Falls are the leading cause of fatal and non-fatal injury in the United States among older adults. Many falls are preventable, thus falls prevention programs are essential to reduce morbidity and mortality, and to ease the associated economic burden from rising healthcare costs.

**Problem Statement**

Although numerous evidence-based fall prevention programs exist, there is a lack of knowledge regarding outcomes and effectiveness of these programs. This data could assist with identifying best practices, prioritization of efforts and allocation of resources to effectively prevent falls among older adults.

**Direct medical cost for falls totaled $34 billion in 2013.**

**Facts about Falling**

- Falling is a leading cause of death and hospitalization among older adults in U.S.
- 1 in 3 older adults 65+ falls at least once per year in U.S.
- 700,000 hospitalizations every year
- 2.5 million emergency department visits annually

Falling is a huge burden on healthcare cost.

Average healthcare cost of fall injury of people 72+ year old is $19,440.

Direct medical cost for falls totaled $34 billion in 2013.

**Introduction**

**Physical Domain**

1. Falling Risks
2. Physical Strength
3. Physical Well Being

**Social Domain**

1. Fear of Falling
2. Quality of Life

**Motivation**

**Conclusion**

1. Evidence-Based Fall-prevention programs such as MOB and Tai Chi can reduce fall incidents and fall risks in the physical and cognitive domains

2. Data is frequently not comprehensive due to patient drop-out and the lack of long-term follow-up

3. Measurements are not standardized/uniform making it impossible to compare different programs

4. Future studies should apply RCT design, utilize similar standardized tests and measures for outcomes, and include long-term follow-up

**Approach**

**Objective:** To perform a literature review to determine the outcomes of fall prevention programs in the following aspects: Fall Risks, Number of Falls, Fear of Falling, Physical Strength, Quality of Life, and Social Isolation

**Search Key Words:** “Matter of balance” AND outcomes or “Evidence-based fall prevention” AND outcomes

**Data Source:** PUBMED, CINAHL, Clinical Key, ProQuest, MEDLINE/Web of Science, CDC, and Medscape

**Inclusion Criteria:**

- Written in English
- Conducted in U.S.
- Community-dwelling elders
- Over 55 years of age
- Evidence-based fall prevention programs

- Must include one of the following outcomes: fall risks, number of falls, fear of falling, physical strength, quality of life, or social isolation

**Exclusion Criteria:**

- Case studies and case series

**Included Articles:**

- # of Randomized Clinical Trials: 2
- # of quasi-experimental studies: 0
- # of prospective cohort studies: 7

**Results**

<table>
<thead>
<tr>
<th>Article</th>
<th>Program</th>
<th>Type of Study</th>
<th>Health Outcomes (6 elements)</th>
<th>Results (Tests and Measures)</th>
</tr>
</thead>
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<tr>
<td>Chen 2015</td>
<td>MOB</td>
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<td>Number of falls, Risk of falling</td>
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<td>Improved # of physically unhealthy days (Health Interference Scale)</td>
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<tr>
<td>Tai Chi</td>
<td>RCT</td>
<td>Physical: Risk of Falling, Physical Strength, Number of Falls</td>
<td>Decreased fear of falling (SFFE)</td>
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**Conclusions**

1. Lack of funding: $10 million total investment for evidence-based fall prevention programs as opposed to $34 billion direct medical cost for falls

2. Lack of comparison between different programs to determine which ones are most effective and should be preferentially funded

3. Lack of standards to guide the future design of clinical trials to allow most effective data collection

**Select References**


**Table of Evidence-Based Fall Prevention Programs Proven in the U.S. (NCOA)**

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