

PHILIPS

Lifeline

Retrospective study

# Chronic conditions and the high risk of falling

Tine Smits, Research Scientist, Philips Research

Andrea Ryter, Senior Global Product Manager, Philips Healthcare,  
Home Monitoring



# Introduction and methodology

By 2031, 22% of people in Canada will be over the age of 65.<sup>1</sup>

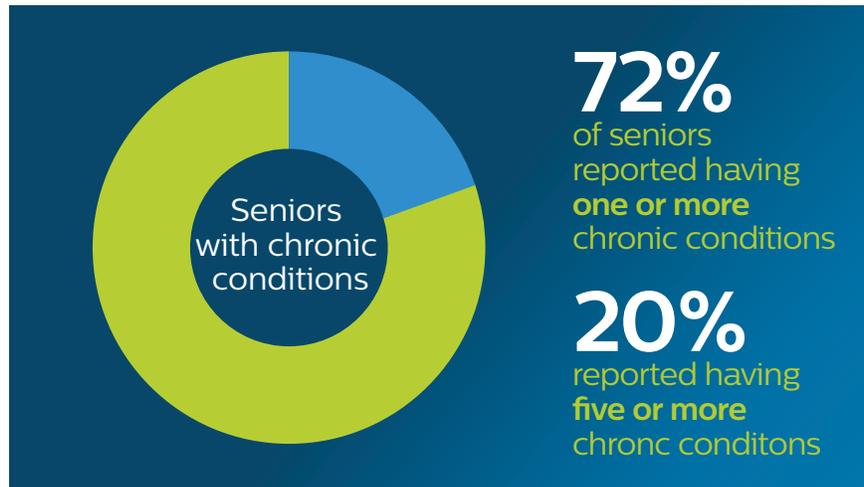
While seniors want to preserve their independence and remain active, at least one in three seniors fall in Canada every year.<sup>2</sup> From 2000 through 2013, the fall injury death rate for seniors aged 65 and older nearly doubled. In addition to threatening seniors' quality of life, falls also represent a sizable financial burden. In recognition of this serious epidemic and the need to better understand this growing problem, Philips conducted a retrospective study of self-reported fall rates of more than 145,000 seniors using its Lifeline Medical Alert solutions between January 2012 and June 2014.

The study reveals surprising new data linking seniors living with chronic conditions to a greater risk of falling. Even patients with chronic diseases unrelated to mobility problems, such as mental health and respiratory conditions, recorded high instances of falling.

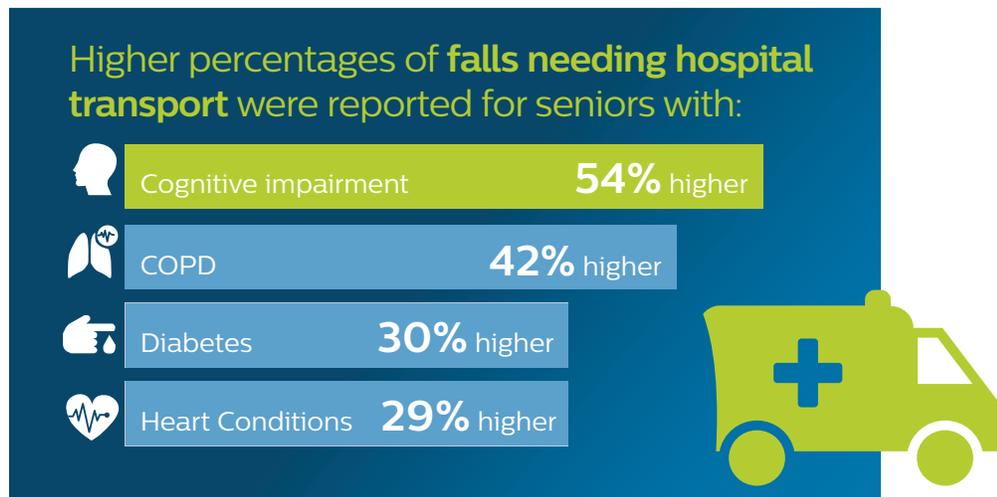
The Philips study is one of the first to identify a much larger population of seniors at serious risk of falling. The falls risks analyzed by this study were based on more than 70,000 falls that the study population experienced between January 2012 and June 2014. The study findings are supplemented with the personal experiences of seniors derived from a qualitative product study conducted in 2014.

# Living with chronic conditions

The study data show that seniors with chronic illnesses such as Alzheimer's and COPD fell more often with severe enough complications to require emergency transport to a hospital. More frequent falls were reported by those with more chronic conditions. Seniors living with five or more chronic conditions had 40 percent more falls than those who don't have any chronic illnesses. Seniors living with three chronic conditions had 15 percent more falls that require transport to the hospital.

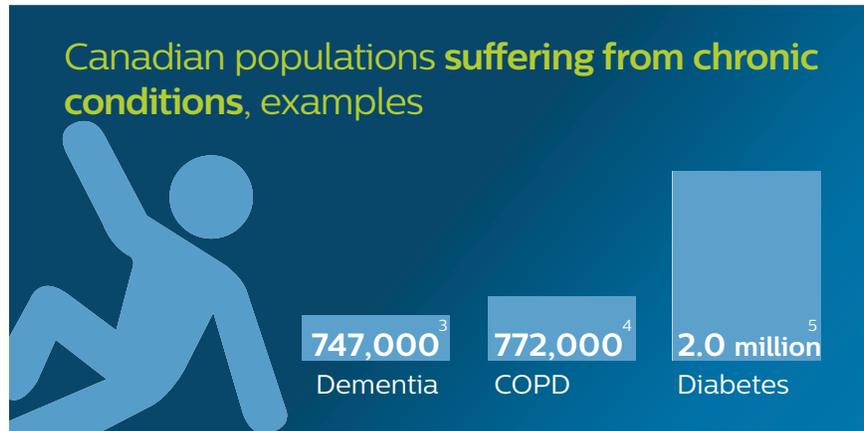


## Chronic conditions, falls and hospital transport



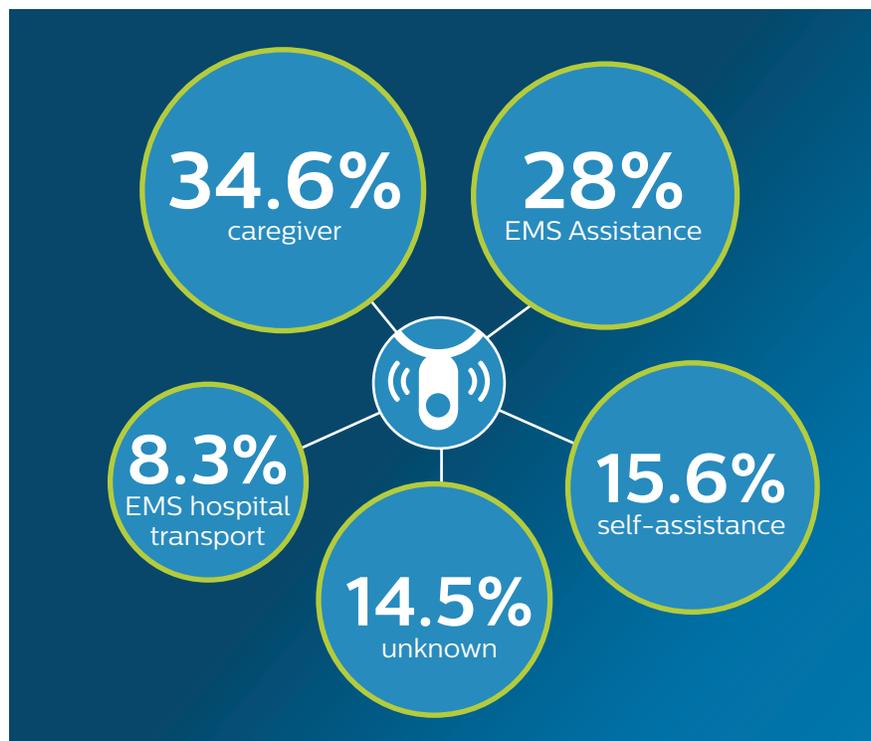
The number of seniors living with chronic diseases is on the rise, increasing the risk of falls.

# Growth of chronic disease



Because many seniors may choose not to tell their clinicians and caregivers when they have fallen, keeping an accurate record of all falls may be difficult. Some of this requires encouraging patients to share more details about their health conditions, including problems with balance, falls, or near accidents. Emergency response solutions can also help keep an accurate record of falls and ultimately help patients get the care they need. More reporting on falls can lead to better outcomes, including faster transport to the hospital, shorter hospital stays, and timely emergency response.

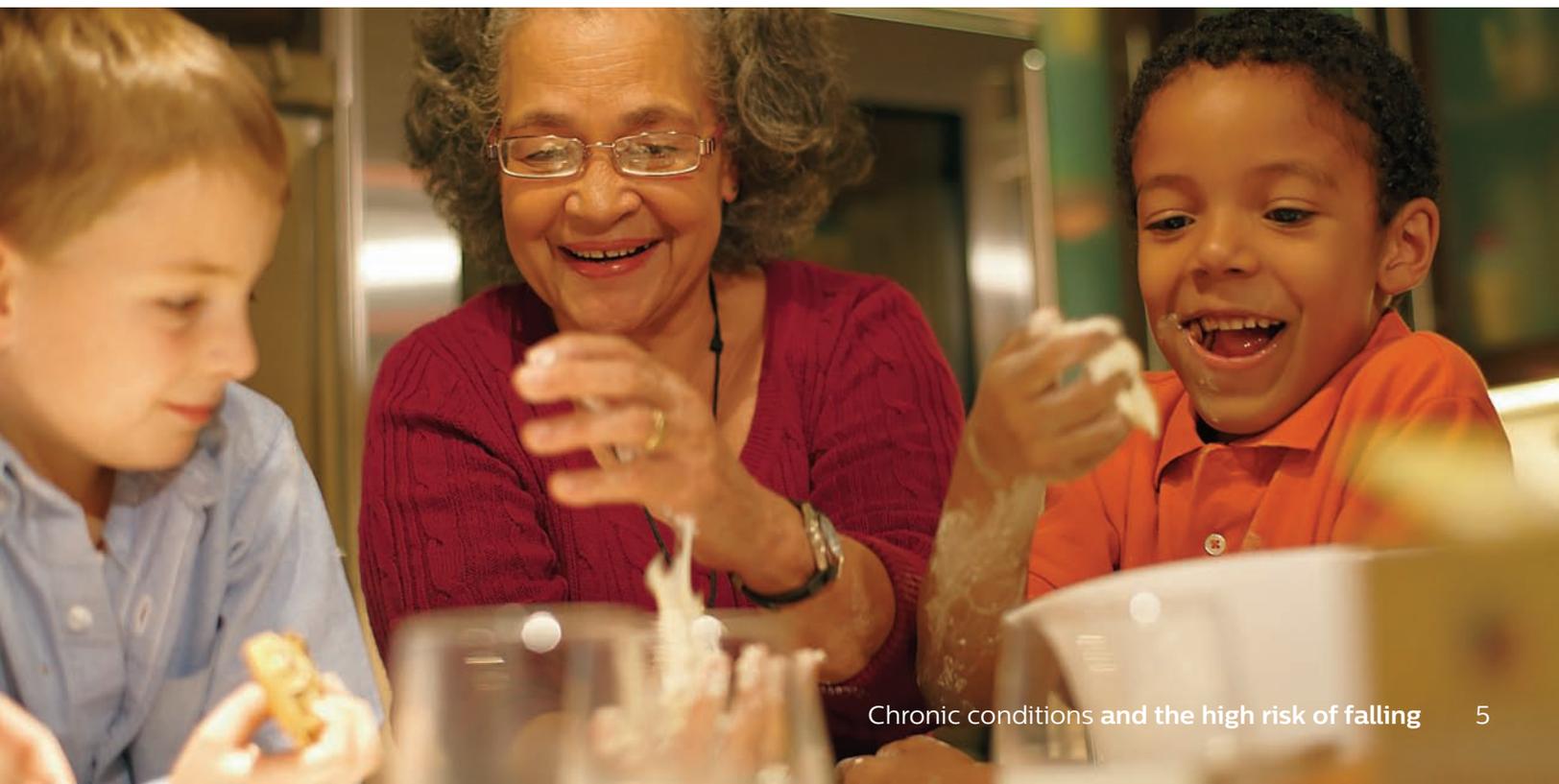
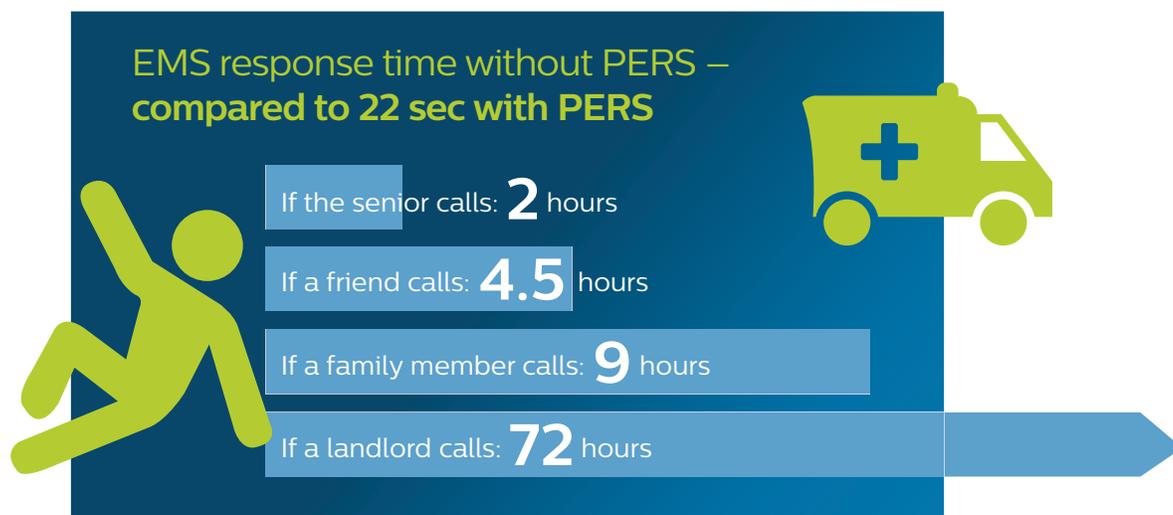
## Type of help needed after a fall for users with **automatic fall detection technology**



# Improving response times when seniors fall

When a senior falls and is unable or reluctant to seek assistance, **certain emergency response systems can automatically detect falls. Emergency response centres can respond as quickly as 22 seconds.** Without an auto detection solution, patients can go hours, even days without receiving emergency medical attention. Studies show that it can take a patient anywhere between 2 and 72 hours to receive help. Solutions that automatically alert an emergency response centre can quickly provide help to seniors, giving their caregivers and families, peace of mind and can potentially help prevent escalating serious medical problems.

Response time can depend on the support network the patient has in place and also who places the call to the emergency medical service.



# Conclusion

Patients, caregivers, family members, and clinicians can collaborate to help prevent accidents and to be better prepared by anticipating falls and other medical problems. Coordinating care will not only improve the quality of life for seniors, but it will also reduce the chances of loss of independence. Here are ways for seniors and their caregivers to be better prepared.

- **Get timely access to care.** Proactively coordinate care, anticipating urgent care needs, and ask how best to ensure that clinicians are accessible when they are needed most. Use emergency response solutions with automatic fall detection features, like Lifeline's AutoAlert technology, to reach emergency medical services as quickly as possible.
- **Avoid unnecessary hospital care.** Automatic fall detection technology and responsive medical care may prevent hospital transport, ER visits and hospitalization. Otherwise, patients could potentially suffer serious medical complications from lying down on the floor, unable to move for a prolonged period of time.
- **Prevent future falls.** With a fuller picture of what is happening to seniors in their homes, caregivers as well as occupational therapists can take proactive steps to provide a safer home by adding guardrails or swapping a conventional bed for a hospital bed.
- **Keep clinicians up to date.** Keeping a record of all falls, even minor ones, gives physicians added information that can help them assess seniors' health status and make adjustments to care, such as prescribing exercises to improve balance and coordination.

---

## References

- <sup>1</sup> Public Health Agency of Canada.
- <sup>2</sup> StatsCan population projections, 1971 to 2061.
- <sup>3</sup> Alzheimer Society of Canada
- <sup>4</sup> Centre for Chronic Disease Prevention and Control, Public Health Agency of Canada, using data from Canadian Community Health Survey, Statistics Canada, 2009-10.
- <sup>5</sup> Statistics Canada, CANSIM, table 105-0501 and Catalogue no. 82-221-X.



Take care  
of yourself  
day



[www.lifeline.ca](http://www.lifeline.ca)

All data within the study is reported with a +/- 95% confidence interval

© 2015 Koninklijke Philips N.V. All rights reserved. Specifications are subject to change without notice. Trademarks are the property of Koninklijke Philips N.V. (Royal Philips) or their respective owners.

[www.philips.com](http://www.philips.com)  
SEP 2015