



Maryland Health Services Cost Review Commission

Population and Demographic Adjustment

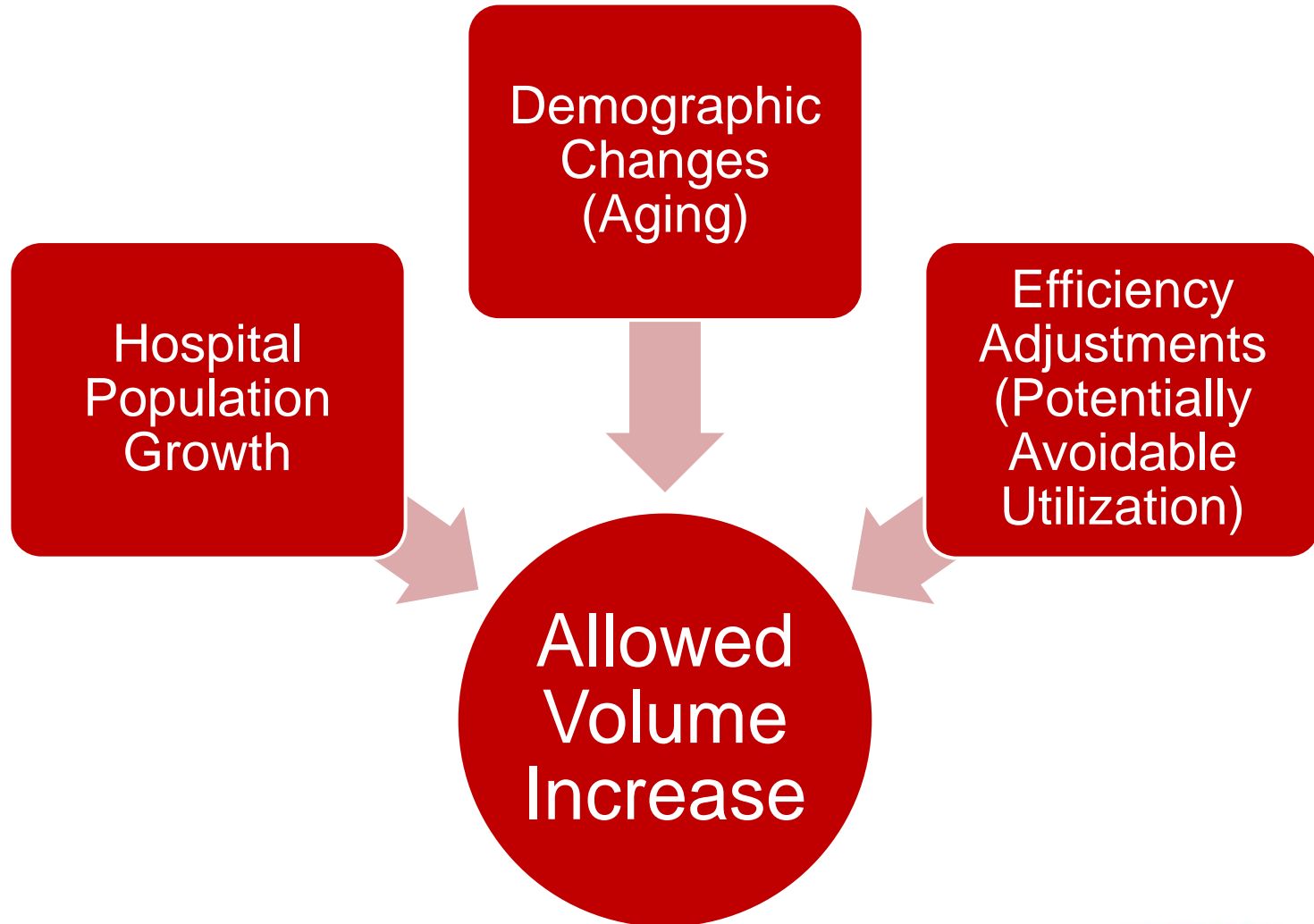
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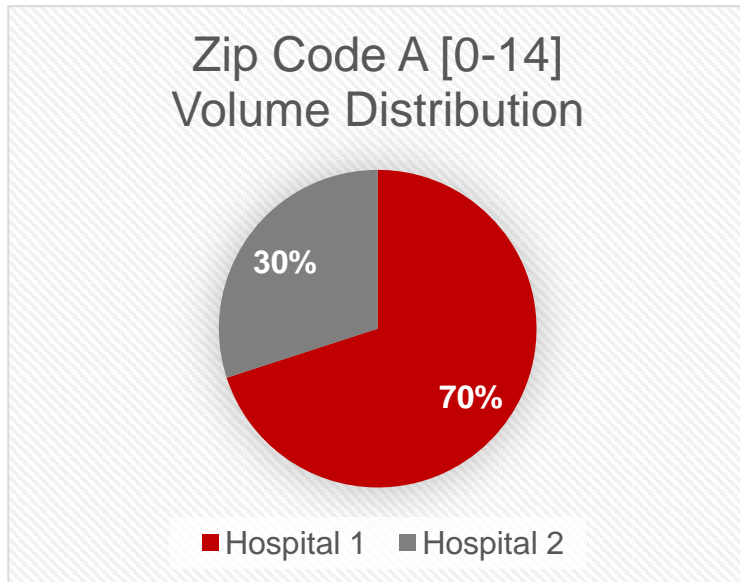
Population Growth

- ▶ State-wide all-payer per capita limit is based on unadjusted population growth (0.7%)
- ▶ Variation in hospital use by different population segments
 - ▶ Age
 - ▶ Sex
 - ▶ Others
- ▶ Hospital budget caps (GBR, TPR) needs updated to reflect changes in demographics

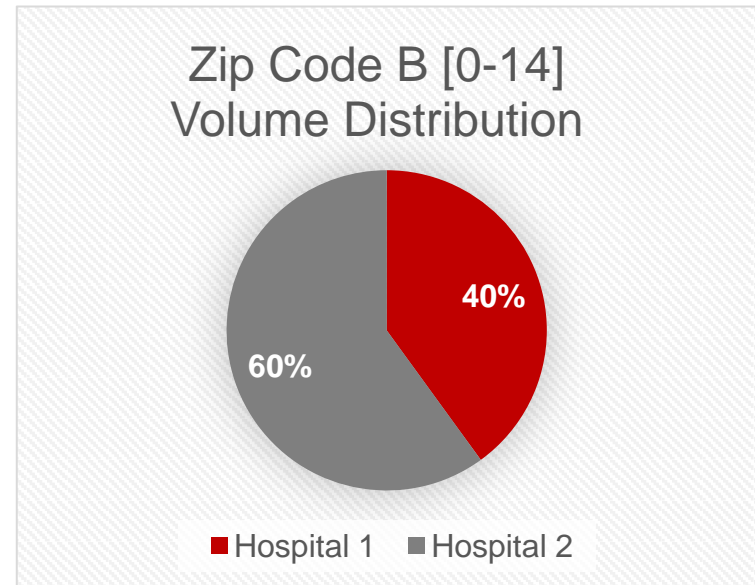
Allowed Volume Increase in Global Budget due to Population Growth



Calculating Virtual Patient Service Population



[0-14] Population in Zip Code A = 1000



[0-14] Population in Zip Code B = 1000

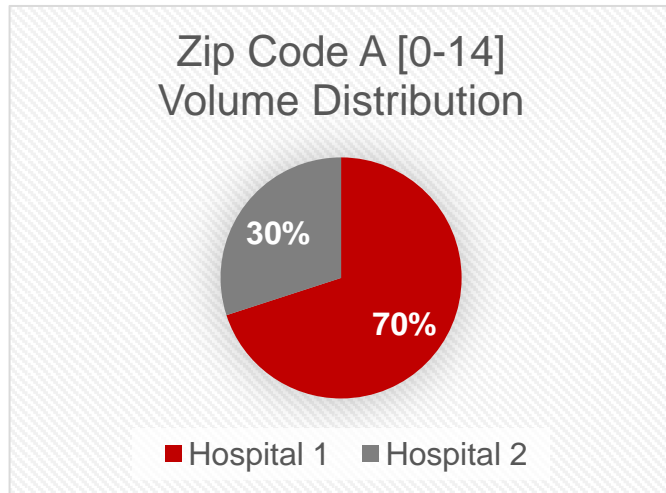
Sample Calculation: Total [0-14] Population at Hospital 1

	Age Group	Population	% of Population at Hospital 1		Base Population for Hospital 1
Zip Code A	0-14	1000	70%	$1000 * 70\% = 700$	700
Zip Code B	0-14	1000	40%	$1000 * 40\% = 400$	400
					1100

Total [0-14] Population for Hospital 1 = 1100

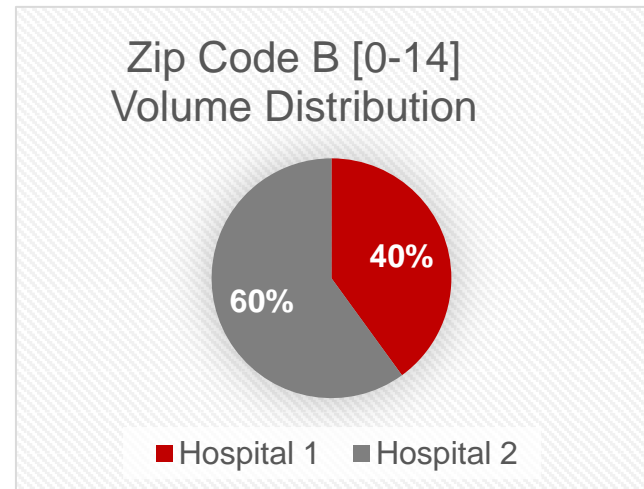


Hospital Population Growth



[0-14] Population in Zip Code A = 1000

[0-14] Population Growth in Zip Code A = 1%



[0-14] Population in Zip Code B = 1000

[0-14] Population Growth in Zip Code B = 5%

Sample Calculation: [0-14] Population Growth Rate at Hospital 1

	Age Group	Base Population	Population Growth Rate		Population Growth	
Zip Code A	0-14	700	1%	$700 * 1\% = 7$	7	
Zip Code B	0-14	400	5%	$400 * 5\% = 20$	20	
		1100			27	$27/1100 = 2\%$

[0-14] Population Growth Rate at Hospital 1 = 2%

Calculation of Volume

► Equivalent Case Mix Adjusted Discharges (ECMADS)

Example

Total Discharges	10,000
Casemix Weight	1.2
Inpatient Revenue	1 mil
Outpatient Revenue	500,000

Inpatient CMADS= Total Inpatient Discharges* Case Mix Weight
12,000 10,000*1.2 =

Hospital Unit Charge= Inpatient Revenue/Casemix Adjusted Charges
1,000,000/12,000=83.33

Outpatient ECMAD= Outpatient Revenue/Hospital Unit Charge 500,000/83.33 =
6,000

Total ECMADS= Inpatient CMADs+Outpatient ECMADs 12,000+6,000 =
18,000

HSCRC

Health Services Cost
Review Commission

► ⁶ ECMADs are calculated for each zip code and age cohort combination for each

Volume Calculations

- ▶ **Limited Exclusions**
 - ▶ Inpatient charges \leq \$200
 - ▶ Inpatient charges trimmed at \$2,000,000
- ▶ In areas where there is no inpatient admission, hospital's age specific average casemix adjusted charge per case is used.
 - ▶ For Free Standing Emergencies we used hospital average casemix of the following hospitals:
 - ▶ Prince George's Hospital for Bowie
 - ▶ Memorial Hospital at Easton for Queen Anne's
 - ▶ Shady Grove Hospital for Germantown

Age Weights and Potentially Avoidable Utilization Adjustment

Cohort	Population 2013	Total Revenue FY 2013	Per Capita Revenue	Weights
	A	B	C=A/B	D=C/Total
0-14	1,116,379	\$869,605,897	\$779	0.33
15-54	3,237,264	\$5,533,410,294	\$1,709	0.73
55-64	753,340	\$2,545,877,489	\$3,379	1.44
65-74	451,737	\$2,332,612,349	\$5,164	2.21
75-84	228,153	\$1,672,564,159	\$7,331	3.13
85+	104,429	\$836,711,222	\$8,012	3.42
Total	5,891,302	\$13,790,781,409	\$2,341	1.00

Potentially Avoidable Utilization: Unplanned Care

Definition of PAU:

“Hospital care that is unplanned and can be prevented through improved care coordination, effective primary care and improved population health.”

Work and Considerations up to date

▶ Readmissions

- ▶ Inpatient- All Hospital, All Cause 30 Day Readmissions using CMS methodology with adjustment for planned admissions
- ▶ ED – any visit within 30 days of an inpatient admission
- ▶ Observation- any observation within 30 days of an inpatient admission

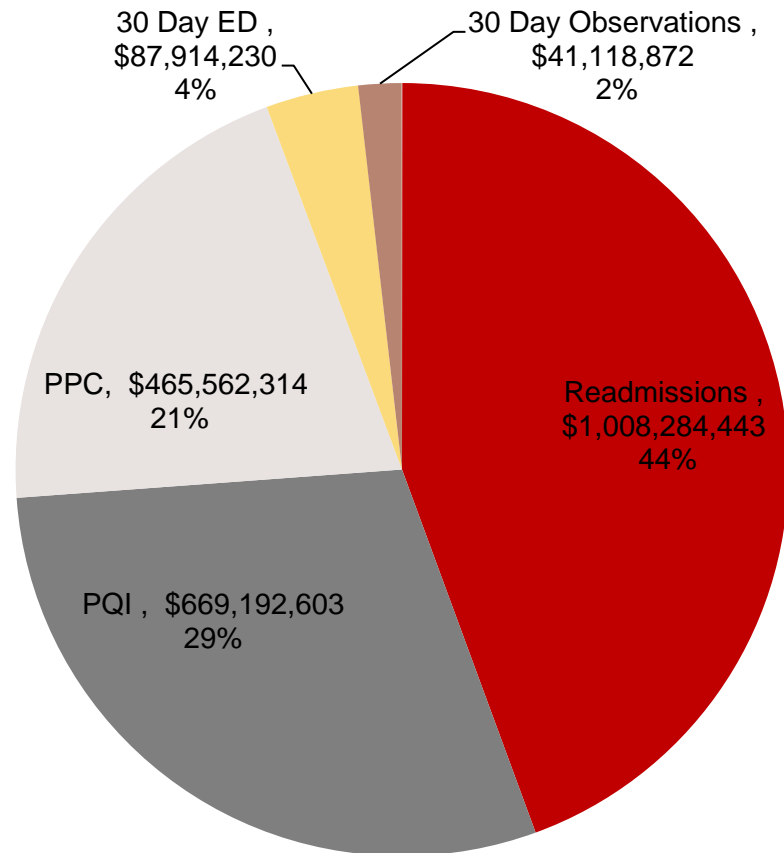
▶ Potentially Avoidable Admissions/Visits

- ▶ Inpatient- AHRQ Prevention Quality Indicators (PQIs)
- ▶ Outpatient - TBD

▶ Hospital Acquired Conditions

- ▶ Potentially Preventable Complications (PPCs)

Distribution of Potentially Avoidable Utilization, CY2012



Note: Categories may overlap; Readmissions are based on ARR methodology adjusted for planned admissions.



Data Sources

- ▶ **Statewide Population Growth for the Waiver Calculations**
 - ▶ Department of Planning
- ▶ **Demographic Adjustments**
 - ▶ Claritas: Zip code age specific current and 5 year projections
- ▶ **HSCRC Inpatient and Outpatient Casemix Data Sets**
 - ▶ CRISP Master Patient Index = Revisits
 - ▶ Agency for Health Care Research (AHRQ)= Preventive Quality Indicators Software
 - ▶ 3M Potentially Preventable Complications Software

Updates from the Demographic Subwork group for FY 2015

- ▶ Updated Age cohorts
 - ▶ FY 2014 (0-14, 15-64, 65-74, 75-84, 85+)
 - ▶ FY 2015 (0-4, 5-14, 15-44, 44-55, 55-64, 65-74, 75-84, 85+).
- ▶ Considered sex, race but determined no need for additional demographic factors
- ▶ Application of efficiency (PAU adjustments) based on percent of each hospital revenue from PAU volume
- ▶ Per Capita Policy Reduction after the PAU adjustment to ensure the state-wide allowed amount
- ▶ Negative results are converted no additional volume