Safety culture for injury prevention in long-term care organizations:

What can be learned from the aviation companies?

Name of Student

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Description of problem area and rationale

The high prevalence of falls is a public health concern about the safety and security of older adults living in Long-Term Care (LTC) organizations, a setting in which they are ironically often admitted due to safety concerns (Tideiksaar, 2010; WHO, 2007). Residents in LTC are more cognitively and/or physically frail causing them to be at higher risk of falls (Arnetz et al., 2011; Egan, Jaglal, Byrne, Wells & Stolee, 2008; Norton et al., 1999; Ramnemark et al., 2000). There is extensive literature that has placed greater emphasis on establishing a set of intrinsic and extrinsic falls risk factors guiding the risk assessment of falls in LTC facilities and in the latter years, suggesting a holistic approach to implement comprehensive, individualized, multifactorial and multidisciplinary fall prevention strategies (Cameron et al., 2010; Gillespie et al., 2003; Neyens et al., 2011; Shanley, 2003; Zecevic, Salomi, Lewko, Vandervoot & Speechley, 2009).

More broadly derived from the emerging concept of “safety culture”, this capstone project will explore lessons that could be translated onto LTC facilities from a high reliability organization, namely aviation companies, in implementing a safety culture that uses a systemic approach to injury prevention. This capstone will first define the concept of safety culture, describe the current state of the art of the safety culture in LTC organizations and then explore lessons learned from the aviation companies to establish a safety culture, and thereby transforming from a high to low risk environment. With the hypothesis that lessons can be learned from the commercial aviation industry, this capstone project will seek to extrapolate how these lessons could be translated into practical and policy implications in the area of injury prevention in LTC (Zecevic et al., 2009). The concept of safety culture will be explored holistically to understand the environmental factors and organizational issues that contribute to falls among older residents despite evidence-based guidelines on fall prevention in LTC (Zecevic et al.).
Definition of Safety Culture

The emerging concept of safety culture has been defined differently and the most commonly used definition is

The product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization’s health and safety management (where) the goal of patient safety is to reduce the risk of injury or harm to patients from the structure and process of care (ACSNI, 1993, p. 23).

Objectives

General aim of the research:

This capstone will first seek to define and understand the model of safety culture. Safety culture is an emerging concept and ‘describes the commitment to safety that permeates a health care organization (and) and open atmosphere for discussion of errors, process improvements, and system issues without fear of reprisal’ (Arnetz et al., 2011, p. 740). This will set the stage for a better understanding of how an organization can establish a culture of safety through the implementation of systematic processes and the promotion of institutional policy and change that fosters organizational learning and a systems approach to safety and injury prevention.

Specific objectives:

More broadly derived from the emerging concept of safety culture, this essay will explore the one high-risk organization, i.e. commercial aviation companies, and how it became a high reliability organization over the last few decades. This will then be compared to the current safety culture in LTC organizations in view of exploring gaps in the latter settings. The
hypothesis of this essay is that safety culture from aviation could be translated into practice in LTC organizations to foster learning on how to create a safety culture for injury prevention in this high-risk environment.

**Approach: Tasks/activities, methodologies and deliverables**

i. Literature review of the model of safety culture
   a. Review and define the model of safety culture (5 pages)
   b. Review of a high reliability organization (aviation) and explore its safety culture (10-15 pages)
   c. Explore and critique safety culture in residential care settings (5 pages)
   d. This capstone will review and discuss policies and practical implications of the SC in long-term care organizations in relation to fall prevention, quality of life and quality of care for residents (20 pages).

With an increase in the prevalence of dementia among older residents, this capstone will explore their perceptions and attitudes towards falls, their personal experiences and opportunities or lack of to engage in purposeful wandering and its impact in maintaining their remaining physical abilities and optimizing their quality of life. The perspectives of other stakeholders, i.e. families, staff and management will also be reviewed in relation to fall prevention in care facilities.

**Novelty, originality and innovation**

This capstone will explore the emerging concept of safety and culture in long-term care organizations by adding to previous literature on how to address fall prevention from the perspectives of different stakeholders.
Potential implications and practical benefits for the aged population

This capstone will aim to set the stage for proposing practical implications to provide quality of care and a safe physical and social environment for preventing falls among frailer older residents in long-term care organizations.

Collaborators and added value of the collaboration

Dr. Andrew Sixsmith will act as the primary supervisor for the completion of this capstone as a requirement of the Master’s program in Gerontology. As the professor in theories on gerontology and director of the gerontology research center, Dr. Sixsmith will act as a mentor and guide for the completion of capstone adding his personal expertise in the areas of fall prevention, ageing-in-place and technology.

Dr. Fabio Feldman will act as a member of capstone committee and provide mentorship and guidance based on his extensive knowledge and role in the area of fall prevention as the senior manager of fall prevention for Fraser Health Authority.

Dr. Aleksandra Zecevic will be consulted informally to discuss her learning about safety culture in relation to fall prevention in residential care settings.

Dr. Mortison Ben, Dr Woolrych Ryan and Laura Booi will also be consulted over monthly workshop or informally as appropriate.
New timelines for completion of capstone:

Here are some tentative timelines for the capstone with goal of completion and defense of capstone by April 17th or 18th, 2013

**Thursday January 4th, 2013:**
- Submission of proposal to Andrew, Fabio and Roslyn

**Wednesday January 9th, 2013:**
- Meet with supervisors to review proposal
- Schedule next meeting or workshop

**Thursday January 17th, 2013:**
- Submit draft on the model of SC
- Workshop 2 on the model of SC

**Thursday January 31st, 2013 or February 7th:** submit draft on how aviation became a low risk to a high risk environment

**Thursday February 14th, 2013:** submit draft on how SC in LTC is lacking

**Thursday March 7th, 2013:** submit draft of practical and policy implications

**Thursday March 21st, 2013:** compile and submit entire draft of capstone (60 pages) to supervisors

- Email Roslyn the final copy of capstone either on March 21st or no later than April 8th, 2013 for her to send it to the external member

- **Defense on April 17th or 18th, 2013**
- Meet with Roslyn on April 22nd, 2013 to review revision process for submission of capstone to library

- Submission to library by April 30th, 2013 (before last working day of April)

- Graduate June 2013!
Capstone - Proposal

Objectives of capstone:
1. Define and explore the concept of safety culture (SC) in residential care (LTC) facilities using the 6 dimensions of SC
2. Review lessons from one high reliability organization, i.e. aviation, in establishing a SC shifting from a high to low risk environment
3. Explore how these lessons could be applied in creating a SC in LTC facilities

Outline

1) Introduction and Method – 2 TO 3 PAGES
   • Introduce topic, research question and hypothesis:
     o Topic: SC in relation to falls in LTC using the learning and SC of aviation
     o Research question: Could lessons from aviation companies be applied to create a SC in LTC?
     o Hypothesis of this capstone: The fundamental principles of aviation safety are applicable to injury prevention in LTC
     o Gap: poor SC in LTC
   • Method: scope literature review or narrative review of literature applied to the topic
   • Describe how aviation became from high risk to low risk industry
   • Discourse about lack of SC in LTC in relation to falls (do we hide falls, describe the culture of care in LTC)
   • Discuss practical implication for practice and policy

2) Model of SC: 5 PAGES
   - Describe the 6 following dimensions of SC:
   a) Leadership commitment to safety
   b) Open communication founded on trust
   c) Organizational learning
   d) A non-punitive approach to adverse event reporting and analysis
   e) Team work
   f) Shared belief of the importance of safety
3) Aviation companies: 20 PAGES
   • Describe what aviation did to move from a low SC to a high SC from 1940’s to 2000
   • Describe safety maturity model

4) Long-term care: 5 PAGES
   • Describe how are long-term care organizations currently doing in terms of the 5 dimensions of SC and how they lag behind when it comes to safety in relation to falls

5) Discussion of practical and policy implications: 15 PAGES

6) Conclusion: 2 PAGES

SC in Long-term care organizations lag behind aviation and have to learn in 5-6 dimensions of SC reviewed in this essay
Questions

- What can injury prevention programmes in long-term care organizations learn from high risk industries such as aviation companies?
- Are the concepts of aviation safety applicable to injury prevention in long-term care organizations? If so, how?
- If yes, which of the concepts and principles of aviation safety applicable to the field of gerontology in long-term care organizations?
- What is safety?
- What is a SC?
- What is an organizational culture?
- Can an injury prevention program based on the principles of aviation safety be implemented in long-term care organizations?
- What are key common safety principles between aviation companies and injury prevention in long-term care organizations?
- How have high risk industries achieved their current level of performance?
- How can a systems approach be effective in reducing risk and its consequences?
- How is a systems approach theorized?
- How is a SC theorized in gerontology?
- What are the parallels that can be drawn between aviation companies and injury prevention in long-term care organizations for older adults? In gerontology?
- How did high risk industries such as aviation companies achieve and maintain their current high level of safe performance?
- What implications does this knowledge have for injury prevention in gerontology in care facilities?

Key concepts:

- Systems approach
- Organizational accident model (Reason)
- Organizational learning
- Human error
- Adverse events (air plane crash; falls)
- Root cause analysis

Key principles:

- Errors or falls inevitably occur and usually derive from faulty system designs (called safety deficiencies), not negligence.
- Injury prevention should be an ongoing process based on open and full reporting (i.e. not blaming but allowing organizational learning)
- Major falls = ‘tip of the iceberg’ of processes indicating possibilities for organizational learning
- Provide *immunity* to staff to encourage open reporting of falls and to provide emotional support and medical guidance.
Reference list


B.C. Ministry of Heath Planning (2004). *Prevention of falls and injuries among the elderly: A special report from the office of the B.C. Ministry of Health Planning*. Published by the Office of the Provincial Health Officer.


