

## Episode-Based Cost and Resource Use Measurement

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## What are episodes of care?

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- ▶ “A series of clinically related health care claims over a defined time period, such as all claims related to a patients diabetes” (Hornbrook et al, 1985)
- ▶ Middle ground between per-unit analysis and per-capita analyses
  - ▶ Provide fuller picture of care than analyzing individual services
  - ▶ More ‘actionable’ than per-capita analyses in identifying specific drivers of resource use

# Why episodes of care?

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- ▶ A more logical view of care delivery
  - ▶ Patient and condition-centric
  - ▶ Recognizes that care is delivered over time
  - ▶ Encompasses all care delivered for condition
- ▶ Potentially allows evaluation of multiple care attributes
  - ▶ Historic focus has been on cost and resource use
  - ▶ Can be expanded to address quality and outcomes

# Episode groupers

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- ▶ **Commercially available**
  - ▶ Episode Treatment Groups (ETGs) – Ingenix
  - ▶ Medical Episode Grouper (MEGs) – Thomson-Reuters
  - ▶ Cave Consulting
- ▶ **Planned or in development**
  - ▶ ABMS / Brookings – Approximately 20 common conditions
    - ▶ Testing ongoing
  - ▶ CMS – Pursuing Medicare episode of care grouper
- ▶ **Independent, unique efforts**
  - ▶ Tailored to available data
  - ▶ Example: Puget Sound Health Alliance

# Episode example – Episode Treatment Groups

**SPECIALTY:** *Family Practice*

**RESPONSIBLE CLINICIAN ID:** 000003402



EPISODE TREATMENT GROUP DESCRIPTION	MANAGE- MENT	SURGERY	ANCILLARY	PHARMACY	FACILITY	TOTAL
Benign hypertension, w/o comorbidity	\$3,854	\$3	\$1,849	\$4,029	\$488	\$10,223
Cardiovascular disease signs & symptoms	\$1,258	\$6	\$4,180	(\$120)	\$214	\$5,539
Minor conduction disorder	\$549	\$4	\$934	\$149	\$614	\$2,251
Allergic rhinitis	\$760	\$8	\$172	\$1,183		\$2,124
Gastroenterology disease signs & symptoms	\$686	\$599	\$528	(\$21)	\$171	\$1,964
Oth minor ortho disorder - neck and back	\$1,450	\$101	(\$232)	\$402		\$1,720
Minor orthopedic trauma - neck and back	\$329	\$23	\$659	(\$126)		\$885
Acute sinusitis	\$8	\$2	\$2	\$828		\$840
Irritable bowel syndrome	\$332	\$88	\$530	(\$150)	\$23	\$823
Oth minor ortho disorder - foot and ankle	\$210	\$62	\$361	\$112	\$35	\$780
Orthopedic signs and symptoms - unspecified	\$244	\$30	\$181	\$172		\$627
""	""	""	""	""	""	""
""	""	""	""	""	""	""
Minor inflammation of skin & subcutaneous tissue	\$315	(\$1,337)	(\$970)	\$1,475		(\$517)
Benign neoplasm of the breast, w/o surgery	(\$103)	(\$97)	(\$384)	\$22		(\$562)
Minor infectious disease	(\$43)	\$22	\$64	(\$772)	\$134	(\$594)
Contraceptive management, with surgery	(\$57)	(\$605)	(\$316)	\$8		(\$970)
Viral skin infection	\$359	(\$1,827)	(\$253)	\$149		(\$1,572)
Routine exam	\$513	(\$235)	(\$2,271)			(\$1,993)
Benign neoplasm of the skin	\$447	(\$2,606)	(\$602)	(\$58)		(\$2,818)
	<b>\$15,588</b>	<b>(\$8,428)</b>	<b>\$3,306</b>	<b>\$7,886</b>	<b>\$2,416</b>	<b>\$20,768</b>



# Example community effort – Puget Sound Health Alliance

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- ▶ Possessed claims data repository
- ▶ Created an episode of care – hospitalization for specific procedures – including all services during hospitalization
- ▶ Used 3M APDRGs categories and severity adjustment
- ▶ Converted claims to resource use using Milliman RVUs for Hospitals tool and physician RVUs
- ▶ Depicted variations in resource use for common procedures by hospital systems
- ▶ Started with blinded results; plan to update data and unblind next year

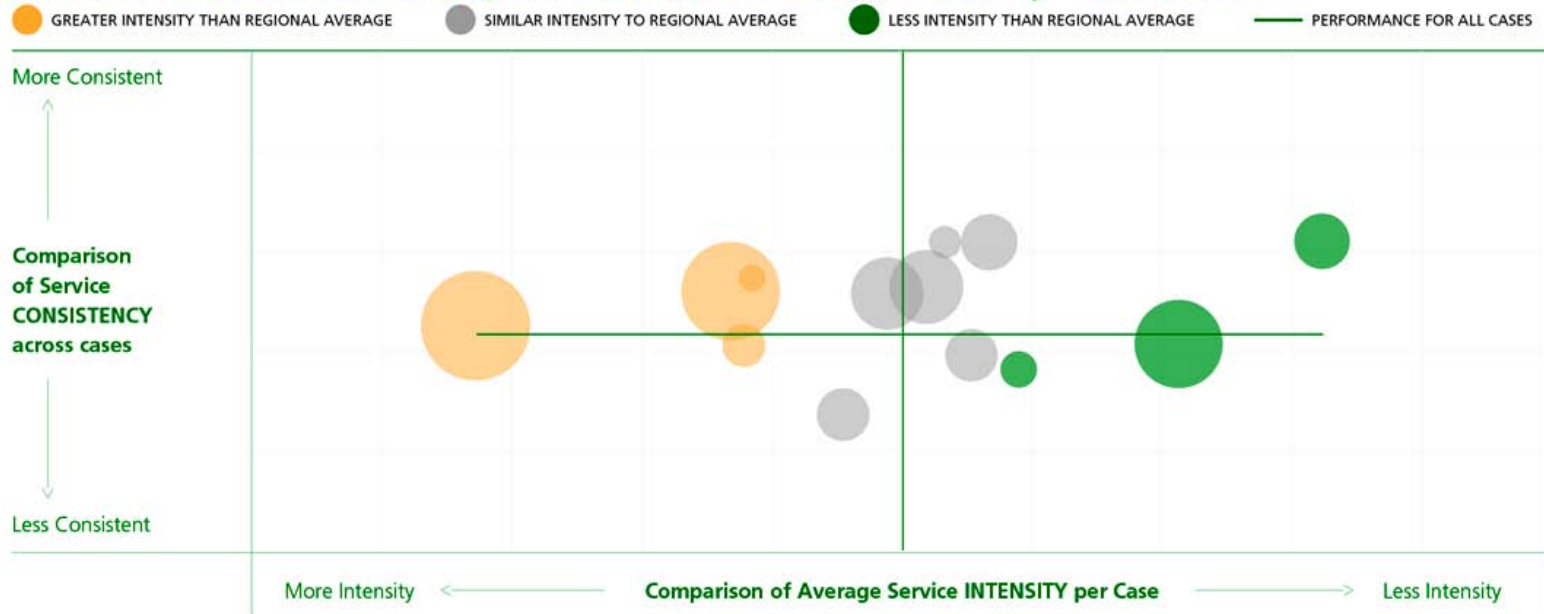
See “Use of Resources in High-Volume Hospitalizations”:

[http://www.pugetsoundhealthalliance.org/documents/puget\\_sound\\_health\\_alliance\\_resource\\_use\\_report\\_2011.pdf](http://www.pugetsoundhealthalliance.org/documents/puget_sound_health_alliance_resource_use_report_2011.pdf)

# Episode example – Puget Sound hospitalizations for back surgery

Resource Use by Delivery System during:

**Dorsal & Lumbar Fusion Proc Except for Curvature of Back, Minor Severity — APR DRG 304.1\***



\* Each bubble represents a single Delivery System (admitting hospital and professional care during the stay).  
Bubble area represents case volume; commercially insured people, 2006–2009

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## Challenges with episodes of care

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- ▶ Usually based on claims data; driven by coding
- ▶ May involve substantial investment required to create, test, and validate the coding algorithms defining an episode
- ▶ Defining a homogenous condition – where variation in results represents variation in resource use decision-making, not differences in the condition, disease severity, or patient comorbidities
- ▶ Do not address appropriateness of care
- ▶ Historically have been proprietary, not subjected to consensus evaluation as NQF has performed for quality measures



Thank you!

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