An Evidence-Based Toolkit for Early Identification of Frail Inmates

Morgan A. Kochajda

DNP Project Final Defense

April 11, 2019

Grand Valley State University
Kirkhof College of Nursing

Acknowledgements

- Advisory Team members:
  - Dianne Conrad DNP, RN, FNP-BC, BC-ADM, FNAP
  - Robert F Johnson MD, MEd, FCCM, FCCP, FACP
  - Simin Beg MD, MBA
  - Rachel Cardosa DNP, RN, AGNP-C
- Family, friends, colleagues
- Organizational leaders and peers

Objectives for Presentation

1. Introduce clinical problem-lack of standardized way to identify frail inmates
2. Review process of organizational assessment and literature review
3. Present project plan, implementation framework
4. Review results of project
5. Review sustainability and dissemination of project

Introduction

- The most rapidly growing inmate population is middle aged and older adults, comprising over 64.7% of the inmate population (Williams, Stern, Mellow, Safer, & Greifinger, 2012; Federal Bureau of Prisons, 2019).
- Inmates are disproportionately ill with chronic conditions including mental health and substance abuse disorders as compared to the general population (Young & Patel, 2015).
- Currently, there are no standardized way to discern if an inmate has higher needs for resources such as palliative care, hospice, reassignment to geriatric housing, or applying for medical parole.

Introduction

- The Department of Corrections (DOC) in a Midwest state desires to improve care for their aging and dying inmates.
- Leadership of the hospice and palliative care department of a nearby large healthcare system have an interest in forming a relationship.
- A relationship must be formalized between the organizations prior to any future collaborations or projects.
- In order to influence change, and sustain improvements, policymakers must be informed of the issue.

Framework: Burke & Litwin (1992)

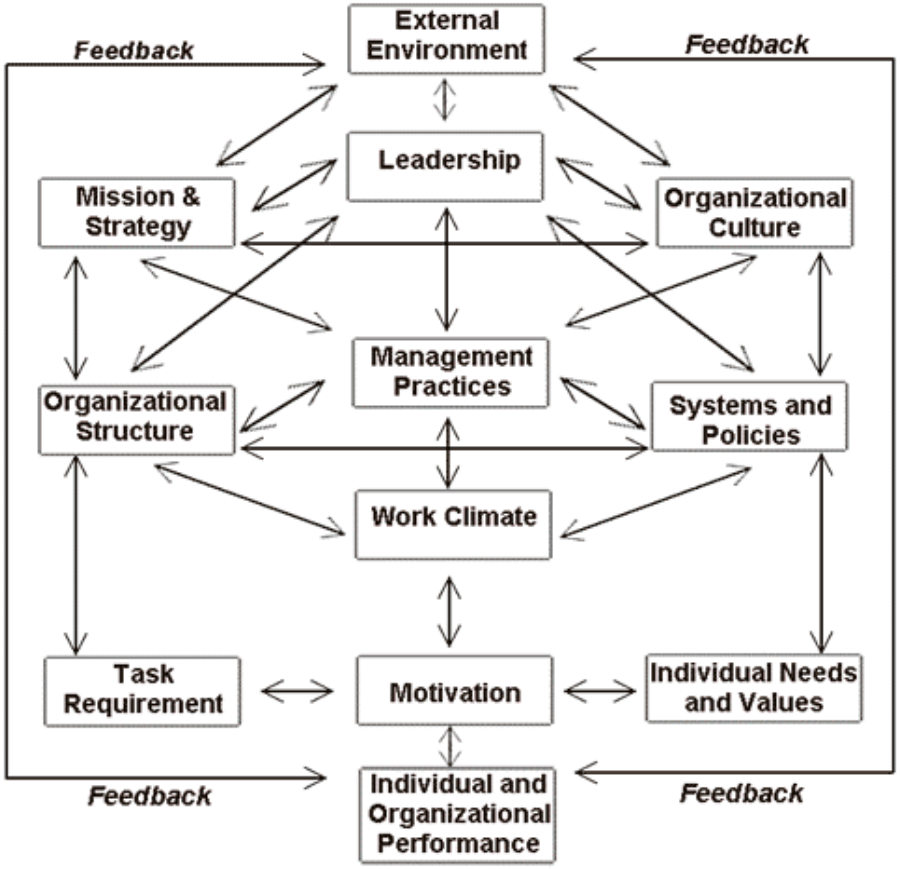

Figure 1. A model of organizational performance and change. Reprinted from "A Causal Model of Organizational Performance and Change." By W.W Burke and G.H Litwin, 1992, *Journal of Management, 18(3),* 528. Copyright 1992 by Southern Management Association

Assessment of Organization

- Burke and Litwin Framework (1992) was utilized
  - Organizational Needs include: mission and strategy, organizational culture, organizational performance
  - SWOT Analysis: Opportunities to promote relationships in the community
  - Assessment of DOC: no standardized way to identify inmates who may need increased services

IRB Approval

NON HUMAN RESEARCH DETERMINATION

November 30, 2018

Morgan A Kochajda, Doctorate in Nursing Practice

SH IRB#: **2018-425**

PROTOCOL TITLE: **An Evidenced Based Protocol for Early Identification of Frail Inmates**

SPONSOR: **Investigator**

Dear Ms. Kochajda,

On November 29, 2018, the above referenced project was reviewed. It was determined that the proposed activity does not meet the definition of research as defined by DHHS or FDA.

Therefore, approval by XXX IRB is not required. This determination applies only to the activities described in the IRB submission and does not apply if changes are made. If changes are made and there are questions about whether these activities are research involving human subjects, please submit a new request to the IRB for a determination.

A quality improvement project may seek publication. Intent to publish alone is insufficient criterion for determining whether a quality improvement activity involves human subject research. However, please be aware when presenting or publishing the collected data that it is presented as a quality improvement project and not as research.

Please be advised, this determination letter is limited to IRB review. It is your responsibility to ensure all necessary institutional permissions are obtained prior to beginning this project. This includes, but is not limited to, ensuring all contracts have been executed, any necessary Data Use Agreements and Material Transfer Agreements have been signed, documentation of support from the Department Chief has been obtained, and any other outstanding items are completed (i.e. CMS device coverage approval letters, material shipment arrangements, etc.).

Your project will remain on file with the Office of the IRB, but only for purposes of tracking research efforts within the XXX system. If you should have questions regarding the status of your project, please contact the Office of the IRB at 616-486-2031 or email

Sincerely,

Jeffrey Jones MD

Chair, Spectrum Health IRB

cc: Quality Specialist

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Human Research Protection Program

Stakeholders

- Hospice and palliative care administrator
- Business and program development manager
- Division Chief of hospice and palliative care
- Palliative care nurse practitioner
- Administrator from DOC

Clinical Practice Question

What is an acceptable evidence-based toolkit to promote the identification of frail inmates appropriate for hospice and palliative care referral, in order to promote a relationship between a Midwest healthcare organization and the DOC?

Literature Review Method

- Comprehensive review of CINHAL and Pubmed
- Search restricted to articles in the English language, within the years 2008-2018
- Key words utilized in search through various combinations included: frailty or frailty screening tool, prisons or correctional facilities, older adults or geriatric, and education or staff education.
- PRISMA method (Moher, Liberati, Tetzlaff, Altma, 2009)

Evidence for Project

- Frailty scales: clinical frailty scale found to be statistically significant in detecting decreases in functionality and increased mortality (Gregorevic, Hubbard, Lim, & Katz, 2016)
- Quality of life: Palliative care and hospice have been shown to increase quality of life that aligns with patient goals (Pazart et al, 2018)
- Educational sessions: providing educational sessions to healthcare staff improved confidence and increased awareness on clinical guidelines and protocols (Bennett et al, 2010)

Model to Examine Phenomenon: Transitional Model of Palliative Care

Phenomenon: Lack of standardized way to identify inmates who may need palliative care or end of life care

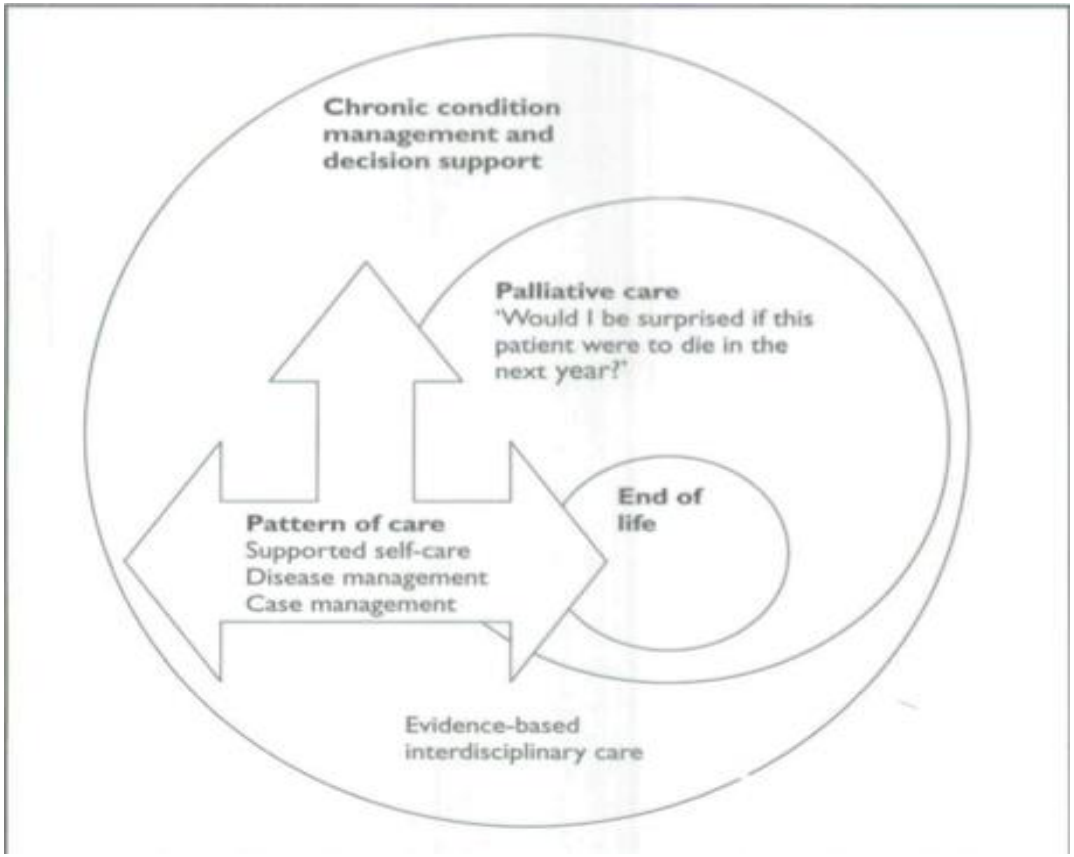


Figure 2. TMPC: palliative care within chronic conditions management and decision support. Reprinted from: Murray, M. A. (2007). Crossing over: Transforming palliative care nursing services for the 21st century. International Journal of Palliative Nursing, 13(8), 366.

Project Plan: Objectives

- Select an appropriate evidence-based frailty screening tool that can appropriately identify frail inmates in prison settings.
- Develop components of an educational session for prison healthcare staff on the screening tool and its use.
- Perform a cost savings analysis on potential cost savings when utilizing the toolkit to promote sustainability of project.
- Create multi-level policy briefs that can be used to educate and influence policymakers on the issue of frailty in prison settings.

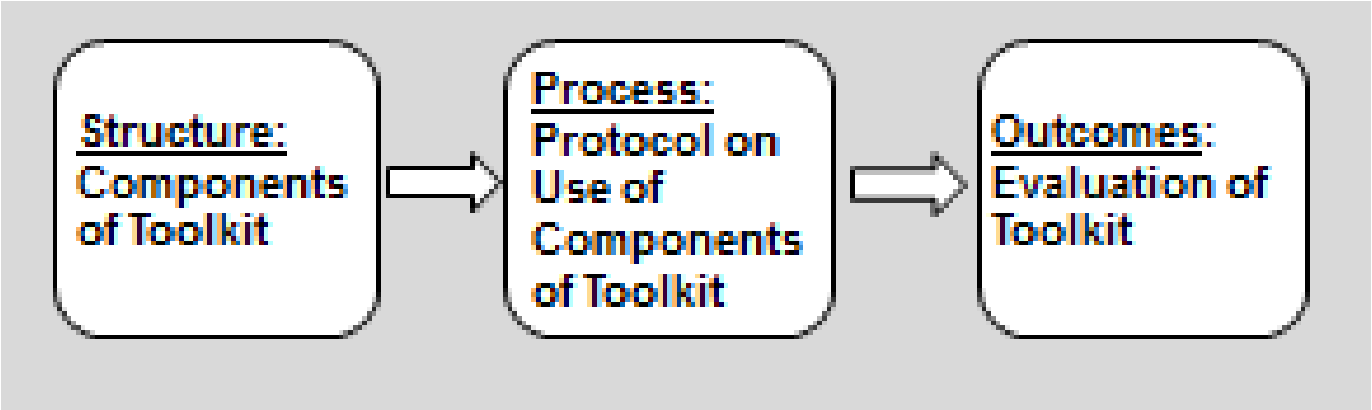
Design

- Developed an evidenced-based toolkit to answer the clinical question
- This is a type of quality improvement project
  - Program development with policy emphasis

Setting & Participants

- Setting: Hospice and palliative care department of Midwest healthcare system
- Participants: key stakeholders of the hospice and palliative care department
  - Hospice and palliative care administrator
  - Business and program development manager
  - Division chief of hospice and palliative care department
  - Palliative care nurse practitioner

Implementation Model: Donabedian (1992)



Applying Donabedian Framework in Project Plan

- Structure → Toolkit components
  - Frailty screening tool
  - Educational materials
  - Cost analysis
  - Policy briefs

Applying Donabedian Framework in Project Plan

- Process → Protocols for use of components of toolkit
  - Plan for use of screening tool
  - Plan for educational sessions
  - Plan for cost analysis
  - Plan for use of policy briefs

Applying Donabedian Framework in Project Plan

- Outcome → Evaluation plan for components of toolkit
  - Plan for evaluation of frailty screening tool
  - Plan for evaluation of educational sessions
  - Plan for cost analysis outcomes
  - Plan for policy brief outcomes

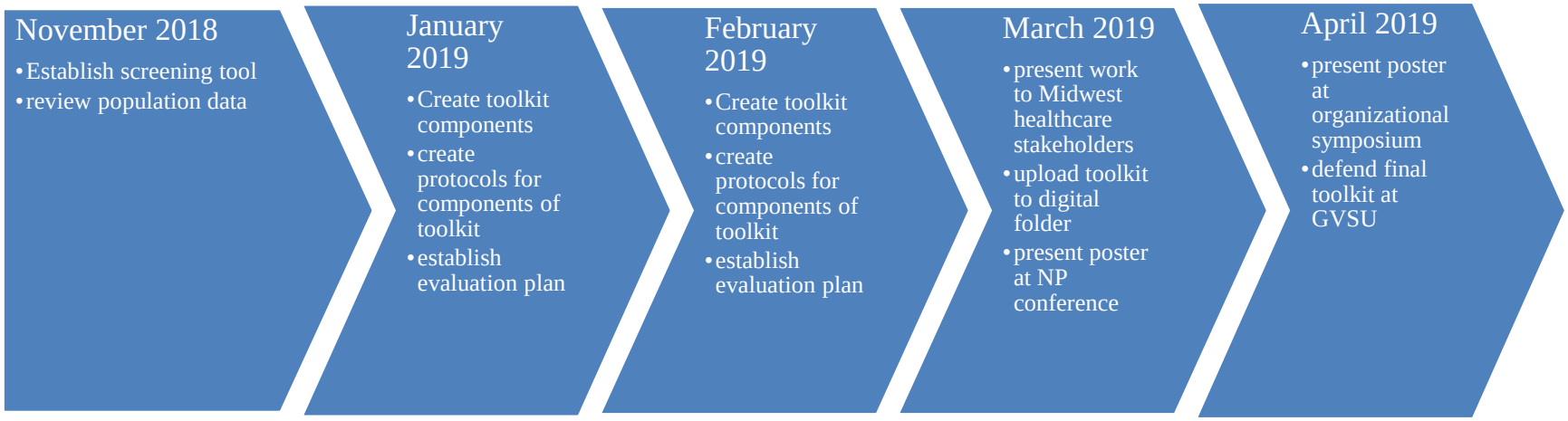
Evaluation & Measures

Acceptance of the toolkit by organizational key stakeholders was the final outcome of the scholarly project

Resources & Cost

Personnel or Resource Item	Projected Time in hours spent on project	Cost of Time Commitment or Item
Chief of Hospice and Palliative Care Department Average salary estimate $149/hour (Glass door, 2019)	15 hours	$2235
Manager of Program Development Average salary estimates $37/hour (Glass door, 2019)	15 hours	$555
Nurse Practitioner Mentor Average salary estimates $45/hour (Glass door, 2019)	20 hours	$900
Laptop Computer		$700
Total Expense of Project		($4390)
DNP Student Average Salary estimate $35/hour, given in kind donation (Glass door, 2019)	250 hours	$8750
Net		$4360

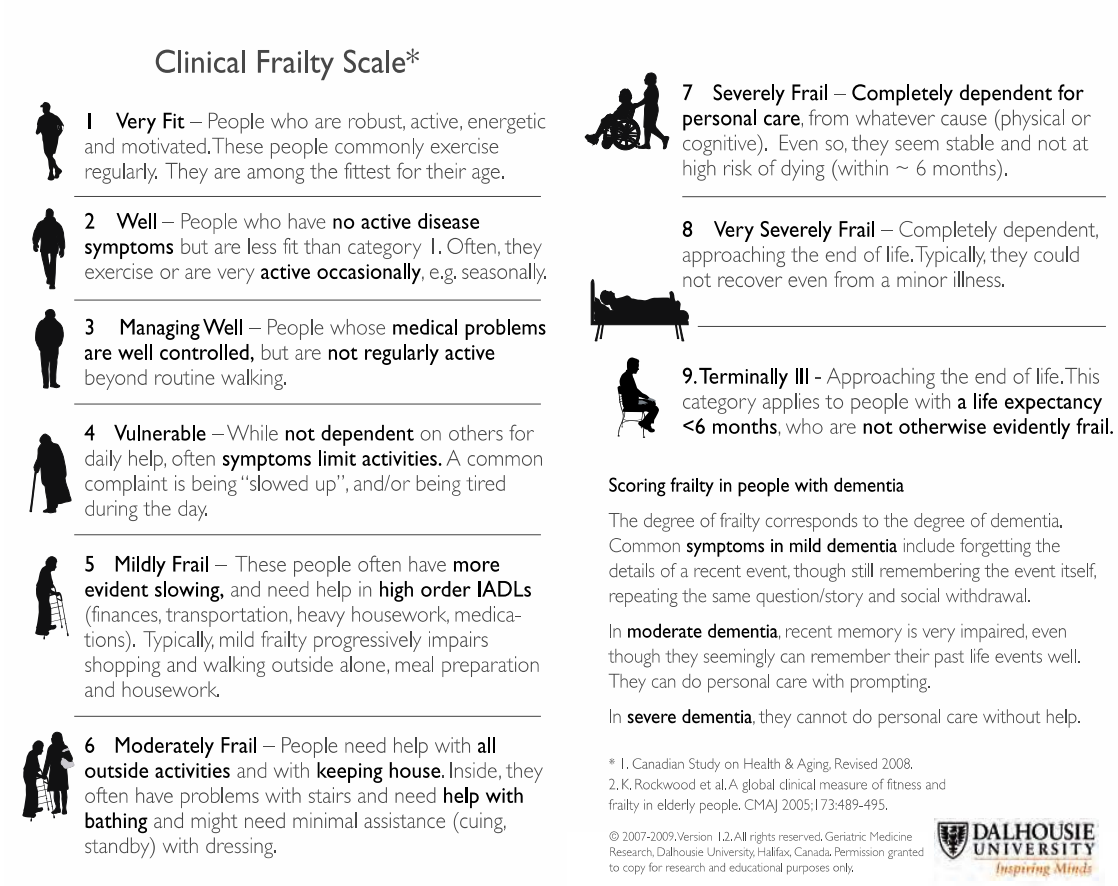
Timeline


November 2018
•Establish screening tool
•review population data
January 2019
•Create toolkit components
•create protocols for components of toolkit
•establish evaluation plan
February 2019
•Create toolkit components
•create protocols for components of toolkit
•establish evaluation plan
March 2019
•present work to Midwest healthcare stakeholders
•upload toolkit to digital folder
•present poster at NP conference
April 2019
•present poster at organizational symposium
•defend final toolkit at GVSU

Results: Toolkit- Clinical frailty scale

(Rockwood et al, 2005)

- Clinical frailty scale was chosen for toolkit
- Permission granted from researchers for use of tool
- Algorithm created for use of tool
- Implementation plan created
- Evaluation plan created
  - Included staff and provider surveys



Clinical Frailty Scale*

1 **Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 **Well** – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.

3 **Managing Well** – People whose **medical problems are well controlled,** but are **not regularly active** beyond routine walking.

4 **Vulnerable** – While **not dependent** on others for daily help, often **symptoms limit activities.** A common complaint is being "slowed up", and/or being tired during the day.

5 **Mildly Frail** – These people often have **more evident slowing,** and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 **Moderately Frail** – People need help with **all outside activities** and with **keeping house.** Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.

7 **Severely Frail** – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 **Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. **Terminally Ill** - Approaching the end of life. This category applies to people with **a life expectancy <6 months**, who are **not otherwise evidently frail.**

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

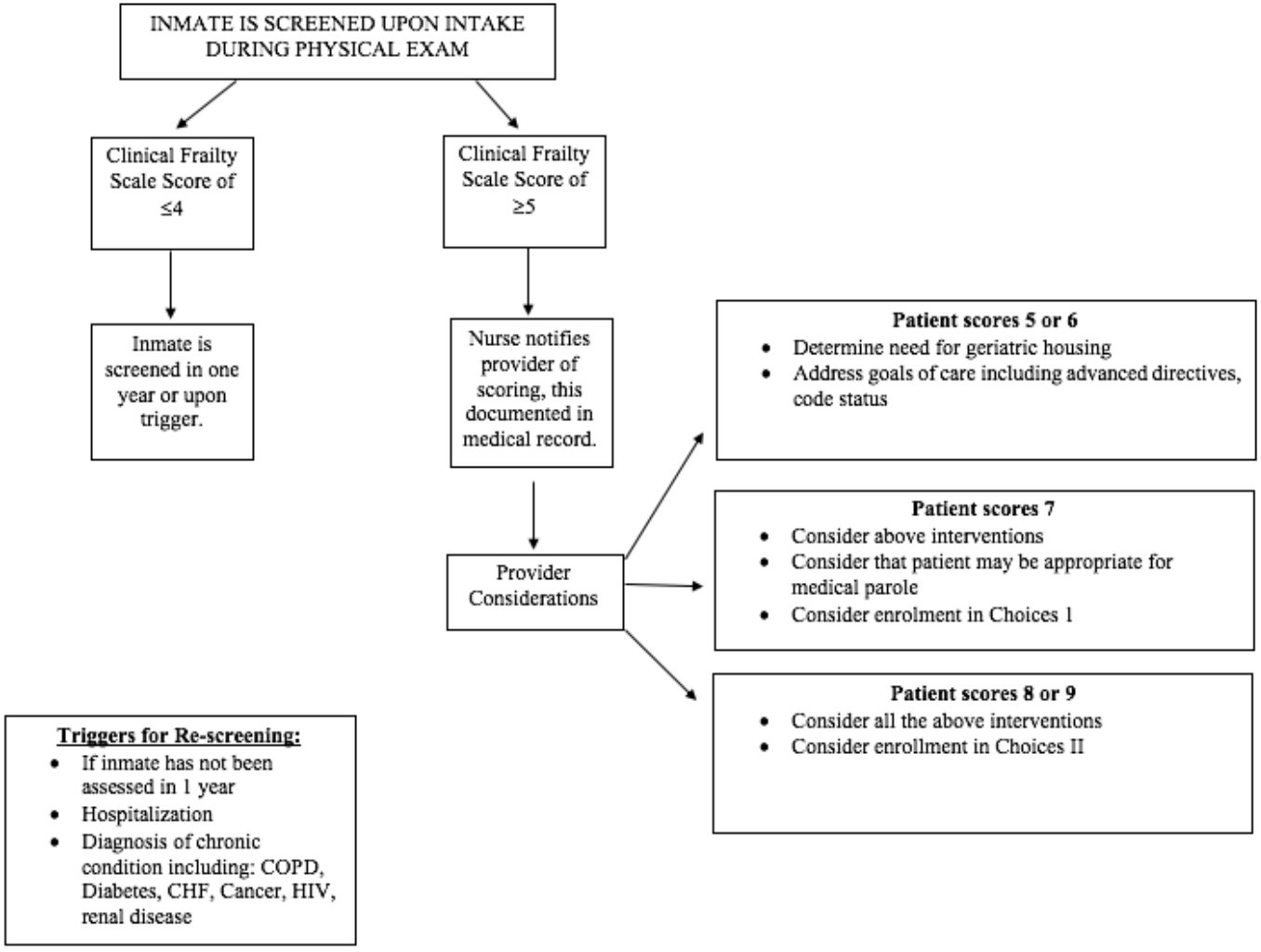
In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

DALHOUSIE UNIVERSITY Inspiring Minds

Algorithm for Clinical frailty scale



Results: Toolkit- Educational Materials

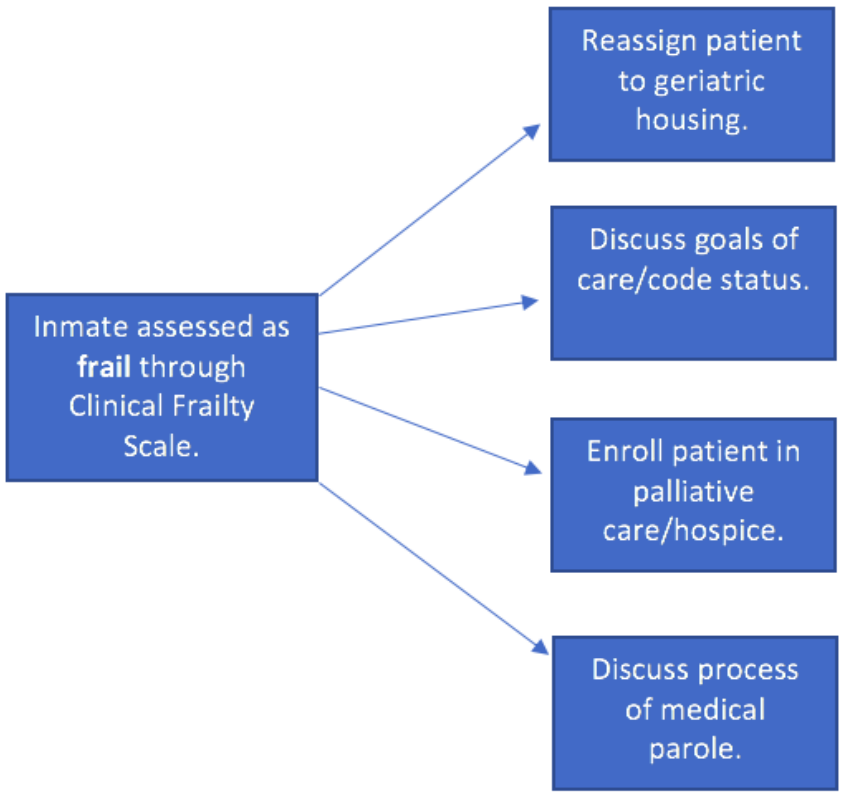
- Situation, Background, Assessment, Recommendations (SBAR) created with case study for educational session
- Protocol for educational sessions created
- Evaluation plan created including pre- and post- tests for educational session

Results: Toolkit- Cost Analysis

- Cost analysis created with the information that palliative care and hospice can decrease ED visits by 15% and hospitalizations by 20% (Antonuzzo et al, 2017; De Palma et al., 2018; Spilsbury, Rosenwax, Arendts, Semmen, 2017; Lustbader et al, 2017).
- Protocol to expand cost analysis when toolkit implemented
- Evaluation plan developed

	1 hospital encounter	100 hospital encounters	1000 hospital encounters	10,000 hospital encounters
Average cost of hospitalization[5]	$11,700	$1,170,000	$11,700,000	$117,000,000
Costs of hospitalization with 20% reduction based on hospice/palliative care intervention[3,4,6,7]	*	$936,000	$9,360,000	$93,600,000
Difference in hospitalization costs	*	($234,000)	($2,340,000)	($23,400,000)
Costs of transportation/guarding[2]	$10,000	$1,000,000	$10,000,000	$100,000,000
Reduced costs in transportation/guarding based on hospice/palliative care intervention	*	$800,000	$8,000,000	$80,000,000
Difference in transportation/guarding costs	*	($200,000)	($2,000,000)	($20,000,000)
Total costs for hospitalization of inmate (average 5 days stay)	$21,700	$2,170,000	$21,700,000	$217,000,000
Total Costs for reduced hospitalizations based on hospice/palliative care intervention (average 5 days stay)	*	$1,736,000	$17,360,000	$89,360,000
Potential Cost Savings	*	**434,000**	**4,340,000**	**43,400,000**

Results: Toolkit- Policy Briefs



- Multi-level policy briefs were created
  - Local
  - State
  - National
- Protocols created on dissemination of policy briefs
- Evaluation plan created for policy briefs

Discussion

- Clinical frailty scale was chosen as foundation of the tool, standardizing the process for evaluating inmates for appropriate resources.
- Providing education to the staff is crucial to the screening process.
- The cost analysis is essential to show the sustainability and justify the use of the toolkit.
- The policy portion of the project is critical to the success of the toolkit.

Implications for Practice

- This project addresses many of the concerns discussed in:
  - Institute of Medicine's Dying in America (2014)
  - National Hospice and Palliative Care Organization's quality guidelines for providing end-of-life care in correctional facilities
  - Addresses the Quadruple Aim of healthcare (Bodeheimer & Sinksy, 2014)

Conclusions

- Evidenced-based toolkit was accepted by the hospice and palliative care department's leadership.
- This toolkit can be utilized by this department to form a relationship with the Department of Corrections, therefore assisting them in meeting the healthcare needs of the frail inmate populations.

Sustainability Plan

- Leadership from hospice and palliative care are meeting with healthcare system leadership to determine next steps
- If a relationship is not formed between the organizations, the toolkit will not be available to the DOC.
- Policy briefs play a crucial role in the sustainability of the project- policymakers could significantly impact the trajectory of the project by encouraging the relationship between the organizations, recognizing the importance of this issue.
- Continuation of DNP role through the department

Dissemination

- The toolkit was disseminated to key stakeholders from the organizations.
- Project was presented in the form of a poster through a state national practitioner council annual conference, and the healthcare system's research council event
- Project is presented at Grand Valley defense
- Final version will be uploaded to Scholarworks.

DNP Essentials Reflection (AANP, 2006)

- Every essential was addressed throughout the work in this project. The most evident essentials utilized were:
  - Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking
  - Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice
  - Essential V: Health Care Policy for Advocacy in Health Care
  - Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes
  - Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health.

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