

Keep them STEADI: Implementation of a Hospital-Based Fall Prevention Program





- **1 out of 3 older adults (65 yrs or greater) fall each year**
- **In 2010, 2.3 million nonfatal fall injuries among older adults were treated in emergency departments and more than 662,000 of these patients were hospitalized**
- **In 2010, the direct medical cost of falls, adjusted for inflation, was \$30 billion**

Level 1 Trauma Center in Dallas, Texas

Annual Trauma Activations \approx 8,000

Annual Admissions \approx 4,100

Trauma \approx 3,500

Burn \approx 600





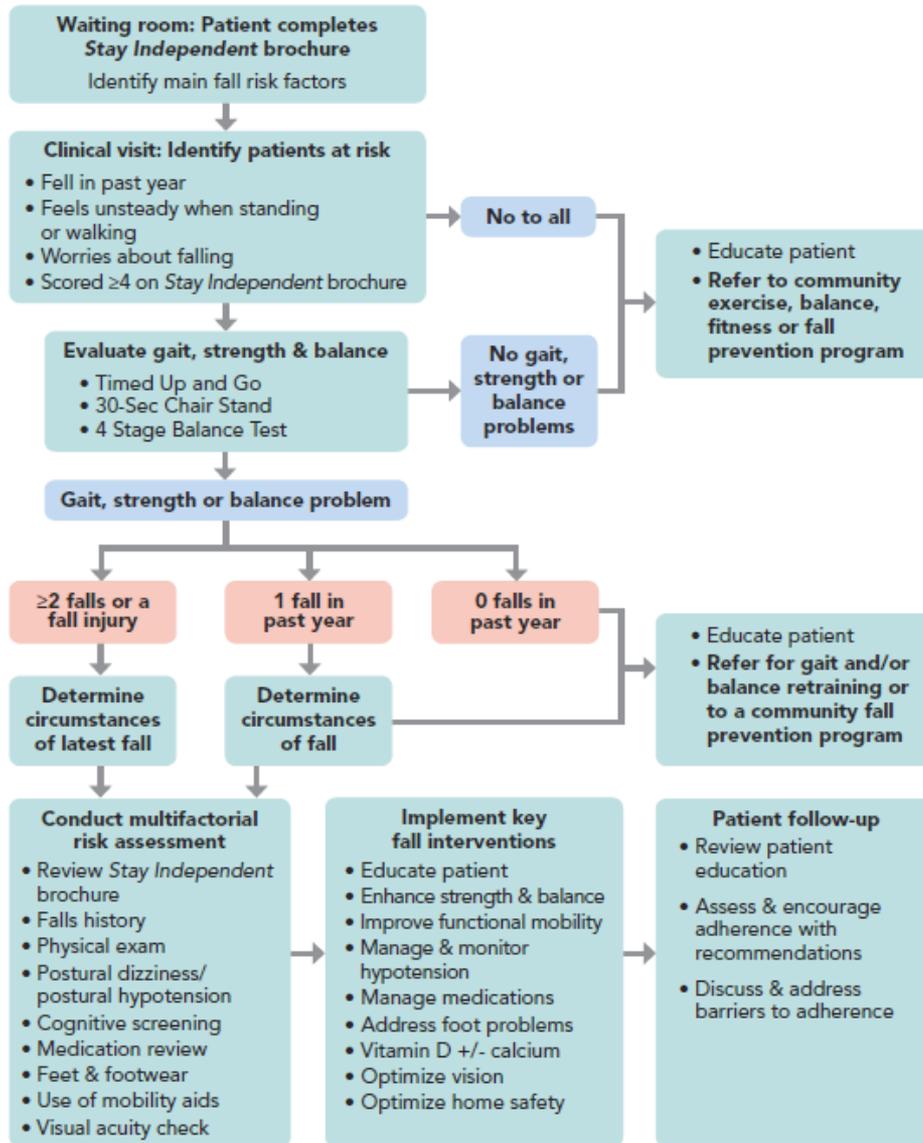
Injury Prevention Approach for Older Adult Falls

Influencing Policy & Legislation	<ul style="list-style-type: none"> • Encourage state and local governments to promote policies and programs that help reduce the incidence and risk of falls among older adults • Support the Texas Driver Responsibility Program to help support designated Trauma Centers across the State provide for uncompensated care
Changing Organizational Practices	<ul style="list-style-type: none"> • Support changes to the Texas Trauma Registry System to improve available data on falls • Work with hospitals and geriatric healthcare providers to implement the CDC Stopping Elderly Accidents, Deaths & Injuries (STEADI) Tool Kit • Support changes to the Texas Trauma System structure that improve the quality of care provided to geriatric patients, support the continuum of care, and improve efficiencies • Support the implementation of the Geriatric Trauma Protocol within the Trauma Center at Parkland
Fostering Coalitions & Networks	<ul style="list-style-type: none"> • Participate in local coalitions (i.e., Area Agency on Aging, church groups, etc.). • Promote multidisciplinary RAC membership including recruitment of community members
Educating Providers	<ul style="list-style-type: none"> • Educate healthcare providers about the the CDC Stopping Elderly Accidents, Deaths & Injuries (STEADI) Tool Kit • Available presentation regarding the effects of trauma on the geriatric patient population • Educating providers regarding available materials to assist with patient education on fall prevention
Promoting Community Education	<ul style="list-style-type: none"> • Promote raising awareness of who is at risk for falls within families and the community • Available presentation / handouts regarding Home Safety Checks • Participation in local RAC initiatives • Participation in local safety fairs
Strengthening Individual Knowledge & Skills	<ul style="list-style-type: none"> • Utilize social media to educate individuals and families ways to prevent falls among older adults • Participation in local safety fairs • CDC Stopping Elderly Accidents, Deaths & Injuries (STEADI) Tool Kit

- **Stopping Elderly Accidents, Deaths, & Injuries (STEADI)**
- **Designed by the CDC for healthcare providers who treat older adults who are at risk of falling or who may have fallen in the past**
- **Toolkit**
- **<http://www.cdc.gov/homeandrecreational/safety/Falls/steady/index.html>**
- **Based on an algorithm adapted from the American and British Geriatric Societies' Clinical Practice Guidelines**



Algorithm for Fall Risk Assessment & Interventions



Screen all older patients for falls

CDC

- Brochure *Stay Independent*

Parkland Trauma Center

- Triage

MOI ROS Trauma Physical Exam Attending Attestation Note				
Fall/Jump trauma				
Types	<input type="button" value="Fall"/> <input type="button" value="Jump"/>			
Approximate height (ft)	<input type="radio"/> 1 - 2 ft	<input type="radio"/> 3 - 5 ft	<input type="radio"/> 6 - 10 ft	<input type="radio"/> 11 - 15 ft
	<input type="radio"/> more than 50 ft	<input type="radio"/> unknown		<input type="radio"/> 16 - 20 ft
Fall location	<input type="checkbox"/> downstairs	<input type="checkbox"/> from a bed	<input type="checkbox"/> from a bridge	
	<input type="checkbox"/> from a ladder	<input type="checkbox"/> from a roof	<input type="checkbox"/> from a stool	
	<input type="checkbox"/> from a vehicle	<input type="checkbox"/> from an animal	<input type="checkbox"/> from bicycle	
	<input type="checkbox"/> from window/balcony	<input type="checkbox"/> in a fire	<input type="checkbox"/> in the bathroom	
	<input type="checkbox"/> in unknown circumstance	<input type="checkbox"/> jumping from height	<input type="checkbox"/> recreational/playing	
	<input type="checkbox"/> running	<input type="checkbox"/> skiing/snowboarding	<input type="checkbox"/> standing	
	<input type="checkbox"/> swimming/diving	<input type="checkbox"/> tripping	<input type="checkbox"/> walking	
	<input type="checkbox"/> while running from police			
Description of fall	<input type="checkbox"/> while on a ladder	<input type="checkbox"/> while on a roof	<input type="checkbox"/> while on a window/balcony	
	<input type="checkbox"/> while on a stool	<input type="checkbox"/> while on a bed	<input type="checkbox"/> in a fire	
	<input type="checkbox"/> in unknown circumstances	<input type="checkbox"/> while recreational/playing	<input type="checkbox"/> while running	
	<input type="checkbox"/> while standing	<input type="checkbox"/> while walking	<input type="checkbox"/> when jumping from height	
	<input type="checkbox"/> while swimming/diving			
Surface type	<input type="checkbox"/> carpet	<input type="checkbox"/> hard floor	<input type="checkbox"/> grass	<input type="checkbox"/> dirt
	<input type="checkbox"/> furniture	<input type="checkbox"/> stairs	<input type="checkbox"/> other (comment)	<input type="checkbox"/> concrete
Safety devices	<input type="checkbox"/> none	<input type="checkbox"/> protective goggles	<input type="checkbox"/> protective clothing	<input type="checkbox"/> 3-pt seatbelt
	<input type="checkbox"/> unrestraint	<input type="checkbox"/> helmet	<input type="checkbox"/> airbao frontal	<input type="checkbox"/> airbao side

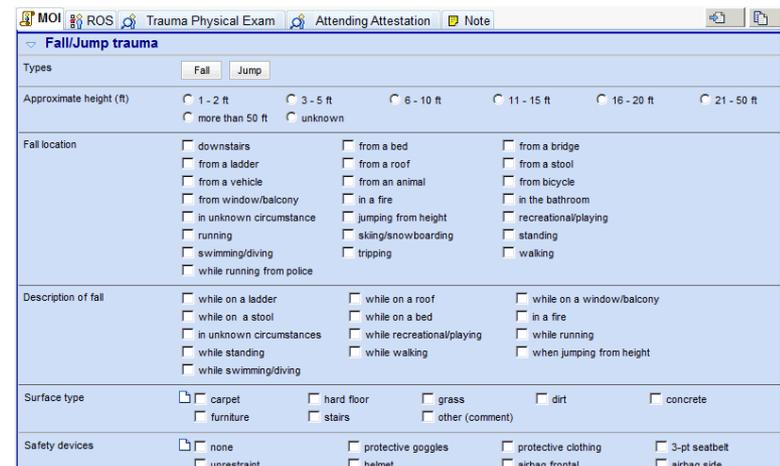
Identify modifiable fall risk factors

CDC

- Review brochure Stay Independent
- Take a falls history

Parkland Trauma Center

- Mechanism of Injury Review
- Community Paramedic



The screenshot shows a web-based medical form titled "Fall/Jump trauma". The form is organized into several sections, each with a set of checkboxes for data entry. The sections include:

- Types:** Radio buttons for "Fall" and "Jump".
- Approximate height (ft):** Radio buttons for "1 - 2 ft", "3 - 5 ft", "6 - 10 ft", "11 - 15 ft", "16 - 20 ft", "21 - 50 ft", and "more than 50 ft".
- Fall location:** A grid of checkboxes for various locations and activities, such as "downstairs", "from a ladder", "from a vehicle", "from window/balcony", "in unknown circumstance", "running", "swimming/diving", "while running from police", "from a bed", "from a roof", "from an animal", "in a fire", "jumping from height", "skiing/snowboarding", "tripping", "from a bridge", "from a stool", "from bicycle", "in the bathroom", "recreational/playing", "standing", and "walking".
- Description of fall:** A grid of checkboxes for circumstances like "while on a ladder", "while on a stool", "in unknown circumstances", "while standing", "while swimming/diving", "while on a roof", "while on a bed", "while recreational/playing", "while walking", "while on a window/balcony", "in a fire", "while running", and "when jumping from height".
- Surface type:** Checkboxes for "carpet", "furniture", "hard floor", "stairs", "grass", "other (comment)", "dirt", and "concrete".
- Safety devices:** Checkboxes for "none", "unrestraint", "protective goggles", "helmet", "protective clothing", "airbag frontal", "3-pt seatbelt", and "airbag side".

Evaluate gait, lower body strength & balance – address identified deficits

CDC

- Timed Up & Go Test (recommended); 30-second Chair Stand Test; 4-Stage Balance Test

Parkland

- Order for Physical Medicine & Rehabilitation consult placed on admission
- Evaluation completed and recommendations prior to discharge

Conduct focused physical exam – address modifiable and/or treatable risk factors

CDC

- Addition to customary medical exam - assess muscle tone, screen for cognitive impairment & depression, examine feet & evaluate footwear

Parkland Trauma Center

- Tertiary Physical Exam
- Physical Medicine & Rehabilitation Exam
- SBIRT with Mental Health Screen

Assess for & manage postural hypotension

CDC

- Orthostatic blood pressure assessment
- Medication review
- Brochure *Postural Hypotension, What It Is and How to Manage It*

Parkland Trauma Center

- Routine nursing care
- Medication review

Review & manage medications

CDC

- Attempt to reduce or change psychoactive medications

Parkland Trauma Center

- Medication reconciliation
- Pharmacy medication review
- American Geriatrics Society Beers assessment
 - guideline for healthcare professionals' to help improve the safety of prescribing medications for older adults - emphasizes deprescribing/avoiding specific medications

Increase vitamin D

CDC

- Recommend at least 800 IU vitamin D supplementation

Parkland Trauma Center

- Admission orders
- Review by Trauma Advance Practice Providers / Trauma Nurse Clinician

Assess visual acuity & optimize vision

CDC

- Administer brief vision test
- Refer to ophthalmologist or optometrists

Parkland Trauma Center

- Ophthalmologist consult as needed

Address home safety & how to reduce fall hazards

CDC

- Counsel patient about reducing fall hazards
- Brochure *Check for Safety*
- Refer to occupational therapy

Parkland Trauma Center

- Physical Medicine & Rehabilitation consult
- Community Paramedic program
 - Home Assessment Checklist

Educate about what causes falls & how to prevent them

CDC

- Educate patient about fall prevention strategies
- Brochure, *What YOU Can Do to Prevent Falls*
- Recommend exercise or community fall prevention programs

Parkland Trauma Center

- Trauma Advanced Practice Providers / Trauma Nurse Clinicians
- Brochure, *Fall Prevention*

Identify community exercise & fall prevention programs

CDC

- Contact senior services providers & community organizations that provide exercise & fall prevention programs to seniors
- Compile a resource list of available programs

Parkland Trauma Center

- Outpatient therapies as recommended
- Community Paramedic program
- Resource list



Prior to STEADI

- 299 (10 %) \geq 65 yrs
 - Leading MOI: Fall
 - 193 (65%) \geq 65 yrs
 - Average age: 77
 - ISS: 1-50, avg 11.20
 - moderate injury
 - Median LOS: 7.9 days
 - 46.8 % discharge home

With STEADI

- 266 (10%) \geq 65 yrs
 - Leading MOI: Fall
 - 165 (62%) \geq 65 yrs
 - Average age: 77
 - ISS: 1-43, avg 12.22
 - moderate injury
 - Median LOS: 6.5 days*
 - 54.5% discharged home*

* $p < 0.01$



- **Increasing knowledge by staff members regarding the severity of geriatric trauma**
- **Advancing clinical practice guidelines**
- **Better integration of services**



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