Population-based outcome measures: Avoidable hospitalizations and emergency department visits

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MEDPAC

Commission's goal for quality measurement

- Use a small set of population-based outcome, patient experience, and value measures
  - Create aligned incentives across different populations (i.e., MA plans, ACOs, and FFS in defined market areas)
- Today:
  - Investigate two claims-based outcome measures to evaluate quality of care for FFS beneficiaries
    - Avoidable hospitalizations and emergency department (ED) visits

Why measure avoidable hospitalizations and ED visits?

- Some hospitalizations are necessary to diagnosis and treat the sick and injured
- Beneficiaries hospitalized can be exposed to functional loss, and health risks such as hospital-associated infections, medication errors, pressure ulcers
- EDs are not ideal for nonurgent acute conditions or management of chronic conditions
  - Detract from resources for emergency care
  - Clinicians unfamiliar with patients' baseline state

Definitions of avoidable hospitalizations and ED visits

- Hospital use that may result from inadequate access to care or poor coordination of care
- Useful indicators of potentially high- or low-quality ambulatory care
  - Not every use can be avoided
- We defined avoidable use based on existing measures, plus some additional research for the ED measure

Avoidable hospitalizations and ED visits can be for both chronic and acute conditions

- *Chronic* conditions including diabetes, chronic obstructive pulmonary disease, asthma, hypertension, heart failure
- *Acute* conditions including bacterial pneumonia, urinary tract infections, cellulitis, pressure ulcers
  - ED visits also includes upper respiratory infection/otitis/rhinitis, influenza, non-specific back pain
- Avoidable hospitalizations include both inpatient admissions and observation stays
- Avoidable ED visits exclude visits that resulted in admissions or observation stays

Average observed rates of avoidable hospitalization and ED visits, all FFS beneficiaries

- About 4 percent of FFS beneficiaries had at least one avoidable hospitalization, while roughly 7 percent experienced an avoidable ED visit

	Observed rate per 1,000 FFS beneficiaries		
	Acute conditions	**Chronic conditions**	**Total**
Avoidable hospitalizations	18.5	32.0	50.5
Avoidable ED visits	62.6	31.7	94.3

Source: Analysis of 2017 FFS claims data. Lower rates are better. Results preliminary; subject to change.

Calculating risk-standardized avoidable hospitalizations and ED visits rates

- Risk-adjustment necessary to account for differences in underlying patient risk
- Comparatively high or low risk-adjusted rates in an area can identify opportunities for improvement or best practices in an area's ambulatory care system
- Risk-adjustment model controlled for age, sex, and clinical characteristics
  - Consistent with the Commission's principles we do not adjust for social risk factors in the model because it can mask disparities

Risk-standardized rates for two market area types

- Calculated risk-standardized rates for two types of market area to understand the nature of variation in rates across local health care markets

MedPAC market areas:

- About 1,200 areas designed to reflect health care markets
- Average FFS population in each area about 25,000 beneficiaries

Hospital service areas (HSAs):

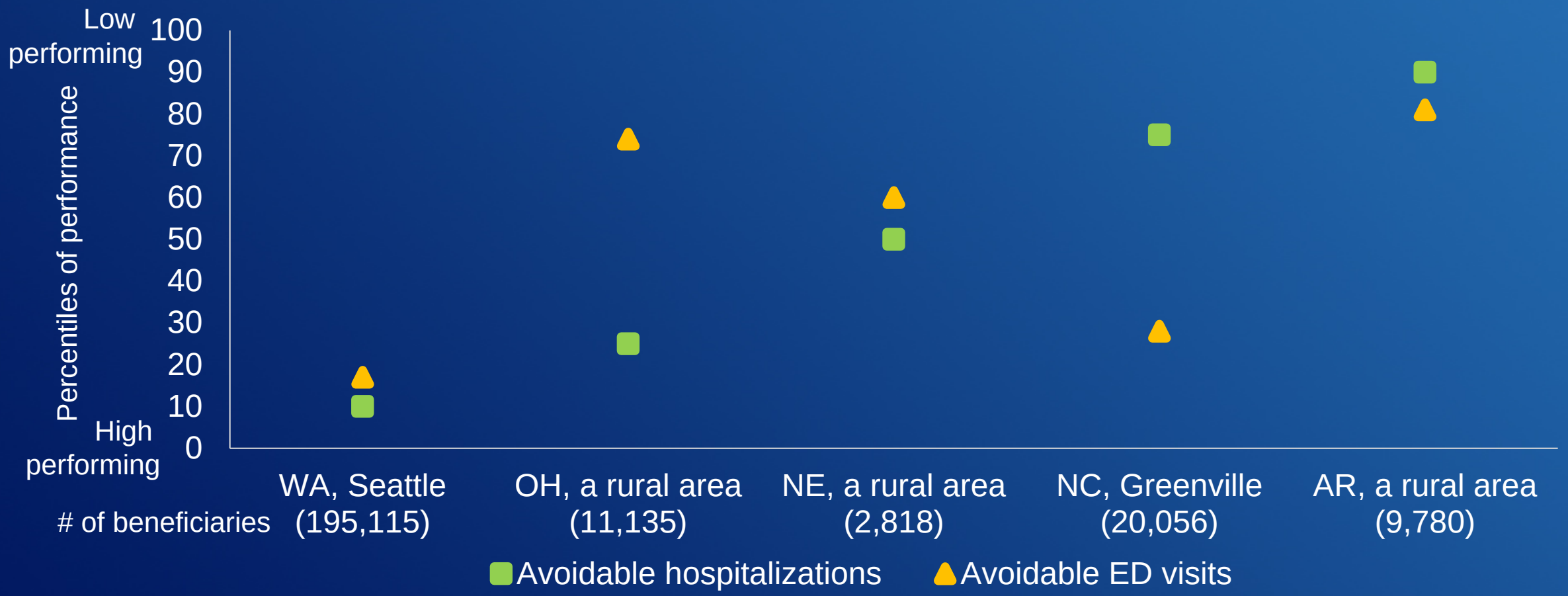
- About 3,400 areas comprising zip codes whose residents receive more of their hospitalizations in that area
- Average FFS population in each area about 10,000 beneficiaries

MedPAC market areas: Risk-standardized avoidable hospitalization and ED visits rates

	Risk-standardized rate per 1,000 FFS beneficiaries			
	10th percentile (high performing)	**50th percentile**	**90th percentile (low performing)**	**Ratio of 90th to 10th**
Avoidable hospitalizations	37.4	50.6	66.3	**1.8**
Avoidable ED visits	77.6	108.9	152.5	**2.0**

Source: Analysis of 2017 FFS claims data. Lower rates are better. Results preliminary; subject to change.

Profile of selected MedPAC market areas



Source: Analysis of 2017 FFS claims data. Lower percentiles are better. Results preliminary; subject to change.

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HSAs: Risk-standardized avoidable hospitalization and ED visits rates

	Risk-standardized rate per 1,000 FFS beneficiaries			
	10th percentile (high performing)	**50th percentile**	**90th percentile (low performing)**	**Ratio of 90th to 10th**
Avoidable hospitalizations	36.9	51.9	70.7	**1.9**
Avoidable ED visits	66.7	106.0	161.5	**2.4**

Source: Analysis of 2017 FFS claims data. Lower rates are better. Results preliminary; subject to change.

Comparing performance of HSAs within a MedPAC market area

MEDPAC Source: Analysis of 2017 FFS claims data. Lower rates are better. Results preliminary; subject to change.

Summary: Avoidable hospitalizations and ED visits

- Developed uniform, claims-based, risk-adjusted measures
- Compared rates for FFS beneficiaries in two different local market areas
- Variation in rates signals the opportunities to improve the quality of FFS ambulatory care
- Will report out FFS avoidable hospitalizations and ED visit results as a part of the physician update in March reports to the Congress

Discussion: Potential next steps

- Analyze high- and low- performing areas to identify factors that affect performance (e.g., rates of primary care clinicians per capita, concentration of ACOs)
- Identify best practices from high-performing areas, including areas with higher proportion of patients with social risk factors
- Continue to explore using these measures to compare the quality of care across FFS, ACOs, and MA