



# Delirium Prevention and Education Project

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Committee Activities and  
Summary of the Findings of  
Delirium Prevalence Day



## Goal

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- Building on the experience of other clinical projects and using evidence from the literature, this project will enhance the awareness of delirium in staff of our local hospitals, and advocate the implementation of protocols for the effective prevention of delirium in hospitalized older adults



## Why Delirium?

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- ⊙ Prevalence ranges from 14% - 56%
- ⊙ Associated with:
  - ↑ length of stay
  - ↑ hospital costs
  - ↑ morbidity & mortality
  - ↑ burden of care
- ⊙ Often under-recognized by staff
- ⊙ Can prevent 30% by changing care routines



## Chronology

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- ⊙ June 1999 SHCERP Retreat
- ⊙ Sept 1999 Committee struck
- ⊙ 2000 Literature review  
Poster design  
Rounds  
Delirium Screening Day  
designed



## Chronology (cont'd)

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- Jan 2001 Pilot CAM
- April 2001 Ethics approval
- June 2001 Letters/Meetings
- July/Aug 2001 Recruitment  
More meetings!
- Sept 2001 Workshops  
Advertising
- Oct 17, 2001 Delirium Day



## Methods: Delirium Prevalence Day

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- Recruit and train 100 screeners
- Screen all patients 65 years & older
  - SMMSE and CAM
  - Interview the assigned nurse
  - Chart review
- Delirium Alert on chart if detected
- Data Analysis



## Scoring the CAM

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- *Positive CAM result:*

1. Presence of acute onset or fluctuating course  
AND
2. Inattention  
AND EITHER
3. Disorganized thinking  
OR
4. Altered level of consciousness



## Units Included & Excluded

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- Units included:

- medical
- surgical
- rehab
- psychiatry

- All critical care units were excluded

# The Population

• Total # of patients 65 & older: 562

- St. Joseph's 33.8% (190)
- General 28.3% (159)
- Henderson 23.5% (132)
- McMaster 11.9% (67)
- Mountain Site 2.5% (14)

# The Population (cont'd)

562



98.6% (554) included



81.9% (454) interviews *attempted*



90.5% (411) interviews *completed*



## Reasons Interview Not Attempted

(N=554)

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• Refused	5.6% (31)
• Did not speak English	5.4% (30)
• Too ill	2.0% (11)
• Aphasic	1.1% (6)
• Other	4.0% (22)



## Reasons Interview Not Completed

(N=554)

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• Language barriers	2.0% (9)
• Refused to finish	1.5% (7)
• Drowsy	1.1% (5)
• Aphasic	1.1% (5)
• Too ill	1.1% (5)
• Other	2.4% (11)

## Prevalence

Interview with Nurse	5.6% (31)
Chart Review	1.8% (10)
Interview with Patient	2.2% (9)
<b>Overall</b>	<b>10.5% (58)</b>

## Scoring the CAM

	Nurse Interview	Chart Review	Patient Interview	Overall
CAM #1	Yes	No	No	Yes
CAM #2	No	Yes	No	Yes
CAM #3	Yes	Yes	Yes	Yes
CAM #4	No	No	No	No
	No	No	No	YES



## Prevalence by Site

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McMaster	20.9% (14)
Henderson	11.5% (15)
St. Joseph's	8.6% (16)
General	7.6% (12)
Mountain Site	0



## Prevalence by Type of Unit

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Medical units	16.0% (39)
Surgical units	8.7% (15)
Rehab units	3.8% (4)
Psychiatry units	0



## Sensitivity & Specificity

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### ***Sensitivity***

- the probability of testing positive if the person is truly delirious

### ***Specificity***

- the probability of testing negative if the person is truly not delirious



## Nurse Report re: Delirium

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Is this person delirious today?

**"Yes"**

**Sensitivity**

**Specificity**

16.1%

69.4%

88.1%

## Occurrence of Terms in Charts

Were the following terms recorded in the chart during the 24 hours preceding Delirium Day?

	<b>"Yes"</b>	<b>Sensitivity</b>	<b>Specificity</b>
delirium	1.4%	14.6%	99.8%
acute confusion	1.8%	13.0%	99.1%
confusion	14.8%	59.3%	89.6%

## Reflection on Results

- What do you think about the results?
  - Do you think they reflect the usual reality?
  - Why might they be lower than other studies?
  - What do results suggest regarding next steps?



# Selected Results from Delirium Workshop & Delirium Day Feedback Forms

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## Workshop Objectives

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How clear were the objectives?

Mean(SD): 3.58 (0.57)

Scale: 1 (not that clear) - 4 (very clear)

To what extent were objectives met?

Mean (SD): 4.6 (0.53)

Scale: 1 (not at all) - 5 (completely)

# Understanding of Delirium

	<b>Before Workshop</b>	<b>After Workshop</b>
<b>Mean (SD)</b>	2.66 (0.98)	4.00 (0.59) *

Scale: 1=poor, 2=fair, 3=good, 4=very good, 5=excellent

\*  $p < .001$

# Confidence Ratings

	Before Workshop	After Workshop
Administer SMMSE	4.17 (.80)	4.45 (.62) **
Score SMMSE	4.13 (.76)	4.39 (.63) *
Administer CAM	3.58 (.78)	3.90 (.66) **
Score CAM	3.64 (.77)	3.95 (.68) **
Your role	4.12 (.68)	4.39 (.62) **

Scale: 1 = not confident - 5 = very confident

\*  $p < 0.05$ , \*\*  $p < 0.01$



## Where to From Here??

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- Creating user friendly delirium prevention and management protocols
- Expanding the scope of the committee: “Elder-Friendly Environments”
- Planning a visit from Sharon Inouye
- Currently exploring models/strategies