accounting for revenue adjustments from volume methodologies. This value can be calculated with revenue from one or the sum of multiple volume methodologies
3. Service Lines – Groupings of services into higher level categories that reflect similar clinical delivery. Service lines are utilized to determine market shifts in the Market Shift methodology
4. Equivalent Case Mix Adjusted Discharges (ECMADS) – Often referred to as casemix, ECMADS are a volume statistic that account for acuity, as not all services require the same level of care and resources.

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## Recommendations

Staff recommends the following updates to the current Commission Methodologies:

1. Consolidate defined markets in the Market Shift methodology by reducing service lines with clinical overlap and assessing inpatient surgery and other highly specialized services at a county level.
2. Establish a Workgroup to evaluate potential modifications to the Demographic Adjustment that will better anticipate use rate changes while maintaining its status as population based.

## Introduction

The State of Maryland has led an effort to transform its health care delivery system to a population-based system that increases the emphasis on patient-centered care, improves population health, and lowers health care costs. To achieve these goals, the State of Maryland worked closely with hospitals, payers, other providers, consumers and the Centers for Medicare & Medicaid Services to develop the Maryland All-Payer Model, which was implemented in 2014. The Model moved away from a volume-based payment system that limited the growth in inpatient charge-per-case to a system that limits the growth in total hospital spending per capita and increasingly focused on outcomes: readmissions, in-hospital complications, potentially avoidable utilization, and patient satisfaction, among others.

At the conclusion of the Model in December of 2018, preliminary results show that the State met and exceeded every contractual target<sup>1</sup> and hospital total profit margins statewide recovered from the unsustainable levels experienced in 2013.<sup>2</sup> Given that the State has endeavored to continue these transformative efforts and build off of the success of the All-Payer Model with the new Total Cost of Care Model, effective January 1, 2019, and given that various volume methodologies have not been examined since the inception of the All-Payer Model, it is important that the State evaluate its methodologies and modify where necessary.

Fundamental to the All-Payer Model was the Global Budget Revenue (GBR) methodology, which was piloted by ten rural hospitals in 2010 and aimed to provide stability to hospitals by establishing annual prospective budgets and allowing for charges to fluctuate in line with reasonable changes in volume.<sup>3</sup> However, while hospital budgets were fixed during a given

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<sup>1</sup> Limiting all-payer hospital spending per capita in line with the growth of the economy, saving Medicare a total of at least \$330 million by keeping Maryland's Medicare per beneficiary growth below the national growth rate (currently the State has saved \$1.4 billion), reducing Medicare readmissions to the national average (currently .05% lower than national average), reducing hospital acquired complications by 30 percentage (currently the State has reduced by 51 percent), and moving virtually all hospital payment methodologies to approved population based approaches.

<sup>2</sup> The statewide average for profit margins for RY 2013 was 1.2 percent; since that time the statewide average for profit margins has been approximately 3 percent. See appendix I for more detail.

<sup>3</sup> The HSCRC allows hospitals to adjust charges for individual rate centers (e.g. room and board) to fluctuate within a 5 percent corridor. HSCRC reviews hospital requests adjust prices beyond a 5 percent corridor.

fiscal year, thereby incentivizing hospitals not to grow volumes unnecessarily and providing a high level of predictability, the Commission had to develop strategies to modify budgets in future years based on changes in population, the aging of the population, new health care innovation cost drivers, and changes in market selection.

To achieve the twin goals of funding population related utilization changes and realigning budgets for market shifts, the HSCRC developed two core volume funding methodologies: the Demographic Adjustment and Market Shift Adjustment. The Demographic Adjustment methodology provides funding for age-adjusted growth/decline at the zip code or county level in order to anticipate changes in utilization based on demographic changes.<sup>4</sup> The Demographic Adjustment is capped by Maryland Department of Planning estimates of statewide population growth to align with the per capita nature of the All-Payer Model tests, i.e. the contractual tests are not age-adjusted.

The HSCRC staff also developed a Market Shift Adjustment methodology that evaluated hospitals' growth/decline for each defined service line and geography to determine the degree to which patients moved from one hospital to another in the most recent calendar year in comparison to the prior year. The Market Shift moved money in the following year at a 50 percent cost factor when volumes moved up at one hospital and down at another in the same service line and geography. Taken together, these policies ensure a competitive hospital market where money follows the patient but only such that statewide volume on net does not grow for anything other than population growth and various forms of healthcare innovation. Both of these methodologies resulted in adequate volume funding statewide while maintaining the Model's status as population-based, but have produced less predictable funding for volume changes at the individual hospital level.

As staff will demonstrate, volume funding statewide has been adequate over the first four years of the Model, but the distribution of funding in any given year has not entirely aligned with medically necessary use rates and to some degree has created hospitals with greater cost inefficiency and poorer total cost of care outcomes. This is because population estimates outlined in the Demographic Adjustment methodology do not necessarily correlate with actual changes in hospital utilization and because the Market Shift methodology is very granular in the development of markets – there are 60 hospital service lines, over 350 geographies and potentially 20,000 markets.

To address these concerns, staff is recommending two key changes in methodology.

- **Market Shift Adjustment:** The first change is to consolidate geographies and service lines to reduce the number of small cells in the Market Shift, improving the reliability of the results.

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<sup>4</sup> The Demographic Adjustment developed for urban areas apportioned age-adjusted population changes among the hospitals serving each zip-code based on their market share in each zip code, in contrast to the rural Demographic Adjustment, which allocated the age-adjusted population change for a county to each rural hospital.

- **Demographic Adjustment:** The second change is to review with a workgroup potential modifications to the Demographic Adjustment that will better anticipate use rate changes while maintaining its status as population-based.

Another concern expressed by the Commissioners is that various hospitals have retained a significant amount of revenue under the current volume methodologies and thus have become cost inefficient. To address this, Commissioners have asked staff to promulgate an efficiency policy that removes revenue from inefficient hospitals. During Rate Year 2018, HSCRC staff developed an Inter-hospital Cost Comparison (ICC) and a geographic Medicare Total Cost of Care Performance Matrix to evaluate hospitals that were high cost outliers. One outlier hospital entered into a spend-down agreement with the Commission. During Rate Year 2018 and 2019, HSCRC staff have also made adjustments of more than \$70 million for services that shifted to unregulated settings, including adjustments for oncology and infusion drugs shifted to unregulated settings. In order to expedite the process of adjusting revenues for high cost outlier hospitals and to make the adjustments more predictable, the HSCRC staff is proposing a more formulaic approach to implementing efficiency adjustments for outliers. This proposed approach will be outlined in a separate Staff Report, along with proposed updates to the Inter-hospital Cost Comparison methodology.

## Background

### Demographic Adjustment

As aforementioned, the Demographic Adjustment methodology provides funding for age-adjusted growth at the zip code or county level in order to anticipate changes in utilization based on demographic changes, and the Demographic Adjustment is capped by Maryland Department of Planning estimates of statewide population growth to align with the per capita nature of the All-Payer/Total Cost of Care Model tests. In 2011, the HSCRC implemented a demographic adjustment for the 10 rural hospitals on global budgets using age-adjusted county projections. The demographic adjustment was then reduced by a 50 percent variable cost factor and further reduced by a 50 percent productivity adjustment, resulting in a demographic adjustment that was 25 percent of the projected age-adjusted population change. In Rate Year 2015, the HSCRC implemented a full year of the Demographic Adjustment for the remainder of hospitals (beyond the 10 hospitals already under global budgets), and in subsequent years, the Commission included the full value of the statewide population growth in calculating the allowed adjustment. The Demographic Adjustment has averaged approximately 0.40 percent of net hospital revenue or ~\$60 million, with lower values in recent periods resulting from slower population growth.

## Market Shift Adjustment

The Market Shift was first implemented in RY 2015 based on CY 2014 calculations. Because a hospital cannot receive additional volume funding unless a different hospital has a reciprocal decline (a shift) in the same service and geography, the net statewide adjustment typically oscillates around \$0.<sup>5</sup> For CY14 to CY17, the average statewide market shift was \$586,000 and typically realigned \$50 million among all hospitals.

Both methodologies affect permanent revenue and are implemented in conjunction with the annual Update Factor to prospectively cap the upcoming fiscal year budget for all hospitals. As they both impact the amount and distribution of volume funding, they should be considered in tandem when evaluating the adequacy of funding. Since the Market Shift is designed with the intent of moving funding when patients move from one hospital to another and not to adjust for overall increases or decreases in volume, the effective variable cost factor, which is the ratio between GBR adjustments from the Market Shift and total charges for volume change (inclusive of fixed costs and variable costs), is less than 50 percent.<sup>6</sup> However, when the Demographic Adjustment is considered in tandem with the Market Shift, the effective variable cost factor for hospitals with volume growth typically exceeds 50 percent for all hospitals.

The main difference between the Demographic Adjustment and the Market Shift is that the Demographic Adjustment modifies hospital budgets for volume change expectations based on projected growth or decline in the age-adjusted population while the Market Shift methodology modifies hospitals budgets based on actual movement of volume among hospitals.

## Volume Calculation Overviews

In this section staff will explain in detail the calculations for the two core volume methodologies: the Demographic Adjustment and the Market Shift Adjustment. Additional details on these calculations and their input variables may also be found in the Appendices.

### Overview of Demographic Adjustment Calculation

The purpose of the Demographic Adjustment is to provide volume funding increases or decreases in anticipation of utilization changes related to changes in age-adjusted population changes for a hospital's service area. This funding, which is based on calendar projections (e.g. RY 2020 will be based on CY 2019 population estimates), is used to prospectively adjust hospital revenues for the upcoming year. There are no retroactive adjustments for changes in

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<sup>5</sup> The impact is not exactly \$0 because realigned volumes are multiplied by hospitals' average charge, which may be different based on their cost structure (e.g. Bon Secours versus Johns Hopkins Hospital), and thus can yield statewide MSA's that deviate from \$0.

<sup>6</sup> A 50 percent variable cost factor is the industry standard for determining the percent of charges necessary to cover all marginal or variable costs associated with providing one additional service and is the standard by which the Commission will evaluate its volume methodologies.

population estimates. Changes in estimates are addressed in developing the succeeding year's Demographic Adjustment.

The Demographic Adjustment calculation begins by determining a hospital's virtual patient service area (VPSA). A VPSA is determined by aggregating the hospital's service volume in each zip code for eight age groups in the State<sup>7</sup>. The HSCRC uses this service area distribution to attribute population to each hospital based on the proportional amount of casemix adjusted services it provides to patients in each zip code relative to services provided by all hospitals.

The HSCRC then calculates the estimated population change for the attributed population using population projections.<sup>8</sup> It also applies an age weight to each age/zip code cohort of the hospital's VPSA to adjust for the differences in cost per capita of each age cohort and to allow for changes resulting from aging of the population.

A portion of the existing service volume is a result of potentially avoidable utilization (PAU). The HSCRC removes this portion of the base volume on a hospital specific basis to eliminate any growth allowance for PAU, when projecting each hospital's expected volume growth due to changes in demographics. The remaining statewide age-adjusted population growth is compared to the State's Department of Planning population growth estimates, and each hospital's Demographic Adjustment is multiplied by a pro-rata reduction factor that accounts for the expected per capita efficiencies to accomplish the overall per capita savings targets in the All-Payer and Total Cost of Care Model, i.e. the final statewide Demographic Adjustment equals Department of Planning growth estimates. The result is the population driven volume growth that will be recognized in each hospital's global budget for the upcoming fiscal year.

#### Summary:

1. Calculate base population estimates for the current calendar year for each hospital based on a hospital's share of volume, as measured by equivalent case-mix adjusted discharges, in a given zip code age cohort.
2. Calculate age adjusted population growth rates by multiplying statewide age cost weights with zip/age population growth rates.
3. Calculate hospital specific age adjusted population growth by multiplying hospital specific base population by age adjusted population growth rates for each zip/age cohort and calculating total projected age adjusted population growth
4. Calculate final demographic adjustment by applying efficiency adjustments
  - a. Reduce age adjusted population growth by hospital specific PAUs as a percent of total all-payer revenue
  - b. Reduce PAU/age adjusted population growth by pro-rata per capita efficiency adjustment reduction

<sup>7</sup> The eight age cohorts (0 to 4, 5 to 14, 15 to 44, 45 to 54, 65 to 74, 75 to 84, 85+) within each zip code provide more specific cost trends than would otherwise result from an overall distribution since population growth trends and health care use within these cohorts differ significantly.

<sup>8</sup>HSCRC obtains its projections from a private vendor, Claritas, who provides zip code and age specific population estimates for current year and 5-year population projections.



Below is an example calculation with just one zip code for a GBR hospital to arrive at the statewide per capita efficiency adjustment.

**Table 1: Demographic Adjustment Example Calculation**

Zip Code	Age Cohort	Base Year ECMADs for Hospital	Total ECMADs for All Hospitals	Share of ECMADs	Base Population	Allocated Base Population	State Total Hospital Revenue per Capita	Age Cost Weights	Projected Population Growth Rate of Cohort	Age Adjusted Population Growth Rates	Hospital Age Adjusted Population Growth	Hospital Overall Age Adjusted Population Growth	Hospital PAU %	Hospital Specific PAU Adjusted Growth Rate	Statewide Per capita Efficiency Adjustment
STEP 1a				Step1b		Step2a		Step2b		Step 3		Step 4			
A	B	C	D	E = C/D	F	G=F * E	H	I=H/H(total)	J	K=J*I	L=G*K	M=sum(L)/sum(G)	N	O=M*(1-N)	P=O*50%
00000	0-4	30	60	50%	3,713	1,857	\$1,577	0.68	0.77%	0.52%	10				
00000	05-14	45	100	45%	23,471	10,562	\$119	0.05	-0.07%	0.00%	(0)				
00000	15-44	100	210	48%	8,902	4,239	\$3,798	1.63	-1.16%	-1.89%	(80)				
00000	45-55	20	35	57%	7,533	4,305	\$2,822	1.21	1.18%	1.43%	61				
00000	55-64	25	40	63%	7,450	4,657	\$3,413	1.46	0.16%	0.23%	11				
00000	65-74	25	30	83%	4,517	3,764	\$5,162	2.21	2.73%	6.04%	227				
00000	75-84	55	70	79%	2,282	1,793	\$7,337	3.14	2.42%	7.60%	136				
00000	85+	60	80	75%	1,044	783	\$8,009	3.43	1.32%	4.53%	35				
Total	Total	360	625	58%	58,913	31,959	\$2,335				401	1.3%	14%	1.08%	0.54%

For additional detail, please see Appendix 2.

### Overview of Market Shift Calculation

The Market Shift Adjustment (MSA) methodology is an algorithm to calculate MSAs for a specific service line (e.g. orthopedic surgery) and a defined geographic location (e.g. ZIP code) using the case-mix adjusted volume measurement of equivalent case-mix adjusted discharges (ECMADS) for regulated inpatient and outpatient services. In total, there are 60 service lines, 46 inpatient and 14 outpatient, that are determined by 3M's aggregation of inpatient All Patients Refined Diagnostic Related Groupings (APR-DRG's), and HSCRC's aggregation of 3M's outpatient Enhanced Ambulatory Patient Groupings (EAPG's). The outpatient groupings are based on hospital rate center analyses to indicate the general services received at the hospital (e.g. emergency room services), while the inpatient service line aggregation is based on the diagnosis and/or procedure a patient receives (e.g. cardiothoracic surgery). There are also over 350 geographies in the Market Shift, as there are zip code level analyses for dense parts of the State and 15 county level analyses for less dense parts of the State.<sup>9</sup> After arraying volume in various service lines and geographies, the market shift algorithm compares the growth in volumes at hospitals with utilization increases to the decline in volumes at hospitals with utilization decreases.

It is important to note that not all revenue is included in the MSA. For instance, potentially avoidable utilization (PAU), which consists of 30 day readmissions and Prevention Quality Indicators,<sup>10</sup> is excluded because the Commission does not want to reward hospitals for growth

<sup>9</sup> For a discussion of Geographic and Service Line Definitions, please see Appendix 3.

<sup>10</sup> Readmissions are admissions to a hospital (defined as inpatient admission or observation stay greater than 23 hours) within a specified time period after a discharge from the same or another hospital. In the PAU measure, readmissions are specified as 30-day, all-payer, all-cause readmissions at the receiving hospital with exclusions for planned admissions. Hospitalizations for ambulatory-care sensitive conditions are measured by the Agency for

in PAU, nor does it want to disincentive hospitals from reducing PAU. The scope of volume evaluated in the MSA is as follows:

**Table 2: Scope of Volume Addressed in Market Shift Calculation**

<b>Included (~70% of revenue)</b>	<b>Not Included (30% of revenue)</b>
<p><u>In-state cases</u></p> <ul style="list-style-type: none"> <li>▶ Case-mix adjusted discharges</li> <li>▶ Case mix adjusted outpatient cases (grouped into Enhanced Ambulatory Patient Groups)</li> </ul> <p><u>Mechanisms</u></p> <ul style="list-style-type: none"> <li>▶ Market Shift Adjustment</li> <li>▶ Demographic Adjustment</li> <li>▶ Other Adjustments</li> </ul>	<p><u>Cases</u></p> <ul style="list-style-type: none"> <li>▶ Out-of-state</li> <li>▶ Radiation and Infusion Therapy and Drugs (drugs addressed separately)</li> <li>▶ Defined quaternary cases, (“Categorical” exclusions such as transplants, research, severe burn, Car-T, Spinraza)</li> <li>▶ Readmissions and Prevention Quality Indicators (classified as potentially avoidable utilization, “PAU”)</li> </ul> <p><u>Mechanisms</u></p> <ul style="list-style-type: none"> <li>▶ Volume Variable for select cases</li> <li>▶ Rate review or special GBR adjustments</li> <li>▶ Intensity Adjustment</li> </ul>

Market Shift Adjustments are capped at the lesser of the growth for volume gains or the decline for volume losses. This approach separates market shifts from collective changes in volume in the service area and removes incentives for driving up volume in the service area. This also means that not all volume growth or declines will be recognized at a 50 percent variable cost factor, only volume changes that are deemed market shifts.

Table 3 provides an illustration of the market shift calculation for ZIP code 21000 and the General Surgery service line. Within this ZIP code, the total volume increase is 654 equivalent case-mix adjusted discharges (ECMADs), and the decline is 129 ECMADs. Applying the “lesser of the two” rule, the allowed market shift is limited to 129 ECMADs, which is allocated to other hospitals with volume increases proportional to this hospital’s volume increase in total utilization. In the end, the net impact of market shift volumes in each ZIP code and service line combination equals zero.

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Health Care Research and Quality’s Prevention Quality Indicators (PQIs). In the PAU measure, PQIs are measured on inpatient admissions and observation stays greater than 23 hours for ambulatory care sensitive conditions

**Table 3. Example Calculation of the Market Shift Algorithm**

ZIP Code 21000 General Surgery	Volume CY13	Volume CY14	Volume Growth	Hospital's Proportion of Total Increase/Decline	Market Shift
	A	B	C=B-A	D=C/Subtotal C	E=D*Allowed Market Shift
Hospital A	1,000	1,500	500	76%	99
Hospital B	500	600	100	15%	20
Hospital C	50	100	50	8%	10
Hospital D	-	4	4	1%	1
<b>Utilization Increase</b>	1,550	2,204	654	100%	129
Hospital E	500	400	(100)	78%	(100)
Hospital F	50	25	(25)	19%	(25)
Hospital G	4	-	(4)	3%	(4)
<b>Utilization Decline</b>	554	425	(129)	100%	(129)
<b>ZIP Code Total</b>	<b>2,104</b>	<b>2,629</b>	<b>525</b>	-	0
<b>Allowed Market Shift</b>	<b>129</b>				

Summary:

1. Array all APR-DRG's and EAPG's into service lines and geographies for each hospital based on 3M inpatient service line specifications, HSCRC outpatient service line specifications based on rate center analyses, and geographies based on the patient's residency – zip code level for denser parts of the State and county level for the 15 rural jurisdictions in the State.
2. Remove from consideration all excluded market shift revenue, including potentially avoidable utilization, out-of-state volume, categorical exclusions, oncology drugs, and chronic cases from the MSA algorithm
3. Run the Market Shift algorithm to determine growth, both increases and decreases in volume for each service line and geography
4. Calculate final market shift adjustment by multiplying the volumes that have been deemed market shifts by a hospital's unique service line average charge per equivalent case mix adjusted discharge.
  - a. The average charge includes all charges and therefore includes outlier charges built into the base of each hospital's GBR

**Volume Assessment**

In this section staff will analyze the adequacy of volume funding from both the Market Shift Adjustment and the Demographic Adjustment relative to a 50 percent variable cost factor, which is the standard by which the Commission and various stakeholders evaluate volume funding adequacy. Staff will further comment on the funding predictability from the two core volume methodologies and will analyze the statistical stability of the Market Shift, namely the degree to which small cell sizes in the market shift are contributing to random variation in the revenue adjustments. Finally, staff will outline modifications to the Market Shift that will create greater reliability in the results.

## Adequacy and Predictability of Volume Funding

Over the first four years of the Model (CY 2014 – CY 2017), the Market Shift Adjustment provided a 50 percent variable cost factor for volume growth and declines that were deemed a market shift in the year following the shift.<sup>11</sup> As such, the funding from the Market Shift never reached a 50 percent effective variable cost factor, which was by design as the Market Shift only recognizes volume shifts, not total growth or declines. This is evident in Table 4, which demonstrates that when accounting for Market Shift Adjustments only, hospitals had unfunded growth relative to a 50 percent variable cost factor and retained declines relative to a 50 percent variable cost factor, i.e. if all volume changes were funded at a 50 percent variable cost factor the hospitals in this graph would all equal \$0.

**Table 4: Residual Funding of In-State Volume Growth and Declines at 50 percent variable cost factor for CY14-CY17 after applying Market Shift Adjustment only**

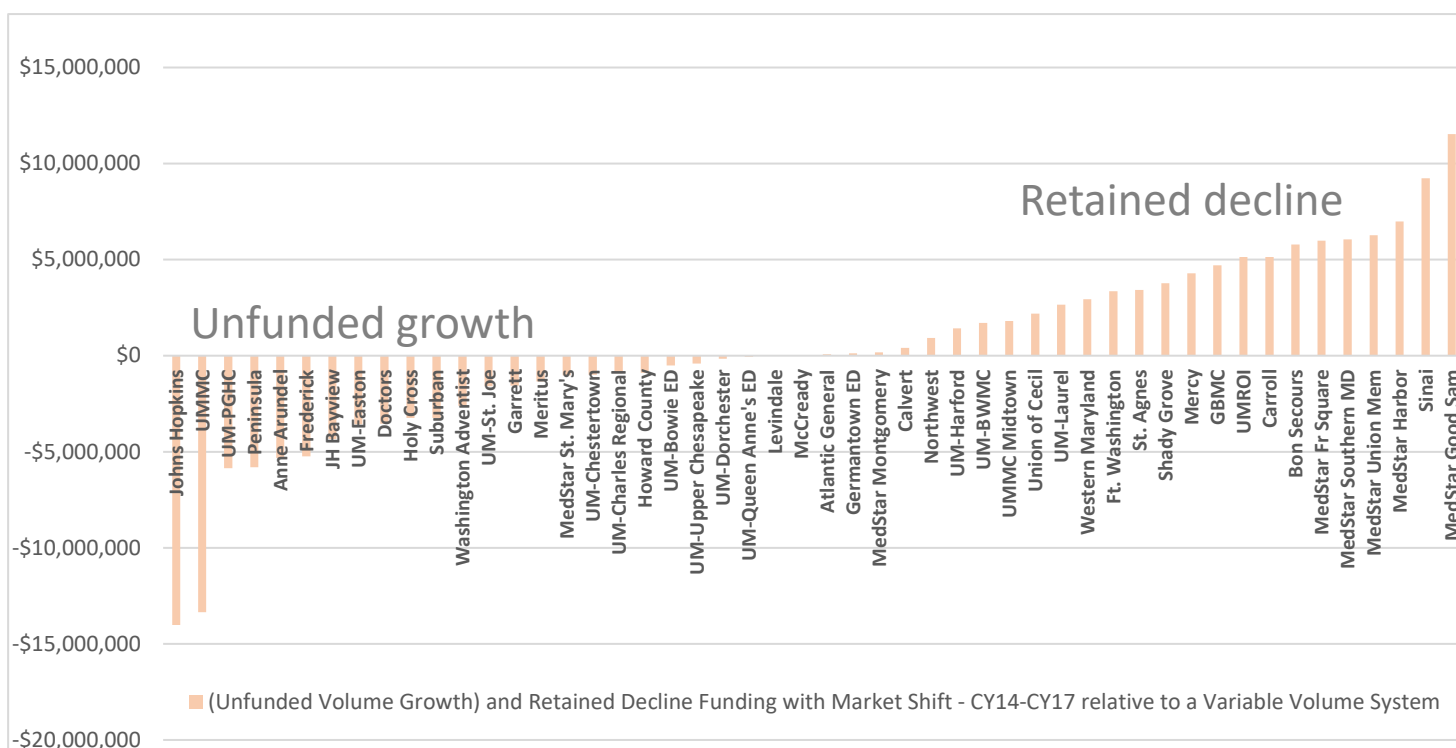


Table 5 builds off of Table 4 and outlines the Market Shift variable cost factor in terms of a percentage, i.e. an effective variable cost factor, both for hospitals with net increases in volume growth and net decreases by year.

<sup>11</sup> CY 2018 Market Shift is not included in this analysis because the final issuance of rate orders of CY 2018 Market Shift will not be completed until July 1, 2019.

**Table 5: Market Shift Adjustment Effective Cost Factor for All Volume Growth - Net Growing Hospitals and Net Declining Hospitals**

	<b>MSA Effective Cost Factor (Net Growers)</b>	<b>Volume Growth \$* (Net Growers)</b>	<b>MSA Effective CostFactor (Net Decliners)</b>	<b>Volume Growth \$* (Net Decliners)</b>
CY14	4.02 percent	\$131.2M	27.7 percent	-\$21.8M
CY15	29.5 percent	\$91.8M	27.8 percent	-\$176.1M
CY16	20.1 percent	\$130.5M	25.7 percent	-\$120.9M
CY17	31.2 percent	\$100.2M	12.1 percent	-\$211.2M

\*Calculated by multiplying average charge for each service line by change in volume

As shown, hospitals with volume growth did not ever reach an effective variable cost factor of 50 percent for all volume growth through the Market Shift, which again is by design. The effective variable cost factor was particularly low in CY 2014 (4.02 percent), as hospitals had much larger growth relative to reductions in utilization (\$131.2 million versus declines of -\$21.8 million) and because the various interventions employed in the All-Payer Model were likely not yet implemented to respond to new incentives. Hospital volume growth for net growers slowed in subsequent years with the notable exception of CY 2016, when \$83.5 million of the \$130.5 million of growth for net growers was due to increases in the General Surgery service line. This growth coincided with the implementation of ICD-10, which had an unintended shift of cases into the General Surgery service line from lower weighted APR-DRGs, due to the conversion to ICD-10 in the third quarter of 2015 - in CY16.<sup>12</sup> It is also important to note that as the Model progressed the effective variable cost factor for net growers increased, suggesting that growth was more indicative of market shifts and that hospitals were no longer uniformly responding to the volume driven incentives of the historical fee-for-service methodologies.

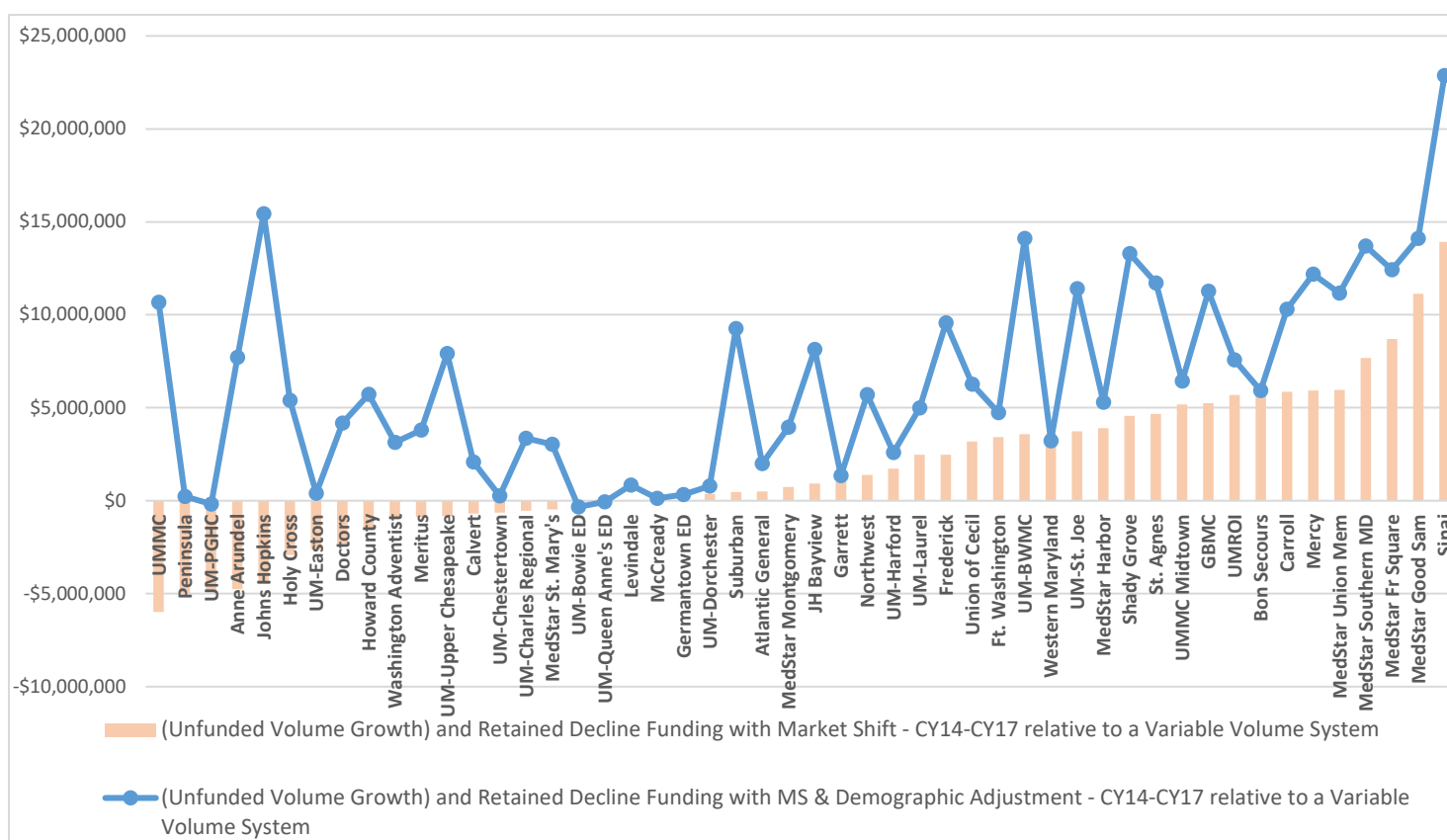
As volume reductions have increased precipitously since CY 2014, net decliners have sustained a fairly consistent effective variable cost factor, approximately 25 percent, which suggests that net declining hospitals have retained 75 percent of the revenue associated with reduced utilization.<sup>13</sup> In CY 2017, the volume reductions for net decliners reached the highest level totaling \$211.2 million. Of note, \$83.2 million of the CY 2017 decline was related exclusively to reductions in ED utilization.

<sup>12</sup> See Appendix 4 for additional detail on General Surgery volume growth related to ICD-10 conversion.

<sup>13</sup> In other words, 50 percent of the reductions were deemed market shifts and 50 percent were deemed avoided utilization – 0 percent avoided utilization + (50 percent market shift \* 50 percent VCF) = 25 percent effective variable cost factor.

Analyzing the Market Shift in isolation would lead to a concern that hospitals with volume growth over the course of the All-Payer Model had been underfunded, potentially for medically necessary care, such as transcatheter aortic valve replacements (TAVR's). However, it is important to also consider the funding provided by the Demographic Adjustment, which aims to prospectively fund utilization growth related to demographic changes while maintaining the incentives of the Model to reduce unnecessary utilization. When this funding source is considered all hospitals in aggregate from CY 2014 to CY 2017 have received adequate funding relative to a 50 percent variable cost factor, as can be seen below in the blue line on Table 6:

**Table 6: Residual Funding Differences of In-State Volume CY14-CY17 Market Shift and Demographic Adjustment Relative to a 50 percent Variable Cost Factor\***



\*Excludes Holy Cross Germantown and does not account for special adjustments, e.g. Medicaid Expansion and Deregulation. Note: if all hospitals were funded at a 50 percent variable cost factor for changes in utilization each hospital on the graph would be equal to \$0.

While funding has been adequate for all hospitals over the course of the All-Payer Model, there are concerns that:

- The standard of a 50 percent variable cost factor are not met in each individual year for all hospitals with volume growth, thereby leading to potentially unfunded medically necessary care and a degree of unpredictability;

- b) The Market Shift methodology is difficult to interpret, most notably due to the large number of markets defined; and
- c) Hospitals with retained revenue at the far right of Table 6 do not require such a large share of the Demographic Adjustment when they have simultaneously retained 100 percent of revenue for utilization reductions that are not deemed market shifts.

Staff concurs with these concerns and is proposing to evaluate potential modifications to the Demographic Adjustment that will better anticipate use rate changes while maintaining its status as population based. Staff is also proposing to reduce the number of markets/cells the Market Shift evaluates to reduce its complexity. The details of this proposal will be discussed in the *Proposed Modifications to Market Shift* section.

### Market Shift Statistical Stability

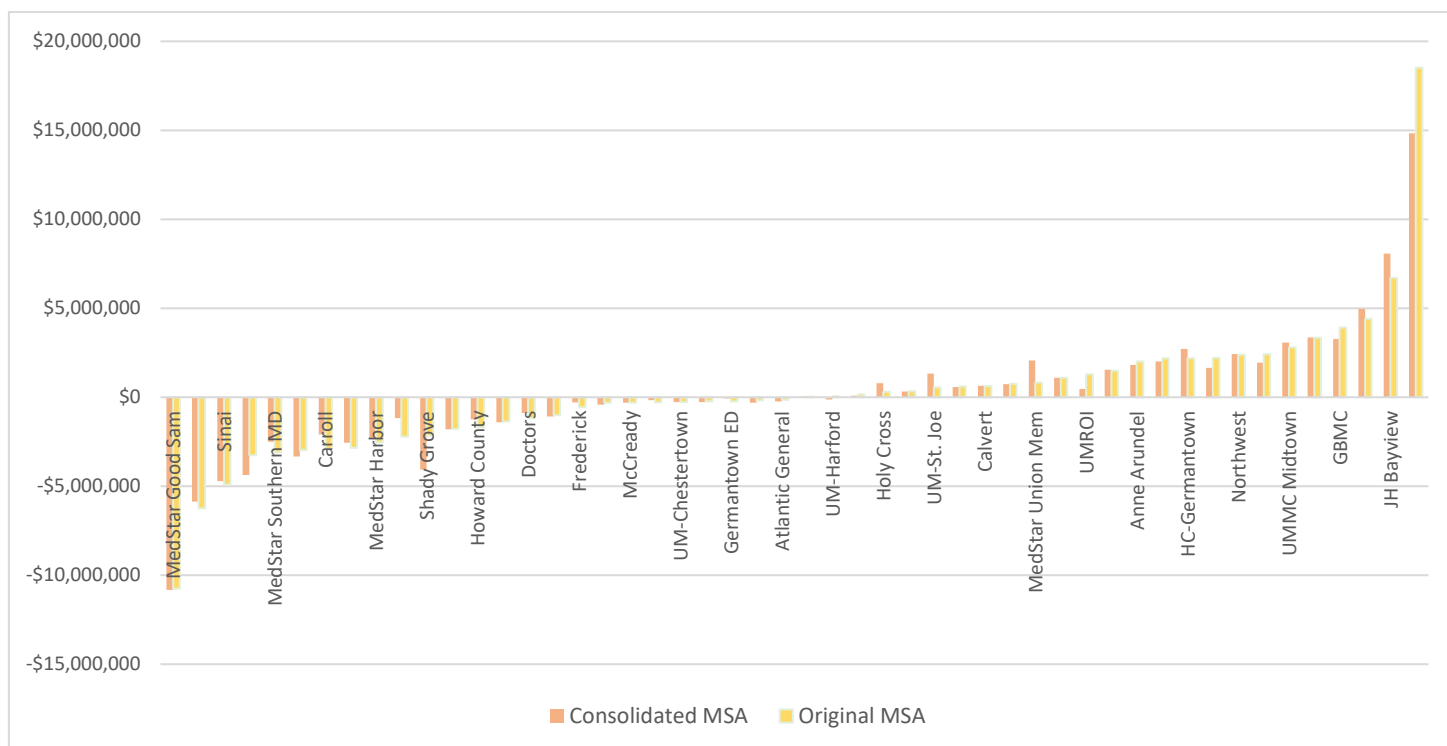
As aforementioned, the Market Shift does evaluate a significant number of markets statewide - there are 60 hospital service lines<sup>14</sup>, over 350 geographies and potentially 20,000 markets. Critics of the Market Shift have noted that the vast amount of markets or cells leads to statistical instability, especially when comparing growth year over year at such a granular level.

To evaluate the statistical stability of the Market Shift, staff consolidated the algorithm such that market shift evaluations only occurred at the county level, i.e. zip code market shifts were eliminated from the calculation. If the market shift revenue adjustments did not materially change under a revised consolidation, staff hypothesized that the Market Shift was not statistically unstable. In Table 7, the results of the consolidated Market Shift versus the regular Market Shift for CY17 indicated that there was not a large degree of change in the revenue adjustments by hospital, especially in comparison to the hospital's overall revenue base.

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<sup>14</sup> For a complete list of service lines by APR-DRG or EAPG see Appendix 5.

**Table 7: Market Shift Adjustments in Regular CY 2017 Market Shift versus Geographic Consolidated Market Shift**



For most hospitals the consolidation of geographic cells did not materially change the market shift adjustment. The average dollar change was \$15,000; the absolute average dollar change was \$421,000. There were, however, various service lines that had a high degree of variation, which led to larger variances at the hospital level. For example, the market shift adjustment for the Ventilator Support service line at University of Maryland Medical Center decreased by \$1.2 million, approximately 1/3 of University's \$3.6 million variation in the two market shift calculations.

While the net hospital variation in market shift adjustments was not extremely large, staff was concerned that the change in dollar adjustments at the hospital level was not sufficient to conclude that the Market Shift is statistically stable. Thus, staff also ran additional analyses to determine the degree to which small cell sizes, e.g. less than 10 discharges per market, were correlated with changes in the consolidated and regular market shift adjustments at the service line level, i.e. random variation. Additionally, staff removed the influence large dollar value service lines can have on this analysis, because if a small dollar service line has random variation due to the statistical instability of the markets defined, it may be masked in a correlation analysis that looks solely at the absolute variation in terms of revenue. Therefore, staff ran the correlation of various small cell size indicators (less than 5, 10, 20 discharges per zip code) relative to service line absolute average dollar variation as a percentage of total service line charges.



**Table 8: Correlation between Market Shift Service Line Dollar Variations between Market Shift Geographic Models & Small Cell Sizes**

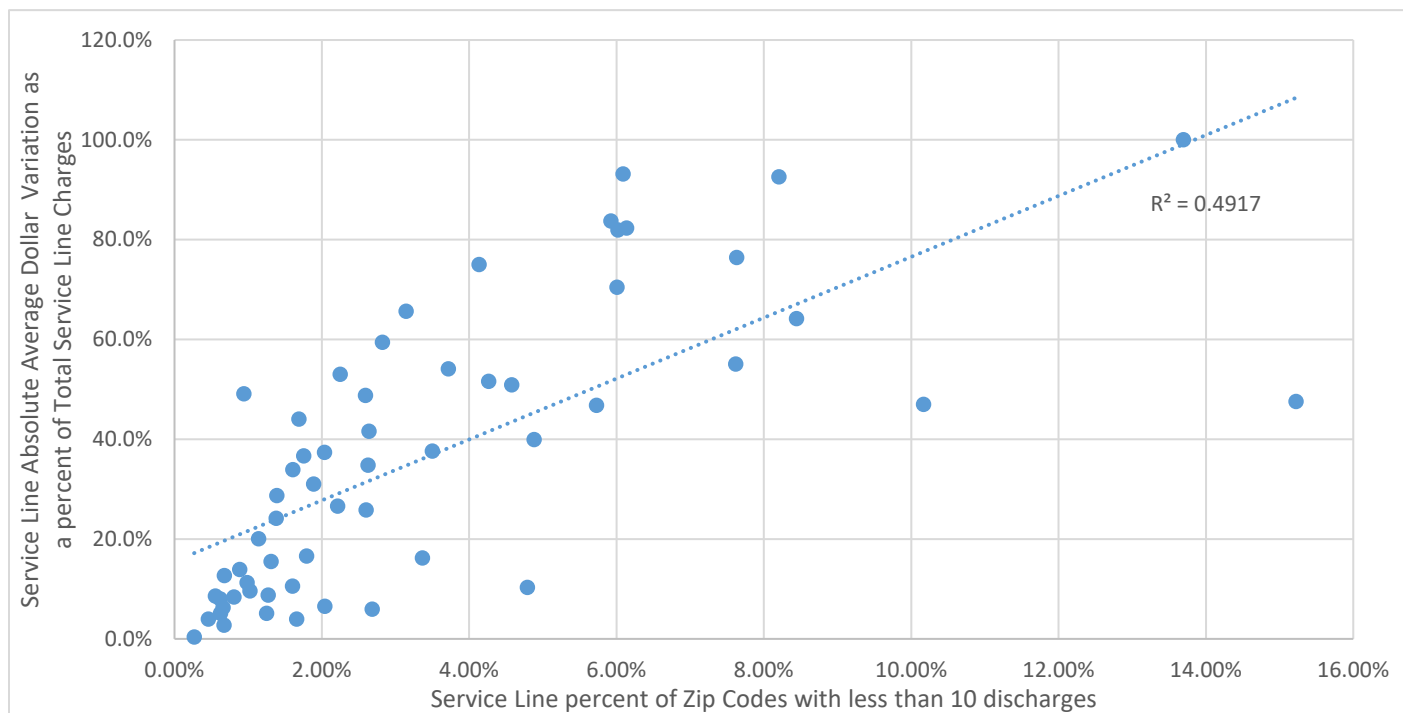


Table 8 indicates that there is indeed a strong relationship between markets with less than 10 discharges and variation between the two market shift calculations, as evidenced by a correlation of .7012,  $R^2$  of .4917. The relationship becomes even stronger if inpatient and outpatient are evaluated independently of one another.<sup>15</sup> Of note, the correlation to determine the random variation begins to break down beyond 10 discharges, suggesting this is the critical point by which cell size becomes unstable.

Due to these analyses and staff's concurrence that the Market Shift is inherently more difficult to interpret with the sheer size of markets defined, staff is putting forward two strategies to consolidate markets, namely to consolidate medical services in terms of clinical overlap and surgical and highly specialized services in terms of geography, all of which be discussed in the *Proposed Modifications to Market Shift* section.

#### Proposed Modifications to Market Shift

Staff proposes two core strategies to reduce the number of markets or cells in the market shift algorithm, namely:

- a) Collapsing medical services into similar service lines that have clinical overlap, similar average charges per equivalent casemix adjusted discharges (ECMADS), similar medical

<sup>15</sup> The  $R^2$  for an inpatient only analysis is .6194 and for outpatient is .9429.

designations of APR-DRG's or EAPG's, and similar overrepresentation in emergency room rate center charges, which signifies less elective forms of care, and

- b) Collapsing inpatient surgeries, outpatient major surgeries, and highly specialized services (e.g. ventilator support, neonatology) into county evaluated markets as opposed to zip code evaluated markets because these services represent more elective forms of care, or care that is referred based on the availability of specialized resources.

Employing the assistance of the Volume Methodology workgroup and a few clinical experts in the field, staff has put forward a plan that takes the number of services lines from 60 to 44 and perhaps more importantly takes 28 service lines from a zip code evaluation to a county evaluation. These changes reduce the Market Shift cells from potentially being in excess of 20,000 to approximately 5,000, and markets with less than 10 discharges (an indicator of a potentially unstable cell size) went from approximately 7,000 to 1,000.<sup>16</sup>

Various critics have noted that no markets should be evaluated on a zip code level and that the number of markets should be reduced further; however, staff is reluctant to pursue this course because further geographic consolidation of medical services, which often begin with a visit to the emergency room close to one's residency regardless of hospital selection, can potentially lead to avoided utilization being treated as a market shift and vice versa.<sup>17</sup>

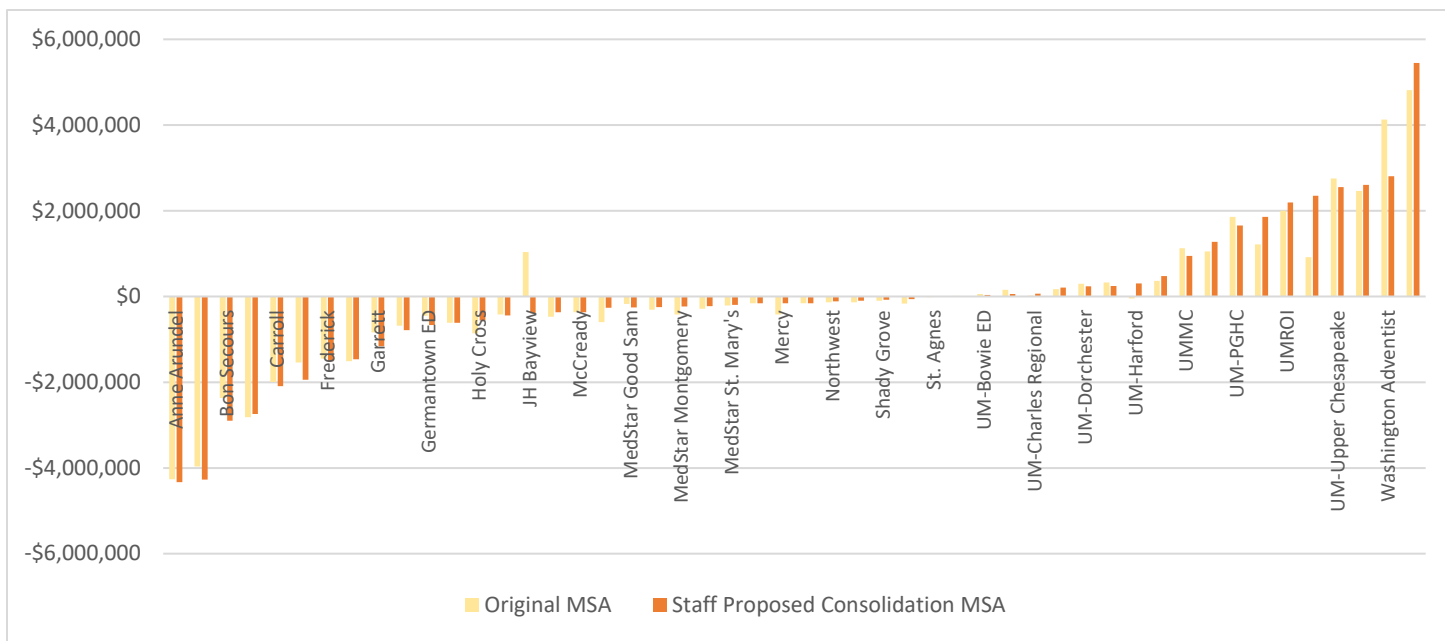
Based on the outline for consolidation in Appendix 6, staff has produced two runs of market shift for the first six months of calendar year 2018 (regular and consolidated) and two runs of unrecognized market shift. For the former, Table 9 outlines revenue adjustment variation in the two market shift models by hospital:

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<sup>16</sup> Please see Appendix 7 for the proposed consolidations by service line

<sup>17</sup> Please see Appendix 8 for a hypothetical example of services being misconstrued as a market shift and vice versa.

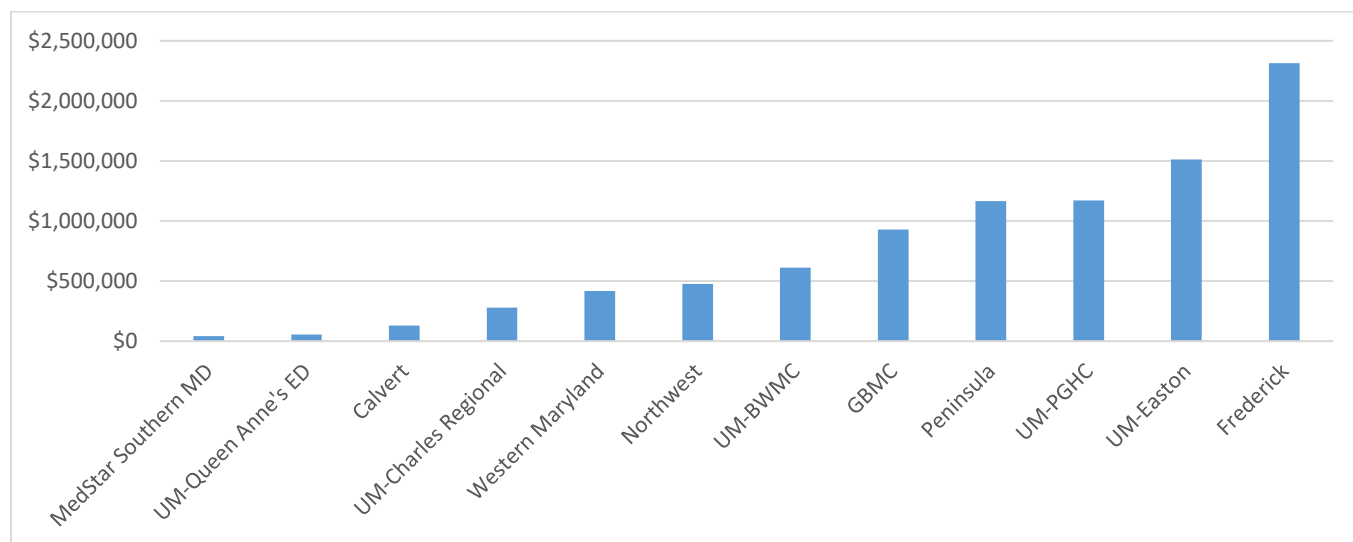
**Table 9: Dollar Variation in CY 2018 Market Shift (six months) between Current Market Definitions and Staff Proposed Market Definitions**



While the dollar variation as shown in Table 9 is not significant by hospital, it is important to note that the average dollar change of \$7,000 was lower than the prior consolidation analysis and the absolute average dollar of \$225,000 was also lower, suggesting that simplifying Market Shift to have approximately 5,000 cells did not materially affect the outcome. Nevertheless, the changes did simplify the approach and reduce the number of small cells.

For the unrecognized market shift under the newly proposed Market Shift consolidation staff notes that unfunded growth statewide is \$9.1 million. See Table 10 for a break down by Hospital:

**Table 10: CY 2018 (six months) Unfunded Growth by Hospital for all Service Lines**



Of note, \$5.3 million of the \$9.1 million in unfunded growth is due to the Infectious Disease service line, which is usually indicative of seasonal flu spikes, and the \$9.1 million does not account for any additional funding provided by the Demographic Adjustment.

### Additional Considerations for Future Policies

All methodologies, in particular volume methodologies, require revisions to improve their accuracy and effectiveness. Staff's recommendations to the Demographic Adjustment and the Market Shift are incremental steps to make the Commission's core volume policies simpler and more predictable. Going forward staff plans to work to improve these methodologies further by engaging a clinical subgroup to consider additional reductions to the number of defined markets/cells in the Market Shift methodology.

Staff will also consider other approaches to allocation of the Demographic Adjustment. One alternative considered is to incorporate the expectation of declines in medical volumes and avoidable utilization and increases in some surgical utilization by incorporating these expected outcomes into the Demographic Adjustment on a service line basis. This would allow for a reallocation of the Demographic Adjustment based on the types of services being offered by each hospital, while not providing payment for actual volume changes. These and other options may be considered. The advantage of this option is that it would not create an incentive for volume growth. The disadvantage is that it does not recognize actual volume changes at each hospital. Staff has not modeled this option at the current time to see if it would address most stakeholder concerns regarding the allocation of the Demographic Adjustment.

### Stakeholder Comments

Staff received four comment letters from stakeholders. The respondents were the Maryland Hospital Association (MHA), Johns Hopkins Health System (JHHS), University of Maryland Medical System (UMMS), and CareFirst. Each letter expressed support for staff's recommendation to consolidate markets in the Market Shift algorithm in terms of geography for more specialized services and services lines where clinical overlap exists. Each letter also expressed support for establishing a workgroup to evaluate potential modifications to the Demographic Adjustment.

Specific comments that were expressed by respondents are as follows:

JHHS stressed that this "... is certainly a step in the right direction, but is just that, a step in what should also be an evolving process to continuously improve the HSCRC rate setting methodologies." JHHS also noted that staff should consider using variable cost factors specific to service lines. **Staff agrees that the Commission methodologies should be reviewed and revised when empirical evidence and modelling suggests there is room for improvement. Staff will consider future modifications to the Commission's core volume methodologies**

**during future workgroup engagements, including variable cost factors specific to service lines.**

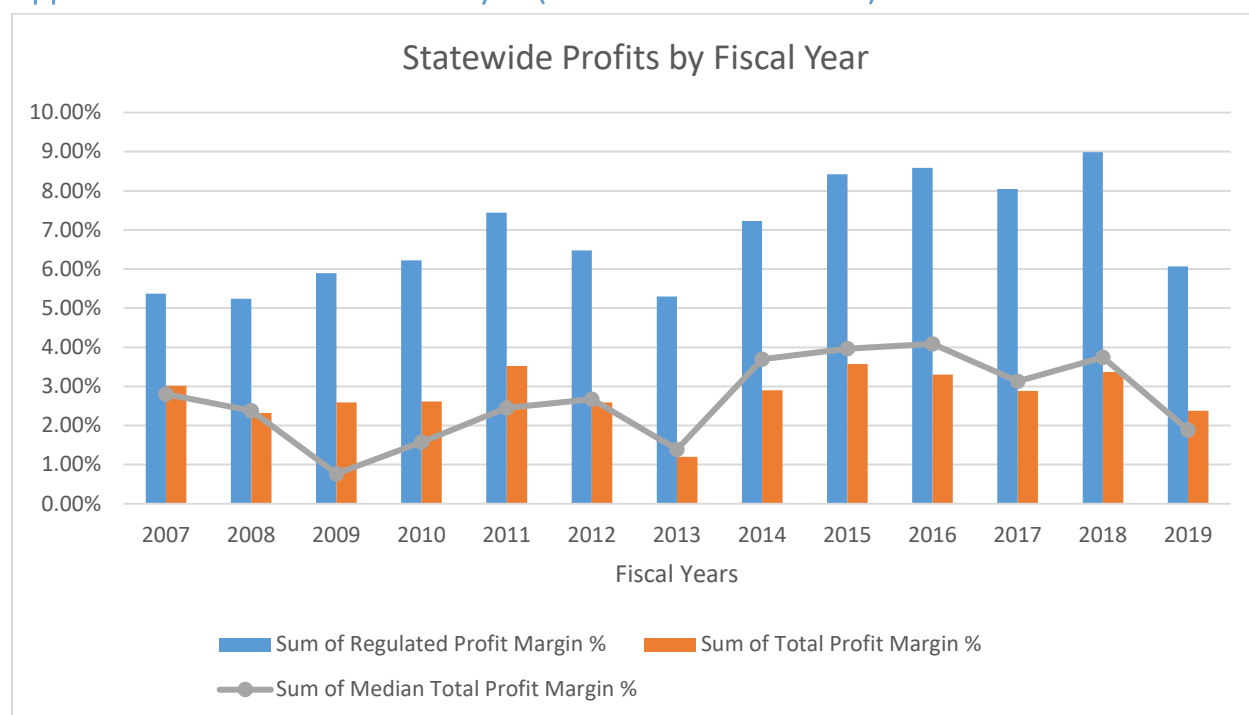
CareFirst wrote that it looks “...forward to discussing with staff ways to in which the MSA [Market Shift Adjustment] might be further consolidated and simplified, going forward.” **While staff has no immediate plans to review further simplification of the Market Shift methodology, staff will continue review and revise methodologies when empirical evidence and modelling suggest there is room for improvement, as noted in staff’s response to JHHS comments.**

### Recommendations

Staff recommends the following updates to the current Commission Methodologies:

1. Consolidate defined markets in the Market Shift methodology by reducing service lines with clinical overlap and assessing inpatient surgery and other highly specialized services at a county level.
2. Establish a Workgroup to evaluate potential modifications to the Demographic Adjustment that will better anticipate use rate changes while maintaining its status as population based.

## Appendix 1. Statewide Profit Analysis (RY 2007 – RY 2019 YTD)



## Appendix 2. Demographic Adjustment Detailed Calculation Steps

This section provides the data sources used and a more detailed explanation of each step of the calculation.

### Data Sources:

Volume estimates and total charges by age cohorts are calculated using HSCRC patient level inpatient and outpatient abstract data submitted on a monthly basis. All calculations involving volume and charges include only Maryland residents, determined by the reported billing zip code of the patient.

Zip code and age specific population estimates and projections were provided by Claritas for current year and 5-year population projections, since zip code level data are not available from the Department of State Planning.

Below are the detailed calculation steps:

**STEP 1. Calculate base population estimates for each hospital based on its share of volume, as measured by equivalent case-mix adjusted discharges, in a given zip code/age cohort.**

**Step 1a: Calculate the base year total service volume of the hospital (inpatient and outpatient) for each zip code by each of the eight age cohorts based on Equivalent Case Mix Adjusted Discharges.**

- i. Measure the volume of inpatient services as total inpatient case mix adjusted discharges (CMADs) that occurred in the specified fiscal year.
- ii. Measure the volume of outpatient services as follows:
  - a. Calculate the Hospital Unit Charge as the average charge per CMAD for all of the hospital's inpatients that occurred in the specified fiscal year.
  - b. Calculate the outpatient equivalent case mix adjusted discharges (ECMADs) as:

$$\text{Outpatient ECMAD} = \frac{\text{Total Charges} - \text{Inpatient Charges}}{\text{Hospital Unit Charge}}$$

- iii. Sum inpatient CMADs and Outpatient ECMADs to determine total service volume of the hospital ECMADs for each zip code and age cohort.

**Step 1b: Allocate the base population for each zip/age cohort.**

Use the proportion of each hospital's ECMAD volumes in each zip/age cohort divided by the total ECMADs for all hospitals in that zip/age cohort to allocate a proportion of the population in each zip code to each hospital.

Example:

For Hospital A and Zip/Age Cohort J the base population would be calculated as:

$$\text{Base Population}_{AJ} = \text{Population}_J * (\text{ECMAD}_{AJ} / \text{ECMAD}_J)$$

**STEP 2: Calculate age adjusted population growth rates.**

**Step 2a: Calculate the statewide age cost weight for each age cohort.**

Relative age cost weights are applied to a hospital's allocated population and population estimates to arrive at cost weighted populations for the base year and the projection year to account for the age-weighted growth in the population. Age specific hospital cost weights are calculated at the state level as the ratio of average total hospital charges per capita for each statewide age cohort to the statewide average hospital charge per capita in the base year. The total hospital charges include charges for Maryland residents only. This calculation is illustrated below for the statewide [5-14] age cohort.

$$\text{Age Cost Weight for [5 to 14] Age Cohort} = \frac{\text{Total [5 to 14] Hospitals' Charges/Population in Base Year}}{\text{Total [All cohorts] Hospitals' Charges /Population in Base Year}}$$

**Step 2b: Calculate age adjusted growth rates.**

For each zip/age cohort, the estimated population growth rates are multiplied by the age cost weights to determine the cost weighted population growth rates.

For a Zip/Age Cohort J and Age Weight [5 to 14];

$$\text{Age Adjusted Population Growth Rate} = \text{Population Growth Rate}_J * \text{Age-Weight [5 to 14]}$$

### **STEP 3: Calculate hospital overall age adjusted growth.**

The age adjusted projected population related volume growth is calculated by multiplying base population numbers by age adjusted growth rates from Step 2 for each zip/age cohort. The overall hospital specific age adjusted growth rate is the sum of the allocated age adjusted population for the projection period divided by the age adjusted allocated population for the base period. This is converted to a percentage after subtracting 1.

For Hospital A and Zip/Age Cohort J and Age-Weight [5 to 14];

$$\text{Projected Population Growth} = \text{Base Population}_{AJ} * \text{Population Growth Rate}_J * \text{Age-Weight [5 to 14]}$$

Then overall Projected Population for Hospital A for all Zip/Age Cohorts = i...z:

$$\text{Overall Projected Population Growth Rate} = \frac{\text{Sum of (Projected Population Growth } i \dots z)}{\text{Sum of (Base Population } i \dots z)}$$

### **STEP 4: Calculate the appropriate volume growth by applying efficiency adjustments.**

#### **Step 4a: Reduce age adjusted overall projected growth by hospital specific overall PAU percentage of revenue.**

The overall growth rate calculated in Step 3 is reduced by the PAU percentage of revenue that is calculated on a hospital specific basis by multiplying the growth rate by the PAU percentage of revenue. The policy result is that the hospital will not receive a demographic adjustment on any of its PAU revenues, which includes revenue from avoidable admissions, 30-day readmissions, observation or emergency department visits, as well as revenue from complications (see below for additional information). PAU percentages of revenue are calculated at the hospital specific level by calculating the ratio of PAU revenue divided by total hospital revenue.

#### **Step 4b: Reduce the PAU adjusted growth percentage for each hospital to achieve an allowance for demographic growth statewide that is lower than the overall growth allowed by the All-Payer Model.**

The All-Payer Model provides for per capita growth, without any explicit adjustment for aging of the population. The preliminary result of Step 4a provides a demographic factor for each hospital that includes an age adjustment and that has been reduced by a measure of potentially avoidable utilization. Without further adjustment, the age and PAU adjusted demographic factor statewide would produce an allowance for growth that is above the statewide allowance for growth in population. Therefore, an additional efficiency adjustment reduction percentage is applied to each hospital's age and PAU adjusted growth percentage to bring the allowance



statewide to a level within the overall population increase percentage provided by the Model. For example, if the age and PAU adjusted allowance were 1.2percent but the target population allowance was .6percent, then all hospitals would receive an additional efficiency adjustment of 50percent. This adjustment recognizes the ability to provide incremental volumes at a lower marginal cost or to further reduce avoidable volume to achieve the needed efficiency level of the per capita model.

**Final Demographic Percentage:** At the conclusion of Step 4b, the final demographic adjustment percentage has been calculated for each hospital in the State. After adding 1 to the percentage, this demographic growth rate is multiplied by each hospital's approved revenue from the base year to arrive at the population adjusted revenue for the target year.

### Appendix 3. Geographic and Service Line Definition Discussion

#### Geographic Area Definitions

Market shift is focused on movement of patients and services between Maryland hospitals. Narrowly defined geographic regions are better for calculating market shift, especially for emergency medical service lines, because the individual hospitals serving the region are not likely to be differentially impacted by population growth or demographically driven changes in utilization rates. However, defining markets too narrowly may result in shifts not being recognized by the MSA. Calculating market shift at the statewide level, in contrast, would result in the movement of dollars to hospitals in regions experiencing population growth at the expense of other regions.

In densely populated regions of the state where there is significant competition among hospitals, market shift calculations are currently performed at the ZIP code level for all services. However, ZIP code level calculations introduce random variation to the measurement in small geographic areas where the population density is low, and the health care market is concentrated. Such ZIP codes are aggregated to limit the impact of small cell sizes on the calculations. ZIP codes in the following jurisdictions are aggregated at the county level:

Garrett, Allegany, Washington, Cecil, Kent, Queen Anne's, Caroline, Talbot, Dorchester, Wicomico, Somerset, Calvert, Charles, Saint Mary's, Worcester

Random variation has not been entirely addressed by aggregating rural regions into county level markets. Thus, staff will discuss in the Volume Assessment section the concern about small cell sizes and the continuance of random variation in current MSA's. Staff will propose to consolidate geographies further for specialized services that are more elective in nature and to also consolidate service lines with clinical overlap.

In calculating market shifts, all hospitals will still have the same geographic definitions. For example, to calculate volume changes in Garrett County, all ZIP codes in Garrett County will be added together for each hospital with volume in Garrett County. The calculations of volume changes will be based on ZIP code-level analysis for the remaining jurisdictions and service lines that are not aggregated, such as Baltimore City emergency room services.

### **Service Line Definitions**

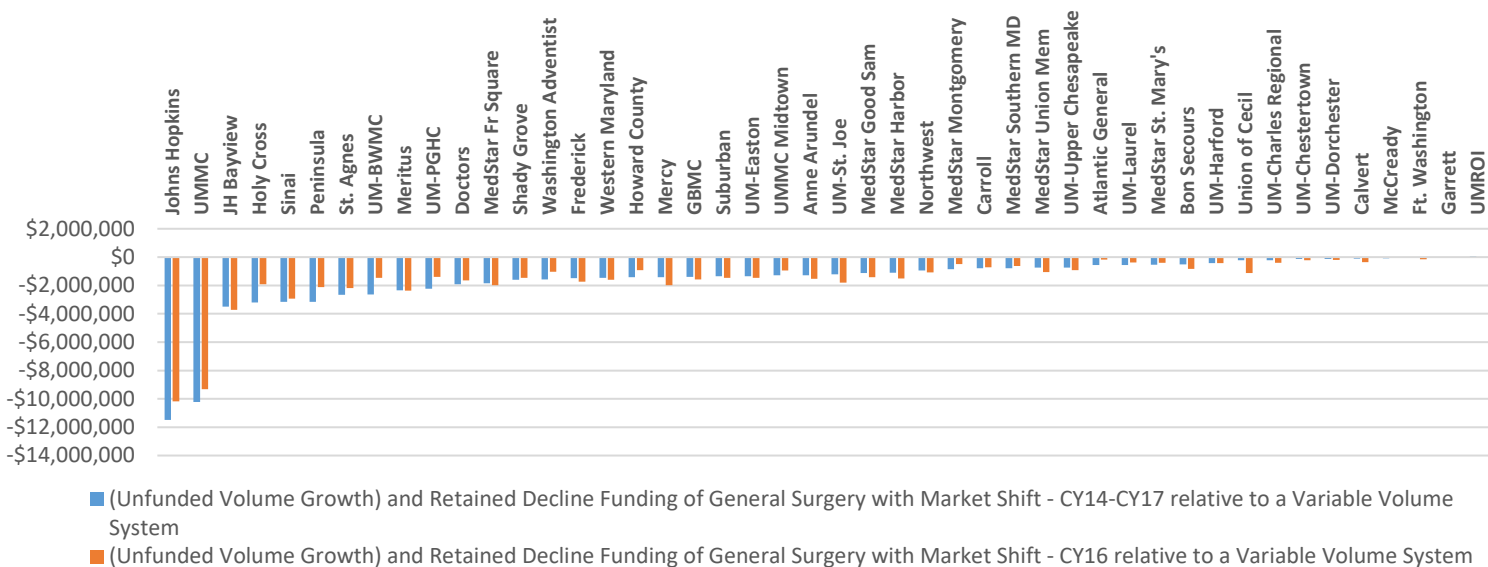
Narrow definitions of service lines were proposed to prevent utilization growth for one component of the service line from masking a shift in patients for another service line. For instance, a service line that captures all surgical procedures might be growing at every hospital in a region due to increasing demand for orthopedic surgery and thereby masking the shift of 50 cardiac surgical procedures from one hospital to another.

Movement of cases from inpatient to outpatient settings and utilization of observation units creates a challenge in differentiating shifts from one hospital to another, or shifts from a hospital's inpatient to outpatient service settings. Staff addressed this issue by counting and weighting all observation room cases of 24 or more hours as inpatient and more recently has started moving outpatient services to inpatient if that service was removed from Medicare's inpatient only list, e.g. total knee arthroplasties.

Inpatient service lines are developed using the existing 3M methodology to group all patient refined-diagnosis related groups (APR-DRGs) to specific service lines with a few modifications. See Appendix 3 in for a cross walk of APR-DRGs to service lines. Staff uses an inpatient-like logic and assigns outpatient visits based on the reasons for acquiring services. For example, all services provided for emergency department (ED) patients are grouped under the ED service line. Appendix 5 provides the hierarchy of outpatient service lines.

### Appendix 4 General Surgery ICD-10 Conversion Analyses

Residual Funding of In-State General Surgery Volume Growth and Declines at a 50percent variable revenue factor for CY14-CY17 after applying Market Shift Adjstment only



### 2015 to 2015 General Surgery Growth by Unique APR-DRG's

APR-DRG Description	Statewide	Statewide	Statewide	Statewide	Statewide	Statewide	Statewide	Statewide	CMI % Change 2015-2015
	Case Growth (Q1-Q2)	Case Growth (Q2-Q3)	Case Growth (Q3-Q4)	Case Growth (Q4-Q1)	Case Growth (Q1-Q2)	Case Growth (Q2- Q3)	Case Growth (Q3-Q4)	Case Growth (2015-2016)	
Extensive procedure unrelated to principal diagnosis Infectious & parasitic diseases including HIV w O.R. procedure	-5	2	79	34	4	-20	6	350	-14.75%
Laparoscopic cholecystectomy	-38	52	189	31	-54	138	-3	868	-2.61%
Major biliary tract procedures	-35	58	-88	71	-5	52	-32	158	-0.47%
Major stomach, esophageal & duodenal procedures	-2	12	26	-4	26	-10	26	168	-11.65%
Nonextensive procedure unrelated to principal diagnosis	23	13	59	18	-19	31	-107	196	-15.13%
Other digestive system & abdominal procedures	-26	5	60	11	-19	22	1	196	-6.80%
Other hepatobiliary, pancreas & abdominal procedures	-1	1	73	-3	-3	32	-24	239	-4.07%
Other male reproductive system & related procedures	6	10	93	23	-3	13	-4	410	-17.93%
Other skin, subcutaneous tissue & related procedures	-16	8	93	2	24	-35	-5	284	-8.67%
Other small & large bowel procedures	-2	16	103	1	2	31	-22	389	-4.80%
Procedure w diag of rehab, aftercare or oth contact w health service	17	-1	102	13	-10	-43	21	278	-9.36%
Skin graft for skin & subcutaneous tissue diagnoses	-3	1	114	-30	-38	12	21	152	-7.31%
<b>Total</b>	<b>-94</b>	<b>198</b>	<b>970</b>	<b>137</b>	<b>-80</b>	<b>197</b>	<b>-124</b>	<b>3,790</b>	

ICD-10 Conversion time period

## Appendix 5. APR-DRG and EAPG Service Line Mapping

### a. APR-DRG Service Line Map

APR_DRG	DRG_Description	Type	Old_Serviceline	New_Serviceline
0	TOTAL KNEE REPLACEMENT (FROM OUTPATIENT)	S	Major Surgery_TKA	Orthopedic Surgery
1	LIVER TRANSPLANT &/OR INTESTINAL TRANSPLANT	S	Transplant Surgery	Transplant Surgery
2	HEART &/OR LUNG TRANSPLANT	S	Transplant Surgery	Transplant Surgery
4	TRACHEOSTOMY W MV 96+ HOURS W EXTENSIVE PROCEDURE	S	Ventilator Support	Ventilator Support
5	TRACHEOSTOMY W MV 96+ HOURS W/O EXTENSIVE PROCEDURE	S	Ventilator Support	Ventilator Support
6	PANCREAS TRANSPLANT	S	Transplant Surgery	Transplant Surgery
7	ALLOGENEIC BONE MARROW TRANSPLANT	S	Transplant Surgery	Transplant Surgery
8	AUTOLOGOUS BONE MARROW TRANSPLANT	S	Transplant Surgery	Transplant Surgery
9	EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO)	S	Ventilator Support	Ventilator Support
10	HEAD TRAUMA WITH DEEP COMA	M	Trauma	Trauma
20	CRANIOTOMY FOR TRAUMA	S	Neurological Surgery	Neurological Surgery
21	CRANIOTOMY EXCEPT FOR TRAUMA	S	Neurological Surgery	Neurological Surgery
22	VENTRICULAR SHUNT PROCEDURES	S	Neurological Surgery	Neurological Surgery
23	SPINAL PROCEDURES	S	Spinal Surgery	Spinal Surgery
24	EXTRACRANIAL VASCULAR PROCEDURES	S	Neurological Surgery	Neurological Surgery
26	OTHER NERVOUS SYSTEM & RELATED PROCEDURES	S	Neurological Surgery	Neurological Surgery
40	SPINAL DISORDERS & INJURIES	M	Neurology	Neurology
41	NERVOUS SYSTEM MALIGNANCY	M	Oncology	Oncology
42	DEGENERATIVE NERVOUS SYSTEM DISORDERS EXC MULT SCLEROSIS	M	Neurology	Neurology
43	MULTIPLE SCLEROSIS & OTHER DEMYELINATING DISEASES	M	Neurology	Neurology
44	INTRACRANIAL HEMORRHAGE	M	Neurology	Neurology
45	CVA & PRECEREBRAL OCCLUSION W INFARCT	M	Neurology	Neurology
46	NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT	M	Neurology	Neurology
47	TRANSIENT ISCHEMIA	M	Neurology	Neurology

48	PERIPHERAL, CRANIAL & AUTONOMIC NERVE DISORDERS	M	Neurology	Neurology
49	BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM	M	Infectious Disease	Infectious Disease
50	NON-BACTERIAL INFECTIONS OF NERVOUS SYSTEM EXC VIRAL MENINGITIS	M	Infectious Disease	Infectious Disease
51	VIRAL MENINGITIS	M	Infectious Disease	Infectious Disease
52	ALTERATION IN CONSCIOUSNESS	M	Neurology	Neurology
53	SEIZURE	M	Neurology	Neurology
54	MIGRAINE & OTHER HEADACHES	M	Neurology	Neurology
55	HEAD TRAUMA W COMA >1 HR OR HEMORRHAGE	M	Neurology	Neurology
56	BRAIN CONTUSION/LACERATION & COMPLICATED SKULL FX, COMA < 1 HR OR NO COMA	M	Neurology	Neurology
57	CONCUSSION, CLOSED SKULL FX NOS, UNCOMPLICATED INTRACRANIAL INJURY, COMA < 1 HR OR NO COMA	M	Neurology	Neurology
58	OTHER DISORDERS OF NERVOUS SYSTEM	M	Neurology	Neurology
59	ANOXIC & OTHER SEVERE BRAIN DAMAGE	M	Neurology	Neurology
73	ORBIT AND EYE PROCEDURES	S	Ophthalmologic Surg	Ophthalmologic Surg
82	EYE INFECTIONS AND OTHER EYE DISORDERS	M	Ophthalmology	Ophthalmology
89	MAJOR CRANIAL/FACIAL BONE PROCEDURES	S	ENT Surgery	ENT Surgery
91	OTHER MAJOR HEAD & NECK PROCEDURES	S	ENT Surgery	ENT Surgery
92	FACIAL BONE PROCEDURES EXCEPT MAJOR CRANIAL/FACIAL BONE PROCEDURES	S	ENT Surgery	ENT Surgery
95	CLEFT LIP & PALATE REPAIR	S	ENT Surgery	ENT Surgery
97	TONSIL & ADENOID PROCEDURES	S	ENT Surgery	ENT Surgery
98	OTHER EAR, NOSE, MOUTH & THROAT PROCEDURES	S	ENT Surgery	ENT Surgery
110	EAR, NOSE, MOUTH, THROAT, CRANIAL/FACIAL MALIGNANCIES	M	Oncology	Oncology
111	VERTIGO & OTHER LABYRINTH DISORDERS	M	Otolaryngology	General Medicine
113	INFECTIONS OF UPPER RESPIRATORY TRACT	M	Otolaryngology	General Medicine
114	DENTAL DISEASES AND DISORDERS	M	Dental	General Medicine
115	OTHER EAR, NOSE, MOUTH, THROAT & CRANIAL/FACIAL DIAGNOSES	M	Otolaryngology	General Medicine

120	MAJOR RESPIRATORY & CHEST PROCEDURES	S	Thoracic Surgery	Thoracic Surgery
121	OTHER RESPIRATORY & CHEST PROCEDURES	S	Thoracic Surgery	Thoracic Surgery
130	RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT 96+ HOURS	M	Pulmonary	Pulmonary
131	CYSTIC FIBROSIS - PULMONARY DISEASE	M	Pulmonary	Pulmonary
132	BPD & OTH CHRONIC RESPIRATORY DISEASES ARISING IN PERINATAL PERIOD	M	Neonatology	Neonatology
133	RESPIRATORY FAILURE	M	Pulmonary	Pulmonary
134	PULMONARY EMBOLISM	M	Pulmonary	Pulmonary
135	MAJOR CHEST & RESPIRATORY TRAUMA	M	Trauma	Trauma
136	RESPIRATORY MALIGNANCY	M	Oncology	Oncology
137	MAJOR RESPIRATORY INFECTIONS & INFLAMMATIONS	M	Pulmonary	Pulmonary
138	BRONCHIOLITIS & RSV PNEUMONIA	M	Pulmonary	Pulmonary
139	OTHER PNEUMONIA	M	Pulmonary	Pulmonary
140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	M	Pulmonary	Pulmonary
141	ASTHMA	M	Pulmonary	Pulmonary
142	INTERSTITIAL & ALVEOLAR LUNG DISEASES	M	Pulmonary	Pulmonary
143	OTHER RESPIRATORY DIAGNOSES EXCEPT SIGNS, SYMPTOMS & MINOR DIAGNOSES	M	Pulmonary	Pulmonary
144	RESPIRATORY SIGNS, SYMPTOMS & MINOR DIAGNOSES	M	Pulmonary	Pulmonary
145	ACUTE BRONCHITIS AND RELATED SYMPTOMS	M	Pulmonary	Pulmonary
160	MAJOR CARDIOTHORACIC REPAIR OF HEART ANOMALY	S	Cardiothoracic Surgery	Cardiothoracic Surgery
161	CARDIAC DEFIBRILLATOR & HEART ASSIST IMPLANT	S	Cardiothoracic Surgery	Cardiothoracic Surgery
162	CARDIAC VALVE PROCEDURES W AMI OR COMPLEX PDX	S	Cardiothoracic Surgery	Cardiothoracic Surgery
163	CARDIAC VALVE PROCEDURES W/O AMI OR COMPLEX PDX	S	Cardiothoracic Surgery	Cardiothoracic Surgery
165	CORONARY BYPASS W AMI OR COMPLEX PDX	S	Cardiothoracic Surgery	Cardiothoracic Surgery
166	CORONARY BYPASS W/O AMI OR COMPLEX PDX	S	Cardiothoracic Surgery	Cardiothoracic Surgery
167	OTHER CARDIOTHORACIC & THORACIC VASCULAR PROCEDURES	S	Cardiothoracic Surgery	Cardiothoracic Surgery
169	MAJOR ABDOMINAL VASCULAR PROCEDURES	S	Vascular Surgery	Vascular Surgery

170	PERMANENT CARDIAC PACEMAKER IMPLANT W AMI, HEART FAILURE OR SHOCK	S	EP/Chronic Rhythm Mgmt	Invasive Cardiology
171	PERM CARDIAC PACEMAKER IMPLANT W/O AMI, HEART FAILURE OR SHOCK	S	EP/Chronic Rhythm Mgmt	Invasive Cardiology
174	PERCUTANEOUS CORONARY INTERVENTION W AMI	S	Invasive Cardiology	Invasive Cardiology
175	PERCUTANEOUS CORONARY INTERVENTION W/O AMI	S	Invasive Cardiology	Invasive Cardiology
176	CARDIAC PACEMAKER & DEFIBRILLATOR DEVICE REPLACEMENT	S	EP/Chronic Rhythm Mgmt	Invasive Cardiology
177	CARDIAC PACEMAKER & DEFIBRILLATOR REVISION EXCEPT DEVICE REPLACEMENT	S	EP/Chronic Rhythm Mgmt	Invasive Cardiology
180	OTHER CIRCULATORY SYSTEM PROCEDURES	S	Cardiothoracic Surgery	Cardiothoracic Surgery
181	LOWER EXTREMITY ARTERIAL PROCEDURES	S	Vascular Surgery	Vascular Surgery
182	OTHER PERIPHERAL VASCULAR PROCEDURES	S	Vascular Surgery	Vascular Surgery
190	ACUTE MYOCARDIAL INFARCTION	M	Myocardial Infarction	Cardiology
191	CARDIAC CATHETERIZATION FOR CORONARY ARTERY DISEASE	M	Invasive Cardiology	Invasive Cardiology
192	CARDIAC CATHETERIZATION FOR OTHER NON-CORONARY CONDITIONS	M	Invasive Cardiology	Invasive Cardiology
193	ACUTE & SUBACUTE ENDOCARDITIS	M	Cardiology	Cardiology
194	HEART FAILURE	M	Cardiology	Cardiology
196	CARDIAC ARREST & SHOCK	M	Cardiology	Cardiology
197	PERIPHERAL & OTHER VASCULAR DISORDERS	M	General Medicine	General Medicine
198	ANGINA PECTORIS & CORONARY ATHEROSCLEROSIS	M	Cardiology	Cardiology
199	HYPERTENSION	M	Cardiology	Cardiology
200	CARDIAC STRUCTURAL & VALVULAR DISORDERS	M	Cardiology	Cardiology
201	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS	M	Cardiology	Cardiology
203	CHEST PAIN	M	Cardiology	Cardiology
204	SYNCOPE & COLLAPSE	M	Cardiology	Cardiology
205	CARDIOMYOPATHY	M	Cardiology	Cardiology
206	MALFUNCTION,REACTION,COMPLICATION OF CARDIAC/VASC DEVICE OR PROCEDURE	M	Cardiology	Cardiology
207	OTHER CIRCULATORY SYSTEM DIAGNOSES	M	Cardiology	Cardiology
220	MAJOR STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES	S	General Surgery	General Surgery

222	OTHER STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES	S	General Surgery	General Surgery
223	OTHER SMALL & LARGE BOWEL PROCEDURES	S	General Surgery	General Surgery
224	PERITONEAL ADHESIOLYSIS	S	General Surgery	General Surgery
226	ANAL PROCEDURES	S	General Surgery	General Surgery
227	HERNIA PROCEDURES EXCEPT INGUINAL, FEMORAL & UMBILICAL	S	General Surgery	General Surgery
228	INGUINAL, FEMORAL & UMBILICAL HERNIA PROCEDURES	S	General Surgery	General Surgery
229	OTHER DIGESTIVE SYSTEM & ABDOMINAL PROCEDURES	S	General Surgery	General Surgery
230	MAJOR SMALL BOWEL PROCEDURES	S	General Surgery	General Surgery
231	MAJOR LARGE BOWEL PROCEDURES	S	General Surgery	General Surgery
232	GASTRIC FUNDOPLICATION	S	General Surgery	General Surgery
233	APPENDECTOMY WITH COMPLEX PRINCIPAL DIAGNOSIS	S	General Surgery	General Surgery
234	APPENDECTOMY WITHOUT COMPLEX PRINCIPAL DIAGNOSIS	S	General Surgery	General Surgery
240	DIGESTIVE MALIGNANCY	M	Oncology	Oncology
241	PEPTIC ULCER & GASTRITIS	M	Gastroenterology	Gastroenterology
242	MAJOR ESOPHAGEAL DISORDERS	M	Gastroenterology	Gastroenterology
243	OTHER ESOPHAGEAL DISORDERS	M	Gastroenterology	Gastroenterology
244	DIVERTICULITIS & DIVERTICULOSIS	M	Gastroenterology	Gastroenterology
245	INFLAMMATORY BOWEL DISEASE	M	Gastroenterology	Gastroenterology
246	GASTROINTESTINAL VASCULAR INSUFFICIENCY	M	Gastroenterology	Gastroenterology
247	INTESTINAL OBSTRUCTION	M	Gastroenterology	Gastroenterology
248	MAJOR GASTROINTESTINAL & PERITONEAL INFECTIONS	M	Gastroenterology	Gastroenterology
249	OTHER GASTROENTERITIS, NAUSEA & VOMITING	M	Gastroenterology	Gastroenterology
251	ABDOMINAL PAIN	M	Gastroenterology	Gastroenterology
252	MALFUNCTION, REACTION & COMPLICATION OF GI DEVICE OR PROCEDURE	M	Gastroenterology	Gastroenterology
253	OTHER & UNSPECIFIED GASTROINTESTINAL HEMORRHAGE	M	Gastroenterology	Gastroenterology



254	OTHER DIGESTIVE SYSTEM DIAGNOSES	M	Gastroenterology	Gastroenterology
260	MAJOR PANCREAS, LIVER & SHUNT PROCEDURES	S	General Surgery	General Surgery
261	MAJOR BILIARY TRACT PROCEDURES	S	General Surgery	General Surgery
263	CHOLECYSTECTOMY	S	General Surgery	General Surgery
264	OTHER HEPATOBILIARY, PANCREAS & ABDOMINAL PROCEDURES	S	General Surgery	General Surgery
279	HEPATIC COMA & OTHER MAJOR ACUTE LIVER DISORDERS	M	Gastroenterology	Gastroenterology
280	ALCOHOLIC LIVER DISEASE	M	Gastroenterology	Gastroenterology
281	MALIGNANCY OF HEPATOBILIARY SYSTEM & PANCREAS	M	Oncology	Oncology
282	DISORDERS OF PANCREAS EXCEPT MALIGNANCY	M	Gastroenterology	Gastroenterology
283	OTHER DISORDERS OF THE LIVER	M	Gastroenterology	Gastroenterology
284	DISORDERS OF GALLBLADDER & BILIARY TRACT	M	Gastroenterology	Gastroenterology
301	HIP JOINT REPLACEMENT	S	Orthopedic Surgery	Orthopedic Surgery
302	KNEE JOINT REPLACEMENT	S	Orthopedic Surgery	Orthopedic Surgery
303	DORSAL & LUMBAR FUSION PROC FOR CURVATURE OF BACK	S	Orthopedic Surgery	Orthopedic Surgery
304	DORSAL & LUMBAR FUSION PROC EXCEPT FOR CURVATURE OF BACK	S	Orthopedic Surgery	Orthopedic Surgery
305	AMPUTATION OF LOWER LIMB EXCEPT TOES	S	Orthopedic Surgery	Orthopedic Surgery
308	HIP & FEMUR FRACTURE REPAIR	S	Orthopedic Surgery	Orthopedic Surgery
309	OTHER SIGNIFICANT HIP & FEMUR SURGERY	S	Orthopedic Surgery	Orthopedic Surgery
310	INTERVERTEBRAL DISC EXCISION & DECOMPRESSION	S	Orthopedic Surgery	Orthopedic Surgery
312	SKIN GRAFT, EXCEPT HAND, FOR MUSCULOSKELETAL & CONNECTIVE TISSUE DIAGNOSES	S	Orthopedic Surgery	Orthopedic Surgery
313	KNEE & LOWER LEG PROCEDURES EXCEPT FOOT	S	Orthopedic Surgery	Orthopedic Surgery
314	FOOT & TOE PROCEDURES	S	Orthopedic Surgery	Orthopedic Surgery
315	SHOULDER, UPPER ARM & FOREARM PROCEDURES EXCEPT JOINT REPLACEMENT	S	Orthopedic Surgery	Orthopedic Surgery

316	HAND & WRIST PROCEDURES	S	Orthopedic Surgery	Orthopedic Surgery
317	TENDON, MUSCLE & OTHER SOFT TISSUE PROCEDURES	S	Orthopedic Surgery	Orthopedic Surgery
320	OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE PROCEDURES	S	Orthopedic Surgery	Orthopedic Surgery
321	CERVICAL SPINAL FUSION & OTHER BACK/NECK PROC EXC DISC EXCIS/DECOMP	S	Spinal Surgery	Spinal Surgery
322	SHOULDER & ELBOW JOINT REPLACEMENT	S	Orthopedic Surgery	Orthopedic Surgery
340	FRACTURE OF FEMUR	M	Orthopedics	General Medicine
341	FRACTURE OF PELVIS OR DISLOCATION OF HIP	M	Orthopedics	General Medicine
342	FRACTURES & DISLOCATIONS EXCEPT FEMUR, PELVIS & BACK	M	Orthopedics	General Medicine
343	MUSCULOSKELETAL MALIGNANCY & PATHOL FRACTURE D/T MUSCSKEL MALIG	M	Oncology	Oncology
344	OSTEOMYELITIS, SEPTIC ARTHRITIS & OTHER MUSCULOSKELETAL INFECTIONS	M	Infectious Disease	Infectious Disease
346	CONNECTIVE TISSUE DISORDERS	M	Rheumatology	General Medicine
347	OTHER BACK & NECK DISORDERS, FRACTURES & INJURIES	M	Orthopedics	General Medicine
349	MALFUNCTION, REACTION, COMPLIC OF ORTHOPEDIC DEVICE OR PROCEDURE	M	Orthopedics	General Medicine
351	OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	M	Rheumatology	General Medicine
361	SKIN GRAFT FOR SKIN & SUBCUTANEOUS TISSUE DIAGNOSES	S	General Surgery	General Surgery
362	MASTECTOMY PROCEDURES	S	General Surgery	General Surgery
363	BREAST PROCEDURES EXCEPT MASTECTOMY	S	General Surgery	General Surgery
364	OTHER SKIN, SUBCUTANEOUS TISSUE & RELATED PROCEDURES	S	General Surgery	General Surgery
380	SKIN ULCERS	M	Dermatology	General Medicine
381	MAJOR SKIN DISORDERS	M	Dermatology	General Medicine
382	MALIGNANT BREAST DISORDERS	M	Oncology	Oncology
383	CELLULITIS & OTHER SKIN INFECTIONS	M	Infectious Disease	Infectious Disease
384	CONTUSION, OPEN WOUND & OTHER TRAUMA TO SKIN & SUBCUTANEOUS TISSUE	M	Dermatology	General Medicine

385	OTHER SKIN, SUBCUTANEOUS TISSUE & BREAST DISORDERS	M	Dermatology	General Medicine
401	ADRENAL PROCEDURES	S	Endocrinology Surgery	Endocrinology Surgery
403	PROCEDURES FOR OBESITY	S	Endocrinology Surgery	Endocrinology Surgery
404	THYROID, PARATHYROID & THYROID GLAND PROCEDURES	S	Endocrinology Surgery	Endocrinology Surgery
405	OTHER PROCEDURES FOR ENDOCRINE, NUTRITIONAL & METABOLIC DISORDERS	S	Endocrinology Surgery	Endocrinology Surgery
420	DIABETES	M	Diabetes	General Medicine
421	MALNUTRITION, FAILURE TO THRIVE & OTHER NUTRITIONAL DISORDERS	M	Endocrinology	General Medicine
422	HYPOVOLEMIA & RELATED ELECTROLYTE DISORDERS	M	Endocrinology	General Medicine
423	INBORN ERRORS OF METABOLISM	M	Endocrinology	General Medicine
424	OTHER ENDOCRINE DISORDERS	M	Endocrinology	General Medicine
425	OTHER NON-HYPOVOLEMIC ELECTROLYTE DISORDERS	M	Endocrinology	General Medicine
426	NON-HYPOVOLEMIC SODIUM DISORDERS	M	Endocrinology	General Medicine
427	THYROID DISORDERS	M	Endocrinology	General Medicine
440	KIDNEY TRANSPLANT	S	Transplant Surgery	Transplant Surgery
441	MAJOR BLADDER PROCEDURES	S	Urological Surgery	Urological Surgery
442	KIDNEY & URINARY TRACT PROCEDURES FOR MALIGNANCY	S	Oncology	Oncology
443	KIDNEY & URINARY TRACT PROCEDURES FOR NONMALIGNANCY	S	Urological Surgery	Urological Surgery
444	RENAL DIALYSIS ACCESS DEVICE AND VESSEL REPAIR	S	Urological Surgery	Urological Surgery
445	OTHER BLADDER PROCEDURES	S	Urological Surgery	Urological Surgery
446	URETHRAL & TRANSURETHRAL PROCEDURES	S	Urological Surgery	Urological Surgery
447	OTHER KIDNEY, URINARY TRACT & RELATED PROCEDURES	S	Urological Surgery	Urological Surgery
461	KIDNEY & URINARY TRACT MALIGNANCY	M	Oncology	Oncology
462	NEPHRITIS & NEPHROSIS	M	Nephrology	General Medicine
463	KIDNEY & URINARY TRACT INFECTIONS	M	Nephrology	General Medicine

465	URINARY STONES & ACQUIRED UPPER URINARY TRACT OBSTRUCTION	M	Urology	Urology
466	MALFUNCTION, REACTION, COMPLIC OF GENITOURINARY DEVICE OR PROC	M	Nephrology	General Medicine
468	OTHER KIDNEY & URINARY TRACT DIAGNOSES, SIGNS & SYMPTOMS	M	Nephrology	General Medicine
469	ACUTE KIDNEY INJURY	M	Nephrology	General Medicine
470	CHRONIC KIDNEY DISEASE	M	Nephrology	General Medicine
480	MAJOR MALE PELVIC PROCEDURES	S	Urological Surgery	Urological Surgery
482	TRANSURETHRAL PROSTATECTOMY	S	Urological Surgery	Urological Surgery
483	PENIS, TESTES & SCROTAL PROCEDURES	S	Urological Surgery	Urological Surgery
484	OTHER MALE REPRODUCTIVE SYSTEM & RELATED PROCEDURES	S	General Surgery	General Surgery
500	MALIGNANCY, MALE REPRODUCTIVE SYSTEM	M	Oncology	Oncology
501	MALE REPRODUCTIVE SYSTEM DIAGNOSES EXCEPT MALIGNANCY	M	Urology	Urology
510	PELVIC EVISCERATION, RADICAL HYSTERECTOMY & OTHER RADICAL GYN PROCS	S	Gynecological Surg	Gynecological Surg
511	UTERINE & ADNEXA PROCEDURES FOR OVARIAN & ADNEXAL MALIGNANCY	S	Oncology	Oncology
512	UTERINE & ADNEXA PROCEDURES FOR NON-OVARIAN & NON-ADNEXAL MALIG	S	Oncology	Oncology
513	UTERINE & ADNEXA PROCEDURES FOR NON-MALIGNANCY EXCEPT LEIOMYOMA	S	Gynecological Surg	Gynecological Surg
514	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES	S	Gynecological Surg	Gynecological Surg
517	DILATION & CURETTAGE FOR NON-OBSTETRIC DIAGNOSES	S	Gynecological Surg	Gynecological Surg
518	OTHER FEMALE REPRODUCTIVE SYSTEM & RELATED PROCEDURES	S	Gynecological Surg	Gynecological Surg
519	UTERINE & ADNEXA PROCEDURES FOR LEIOMYOMA	S	Gynecological Surg	Gynecological Surg
530	FEMALE REPRODUCTIVE SYSTEM MALIGNANCY	M	Oncology	Oncology
531	FEMALE REPRODUCTIVE SYSTEM INFECTIONS	M	Gynecology	OB/GYN
532	MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS	M	Gynecology	OB/GYN
540	CESAREAN DELIVERY	S	Obstetrics/Delivery	OB/GYN

541	VAGINAL DELIVERY W STERILIZATION &/OR D&C	S	Obstetrics/Delivery	OB/GYN
542	VAGINAL DELIVERY W COMPLICATING PROCEDURES EXC STERILIZATION &/OR D&C	S	Obstetrics/Delivery	OB/GYN
544	D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY FOR OBSTETRIC DIAGNOSES	S	Other Obstetrics	OB/GYN
545	ECTOPIC PREGNANCY PROCEDURE	S	Gynecological Surg	Gynecological Surg
546	OTHER O.R. PROC FOR OBSTETRIC DIAGNOSES EXCEPT DELIVERY DIAGNOSES	S	Other Obstetrics	OB/GYN
560	VAGINAL DELIVERY	M	Obstetrics/Delivery	OB/GYN
561	POSTPARTUM & POST ABORTION DIAGNOSES W/O PROCEDURE	M	Other Obstetrics	OB/GYN
563	PRETERM LABOR	M	Other Obstetrics	OB/GYN
564	ABORTION W/O D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY	M	Other Obstetrics	OB/GYN
565	FALSE LABOR	M	Other Obstetrics	OB/GYN
566	OTHER ANTEPARTUM DIAGNOSES	M	Other Obstetrics	OB/GYN
580	NEONATE, TRANSFERRED <5 DAYS OLD, NOT BORN HERE	M	Neonatology	Neonatology
581	NEONATE, TRANSFERRED < 5 DAYS OLD, BORN HERE	M	Neonatology	Neonatology
583	NEONATE W ECMO	S	Neonatology	Neonatology
588	NEONATE BWT <1500G W MAJOR PROCEDURE	S	Neonatology	Neonatology
589	NEONATE BWT <500G OR GA <24 WEEKS	M	Neonatology	Neonatology
591	NEONATE BIRTHWT 500-749G W/O MAJOR PROCEDURE	M	Neonatology	Neonatology
593	NEONATE BIRTHWT 750-999G W/O MAJOR PROCEDURE	M	Neonatology	Neonatology
602	NEONATE BWT 1000-1249G W RESP DIST SYND/OTH MAJ RESP OR MAJ ANOM	M	Neonatology	Neonatology
603	NEONATE BIRTHWT 1000-1249G W OR W/O OTHER SIGNIFICANT CONDITION	M	Neonatology	Neonatology
607	NEONATE BWT 1250-1499G W RESP DIST SYND/OTH MAJ RESP OR MAJ ANOM	M	Neonatology	Neonatology
608	NEONATE BWT 1250-1499G W OR W/O OTHER SIGNIFICANT CONDITION	M	Neonatology	Neonatology
609	NEONATE BWT 1500-2499G W MAJOR PROCEDURE	S	Neonatology	Neonatology
611	NEONATE BIRTHWT 1500-1999G W MAJOR ANOMALY	M	Neonatology	Neonatology

612	NEONATE BWT 1500-1999G W RESP DIST SYND/OTH MAJ RESP COND	M	Neonatology	Neonatology
613	NEONATE BIRTHWT 1500-1999G W CONGENITAL/PERINATAL INFECTION	M	Neonatology	Neonatology
614	NEONATE BWT 1500-1999G W OR W/O OTHER SIGNIFICANT CONDITION	M	Neonatology	Neonatology
621	NEONATE BWT 2000-2499G W MAJOR ANOMALY	M	Neonatology	Neonatology
622	NEONATE BWT 2000-2499G W RESP DIST SYND/OTH MAJ RESP COND	M	Neonatology	Neonatology
623	NEONATE BWT 2000-2499G W CONGENITAL/PERINATAL INFECTION	M	Neonatology	Neonatology
625	NEONATE BWT 2000-2499G W OTHER SIGNIFICANT CONDITION	M	Neonatology	Neonatology
626	NEONATE BWT 2000-2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	M	Neonatology	Neonatology
630	NEONATE BIRTHWT >2499G W MAJOR CARDIOVASCULAR PROCEDURE	S	Neonatology	Neonatology
631	NEONATE BIRTHWT >2499G W OTHER MAJOR PROCEDURE	S	Neonatology	Neonatology
633	NEONATE BIRTHWT >2499G W MAJOR ANOMALY	M	Neonatology	Neonatology
634	NEONATE, BIRTHWT >2499G W RESP DIST SYND/OTH MAJ RESP COND	M	Neonatology	Neonatology
636	NEONATE BIRTHWT >2499G W CONGENITAL/PERINATAL INFECTION	M	Neonatology	Neonatology
639	NEONATE BIRTHWT >2499G W OTHER SIGNIFICANT CONDITION	M	Neonatology	Neonatology
640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	M	Normal Newborn	Neonatology
650	SPLENECTOMY	S	General Surgery	General Surgery
651	OTHER PROCEDURES OF BLOOD & BLOOD-FORMING ORGANS	S	General Surgery	General Surgery
660	MAJOR HEMATOLOGIC/IMMUNOLOGIC DIAG EXC SICKLE CELL CRISIS & COAGUL	M	Hematology	Hematology
661	COAGULATION & PLATELET DISORDERS	M	Hematology	Hematology
662	SICKLE CELL ANEMIA CRISIS	M	Hematology	Hematology
663	OTHER ANEMIA & DISORDERS OF BLOOD & BLOOD-FORMING ORGANS	M	Hematology	Hematology
680	MAJOR O.R. PROCEDURES FOR LYMPHATIC/HEMATOPOIETIC/OTHER NEOPLASMS	S	General Surgery	General Surgery
681	OTHER O.R. PROCEDURES FOR LYMPHATIC/HEMATOPOIETIC/OTHER NEOPLASMS	S	General Surgery	General Surgery

690	ACUTE LEUKEMIA	M	Oncology	Oncology
691	LYMPHOMA, MYELOMA & NON-ACUTE LEUKEMIA	M	Oncology	Oncology
692	RADIOTHERAPY	M	Oncology	Oncology
694	LYMPHATIC & OTHER MALIGNANCIES & NEOPLASMS OF UNCERTAIN BEHAVIOR	M	Oncology	Oncology
695	CHEMOTHERAPY FOR ACUTE LEUKEMIA	M	Oncology	Oncology
696	OTHER CHEMOTHERAPY	M	Oncology	Oncology
710	INFECTIOUS & PARASITIC DISEASES INCLUDING HIV W O.R. PROCEDURE	S	General Surgery	General Surgery
711	POST-OP, POST-TRAUMA, OTHER DEVICE INFECTIONS W O.R. PROCEDURE	S	General Surgery	General Surgery
720	SEPTICEMIA & DISSEMINATED INFECTIONS	M	Infectious Disease	Infectious Disease
721	POST-OPERATIVE, POST-TRAUMATIC, OTHER DEVICE INFECTIONS	M	General Surgery	General Surgery
722	FEVER	M	Infectious Disease	Infectious Disease
723	VIRAL ILLNESS	M	Infectious Disease	Infectious Disease
724	OTHER INFECTIOUS & PARASITIC DISEASES	M	Infectious Disease	Infectious Disease
740	MENTAL ILLNESS DIAGNOSIS W O.R. PROCEDURE	S	General Surgery	General Surgery
750	SCHIZOPHRENIA	M	Psychiatry	Psychiatry
751	MAJOR DEPRESSIVE DISORDERS & OTHER/UNSPECIFIED PSYCHOSES	M	Psychiatry	Psychiatry
752	DISORDERS OF PERSONALITY & IMPULSE CONTROL	M	Psychiatry	Psychiatry
753	BIPOLAR DISORDERS	M	Psychiatry	Psychiatry
754	DEPRESSION EXCEPT MAJOR DEPRESSIVE DISORDER	M	Psychiatry	Psychiatry
755	ADJUSTMENT DISORDERS & NEUROSES EXCEPT DEPRESSIVE DIAGNOSES	M	Psychiatry	Psychiatry
756	ACUTE ANXIETY & DELIRIUM STATES	M	Psychiatry	Psychiatry
757	ORGANIC MENTAL HEALTH DISTURBANCES	M	Psychiatry	Psychiatry
758	BEHAVIORAL DISORDERS	M	Psychiatry	Psychiatry
759	EATING DISORDERS	M	Psychiatry	Psychiatry
760	OTHER MENTAL HEALTH DISORDERS	M	Psychiatry	Psychiatry
770	DRUG & ALCOHOL ABUSE OR DEPENDENCE, LEFT AGAINST MEDICAL ADVICE	M	Substance Abuse	Psychiatry
772	ALCOHOL & DRUG DEPENDENCE W REHAB OR REHAB/DETOX THERAPY	M	Substance Abuse	Psychiatry

773	OPIOID ABUSE & DEPENDENCE	M	Substance Abuse	Psychiatry
774	COCAINE ABUSE & DEPENDENCE	M	Substance Abuse	Psychiatry
775	ALCOHOL ABUSE & DEPENDENCE	M	Substance Abuse	Psychiatry
776	OTHER DRUG ABUSE & DEPENDENCE	M	Substance Abuse	Psychiatry
792	EXTENSIVE OR PROCEDURES FOR OTHER COMPLICATIONS OF TREATMENT	S	Injuries/complic. of prior care	Injuries/complic. of prior care
793	MODERATELY EXTENSIVE OR PROCEDURES FOR OTHER COMPLICATIONS OF TREATMENT	S	Injuries/complic. of prior care	Injuries/complic. of prior care
794	NON-EXTENSIVE OR PROCEDURES FOR OTHER COMPLICATIONS OF TREATMENT	S	Injuries/complic. of prior care	Injuries/complic. of prior care
810	HEMORRHAGE OR HEMATOMA DUE TO COMPLICATION	M	Injuries/complic. of prior care	Injuries/complic. of prior care
811	ALLERGIC REACTIONS	M	General Medicine	General Medicine
812	POISONING OF MEDICINAL AGENTS	M	General Medicine	General Medicine
813	OTHER COMPLICATIONS OF TREATMENT	M	Injuries/complic. of prior care	Injuries/complic. of prior care
815	OTHER INJURY, POISONING & TOXIC EFFECT DIAGNOSES	M	General Medicine	General Medicine
816	TOXIC EFFECTS OF NON-MEDICINAL SUBSTANCES	M	General Medicine	General Medicine
817	OVERDOSE	M	General Medicine	General Medicine
841	EXTENSIVE 3RD DEGREE BURNS W SKIN GRAFT	S	General Medicine	General Surgery
842	BURNS WITH SKIN GRAFT EXCEPT EXTENSIVE 3RD DEGREE BURNS	S	General Medicine	General Surgery
843	EXTENSIVE 3RD DEGREE OR FULL THICKNESS BURNS W/O SKIN GRAFT	M	General Medicine	General Medicine
844	PARTIAL THICKNESS BURNS W/O SKIN GRAFT	M	General Medicine	General Medicine
850	PROCEDURE W DIAG OF REHAB, AFTERCARE OR OTH CONTACT W HEALTH SERVICE	S	General Surgery	General Surgery
860	REHABILITATION	M	Rehabilitation	Rehabilitation
861	SIGNS, SYMPTOMS & OTHER FACTORS INFLUENCING HEALTH STATUS	M	General Medicine	General Medicine
862	OTHER AFTERCARE & CONVALESCENCE	M	General Medicine	General Medicine
863	NEONATAL AFTERCARE	M	Neonatology	Neonatology
890	HIV W MULTIPLE MAJOR HIV RELATED CONDITIONS	M	HIV	Infectious Disease
892	HIV W MAJOR HIV RELATED CONDITION	M	HIV	Infectious Disease



893	HIV W MULTIPLE SIGNIFICANT HIV RELATED CONDITIONS	M	HIV	Infectious Disease
894	HIV W ONE SIGNIF HIV COND OR W/O SIGNIF RELATED COND	M	HIV	Infectious Disease
910	CRANIOTOMY FOR MULTIPLE SIGNIFICANT TRAUMA	S	Trauma	Trauma
911	EXTENSIVE ABDOMINAL/THORACIC PROCEDURES FOR MULT SIGNIFICANT TRAUMA	S	Trauma	Trauma
912	MUSCULOSKELETAL & OTHER PROCEDURES FOR MULTIPLE SIGNIFICANT TRAUMA	S	Trauma	Trauma
930	MULTIPLE SIGNIFICANT TRAUMA W/O O.R. PROCEDURE	M	Trauma	Trauma
950	EXTENSIVE PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	S	General Surgery	General Surgery
951	MODERATELY EXTENSIVE PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	S	General Surgery	General Surgery
952	NONEXTENSIVE PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	S	General Surgery	General Surgery
955	PRINCIPAL DIAGNOSIS INVALID AS DISCHARGE DIAGNOSIS		Invalid	Invalid
956	UNGROUPABLE		Ungroupable	Ungroupable

**b. EAPG Service Line Maps**

HIGHTYPE	HIGHTYPE_Desc	HIWTAPG	apg_desc	New_Service
1	Significant Procedures	1	PHOTOCHEMOTHERAPY	Other
1	Significant Procedures	2	SUPERFICIAL NEEDLE BIOPSY AND ASPIRATION	Other
1	Significant Procedures	3	LEVEL I SKIN INCISION AND DRAINAGE	Minor Surgery
1	Significant Procedures	4	LEVEL II SKIN INCISION AND DRAINAGE	Minor Surgery
1	Significant Procedures	5	NAIL PROCEDURES	Minor Surgery
1	Significant Procedures	6	LEVEL I SKIN DEBRIDEMENT AND DESTRUCTION	Minor Surgery
1	Significant Procedures	7	LEVEL II SKIN DEBRIDEMENT AND DESTRUCTION	Minor Surgery
1	Significant Procedures	8	LEVEL III SKIN DEBRIDEMENT AND DESTRUCTION	Minor Surgery

1	Significant Procedures	9	LEVEL I EXCISION AND BIOPSY OF SKIN AND SOFT TISSUE	Minor Surgery
1	Significant Procedures	10	LEVEL II EXCISION AND BIOPSY OF SKIN AND SOFT TISSUE	Minor Surgery
1	Significant Procedures	11	LEVEL III EXCISION AND BIOPSY OF SKIN AND SOFT TISSUE	Major Surgery
1	Significant Procedures	12	LEVEL I SKIN REPAIR	Minor Surgery
1	Significant Procedures	13	LEVEL II SKIN REPAIR	Minor Surgery
1	Significant Procedures	14	LEVEL III SKIN REPAIR	Major Surgery
1	Significant Procedures	15	LEVEL IV SKIN REPAIR	Major Surgery
1	Significant Procedures	20	LEVEL I BREAST PROCEDURES	Minor Surgery
1	Significant Procedures	21	LEVEL II BREAST PROCEDURES	Major Surgery
1	Significant Procedures	22	LEVEL III BREAST PROCEDURES	Major Surgery
1	Significant Procedures	30	LEVEL I MUSCULOSKELETAL PROCEDURES EXCLUDING HAND AND FOOT	Major Surgery
1	Significant Procedures	31	LEVEL II MUSCULOSKELETAL PROCEDURES EXCLUDING HAND AND FOOT	Major Surgery
1	Significant Procedures	32	LEVEL III MUSCULOSKELETAL PROCEDURES EXCLUDING HAND AND FOOT	Major Surgery
1	Significant Procedures	33	LEVEL I HAND PROCEDURES	Minor Surgery
1	Significant Procedures	34	LEVEL II HAND PROCEDURES	Major Surgery
1	Significant Procedures	35	LEVEL I FOOT PROCEDURES	Major Surgery
1	Significant Procedures	36	LEVEL II FOOT PROCEDURES	Major Surgery
1	Significant Procedures	37	LEVEL I ARTHROSCOPY	Major Surgery
1	Significant Procedures	38	LEVEL II ARTHROSCOPY	Major Surgery
1	Significant Procedures	39	REPLACEMENT OF CAST	Other
1	Significant Procedures	40	SPLINT, STRAPPING AND CAST REMOVAL	Other
1	Significant Procedures	41	CLOSED TREATMENT FX & DISLOCATION OF FINGER, TOE & TRUNK	Minor Surgery
1	Significant Procedures	42	CLOSED TREATMENT FX & DISLOCATION EXC FINGER, TOE & TRUNK	Minor Surgery

1	Significant Procedures	43	OPEN OR PERCUTANEOUS TREATMENT OF FRACTURES	Major Surgery
1	Significant Procedures	44	BONE OR JOINT MANIPULATION UNDER ANESTHESIA	Minor Surgery
1	Significant Procedures	45	BUNION PROCEDURES	Major Surgery
1	Significant Procedures	46	LEVEL I ARTHROPLASTY	Major Surgery
1	Significant Procedures	47	LEVEL II ARTHROPLASTY	Major Surgery
1	Significant Procedures	48	HAND AND FOOT TENOTOMY	Major Surgery
1	Significant Procedures	49	ARTHROCENTESIS AND LIGAMENT OR TENDON INJECTION	Minor Surgery
1	Significant Procedures	60	PULMONARY TESTS	Other
1	Significant Procedures	61	NEEDLE AND CATHETER BIOPSY, ASPIRATION, LAVAGE AND INTUBATION	Minor Surgery
1	Significant Procedures	62	LEVEL I ENDOSCOPY OF THE UPPER AIRWAY	Minor Surgery
1	Significant Procedures	63	LEVEL II ENDOSCOPY OF THE UPPER AIRWAY	Major Surgery
1	Significant Procedures	64	ENDOSCOPY OF THE LOWER AIRWAY	Major Surgery
5	Rehab and Therapy	65	RESPIRATORY THERAPY	Rehab and Therapy
5	Rehab and Therapy	66	PULMONARY REHABILITATION	Rehab and Therapy
1	Significant Procedures	67	VENTILATION ASSISTANCE AND MANAGEMENT	Other
1	Significant Procedures	80	EXERCISE TOLERANCE TESTS	Cardiovascular
1	Significant Procedures	81	ECHOCARDIOGRAPHY	Cardiovascular
1	Significant Procedures	82	CARDIAC ELECTROPHYSIOLOGIC TESTS AND MONITORING	Cardiovascular
1	Significant Procedures	83	PLACEMENT OF TRANSVENOUS CATHETERS	Cardiovascular
1	Significant Procedures	84	DIAGNOSTIC CARDIAC CATHETERIZATION	Cardiovascular
1	Significant Procedures	85	PERIPHERAL TRANSCATHETER AND REVASCULARIZATION PROCEDURES	Cardiovascular
1	Significant Procedures	86	PACEMAKER INSERTION AND REPLACEMENT	Cardiovascular
1	Significant Procedures	87	REMOVAL AND REVISION OF PACEMAKER AND VASCULAR DEVICE	Cardiovascular

1	Significant Procedures	88	LEVEL I CARDIOTHORACIC PROCEDURES	Cardiovascular
1	Significant Procedures	89	LEVEL II CARDIOTHORACIC PROCEDURES	Cardiovascular
1	Significant Procedures	90	SECONDARY VARICOSE VEINS AND VASCULAR INJECTION	Major Surgery
1	Significant Procedures	91	VASCULAR LIGATION AND RECONSTRUCTION	Major Surgery
1	Significant Procedures	92	RESUSCITATION	Minor Surgery
1	Significant Procedures	93	CARDIOVERSION	Cardiovascular
5	Rehab and Therapy	94	CARDIAC REHABILITATION	Rehab and Therapy
1	Significant Procedures	96	ATRIAL AND VENTRICULAR RECORDING AND PACING	Cardiovascular
1	Significant Procedures	97	AICD IMPLANT	Cardiovascular
1	Significant Procedures	99	CORONARY ANGIOPLASTY	Cardiovascular
2	Oncology Related Service	110	PHARMACOTHERAPY BY EXTENDED INFUSION	Oncology Related Services
1	Significant Procedures	110	PHARMACOTHERAPY BY EXTENDED INFUSION	Other
2	Oncology Related Service	111	PHARMACOTHERAPY EXCEPT BY EXTENDED INFUSION	Oncology Related Services
1	Significant Procedures	111	PHARMACOTHERAPY EXCEPT BY EXTENDED INFUSION	Other
1	Significant Procedures	112	PHLEBOTOMY	Other
1	Significant Procedures	113	LEVEL I BLOOD AND BLOOD PRODUCT EXCHANGE	Other
1	Significant Procedures	114	LEVEL II BLOOD AND BLOOD PRODUCT EXCHANGE	Other
1	Significant Procedures	115	DEEP LYMPH STRUCTURE AND THYROID PROCEDURES	Major Surgery
1	Significant Procedures	161	URINARY STUDIES AND PROCEDURES	Other
2	Oncology Related Service	457	VENIPUNCTURE	Clinic
1	Significant Procedures	130	ALIMENTARY TESTS AND SIMPLE TUBE PLACEMENT	Minor Surgery
1	Significant Procedures	131	ESOPHAGEAL DILATION WITHOUT ENDOSCOPY	Minor Surgery

1	Significant Procedures	132	ANOSCOPY WITH BIOPSY AND DIAGNOSTIC PROCTOSIGMOIDOSCOPY	Minor Surgery
1	Significant Procedures	133	PROCTOSIGMOIDOSCOPY WITH EXCISION OR BIOPSY	Minor Surgery
1	Significant Procedures	134	DIAGNOSTIC UPPER GI ENDOSCOPY OR INTUBATION	Minor Surgery
1	Significant Procedures	135	THERAPEUTIC UPPER GI ENDOSCOPY OR INTUBATION	Minor Surgery
1	Significant Procedures	136	DIAGNOSTIC LOWER GASTROINTESTINAL ENDOSCOPY	Minor Surgery
1	Significant Procedures	137	THERAPEUTIC COLONOSCOPY	Minor Surgery
1	Significant Procedures	138	ERCP AND MISCELLANEOUS GI ENDOSCOPY PROCEDURES	Major Surgery
1	Significant Procedures	139	LEVEL I HERNIA REPAIR	Major Surgery
1	Significant Procedures	140	LEVEL II HERNIA REPAIR	Major Surgery
1	Significant Procedures	141	LEVEL I ANAL AND RECTAL PROCEDURES	Minor Surgery
1	Significant Procedures	142	LEVEL II ANAL AND RECTAL PROCEDURES	Major Surgery
1	Significant Procedures	143	LEVEL I GASTROINTESTINAL PROCEDURES	Minor Surgery
1	Significant Procedures	144	LEVEL II GASTROINTESTINAL PROCEDURES	Major Surgery
1	Significant Procedures	145	LEVEL I LAPAROSCOPY	Major Surgery
1	Significant Procedures	146	LEVEL II LAPAROSCOPY	Major Surgery
1	Significant Procedures	147	LEVEL III LAPAROSCOPY	Major Surgery
1	Significant Procedures	148	LEVEL IV LAPAROSCOPY	Major Surgery
1	Significant Procedures	149	SCREENING COLORECTAL SERVICES	Minor Surgery
1	Significant Procedures	160	EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY	Major Surgery
1	Significant Procedures	168	HEMODIALYSIS	Other
1	Significant Procedures	162	URINARY DILATATION	Minor Surgery
1	Significant Procedures	163	LEVEL I BLADDER AND KIDNEY PROCEDURES	Minor Surgery
1	Significant Procedures	164	LEVEL II BLADDER AND KIDNEY PROCEDURES	Major Surgery

1	Significant Procedures	165	LEVEL III BLADDER AND KIDNEY PROCEDURES	Major Surgery
1	Significant Procedures	166	LEVEL I URETHRA AND PROSTATE PROCEDURES	Minor Surgery
1	Significant Procedures	167	LEVEL II URETHRA AND PROSTATE PROCEDURES	Major Surgery
1	Significant Procedures	169	PERITONEAL DIALYSIS	Other
1	Significant Procedures	190	ARTIFICIAL FERTILIZATION	Other
1	Significant Procedures	180	TESTICULAR AND EPIDIDYMAL PROCEDURES	Major Surgery
1	Significant Procedures	181	CIRCUMCISION	Minor Surgery
1	Significant Procedures	182	INSERTION OF PENILE PROSTHESIS	Major Surgery
1	Significant Procedures	183	OTHER PENILE PROCEDURES	Major Surgery
1	Significant Procedures	184	DESTRUCTION OR RESECTION OF PROSTATE	Major Surgery
1	Significant Procedures	185	PROSTATE NEEDLE AND PUNCH BIOPSY	Minor Surgery
1	Significant Procedures	210	EXTENDED EEG STUDIES	Other
1	Significant Procedures	191	LEVEL I FETAL PROCEDURES	Minor Surgery
1	Significant Procedures	192	LEVEL II FETAL PROCEDURES	Major Surgery
1	Significant Procedures	193	TREATMENT OF INCOMPLETE ABORTION	Minor Surgery
1	Significant Procedures	194	THERAPEUTIC ABORTION	Minor Surgery
1	Significant Procedures	195	VAGINAL DELIVERY	Major Surgery
1	Significant Procedures	196	LEVEL I FEMALE REPRODUCTIVE PROCEDURES	Minor Surgery
1	Significant Procedures	197	LEVEL II FEMALE REPRODUCTIVE PROCEDURES	Major Surgery
1	Significant Procedures	198	LEVEL III FEMALE REPRODUCTIVE PROCEDURES	Major Surgery
1	Significant Procedures	199	DILATION AND CURETTAGE	Minor Surgery
1	Significant Procedures	200	HYSTEROSCOPY	Major Surgery
1	Significant Procedures	201	COLPOSCOPY	Minor Surgery

1	Significant Procedures	211	ELECTROENCEPHALOGRAM	Other
1	Significant Procedures	212	ELECTROCONVULSIVE THERAPY	Other
1	Significant Procedures	213	NERVE AND MUSCLE TESTS	Other
1	Significant Procedures	219	SPINAL TAP	Other
1	Significant Procedures	214	LEVEL I NERVOUS SYSTEM INJECTIONS, STIMULATIONS OR CRANIAL TAP	Minor Surgery
1	Significant Procedures	215	LEVEL I REVISION OR REMOVAL OF NEUROLOGICAL DEVICE	Minor Surgery
1	Significant Procedures	216	LEVEL II REVISION OR REMOVAL OF NEUROLOGICAL DEVICE	Major Surgery
1	Significant Procedures	217	LEVEL I NERVE PROCEDURES	Minor Surgery
1	Significant Procedures	218	LEVEL II NERVE PROCEDURES	Major Surgery
1	Significant Procedures	222	SLEEP STUDIES	Other
1	Significant Procedures	220	LEVEL II NERVOUS SYSTEM INJECTIONS, STIMULATIONS OR CRANIAL TAP	Minor Surgery
1	Significant Procedures	221	LAMINOTOMY AND LAMINECTOMY	Major Surgery
1	Significant Procedures	251	OTORHINOLARYNGOLOGIC FUNCTION TESTS	Other
1	Significant Procedures	223	LEVEL III NERVE PROCEDURES	Major Surgery
1	Significant Procedures	224	LEVEL IV NERVE PROCEDURES	Major Surgery
1	Significant Procedures	230	MINOR OPHTHALMOLOGICAL TESTS AND PROCEDURES	Minor Surgery
1	Significant Procedures	232	LASER EYE PROCEDURES	Minor Surgery
1	Significant Procedures	233	CATARACT PROCEDURES	Minor Surgery
1	Significant Procedures	234	LEVEL I ANTERIOR SEGMENT EYE PROCEDURES	Minor Surgery
1	Significant Procedures	235	LEVEL II ANTERIOR SEGMENT EYE PROCEDURES	Major Surgery
1	Significant Procedures	236	LEVEL III ANTERIOR SEGMENT EYE PROCEDURES	Major Surgery
1	Significant Procedures	237	LEVEL I POSTERIOR SEGMENT EYE PROCEDURES	Major Surgery
1	Significant Procedures	238	LEVEL II POSTERIOR SEGMENT EYE PROCEDURES	Major Surgery

1	Significant Procedures	239	STRABISMUS AND MUSCLE EYE PROCEDURES	Major Surgery
1	Significant Procedures	240	LEVEL I REPAIR AND PLASTIC PROCEDURES OF EYE	Minor Surgery
1	Significant Procedures	241	LEVEL II REPAIR AND PLASTIC PROCEDURES OF EYE	Major Surgery
1	Significant Procedures	250	COCHLEAR DEVICE IMPLANTATION	Major Surgery
1	Significant Procedures	257	AUDIOMETRY	Other
1	Significant Procedures	252	LEVEL I FACIAL AND ENT PROCEDURES	Major Surgery
1	Significant Procedures	253	LEVEL II FACIAL AND ENT PROCEDURES	Major Surgery
1	Significant Procedures	254	LEVEL III FACIAL AND ENT PROCEDURES	Major Surgery
1	Significant Procedures	255	LEVEL IV FACIAL AND ENT PROCEDURES	Major Surgery
1	Significant Procedures	256	TONSIL AND ADENOID PROCEDURES	Minor Surgery
1	Significant Procedures	350	LEVEL I ADJUNCTIVE GENERAL DENTAL SERVICES	Other
5	Rehab and Therapy	270	OCCUPATIONAL THERAPY	Rehab and Therapy
5	Rehab and Therapy	271	PHYSICAL THERAPY	Rehab and Therapy
5	Rehab and Therapy	272	SPEECH THERAPY AND EVALUATION	Rehab and Therapy
5	Rehab and Therapy	274	OCCUPATIONAL/PHYSICAL THERAPY, GROUP	Rehab and Therapy
5	Rehab and Therapy	275	SPEECH THERAPY & EVALUATION, GROUP	Rehab and Therapy
1	Significant Procedures	280	VASCULAR RADIOLOGY EXCEPT VENOGRAPHY OF EXTREMITY	Radiology
1	Significant Procedures	281	MAGNETIC RESONANCE ANGIOGRAPHY - HEAD AND/OR NECK	Radiology
1	Significant Procedures	282	MAGNETIC RESONANCE ANGIOGRAPHY - CHEST	Radiology
1	Significant Procedures	283	MAGNETIC RESONANCE ANGIOGRAPHY - OTHER SITES	Radiology
1	Significant Procedures	284	MYELOGRAPHY	Radiology
1	Significant Procedures	285	MISCELLANEOUS RADIOLOGICAL PROCEDURES WITH CONTRAST	Radiology
1	Significant Procedures	286	MAMMOGRAPHY & OTHER RELATED PROCEDURES	Radiology



1	Significant Procedures	287	DIGESTIVE RADIOLOGY	Radiology
1	Significant Procedures	288	DIAGNOSTIC ULTRASOUND EXCEPT OBSTETRICAL AND VASCULAR OF LOWER EXTREMITIES	Radiology
1	Significant Procedures	289	VASCULAR DIAGNOSTIC ULTRASOUND OF LOWER EXTREMITIES	Radiology
1	Significant Procedures	290	PET SCANS	CT/MRI/PET
1	Significant Procedures	291	BONE DENSITOMETRY	Radiology
1	Significant Procedures	292	MRI- ABDOMEN	CT/MRI/PET
1	Significant Procedures	293	MRI- JOINTS	CT/MRI/PET
1	Significant Procedures	294	MRI- BACK	CT/MRI/PET
1	Significant Procedures	295	MRI- CHEST	CT/MRI/PET
1	Significant Procedures	296	MRI- OTHER	CT/MRI/PET
1	Significant Procedures	297	MRI BRAIN AND MAGNETOENCEPHALOGRAPHY	CT/MRI/PET
1	Significant Procedures	298	CAT SCAN BACK	CT/MRI/PET
1	Significant Procedures	299	CAT SCAN - BRAIN	CT/MRI/PET
1	Significant Procedures	300	CAT SCAN - ABDOMEN	CT/MRI/PET
1	Significant Procedures	301	CAT SCAN - OTHER	CT/MRI/PET
1	Significant Procedures	302	ANGIOGRAPHY, OTHER	Radiology
1	Significant Procedures	303	ANGIOGRAPHY, CEREBRAL	Radiology
6	Psychiatric	310	DEVELOPMENTAL & NEUROPSYCHOLOGICAL TESTING	Psychiatric
6	Psychiatric	311	FULL DAY PARTIAL HOSPITALIZATION FOR SUBSTANCE ABUSE	Psychiatric
6	Psychiatric	312	FULL DAY PARTIAL HOSPITALIZATION FOR MENTAL ILLNESS	Psychiatric
6	Psychiatric	313	HALF DAY PARTIAL HOSPITALIZATION FOR SUBSTANCE ABUSE	Psychiatric
6	Psychiatric	314	HALF DAY PARTIAL HOSPITALIZATION FOR MENTAL ILLNESS	Psychiatric
6	Psychiatric	315	COUNSELLING OR INDIVIDUAL BRIEF PSYCHOTHERAPY	Psychiatric

6	Psychiatric	316	INDIVIDUAL COMPREHENSIVE PSYCHOTHERAPY	Psychiatric
6	Psychiatric	317	FAMILY PSYCHOTHERAPY	Psychiatric
6	Psychiatric	318	GROUP PSYCHOTHERAPY	Psychiatric
6	Psychiatric	319	ACTIVITY THERAPY	Psychiatric
6	Psychiatric	320	CASE MANAGEMENT & TREATMENT PLAN DEVELOPMENT - MENTAL HEALTH OR SUBSTANCE ABUSE	Psychiatric
6	Psychiatric	322	MEDICATION ADMINISTRATION & OBSERVATION	Psychiatric
6	Psychiatric	323	MENTAL HYGIENE ASSESSMENT	Psychiatric
6	Psychiatric	327	INTENSIVE OUTPATIENT TREATMENT	Psychiatric
1	Significant Procedures	330	LEVEL I DIAGNOSTIC NUCLEAR MEDICINE	Radiology
1	Significant Procedures	331	LEVEL II DIAGNOSTIC NUCLEAR MEDICINE	Radiology
1	Significant Procedures	332	LEVEL III DIAGNOSTIC NUCLEAR MEDICINE	Radiology
1	Significant Procedures	340	THERAPEUTIC NUCLEAR MEDICINE	Radiology
2	Oncology Related Service	341	RADIATION THERAPY AND HYPERTHERMIA	Oncology Related Services
1	Significant Procedures	342	AFTERLOADING BRACHYTHERAPY	Oncology Related Services
2	Oncology Related Service	342	AFTERLOADING BRACHYTHERAPY	Oncology Related Services
2	Oncology Related Service	343	RADIATION TREATMENT DELIVERY	Oncology Related Services
1	Significant Procedures	343	RADIATION TREATMENT DELIVERY	Radiology
1	Significant Procedures	344	INSTILLATION OF RADIOELEMENT SOLUTIONS	Oncology Related Services
2	Oncology Related Service	344	INSTILLATION OF RADIOELEMENT SOLUTIONS	Oncology Related Services
2	Oncology Related Service	345	HYPERTHERMIC THERAPIES	Oncology Related Services
1	Significant Procedures	346	RADIOSURGERY	Minor Surgery

2	Oncology Related Service	346	RADIOSURGERY	Oncology Related Services
2	Oncology Related Service	349	LEVEL II AFTERLOADING BRACHYTHERAPY	Oncology Related Services
1	Significant Procedures	351	LEVEL II ADJUNCTIVE GENERAL DENTAL SERVICES	Other
1	Significant Procedures	352	LEVEL I PERIODONTICS	Other
1	Significant Procedures	355	LEVEL III PROSTHODONTICS, FIXED	Other
1	Significant Procedures	356	LEVEL I PROSTHODONTICS, REMOVABLE	Other
1	Significant Procedures	357	LEVEL II PROSTHODONTICS, REMOVABLE	Other
1	Significant Procedures	358	LEVEL III PROSTHODONTICS, REMOVABLE	Other
1	Significant Procedures	361	LEVEL I DENTAL RESTORATIONS	Other
1	Significant Procedures	362	LEVEL II DENTAL RESTORATIONS	Other
1	Significant Procedures	363	LEVEL III DENTAL RESTORATION	Other
1	Significant Procedures	364	LEVEL I ENDODONTICS	Other
1	Significant Procedures	371	LEVEL I ORTHODONTICS	Other
1	Significant Procedures	367	LEVEL I ORAL AND MAXILLOFACIAL SURGERY	Minor Surgery
1	Significant Procedures	368	LEVEL II ORAL AND MAXILLOFACIAL SURGERY	Minor Surgery
1	Significant Procedures	372	SEALANT	Other
4	ED Medical Visit	520	SPINAL DIAGNOSES & INJURIES	Other
4	ED Medical Visit	523	MULTIPLE SCLEROSIS & OTHER DEMYELINATING DISEASES	Other
4	ED Medical Visit	524	LEVEL I CNS DIAGNOSES	Other
4	ED Medical Visit	526	TRANSIENT ISCHEMIA	Other
4	ED Medical Visit	528	NONTRAUMATIC STUPOR & COMA	Other
7	Ancillary & Other	385	LEVEL I MOLECULAR PATHOLOGY AND GENETIC TESTS	Lab
7	Ancillary & Other	386	LEVEL II MOLECULAR PATHOLOGY AND GENETIC TESTS	Lab
7	Ancillary & Other	387	LEVEL III MOLECULAR PATHOLOGY AND GENETIC TESTS	Lab

7	Ancillary & Other	390	LEVEL I PATHOLOGY	Lab
7	Ancillary & Other	391	LEVEL II PATHOLOGY	Lab
7	Ancillary & Other	392	PAP SMEARS	Lab
7	Ancillary & Other	393	BLOOD AND TISSUE TYPING	Lab
7	Ancillary & Other	394	LEVEL I IMMUNOLOGY TESTS	Lab
7	Ancillary & Other	395	LEVEL II IMMUNOLOGY TESTS	Lab
7	Ancillary & Other	396	LEVEL I MICROBIOLOGY TESTS	Lab
7	Ancillary & Other	397	LEVEL II MICROBIOLOGY TESTS	Lab
7	Ancillary & Other	398	LEVEL I ENDOCRINOLOGY TESTS	Lab
7	Ancillary & Other	399	LEVEL II ENDOCRINOLOGY TESTS	Lab
7	Ancillary & Other	400	LEVEL I CHEMISTRY TESTS	Lab
7	Ancillary & Other	401	LEVEL II CHEMISTRY TESTS	Lab
7	Ancillary & Other	402	BASIC CHEMISTRY TESTS	Lab
7	Ancillary & Other	403	ORGAN OR DISEASE ORIENTED PANELS	Lab
7	Ancillary & Other	404	TOXICOLOGY TESTS	Lab
7	Ancillary & Other	405	THERAPEUTIC DRUG MONITORING	Lab
7	Ancillary & Other	406	LEVEL I CLOTTING TESTS	Lab
7	Ancillary & Other	407	LEVEL II CLOTTING TESTS	Lab
7	Ancillary & Other	408	LEVEL I HEMATOLOGY TESTS	Lab
7	Ancillary & Other	409	LEVEL II HEMATOLOGY TESTS	Lab
7	Ancillary & Other	410	URINALYSIS	Lab
7	Ancillary & Other	411	BLOOD AND URINE DIPSTICK TESTS	Lab
4	ED Medical Visit	529	SEIZURE	Other
4	ED Medical Visit	531	MIGRAINE	Other

4	ED Medical Visit	532	HEAD TRAUMA	Other
4	ED Medical Visit	533	AFTEREFFECTS OF CEREBROVASCULAR ACCIDENT	Other
4	ED Medical Visit	534	NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARC	Other
7	Ancillary & Other	417	MINOR REPRODUCTIVE PROCEDURES	Minor Surgery
4	ED Medical Visit	535	CVA & PRECEREBRAL OCCLUSION W INFARCT	Other
4	ED Medical Visit	536	CEREBRAL PALSY	Other
4	ED Medical Visit	550	ACUTE MAJOR EYE INFECTIONS	Other
4	ED Medical Visit	551	CATARACTS	Other
4	ED Medical Visit	552	GLAUCOMA	Other
7	Ancillary & Other	424	DRESSINGS AND OTHER MINOR PROCEDURES	Minor Surgery
4	ED Medical Visit	553	LEVEL I OTHER OPHTHALMIC DIAGNOSES	Other
6	Psychiatric	426	PSYCHOTROPIC MEDICATION MANAGEMENT	Psychiatric
4	ED Medical Visit	554	LEVEL II OTHER OPHTHALMIC DIAGNOSES	Other
4	ED Medical Visit	555	CONJUNCTIVITIS	Other
4	ED Medical Visit	561	VERTIGINOUS DIAGNOSES EXCEPT FOR BENIGN VERTIGO	Other
4	ED Medical Visit	570	CYSTIC FIBROSIS - PULMONARY DISEASE	Other
4	ED Medical Visit	572	BRONCHIOLITIS & RSV PNEUMONIA	Other
8	Oncology Drugs	431	CLASS II CHEMOTHERAPY DRUGS	Onc & Inf Drugs
8	Oncology Drugs	432	CLASS III CHEMOTHERAPY DRUGS	Onc & Inf Drugs
4	ED Medical Visit	573	COMMUNITY ACQUIRED PNUEMONIA	Other
8	Oncology Drugs	433	CLASS IV CHEMOTHERAPY DRUGS	Onc & Inf Drugs
8	Oncology Drugs	434	CLASS V CHEMOTHERAPY DRUGS	Onc & Inf Drugs
4	ED Medical Visit	574	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	Other
4	ED Medical Visit	577	LEVEL II OTHER RESPIRATORY DIAGNOSES	Other
8	Oncology Drugs	436	CLASS II PHARMACOTHERAPY	Onc & Inf Drugs
8	Oncology Drugs	437	CLASS III PHARMACOTHERAPY	Onc & Inf Drugs
4	ED Medical Visit	578	PNEUMONIA EXCEPT FOR COMMUNITY ACQUIRED PNEUMONIA	Other
8	Oncology Drugs	438	CLASS IV PHARMACOTHERAPY	Onc & Inf Drugs
4	ED Medical Visit	579	STATUS ASTHMATICUS	Other

8	Oncology Drugs	439	CLASS V PHARMACOTHERAPY	Onc & Inf Drugs
8	Oncology Drugs	440	CLASS VI PHARMACOTHERAPY	Onc & Inf Drugs
8	Oncology Drugs	441	CLASS VI CHEMOTHERAPY DRUGS	Onc & Inf Drugs
8	Oncology Drugs	443	CLASS VII CHEMOTHERAPY	Onc & Inf Drugs
4	ED Medical Visit	591	ACUTE MYOCARDIAL INFARCTION	Other
8	Oncology Drugs	444	CLASS VII PHARMACOTHERAPY	Onc & Inf Drugs
4	ED Medical Visit	593	LEVEL II CARDIOVASCULAR DIAGNOSES	Other
4	ED Medical Visit	594	HEART FAILURE	Other
4	ED Medical Visit	595	CARDIAC ARREST OR OTHER CAUSES OF MORTALITY	Other
3	Non-ED medical Visit	510	MAJOR SIGNS, SYMPTOMS AND FINDINGS	Clinic
3	Non-ED medical Visit	520	SPINAL DIAGNOSES & INJURIES	Clinic
4	ED Medical Visit	599	HYPERTENSION	Other
4	ED Medical Visit	601	LEVEL I CARDIAC ARRHYTHMIA & CONDUCTION DIAGNOSES	Other
8	Oncology Drugs	460	CLASS VIII - COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	Onc & Inf Drugs
8	Oncology Drugs	461	CLASS IX COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	Onc & Inf Drugs
4	ED Medical Visit	603	LEVEL II CARDIAC ARRHYTHMIA & CONDUCTION DIAGNOSES	Other
4	ED Medical Visit	605	SYNCOPE & COLLAPSE	Other
8	Oncology Drugs	462	CLASS X COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	Onc & Inf Drugs
8	Oncology Drugs	463	CLASS XI COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	Onc & Inf Drugs
8	Oncology Drugs	464	CLASS XII COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	Onc & Inf Drugs
8	Oncology Drugs	465	CLASS XIII COMBINED CHEMOTHERAPY AND PHARMOCOTHERAPY	Onc & Inf Drugs
7	Ancillary & Other	470	OBSTETRICAL ULTRASOUND	Radiology
7	Ancillary & Other	471	PLAIN FILM	Radiology
7	Ancillary & Other	472	ULTRASOUND GUIDANCE	Radiology
7	Ancillary & Other	473	CT GUIDANCE	CT/MRI/PET

7	Ancillary & Other	474	RADIOLOGICAL GUIDANCE FOR THERAPEUTIC OR DIAGNOSTIC PROCEDURES	Radiology
7	Ancillary & Other	475	MRI GUIDANCE	CT/MRI/PET
2	Oncology Related Service	476	LEVEL I THERAPEUTIC RADIATION TREATMENT PREPARATION	Oncology Related Services
2	Oncology Related Service	477	LEVEL II THERAPEUTIC RADIATION TREATMENT PREPARATION	Oncology Related Services
7	Ancillary & Other	477	LEVEL II THERAPEUTIC RADIATION TREATMENT PREPARATION	Oncology Related Services
2	Oncology Related Service	478	MEDICAL RADIATION PHYSICS	Oncology Related Services
2	Oncology Related Service	479	TREATMENT DEVICE DESIGN AND CONSTRUCTION	Oncology Related Services
7	Ancillary & Other	479	TREATMENT DEVICE DESIGN AND CONSTRUCTION	Oncology Related Services
2	Oncology Related Service	480	TELETHERAPY/BRACHYTHERAPY CALCULATION	Oncology Related Services
1	Significant Procedures	481	THERAPEUTIC RADIOLOGY SIMULATION FIELD SETTING	Oncology Related Services
2	Oncology Related Service	481	THERAPEUTIC RADIOLOGY SIMULATION FIELD SETTING	Oncology Related Services
2	Oncology Related Service	482	RADIOELEMENT APPLICATION	Oncology Related Services
2	Oncology Related Service	484	THERAPEUTIC RADIOLOGY TREATMENT PLANNING	Oncology Related Services
7	Ancillary & Other	486	BASIC BLOOD TYPING	Lab
4	ED Medical Visit	623	ESOPHAGITIS	Other
4	ED Medical Visit	626	INFLAMMATORY BOWEL DISEASE	Other
4	ED Medical Visit	627	NON-BACTERIAL GASTROENTERITIS, NAUSEA & VOMITING	Other
4	ED Medical Visit	629	MALFUNCTION, REACTION & COMPLICATION OF GI DEVICE OR PROCEDURE	Other

4	ED Medical Visit	630	CONSTIPATION	Other
4	ED Medical Visit	632	IRRITABLE BOWEL SYNDROME	Other
4	ED Medical Visit	633	ALCOHOLIC LIVER DISEASE	Other
4	ED Medical Visit	635	PANCREAS DIAGNOSES EXCEPT MALIGNANCY	Other
3	Non-ED medical Visit	521	NERVOUS SYSTEM MALIGNANCY	Clinic
3	Non-ED medical Visit	522	DEGENERATIVE NERVOUS SYSTEM DIAGNOSES EXC MULT SCLEROSIS	Clinic
3	Non-ED medical Visit	523	MULTIPLE SCLEROSIS & OTHER DEMYELINATING DISEASES	Clinic
4	ED Medical Visit	636	HEPATITIS WITHOUT COMA	Other
3	Non-ED medical Visit	524	LEVEL I CNS DIAGNOSES	Clinic
3	Non-ED medical Visit	525	LEVEL II CNS DIAGNOSES	Clinic
3	Non-ED medical Visit	526	TRANSIENT ISCHEMIA	Clinic
3	Non-ED medical Visit	527	PERIPHERAL NERVE DIAGNOSES	Clinic
3	Non-ED medical Visit	528	NONTRAUMATIC STUPOR & COMA	Clinic
3	Non-ED medical Visit	529	SEIZURE	Clinic
3	Non-ED medical Visit	530	HEADACHES OTHER THAN MIGRAINE	Clinic
3	Non-ED medical Visit	531	MIGRAINE	Clinic
3	Non-ED medical Visit	532	HEAD TRAUMA	Clinic
3	Non-ED medical Visit	533	AFTEREFFECTS OF CEREBROVASCULAR ACCIDENT	Clinic
3	Non-ED medical Visit	534	NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT	Clinic
3	Non-ED medical Visit	535	CVA & PRECEREBRAL OCCLUSION W INFARCT	Clinic
3	Non-ED medical Visit	536	CEREBRAL PALSY	Clinic
3	Non-ED medical Visit	550	ACUTE MAJOR EYE INFECTIONS	Clinic
3	Non-ED medical Visit	551	CATARACTS	Clinic
3	Non-ED medical Visit	552	GLAUCOMA	Clinic
3	Non-ED medical Visit	553	LEVEL I OTHER OPHTHALMIC DIAGNOSES	Clinic



3	Non-ED medical Visit	554	LEVEL II OTHER OPHTHALMIC DIAGNOSES	Clinic
3	Non-ED medical Visit	555	CONJUNCTIVITIS	Clinic
3	Non-ED medical Visit	560	EAR, NOSE, MOUTH, THROAT, CRANIAL/FACIAL MALIGNANCIES	Clinic
3	Non-ED medical Visit	561	VERTIGINOUS DIAGNOSES EXCEPT FOR BENIGN VERTIGO	Clinic
3	Non-ED medical Visit	562	INFECTIONS OF UPPER RESPIRATORY TRACT & OTITIS MEDIA	Clinic
3	Non-ED medical Visit	563	DENTAL & ORAL DIAGNOSES & INJURIES	Clinic
3	Non-ED medical Visit	564	LEVEL I OTHER EAR, NOSE, MOUTH, THROAT & CRANIAL/FACIAL DIAGNOSES	Clinic
3	Non-ED medical Visit	565	LEVEL II OTHER EAR, NOSE, MOUTH, THROAT & CRANIAL/FACIAL DIAGNOSES	Clinic
3	Non-ED medical Visit	570	CYSTIC FIBROSIS - PULMONARY DISEASE	Clinic
3	Non-ED medical Visit	571	RESPIRATORY MALIGNANCY	Clinic
3	Non-ED medical Visit	572	BRONCHIOLITIS & RSV PNEUMONIA	Clinic
3	Non-ED medical Visit	573	COMMUNITY ACQUIRED PNEUMONIA	Clinic
3	Non-ED medical Visit	574	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	Clinic
3	Non-ED medical Visit	575	ASTHMA	Clinic
3	Non-ED medical Visit	576	LEVEL I OTHER RESPIRATORY DIAGNOSES	Clinic
3	Non-ED medical Visit	577	LEVEL II OTHER RESPIRATORY DIAGNOSES	Clinic
3	Non-ED medical Visit	578	PNEUMONIA EXCEPT FOR COMMUNITY ACQUIRED PNEUMONIA	Clinic
3	Non-ED medical Visit	579	STATUS ASTHMATICUS	Clinic
3	Non-ED medical Visit	591	ACUTE MYOCARDIAL INFARCTION	Clinic
3	Non-ED medical Visit	592	LEVEL I CARDIOVASCULAR DIAGNOSES	Clinic
3	Non-ED medical Visit	593	LEVEL II CARDIOVASCULAR DIAGNOSES	Clinic
3	Non-ED medical Visit	594	HEART FAILURE	Clinic
3	Non-ED medical Visit	595	CARDIAC ARREST OR OTHER CAUSES OF MORTALITY	Clinic

3	Non-ED medical Visit	596	PERIPHERAL & OTHER VASCULAR DIAGNOSES	Clinic
3	Non-ED medical Visit	597	PHLEBITIS	Clinic
3	Non-ED medical Visit	598	ANGINA PECTORIS & CORONARY ATHEROSCLEROSIS	Clinic
3	Non-ED medical Visit	599	HYPERTENSION	Clinic
3	Non-ED medical Visit	600	CARDIAC STRUCTURAL & VALVULAR DIAGNOSES	Clinic
3	Non-ED medical Visit	601	LEVEL I CARDIAC ARRHYTHMIA & CONDUCTION DIAGNOSES	Clinic
3	Non-ED medical Visit	602	ATRIAL FIBRILLATION	Clinic
3	Non-ED medical Visit	603	LEVEL II CARDIAC ARRHYTHMIA & CONDUCTION DIAGNOSES	Clinic
3	Non-ED medical Visit	604	CHEST PAIN	Clinic
3	Non-ED medical Visit	605	SYNCOPE & COLLAPSE	Clinic
3	Non-ED medical Visit	620	DIGESTIVE MALIGNANCY	Clinic
3	Non-ED medical Visit	621	PEPTIC ULCER & GASTRITIS	Clinic
3	Non-ED medical Visit	623	ESOPHAGITIS	Clinic
3	Non-ED medical Visit	624	LEVEL I GASTROINTESTINAL DIAGNOSES	Clinic
3	Non-ED medical Visit	625	LEVEL II GASTROINTESTINAL DIAGNOSES	Clinic
3	Non-ED medical Visit	626	INFLAMMATORY BOWEL DISEASE	Clinic
3	Non-ED medical Visit	627	NON-BACTERIAL GASTROENTERITIS, NAUSEA & VOMITING	Clinic
3	Non-ED medical Visit	628	ABDOMINAL PAIN	Clinic
3	Non-ED medical Visit	629	MALFUNCTION, REACTION & COMPLICATION OF GI DEVICE OR PROCEDURE	Clinic
3	Non-ED medical Visit	630	CONSTIPATION	Clinic
3	Non-ED medical Visit	631	HERNIA	Clinic
3	Non-ED medical Visit	632	IRRITABLE BOWEL SYNDROME	Clinic
3	Non-ED medical Visit	633	ALCOHOLIC LIVER DISEASE	Clinic

3	Non-ED medical Visit	634	MALIGNANCY OF HEPATOBILIARY SYSTEM & PANCREAS	Clinic
3	Non-ED medical Visit	635	PANCREAS DIAGNOSES EXCEPT MALIGNANCY	Clinic
3	Non-ED medical Visit	636	HEPATITIS WITHOUT COMA	Clinic
3	Non-ED medical Visit	637	GALLBLADDER & BILIARY TRACT DIAGNOSES	Clinic
3	Non-ED medical Visit	638	CHOLECYSTITIS	Clinic
3	Non-ED medical Visit	639	LEVEL I HEPATOBILIARY DIAGNOSES	Clinic
3	Non-ED medical Visit	640	LEVEL II HEPATOBILIARY DIAGNOSES	Clinic
3	Non-ED medical Visit	650	FRACTURE OF FEMUR	Clinic
3	Non-ED medical Visit	651	FRACTURE OF PELVIS OR DISLOCATION OF HIP	Clinic
3	Non-ED medical Visit	652	FRACTURES & DISLOCATIONS EXCEPT FEMUR, PELVIS & BACK	Clinic
3	Non-ED medical Visit	653	MUSCULOSKELETAL MALIGNANCY & PATHOLOGICAL FRACTURES	Clinic
3	Non-ED medical Visit	654	OSTEOMYELITIS, SEPTIC ARTHRITIS & OTHER MUSCULOSKELETAL INFECTIONS	Clinic
3	Non-ED medical Visit	655	CONNECTIVE TISSUE DIAGNOSES	Clinic
3	Non-ED medical Visit	656	BACK & NECK DIAGNOSES EXCEPT LUMBAR DISC DIAGNOSES	Clinic
3	Non-ED medical Visit	657	LUMBAR DISC DIAGNOSES	Clinic
3	Non-ED medical Visit	658	LUMBAR DISC DIAGNOSES WITH SCIATICA	Clinic
3	Non-ED medical Visit	659	MALFUNCTION, REACTION, COMPLIC OF ORTHOPEDIC DEVICE OR PROCEDURE	Clinic
3	Non-ED medical Visit	660	LEVEL I OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	Clinic
3	Non-ED medical Visit	661	LEVEL II OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	Clinic
3	Non-ED medical Visit	662	OSTEOPOROSIS	Clinic
3	Non-ED medical Visit	663	PAIN	Clinic
3	Non-ED medical Visit	670	SKIN ULCERS	Clinic
3	Non-ED medical Visit	671	MAJOR SKIN DIAGNOSES	Clinic

3	Non-ED medical Visit	672	MALIGNANT BREAST DIAGNOSES	Clinic
3	Non-ED medical Visit	673	CELLULITIS & OTHER BACTERIAL SKIN INFECTIONS	Clinic
3	Non-ED medical Visit	674	CONTUSION, OPEN WOUND & OTHER TRAUMA TO SKIN & SUBCUTANEOUS TISSUE	Clinic
3	Non-ED medical Visit	675	OTHER SKIN, SUBCUTANEOUS TISSUE & BREAST DIAGNOSES	Clinic
3	Non-ED medical Visit	676	DECUBITUS ULCER	Clinic
3	Non-ED medical Visit	690	MALNUTRITION, FAILURE TO THRIVE & OTHER NUTRITIONAL DIAGNOSES	Clinic
3	Non-ED medical Visit	691	INBORN ERRORS OF METABOLISM	Clinic
3	Non-ED medical Visit	692	LEVEL I ENDOCRINE DIAGNOSES	Clinic
3	Non-ED medical Visit	693	LEVEL II ENDOCRINE DIAGNOSES	Clinic
3	Non-ED medical Visit	694	ELECTROLYTE DISORDERS	Clinic
3	Non-ED medical Visit	695	OBESITY	Clinic
3	Non-ED medical Visit	710	DIABETES WITH OPHTHALMIC MANIFESTATIONS	Clinic
3	Non-ED medical Visit	711	DIABETES WITH OTHER MANIFESTATIONS & COMPLICATIONS	Clinic
3	Non-ED medical Visit	712	DIABETES WITH NEUROLOGIC MANIFESTATIONS	Clinic
3	Non-ED medical Visit	713	DIABETES WITHOUT COMPLICATIONS	Clinic
3	Non-ED medical Visit	714	DIABETES WITH RENAL MANIFESTATIONS	Clinic
3	Non-ED medical Visit	720	RENAL FAILURE	Clinic
3	Non-ED medical Visit	721	KIDNEY & URINARY TRACT MALIGNANCY	Clinic
3	Non-ED medical Visit	722	NEPHRITIS & NEPHROSIS	Clinic
3	Non-ED medical Visit	723	KIDNEY AND CHRONIC URINARY TRACT INFECTIONS	Clinic
3	Non-ED medical Visit	724	URINARY STONES & ACQUIRED UPPER URINARY TRACT OBSTRUCTION	Clinic
3	Non-ED medical Visit	725	MALFUNCTION, REACTION, COMPLIC OF GENITOURINARY DEVICE OR PROC	Clinic
3	Non-ED medical Visit	726	OTHER KIDNEY & URINARY TRACT DIAGNOSES, SIGNS & SYMPTOMS	Clinic

3	Non-ED medical Visit	727	ACUTE LOWER URINARY TRACT INFECTIONS	Clinic
3	Non-ED medical Visit	740	MALIGNANCY, MALE REPRODUCTIVE SYSTEM	Clinic
3	Non-ED medical Visit	741	MALE REPRODUCTIVE SYSTEM DIAGNOSES EXCEPT MALIGNANCY	Clinic
3	Non-ED medical Visit	742	NEOPLASMS OF THE MALE REPRODUCTIVE SYSTEM	Clinic
3	Non-ED medical Visit	743	PROSTATITIS	Clinic
3	Non-ED medical Visit	744	MALE REPRODUCTIVE INFECTIONS	Clinic
3	Non-ED medical Visit	750	FEMALE REPRODUCTIVE SYSTEM MALIGNANCY	Clinic
3	Non-ED medical Visit	751	FEMALE REPRODUCTIVE SYSTEM INFECTIONS	Clinic
3	Non-ED medical Visit	752	LEVEL I MENSTRUAL AND OTHER FEMALE DIAGNOSES	Clinic
3	Non-ED medical Visit	753	LEVEL II MENSTRUAL AND OTHER FEMALE DIAGNOSES	Clinic
3	Non-ED medical Visit	760	VAGINAL DELIVERY	Clinic
3	Non-ED medical Visit	761	POSTPARTUM & POST ABORTION DIAGNOSES W/O PROCEDURE	Clinic
3	Non-ED medical Visit	762	THREATENED ABORTION	Clinic
3	Non-ED medical Visit	763	ABORTION W/O D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY	Clinic
3	Non-ED medical Visit	764	FALSE LABOR	Clinic
3	Non-ED medical Visit	765	OTHER ANTEPARTUM DIAGNOSES	Clinic
3	Non-ED medical Visit	766	ROUTINE PRENATAL CARE	Clinic
3	Non-ED medical Visit	770	NORMAL NEONATE	Clinic
3	Non-ED medical Visit	771	LEVEL I NEONATAL DIAGNOSES	Clinic
3	Non-ED medical Visit	772	LEVEL II NEONATAL DIAGNOSES	Clinic
3	Non-ED medical Visit	780	OTHER HEMATOLOGICAL DIAGNOSES	Clinic
3	Non-ED medical Visit	781	COAGULATION & PLATELET DIAGNOSES	Clinic
3	Non-ED medical Visit	782	CONGENITAL FACTOR DEFICIENCIES	Clinic

3	Non-ED medical Visit	783	SICKLE CELL ANEMIA CRISIS	Clinic
3	Non-ED medical Visit	784	SICKLE CELL ANEMIA	Clinic
3	Non-ED medical Visit	785	ANEMIA EXCEPT FOR IRON DEFICIENCY ANEMIA AND SICKLE CELL ANEMIA	Clinic
3	Non-ED medical Visit	786	IRON DEFICIENCY ANEMIA	Clinic
3	Non-ED medical Visit	805	SEPTICEMIA & DISSEMINATED INFECTIONS	Clinic
3	Non-ED medical Visit	806	POST-OPERATIVE, POST-TRAUMATIC, OTHER DEVICE INFECTIONS	Clinic
3	Non-ED medical Visit	807	FEVER	Clinic
3	Non-ED medical Visit	808	VIRAL ILLNESS	Clinic
3	Non-ED medical Visit	809	OTHER INFECTIOUS & PARASITIC DISEASES	Clinic
3	Non-ED medical Visit	810	H. PYLORI INFECTION	Clinic
3	Non-ED medical Visit	840	OPIOID ABUSE & DEPENDENCE	Clinic
3	Non-ED medical Visit	841	COCAINE ABUSE & DEPENDENCE	Clinic
3	Non-ED medical Visit	842	ALCOHOL ABUSE & DEPENDENCE	Clinic
3	Non-ED medical Visit	843	OTHER DRUG ABUSE & DEPENDENCE	Clinic
3	Non-ED medical Visit	850	ALLERGIC REACTIONS	Clinic
3	Non-ED medical Visit	851	POISONING OF MEDICINAL AGENTS	Clinic
3	Non-ED medical Visit	852	OTHER COMPLICATIONS OF TREATMENT	Clinic
3	Non-ED medical Visit	853	OTHER INJURY, POISONING & TOXIC EFFECT DIAGNOSES	Clinic
3	Non-ED medical Visit	854	TOXIC EFFECTS OF NON-MEDICINAL SUBSTANCES	Clinic
3	Non-ED medical Visit	860	EXTENSIVE 3RD DEGREE OR FULL THICKNESS BURNS W/O SKIN GRAFT	Clinic
3	Non-ED medical Visit	861	PARTIAL THICKNESS BURNS W OR W/O SKIN GRAFT	Clinic
3	Non-ED medical Visit	870	REHABILITATION	Clinic
3	Non-ED medical Visit	871	SIGNS, SYMPTOMS & OTHER FACTORS INFLUENCING HEALTH STATUS	Clinic

3	Non-ED medical Visit	872	OTHER AFTERCARE & CONVALESCENCE	Clinic
3	Non-ED medical Visit	873	NEONATAL AFTERCARE	Clinic
3	Non-ED medical Visit	874	JOINT REPLACEMENT	Clinic
3	Non-ED medical Visit	875	CONTRACEPTIVE MANAGEMENT	Clinic
3	Non-ED medical Visit	878	GYNECOLOGICAL PREVENTIVE MEDICINE	Clinic
3	Non-ED medical Visit	879	PREVENTIVE OR SCREENING ENCOUNTERS	Clinic
3	Non-ED medical Visit	880	HIV INFECTION	Clinic
3	Non-ED medical Visit	881	AIDS	Clinic
3	Non-ED medical Visit	882	GENETIC COUNSELING	Clinic
3	Non-ED medical Visit	820	SCHIZOPHRENIA	Clinic
3	Non-ED medical Visit	821	MAJOR DEPRESSIVE DIAGNOSES & OTHER/UNSPECIFIED PSYCHOSES	Clinic
3	Non-ED medical Visit	822	PERSONALITY & IMPULSE CONTROL DIAGNOSES	Clinic
4	ED Medical Visit	637	GALLBLADDER & BILIARY TRACT DIAGNOSES	Other
4	ED Medical Visit	638	CHOLECYSTITIS	Other
3	Non-ED medical Visit	823	BIPOLAR DISORDERS	Clinic
4	ED Medical Visit	650	FRACTURE OF FEMUR	Other
3	Non-ED medical Visit	824	DEPRESSION EXCEPT MAJOR DEPRESSIVE DIAGNOSES	Clinic
4	ED Medical Visit	651	FRACTURE OF PELVIS OR DISLOCATION OF HIP	Other
4	ED Medical Visit	652	FRACTURES & DISLOCATIONS EXCEPT FEMUR, PELVIS & BACK	Other
3	Non-ED medical Visit	825	ADJUSTMENT DISORDERS & NEUROSES EXCEPT DEPRESSIVE DIAGNOSES	Clinic
4	ED Medical Visit	662	OSTEOPOROSIS	Other
4	ED Medical Visit	695	OBESITY	Other
4	ED Medical Visit	710	DIABETES WITH OPHTHALMIC MANIFESTATIONS	Other
4	ED Medical Visit	713	DIABETES WITHOUT COMPLICATIONS	Other
4	ED Medical Visit	722	NEPHRITIS & NEPHROSIS	Other
4	ED Medical Visit	724	URINARY STONES & ACQUIRED UPPER URINARY TRACT OBSTRUCTION	Other

4	ED Medical Visit	725	MALFUNCTION, REACTION, COMPLIC OF GENITOURINARY DEVICE OR PROC	Other
4	ED Medical Visit	727	ACUTE LOWER URINARY TRACT INFECTIONS	Other
4	ED Medical Visit	743	PROSTATITIS	Other
4	ED Medical Visit	744	MALE REPRODUCTIVE INFECTIONS	Other
4	ED Medical Visit	753	LEVEL II MENSTRUAL AND OTHER FEMALE DIAGNOSES	Other
4	ED Medical Visit	760	VAGINAL DELIVERY	Other
3	Non-ED medical Visit	826	ACUTE ANXIETY & DELIRIUM STATES	Clinic
4	ED Medical Visit	761	POSTPARTUM & POST ABORTION DIAGNOSES W/O PROCEDURE	Other
3	Non-ED medical Visit	827	ORGANIC MENTAL HEALTH DISTURBANCES	Clinic
3	Non-ED medical Visit	828	MENTAL RETARDATION	Clinic
3	Non-ED medical Visit	829	CHILDHOOD BEHAVIORAL DIAGNOSES	Clinic
3	Non-ED medical Visit	830	EATING DISORDERS	Clinic
4	ED Medical Visit	762	THREATENED ABORTION	Other
3	Non-ED medical Visit	831	OTHER MENTAL HEALTH DIAGNOSES	Clinic
4	ED Medical Visit	763	ABORTION W/O D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY	Other
4	ED Medical Visit	764	FALSE LABOR	Other
4	ED Medical Visit	765	OTHER ANTEPARTUM DIAGNOSES	Other
4	ED Medical Visit	510	MAJOR SIGNS, SYMPTOMS AND FINDINGS	Other
4	ED Medical Visit	521	NERVOUS SYSTEM MALIGNANCY	Other
4	ED Medical Visit	766	ROUTINE PRENATAL CARE	Other
4	ED Medical Visit	771	LEVEL I NEONATAL DIAGNOSES	Other
4	ED Medical Visit	772	LEVEL II NEONATAL DIAGNOSES	Other
4	ED Medical Visit	780	OTHER HEMATOLOGICAL DIAGNOSES	Other
4	ED Medical Visit	522	DEGENERATIVE NERVOUS SYSTEM DIAGNOSES EXC MULT SCLEROSIS	Other
4	ED Medical Visit	781	COAGULATION & PLATELET DIAGNOSES	Other
4	ED Medical Visit	782	CONGENITAL FACTOR DEFICIENCIES	Other
4	ED Medical Visit	783	SICKLE CELL ANEMIA CRISIS	Other
4	ED Medical Visit	525	LEVEL II CNS DIAGNOSES	Other
4	ED Medical Visit	527	PERIPHERAL NERVE DIAGNOSES	Other
4	ED Medical Visit	530	HEADACHES OTHER THAN MIGRAINE	Other
4	ED Medical Visit	784	SICKLE CELL ANEMIA	Other
4	ED Medical Visit	560	EAR, NOSE, MOUTH, THROAT, CRANIAL/FACIAL MALIGNANCIES	Other



4	ED Medical Visit	785	ANEMIA EXCEPT FOR IRON DEFICIENCY ANEMIA AND SICKLE CELL ANEMIA	Other
4	ED Medical Visit	562	INFECTIONS OF UPPER RESPIRATORY TRACT & OTITIS MEDIA	Other
4	ED Medical Visit	786	IRON DEFICIENCY ANEMIA	Other
4	ED Medical Visit	563	DENTAL & ORAL DIAGNOSES & INJURIES	Other
4	ED Medical Visit	805	SEPTICEMIA & DISSEMINATED INFECTIONS	Other
4	ED Medical Visit	564	LEVEL I OTHER EAR, NOSE, MOUTH, THROAT & CRANIAL/FACIAL DIAGNOSES	Other
4	ED Medical Visit	565	LEVEL II OTHER EAR, NOSE, MOUTH, THROAT & CRANIAL/FACIAL DIAGNOSES	Other
4	ED Medical Visit	806	POST-OPERATIVE, POST-TRAUMATIC, OTHER DEVICE INFECTIONS	Other
4	ED Medical Visit	571	RESPIRATORY MALIGNANCY	Other
4	ED Medical Visit	575	ASTHMA	Other
4	ED Medical Visit	807	FEVER	Other
4	ED Medical Visit	808	VIRAL ILLNESS	Other
4	ED Medical Visit	576	LEVEL I OTHER RESPIRATORY DIAGNOSES	Other
4	ED Medical Visit	809	OTHER INFECTIOUS & PARASITIC DISEASES	Other
4	ED Medical Visit	810	H. PYLORI INFECTION	Other
4	ED Medical Visit	592	LEVEL I CARDIOVASCULAR DIAGNOSES	Other
4	ED Medical Visit	840	OPIOID ABUSE & DEPENDENCE	Other
4	ED Medical Visit	841	COCAINE ABUSE & DEPENDENCE	Other
4	ED Medical Visit	596	PERIPHERAL & OTHER VASCULAR DIAGNOSES	Other
4	ED Medical Visit	842	ALCOHOL ABUSE & DEPENDENCE	Other
4	ED Medical Visit	843	OTHER DRUG ABUSE & DEPENDENCE	Other
4	ED Medical Visit	850	ALLERGIC REACTIONS	Other
4	ED Medical Visit	851	POISONING OF MEDICINAL AGENTS	Other
4	ED Medical Visit	597	PHLEBITIS	Other
4	ED Medical Visit	598	ANGINA PECTORIS & CORONARY ATHEROSCLEROSIS	Other
4	ED Medical Visit	852	OTHER COMPLICATIONS OF TREATMENT	Other
4	ED Medical Visit	853	OTHER INJURY, POISONING & TOXIC EFFECT DIAGNOSES	Other
4	ED Medical Visit	854	TOXIC EFFECTS OF NON-MEDICINAL SUBSTANCES	Other
4	ED Medical Visit	600	CARDIAC STRUCTURAL & VALVULAR DIAGNOSES	Other
4	ED Medical Visit	602	ATRIAL FIBRILLATION	Other
4	ED Medical Visit	604	CHEST PAIN	Other
4	ED Medical Visit	620	DIGESTIVE MALIGNANCY	Other
4	ED Medical Visit	621	PEPTIC ULCER & GASTRITIS	Other

4	ED Medical Visit	624	LEVEL I GASTROINTESTINAL DIAGNOSES	Other
4	ED Medical Visit	625	LEVEL II GASTROINTESTINAL DIAGNOSES	Other
4	ED Medical Visit	628	ABDOMINAL PAIN	Other
4	ED Medical Visit	631	HERNIA	Other
4	ED Medical Visit	860	EXTENSIVE 3RD DEGREE OR FULL THICKNESS BURNS W/O SKIN GRAFT	Other
4	ED Medical Visit	634	MALIGNANCY OF HEPATOBILIARY SYSTEM & PANCREAS	Other
4	ED Medical Visit	639	LEVEL I HEPATOBILIARY DIAGNOSES	Other
4	ED Medical Visit	640	LEVEL II HEPATOBILIARY DIAGNOSES	Other
4	ED Medical Visit	653	MUSCULOSKELETAL MALIGNANCY & PATHOLOGICAL FRACTURES	Other
4	ED Medical Visit	654	OSTEOMYELITIS, SEPTIC ARTHRITIS & OTHER MUSCULOSKELETAL INFECTIONS	Other
4	ED Medical Visit	655	CONNECTIVE TISSUE DIAGNOSES	Other
4	ED Medical Visit	656	BACK & NECK DIAGNOSES EXCEPT LUMBAR DISC DIAGNOSES	Other
4	ED Medical Visit	657	LUMBAR DISC DIAGNOSES	Other
4	ED Medical Visit	658	LUMBAR DISC DIAGNOSES WITH SCIATICA	Other
4	ED Medical Visit	659	MALFUNCTION, REACTION, COMPLIC OF ORTHOPEDIC DEVICE OR PROCEDURE	Other
4	ED Medical Visit	660	LEVEL I OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	Other
4	ED Medical Visit	661	LEVEL II OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	Other
4	ED Medical Visit	663	PAIN	Other
4	ED Medical Visit	861	PARTIAL THICKNESS BURNS W OR W/O SKIN GRAFT	Other
4	ED Medical Visit	871	SIGNS, SYMPTOMS & OTHER FACTORS INFLUENCING HEALTH STATUS	Other
4	ED Medical Visit	670	SKIN ULCERS	Other
4	ED Medical Visit	671	MAJOR SKIN DIAGNOSES	Other
4	ED Medical Visit	872	OTHER AFTERCARE & CONVALESCENCE	Other
4	ED Medical Visit	672	MALIGNANT BREAST DIAGNOSES	Other
4	ED Medical Visit	673	CELLULITIS & OTHER BACTERIAL SKIN INFECTIONS	Other
4	ED Medical Visit	674	CONTUSION, OPEN WOUND & OTHER TRAUMA TO SKIN & SUBCUTANEOUS TISSUE	Other
4	ED Medical Visit	873	NEONATAL AFTERCARE	Other
4	ED Medical Visit	675	OTHER SKIN, SUBCUTANEOUS TISSUE & BREAST DIAGNOSES	Other
4	ED Medical Visit	874	JOINT REPLACEMENT	Other
4	ED Medical Visit	875	CONTRACEPTIVE MANAGEMENT	Other

2	Oncology Related Service	800	ACUTE LEUKEMIA	Oncology Related Services
4	ED Medical Visit	800	ACUTE LEUKEMIA	Oncology Related Services
2	Oncology Related Service	801	LYMPHOMA, MYELOMA & NON-ACUTE LEUKEMIA	Oncology Related Services
3	Non-ED medical Visit	801	LYMPHOMA, MYELOMA & NON-ACUTE LEUKEMIA	Oncology Related Services
4	ED Medical Visit	801	LYMPHOMA, MYELOMA & NON-ACUTE LEUKEMIA	Oncology Related Services
2	Oncology Related Service	802	RADIOTHERAPY	Oncology Related Services
4	ED Medical Visit	802	RADIOTHERAPY	Oncology Related Services
2	Oncology Related Service	803	CHEMOTHERAPY	Oncology Related Services
3	Non-ED medical Visit	803	CHEMOTHERAPY	Oncology Related Services
4	ED Medical Visit	803	CHEMOTHERAPY	Oncology Related Services
2	Oncology Related Service	804	LYMPHATIC & OTHER MALIGNANCIES & NEOPLASMS OF UNCERTAIN BEHAVIOR	Oncology Related Services
4	ED Medical Visit	804	LYMPHATIC & OTHER MALIGNANCIES & NEOPLASMS OF UNCERTAIN BEHAVIOR	Oncology Related Services
4	ED Medical Visit	676	DECUBITUS ULCER	Other
4	ED Medical Visit	878	GYNECOLOGICAL PREVENTIVE MEDICINE	Other
4	ED Medical Visit	690	MALNUTRITION, FAILURE TO THRIVE & OTHER NUTRITIONAL DIAGNOSES	Other
4	ED Medical Visit	691	INBORN ERRORS OF METABOLISM	Other
4	ED Medical Visit	879	PREVENTIVE OR SCREENING ENCOUNTERS	Other
4	ED Medical Visit	880	HIV INFECTION	Other
4	ED Medical Visit	692	LEVEL I ENDOCRINE DIAGNOSES	Other
4	ED Medical Visit	693	LEVEL II ENDOCRINE DIAGNOSES	Other
4	ED Medical Visit	694	ELECTROLYTE DISORDERS	Other

4	ED Medical Visit	881	AIDS	Other
7	Ancillary & Other	116	ALLERGY TESTS	Other
7	Ancillary & Other	373	LEVEL I DENTAL FILM	Other
4	ED Medical Visit	711	DIABETES WITH OTHER MANIFESTATIONS & COMPLICATIONS	Other
4	ED Medical Visit	820	SCHIZOPHRENIA	Other
4	ED Medical Visit	712	DIABETES WITH NEUROLOGIC MANIFESTATIONS	Other
4	ED Medical Visit	821	MAJOR DEPRESSIVE DIAGNOSES & OTHER/UNSPECIFIED PSYCHOSES	Other
4	ED Medical Visit	714	DIABETES WITH RENAL MANIFESTATIONS	Other
4	ED Medical Visit	822	PERSONALITY & IMPULSE CONTROL DIAGNOSES	Other
4	ED Medical Visit	720	RENAL FAILURE	Other
4	ED Medical Visit	823	BIPOLAR DISORDERS	Other
4	ED Medical Visit	721	KIDNEY & URINARY TRACT MALIGNANCY	Other
4	ED Medical Visit	824	DEPRESSION EXCEPT MAJOR DEPRESSIVE DIAGNOSES	Other
4	ED Medical Visit	723	KIDNEY AND CHRONIC URINARY TRACT INFECTIONS	Other
4	ED Medical Visit	825	ADJUSTMENT DISORDERS & NEUROSES EXCEPT DEPRESSIVE DIAGNOSES	Other
4	ED Medical Visit	726	OTHER KIDNEY & URINARY TRACT DIAGNOSES, SIGNS & SYMPTOMS	Other
4	ED Medical Visit	826	ACUTE ANXIETY & DELIRIUM STATES	Other
4	ED Medical Visit	740	MALIGNANCY, MALE REPRODUCTIVE SYSTEM	Other
4	ED Medical Visit	827	ORGANIC MENTAL HEALTH DISTURBANCES	Other
4	ED Medical Visit	741	MALE REPRODUCTIVE SYSTEM DIAGNOSES EXCEPT MALIGNANCY	Other
4	ED Medical Visit	828	MENTAL RETARDATION	Other
4	ED Medical Visit	750	FEMALE REPRODUCTIVE SYSTEM MALIGNANCY	Other
4	ED Medical Visit	829	CHILDHOOD BEHAVIORAL DIAGNOSES	Other
4	ED Medical Visit	751	FEMALE REPRODUCTIVE SYSTEM INFECTIONS	Other
4	ED Medical Visit	830	EATING DISORDERS	Other
4	ED Medical Visit	752	LEVEL I MENSTRUAL AND OTHER FEMALE DIAGNOSES	Other
4	ED Medical Visit	831	OTHER MENTAL HEALTH DIAGNOSES	Other
7	Ancillary & Other	374	LEVEL II DENTAL FILM	Other

7	Ancillary & Other	376	DIAGNOSTIC DENTAL PROCEDURES	Other
7	Ancillary & Other	377	PREVENTIVE DENTAL PROCEDURES	Other
7	Ancillary & Other	412	SIMPLE PULMONARY FUNCTION TESTS	Other
7	Ancillary & Other	413	CARDIOGRAM	Other
7	Ancillary & Other	414	LEVEL I IMMUNIZATION	Other
7	Ancillary & Other	415	LEVEL II IMMUNIZATION	Other
7	Ancillary & Other	416	LEVEL III IMMUNIZATION	Other
7	Ancillary & Other	418	MINOR CARDIAC AND VASCULAR TESTS	Other
7	Ancillary & Other	419	MINOR OPHTHALMOLOGICAL INJECTION, SCRAPING AND TESTS	Other
7	Ancillary & Other	420	PACEMAKER AND OTHER ELECTRONIC ANALYSIS	Other
7	Ancillary & Other	421	TUBE CHANGE	Other
7	Ancillary & Other	423	INTRODUCTION OF NEEDLE AND CATHETER	Other
7	Ancillary & Other	425	LEVEL I OTHER MISCELLANEOUS ANCILLARY PROCEDURES	Other
7	Ancillary & Other	427	BIOFEEDBACK AND OTHER TRAINING	Other
7	Ancillary & Other	428	PATIENT EDUCATION, INDIVIDUAL	Other
7	Ancillary & Other	429	PATIENT EDUCATION, GROUP	Other
7	Ancillary & Other	430	CLASS I CHEMOTHERAPY DRUGS	Other
7	Ancillary & Other	431	CLASS II CHEMOTHERAPY DRUGS	Other
7	Ancillary & Other	433	CLASS IV CHEMOTHERAPY DRUGS	Other
7	Ancillary & Other	435	CLASS I PHARMACOTHERAPY	Other
7	Ancillary & Other	436	CLASS II PHARMACOTHERAPY	Other
7	Ancillary & Other	438	CLASS IV PHARMACOTHERAPY	Other
4	ED Medical Visit	870	REHABILITATION	Rehab and Therapy

7	Ancillary & Other	439	CLASS V PHARMACOTHERAPY	Other
7	Ancillary & Other	443	CLASS VII CHEMOTHERAPY	Other
7	Ancillary & Other	450	OBSERVATION	Other
7	Ancillary & Other	451	SMOKING CESSATION TREATMENT	Other
7	Ancillary & Other	455	IMPLANTED TISSUE OF ANY TYPE	Other
7	Ancillary & Other	458	ALLERGY THERAPY	Other
7	Ancillary & Other	459	VACCINE ADMINISTRATION	Other
7	Ancillary & Other	461	CLASS IX COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	Other
7	Ancillary & Other	462	CLASS X COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	Other
7	Ancillary & Other	487	MINOR CARDIAC MONITORING	Other
7	Ancillary & Other	488	MINOR DEVICE EVALUATION & ELECTRONIC ANALYSIS	Other
7	Ancillary & Other	489	LEVEL II OTHER MISCELLANEOUS ANCILLARY PROCEDURES	Other
7	Ancillary & Other	490	INCIDENTAL TO MEDICAL VISIT OR SIGNIFICANT PROCEDURE	Other
7	Ancillary & Other	491	MEDICAL VISIT INDICATOR	Other
7	Ancillary & Other	495	MINOR CHEMOTHERAPY DRUGS	Other
7	Ancillary & Other	496	MINOR PHARMACOTHERAPY	Other
7	Ancillary & Other	497	TELEHEALTH FACILITATION	Other
5	Rehab and Therapy	118	NUTRITION THERAPY	Other
7	Ancillary & Other	457	VENIPUNCTURE	Other
7	Ancillary & Other	993	INPATIENT ONLY PROCEDURES	Unassigned
7	Ancillary & Other	999	UNASSIGNED	Unassigned
7	Ancillary & Other	1001	DURABLE MEDICAL EQUIPMENT AND SUPPLIES - LEVEL 1	Unassigned
7	Ancillary & Other	1002	DURABLE MEDICAL EQUIPMENT AND SUPPLIES - LEVEL 2	Unassigned

7	Ancillary & Other	1003	DURABLE MEDICAL EQUIPMENT AND SUPPLIES - LEVEL 3	Unassigned
7	Ancillary & Other	1004	DURABLE MEDICAL EQUIPMENT - LEVEL 4	Unassigned
7	Ancillary & Other	1005	DURABLE MEDICAL EQUIPMENT - LEVEL 5	Unassigned
7	Ancillary & Other	1006	DURABLE MEDICAL EQUIPMENT - LEVEL 6	Unassigned
7	Ancillary & Other	1009	DURABLE MEDICAL EQUIPMENT - LEVEL 9	Unassigned
7	Ancillary & Other	1010	DURABLE MEDICAL EQUIPMENT - LEVEL 10	Unassigned
7	Ancillary & Other	1011	DURABLE MEDICAL EQUIPMENT - LEVEL 11	Unassigned

### Outpatient Service Line Assignment Hierarchy

If <u>New Service</u> is ' <b>Rad/Inf/Chemo</b> ' then <u>Service Line</u> is ' <b>Rad/Inf/Chemo</b> ';
Else If service Line not in ('Rad/Inf/Chemo') and <u>New Service</u> is ' <b>Psychiatric</b> ' then <u>Service Line</u> is ' <b>Psychiatry</b> ';
Else If Service Line is not in ('Rad/Inf/Chemo','Psychiatry') and <u>New Service</u> is ' <b>Clinic</b> ' then <u>Service Line</u> is ' <b>Clinic</b> ';
Else If Service Line is not in ('Rad/Inf/Chemo','Psychiatry','Clinic') and <u>New Service</u> is ' <b>Rehabilitation</b> ' then <u>Service Line</u> is ' <b>Rehab &amp; Therapy</b> ';
Else If Service Line is not in ('Rad/Inf/Chemo','Psychiatry','Clinic','Rehab & Therapy') and ( <b>hospid=210333 or hospid=210088 or hospid=210087 or rctcode28 &gt; 0 or rctcode34 &gt; 0 or rctcode90&gt;0</b> ) then <u>Service Line</u> is ' <b>ED</b> ';
Else If Service Line is not in ('Rad/Inf/Chemo','Psychiatry','Clinic','Rehab & Therapy','ED') and <u>New Service</u> is ' <b>Major Surgery</b> ' then <u>Service Line</u> is ' <b>Major Surgery</b> ';
Else If Service Line is not in ('Rad/Inf/Chemo','Psychiatry','Clinic','Rehab & Therapy','ED','Major Surgery') and <u>New Service</u> is ' <b>Minor Surgery</b> ' then <u>Service Line</u> is ' <b>Minor Surgery</b> ';
Else If Service Line is not in ('Rad/Inf/Chemo','Psychiatry','Clinic','Rehab & Therapy','ED','Major Surgery','Minor Surgery') and <u>New Service</u> is ' <b>Cardiovascular</b> ' then <u>Service Line</u> is ' <b>Cardiovascular</b> ';
Else If Service Line is not in ('Rad/Inf/Chemo','Psychiatry','Clinic','Rehab & Therapy','ED','Major Surgery','Minor Surgery','Cardiovascular') and <u>New Service</u> is ' <b>CT/MRI/PET</b> ' then <u>Service Line</u> is ' <b>CT/MRI/PET</b> ';
Else if <u>ECMAD</u> in (.,0) then <u>Service Line</u> is ' <b>Unassigned</b> ';
Else <u>Service Line</u> is <u>New Service</u> ;

## Appendix 6. Proposed Market Shift Service Line Consolidation

<b><u>Service Line</u></b>	<b><u>IP/O P</u></b>	<b><u>Consolidation Proposal</u></b>	<b><u>Proposed Service Collapse</u></b>
Cardiology	IP	Service Collapse	Cardiology
Cardiothoracic Surgery	IP	Geography Collapse	Cardiothoracic Surgery
Dental	IP	Service Collapse	General Medicine
Dermatology	IP	Service Collapse	General Medicine
Diabetes	IP	Service Collapse	General Medicine
Endocrinology	IP	Service Collapse	General Medicine
Endocrinology Surgery	IP	Geography Collapse	Endocrinology Surgery
ENT Surgery	IP	Geography Collapse	ENT Surgery
EP/Chronic Rhythm Mgmt	IP	Geography/Service Collapse	Invasive Cardiology
Gastroenterology	IP	NA	Gastroenterology
General Medicine	IP	Service Collapse	General Medicine
General Surgery	IP	Geography Collapse	General Surgery
Gynecological Surg	IP	Geography Collapse	Gynecological Surg
Gynecology	IP	Geography/Service Collapse	Ob/Gyn
Hematology	IP	Geography Collapse	Hematology
HIV	IP	Service Collapse	Infectious Disease
Infectious Disease	IP	Service Collapse	Infectious Disease
Injuries/complic. of prior care	IP	Geography Collapse	Injuries/complic. of prior care
Invasive Cardiology	IP	Geography/Service Collapse	Invasive Cardiology
Myocardial Infarction	IP	Service Collapse	Cardiology
Neonatology	IP	Geography/Service Collapse	Neonatology
Nephrology	IP	NA	General Medicine
Neurological Surgery	IP	Geography Collapse	Neurological Surgery
Neurology	IP	NA	Neurology
Newborn	IP	Geography/Service Collapse	Neonatology
Obstetrics/Delivery	IP	Geography/Service Collapse	Ob/Gyn
Oncology_IP	IP	Geography Collapse	Oncology_IP
Ophthalmologic Surg	IP	Geography Collapse	Ophthalmologic Surg
Ophthalmology	IP	Service Collapse	Ophthamology
Orthopedic Surgery	IP	Geography Collapse	Orthopedic Surgery
Orthopedics	IP	Service Collapse	General Medicine



Other Obstetrics	IP	Geography/Service Collapse	Ob/Gyn
Otolaryngology	IP	Service Collapse	General Medicine
Psychiatry_IP	IP	Service Collapse	Psychiatry_IP
Pulmonary	IP	NA	Pulmonary
Rehabilitation_IP	IP	Geography Collapse	Rehabilitation_IP
Rheumatology	IP	Service Collapse	General Medicine
Spinal Surgery	IP	Geography Collapse	Spinal Surgery
Substance Abuse	IP	Service Collapse	Psychiatry_IP
Thoracic Surgery	IP	Geography Collapse	Thoracic Surgery
Trauma	IP	Geography Collapse	Trauma
Unassigned_IP	IP	NA	Unassigned_IP
Urological Surgery	IP	Geography Collapse	Urological Surgery
Urology	IP	Service Collapse	Urology
Vascular Surgery	IP	Geography Collapse	Vascular Surgery
Ventilator Support	IP	Geography Collapse	Ventilator Support
Cardiovascular	OP	Geography Collapse	Cardiovascular
Clinic	OP	NA	Clinic
CT/MRI/PET	OP	NA	CT/MRI/PET
Drugs	OP	NA	Removed
ED	OP	NA	ED
Lab	OP	Service Collapse	Lab
Major Surgery	OP	Geography Collapse	Major Surgery
Minor Surgery	OP	Geography Collapse	Minor Surgery
Other	OP	NA	Other
Pathology	OP	Service Collapse	Lab
Psychiatry_OP	OP	NA	Psychiatry_OP
Radiology	OP	NA	Radiology
Rehab & Therapy	OP	NA	Rehab & Therapy
Unassigned_OP	OP	NA	Unassigned_OP

## Appendix 7. Hypothetical Emergency Room Market Shift Example that Masks Avoided Utilization

		Base Year - ER ECMADS	Performance Year - ER ECMADS	Growth	Current Market Shift	Unrecognized Growth / (Decline)	Consolidated Geography Market Shift	Unrecognized Growth / (Decline)	
Same Zips	Hospital A West Baltimore	100	90	(10)	(10)	0	(6)	(4)	} Probable market shift being treated as avoided utilization
	Hospital B West Baltimore	200	225	25	10	15	25	-	
Same Zips	Hospital C East Baltimore	250	180	(70)	(20)	(50)	(39)	(31)	} Probable avoided utilization being treated as market shift
	Hospital D East Baltimore	100	120	20	20	0	20	-	
	<b>Total</b>	<b>650</b>	<b>615</b>	<b>-35</b>	<b>0</b>	<b>-35</b>	<b>0</b>	<b>-35</b>	