Supplementary Appendix

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Supplementary Table 1. Counts and incidence rates of adjudicated serious fall injury events, hierarchically organized by most definitive injury type for each event.*

	Hospitalized Count (Incidence Rate)		Not hospitalized Count (Incidence Rate)	
Injury type	Intervention	Control	Intervention	Control
Hip fracture	39 (0.62)	43 (0.71)	1 (0.02)	0 (0.00)
Other fracture	53 (0.84)	57 (0.94)	109 (1.72)	118 (1.95)
Dislocation	0 (0.00)	0 (0.00)	5 (0.08)	3 (0.05)
Cut with evidence of closure	12 (0.19)	11 (0.18)	72 (1.14)	51 (0.84)
All other injuries	39 (0.62)	53 (0.88)	0 (0.00)**	0 (0.00)**

*All injury events are placed into the most definitive category for which they are eligible, ordered from most to least definitive: 1) hip fracture, 2) other fracture, 3) dislocation, 4) cut with evidence of closure, or 5) all other injuries. Incidence rates are per 100 person-years of follow-up (PYF). The intervention group had a total of 6338.31 PYF; the control group had a total of 6042.51 PYF.

**By definition, there are zero events in these cells, as events in the "all other injuries" category could only be considered a serious fall injury per STRIDE's definition if an overnight hospitalization was present.

Supplementary Table 2. Unadjusted total costs per person-year of follow-up for FIMA and adjudicated serious fall injuries, by healthcare system and overall.

		Unadjusted total costs/PYF			
	Total PYF	FIMA		Adjudicated SFI	
Healthcare system*		Intervention	Control	Intervention	Control
A	843	$1,615	$3,746	$956	$2,380
B	1,430	$2,472	$2,991	$1,088	$1,500
C	1,491	$2,321	$2,772	$1,147	$1,195
D	1,175	$1,886	$2,641	$895	$1,723
E	1,319	$1,875	$2,087	$866	$929
F	1,094	$1,957	$1,830	$1,156	$894
G	1,686	$1,765	$1,807	$802	$995
H	1,345	$2,574	$1,784	$1,340	$782
I	1,017	$2,006	$1,576	$1,000	$794
J	981	$1,793	$1,533	$972	$628
Overall	***12,381***	***$2,034***	***$2,289***	***$1,013***	***$1,173***

*Healthcare system letters are labeled "A" through "J" based on unadjusted total costs/PYF of their control practices for FIMA, ordered from highest to lowest.

Abbreviations: PYF, person-years of follow-up; FIMA, fall injuries with medical attention

Supplementary Table 3. Adjusted total costs per person-year of follow-up for adjudicated serious fall injuries.

	Total PYF	Adjusted total costs/PYF (95% CI)**	
Healthcare system*		Intervention	Control
A	843	$1,013 ($565-$1,444)	$2,289 ($1,386-$2,833)
B	1,430	$1,111 ($767-$1,481)	$1,498 ($942-$2,054)
C	1,491	$1,155 ($1,030-$1,300)	$1,095 ($292-$1,899)
D	1,175	$871 ($317-$1,332)	$1,706 ($1,429-$1,956)
E	1,319	$864 ($573-$1,037)	$929 ($927-$930)
F	1,094	$1,249 ($810-$2,290)	$860 ($296-$1,341)
G	1,686	$728 ($293-$918)	$990 ($504-$1,566)
H	1,345	$1,333 ($994-$1,657)	$768 ($287-$1,301)
I	1,017	$995 ($481-$1,731)	$796 ($653-$933)
J	981	$1,047 ($431-$1,533)	$607 ($157-$1,279)
Overall	***12,381***	***$1,021 ($900-$1,134)***	***$1,145 ($965-$1,351)***

*Healthcare system letters are labeled "A" through "J" based on unadjusted total costs/PYF of their control practices for FIMA, ordered from highest to lowest.

**95% CI based on bootstrapped estimates from Tweedie model including covariates used in constrained randomization, treatment arm, and dummy indicators for healthcare systems and their interactions with treatment arm.

PYF, person-year of follow-up; CI, confidence interval; FIMA, fall injuries with medical attention

Supplementary Table 4. Omnibus (Type 3) Wald tests for cost of FIMA, comparing results using different data sources for costs.

All healthcare systems	**Bohl et al.**	**Hoffman et al.**
Effect	*p value*	*p value*
Treatment arm (intervention vs. control)	0.340	0.155
Healthcare system (dummy-coded)	0.035	0.037
Healthcare system by treatment arm interaction	0.090	0.258
Tertile of practice size (dummy-coded)	0.043	0.555
Study participants in practice were majority white race (vs. not)	0.429	0.464
Urban practice (vs. rural)	0.337	0.348

This table shows results for the primary analysis using cost data from Bohl et al.(22) , and a sensitivity analysis substituting data from Hoffman et al. (24).

Abbreviations: FIMA, fall injuries with medical attention

Consolidated Health Economic Evaluation Reporting Standards (CHEERS) 2022 Checklist

Title

1. Title: Identify the study as an economic evaluation and specify the interventions being compared.
    - Reporting location: Title page

Abstract

2. Abstract: Provide a structured summary that highlights context, key methods, results, and alternative analyses.
    - Reporting location: Abstract page

Introduction

3. Introduction (Background and Objectives): Give the context for the study, the study question, and its practical relevance for decision making in policy or practice.
    - Reporting location: Introduction section, all paragraphs

Methods

4. Health economic analysis plan: Indicate whether a health economic analysis plan was developed and where available.
    - Reporting location: Methods section, overview sub-section

5. Study population: Describe characteristics of the study population (such as age range, demographics, socioeconomic, or clinical characteristics).
    - Reporting location: Table 1

6. Setting and location: Provide relevant contextual information that may influence findings.
    - Reporting location: Introduction section, second paragraph; Methods section, overview sub-section

7. Comparators: Describe the interventions or strategies being compared and why chosen.
    - Reporting location: Introduction section, second paragraph.

8. Perspective: State the perspective(s) adopted by the study and why chosen.
    - Reporting location: Methods section, calculation of costs sub-section

9. Time horizon: State the time horizon for the study and why appropriate.
    - Reporting location: Methods section, calculation of costs sub-section

10. Discount rate: Report the discount rate(s) and reason chosen.
    - Reporting location: Methods section, calculation of costs sub-section

11. Selection of outcomes: Describe what outcomes were used as the measure(s) of benefit(s) and harm(s).
    - Reporting location: Not applicable

12. Measurement of outcomes: Describe how outcomes used to capture benefit(s) and harm(s) were measured.
    - Reporting location: Not applicable.

13. Valuation of outcomes: Describe the population and methods used to measure and value outcomes.
    - Reporting location: Not applicable.

14. Measurement and valuation of resources and costs: Describe how costs were valued.
    - Reporting location: Methods section, including data sources sub-section, outcomes sub-section, and calculation of costs subsection

15. Currency, price date, and conversion: Report the dates of the estimated resource quantities and unit costs, plus the currency and year of conversion.
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16. Rationale and description of model: If modeling is used, describe in detail and why used. Report if the model is publicly available and where it can be accessed.
    - Reporting location: Not applicable.

17. Analytics and assumptions: Describe any methods for analyzing or statistically transforming data, any extrapolation methods, and approaches for validating any model used.
    - Reporting location: Methods section, statistical analysis sub-section

18. Characterizing heterogeneity: Describe any methods used for estimating how the results of the study vary for subgroups.
    - Reporting location: Methods section, statistical analysis sub-section

19. Characterizing distributional effects: Describe how impacts are distributed across different individuals or adjustments made to reflect priority populations.
    - Reporting location: Not reported.

20. Characterizing uncertainty: Describe methods to characterize any sources of uncertainty in the analysis.
    - Reporting location: Methods section, statistical analysis sub-section

21. Approach to engagement with patients and others affected by the study: Describe any approaches to engage patients or service recipients, the general public, communities, or stakeholders (e.g., clinicians or payers) in the design of the study.
    - Reporting location: Not reported.

Results

22. Study parameters: Report all analytic inputs (e.g., values, ranges, references) including uncertainty or distributional assumptions.
    - Reporting location: Methods section, calculation of costs sub-section; Table 2

23. Summary of main results: Report the mean values for the main categories of costs and outcomes of interest and summarize them in the most appropriate overall measure.
    - Reporting location: Table 3

24. Effect of uncertainty: Describe how uncertainty about analytic judgments, inputs, or projections affects findings. Report the effect of choice of discount rate and time horizon, if applicable.
    - Reporting location: Table 3; Figure 1

25. Effect of engagement with patients and others affected by the study: Report on any difference patient/service recipient, general public, community, or stakeholder involvement made to the approach or findings of the study.
    - Reporting location: Not reported.

Discussion

26. Study findings, limitations, generalizability, and current knowledge: Report key findings, limitations, ethical, or equity considerations not captured and how these could impact patients, policy, or practice.
    - Reporting location: Discussion section, all paragraphs.

Other Relevant Information

27. Source of funding: Describe how the study was funded and any role of the funder in the identification, design, conduct, and reporting of the analysis.
    - Reporting location: Title page

28. Conflicts of interest: Report authors' conflicts of interest according to journal or International Committee of Medical Journal Editors requirements.
    - Reporting location: Title page

Acknowledgments

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