Mobilisation of Vulnerable Elders in Ontario: MOVE ON

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Competing interests

- I have no relevant financial COI to declare
- I have intellectual/academic interests in the area of early mobilisation/implementation

Objectives

- To increase awareness of tailoring implementation strategies to different contexts
- To increase awareness of challenges in spreading an implementation strategy and of opportunities to monitor sustainability

The Challenge

- Hospitalized older adults who were ambulatory 2 weeks prior to admission spent a median of 43 minutes per day mobilizing in hospital. (JAGS 2009;57:1660-5)
  - We repeated this across our academic, acute care hospitals in Toronto and found similar results
- One-third of older adults develop a new disability in an activity of daily living (ADL) during hospitalization; half are unable to recover function. (JAGS 2003;51:451-8)
- Without mobilisation elderly patients lose 1% to 5% of muscle strength each day in hospital. (Annals Int Med 1993;118:219-23)

Early mobilisation can:

- Decrease length of stay
  (1.1 days [95% CI 0 to 2.2 days])
- Shorten duration of delirium
  (median of 2 days versus 4 days)
- Improve return to independent functional status
  (odds ratio 2.7 [95% CI 1.2 to 6.1])
- Decrease rate of depression (odds ratio 0.14)
- Increase rate of discharge to home (1.08 [95%CI 1.03 to 1.14])
- Decrease hospital costs by $300/day
  - Age Ageing 2007;36:219-22; J Gerontol 1998;53:307-12;Lancet 2009;373:1874-82

How is this aligned with other initiatives?

- Senior Friendly Hospital Initiative
- Provincial Falls Prevention Strategy
- ED Wait times, length of stay
- Readmission Rates
- Excellent Care for All Strategy

MOVE ON Objective

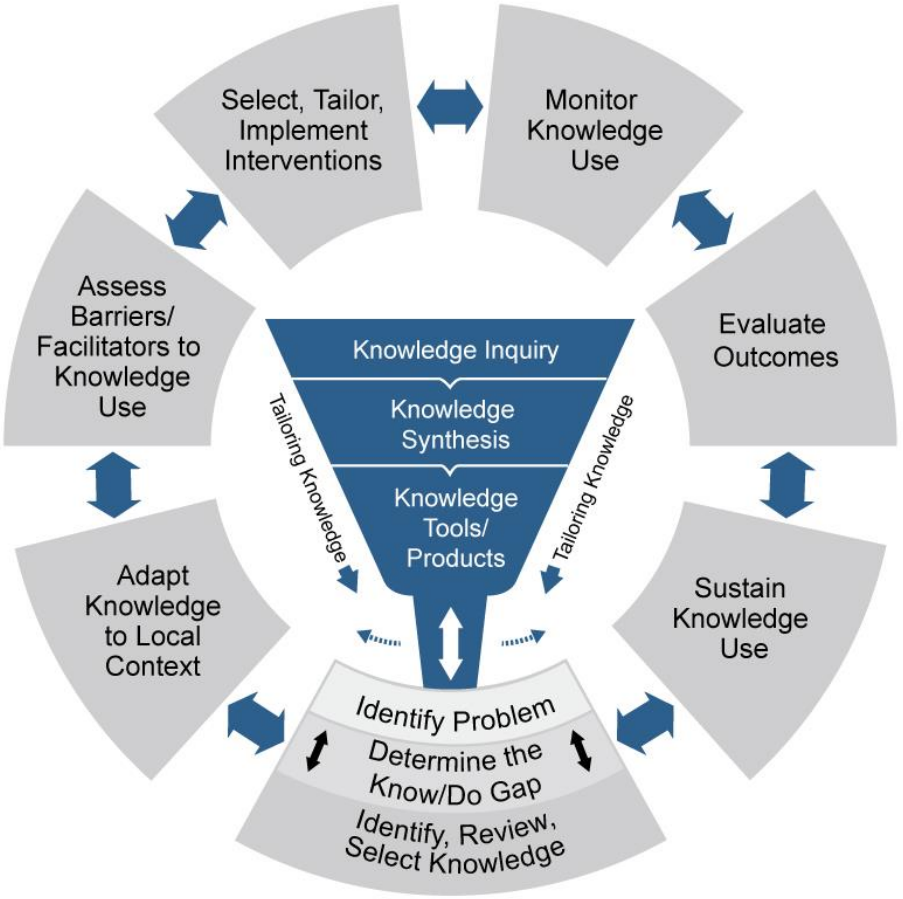
- To implement and evaluate the impact of an evidence-based strategy to promote early mobilisation in older patients admitted to hospitals in Ontario
  - Implement Sci 2013;8:76

Frameworks used

- Knowledge to action framework
- Theoretical domains framework
- COM-B and Behaviour change wheel

- Used an integrated knowledge translation approach whereby researchers and knowledge users worked together to design and implement the project
    - JCEHP 2006;26:13-24; Appl Psychol 2008 57;660-80

KTA Framework



Study Design

- Mixed methods:
  - Interrupted time series study with interviews, focus groups and document analysis
  - Pre-intervention (10 weeks); intervention roll out (8 weeks); post-intervention (20 weeks)
- Population:
  - Patients aged ≥ 65 years admitted to inpatient medicine units
  - Patients receiving palliative care or on bed rest were excluded
- Setting:
  - 14 university-affiliated hospitals in Ontario, Canada

Key messages for implementation

- Complete a mobility assessment within 24 hours of the decision to admit
- Encourage mobility 3 or more times per day
- Encourage progressive, scaled mobilisation that is tailored to the individual patient

  - J Rehab Med 2008, 40:609-614

Implementation intervention

- Multi-component and tailored to the context
- Key stakeholders and champions identified at each site
- Each site created local working group to coordinate implementation
  - Working group included local education coordinator, physician champion, research coordinator
- Members of the central MOVE ON team functioned as implementation coaches
- All sites participated in an online community of practice

Implementation intervention

- 1 to 3 focus groups with frontline staff on each targeted unit
  - Facilitated by local champion and research coordinator
  - Used the TDF to guide these and to identify behaviour change domains
- Results of focus groups were reviewed with working groups and implementation coaches to develop implementation strategy

Implementation intervention

- Barriers/facilitators were mapped to behaviour change constructs to develop implementation strategies, based on systematic reviews of the evidence
  - Appl Psychol. 2008;57(4):660–80. doi: 10.1111/j.1464-0597.2008.
- For example:
  - if beliefs about consequences of mobilisation were identified as a barrier,
    - information about the behaviour outcome were provided along with persuasive communication about the importance of mobilisation of older people by an opinion leader

Implementation intervention

- Implementation strategy targeted the clinical staff and patients/caregivers
  - Multicomponent and many tools were created and provided on the MOVE ON portal for ‘branding’ by each hospital
- All of this was informed by the MOVE-iT pilot, whereby we used the same approach to create implementation strategies
  - We used this to create a mapping guide
    - Implement Sci 2014;9:160

Table 3

Reference guide for mapping barriers with appropriate intervention activities

	Barriers	Intervention activities
Capability	• Attitudes and beliefs about mobilization	• Classroom education
	• Lack of knowledge about the importance of mobilization	• Follow-up education (e.g. one-on-one co
	• Perceived lack of skills to implement intervention	• Staff and patient posters
	• Fear of injuring patient	• Patient pamphlets/handouts
	• Little to no knowledge of patient's baseline or current mobility status	• Display
	• Patient/family beliefs about mobilization	• Promotions
		• Seniors' fair (contest)
		• Volunteer activities
Opportunity	• Time constraints and heavy workload	• Leadership activities
	• Lack of clarity regarding roles and responsibilities	• Huddles
	• Lack of standard mobility documentation processes	• Staff meeting/rounds
	• Presence of other priorities and initiatives on the unit	• Promotions
	• Existing climate/culture of unit	• Reminders
	• Lack of communication between health-care providers regarding patient's care plan	• Mobility champions

Outcomes

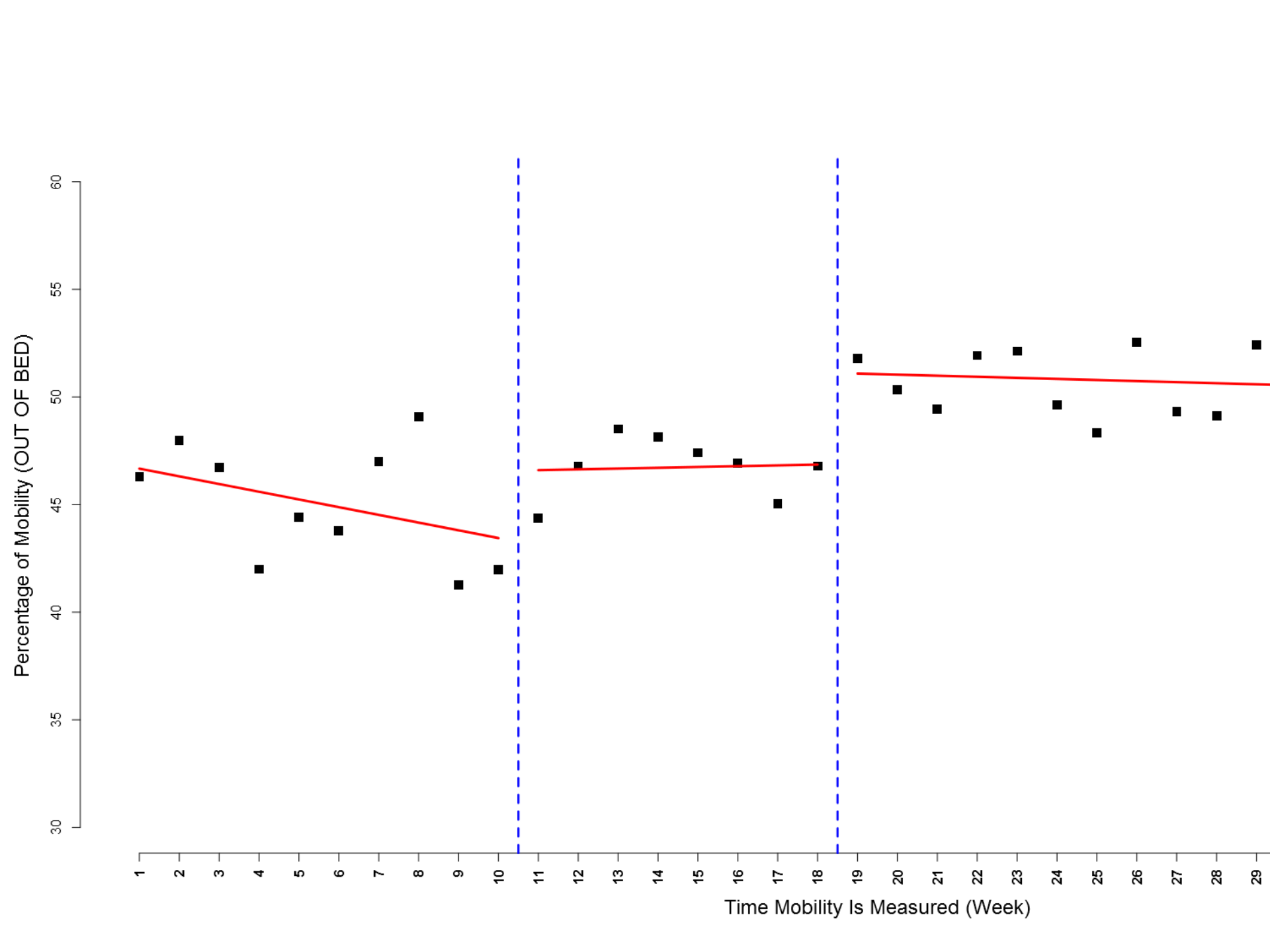
- Primary outcome: mobilisation status of patients assessed on twice weekly visual audits (on random weekdays) that took place three times daily
  - Patients were considered mobilised if the visual audit identified them to be out of bed
  - Focus was on mobilisation, not just ambulation
  - Visual audit method had good inter-rater agreement (kappa 0.83) and accuracy (LR 12.2 [95% CI 3.2 to 46.5])
- Secondary outcomes: length of stay, rate of injurious falls, functional status, discharge destination
- Process evaluation: type of and adherence to interventions

Results

- 32 units in 14 hospitals
- 14,540 patients, mean age 79.9 years [SD 8.32]
- 53% were female
- 115025 observations from 12,490 patients (mean age 80) in 11 hospitals were included in the overall analysis
  - 3 hospitals excluded (N=2050)
    - 1 because of incomplete data, 2 because the patients were in complex continuing care units
      - Age and Ageing 2017;doi.10.1093

Results

- Overall results: Patient mobilisation
  - Significantly more patients were out of bed per day post-intervention (10.56% [95 % CI 4.94 to 16.18])
- 13 of 14 hospitals showed an increase in patient mobilisation


Percentage of Mobility (OUT OF BED)
30
35
40
45
50
55
60
1
2
3
4
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6
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8
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10
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27
28
29
Time Mobility Is Measured (Week)

Results

- Secondary outcomes: Median length of stay (LOS)
  - Significantly shorter in the post-intervention period compared to pre-intervention (6.1 days [95 % CI -11 to -1.2])
- High correlation between reduced LOS and increased mobilisation
  - 92% of sites showed an increase in mobilisation and a decrease in LOS
- Falls and functional status data were inadequate for full analysis but no significant differences noted

Limitations

- Visual audits used for patient mobility
- No collection of data on external factors influencing LOS
- None of the hospitals routinely collected data on patient mobility
- Poor quality data on functional status and falls from hospital decision support

Strengths

- Large study
- Implementation intervention tailored to context
  - Involved entire multidisciplinary team
- No funds provided for implementation to optimise sustainability

- Results replicated across multiple hospitals and in 2 provinces

Process evaluation

- Importance of organisational readiness

Development of decision support tool

- Identified key measures for assessing ORC from review by Gagnon et al
- Categorised individual items of measures according to key readiness constructs from an existing framework
- Modified Delphi with stakeholder panel to assess feasibility and relevance of the measures
- Developed and tested decision support tool to guide selection of ORC measure
  - Implement Sci. 2014 May 10;9:56. doi: 10.1186/1748-5908-9-56
  - BMC Med Inform Decis Mak 2016;16:24

Ready, Set, Change!

Introduction

Ready, Set, Change! is a decision support tool designed to guide users in the selection of an appropriate readiness for change assessment measure for their setting. The tool has been developed for use by frontline implementers and decision-makers in healthcare settings including but not limited to acute care, long-term care, public health, mental health, and healthcare policy. Ready, Set, Change! decision support tool is based on a framework for organizational readiness for change comprised of 4 key constructs:

Individual Psychological

Attitudes, beliefs, and perceptions held by individual staff members regarding the change. It may also refer to the extent to which staff members agree with the value of the change

Individual Structural

Staff members' knowledge, skills, and abilities to perform activities and roles related to the change. It may also refer to the willingness of individual staff to undergo training to improve their knowledge, skills, and abilities required for change implementation

Organizational Change Questionnaire-Climate of Change, Processes, and Readiness has been recommended for you to use in your unique setting to assess your organization's level of readiness to implement the change initiative.

Why this measure was recommended

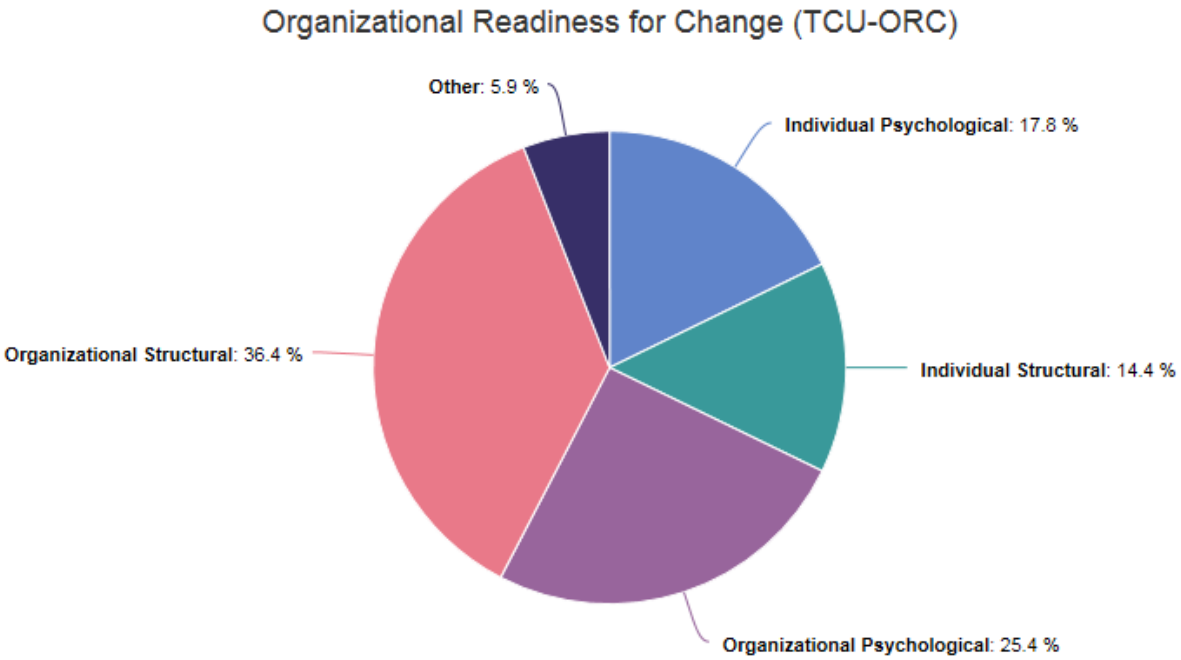
This measure was recommended to you because your top priorities are related to Organizational Structural aspects of readiness for change (refer to the definitions below).

Facts about this measure

- This measure contains a total of 53 items, of which 23 items (43%) are designed to assess Organizational Structural priorities.
- A panel of your peers rated this measure as feasible to use, (i.e., can be implemented in a timely manner without causing undue burden to existing resources) and relevant to health care settings.
- A promoter score (i.e., likelihood to recommend to others) of 8 out of 10 was awarded to this measure by your peers.
- For details on how to access this measure click below.

Why consider an alternative measure?

Although this alternative measure represents less Organizational Structural items, you may find it a more suitable option in your organization's setting.



Setting(s): Addiction services, Health care technology, Transfer centres

Definitions

How this tool will help you select KT programs for the MOVEs project

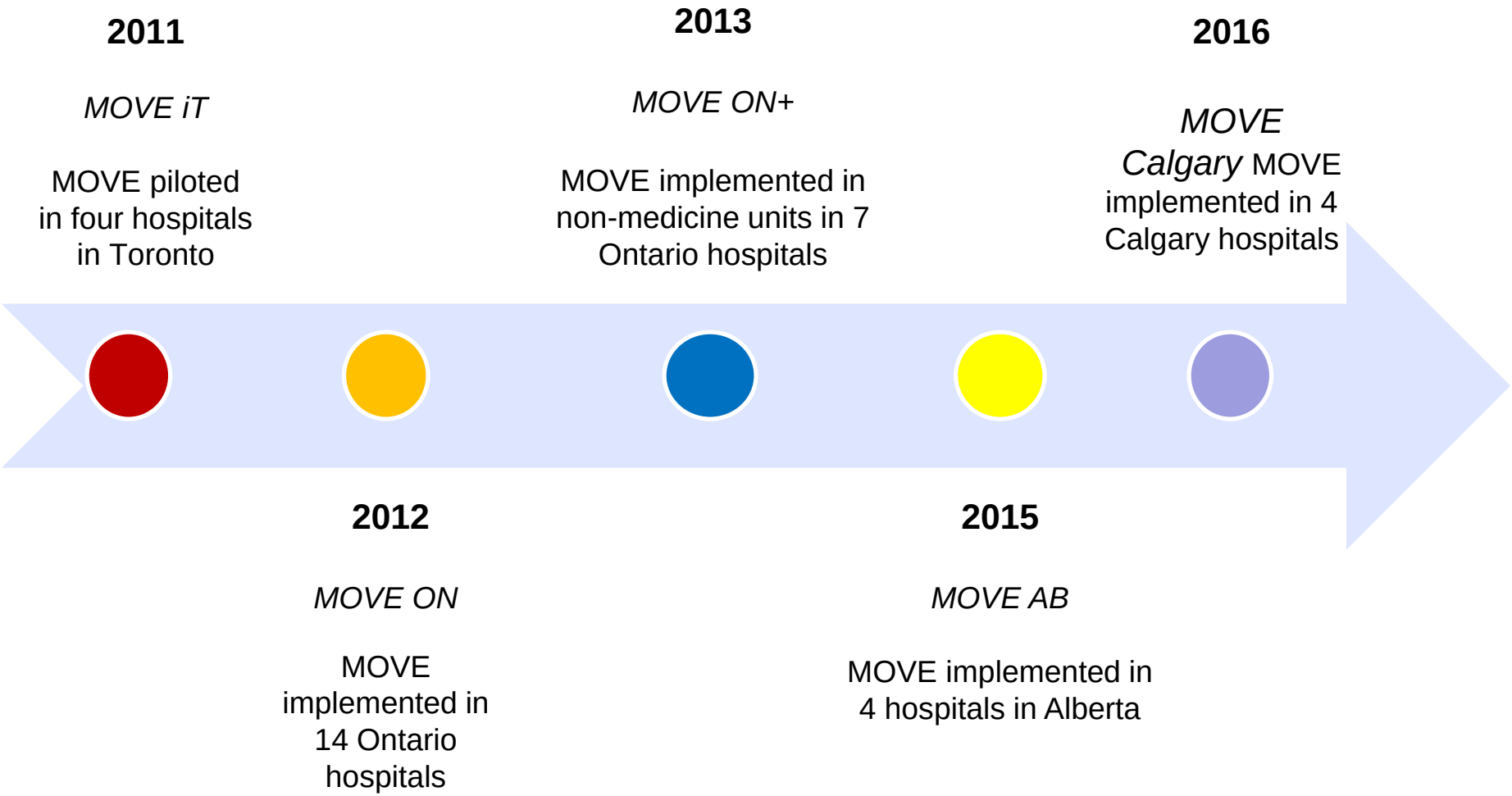
The STEP tool includes a pre-programmed survey designed to determine your unit's top barriers to mobilizing patients at multiple levels. It also measures barriers to implementing the MOVE project strategies. The survey is based on work conducted with previous MOVE sites.

To measure the significance of barriers to mobilization on your unit (s), simply deploy a survey to your unit staff – the tool system will collect and analyze results for you, and will suggest strategies that you may select to implement as part of the MOVE program, based on your unit's results.

How to use the STEP Tool

1. Create a new survey by selecting "Create new survey" on the Dashboard. This survey asks respondents to rank common barriers to implementation in order of perceived importance to their setting. Note: respondents should include those that will be required to make changes to their behaviour/workflow/processes etc., as a result of implementation.
2. The only information required to create a survey is the survey name and the contact information for someone on your implementation team (to whom queries about the MOVE project and the survey can be directed). Enter this information in the fields provided.
3. When your survey is created, you can deploy your survey by email to relevant colleagues/ staff members. Simply copy the link into an email and send it to your relevant participants/contacts.

MOVE Funding & Implementation



Spread

- 63 hospitals now using MOVE in Ontario
  - Similar results seen across the sites
- 12 hospitals in Alberta using MOVE
  - Similar results seen across the sites
- Tested new implementation support tools with each roll out

Sustainability

- Are MOVE ON hospital units sustaining the MOVE intervention two years post-implementation?
- Have MOVE ON hospitals spread MOVE to other units within the hospital and have they sustained implementation?

Methods

- Design: Mixed methods, two years post-implementation
- Setting: 14 MOVE ON hospitals
- Participants:
  - Staff from 25 implementation units
  - Staff from non-implementation units

Methods

- Data collection:
  - Surveys
    - staff awareness of the importance of mobilisation and MOVE ON project;
    - staff attitudes towards mobilisation;
    - staff confidence in mobilizing patients;
    - what key messages are still being delivered;
    - tools and resources are currently still being used to deliver key messages
  - Semi-structured telephone interviews
    - why activities were/were not sustained;
    - facilitators and barriers to sustainability and spread
    - ongoing sustainability plans

Results

- 212 hospital staff completed the survey in 7 hospitals:
  - 9 MOVE units (n=105)
  - 8 nMOVE units (n=107)
- Staff reported the presence of corporate early mobilisation initiatives at each hospital
- Approximately half of MOVE and nMOVE unit respondents reported that they were aware of the three key MOVE messages
- MOVE and nMOVE respondents perceived to have changed their practice (60.9% vs 56.3%, respectively; p = .586)
- MOVE and nMOVE units perceived that staff changed practices as a result of corporate initiatives (81% and 77%, respectively; p = .654).

Results

Interviews:

- 6 staff interviews completed; remaining interviews are ongoing (N=20)
- Participants identified the following themes:
  - Facilitators to sustainability:
    - embedding MOVE ON in the organisational culture;
    - multilevel support for early mobilisation; and
    - corporate prioritization of mobilisation
  - Attributes of the MOVE ON philosophy:
    - cultural shift that permeated the organisation;
    - implementation of formal procedures (policies, role revision, documentation) to keep mobilisation on the radar

Conclusions

- MOVE ON engaged multiple hospitals to implement a contextualised intervention to promote early mobilisation
  - Mobility should be tailored to the individual
  - Implementation of early mobility should be tailored to the setting
- Lessons learned
  - Importance of stakeholder engagement
  - Defining roles and planning intervention early
  - Considering sustainability from project onset
  - Inaccuracy of decision support data

Key enablers

- Effective communication between sites and coaches
- Involvement of diverse professionals and unit leaders
- Capacity building and training throughout the project
- Central team's expertise on implementation
- Alignment with Senior Friendly Hospital Strategies

A collaboration of 14 CAHO Hospitals

Funded by CAHO ARTIC Program

Sunnybrook Health Sciences Centre

St. Michael's
Inspired Care.
Inspiring Science.

Mount Sinai Hospital
Joseph and Wolf Lebovic Health Complex

Baycrest
Enriching Care
Enhancing Knowledge
Enlightening Minds

MOVE ON

The Ottawa Hospital | L'Hôpital d'Ottawa

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Health Sciences North
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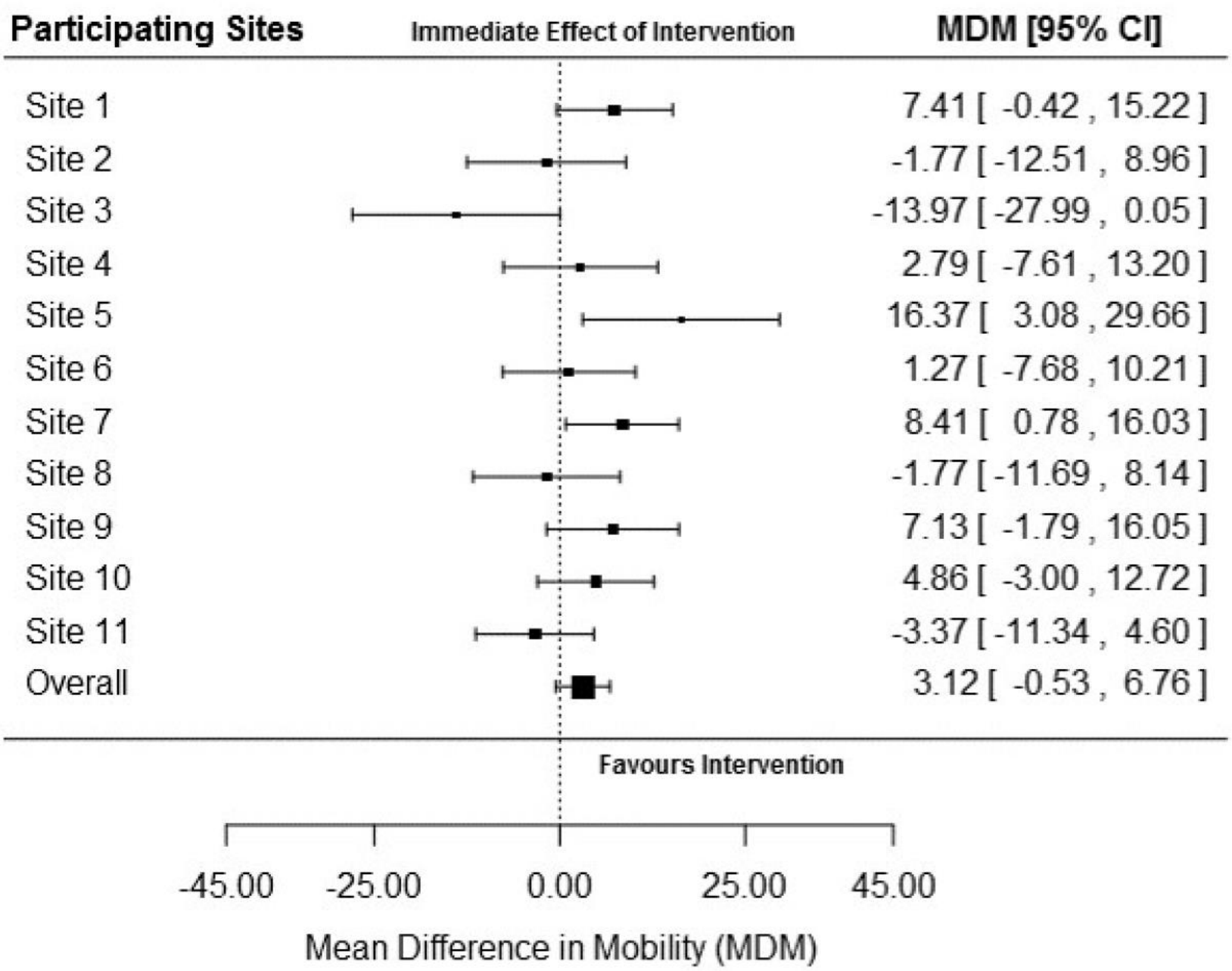
Participating Sites
Immediate Effect of Intervention
MDM [95% CI]
Site 1
7.41 [-0.42 , 15.22]
Site 2
-1.77 [-12.51 , 8.96]
Site 3
-13.97 [-27.99 , 0.05]
Site 4
2.79 [-7.61 , 13.20]
Site 5
16.37 [3.08 , 29.66]
Site 6
1.27 [-7.68 , 10.21]
Site 7
8.41 [0.78 , 16.03]
Site 8
-1.77 [-11.69 , 8.14]
Site 9
7.13 [-1.79 , 16.05]
Site 10
4.86 [-3.00 , 12.72]
Site 11
-3.37 [-11.34 , 4.60]
Overall
3.12 [-0.53 , 6.76]
Favours Intervention
-45.00
-25.00
0.00
25.00
45.00
Mean Difference in Mobility (MDM)