Using Information Technology to Assist in Redesign of a Fall Risk Prevention Program

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Falls Data

- **Most commonly occurring adverse event in healthcare**

- **Injury is 5th leading cause of death in older adults**

- **% of elderly person will double over next three decades to 70 million**

Program

- Problems at Methodist Healthcare System
- Developing a customized tool
- Integration into documentation
- Validation
- Recommendations

Specific Problems

Using Morse (1997), Hendrich (1995)

- **<u>Patients still falling</u>**
- **Missed if patient transferred**
- **Missed following change in condition**
- **Incomplete**
- **Copied**

Goals of Redesign Fall Project

- **Tailor assessment to MHS population**
- **Ensure fall risk reassessment Q12H**
- **Ensure fall risk reassessment with status change and patient transfer**
- **Improve accuracy of assessments**
- **Tailor interventions to specific risk**
- **Decrease falls and severity of falls**

Step One: MHS Custom Fall Assessment

- **6 Months Fall Data at 6 Hospitals**
- **Morse, Tideiksaar, Hendrich and Briggs**
- **30+ Factors Identified from Literature**
- **Compared to MHS Factors**

- **13 Fall Risk Factors Identified for MHS**

Where to Start?

What were nurses already do well?

Complete Shift Assessments at 97%

Step Two: Embed Indicators

Fall Risk Indicators by Fall Categories

Activity	Disorientation	Post Medication	Toileting
Age > 70	Decreased Mentation	Medication	Incontinence
Hearing/ Vision	Cognitive Impairment	Age >70	Urination Problems
Assistive Device	Age >70	Pain	Hearing/Vision
Altered Activity	Medication	Altered Activity	IV or Saline Lock
Altered Mobility	Hearing/ Vision	Altered Mobility	Constipation

Risk Assessment Prior to Changes

Modified Hendrich Fall Risk Assessment

Confusion/ Disorient:	3	CONFUSION
Depression:	0	NO DEPRESSION
Altered Elimination:	3	ALT. ELIMINATION
Falls in last 3 Months:	7	RECENT HX FALLS
Impaired Mobility/ Weakness:	0	NO IMP. MOBILITY
Dizziness/ Vertigo:	0	NO DIZZINESS/ VERTIGO
TOTAL FALL RISK:	13	

0 to 2 = Low Risk
3 to 6 = Mod Risk
>6 = High Risk

Risk Assessment Following Changes

HAS PATIENT FALLEN THIS ADMISSION?: N
FALL AND SKIN SCORES AUTO CALCULATE FROM THIS ASSESSMENT
DO NOT RE-NUMBER.

FALL RISK PRECAUTIONS:	Toileting: 2 **	Disorientation: 4 **
(6 OR MORE HIGH RISK)	Activity: 2 **	Post Med: 6 **

FALL DATA FROM ADMISSION HX:
Previous Fall: Y Describe How Fall Occurred: FELL AT HOME IN SHOWER

Scores auto-calculate from admission and shift assessment.

Step Three: Develop Care Plan Problems

Problem: Fall: Activity Precautions

Problem: Fall: Disorientation Precautions

Problem: Fall: Post Medication Precautions

Problem: Fall: Toileting Precautions

Care Plan Problem List Before:

MULTI-DISCIPLINARY PROBLEM REVIEW LAST REVIEWED: 07/15/04

	PROBLEM	PT RESPONSE
1.	Problem: Pain	3 MOD PROG
2.	Problem: Impaired Self-Feeding	2 MIN PROG
3.	Problem: Nutritional Status (12)	3 MOD PROG
4.	Problem: Swallowing Impairment	3 MOD PROG
5.	Problem: High Risk Fall (Screen >6) (11)	3 MOD PROG
6.	Problem: Altered Respiratory Status (RT)	4 GOOD PRO
7.	Problem: Need for PT(1) Intervention	4 GOOD PRO
8.	Problem: Need for SLP(1) Intervention	2 MIN PROG
9.	Spiritual Need: Emotional/Spiritual Supp	3 MOD PROG

Care Plan Problem includes one editable, generic goal with multiple optional interventions. The associated Care Guidelines are general intervention suggestions only.

Care Plan Problem List After:

MULTI-DISCIPLINARY PROBLEM REVIEW — LAST REVIEWED: 07/15/04

	PROBLEM	PT RESPONSE
1.	Problem: Pain	3 MOD PROG
2.	Problem: Impaired Self-Feeding	2 MIN PROG
3.	Problem: Nutritional Status (12)	3 MOD PROG
4.	Problem: Fall: Disorientation Precaution	3 MOD PROG
5.	Problem: Fall: Post Med Precautions	3 MOD PROG
6.	Problem: Swallowing Impairment	4 GOOD PRO
7.	Problem: Altered Respiratory Status (RT)	4 GOOD PRO
8.	Problem: Need for PT(1) Intervention	2 MIN PROG
9.	Problem: Need for SLP(1) Intervention	3 MOD PROG

Care Plan Problem includes one editable, generic goal with interventions and Care Guidelines Specific to the type of fall risk identified.

Intervention Comparison Sample

Suggested for all High-Risk

* Bed/ Chair alarm
* Rubber matting
* Low bed
* Frequent rounds

Post-Medication

* Pharmacy consult
* Pain management alternatives
* Assess postural hypotension
* Remind patient to rise slowly
* Bed near nurse station

Toileting

* Incorporate Pt's schedule
* Bathroom escort
* Bedside commode
* Toilet Q2H and prn

Step Four: Validation of Tool Paper Pilot

- 93 Records
- Evaluated using Hendrich:
  High risk value if 3 or more indicators identified per category

.96 correlation with the Hendrich Tool

Step Five: Validation of Scoring

(Formally named ADAPT Fall Tool)

1. **Documentation and Reassessment**

2. **Frequency of fall identification**

3. **Accuracy of fall identification**

Documentation and Reassessment

- Fall risk assessment increased to 100% (Q12H)
- Fall risk reassessment performed within 8 hours of transfer to another unit
- Fall risk reassessment performed with significant change in status

Goals were met! But was the data valid?

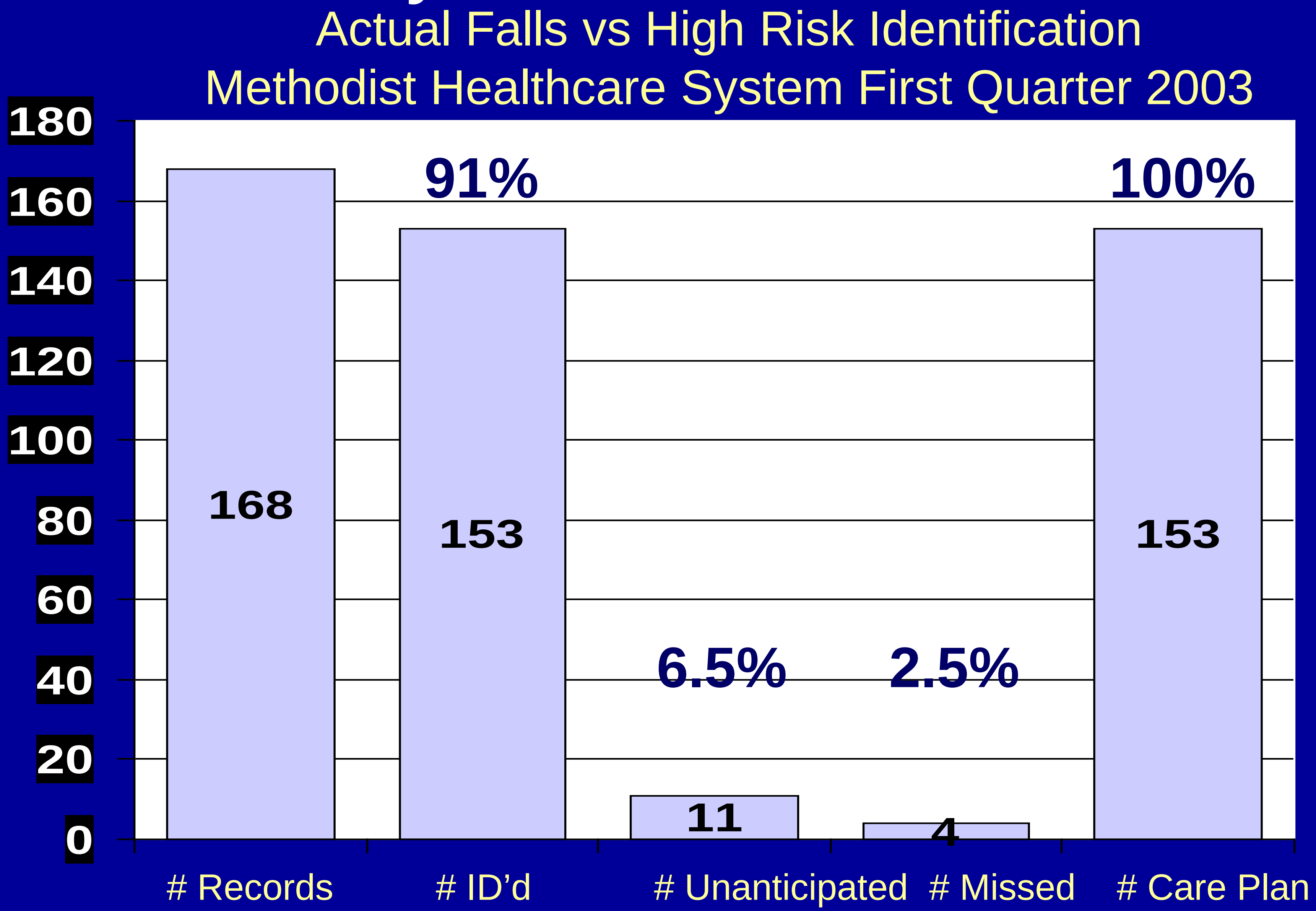
Frequency of Fall Identification

- 6402 records reviewed
- 38% of patients identified at fall risk
- Fall risk highest in activity and post-medication categories

Accuracy of Fall Identification

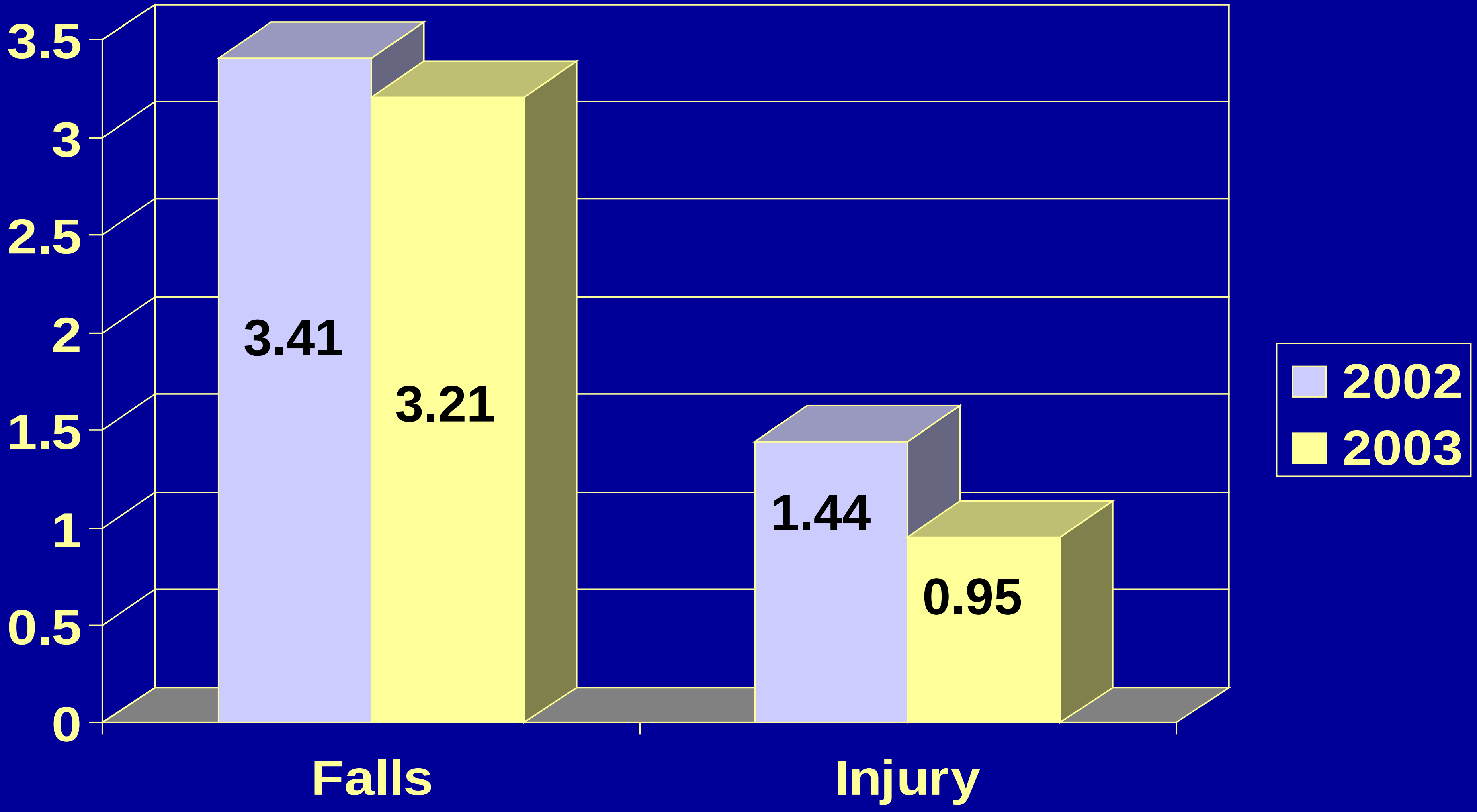
- 168 records reviewed
- 2 factors missed: CRF and recent abdominal surgery
- 100% of high risk records (153) had appropriate care plan problems and interventions

Accuracy of Fall Identification



Results

MHS Falls and Injury Data 2002-2003



Recommendations

- Specialty specific fall assessments
- Pursue development of embedded indicators
- Development of middle-ware
- Additional inter-rater reliability component

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