

The Ontario Senior Friendly Hospital Strategy

Evaluation of Indicators for
Hospital-acquired Delirium and Functional Decline
Preliminary Results

OHA 3rd Annual Senior Friendly Hospital Conference
June 12 2014

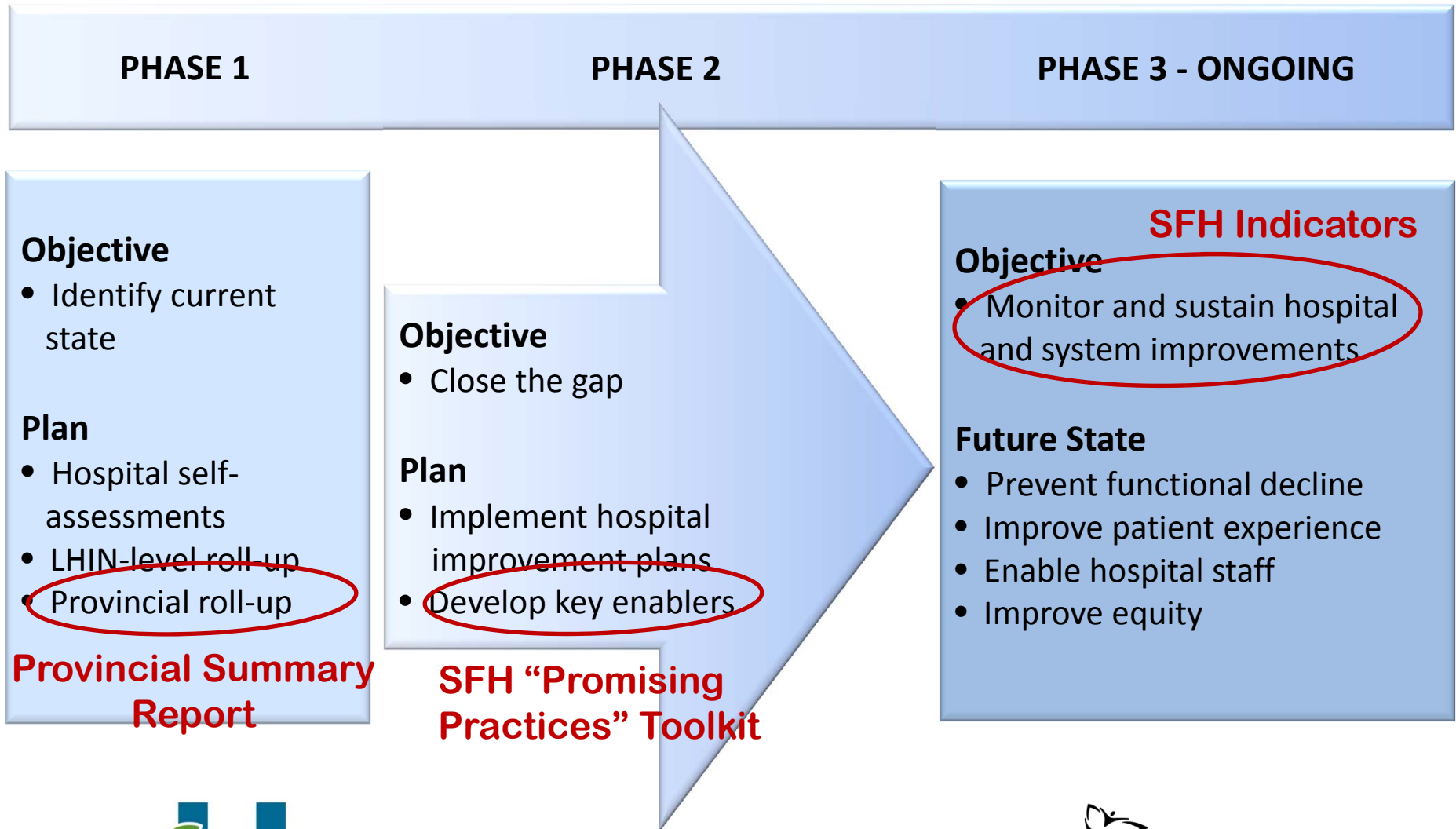
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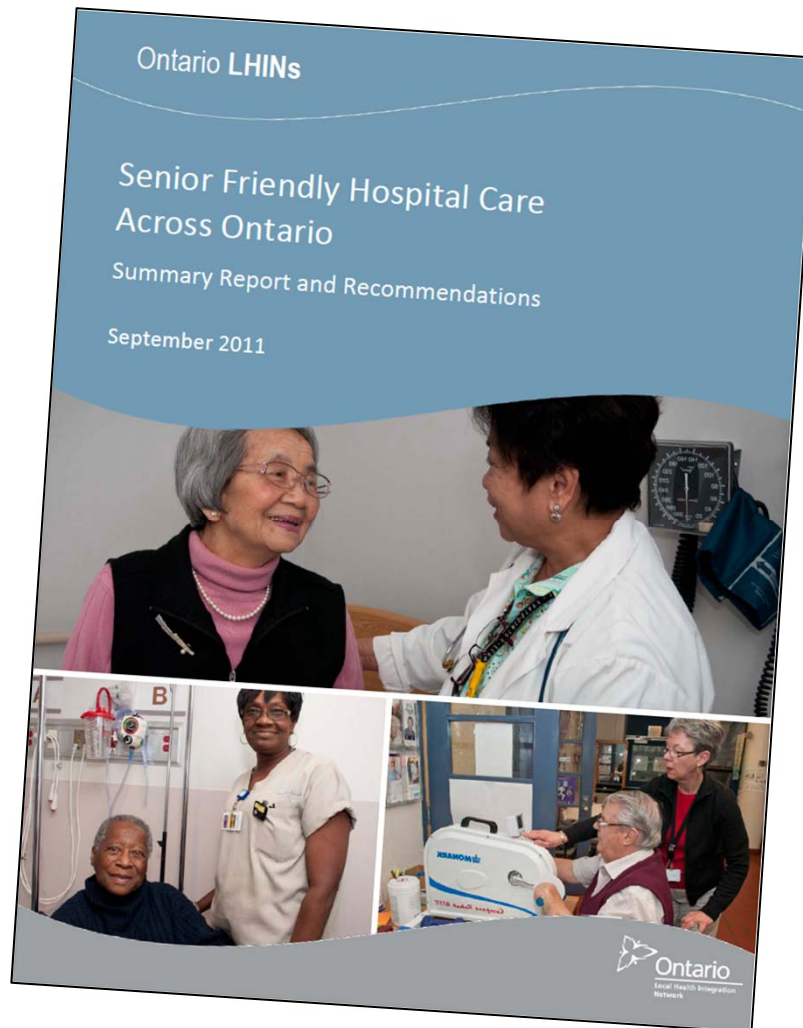
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Ontario Pan-LHIN Senior Friendly Hospital Strategy



Provincial Summary of SFH Care - Priorities



Functional Decline

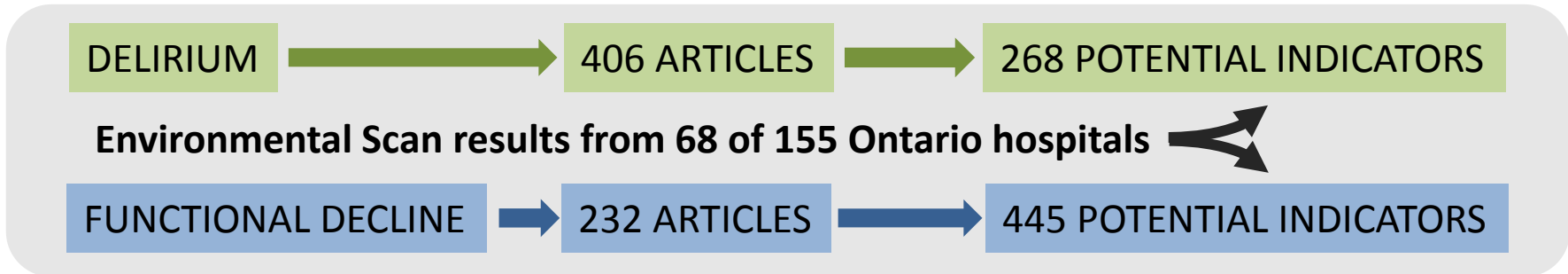
Implement inter-professional early mobilization protocols across hospital departments to optimize physical function

Delirium

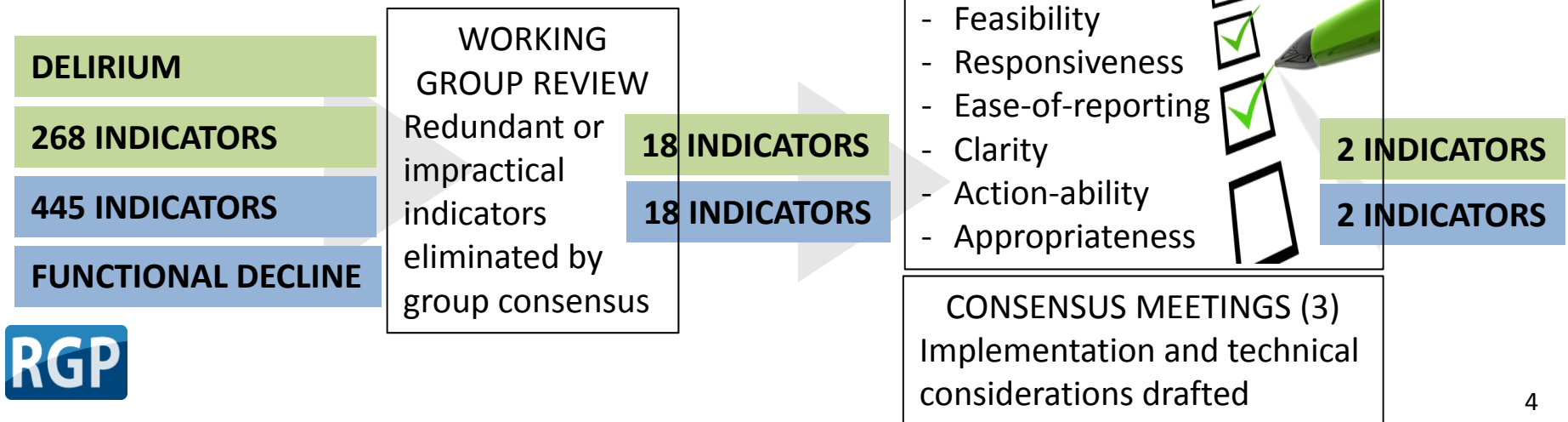
Implement inter-professional screening, prevention, and management protocols across hospital departments to optimize cognitive function

Literature Review and Environmental Scan

From over 15,000 retrieved articles from 1991-2011, 406 articles for delirium and 232 for functional decline were reviewed. Sixty-eight hospitals responded to an environmental scan. Together, this identified 268 potential indicators for delirium and 445 for functional decline.



Working Group Review, Delphi Panel and Consensus Meetings



Delirium Indicators (All Hospital Sectors)

Process	Rate of baseline delirium screening	Percentage of patients (65 and older) receiving delirium screening using a validated tool upon admission to hospital
Outcome	Rate of hospital-acquired delirium	Incidence of delirium in patients (65 and older) acquired over the course of hospital admission
	Data Source and/or Tool	Confusion Assessment Method (CAM), CAM-ICU, or Intensive Care Delirium Screening Checklist (ICDSC)
	Exclusions	Patients with decreased level of consciousness (unresponsive or requiring vigorous stimulation for a response); patients in palliative care
	Considerations	Minimum frequency of screening to capture incidence – at least daily after the initial baseline screen

Functional Decline Indicators (Acute Care Sector)

Process	Rate of ADL function assessment at admission and discharge	Percentage of patients (65 and older) receiving assessment of ADL function with a validated tool at both admission and discharge
Outcome	Rate of no decline in ADL function	Percentage of patients (65 and older) with no decline in ADL function from hospital admission to hospital discharge as measured by a validated tool
Data Source and/or Tool	Barthel Index Health Outcomes for Better Information in Care (HOBIC) – ADL Section Alpha-FIM Tool®	
Exclusions	Patients in emergency department who are not admitted to hospital; patients in palliative care; patients admitted for day surgery procedures; patients with a length of stay <48 hours	

Implementation



- 44 hospitals in 10 LHINs volunteered to implement the delirium and/or functional decline indicators
- Inform future use of the indicators in quality improvement or hospital accountability structures

Evaluation		Sources of Data
Indicator definition	Technical specifications	<ul style="list-style-type: none"> • Action plan and progress reports • Data submissions • Staff surveys • Monthly collaboration webinars • Correspondence and coaching requests
Feasibility	Completion rates Change trends Data quality	
Clinical value	Staff perception	
Implementation strategies	Success factors Challenges	

Participating Hospitals

South West

Grey Bruce Health Services
St Joseph's Health Care (London)
St Thomas Elgin General Hospital

Erie St. Clair

Hotel-Dieu Grace Healthcare

Hamilton Niagara Haldimand Brant

Brant Community Healthcare System
Hamilton Health Sciences
Joseph Brant Memorial Hospital
Niagara Health System
Norfolk General Hospital
St Joseph's Healthcare (Hamilton)

Toronto Central

Baycrest
Providence Healthcare
St Michael's
Sunnybrook Health Sciences Centre
Toronto East General Hospital
University Health Network – TWH + TRI
West Park Healthcare Centre

Central

Markham Stouffville Hospital
North York General Hospital
Southlake Regional Health Centre
Stevenson Memorial Hospital

Central East

Campbellford Memorial Hospital
Lakeridge Health
Northumberland Hills Hospital
Ontario Shores Centre for Mental
Health Sciences
Peterborough Regional Health
Centre
Ross Memorial Hospital
The Scarborough Hospital

South East

Brockville General Hospital

Champlain

Deep River District Hospital
The Ottawa Hospital

North East

Blind River District Health Centre
Espanola Hospital & Health Centre
Health Sciences North
Kirkland District Hospital
St Joseph's General Hospital
(Elliot Lake)
Manitoulin Health Centre
North Bay Regional Health Centre
Sensenbrenner Hospital
West Nipissing General Hospital
West Parry Sound Health Centre

North West

St Joseph's Care Group
(Thunder Bay)



Summary of Implementation:

Delirium – 42 patient care units at 31 hospital sites

Functional Decline – 24 patient care units at 22 hospital sites

	DELIRIUM	
Hospital Type*	No. of Hospitals	No. of Beds
Addictions and MH	1	25
CAHO	8	385
CCC and Rehab	2	56
Community	15	556
Small	5	158
Total	31	1,180
Withdrawn	2	130

* OHA classification

Confusion Assessment Method

- 1) Acute onset +
- 2) Inattention +
- 3) Disorganized thinking OR 4) Altered level of consciousness

DELIRIUM PROCESS INDICATOR – Rate of baseline screening

- **Compliance**
 - High rates of compliance with CAM screening on admission
 - Compliance rates trended upwards over time
- **Ease of Use**
 - “tool is easy and quick to learn, understand and use”
 - Concerns were raised about needing to know patient’s baseline (or needing to perform a cognitive assessment coupled to the CAM) for an accurate admission assessment
- **Implementation - Need for Training**
 - Some patient populations were difficult to assess (e.g. stroke, dementia, aphasia, other communication problems)
- **Inclusion/Exclusion**
 - Some sites suggested palliative patients not be excluded as they should have delirium managed for comfort if present

DELIRIUM OUTCOME INDICATOR – Incidence rate of delirium

- **Compliance with regular CAM screening**
 - High rates of daily or nearly daily CAM screening
 - Screening at regular time points was a success factor as it made it part of routine practice (e.g. q shift, daily at 3pm)
 - Tracking daily screening compliance was laborious and required human resources
 - Note: not a requirement of indicator, but compliance audits may be needed
 - Rehab/CCC sites do not feel daily screening is necessary as their patients are more stable

DELIRIUM OUTCOME INDICATOR – Incidence rate of delirium

- **Reliability** - moderate degree of inconsistency due to:
 - patient status fluctuations
 - different staff members having different interpretations of observations
 - different skill levels at assessing delirium
 - transfer of information issues (e.g. not knowing/communicating patient baseline)
 - administrative errors (e.g. calculating scores, transcribing scores)
- **Validity**
 - moderate to frequent feedback that CAM scores not matching reports of delirium in clinical notes or a physician diagnosis of delirium
 - some sites reported that CAM accuracy decreases over time, and regular refresher education is necessary

DELIRIUM INDICATORS – SUMMARY

- high rates of compliance with admission screening
- daily screening with CAM to capture delirium is feasible, but clinical judgement is gold standard - validity needs to be monitored
- very high value in educating staff to perform delirium/CAM screening – fostered QI and change in practice
 - more discussion of delirium (e.g. in rounds, amongst inter-professional staff)
 - perceived earlier detection of delirium
 - Leads to intervention (e.g. order sets, management strategies, resource binders, decision trees, posters/pamphlets for staff family and patients)
- Provincial Collaboration – sharing through teleconferences and web-based collaboration portal

	FUNCTIONAL DECLINE	
Hospital Type*	No. of Hospitals	No. of Beds
Addictions and MH	0	0
CAHO	2	69
CCC and Rehab	0	0
Community	11	326
Small	8	241
Total	21	636
Withdrawn	3	135

* OHA classification

BARTHEL INDEX

Feeding

Bathing

Grooming

Dressing

Bowels

Bladder

Toilet use

Transfers (bed to chair and back)

Mobility (on level surfaces)

Stairs



FUNCTIONAL DECLINE INDICATORS – BARTHEL INDEX (11 sites)

- **Compliance**
 - “high” completion rates (56% of sites > 80% compliance for both admission and discharge Barthel)
- **Ease of Use**
 - mostly positive e.g. “quick and easy to learn and administer”
- **Implementation**
 - administered by range of inter-professional team members – e.g. PSWs found it helpful and that it facilitates practice to their full scope
- **Sensitivity**
 - most sites felt it was appropriate to detect functionally relevant change in the acute care population
 - modest ceiling effect noted

FUNCTIONAL DECLINE INDICATORS – HOBIC (10 sites)

- **Compliance – Low**
 - despite several year history of HOBIC implementation
 - despite changes to process in order to increase compliance
- **Implementation**
 - Time consuming ~ 1 hour
 - some issues with user friendliness of web-based platform causing data loss
 - Code 8 “Activity did not occur “– results in incomplete assessment = voided
- **Clinical value**
 - perceived as low - time lag to receive reports

FUNCTIONAL DECLINE INDICATORS – SUMMARY

- High compliance rates for ADL assessment on admission seem feasible with an assessment tool that is quick to administer
- Goal of monitoring functional decline in hospital does not seem feasible unless compliance with discharge ADL assessment can be improved
- For longer stay patients, admission and discharge ADL assessment is feasible and helpful (Barthel)
 - Influence care plan and monitor progress
- HOBIC - low feasibility and perceived value
- One site using the Barthel Index is adding this as a 1-month post-D/C telephone assessment to provide transitional support in the community

Next steps



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