Join us for upcoming CAPC webinars and virtual office hours

➔ Webinar:
  – Outpatient Pediatric Palliative Care: The Role of Pediatric Palliative Care in the Medical Home
    Thursday, December 8, 2016 at 1:30 pm ET
    Featured Presenter: Glen Medellin, MD, FAAP, FAAHPM

➔ Virtual Office Hours:
  – Palliative Care Models in the Community with John Morris, MD, FAAHPM
    • TODAY at 3 p.m. ET
  – Building Effective Payer-Provider Partnerships with Tom Gualtieri-Reed, MBA
    • Tuesday, November 22 at 1 p.m. ET
  – Pediatric Palliative Care with Sarah Friebert, MD
    • Wednesday, November 30 at 4 p.m. ET
  – Palliative Care in Long Term Care Settings with Katy Lanz, DNP, MSN, AGPCNP-BC, ACHPN
    • Monday, December 5 at 12 p.m. ET

Visit www.capc.org/providers/webinars-and-virtual-office-hours/
Amy S. Kelley, MD, MSHS
Associate Professor, Brookdale Department of Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai
Financial Disclosures

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  - Paul Beeson Career Development Award (NIA K23AG040774)
  - American Federation of Aging Research
  - National Palliative Care Research Center
  - West Health Institute
Small proportion of Medicare Beneficiaries Account for Majority of Medicare Spending

- **10%** of Medicare Beneficiaries account for **90%** of total Medicare spending.
- **57%** account for **10%** of total Medicare spending.
- **43%** account for the remaining **57%** of total Medicare spending.

**Total Number of Traditional Medicare Beneficiaries:** 35.4 million

**Total Traditional Medicare Spending:** $343 billion

Average per capita Traditional Medicare spending:
- **$9,702** for the top 10%
- **$55,763** for the bottom 90%
- **$4,584** for the middle 43%

**NOTES:** Excludes Medicare Advantage enrollees. Includes noninstitutionalized and institutionalized beneficiaries.

**SOURCE:** Kaiser Family Foundation analysis of the CMS Medicare Current Beneficiary Survey Cost and Use File, 2009.
To Maximize Value:

\[ \text{VALUE} = \frac{\uparrow \text{QUALITY}}{\downarrow \neq \text{COST}} \]

For Patients with Serious Illness
Background

→ Palliative care has been shown to improve QOL, manage symptoms, support patients and families, and lower costs.

→ Yet not all patients need all aspects of palliative care services, and many who could benefit never receive palliative care.

→ Resource-intensive services must be directed to those who need them most.

→ Efforts to target services are hindered by inability to prospectively identify those seriously ill people at greatest risk for high cost, low quality care.
But what is “serious illness”?

- No consensus definition in literature
- No methods for prospective identification
A new conceptual definition…

“Serious illness is a condition that carries a high risk of mortality, negatively impacts quality of life and daily function, and/or is burdensome in symptoms, treatments or caregiver stress.”
“Serious illness is a condition that carries a high risk of mortality, negatively impacts quality of life and daily function, and/or is burdensome in symptoms, treatments or caregiver stress.”
A) One or more severe medical conditions (Condition) and/or receiving assistance with any basic activities of daily living (ADL) (Functional Limitation);

B) Condition and/or Functional Limitation and one or more hospital admission in the last 12 months and/or residing in a nursing home (Utilization); and

C) Condition and Functional Limitation and Utilization.
Severe Medical Conditions

1. Cancer (metastatic or hematologic)
2. Renal failure, end stage
3. Dementia
4. Advanced liver disease or cirrhosis
5. Diabetes with severe complications
   - ischemic heart disease, peripheral vascular disease, renal disease
6. Amyotrophic lateral sclerosis (ALS)
7. Acquired Immune Deficiency Syndrome
8. Hip fracture
9. Chronic obstructive pulmonary disease or interstitial lung disease
   - only if using home oxygen or hospitalized for the condition
10. Congestive heart failure
    - only if hospitalized for the condition
Functional Limitation

Receiving assistance with any of the basic activities of daily living (ADL):

- eating
- bathing
- dressing
- toileting
- transferring
- walking
Population Model of Serious Illness

No Serious Condition or Functional Impairment: lowest risk, no specialized services needed.

A: Serious Condition and/or Functional Impairment: moderate risk, may benefit from screening for needs amenable to specialized services.

B: Condition and/or Function and Utilization: moderate-high risk, may benefit from needs assessment and/or specialized services.

C: Condition and Function and Utilization: highest risk group, may benefit from specialized interventions.

Kelley et al Health Services Research 2016
Methods

➔ Health and Retirement Study, 2000-2010
➔ Individual Medical Claims
➔ Subjects were enrolled at the first evaluation meeting a serious illness definition
➔ Followed for 1 year to assess outcomes: hospitalization, mortality, Medicare spending
Hospital Utilization and Mortality Across Serious Illness Groups

- **Any Hospital Admission**
  - Condition and/or Functional Limitation: 32
  - Condition and/or Functional Limitation and Utilization: 43
  - Condition and Functional Limitation and Utilization: 48

- **Total Hospital Days**
  - Condition and/or Functional Limitation: 4
  - Condition and/or Functional Limitation and Utilization: 6
  - Condition and Functional Limitation and Utilization: 14
  - Mortality: 5

- **Mortality**
  - Condition and/or Functional Limitation: 11
  - Condition and/or Functional Limitation and Utilization: 18
  - Condition and Functional Limitation and Utilization: 27
  - Mortality: 1.6
Total Medicare Spending Across Serious Illness Groups

Total Medicare Spending, mean

- Condition and/or Functional Limitation: $18,749
- Condition and/or Functional Limitation and Utilization: $24,775
- Condition and Functional Limitation and Utilization: $29,749
- Comparison Group: $7,445

Total Medicare Spending, median

- Condition and/or Functional Limitation: $6,727
- Condition and/or Functional Limitation and Utilization: $12,022
- Condition and Functional Limitation and Utilization: $15,669
- Comparison Group: $1,957
Sensitivity and Specificity for Identifying 1 Year Outcomes

<table>
<thead>
<tr>
<th>1-Year Outcomes</th>
<th>Criteria A: sensitivity, specificity*</th>
<th>Criteria B: sensitivity, specificity</th>
<th>Criteria C: sensitivity, specificity</th>
<th>Top 5% predicted by, Hierarchical Condition Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalization</td>
<td>0.53, 0.79</td>
<td>0.32, 0.91</td>
<td>0.15, 0.97</td>
<td>0.19, 0.98</td>
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<tr>
<td>Top 5% Medicare Spending</td>
<td>0.66, 0.75</td>
<td>0.44, 0.89</td>
<td>0.25, 0.95</td>
<td>0.39, 0.97</td>
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<td>Death</td>
<td>0.73, 0.75</td>
<td>0.51, 0.89</td>
<td>0.30, 0.96</td>
<td>0.32, 0.96</td>
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Sensitivity = true positive / (true positive + false negative)
Specificity = true negative / (true negative + false positive)
### 2-Year Outcomes Across Serious Illness Groups

<table>
<thead>
<tr>
<th>Condition and/or Functional Limitation (Criteria A)</th>
<th>Died</th>
<th>Seriously Ill</th>
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<th>Condition and/or Functional Limitation and Utilization (Criteria B)</th>
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<th>Condition and Functional Limitation (Criteria C)</th>
<th>Died</th>
<th>Seriously Ill</th>
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Hospital Utilization and Mortality Across Serious Illness Groups (NHATS)

- Any Hospital Admission:
  - Condition and/or Functional Limitation: 37
  - Condition and/or Functional Limitation and Utilization: 49
  - Condition and Functional Limitation and Utilization: 63
  - Total Hospital Days: 15

- Total Hospital Days:
  - Condition and/or Functional Limitation: 4
  - Condition and/or Functional Limitation and Utilization: 5
  - Condition and Functional Limitation and Utilization: 6
  - Mortality: 1

- Mortality:
  - Condition and/or Functional Limitation: 16
  - Condition and/or Functional Limitation and Utilization: 24
  - Condition and Functional Limitation and Utilization: 30
  - Total: 2.5
Total Medicare Spending Across Serious Illness Groups (NHATS)

- Total Medicare Spending, mean:
  - Condition and/or Functional Limitation: $18,803
  - Condition and/or Functional Limitation and Utilization: $25,172
  - Condition and Functional Limitation and Utilization: $31,493
  - Comparison Group: $6,751

- Total Medicare Spending, median:
  - Condition and/or Functional Limitation: $8,915
  - Condition and/or Functional Limitation and Utilization: $15,474
  - Condition and Functional Limitation and Utilization: $23,600
  - Comparison Group: $1,997
Main Findings:

➔ Prospective identification of people with serious illness is feasible and key to improving care.

➔ Most seriously ill patients identified are not in the last year of life.

➔ Waiting until “end of life” is too late.

➔ Depending upon a program’s aim, these definitions may be used, for example, to:
  – screen patients for palliative care needs (A), or
  – effectively target high-resource services (C).
Next Steps

➔ Applying this to your local health system infrastructure
Arta Bakshandeh, DO, MA
Senior Medical Officer
Alignment Healthcare
What proportion of the costliest 5% of U.S. patients are in their last year of life?

➔ Only 11% of the costliest 5% of U.S. patients are in their last twelve months of life.

➔ About half have one-time high expenditures (for example, major surgery) and go on to recover.

➔ About 40% have persistent, year-after-year high spending associated with frailty, cognitive impairment, functional dependency, and multimorbidity.
Top 5% of Medical Spenders

- Prognosis alone is not a useful method of identifying high-risk, high-need, and high-cost patients.
- Predictors of high-risk, high-need patient populations include:
  - Functional and/or cognitive impairment
  - Frailty
  - Multimorbidity
  - One or more serious medical illnesses
  - Family caregiver exhaustion
Challenges We All Face

Different for each stakeholder:

➔ Member/patient
  – Access
  – Affordability
  – Care Giver Burden

➔ Hospital
  – Incomplete understanding of post-acute utilization
  – Inability to visualize post acute outcomes
  – Lack of integration to improve quality

➔ Provider/IPA
  – Understanding the right setting for care
  – Transitioning to lower cost/acuity as soon as clinically appropriate

➔ Health Plan
  – Corporate culture
  – Engaging the above mentioned
In 2013, at the request of members of Congress, the Institute of Medicine reported variations in Medicare expenditures for the services of hospitals, physicians, and other health care providers.

Committee findings:
- MOST of the variation among geographic areas is attributable to variation in the use of post-acute care and inpatient services.
- Within any area, provider BEHAVIOR varies substantially

CARE ACROSS SITES DISCIPLINES

HOSPITAL

SNF

ALF

HOME

LONGITUDINAL CARE

REAL TIME CARE

CONSTANT & CONTINUOUS

EVIDENCE BASED PROTOCOLS

BIOMETRIC MEASUREMENTS

PHONE

VIDEO

REMOTE VITAL SIGNS
Applying Data Analytics

➔ Where is your data today?
➔ Is the data actionable?
  – If so…By Whom?
Engaging and Empowering Clinicians

The information in the Command Center is used by AHC clinical staff during rounds to better understand the entirety of the clinical picture and initiate care plans for each patient under the care of AHC providers.

- Our virtual population health platform designed by the medical directors at Alignment in order to dynamically stratify, predict, monitor and track member’s healthcare utilization and changes in health status.
- The Command Center originated from the need for medical utilization monitoring at scale and the ability to use analytics to provide earlier and earlier predictive modeling and high-touch intervention.
- The Command Center generated Census, HEDIS/Star quality measures, Clinical Alerts, HCC alerts, a Patient 360 view and a gap closure workflow developed by the Alignment clinical operations team.
- The alerts and subsequent workflow are used for daily rounds by the case management and Senior Medical Officers at Alignment Corporate Offices in conjunction with the field clinicians who ensure execution.
Engaging and Empowering Clinicians

The information in the Command Center is used by AHC clinical staff during rounds to better understand the entirety of the clinical picture and initiate care plans for each patient under the care of AHC providers.

**Outcomes**

- Provides early predictive capabilities from data and alerts created by daily feeds
- Enhances communication between corporate and field staff, providing a systematic approach to individual-based care mgmt
- Establishes one point to review disparate data sources, and assures execution of standard protocols (thereby creating scalability)
- Provides better ability to track utilization and census on a real-time basis as opposed to quarterly or monthly reporting of trends
Engaging and Empowering Clinicians

The information in the Command Center is used by AHC clinical staff during rounds to better understand the entirety of the clinical picture and initiate care plans for each patient under the care of AHC providers.

At A Patient Level

- Patient Profile: 68 y/o Female with metastatic breast cancer presents to the ER complaining of increased pain and discharged with PCP follow up.
- Condition: Pain management in Oncology (high risk patient)
- Event: Alert trigger for addition of pain medication in Oncology patient AND alert for Oncology patient visiting ED
- Typical Event Outcome: Patient unable to see PCP or Oncology in time to titrate medication and back in ER vs uncontrolled pain
- AHA Outcome: Case management workflow triggered by alert to contact patient and set home visit vs care center visit for medication titration and care coordination
Questions?

Do you have questions for the presenter?

Type your question into the chat box on your control panel: