

Learn from Data to Reduce Fall Risk in Your Hospital: Case Study Example

Conducting a case study in your hospital is a valuable method to understand and uncover gaps in your hospital's systems of care, identify solutions, and prioritize actions. The following case study example demonstrates how data collected as part of a fall risk reduction program can be used to learn and take actions toward improving patient safety outcomes. The resource, Learning from Data, located on the UNMC CAPTURE Falls Website, is a guide to using the Data, Information, Knowledge, Wisdom (DIKW) framework specifically for the purpose of fall risk reduction.

Background

Please note, the hospital data and information described in this example is hypothetical and intended for educational purposes only.

The hospital in this example case study is a 25-bed Critical Access Hospital (CAH) located in a small rural community in the Midwest. Patient safety has always been a priority at the hospital; however, the new quality coordinator was concerned with the seemingly high number of falls. Additionally, the facility has recently experienced a high rate of turnover in leadership and front-line staff. Reasons for leaving the hospital included: retirement, relocation, and personnel exiting the workforce to take care of family members.

At the suggestion of the hospital's network coordinator, the quality coordinator gathered an interprofessional group of hospital staff and together they completed the CAPTURE Falls Gap Analysis Scorecard. Additionally, the quality coordinator created charts and graphs displaying trends in patient fall events over time using data collected over the previous 18-months and reviewed current policies and procedures regarding fall risk reduction.

Using data collected from 1) CAPTURE Falls Gap Analysis Scorecard, 2) Fall Event Reports and Post-fall Huddle documentation, and 3) Process Audits, the quality coordinator and interprofessional group explored their hospital's fall risk reduction system by completing a series of tables modeled after the Data-Information-Knowledge-Wisdom (DIKW) framework:

- DATA/INFORMATION (Column 1)
 - Answers the question, "What are the facts in our facility?"
- KNOWLEDGE (Column 2)
 - Answers the question, "Why might this be happening within our facility?"
- WISDOM (Column 3)
 - Answers the question, "What actions, if any, should we take?"

Data Source 1: Gap Analysis Scorecard

Completing a Gap Analysis Scorecard can provide your hospital with information on the current state of the structures, processes, and outcomes of your fall risk reduction program. For this case study example, a completed hypothetical gap analysis scorecard was used to complete the DIKW table (Table 1) for this learning source.

Table 1. DIKW for Fall Risk Reduction Program Gap Analysis Scorecard

Data/Information	Knowledge	Wisdom
What are the facts in our facility?	What is the context within our hospital and evidence-based practice?	What actions, if any, should we take?
<ul style="list-style-type: none"> • No one in the facility is designated as accountable for fall risk reduction 	<ul style="list-style-type: none"> • A fall risk reduction program led by an interprofessional team creates an accountability structure for the facility where a team is responsible for the program and its outcomes 	<ul style="list-style-type: none"> • Implement an interprofessional fall risk reduction team
<ul style="list-style-type: none"> • No standardized definition of a fall utilized in the facility 	<ul style="list-style-type: none"> • Standardized fall definitions provide objectivity about what “counts” as a fall, for when to report a fall, and allow for benchmarking with peer hospitals 	<ul style="list-style-type: none"> • Adopt a standardized fall definition • Educate and train staff to report all falls
<ul style="list-style-type: none"> • Morse fall risk assessment tool is used, but patient fall risk is assessed on admission only 	<ul style="list-style-type: none"> • Ideally, patient fall risk is assessed on admission, at shift change, and after any fall event 	<ul style="list-style-type: none"> • Review resources on fall risk assessments • Adopt an evidence-based fall risk assessment protocol • Educate staff on new policy
<ul style="list-style-type: none"> • Staff do not conduct purposeful hourly rounding 	<ul style="list-style-type: none"> • Consistent, timely, and purposeful rounding reduces the chances of patients getting up unassisted 	<ul style="list-style-type: none"> • Explore purposeful hourly rounding as a universal intervention • Train staff and implement policy • Audit completion of purposeful rounding
<ul style="list-style-type: none"> • Total fall rate: 8.4 falls per 1,000 patient days, an increase over last year’s rate of 7.0. • Injurious fall rate: 4.2 falls per 1,000 patient days, increase over last year’s rate of 3.7. • Unassisted fall rate: Not calculated 	<ul style="list-style-type: none"> • Both total and injurious fall rates are higher than fall rates for peer hospitals* • Both total and injurious fall rates increased over last year • We do not know our unassisted fall rate 	<ul style="list-style-type: none"> • Continue to track total and injurious fall rates • Add unassisted fall rate to outcome metrics • Create awareness of fall rates and benchmarks across organization

*Benchmark fall rates for Critical Access Hospitals in the state: Total—3.99 falls per 1,000 patient days, Unassisted—2.32 falls per 1,000 patient days, Injurious Falls—1.29 falls per 1,000 patient days.

Data Source 2: Fall Event Reports and Post-fall Huddle Documentation

Fall event reports can provide information both on the individual patient level and when aggregated to the system level. In this case study example, information from figures 1-5 was used to complete the DIKW table (Table 2) for this learning source.

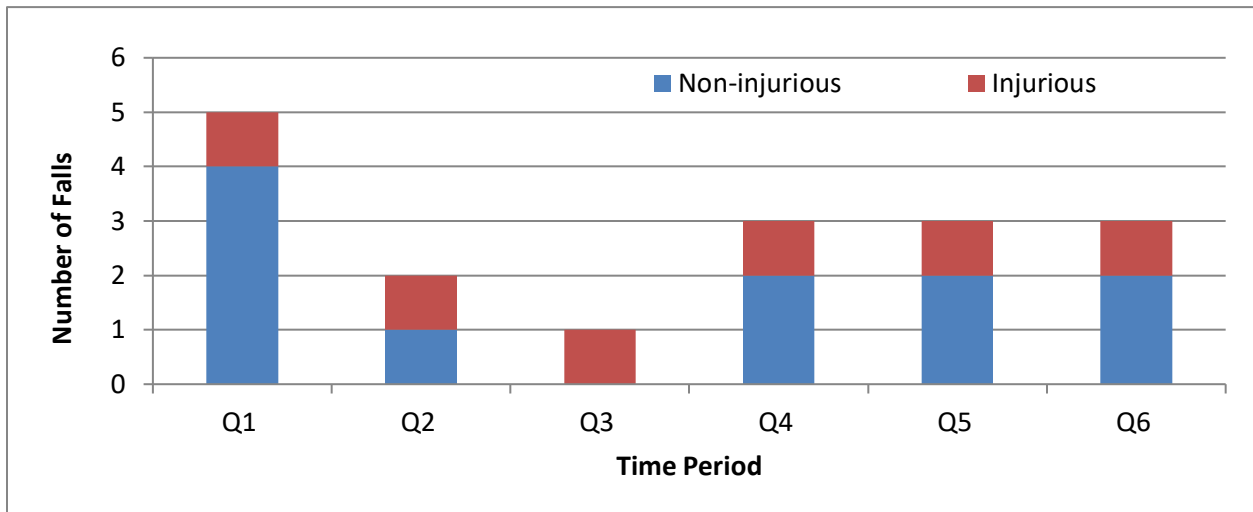


Figure 1. Number of non-injurious and injurious falls per quarter (N=17)

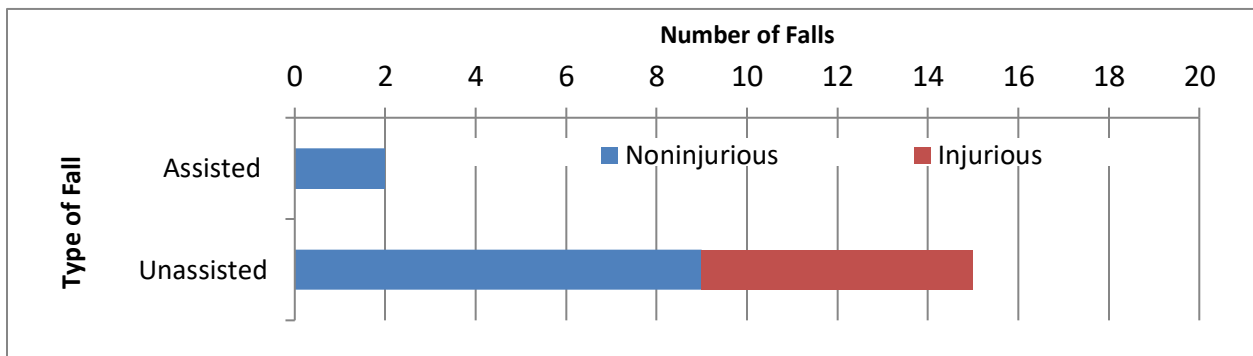


Figure 2. Total number of non-injurious and injurious falls Q1 – Q6 by fall type (N=17)

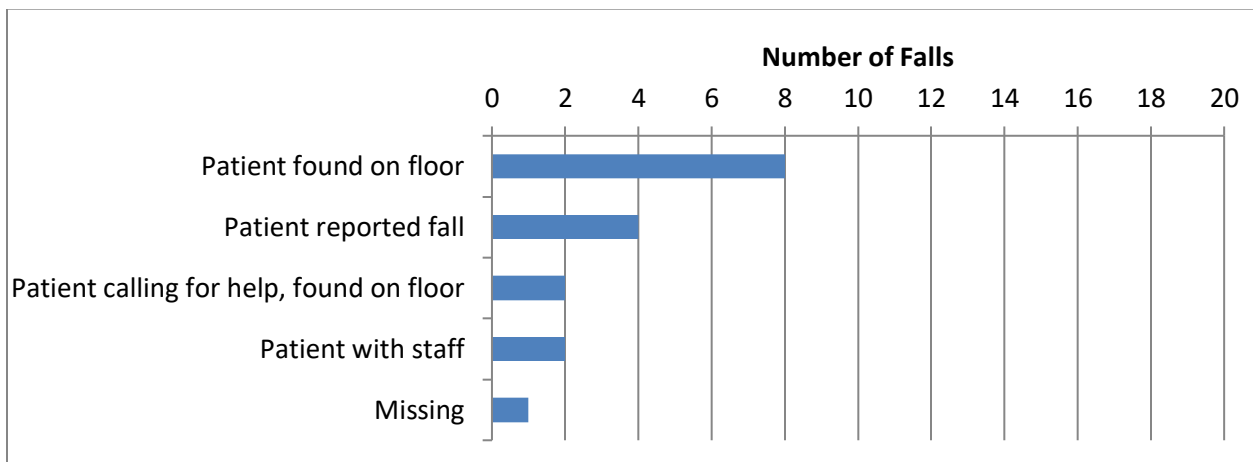


Figure 3. Total number of falls Q1 - Q6 associated with how fall was discovered (N=17)

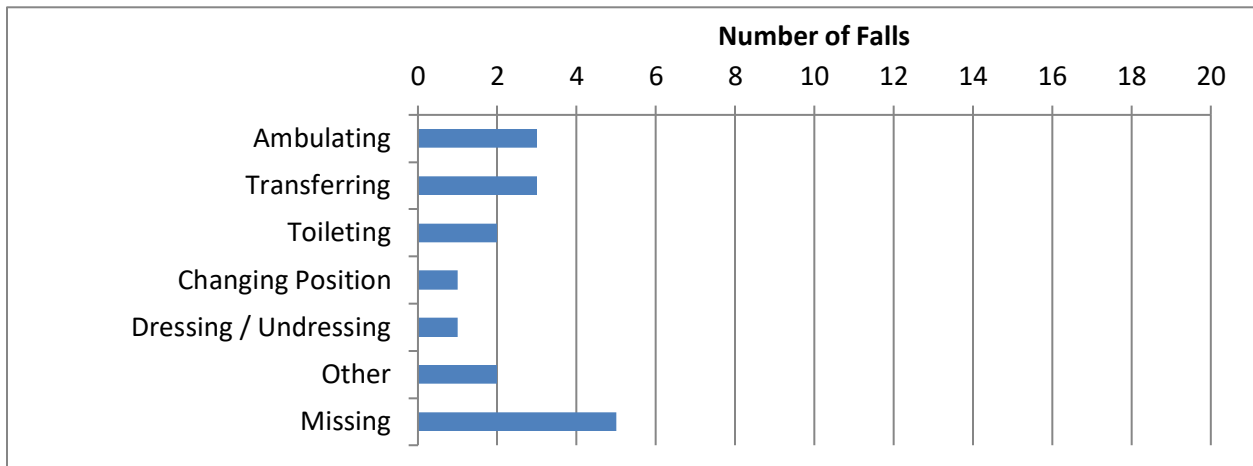


Figure 4. Total number of falls Q1 - Q6 associated with what the patient was trying to do at the time of the fall (N=17)

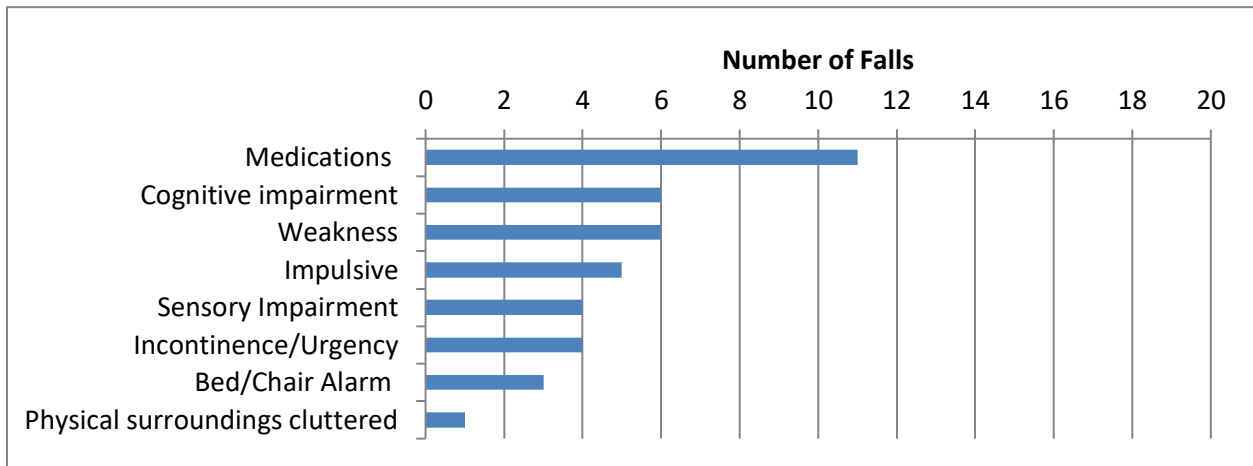


Figure 5. Total number of falls Q1 - Q6 associated with factors that contributed to the fall (N=17)

Table 2. DIKW for Event Reporting Form and Post-Fall Huddles

Data/Information	Knowledge	Wisdom
What are the facts?	What is the context within our hospital and evidence-based practice?	What actions, if any, should we take?
<p>Number of non-injurious and injurious falls per quarter (Figure 1)</p> <ul style="list-style-type: none"> • 17 inpatient falls reported • 6 falls (~35%) were injurious • 11 (~65%) falls were not injurious • Q1 had the most falls (5) 	<ul style="list-style-type: none"> • Falls be underreported due to lack of standardized definition • We do not have an objective/standardized definition for injurious falls, therefore minor injuries such as scrapes or contusions may not be counted as injurious. • Experienced a high rate of staff turnover in Q1 • Injurious fall rates are higher than our peers 	<ul style="list-style-type: none"> • Review AHRQ criteria for fall types and harm levels • Audit fall event reports and determine if falls were properly categorized as to injurious and level of harm • Educate staff to accurately categorize falls • Explore onboarding education
<p>Total number of non-injurious and injurious falls Q1 – Q6 by fall type (Fig 2)</p> <ul style="list-style-type: none"> • 15 of the 17 falls (~88%) were unassisted • 6 of the unassisted falls were injurious, neither of the assisted falls were injurious 	<ul style="list-style-type: none"> • PTs and OTs have historically Assisted were only reported by PTs • Assisted falls have not been historically reported • We may be able to reduce injurious falls if we increase the proportion of falls that are assisted 	<ul style="list-style-type: none"> • Include assisted falls in our fall reporting policy and educate staff • Physical Therapists develop a training program to train staff to safely assist patients during a fall
<p>Total number of falls Q1 - Q6 associated with how fall was discovered (Figure 3)</p> <ul style="list-style-type: none"> • 8 patients were found on the floor after falling • 14 of the 17 falls occurred when the patient was alone 	<ul style="list-style-type: none"> • We do not reliably conduct purposeful rounding – from Gap Assessment Scorecard • Purposeful rounding could reduce the number of patients that are up unattended 	<ul style="list-style-type: none"> • Train staff to conduct purposeful rounding for every patient – regardless of level of fall risk • Conduct an audit to determine reliability of purposeful rounding
<p>Total number of falls Q1 - Q6 associated with what the patient was trying to do at the time of the fall (Figure 4)</p> <ul style="list-style-type: none"> • 6 of the falls occurred while patient was ambulating, transferring, or toileting • What the patient was trying to do at the time of the fall was either “Other” or missing in 7 of the reports 	<ul style="list-style-type: none"> • Purposeful rounding could reduce the number of patients that are up unattended, and training in assisted falls could reduce risk of a fall with injury • Incomplete/non-detailed fall event reports prevent learning from fall event reports 	<ul style="list-style-type: none"> • Educate staff on the importance of accurately and fully completing fall event reports
<p>Total number of falls Q1 - Q6 associated with contributing factors (Figure 5)</p> <ul style="list-style-type: none"> • Medications contributed to 11 of the falls • Cognitive impairment and weakness each contributed to 6 of the falls 	<ul style="list-style-type: none"> • No pharmacist on fall risk reduction team (from Gap Analysis Scorecard) • Pharmacists not receiving notifications of patients who are at fall risk • Fall risk assessment is only being completed at admission (from Gap Analysis Scorecard) 	<ul style="list-style-type: none"> • Recruit pharmacist for fall risk reduction team • Create process for pharmacy review • Review fall-risk assessment policy/procedure and revise to meet evidence-based recommendations • Conduct process audits on fall risk assessments to assess reliability.

Data Source 3: Process Audits

Conducting process audits are useful to assess the reliability of important elements of your hospital’s fall risk reduction program. When conducted properly, the results of a process audit can help your fall risk reduction team dive deeper into factors contributing to both system strengths—to be celebrated and weaknesses in your fall risk reduction program. In this case study example, the specific process audits are included as “actions to take” (Wisdom column) from DIKW tables 2 and 3. Results from these future audits create the facts (Data/Information column) for the DIKW table (Table 3) for this learning source.

Table 3. DIKW for Process Audits

Data/Information	Knowledge	Wisdom
What are the facts?	What is the context within our hospital and evidence-based practice?	What actions, if any, should we take?
<ul style="list-style-type: none"> • Results from purposeful hourly rounding process audits 	<ul style="list-style-type: none"> • What do these results tell us about the reliability of our purposeful hourly rounding? 	<ul style="list-style-type: none"> • Should we celebrate our success or take action to improve reliability?
<ul style="list-style-type: none"> • Results from fall risk assessment audits 	<ul style="list-style-type: none"> • What do these results tell us about the reliability of conducting fall risk assessments according to policy and procedures? 	<ul style="list-style-type: none"> • Should we celebrate our success or take action to improve reliability?

Summary and Next Steps

Conducting process audits can help your fall risk reduction team dive deeper into factors contributing to both system strengths—to be celebrated and weaknesses in your fall risk reduction program. In this case study example, the specific process audits are included as “actions to take” (Wisdom column) from DIKW tables 2 and 3. Results from these future audits create the facts (Data/Information column) for the DIKW table (Table 3) for this learning source.