

How Can My Healthcare Facility Improve Fall Prevention Strategies?



stepscan[®]

GAIT ANALYSIS TECHNOLOGY

Why lowering your patient's risk of falling is crucial for your healthcare facility's patient outcomes.

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INTRODUCTION

Today, both public and private organizations are constantly struggling against cuts, and healthcare organizations are in an ongoing battle of conflicting outcomes.

Healthcare facilities must focus on delivering high-quality patient care, maintaining facility security, preventing infection and ensuring patient safety, all while learning to deal with extremely stretched resources, rising healthcare costs and ever-growing staffing challenges.

Healthcare facilities must invest in effective new technologies and implement modern strategies to overcome these pressing challenges, and ensure that they are able to deliver positive patient outcomes.

One of the most common challenges that healthcare facilities across the world face is fall prevention.

In fact, according to the *World Health Organization (WHO)*, falls are a major public health problem across the globe. An estimated 684,000 fatal falls occur each year, making it the second leading cause of unintentional injury death - after road traffic

injuries. The largest morbidity occurs in people aged 65 years or older, young adults aged 15-29 years and children aged 15 years or younger.

Approximately 37.3 million falls severe enough to require medical attention occur each year. Globally, falls are responsible for over 38 million disability-adjusted life years (the potential years of healthy life lost due to being in a state of poor health or disability) lost.

In this ebook, we take a look at exactly how a fall in your healthcare facility is defined, why fall prevention techniques are incredibly important, some best practices you can implement to minimize falls in your facility, as well as how Stepscan's innovative technology can significantly improve your fall prevention strategy.

PART

I

HOW IS A FALL IN YOUR HEALTHCARE FACILITY DEFINED?

A fall is defined as an act of suddenly collapsing, in which a patient falls rapidly to the floor with no control over their movement. This can be dangerous in healthcare facilities, as many patient falls go unwitnessed by staff members.

While a fall doesn't have to result in an injury to be classified as such, injuries are a common occurrence from patient falls. Fall injuries may or may not require treatment, and could result in either temporary or permanent harm to a patient.

Who is at risk of becoming injured from falls?

While everyone in your healthcare facility poses a fall risk, the age, gender and health of an individual will play a role in how severe a fall is.



Age:

The age of a patient is the key risk factor in the severity of a fall. Older people are at a significantly higher risk of suffering serious injuries or death from a fall.

Gender:

Both genders are at risk of falls, but research has found that men are more likely to die from falls while women are more likely to suffer non-fatal falls that result in serious injury.

Health:

Patients suffering from existing neurological, cardiac and other disabling conditions, are far more likely to die or suffer serious injuries in a fall.

Near falls are also an issue. Near falls are defined as a slip, trip or stumble where a patient loses their balance but is able to recover and remain upright by either rectifying their balance or by being caught by a member of staff.

These near falls often go unnoticed and unmeasured by healthcare facilities, yet without having clear insight into near falls, it is almost impossible to understand the fall risk that patient may possess.

Defining what a fall means for your healthcare facility is a crucial part of measuring risk and an important aspect of designing a fall prevention strategy.



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WHY FALL PREVENTION TECHNIQUES ARE IMPORTANT

Fall prevention is an essential element for improving patient outcomes. Falls result in pain, severe injuries (such as hip fractures and head injuries), disabilities that make it difficult for individuals to live independently and even early death.

This is becoming an increasingly growing challenge for healthcare facilities, and needs to be addressed. In fact, research from the Agency for Healthcare Research and Quality found fall-related death rates in the United States increased between 1999 and 2004, from 29 to 41 per 100,000 population. Between 2018 and 2021, fall related deaths increased again from 64.4 to 78.0 per 100,000 population (Healthy People 2030).

This is way below the Healthy People 2030 fall-prevention goal, from the US Office of Disease Prevention and Health Promotion, which specifically seeks to reduce the number of deaths resulting from falls among those aged 65 or older from the 2018 baseline of 64.4 per 100,000 population to no more than 63.4 per 100,000 by 2030.

Falls can result in patients extending the

period in which they are in your care, even staying in your care indefinitely, and increasing your healthcare facility's fatality rate. If you don't address fall risk, your ability to care for your patients will be seriously affected.

Not only that, but fall-related injuries result in a significant economic burden on not only your healthcare facility, but society as a whole. That's because those individuals who fall and suffer a disability, particularly older people, are at a major risk for subsequent long-term care and institutionalization.

According to the Canadian Patient Safety Institute, the average acute length of stay for a fall-related injury was 91 percent longer (14.3 days) across Canada as a whole compared to the average length of stay (7.5 days) for all other causes of hospitalization excluding falls. Your healthcare facility could be saving a significant amount of money each year by simply minimizing the risk of patient falls. This money can then be used far more effectively to improve patient care and ultimately, outcomes.

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3

INPATIENT FALL PREVENTION BEST PRACTICES

Creating a fall prevention strategy is all about ensuring your healthcare facility is compliant with best practices for fall prevention. But what should be implemented into this strategy to ensure you optimize results?

Fall prevention strategies must use in-depth research, public health initiatives and innovative, new technologies if they are to be truly successful. This will allow your healthcare facility to properly explore risk factors and implement effective prevention strategies that reduce those risks.



To kickstart your strategy, here are some important best practices your healthcare facility can implement to reduce the number, and severity, of falls:



Identify high-risk patients:

By proactively identifying high-risk patients, you can ensure your clinicians and staff can keep an eye out on their safety and initiate the correct protocols that reduce the risk of falling. It's possible you can even give staff members a visual clue, such as an item of clothing on a patient, so they know which patients need specific fall prevention care.

Encourage the Use of Assistive and Protective Aids:

It's impossible for your healthcare facility to completely remove the risk of falls, so it's important you have protocols in place that deal with falls as effectively as possible. Patients who fall are far more likely to suffer from severe injuries, long-term disabilities and death if they are left waiting. Encouraging the use of walkers and or bed alarms can help prevent falls and help clinicians respond to emergencies far quicker than they otherwise would be able to.

Do safety checks:

Frequent checks of high-risk patients, on top of the regular hourly rounds of all patients, will help to make sure that all precautions to prevent falls are in place correctly.

Use innovative technologies:

There is a wide range of technologies that can be used to identify patients who have a high risk of falling, including Stepscan's innovative gait analysis technology. Modern technologies will help you to identify high-risk patients, meaning you can take proactive action to ensure their safety.

PART

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MEASURING THE SUCCESS OF FALL PREVENTION STRATEGIES

It's all well and good implementing a strategy to minimize fall risk in your healthcare facility, but without properly measuring this strategy, your organization will have no way of knowing whether it's a success or not.

If you can't measure fall risk, you can't improve it.

Fall rates and fall-related injury rates are the most direct measure of your inpatient fall prevention strategies. If both of these rates are declining, your healthcare facility's fall prevention strategy is showing signs of success. If these rates are the same, or even increasing, then your organization will know that changes need to be made to improve fall prevention.

There are a number of ways to measure fall rates, but the most important aspect is to ensure everyone in your healthcare defines a fall in the exact same way. When a unified definition of a fall is used throughout your healthcare facility, the reporting of falls will be significantly more accurate.

Your facility's fall risk can be measured in a variety of ways. Some facilities track the number of falls that occur every month, however the problem with this method is that it does not account for how full or empty your facility is.

That's why the *Agency for Healthcare Research and Quality* recommends that your facility calculates the rate of falls per 1,000 occupied bed days.

Here's how the organization advises you to calculate this figure:

1. First, count the number of falls that occurred during any given month. Let's say there were three falls during the month of April.
2. Then figure out, for each day of the month at the same point in time, how many beds were occupied on the unit. For example, on April 1, there may have been 26 beds occupied; on April 2, there may have been 28 beds occupied, and so on.
3. Add up the total occupied beds each day, starting from April 1 through April 30. Let's say the total adds to 879 (out of a maximum of 900, since if all 30 beds were occupied on all 30 days, 30×30 would equal 900).
4. Divide the number of falls by the number of occupied bed days for the month of April, which is $3/879 = 0.0034$.
5. Multiply the result you get in #4 by 1,000. So, $0.0034 \times 1,000 = 3.4$. Thus, your fall rate was 3.4 falls per 1,000 occupied bed days.

Once you have measured this data, you can make changes to your fall prevention strategies to improve the results.



HOW CAN STEPSCAN HELP?

The Stepscan Gait Analysis technology is a pressure sensitive floor tile system and software that tracks and analyzes how people walk. Stepscan is already being used in hospitals and clinics internationally in applications ranging from pre-surgery planning and post-operative assessment of Cerebral Palsy children, to stroke rehabilitation, concussion screening, fitting of prosthetic limbs, and by both Canadian and U.S. Veteran Hospital systems.

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FEATURES

- Objective and reliable data.
- Non-invasive, patient-friendly assessment.
- Quantitative, easy-to-interpret reports.
- Enhanced time efficiencies.
- A reputable product that is Registered Medical Device in countries across the world.



At Stepscan we believe that mobility is the litmus test for healthy aging.

The Stepscan fall risk assessment tool captures and analyzes the irregularities in gait and balance, identifying high-risk fallers quick and reliably. Based on research involving over 3,600 subjects, the Stepscan Mobility Score is an evidence-based measurement that can be used in conjunction with already established fall risk intervention strategies to reduce the number of falls within your facility.

Stepscan's patient-centric design allows for unobtrusive assessments and a positive patient experience. Through seamless data collection and automated, easy-to-interpret reports, your healthcare facility will gain significant time efficiencies while at the same time vastly improving patient outcomes.

Stepscan[®] is one of only two systems that meets international technical performance standards for medical gait and plantar pressure measurement systems. Stepscan's objective measures provide reliable evidence that supports treatment plan decisions and encourages patient compliance. That's why Stepscan is a registered medical device with Health Canada, the United States Food and Drug Administration, and Australia's Therapeutic Goods Administration.

Stepscan Technologies Inc. is a federally incorporated company headquartered in Charlottetown, Prince Edward Island, Canada. The company's core product is a pressure-sensitive electronic floor tile system, combined with proprietary gait analysis software that captures and analyzes the patterns of mobility and balance in a subject as they move across the floor.

As the system is also able to capture the movement of several subjects simultaneously, this platform technology has a wide range of applications beyond medical research, clinical rehabilitation and physiotherapy. Its multi-subject tracking capabilities have resulted in the development of customized solutions for customers in the security sectors (gait biometrics), military training and virtual simulation as well as sports performance and training applications.



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