**Jefferson** University

July, 2009

*Delirium Screening at the Point of Care:*
*Exploring Human Computer Interaction*

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*Delirium Screening at the Point of Care:*
*Exploring Human Computer Interaction*

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## Greetings from Philadelphia

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## Greetings from the Dean

http://www.jefferson.edu/nursing

- Mary G. Schaal, RN, EdD

Dean

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## Objectives

- Discuss factors identified by bedside nurses that support implementing an electronic delirium screening tool at the point of care.
- Discuss factors identified by bedside nurses that prevent implementing an electronic delirium screening tool at the point of care.

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## Objectives

- Examine the feasibility of implementing a screening tool at the point of care.

## Background & Significance

- Delirium is under-recognized and not documented by nurses in over 85% of patients who are delirious (Milisen, 2002).
- Nurses play a critical role in assessing risk for delirium because they provide 24-hour care and see the patient in a variety of circumstances (Foreman, 1991; Inouye, 2000).

## Background & Significance

- Failure to recognize delirium can lead to serious and costly adverse events including increased LOS, falls, UTIs, restraint use, new nursing home placement, serious morbidity, and mortality (Galanakis, 2001; Inouye, 1998; Olofsson 2005; Rudolph, 2005).

## Significance

- Costs skyrocketing.
- Delirium is preventable.
- Adverse events can be reduced and prevented.
- August 2007 – Medicare no longer paying for medical errors.

Laura Restrepo
Delirium
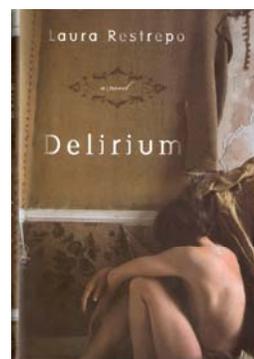
## R03: Pilot Study

- *"Delirium Screening: From Research to Point of Care"*
- Co-I: Dr. Christopher Sciamanna
- Agency for Healthcare Quality and Research (AHRQ)
- 1-R03-HS-016917-01
- 2007-2009

## Specific Aims

- **Aim 1**. To establish the feasibility of incorporating the Confusion Assessment Method (CAM), screening tool for delirium, with score alert system into a hospital-based electronic medical record and evaluate the facilitators and barriers to full integration.

- **Aim 2**. To assess the effect of screening with the Confusion Assessment Method (CAM) on nurses' ability to recognize delirium.

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## Specific Aims

- **Aim 3**. To determine the effect of screening with the Confusion Assessment Method (CAM) on the management of delirium by nurses.

- **Aim 4**. To determine the effect of screening with the Confusion Assessment Method on clinically recognized adverse events including falls, pressure ulcers, urinary tract infections, restraint use in postoperative older adults undergoing hip and knee surgery.

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## Specific Aim #1

- Incorporating the Confusion Assessment Method (CAM) with score alert system into the EMR
- Facilitators
- Barriers

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## Specific Aim #1

- Working with Hospital IT
- Total number of technical support hours needed for the implementation were tracked and the time needed to input and save patients' CAM data in the system was tracked

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## Specific Aim #1

- Bedside nurses who will interact with the system at the point of care were recruited to participate in focus group discussions to understand the barriers and opportunities to incorporating a screening intervention to assist nurses in screening for delirium at the point of care.
- Feasibility was further be established by examining the satisfaction of nurses with using the CAM in the EMR at the point of care.

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## Specific Aim #1

- CAM 4-item short form embedded into nursing documentation flow sheets
- Score Alert with Positive Screen
- Five Evidence-Based Interventions

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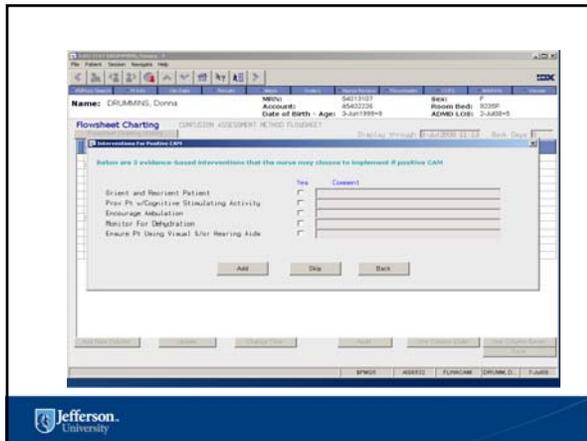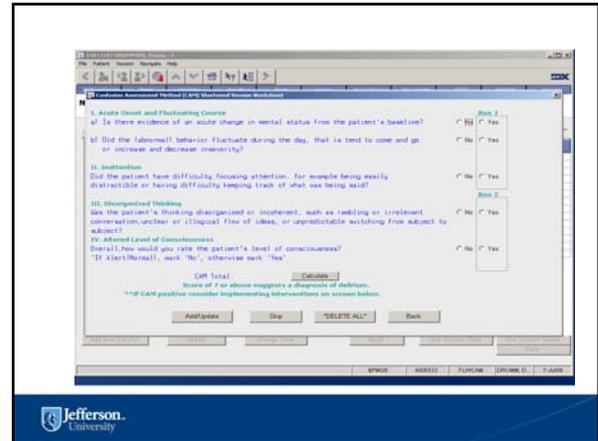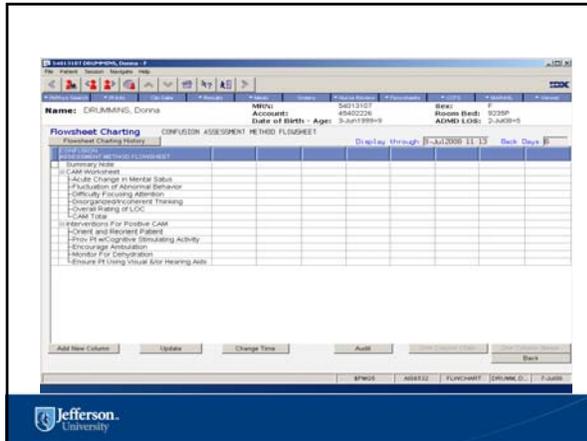
## Specific Aim #1

- Focus Group #1:  11/1/2007
- Focus Group #2:  11/29/2007
- 15 Participants
- 1.5 hours included dinner
- Incentive: card for food vendor

## Specific Aim #1

- Job satisfaction and challenges
- Familiarity with using screening tools
- Knowledge and attitude towards patient population

## Specific Aim #1

- Impressions of the CAM tool
- Proficiency with computers
- Experience with research

## Specific Aim #1: Focus Group Results

- Facilitators
- Barriers

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## Specific Aim #1:
## Focus Group Differences

- Focus Group #1
- Focus Group #2

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## Specific Aim #2: Pre-Intervention Phase

- Established rate of delirium in healthy, older adult elective surgery patients.
- Research Assistant screened with 9-item CAM.

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## Specific Aim #2: Pre-Intervention Phase

- Delirium in 7% of older adult surgical patients
- Falls (1)
- Pressure Ulcers (2)
- Restraint Use (0)
- UTIs (pending)

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## Specific Aim #2: Post-Intervention Phase

- Research Assistant screening with 9-item paper and pencil CAM
- Nurses screening with 4-item CAM embedded in EMR
- Preliminary data

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## Specific Aim #3:
## Effect of Screening on Management

- Nurses screening with CAM embedded in EMR (not forced completion)
- Nurses selecting evidence-based interventions (able to bypass)

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**Specific Aim #4:**
**Effect of Screening on Adverse Events**

- Falls
- Pressure Ulcers
- Restraint Use
- UTIs