A Gap Analysis of Geriatric Trauma Research Projects in the United States

2018 HSRProj Research Competition for Students

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Outline

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Background

- Population Aged 65+ the fastest growing: 14.3% in 2014 and 23.5% by 2060 \(^{(1,2)}\)
- Quality of care for older adults is an emerging issue \(^{(3)}\)
- Falls are the leading cause of injury for older adults \(^{(4)}\)
- Trauma includes a wide spectrum of issues
- Geriatric trauma involves the confluence of age-related decline that causes injury and the body’s physiologic effort to maintain homeostasis during and after hospitalization \(^{(5)}\)
Research Statement

Identify potential research gaps related to trauma in aged/geriatric participants
Methods: Project Identification

- Adapted PRISMA guidelines (6)
- Developed a peer-reviewed strategy
- Two reviewers searched the database
- Search strategy included MESH and key terms
- Relevant projects identified based on inclusion and exclusion criteria
  - Inclusion: Primary population of interest, population >65 with the primary condition being physical trauma
  - Exclusion: Post-traumatic Stress Disorder and fall-reduction education programs
Methods: Gap Analysis

- Final projects were studied to identify research gaps
  - Type of research
  - PICO
  - Methodology
  - Outcomes measured
  - Intervention utilized
- NIH RePORT and PubMed were also searched utilizing parallel search strategies in order to triangulate results
Results: Project Identification

Figure 1. Search Strategy and Results (7)

**Search strategy:** Geriatric (geriatric, aged, older adult) and Trauma (wounds and injuries, trauma) MESH, Keyword and Title/Abstract

- **HSRProj Database Results**
  - 86 projects
  - 10 projects

- **NIH RePORT Results**
  - 483 projects
  - 31 projects

- **PubMed Results**
  - 594 publications
  - 52 publications

5 projects appeared in both HSRProj and RePORT
0 projects appeared in HSRProj, RePORT and PubMed
### Results: Project Characteristics

#### Table 1. HSRProj Selected Projects Summary

<table>
<thead>
<tr>
<th>Project</th>
<th>Type</th>
<th>Outcome(s)</th>
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<tbody>
<tr>
<td>Randomized trial of a multifactorial fall injury prevention strategy: a joint initiative of PCORI and the National Institute on Aging of the National Institutes of Health (PI: Shalender Bhasin)</td>
<td>Patient-Centered Intervention</td>
<td>Serious fall injuries</td>
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<td>Upper extremity frailty assessment tool (PI: Joseph Gwin)</td>
<td>Clinical Assessment</td>
<td>Assessment validation</td>
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<td>Defining the impact of injuries in the elderly (PI: Kristan Staudenmayer)</td>
<td>Clinical Database</td>
<td>Pre-injury function and injury risk</td>
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<td>Supporting the creation of a LEARNing INteGrated health system to mobilize context-adapted knowledge with a Wiki platform to Improve the transitions of frail Seniors from emergency Departments to the cOMmunity: the LEARNING WISDOM program (PI: Patrick Achambault)</td>
<td>Clinical Database and Training</td>
<td>Program effectiveness</td>
</tr>
<tr>
<td>The value of emergency care for injured older adults (PI: Craig Newgard)</td>
<td>Secondary Data Analysis</td>
<td>Survival, resource utilization, costs</td>
</tr>
<tr>
<td>The one-year trajectory of elderly patients after cervical spine fracture (PI: Zara Cooper)</td>
<td>Secondary Data Analysis</td>
<td>Mortality, readmission, and health care utilization post-injury</td>
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<td>5-year survival following injury in geriatric patients (PI: Laura Criddle)</td>
<td>Secondary Data Analysis</td>
<td>5-year survival and time-to-death</td>
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<tr>
<td>Costs and effectiveness of trauma care in the elderly (PI: Ellen Mackenzie)</td>
<td>Secondary Data Analysis</td>
<td>Costs and clinical outcomes</td>
</tr>
<tr>
<td>Program on health research for older rural populations (PI: Gordon DeFriese)</td>
<td>Research Center</td>
<td>Aging processes of rural older adults</td>
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<tr>
<td>Shared Decision Making in the Emergency Department (ED): Development of a Policy-relevant Patient-centered Research Agenda (PI: Corita Grudzen)</td>
<td>Research Conference</td>
<td>None</td>
</tr>
</tbody>
</table>
Results: Gap Analysis

Figure 2. Gap Analysis

- Population
  - Gender Specific (0)
  - Geriatric Focus (10)
  - Minority Focus (1)

- Project Design
  - Research (6)
  - Program Development (4)

- Research Outcomes
  - Patient-Related Outcomes (6)
  - Program-Effectiveness (1)
  - Cost (2)
  - No clear Outcomes (1)

- Selected Geriatric Trauma Projects

- Secondary Data Analysis (4)
- Randomized Control Trials (1)
- Assessment Validation (1)
- Research Conference (1)
- Database Development (2)
- Research Center (1)
Conclusion

- Few projects focused on geriatric trauma
- Handful focused on research
- It is a critical public health problem
- There is a need for systematic attention
- More research is needed to identify interventions and long term outcomes in this population
References


