From clinical insight through study design to policy change: CAPABLE program

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Mrs. B
Her medical conditions

- Hypertension
- Congestive Heart Failure
- Arthritis
- Diabetes
Her Hazardous floor
CAPABLE Approach

• Age in place = person and house
• Older adult is the expert
• Professionals use specialized knowledge only to elicit, support what older adult wants
• ↑Physical function ↓depression
• ↓hospitalization, ↓nursing home
Perfect timing to change health

QUALITY

QUANTITY
Older adults: key drivers of population outcomes
Relative Risk of Being in the Top 5% of Health Care Spenders, 2006

Exhibit 13: Relative Risk of Being in the Top 5% of Health Care Spenders by Selected Groups, 2006

Relative Risk

- Everyone: 1
- No Functional Limitation & No Chronic: 0.2
- Chronic Only: 0.8
- Functional Limitation Only: 0.8
- 1+ Chronic: 1.8
- 2+ Chronic: 2.7
- 3+ Chronic: 3.6
- Chronic and Functional Limitation: 4.3
- Received Help with ADL/IADL: 6.1
- Received Help with ADL/IADL and 1+Chronic: 6.6
- Received Help with ADL/IADL and 2+Chronic: 7.1
- Received Help with ADL/IADL and 3+Chronic: 7.7

Relative Probability for General Population
CAPABLE

- Focused on individual strengths and goals in self-care (ADLs and IADL)
- Client-directed ≠ client-centered
- Handyman, Nurse and Occupational Therapist
- OT: 6 visits, RN:4 visits, Handyman: $1300 budget over 4 months
- Whole cost = $2825
You have given me my independence

- Mrs B tells us about how CAPABLE set goals
CAPABLE’s current state

- **CMS Innovations Center grant**
- **Randomized trial with NIH funding**
- Michigan Medicaid Waiver in 4 cities (Hillman)
- Trinity Health - one site
- Johns Hopkins ACO piloting, JH hospital
- San Diego, Greensboro, NC, Scranton, PA, Vermont
- Bath, ME
- Denver, CO
- Habitat 6 places
- Boston VA

Szanton et al 2016, Health Affairs
Szanton et al, 2015, Journal of the American Geriatrics Society
Szanton et al, Contemporary Clinical Trials, 2014
Szanton et al, 2011, Journal of the American Geriatrics Society,
Ruiz et al, Health Affairs, 2017
Number of ADL Difficulties at Baseline and 5 Months for Completed CMS Participants (n=225)
Exhibit 1. Changes from Baseline to Follow-up in Activities of Daily Living Limitations and Instrumental Activities of Daily Living Limitations

**ADL Limitations**
- Improve: 74.8%
- Stay the Same: 15.4%
- Worsen: 9.8%

**IADL Limitations**
- Improve: 65.0%
- Stay the Same: 22.2%
- Worsen: 12.8%
Decreasing Depressive Symptoms

PHQ-9 Scores at Baseline and 5 Months for Completed CMS Participants with Baseline Score ≥5 (n=118)
Exhibit 2. Changes from Baseline to Follow-up in Depressive Symptoms and Home Hazards

**Depressive symptoms**
- Improve: 52.9%
- Stay the Same: 16.5%
- Worsen: 30.6%

**Home Hazards**
- Improve: 77.6%
- Stay the Same: 12.2%
- Worsen: 10.2%
CAPABLE saves Medicare >$20k per patient for 2 years

<table>
<thead>
<tr>
<th>Model</th>
<th>Hospitalization Per quarter, per 1,000 patients</th>
<th>95% CI</th>
<th>ED visit Per quarter, per 1,000 patients</th>
<th>95% CI</th>
<th>Medicare Expend Per quarter, per patient</th>
<th>95% CI</th>
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<tbody>
<tr>
<td>ABC (over a 3-year period)</td>
<td>−4</td>
<td>−14, 6</td>
<td>2</td>
<td>−12, 16</td>
<td>$60</td>
<td>−311, 431</td>
</tr>
<tr>
<td>CAPABLE (over a 2-year period)</td>
<td>3</td>
<td>−36, 42</td>
<td>−26</td>
<td>−69, 17</td>
<td>−2,765**</td>
<td>−4,963, −567</td>
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<td>Stroke Mobile (over a 2-year period)</td>
<td>−52b*</td>
<td>−113, −8</td>
<td>35</td>
<td>−28, 98</td>
<td>2,088</td>
<td>2,157, 6,333</td>
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<tr>
<td>DASH (over a 3-year period)</td>
<td>−17**</td>
<td>−25, −9</td>
<td>−24***</td>
<td>−36, −12</td>
<td>−316</td>
<td>−745, 113</td>
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<td>AIM (in the last month of life, over a 3-year period)</td>
<td>−76***</td>
<td>−100, −51</td>
<td>30***</td>
<td>11, 49</td>
<td>−5,985***</td>
<td>−7,010, −4,959</td>
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** p < 0.05 From Ru Health Affairs, 2017

Innovative Home Visit Models Associated With Reductions In Costs, Hospitalizations, And Emergency Department Use

Medicare Innovation

By Sarah Ruiz, Lynne Page Snyder, Christina Rotondo, Caitlin Cross-Barnet, Erin Murphy Colligan, and Katherine Giuriceo

Health Affairs, 2017
CAPABLE saves Medicare >$20k per patient for 2 years

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*From Health Affairs, 2017*
Driving the savings

• In Ruiz et al (prior slide) driving the savings are
  – Reduced readmissions
  – Reduced observation stays
  – Decreased specialty care
  – Reduced nursing home admissions
    (see key on next slide)
MRS. D.

- Confused, over medicated
- 30 minutes to walk to the bathroom
- Sat on commode all day as a chair
- CAPABLE: Med schedule, chair along hall, chair at top of stairs, railing on both sides, bed risers, wider commode
MRS. H.

- Asthma, DM, HTN, Arthritis

- Breathless – limited ADLs, couldn’t walk up steps, or outside house

- CAPABLE:
  - connected with PCP for long acting inhalers
  - Switched from Aleve to Tylenol
  - CAPABLE exercises
  - Easier to take a bath → decreased pain
  - Super ear
  - Railings, repaired linoleum floor
Addressing Function

• Poor function is costly
• It’s what older adults care about
• It’s virtually ignored in medical care
• Modifiable
If I had 10,000 tongues…

• “If I had 10,000 tongues and they could all speak at the same time, I could not praise the CAPABLE program enough.”
Policy implications: getting from here to there
PAYOR POSSIBILITIES (TRIPLE AIM)

- CMS could scale – through PTAC
- Accountable Care Organizations
- Medicare Advantage
- PACE
- Medicaid waivers
- Maryland Hospital Waiver
Acknowledgements

• Study participants
• CMS 330970-01: CMMI
• 1R01AG040100: National Institute on Aging
• Rita and Alex Hillman Foundation
• 1KL2RR025006-01
• Johns Hopkins Population Center Early Career Award
• Robert Wood Johnson Nurse Scholar award
• The John A. Hartford Building Academic Geriatric Nursing Capacity Program
• AARP Foundation
Co-investigators

• Laura Gitlin        Jack Guralnik
• Ibby Tanner         Roland Thorpe
• Cynthia Boyd        Qian-Li Xue
• Bruce Leff          David Bishai
• Jennifer Wolff
CAPABLE team

• Alice Delaney, Laken Roberts, Jill Roth, Allyson Evelyn-Gustave, Allysin Bridges, Felicia Smith, Manka Nkimbeng, Jessica Savage, Kathy Becker, Gerry Shorb,

• CivicWorks
Questions and discussion