Anschutz | Colorado Clinical and Translational Sciences Institute (CCTSI)

ALERT-ED: Awareness & Linkage to Resources for At-Risk ED Patients

PEET-25-003

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Introduction

Relevance and Background

In 2023 **53,279** older adults in Colorado presented to the ED for a fall.

- These falls cost the state of Colorado **$739 M**.
- **1 in 3** older adults who go to the ED for a fall, fall again within 6 months.

EDs routinely screen for fall risk, but patients are rarely informed of their results or connected with resources to decrease risk despite many fall prevention programs existing that can reduce fall risk by up to **30%.**

Digital health technologies can be used to notify patients of their fall risk and refer them to appropriate, accessible programs.

We leveraged UCHealth's conversational artificial intelligence (AI) chatbot, Livi.

Specific Aims

Specific Aims and Overarching Hypothesis

Aim 1: Engage patient and ED staff to optimize the intervention's feasibility, usability, and acceptability, and plan for subsequent widespread implementation at 8 UCHealth EDs

Aim 2: Test the impact of ALERT-ED revisits for falls at six months following a cluster randomized, multiple-crossover design, and assess patient reported engagement with community fall prevention programs at 1 and 6 months.

Overarching Hypothesis: We can improve patient health via pragmatic, automated notification of screening results and referral to resources. Although we designed ALERT-ED to intervene on fall risk in EDs, the intervention could be deployed for other health concerns central to UCHealth's mission including for patients seeking care for transplants, cancer, brain health, or orthopedic concerns.

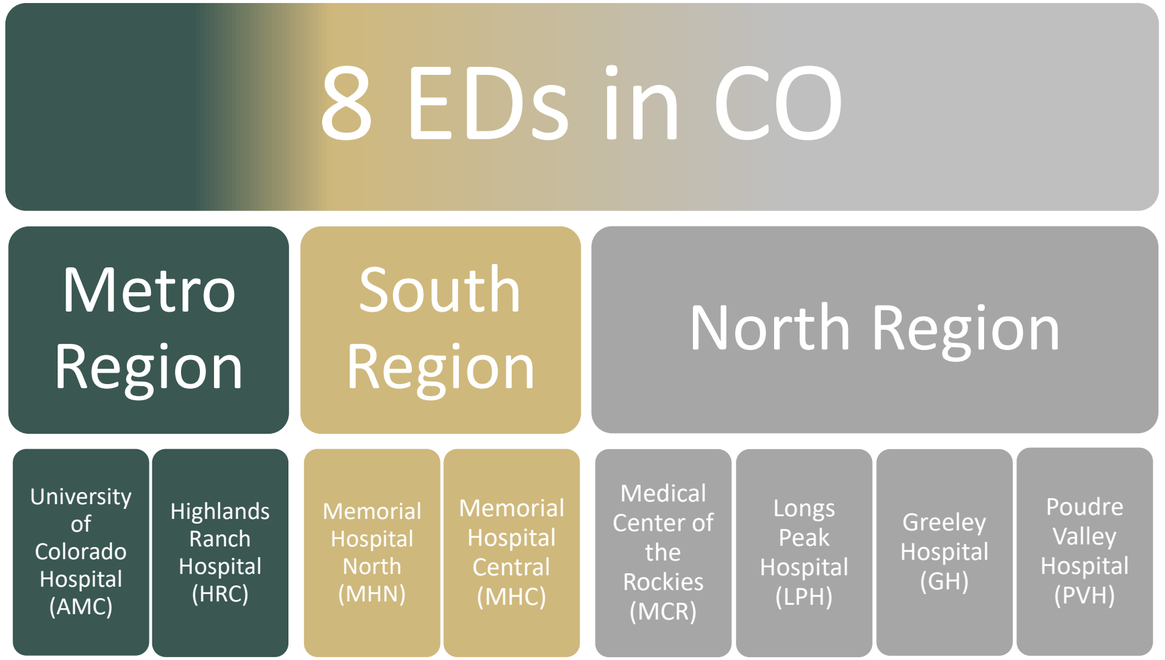
Methods

Aim 1:

- Semi-structured qualitative interviews to optimize and inform the design of patient and clinical staff resources to support broader implementation
- Clinical staff were recruited from our local site or nurse champions identified in preparation for Aim 2
- Patients and caregivers interviewed during their ED visit

Aim 2:

- Single-center, multi-ED, cluster-randomized crossover trial
- EDs are randomized with 4 sites starting in the intervention and 4 in the control condition in week 1; then they switch
- Nine months of recruitment and six months of follow up
- Primary outcome: fall-related ED visits within six months
- Secondary outcome: engagement with community fall prevention programs

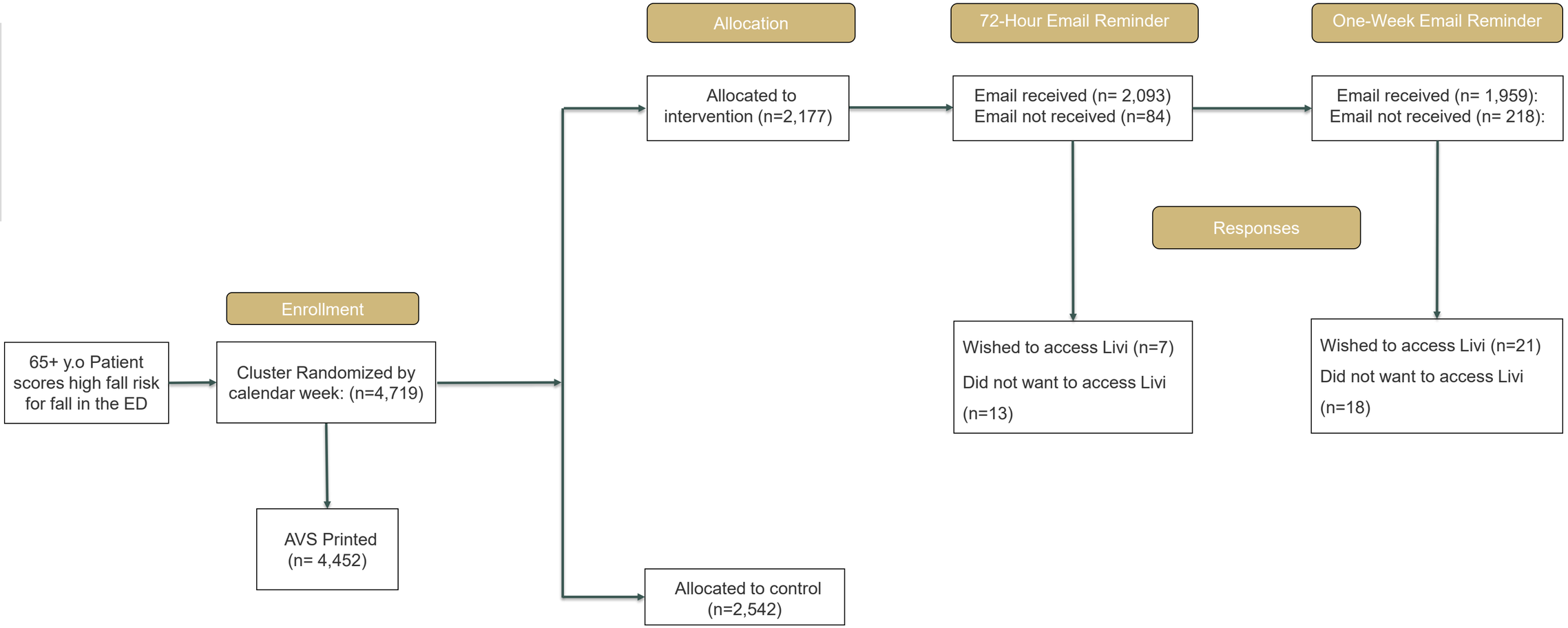


Aim 1 Results

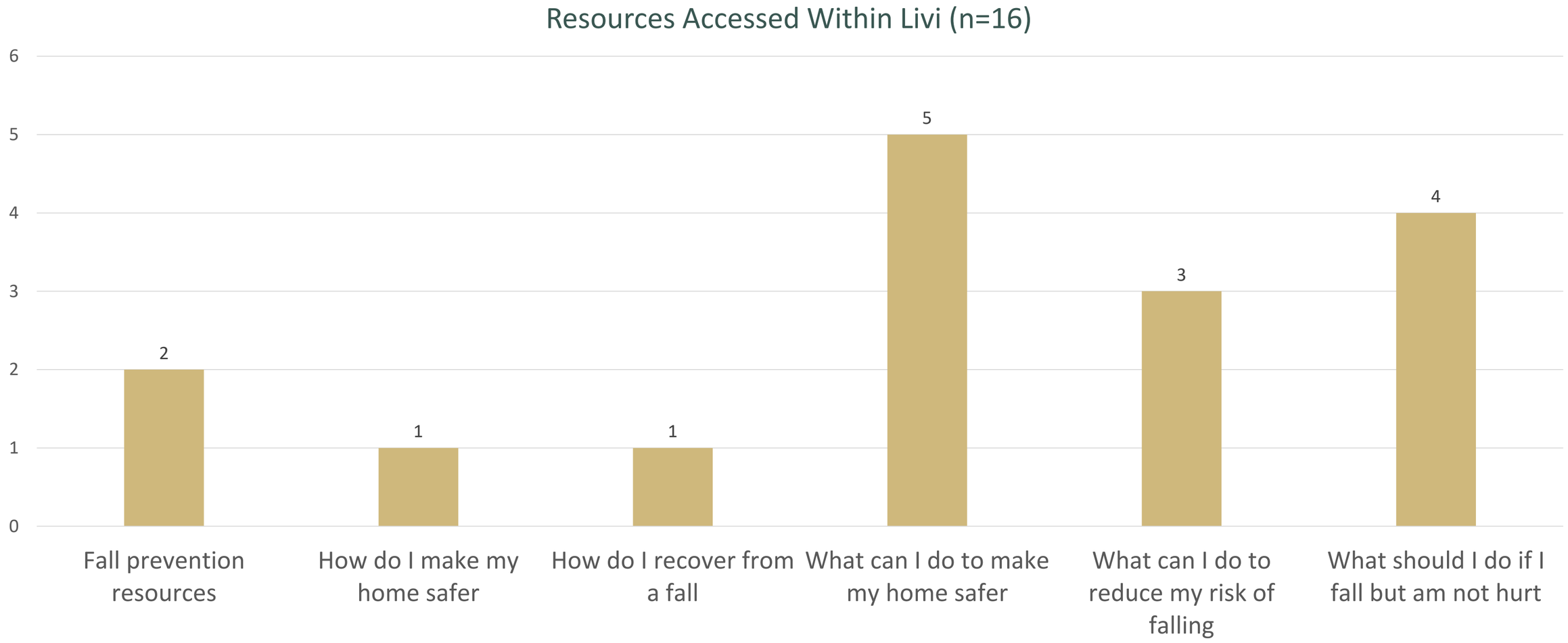
- August – October 2025
- Nurses: 6
- Patients: 11
- Caregivers 4

Feasibility	Acceptability	Usability
Nurses felt that employing dissemination strategies would make integration of Livi in the ED more feasible	Patients, caregivers, and nurses felt that trust, readability, and personalization of Livi increased acceptability A few patients expressed privacy concerns and skepticism around artificial intelligence which impact acceptability	Some patients and nurses reported that the QR interface and the lack of a password improved usability, while others found the QR code difficult to use.

Aim 2 Preliminary Data Week 0-7



Aim 2 Preliminary Data Week 0-7



Email Responses from Participants

“FYI, I have enrolled in and am currently attending a six-week "Better Balance" class. I have purchased and am being monitored for falls using a Life monitoring service. I have purchased better shoes and also have begun regular use of a cane and arollator walker. All of this has restricted my previous active lifestyle but I have to admit I have reached an age where things have to change or suffer unwanted consequences. I lost a dear friend less than a year ago who sufferedmajor head trauma through a fall from which he never recovered. This fact is foremost in my mind at the present time.”

-- 86 y.o White Male

Dissemination & Future Plans

- Continue to optimize engagement strategies, including asking frontline PAR staff to engage patients
- Two papers accepted: JMIR Formative, Academic Emergency Medicine
- Two more papers expected: patient engagement outcomes, trial primary outcomes

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Preprints (earlier versions) of this paper are available at https://preprints.jmir.org/preprint/77237, first published 12.May.2025.

Development and Health System Deployment of an Electronic Health Record–Integrated Chatbot Intervention for Connecting Fall Risk Screening to Community Resources After Emergency Department Visits: Implementation Study

Audrey Keleman[1,2]; Megan Bounds[3]; Maxwell Lunt[4]; Jennifer Portz[5]; Bucky Ferozan[6]; Jonathan Gomez Picazo[3]; Kelly Bookman[3]; Hillary D Lum[7]; Elizabeth M Goldberg[3]

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ORIGINAL ARTICLE | Full Access

ALERT-ED: Awareness and Linkage to Resources for At-Risk Emergency Department Patients: Interviews with Older Patients, Caregivers, and Nurses

William Mundo, Maren Clark, Jonathan Gomez Picazo, Jennifer Dickman Portz, Elizabeth M. Goldberg

First published: 16 March 2026 | https://doi.org/10.1111/acem.70261 | VIEW METRICS

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CTS Roadblock Addressed

1. **Failure to Translate Evidence-Based Interventions into Routine Care (T3 Translation)** → ALERT-ED connects high fall risk patients to evidence-based community fall prevention programs
2. **Lack of Scalable Health System Interventions** → ALERT-ED enables rapid, low-cost scaling of preventative interventions across health systems
3. **Clinician Workflow and Time Constraints** → ALERT-ED demonstrates how preventative care can be delivered without increasing clinician workload, a key translational barrier
4. **Disconnection Between Health Systems and Community Resources** (T4 Translation) → ALERT-ED connects ED patients to local programs