



THE PREVALENCE OF FALL INJURIES AMONG OLDER OHIOANS

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INTRODUCTION

Falls are the leading cause of both fatal and nonfatal injuries for persons age 65 and older¹, and represent a major impact on Ohioans and their families, communities and healthcare. This policy brief uses data from the 2015 Ohio Medicaid Assessment Survey (OMAS) to examine fall injuries, as well as the receipt of medical attention for those injuries, among Ohio's older Medicaid population.

BACKGROUND

An older Ohioan falls every two minutes on average, resulting in an injury every five minutes, six emergency department visits and one hospitalization per hour, and three deaths per day. While residents age 65 and older make up 15 percent of Ohio's population, they account for more than 84 percent of fatal falls².

Fall injuries are expensive: In 2013, \$34 billion was spent in direct medical costs treating older Americans for the consequences of falls³. The average direct medical cost for Ohioans' fall injuries ranged from \$20,000 for persons age 55-59 to \$27,000 for age 65-69⁴. In 2010, the average cost of a fall-related hospital admission was \$35,000⁵. In 2015 alone, 1,052 of the over 18,000 individuals enrolled in the Ohio Department of Aging-administered *PASSPORT Home and Community Based Medicaid Waiver* program had a fall that resulted in a hospital admission⁶.

Fall injuries have also been associated with higher likelihood of long-term nursing home admissions⁷. Compared to non-fall injuries, hospitalization due to hip fracture and other fall-related injuries are associated with significantly higher likelihood of a subsequent admission to long-term nursing home care, as well as with worse disability outcomes⁸.

Falls prevention has largely focused on persons age 65 and older, but falls are not a major concern only for our elders: Falls were the leading or second leading cause of fatal and nonfatal injury across all age groups, both children and adults, from 2001 through 2014⁹.

OBJECTIVES

This brief has two aims: First, to illustrate the sociodemographic, health and healthcare composition of Medicaid-enrolled older Ohioans injured in a fall. Second, to examine the rate of receipt of medical attention among those who were injured.

METHODS

The data source for all analyses in this brief is the 2015 OMAS, a telephone survey that samples both landline and cell phones of Ohio residents. The survey examines insurance status, access to the health system, health statuses, demographics and other characteristics of Ohio's Medicaid, Medicaid eligible, and non-Medicaid populations. In 2015, interviewers completed 42,876 interviews with adults and 10,122 proxy interviews of children. The 2015 OMAS is the sixth iteration of the survey (previously known as Ohio Family Health Survey). For details, please see the OMAS Methodology Report¹⁰.

For the first time in the 2015 OMAS, the following two questions were asked of Ohioans age 55 years and older, as well as Ohioans ages 19 years and older who indicated having a developmental disability:

HIGHLIGHTS

- 18% of Medicaid-enrolled adults age 55 and older were injured in a fall in the past year.
- 71% with a fall injury received medical attention for that injury.
- Medicaid-enrolled adults age 55 and older had a higher rate of fall injury and a lower rate of medical attention for their falls than state averages for that age group.
- 90% of Medicaid-enrolled Ohioans ages 55-64 with a fall injury resided in a rural county.

- Within the past 12 months, have you been injured due to a fall?
- Did this injury due to a fall result in a visit to a doctor, nurse, other health professional, a clinic, or hospital?

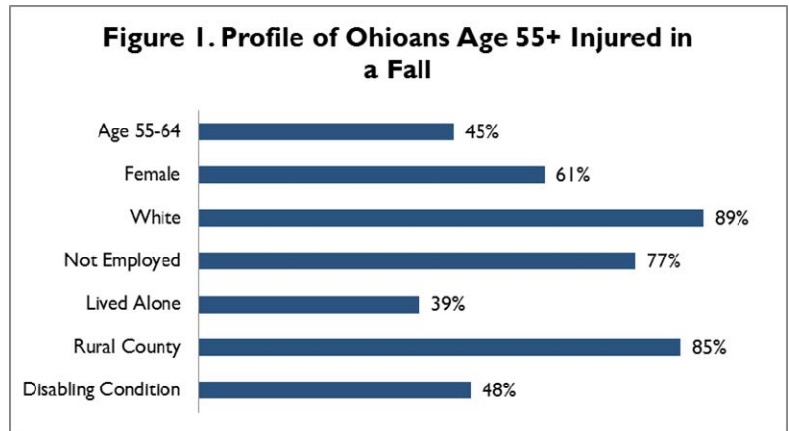
Responses to the two questions apply to the twelve months leading up to the date of interview and in the results presented here the phrase, “in 2015” refers to this period. Note that OMAS respondents were asked whether an injury occurred, not the severity of the injury that occurred, and were asked whether medical attention was received, not whether the injury in question was severe enough to require such attention.

The analysis in this brief links the answers to these two questions with responses to other OMAS questions. Results are limited to Ohioans age 55 and older, and focus on Ohio’s Medicaid-enrolled population. Persons age 55-64 have higher labor force participation and are generally not enrolled in Medicare, so for select indicators results are presented separately for those aged 55-64 years and those 65 years and older.

RESULTS

Background: All Ohioans Age 55 and Older

Across the state in 2015, an estimated 344,000 Ohioans age 55 and older were injured in a fall – just over one in ten persons in that age range. The composition of those who fell varied by a number of characteristics (Figure 1): Those injured in a fall tended to be age 65 and older, female, white, not currently employed, and lived in a household with other children or adults. The majority resided in a rural county rather than a metropolitan or suburban one, and nearly half suffered from one or more disabling conditions. The majority-white composition of those injured in a fall is reflective of the ethnic/race-specific risk of fall injury: Ohioans ages 55 and older were 12% nonwhite, nonwhite Ohioans were 11% of those age 55 and older injured in a fall, and 9% of nonwhite Ohioans age 55 and older were injured in a fall compared with 11% of white Ohioans those ages. Among those who fell, approximately three in four (74%, 256,000) received some form of medical attention as a result of their injury.



Ohio’s Medicaid-Enrolled Adults Age 55 and Older

An estimated 71,000 Medicaid-enrolled Ohioans age 55 and older had a fall injury in 2015. This population represents more than 21% of all of Ohioans with a fall injury and 18% of the Medicaid-enrolled population in that age range. Among those injured, 71% (50,000) received some form of medical attention – 75% for those 65 and older.

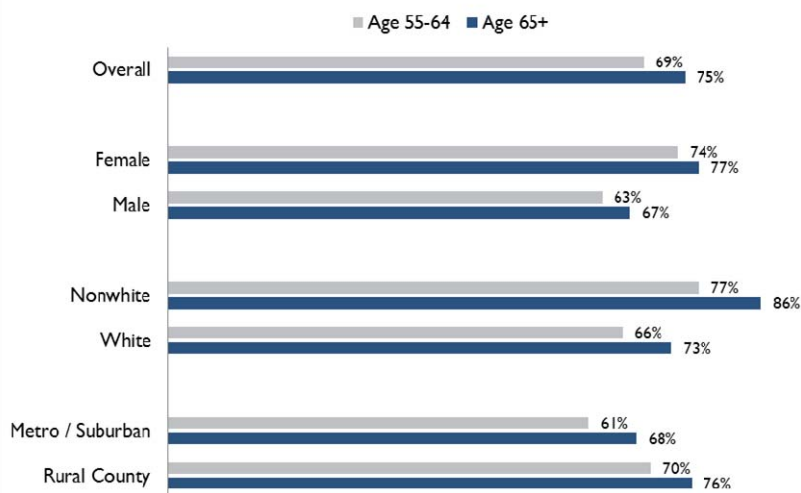
The majority of Medicaid-enrolled Ohioans injured in a fall were age 55-64 (60%, 42,000); 40% were age 65 and older (29,000) (Figure 2). These groups represent 10% and 7% of Ohio’s Medicaid enrollees in those age groups, respectively. Sixty-nine percent of persons age 55-64 with a fall injury, and 75% among those of age 65 and older, received some form of medical attention for their injury.

Figure 2. Profile of Medicaid-Enrolled Ohioans Age 55+ Injured in a Fall

| | Age 55-64 | Age 65+ |
|------------------|-----------|---------|
| Female | 55% | 80% |
| Male | 45% | 20% |
| Nonwhite | 24% | 11% |
| White | 76% | 89% |
| Suburban / Metro | 11% | 10% |
| Rural | 89% | 90% |
| Overall | 60% | 40% |

Turning to the profile of those injured in a fall among Ohio’s Medicaid-enrolled population: Gender, racial and residential gaps are present and vary with age (Figure 2). Women comprised 55% (23,000) of fall injuries (45%, 19,000, were men) among Medicaid-enrolled Ohioans age 55-64, and the gender gap widened for those age 65 and older such that 80% of those injured in a fall were women. Seventy-six percent of those injured age 55-64 were white (32,000) versus nonwhite (10,000), and this difference also grows at age 65 and older. The vast majority of Medicaid enrollees who reported injury lived in a rural county: 90% (38,000) among those ages 55-64 and 86% (25,000) among 65 and older.

Figure 3. Receipt of Medical Attention for Fall Injuries: Medicaid-Enrolled Ohioans Age 55+



The majority-white proportion of those reporting injury is partly a reflection of Ohio’s underlying racial and ethnic composition. The risk of fall injury risk by ethnicity and race followed a different pattern, however: nonwhite and white Ohioans had equal percentages injured (9.9%) at ages 55-64, and at age 65 and older 11% of whites and 8.4% of nonwhites were injured in a fall. Among nonwhites, racial/ethnic differences in the rate of fall injury were not statistically significant.

Rates of receiving medical attention varied, too, among Medicaid-enrolled Ohioans injured in a fall (Figure 3). Men had lower rates of receiving medical attention, as did whites in comparison with nonwhites. The rate of receipt of medical attention for those living alone was similar to that for those

living with others among both persons age 55-64 and 65 and older.

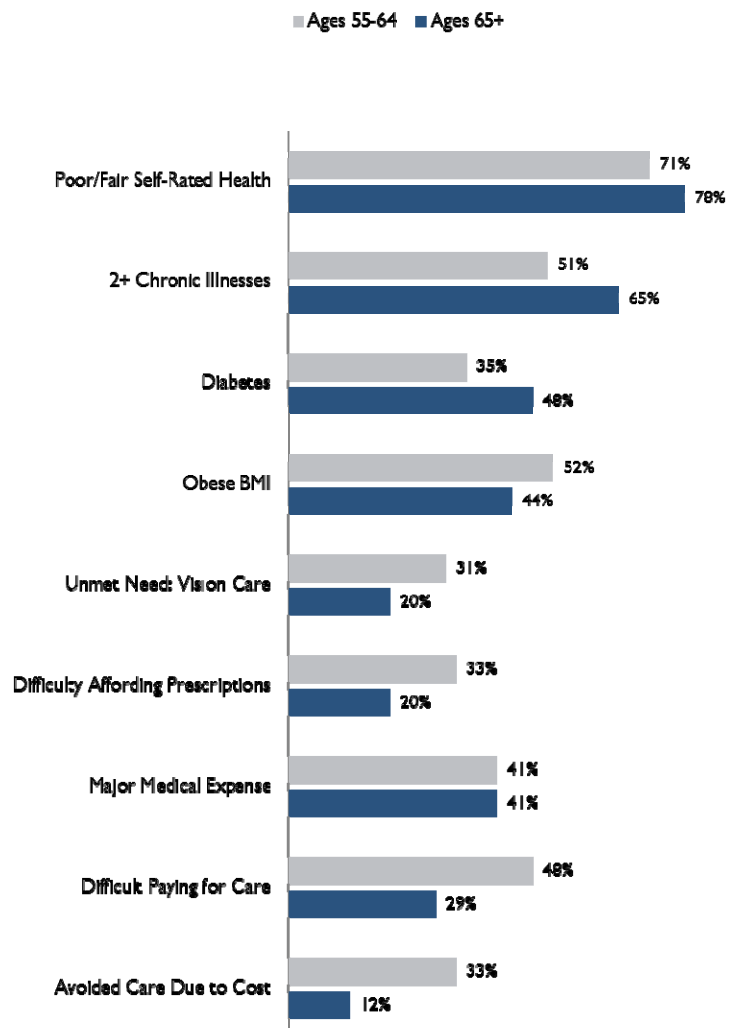
Persons age 55-64 living in a metro or suburban county with a fall injury had a lower rate of medical attention, 61%, than those living in Ohio’s rural counties (70%). These rates increase at age 65 and older, but the gap remains: 68% and 76% for metro/suburban and rural counties, respectively. The disparity in receipt of treatment was both smaller than the rate of fall injury by county type, and in the opposite direction (rural counties had higher reported percentages injured). Again, we note that receipt of medical attention is not strictly an indicator of the severity of injury.

Health status and conditions are associated with fall injuries (Figure 4). First, self-rated health is a subjective measure of overall health that has been shown to be a powerful predictor of subsequent mortality¹⁰. Among those injured in a fall, 71% and 78% rated their overall health *Fair* or *Poor* in the 55-64 and 65+ age groups, respectively, compared with 46% and 41% among those who did not report a fall injury.

Chronic illness and obesity can lead to injury, as well as increase its impact¹¹: 51% of 55-64 year old Medicaid-enrolled Ohioans, and 65% of those ages 65 and older, reporting a fall injury had two or more chronic conditions¹². By contrast, 40% of 55-64 year olds and 52% of those 65 and older of the Medicaid enrolled who were not injured reported two or more chronic conditions. Compared to those not injured, those injured had higher rates of: 1) diabetes (35% versus 29% for ages 55-64, and 48% versus 36% for those ages 65 and older); and 2) obesity as measured by body mass index (BMI) (52% versus 47% for ages 55-64, and 44% and 37% for those ages 65 and older).

Vision impairment has been shown to predict falls and fall-related injuries¹³. The OMAS does not measure vision impairment directly, but nearly a third (31%, 13,040) of Medicaid-enrolled Ohioans injured in a fall also reported an unmet need for vision care. This declined to about one in five Ohioans (20%, 6,000) among those age 65 and older. A

Figure 4. Health Status and Healthcare Access: Prevalence of Fall Injuries by Indicator, Medicaid-Enrolled Adults Age 55+



similar proportion also reported difficulty obtaining prescriptions due to cost (33% for those ages 55-64 versus 20% for those ages 65 and older).

The cost of fall injuries can be high, and are generally unexpected. Nearly double the proportion of those with a fall injury in the past 12 months also reported a major medical expense during that period: 41% of those reporting a fall injury vs 21% of those not reporting among 55-64 year-olds, and 41% versus 24% among those 65 and older. Note that those reporting a major medical expense did not indicate whether it was the result of a fall, and factors such as age and health issues can contribute both to high medical expenses and falls. Some of Ohio's Medicaid-enrolled older adults had difficulty obtaining or paying for care: Nearly all Medicaid-enrolled Ohioans age 55-64 (41,000) and 97% of Ohioans 65 and older (28,000) with a fall injury reported having a usual source of care, yet nearly half (48%, 20,000) of those 55-64 and 29% of those 65 and older (8,000) reported difficulty paying for health care. Approximately a third (33%, 14,000) of those injured at age 55-64 indicated having avoided obtaining health care due to cost, and this proportion drops to 12% (3,500) among Medicaid-enrolled Ohioans age 65 and older.

POLICY CONSIDERATIONS

In light of the high overall prevalence and cost of fall injuries, even small reductions may yield substantial cost savings in large systems such as Medicaid. In this manner, Medicaid's emphasis on prevention is compatible with the health and cost benefits of falls prevention interventions. The 2015 OMAS did not directly measure the consequences of falls or fall injuries, but other research reveals the high per capita and population costs they impose.

The rate of fall injuries among Ohio's Medicaid-enrolled adults age 55 and older was higher than in the general population at those ages, and represents nearly one in five Medicaid-enrolled Ohioans ages 55+. The percentage of persons who also received some form of medical attention for their injury was lower than the overall population as well. This makes fall injuries, their consequences and prevention an important component of Medicaid program design and implementation.

The disparities observed across major demographic groups – both in reports of fall injury and in receipt of medical treatment for such an injury – are a concern for health equity. The variation in these disparities by age group suggests age is important both on its own and interacted with other factors when considering the differential risk and impact of falls over the life course or among different cohorts. It is also important to consider the difference between the profile of persons injured in a fall and risk factors for injury – for example, Ohio's majority white population can mask similar or greater prevalence of fall injuries among nonmajority groups.

Older Ohioans with Medicaid coverage and a fall injury reported difficulty obtaining and paying for healthcare. The unexpected expense of a fall injury can be disruptive to individuals and their families, and through subsequent disability or other impairment may result in costs that hinder a person's ability to earn an income. The proportion indicating an unmet need for vision care, nearly a third of those injured in a fall, reveals a particular need for vision care access and affordability.

The association between fall injuries and both self-rated health and burden of chronic illness is consistent with previous research on the comorbidity of falls and chronic illness and their association with subsequent mortality. Falls risk assessments, already included in the PASSPORT program as well as the initial Medicare screening, could be integrated into programs and provider activities already directed toward preventing and treating chronic conditions. For example, the Department of Medicaid may benefit from collaboration with the Ohio Department of Health and the Ohio Older Adult Falls Prevention Coalition to encourage their health plans and providers to adopt the STEADI (Stopping Elderly Accidents, Deaths & Injuries) toolkit.

Finally, falls prevention efforts have traditionally targeted audiences ages 65 and older, but the percentage of Ohioans ages 55-64 reporting a fall-associated injury is high enough to warrant policy attention – regardless of Medicaid enrollment status. An emphasis on prevention for middle-aged adults may be beneficial over the remainder of the life course, as well as yield substantial healthcare savings.

METHODOLOGICAL CONSIDERATIONS

We note that the rate of fall injuries reported in the OMAS is likely an underestimate. First, the OMAS questions ask whether a person was injured in a fall, not whether she or he fell at all. Second, the questions ask whether a person was injured; we do not know whether a person fell once, twice, or more times. The questions did not ask about severity of the injury or whether

medical treatment was sought, only whether medical attention was received. We recognize that high proportions receiving medical attention for a fall injury may be evidence of greater access to health care rather than implying higher-severity injuries. Finally, the two questions about fall injuries were newly added in the 2015 OMAS. As such, we are unable to present trends in measures of falls injuries or their treatment. Continued inclusion of these items will allow us to track change over time. Further, our scope is limited to Ohioans age 55 and older, yet the prominence of falls as cause of both fatal and nonfatal injury across a broad age range suggests there is value in expanding in the future OMAS the age range of respondents to whom these questions are presented.

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FOR MORE INFORMATION

To view more information about OMAS and the findings in this policy brief, please visit the OMAS website at the Ohio Colleges of Medicine Government Resource Center grc.osu.edu/omas.

