A Human Factors Pre-Visit Planning Intervention to Improve Primary Care Physician Situation Awareness for Elderly Patient Visits

Tosha Wetterneck, MD, MS
Associate Professor, UWSMPH
Center for Quality and Productivity Improvement, UW-Madison

WREN Convocation Sept 18, 2014

Research Question

• Information chaos is the major hazard in the primary care of elderly
• Little known about impact of PC redesign on PCP outcomes

• Does a human factors designed intervention to improve information availability at elderly patient visits
  ▫ Increase PCP situation awareness
  ▫ Decrease PCP mental workload

Study Design

• Randomized controlled trial of a pre-visit planning intervention
• 16 Physician-nurse teams at 4 Primary care clinics in Wisconsin
  ▫ Pre: 768 elderly pts; Trial 768 pts control/INT

• Timeline:

<table>
<thead>
<tr>
<th>Pre-intervention</th>
<th>Trial Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 2011 Care-as-usual</td>
<td>Sep 2011 Control &amp; Intervention</td>
</tr>
</tbody>
</table>

  Intervention training
Pre-visit Planning Intervention - 3 parts

- Nurse chart review & patient phone call 4-5 days before visit using ‘pt overview document (POD)”
- Nurse – Physician Huddle before visit
- Physician uses POD during visit

- POD Info collected:
  - Reasons for visit & patient questions
  - Elderly health overview & health maintenance
  - New since the last visit
  - F/u items
  - Lab/test results
  - Visits with other clinicians
  - Medication changes
  - Chronic ongoing problems
  - Chronic disease control

*Used paper form in clinics, also programmed into EPIC

What This Means for Clinical Practice

- A standardized, nurse-led pre-visit planning team intervention
  - Improves PCP situation awareness before and during elderly patient visits
  - Improves PCP perceptions about visit itself
  - Does not adversely effect PCP mental workload
  - Further analyses will determine if certain patient, visit or PCP characteristics influence these outcomes
Acknowledgements

- Ben-Tzion Karsh, PI
- Core Research Team:
  - Family Medicine: John Beasley, Brian Arndt, Paul Smith
  - ISyE: Bentzi Karsh (PI), Jamie Stone, Mary Ellen Hagenauer
  - Nursing: Roger Brown
  - Wisconsin Research & Education Network (WREN)
  - Melody Bockenfeld, Veronica Harper, Amy Irwin, Kate Judge, Hannah Leake, Peggy O'Halloran
  - Many grad & undergrad students
- Funding: Agency for Healthcare Research and Quality, UW Institute for Clinical & Translational Research