

Use of PERS in Older Adults Who Risk Losing Independence and Increased Morbidity

By Jennifer Maybin

More than one in four adults over age 65 falls each year; less than half of those tell anyone about it. Unfortunately, falling even once doubles the chances of falling again.^{1,2} Twenty percent of such falls cause serious injuries, such as broken bones or traumatic head injuries.^{3,4} These amount to a cost of more than \$50 billion, of which Medicare pays 75%.⁵

What's more, injuries decrease quality of life and often reduce activity levels. This leads to greater weakness and even greater chances of falling.⁶ And according to the Centers for Disease Control and Prevention, we can anticipate seven deaths every hour from falls by the year 2030.⁷

Why is this important? Because the older population is expanding. A large majority lives alone in homes they own and must maintain. In addition, more women than men attain older age and live alone. They have a 50% greater risk of falls than do men.^{8,9} Among the risks are age, having one alcoholic drink a week, taking five or more medications, and contending with diabetes or osteoporosis.¹⁰

Other chronic conditions also increase the risk of falls in older adults. Among them are myocardial infarction, angina, stroke, asthma, chronic obstructive pulmonary disease (COPD), cancer, chronic kidney disease, arthritis, depression, dementia, and diabetes.^{11,12}

Let's take a look at some of the demographics of older adults living in the US. Then we'll reveal the results of a recent study that links falls to chronic conditions among seniors and outlines some remedies.

Demographics of Older Adults in the US

The number of people in the United States older than 65 was estimated to be 49.2 million in 2016 by the US Census' American Community Survey. Among them, 28.7 million were between the ages of 65 and 74.¹³ Women in this group outnumbered men by about 2 million; as they aged, their number was twice that of men in the 75 to 84 age bracket.¹³



Among the population aged 64 to 74, more than three-quarters identified as white and 18% as Hispanic. About 9% of this group were black and less than 5% were Asian. Within this cohort, 20.4% of men and 37.7% of women were divorced or widowed. By the time this age group reached 85 years, only 15% of females still had a partner.¹³

Jennifer G. Maybin is the Executive Editor of *CareManagement*.

We're in an age when older Americans continue to live actively and usually reside on their own or with their spouse. Only 68% of those 65 and older lived in family households; this figure shrinks to less than 50% for those older than 74. About one in five adults aged 65 to 74 lived alone in 2016; that figure doubles to about 40% by age 85 and older. Among the 65- to 74-year group and the 75- to 84-year group, nearly 80% owned their homes, these likely requiring ongoing maintenance. Even among those 85 and older, 69% own their homes.¹³

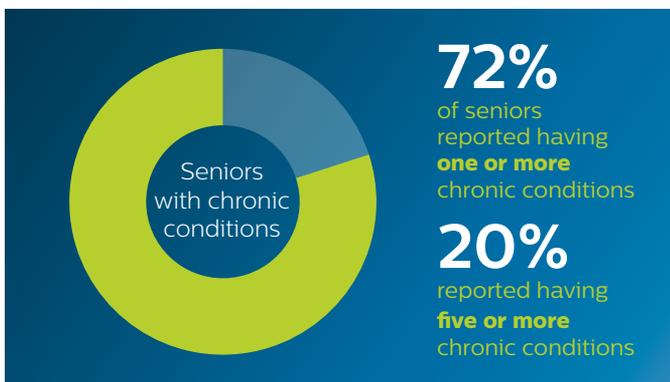
Fifteen percent of adults aged 65 to 74 have ambulatory difficulty, while over 25% of those 75 to 84 and half of those 85 and older have trouble moving. Hearing difficulties are the most prevalent problem, followed by difficulties with independent living. Difficulties with self-care affect up to 43% of adults older than 65.¹³

Most falls among women occur inside the house on flat surfaces, whereas among men, most falls occur in the garden. Among both groups, the greatest risk of falls is going to or coming from the bathroom.¹⁴

Study of Falls in Over 145,000 Seniors

Presented here, Philips Lifeline undertook a retrospective study of self-reported fall rates among more than 145,000 seniors. This cohort experienced more than 70,000 falls between January 2012 and June 2014.

The data show that seniors with chronic illnesses such as Alzheimer's and COPD fell more often than those without such conditions. The more chronic conditions a senior had, the greater the risk; those coping with five or more had 40% more falls than those with no such conditions. Complications from falls were severe enough to require emergency transport to a hospital.



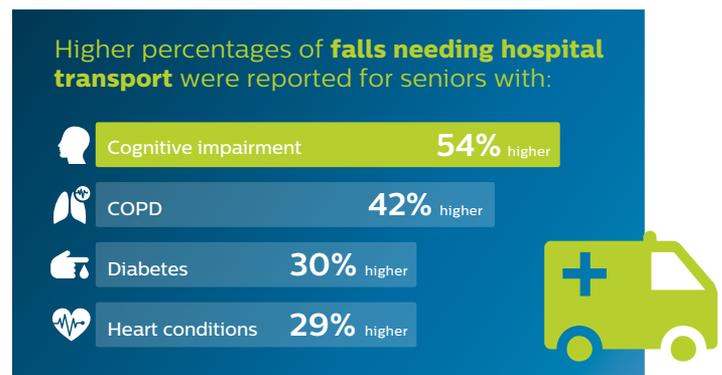
Seventy-two percent of seniors have one or more chronic conditions.

How many of those seniors had chronic conditions? Among study participants, 72% reported having one or more chronic conditions, while 20% had five or more. As reported in the demographics section, add to those statistics that the number of seniors living with chronic conditions is on the rise, as is the number of seniors.

Cognitive impairment caused 54% of falls requiring hospital transport. Next was COPD at 42%, followed by diabetes at 30% and heart conditions at 29%.

Falls Prevention and Reporting

But keeping an accurate record of falls is difficult because many older adults choose not to tell anyone about falling, perhaps fearing loss of independence. In fact, fear of losing independence is the number one fear among older adults—far greater than fear of death.¹⁵



Cognitive impairment and other chronic conditions increase the risk of falls among seniors.

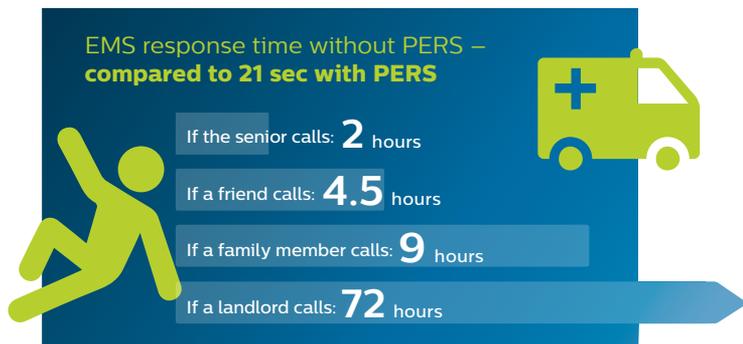
Clinicians and caregivers should become aware of the risk and occurrence of falls for their patients and loved ones. Knowing about falls can help them find solutions so as to limit falls occurrence and increase seniors' chances of remaining independent.

Numerous prevention strategies can help older adults maintain independence and prevent falls. These include exercise and physical activity, balance and gait training, environmental and behavioral interventions, and medication management.¹⁶

And more reporting of falls can lead to better outcomes—including faster transport to hospitals, shorter hospital stays, and timely emergency response.

Automatic Fall Response Systems

Use of automatic fall response systems, or personal emergency response systems (PERS) offers a better reporting method. Some PERS permit a user to report a fall to a help center, if they so choose. Other PERS can automatically detect falls, thereby enabling emergency response in as little as 21 seconds.



The lag in response times without a PERS.

If an older adult calls for emergency medical services (EMS), the average time before help arrives is two hours. If a family member calls, the wait can be nine hours. And if a landlord calls—the span can be as long as 72 hours.¹⁷ Any such delay leads to greater morbidity, longer hospital stays, and possible loss of independence due to consequences of a fall.

With automatic alerts quickly providing help to older adults who have fallen, what better way to ensure reporting and timely response? The quicker the provision of care, the better the outcomes. Such a response system can immediately alert caregivers, family members, and clinicians to respond to falls, anticipate them, and collaborate on solutions that can help seniors maintain their independence.

Beyond quick response and emergency care transportation, an automatic alert system may also help avoid the latter. Some falls don't require emergency transportation or hospital care, but do serve to raise risk awareness. This can make the senior and others aware of the need for more fall prevention measures and support. An automatic system can also help prevent suffering if a subscriber remains lying on the floor, unable to move for prolonged periods of time.¹⁷

Further, immediate notification often provides a fuller picture of what caused a fall. Caregivers and occupational therapists, for instance, can take proactive steps to make an older adult's home safer—perhaps by adding guardrails in bathrooms and kitchens, or

exchanging a bed for one that is easier to get in and out of. By having a record of falls, case managers can also better assess an older adult's status. Perhaps medication changes should be requested or exercise programs initiated to improve balance and coordination.

Selection of PERS

Some older adults may assume that their smartphones or devices such as Amazon Echo or Google Home would be sufficient. But a smartphone may not be immediately at hand, and neither Alexa nor Google Home can currently call 9-1-1.¹⁸

Numerous companies provide PERS. A wise case manager or consumer should research systems to learn which ones offer automatic alerts and other needed features.

Consumer Reports suggests asking three key questions¹⁸:

- Is a home-based or mobile system preferred/needed?
- Should the system be monitored or not?
- Should the system have a fall-detection feature?

Other questions to ask are activation costs; monthly fees for the PERS subscription, cellular service, and fall detection; cancellation fees; monitoring center certification; availability of alternate languages; customer service (non-emergency) hours; and battery life.¹⁸

Home-Based or Mobile?

Limited to residential use only, home-based systems include a wearable call button that lets a user speak to a dispatcher through a base unit.

Offering more flexibility, mobile systems protect active users by way of GPS technology and cellular networks when they're out and about.

- ✓ Mobile PERS from Philips Lifeline equipped with AutoAlert—its proprietary fall detection technology—uses five built-in technologies to locate a subscriber when in need.

Monitored or Not?

Monitored systems provide connection to a manned response center 24/7. Unmonitored systems dial friends or family members whose numbers are preprogrammed on the device's emergency call list.

- ✓ Philips Lifeline lets each user determine for themselves who gets notified. This could be a family member, a caregiver, or one of the company's trained response associates located in North America.

Fall detection feature?

Some providers offer an automatic fall detection option, usually available for an additional monthly charge. There is a possibility of false alerts—for instance, if the device is dropped or the user momentarily loses their balance but doesn't actually land on the ground.

- ✓ Even if they can't push their personal alert button, Philips Lifeline with AutoAlert can provide fast, 24/7 access to one of its North American response centers, even if the subscriber is disoriented, immobilized, or unconscious.

Other choices

- Certification by Underwriters Laboratories (UL), Department of Defense (DOD), Factory Mutual Global (FMG), others.
- Optimally, no activation or cancellation fees
- No contract or commitment
- Long mobile unit battery life of several days, not hours
- Abundant non-emergency customer service hours on weekdays and weekends
- Multiple languages
- ✓ Philips Lifeline invented the personal medical alert system over 45 years ago. Today it's the #1 medical alert system in the US and is recommended by more than 200,000 healthcare professionals nationwide.

[Learn more about Philips Lifeline Medical Alert Systems.](#)

How You Can Help

As case managers, you always put your patients' health first. Knowing about PERS and being able to educate patients, caregivers, and clinicians about their use, characteristics, pricing, and more can help prevent long-term morbidities and even mortality among the expanding older adult population.

References

1. Stevens JA, Ballesteros MF, Mack KA, Rudd RA, DeCaro E, Adler G. Gender differences in seeking care for falls in the aged Medicare population. *Am J Prev Med.* 2012;43:59-62.
2. Alexander BH, Rivara FP, Wolf ME. The cost and frequency of hospitalization for fall-related injuries in older adults. *Am J Public Health.* 1992;82(7):1020-1023.
3. Sterling DA, O'Connor JA, Bonadies J. Geriatric falls: injury severity is high and disproportionate to mechanism. *J Trauma.* 2001;50(1):116-119.

4. O'Loughlin J, et al. Incidence of and risk factors for falls and injurious falls among the community-dwelling elderly. *Am J Epidemiol.* 1993;137:342-354.
5. Florence CS, Bergen G, Atherly A, Burns ER, Stevens JA, Drake C. Medical costs of fatal and nonfatal falls in older adults. *J Am Geriatr Soc.* 2018;66(4):693-698.
6. Vellas BJ, Wayne SJ, Romero LJ, Baumgartner RN, Garry PJ. Fear of falling and restriction of mobility in elderly fallers. *Age Ageing.* 1997;26(3):189-193.
7. Centers for Disease Control and Prevention (CDC). Important facts about falls. CDC website. <https://www.cdc.gov/homeandrecreationalsafety/falls/adultfalls.html>. Last reviewed February 10, 2017. Accessed June 3, 2019.
8. Yang Y, van Schooten KS, Sims-Gould J, McKay HA, Feldman F, Robinovitch SN. [Sex differences in the circumstances leading to falls: evidence from real-life falls captured on video in long-term care.](#) *J Am Med Dir Assoc.* 2018;19(2):130-135.
9. Johansson J, Nordstrom A, Nordstrom P. [Greater fall risk in elderly women than in men is associated with increased gait variability during multitasking.](#) *J Am Med Dir Assoc.* 2016;17(6):535-540.
10. Why do women fall? Harvard Health Publishing website. <https://www.health.harvard.edu/womens-health/why-do-women-fall>. Published April 15, 2015. Accessed June 3, 2019.
11. Paliwal Y, Slattum PW, Ratliff SM. [Chronic health conditions as a risk factor for falls among the community-dwelling US older adults: a zero-inflated regression modeling approach.](#) *Biomed Res Int.* 2017;2017:5146378. Epub 2017 March 28.
12. Centers for Disease Control and Prevention (CDC). Promoting health for older adults. CDC website. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/promoting-health-for-older-adults.htm>. Last reviewed April 3, 2019. Accessed June 3, 2019.
13. Robert AW, Ogunwole SU, Blakeslee L, Rabe MA. The population 65 years and older in the United States: 2016. American Community Survey Report No. ACS-38. <https://www.census.gov/content/dam/Census/library/publications/2018/acs/ACS-38.pdf>. Issued October 2018. Accessed June 3, 2019.
14. Mulley G. Falls in older people. *J R Soc Med.* 2001;94(4):202.
15. Home Sweet Home Care. Loss of independence and falling: the unpleasant connection. <http://www.homesweethomecareinc.com/caregiver-helpers/reduce-falls-remain-independent/>. Published August 13, 2015. Accessed June 3, 2019.
16. Berg RL, Cassells JS, eds. *The Second Fifty Years: Promoting Health and Preventing Disability.* Washington, DC: National Academies Press; 1992.
17. Data on file. Philips Lifeline. 2015.
18. Roberts C. How to choose a medical alert system. Consumer Reports website. <https://www.consumerreports.org/medical-alert-systems/how-to-choose-a-medical-alert-system/>. Published February 7, 2019. Accessed June 3, 2019.

This supplement was supported by an educational grant from Philips Lifeline.

CEU exam

Take this exam online >

Take the test online and then immediately print your certificate after successfully completing the test. Or print, complete, and mail the exam on the next page.
Exam expires July 15, 2020.

This exam is FREE to all.

[Click here to join ACCM](#) and get access to more CEs—up to 36 per year!

Questions

- 1. How many adults over the age of 65 fall each year?**
 - a. 1 in 4
 - b. 1 in 5
 - c. 1 in 6
 - d. 1 in 7
- 2. What is the annual cost of falls?**
 - a. More than \$50 billion
 - b. More than \$55 billion
 - c. More than \$60 billion
 - d. More than \$65 billion
- 3. Women have a _____ greater risk of falls than men.**
 - a. 30%
 - b. 40%
 - c. 50%
 - d. 60%
- 4. Risks of falling include:**
 - a. Age
 - b. Having one alcoholic drink per week
 - c. Taking five or more medications
 - d. All of the above
- 5. Individuals coping with five or more chronic conditions have _____ more falls compared with individuals with no chronic conditions.**
 - a. 20%
 - b. 30%
 - c. 40%
 - d. 50%
- 6. The number one fear among older adults is fear of falling.**
 - a. True
 - b. False
- 7. The advantages of using a PERS include:**
 - a. Quicker provision of care
 - b. Better outcomes
 - c. Immediate alert of caregivers and family
 - d. All of the above
- 8. By having an accurate record of falls, the case manager can better access an older adult's status.**
 - a. True
 - b. False
- 9. In selecting a PERS, the following questions should be asked?**
 - a. Is a home-based or mobile system preferred/ needed?
 - b. Should the system be monitored or not?
 - c. Should the system have a fall-detection feature?
 - d. All of the above
- 10. Other factors to consider when selecting a PERS include:**
 - a. No contract or commitment
 - b. Long mobile unit battery life of several days
 - c. Non-emergency customer service hours on weekdays and weekends
 - d. All of the above

Take this exam online >

Take the test online and then immediately print your certificate after successfully completing the test. Or print, complete, and mail this answer sheet.
Exam expires July 15, 2020.

Use of PERS in Older Adults Who Risk Losing Independence and Increased Morbidity

Objectives

July 2019

1. State the demographics of older adults living in the US.
2. State three prevention strategies to help older adults maintain independence and prevent falls.
3. Describe three criteria for selection of PERS.

Answers

Please indicate your answer by filling in in the letter:

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____

Continuing Education Program Evaluation

Please indicate your rating by circling the appropriate number using a scale of 1 (low) to 5 (high).

- | | | | | | |
|--|---|---|---|---|---|
| 1. The objectives were met. | 1 | 2 | 3 | 4 | 5 |
| 2. The article was clear and well organized. | 1 | 2 | 3 | 4 | 5 |
| 3. The topic was both relevant and interesting to me. | 1 | 2 | 3 | 4 | 5 |
| 4. The amount and depth of the material were adequate. | 1 | 2 | 3 | 4 | 5 |
| 5. The quality and amount of the graphics were effective. | 1 | 2 | 3 | 4 | 5 |
| 6. I would recommend this article. | 1 | 2 | 3 | 4 | 5 |
| 7. This has been an effective way to present continuing education. | 1 | 2 | 3 | 4 | 5 |

8. Additional comments:

This educational manuscript has been approved for 2 hours of CCM and CDMS education credit by The Commission for Case Manager Certification and the Certification of Disability Management Specialists Commission. Provider #00059431. It has also been approved for 2 contact hours of nursing credit by the California Board of Registered Nursing. To receive credit for this exam, you must score 80% or above. **Exam expires July 15, 2020.**

Please print:

*Certificant's Name: _____
 *Email Address: _____
 *Mailing Address: _____

Please complete all that apply:

CCM ID# _____
 CMSA ID# _____
 CDMS ID# _____
 RN ID# _____
 ACCM Membership# _____
 ACCM Exp. Date _____

*CE exams cannot be processed without above information.

CE contact hours applied for: CCM RN CDMS

PLEASE NOTE: Exam may be taken online at www.academyCCM.org/ce or by clicking the link found in this supplement. Take the exam and immediately print your certificate after successfully completing the test. Mailed exams should be sent to: **Academy of Certified Case Managers, 1574 Coburg Road #225, Eugene, Oregon 97401.** Please allow 4 to 6 weeks for processing of mailed exams.

This CE exam is protected by U.S. Copyright law. You are permitted to make one copy for the purpose of exam submission. Multiple copies are not permitted.

If you are not an ACCM member and wish to become one, please [click here](#).