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Mission: Promote health and wellness, improve health outcomes, and assure safety net services for all people in New Mexico.

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## Introduction

Falls among older adults (age 65+) are a significant public health concern in the United States, leading to serious injuries, loss of independence, and substantial healthcare costs. Each year, about one in four (or over 14 million) adults aged 65 and older report experiencing a fall. Of these incidents, around 37% result in injuries requiring medical treatment or causing activity limitations for at least one day, amounting to approximately nine million fall-related injuries each year.<sup>1</sup>

Falls are a leading cause of serious injury and long-term health decline in older adults. They often result in fractures, traumatic brain injuries (TBI) and other complications that can lead to hospitalization, disability, and premature death. About 95% of hip fractures in older adults are caused by falls,<sup>2</sup> reducing mobility and independence. Falls are also the most frequent cause of TBI.<sup>3</sup> Beyond the physical consequences, the psychological impacts can be profound. Many older adults who experience a fall develop a persistent fear of falling again. This fear often leads to reduced physical activity, social withdrawal, and functional decline, all of which further increase the risk of falling over time.<sup>3</sup> Falls not only diminish quality of life but also increase the risk of early mortality among older adults.<sup>4</sup>

In New Mexico (NM), falls are the leading cause of unintentional injury-related deaths among adults aged 65 and older and the third leading cause of injury death across all age groups. Between 2019 and 2023, there were 1,418 unintentional fall-related deaths among older adults in NM.<sup>5</sup> Unintentional fall-related deaths among older adults cost the state \$795 million in medical care and lost productivity in 2023, according to the Centers for Disease Control and Prevention Web-based Injury Statistics Query and Reporting System (CDC WISQARS). Additionally, in 2023, the average cost per fall-related hospitalization nationwide was \$53,889. In NM, fall-related hospitalizations resulted in an estimated \$374.9 million in direct medical costs, contributing to a total economic burden exceeding \$1.91 billion.<sup>6</sup>

This report presents data from 2019 to 2023 on unintentional fall-related deaths and hospitalizations among New Mexican adults aged 65 and older.

The Methods section describes the two types of data included in this report (mortality data and hospitalization data). The Findings section focuses on the key findings for falls related deaths among older adults (age 65+) based on mortality data, which include: (a) trends in fall related deaths between 2019 and 2023; (b) fall related deaths by age group and year; (c) sex differences in fall related deaths; (d) racial/ethnic disparities in fall related deaths; and (e) geographic variation falls deaths (across NM Health Regions) between 2019 and 2023. The fourth section reviews key findings for falls related hospitalization among older adults (age 65+) between 2019 and 2023, which include: (a) trends in fall related hospitalization between 2019 and 2023; (b) fall related hospitalization by age group and year; (c) sex differences in fall related hospitalization; (d) racial/ethnic disparities in fall related hospitalization; and (e) geographic variation in falls related hospitalization (across NM Health Regions) between 2019 and 2023. The last section summarizes key findings on fall related death and hospitalization, discusses falls prevention initiatives supported by the New Mexico Department of Health (NMDOH), and

describes the limitations of the two data sources used in this report (mortality and hospitalization data).

### Methods

The report includes two sources of data. Fall-related death data were obtained from the NM Bureau of Vital Records and Health Statistics (NM-BVRHS). These data are derived from death certificates of NM residents filed with the NMDOH and include underlying and contributing causes of death.<sup>7</sup> Fall-related deaths were identified using the International Classification of Diseases, Tenth Revision (ICD-10) external cause-of-injury codes W00–W19, indicating unintentional falls.

Fall-related hospitalization data came from the Hospital Inpatient Discharge Database (HIDD), maintained by NMDOH. HIDD captures discharge records from every patient that has stayed a minimum of 24 hours in a non-federal hospital in New Mexico. It does not include data from federal facilities such as Indian Health Service, Veterans Affairs or military hospitals. Hospitalizations are defined based on inpatient admissions and include diagnostic, procedural and demographic data.<sup>8</sup> The analysis included New Mexico residents aged 65 or older with hospitalizations related to unintentional falls, identified by ICD-10 external cause-of-injury codes W00–W19.

This report presents the number and rate of fall-related deaths and non-fatal hospitalizations among NM residents aged 65 and older. Age-adjusted rates were calculated using the direct method, standardized to the 2000 U.S. standard population, and included age groups 65–74, 75–84, and 85+. Age-specific rates were multiplied by the corresponding standard population weights (65–74: 0.522501, 75–84: 0.354797, 85+: 0.122702) and summed to obtain the final age-adjusted rate. All analyses were conducted using SAS and Microsoft Excel.

## **Findings**

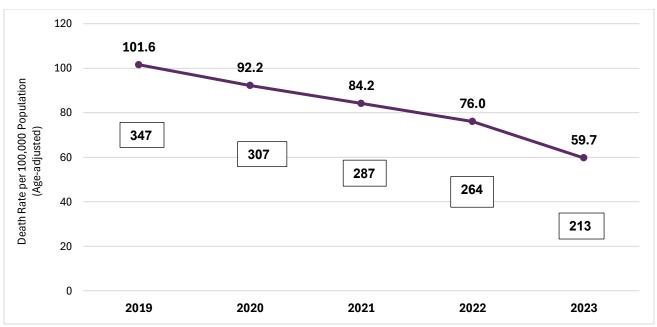
#### **Mortality Data**

#### Fall-Related Deaths Among Older Adults (Age 65+) by Year in New Mexico

Figure 1 presents the age-adjusted death rate and number for falls among older adult NM residents (age 65+) by year between 2019 to 2023. During this period, 85% of unintentional fall-related deaths (1,418 out of a total of 1,662 falls deaths) involved older adults (age 65+).<sup>5</sup> Several key findings from Figure 1 are that:

- The age-adjusted fall-related death rate among older adults (age 65+) has dropped every year between 2019 and 2023.
- Between 2019 and 2023, the age-adjusted fall-related death rate among older adults decreased by 41% (from 101.6 per 100,000 population in 2019 to 59.7 per 100,000 population in 2023).

Figure 1. Age-Adjusted Death Rate and Number for Falls Among Older Adult NM Residents (Age 65+) by Year, 2019–2023



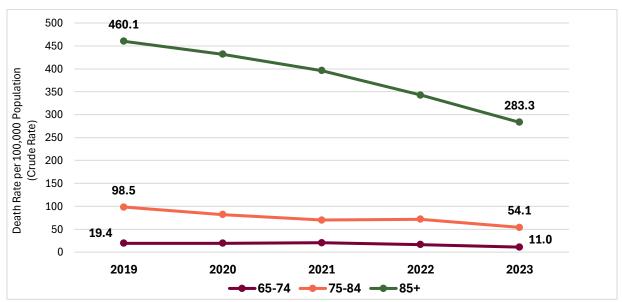
Source: NM-BVRHS, last accessed 4/25/2025

#### Fall-Related Deaths Among Older Adults (Age 65+) by Age Group and Year in New Mexico

Figure 2 presents the crude death rate for falls among older adult NM residents (age 65+) by age group (65-74, 74-84, 85+) and year between 2019 to 2023. Key observations from Figure 2 include:

- Older adults age 85+ had the highest crude death rate for falls (compared to older adults age 65-74 and 74-84).
- The crude death rate for falls decreased between 2019 and 2023 for all 3 age groups (65-74, 74-84, 85+). More specifically, the crude death rate:
  - Decreased by 38% (from 460.1 per 100,000 in 2019 to 283.3 per 100,000 in 2023) for older adults age 85+.
  - Decreased by 45% (from 98.5 in 2019 to 54.1 in 2023 per 100,000 population) for older adults age 75-84.
  - o Decreased by 43% (from 19.4 per 100,000 population in 2019 to 11.0 per 100,000 population in 2023) for older adults age 65-74.

Figure 2. Crude Death Rate for Falls Among Older Adult NM Residents (Age 65+) by Age Group and Year, 2019–2023



Source: NM-BVRHS, last accessed 4/25/2025

#### Fall-Related Deaths Among Older Adults (Age 65+) by Sex and Year in New Mexico

Figure 3 shows the age-adjusted death rate for falls among older adult NM residents (age 65+) by sex and year between 2019 to 2023. Fall-related death rates were consistently higher among males compared to females throughout the five-year period. However, the gap between the fall-related death rate for males and females fluctuated over time. More specifically:

- In 2023, the age-adjusted death rate for falls for males was 40% higher than females (71.4 vs. 50.9 per 100,000 population).
- In 2021, the age-adjusted death rate for falls for males was only 5% higher than females (86.5 vs. 82.6 per 100,000 population).

120 105.0 102.6 98.3 100 Death Rate per 100,000 Population 86.5 85.6 84.5 82.6 80 71.4 67.9 (Age-Adjusted) Male 60 50.9 ■ Female 40 20 0 2019 2020 2021 2022 2023

Figure 3. Age-Adjusted Death Rate for Falls Among Older Adult NM Residents (Age 65+) by Sex and Year, 2019–2023

Source: NM-BVRHS, last accessed 4/25/2025

## Fall-Related Deaths Among Older Adults (Age 65+) by Race/Ethnicity and Year in New Mexico

Figure 4 shows the age-adjusted death rate for falls among older adult NM residents (age 65+) by race/ethnicity between 2019 to 2023. Several key findings from Figure 4 are that:

- Non-Hispanic White older adults (age 65+) had a 47% decrease in their age adjusted death rate, which was the largest decrease for any race/ethnic group.
  - o In addition, Non-Hispanic White older adults (age 65+) went from having the highest falls death rate (110.5 per 100,000 population in 2019) to the lowest death rate (58.9 per 100,000 population in 2023) between 2019 and 2023.
- Hispanic older adults (age 65+) had a 35% decrease in their age-adjusted death rate (from 94.4 per 100,000 population in 2019 to 61.5 per 100,000 population in 2023).
- Non-Hispanic American Indian/Alaska Native (Al/AN) older adults (age 65+) experienced a 20% increase in the fall-related death rate.
  - Non-Hispanic Al/AN went from having the lowest falls death rate (63.7 per 100,000 population in 2019) to the highest falls death rate (76.5 per 100,000 population in 2023) between 2019 and 2023.

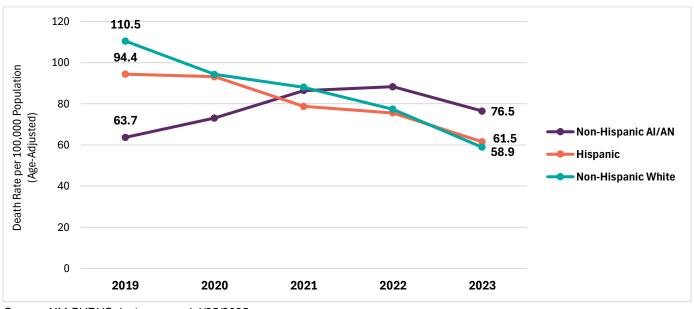


Figure 4. Age-Adjusted Death Rate for Falls Among Older Adult NM Residents (Age 65+) by Race/Ethnicity and Year, 2019–2023

Source: NM-BVRHS, last accessed 4/25/2025

# Fall-Related Deaths Among Older Adults (Age 65+) by New Mexico Health Region Residency and Year

New Mexico is divided into <u>five health regions</u> by the NMDOH to support targeted public health efforts in different parts of the state (Northwest Region, Northeast Region, Metro Region, Southeast Region, Southwest Region). 9 NM health regions can also be used to examine

geographic variation in fall related deaths among older adults (age 65+) in the state. Figure 5 shows the age-adjusted death rate for falls among older adults (age 65+) by NM health region residency between 2019 to 2023. One overarching finding from Figure 5 is that:

The age adjusted death rate for falls among older adults (age 65+) decreased for all five regions in New Mexico over the five-year period. More specifically, the age adjusted death rate for falls for the:

- Metro Region decreased by 37% (from 114.2 per 100,000 population in 2019 to 71.7 per 100,000 population in 2023).
- Northeast Region decreased by 43% (from 80.5 per 100,000 population in 2019 to 45.5 per 100,000 population in 2023).
- Northwest Region declined by 17% (from 79.1 per 100,000 population in 2019 to 65.6 per 100,000 population in 2023).
- Southeast Region decreased by 55% (from 116.3 per 100,000 population in 2019 to 52.2 per 100,000 population in 2023), which was the largest decrease across all five heath region regions.
- Southwest Region decreased by 48% (from 95.8 per 100,000 population in 2019 to 49.4 per 100,000 population in 2023).

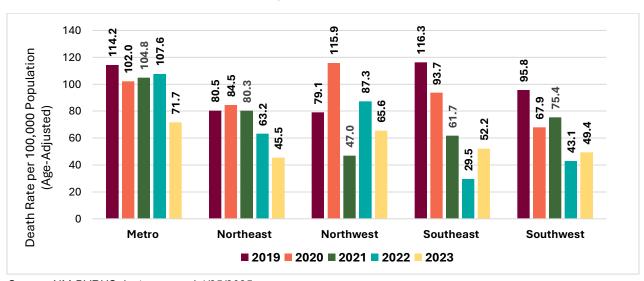


Figure 5. Age-Adjusted Death Rate for Falls Among Older Adults (Age 65+) by NM Health Region Residency and Year, 2019–2023

Source: NM-BVRHS, last accessed 4/25/2025

#### **Hospitalization Data**

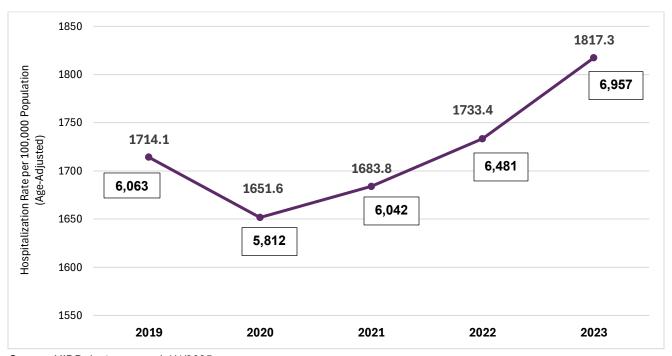
#### Fall-Related Hospitalizations Among Older Adults (Age 65+) by Year in New Mexico

Figure 6 contains the age-adjusted hospitalization rate and number for falls among older adult NM residents (Age 65+) by Year between 2019–2023. During this period, older adults (age 65+) accounted for 71% of all fall-related hospitalizations (31,355 out of a total of 43,971). Key findings from Figure 6 include:

The age-adjusted hospitalization rate for falls among older adults (65+) increased by 6% (from 1714.1 per 100,000 population in 2019 to 1817.3 per 100,000 population in 2023).

• The hospitalization rate initially declined by almost 4% between 2019 (171.4.1 per 100,000 population) and 2020 (1651.6 per 100,000 population) but has increased by over 10% between 2020 and 2023 (from 1651.6 per 100,000 population in 2020 to 1817.3 per 100,000 population in 2023).

Figure 6. Age-Adjusted Hospitalization Rate for Falls Among Older Adult NM Residents (Age 65+) by Year, 2019–2023

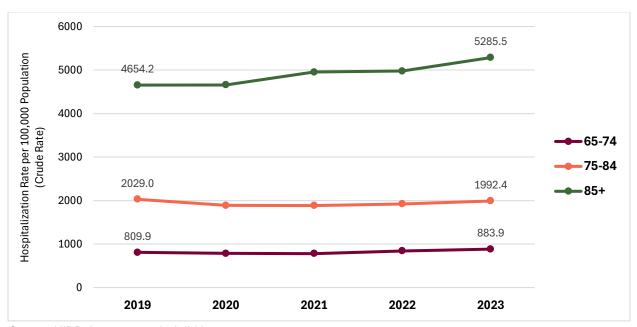


#### Fall-Related Hospitalizations Among Older Adults (Age 65+) by Age Group and Year in New Mexico

Figure 7 presents the crude hospitalization rate for falls among older adult NM residents (Age 65+) by age group (65-74, 74-84, 85+) and year between 2019–2023. Several key findings are that the crude hospitalization rate for falls among older adults:

- Increased by 9% (from 809.9 per 100,000 in 2019 to 883.9 per 100,000 in 2023) for older adults age 65-74.
- Decreased by 2% (from 2029.0 per 100,000 population in 2019 to 1992.4 per 100,000 population in 2023) for older adults age 75-84.
- Increased by 13% (from 4654.2 per 100,000 population in 2019 to 5285.5 per 100,000 population in 2023) for older adults age 85+.

Figure 7. Crude Hospitalization Rate for Falls Among Older Adult NM Residents (Age 65+) by Age Group and Year, 2019–2023

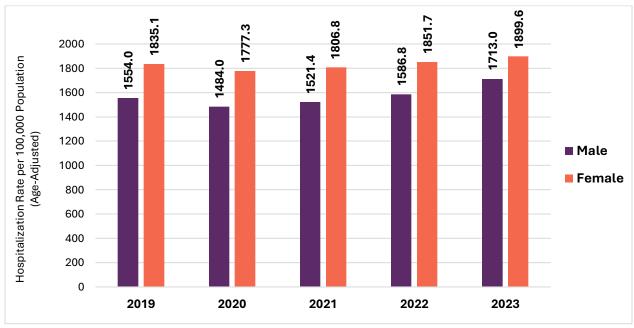


## Fall-Related Hospitalizations Among Older Adults (Age 65+) by Sex and Year in New Mexico

Figure 8 displays the age-adjusted hospitalization rate for falls among older adult NM residents (Age 65+) by sex and year between 2019–2023. Fall-related hospitalization rates were consistently higher among females than males throughout the five-year period. However, the difference in fall-related hospitalization rates between males and females varied over the years. More specifically, the age adjusted hospitalization rate for falls was:

- Over 18% higher for females (1835.1 per 100,000 population) versus males (1554.0 per 100,000 population) in 2019
- Almost 20% higher for females (1777.3 per 100,000 population) versus males (1484.0 per 100,000 population in 2020
- Almost 19% higher for females (1806.8 per 100,000 population) versus males (1521.4 per 100,000 population) in 2021
- Almost 17% higher for females (1851.7 per 100,000 population) versus males (1586.8 per 100,000 population) in 2022.
- Eleven percent higher for females (1899.6 per 100,000 population) versus males (1713.0 per 100,000 population) in 2023.

Figure 8. Age-Adjusted Hospitalization Rate for Falls Among Older Adult NM Residents (Age 65+) by Sex and Year, 2019–2023

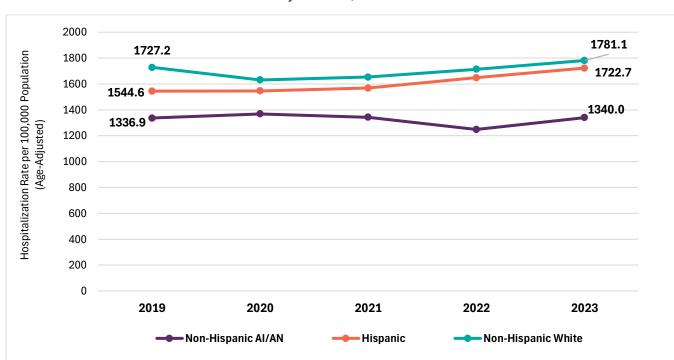


## Fall-Related Hospitalizations Among Older Adults (Age 65+) by Race/Ethnicity and Year in New Mexico

Figure 9 presents the age-adjusted hospitalization rate for falls among older adult NM residents (Age 65+) by race/ethnicity and year in New Mexico between 2019–2023. Several key findings from Figure 9 are that the age adjusted hospitalization rate for:

- Non-Hispanic White older adults (age 65+) increased by 3% (from 1727.2 per 100,000 in 2019 to 1781.1 per 100,000 in 2023).
- Hispanic older adults (age 65+) increased by 12% (from 1544.6 per 100,000 population in 2019 to 1722.7 per 100,000 population in 2023).
- Non-Hispanic Al/AN older adults (age 65+) had a less than 1% increase (from 1336.9 per 100,000 population in 2019 to 1340.0 per 100,000 population in 2023).

Figure 9. Age-Adjusted Hospitalization Rate for Falls Among Older Adult NM Residents (Age 65+) by Race/Ethnicity and Year, 2019–2023

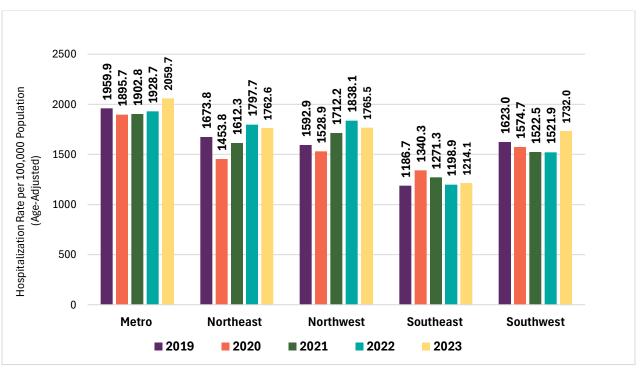


# Fall-Related Hospitalizations Among Older Adults (Age 65+) by New Mexico Health Region Residency and Year

Figure 10 shows the age-adjusted hospitalization rate for falls among older adults (Age 65+) by NM health region residency and year between 2019–2023. Key findings from Figure 10 are that the age adjusted hospitalization rate for falls in the:

- Metro Region increased by 5% (from 1959.9 per 100,000 population in 2019 to 2059.7 per 100,000 in 2023).
- Northeast Region increased by 5% (from 1673.8 per 100,000 population in 2019 to 1762.6 per 100,000 population in 2023).
- Northwest Region increased by 11% (from 1592.9 per 100,000 population in 2019 to 1765.5 per 100,000 population in 2023).
- Southeast Region increased by 2% (from 1186.7 per 100,000 population in 2019 to 1214.1 per 100,000 population in 2023).
- Southwest Region increased by 7% (from 1623.0 per 100,000 population in 2019 to 1732.0 per 100,000 population in 2023).

Figure 10. Age-Adjusted Hospitalization Rate for Falls Among Older Adults (Age 65+) by NM Health Region Residency and Year, 2019–2023



## Discussion

Table 1 summarizes the key findings for mortality data (column one) and hospitalization data (column two). One (overarching) key finding is that there is a disparity in the findings across the two data sources used in this report (death vs. hospitalization data). Although there are several exceptions, the general pattern of findings in Table 1 is that fall deaths are declining (column one), but hospitalization is increasing (column two) between 2019 and 2023.

#### Over the Study Period (2019-2023)

Between 2019 and 2023, the age-adjusted death rate for falls among older adults (age 65+) decreased by 41% between 2019 and 2023. In contrast, the age-adjusted hospitalization rate for falls among older adults (age 65+) increased by 6% between 2019 and 2023.

Table 1. Summary of Key Findings for Fall-Related Injuries Among Older Adults (Age 65+) in New Mexico, 2019-2023

Key Findings	Death Rate (1)	Hospitalization Rate (2)
Over the Study Period (2019-2023)	↓41%	↑ +6%
By Age Group		
Ages 65-74	↓43%	↑ 9%
Ages 75-84	↓45%	↓2%
Ages 85+	↓38%	↑ 13%
By Sex	Male > Female	Female > Male
By Race/Ethnicity		
Non-Hispanic White	↓47%	↑ 3%
Hispanic	↓35%	↑ 12%
Non-Hispanic AI/AN	↑ 20%	↓ less than 1%
By New Mexico Health Region	n	
Metro Region	↓37%	↑ 5%
Northeast Region	↓43%	↑ 5%
Northwest Region	↓17%	↑ 11%
Southeast Region	↓55%	↑ 2%
Southwest Region	↓48%	↑ 7%

#### By Age Group

- Between 2019 and 2023, the crude death rate for falls for older adults (age 65-74) decreased by 43% while the crude hospitalization rate increased by 9%.
- Between 2019 and 2023, the crude death rate for falls for older adults (age 85+) decreased by 38% while the crude hospitalization rate increased by 13%.
- In contrast, both the crude death rate and the crude hospitalization rate for falls among older adults (age 75-84) decreased by 45% and 2% respectively between 2019 and 2023.

#### By Sex

 Between 2019 and 2023, males had a higher age adjusted death rate for falls compared to females. In contrast, females had a higher age adjusted hospitalization rate for falls compared to males over the same time period.

#### By Race/Ethnicity

- Between 2019 and 2023, the age adjusted death rate for falls for non-Hispanic Whites decreased by 47% while the crude hospitalization rate increased by 3%.
- Between 2019 and 2023, the age adjusted death rate for falls for Hispanics decreased by 35% while the crude hospitalization rate increased by 12%.
- In contrast, both the age adjusted death rate and crude hospitalization rate for falls for non-Hispanic Al/AN increased by 20% and less than 1% respectively between 2019 and 2023.

#### By New Mexico Health Region

 Between 2019 and 2023, the age adjusted death rate for falls among older adults (age 65+) decreased for all five health regions in New Mexico while the hospitalization rate increased for all five health regions.

# Understanding Disparities in Falls-Related Outcomes Among Older Adults (age 65+)

Although Table 1 shows a clear pattern of declining deaths (column one) and increasing hospitalization (column two) for falls, the explanation for these disparities between the two data sources (deaths versus hospitalization) and across age groups, sex, racial/ethnic groups, and health regions is unclear. As a result, this section will examine possible explanations for these disparities. More specifically, between 2019 and 2023:

The oldest age group (age 85+) had the highest rate of falls related deaths and hospitalizations, which is most likely due to physiological decline, reduced muscle strength, impaired balance and multiple chronic conditions.<sup>10</sup>

Males were more at risk for falls deaths, but females were more at risk for hospitalization. One possible explanation is related to underlying biological and behavioral factors. Older females are more likely to develop osteoporosis, increasing the risk of fractures (especially hip fractures) from lower-impact falls, which leads to non-fatal but serious injuries requiring hospitalization. On the other hand, men are more likely to have severe comorbid conditions, such as cardiovascular disease or diabetes, which may undermine their physical recovery from a fall and contribute to higher mortality. Additionally, men may delay seeking care, which may lead to more severe complications or death. 13

Non-Hispanic White older adults had both the largest decline in mortality and the highest hospitalization rates. On the other hand, Al/AN older adults experienced a 20% increase in death rates and the lowest hospitalization rate (compared to non-Hispanic Whites and Hispanics). Nationally, Al/AN populations are an at-risk group for injury due to disparities in healthcare access, chronic disease burden, and environmental risk factors. <sup>14</sup> In contrast, the drop in mortality and high hospitalization rates for Non-Hispanic Whites can be due to greater access to healthcare, which facilitate early intervention for falls prevention and timely acute care, which will reduce the likelihood of fatal outcomes. <sup>15</sup>

Regionally, the Metro and Southeast areas reported the highest mortality rates in 2019, with the Metro Region experiencing a 37% decrease by 2023. However, hospitalization rates remained highest in the Metro Region throughout the period. These patterns may reflect regional differences in population density, availability of healthcare services and local public health initiatives. In other words, the Metro Region may benefit from closer proximity to community-based fall prevention programs, while rural areas may face barriers to accessing healthcare and/or preventive care.<sup>16</sup>

## NMDOH Fall Prevention Program

To address the growing concern of fall-related injuries, the NMDOH supports several evidence-based fall prevention programs including Tai Chi for Arthritis and Falls Prevention, Tai Ji Quan: Moving for Better Balance, Otago, On the Move, Bingocize, and Matter of Balance. These programs aim to improve strength, balance, mobility, and confidence among older adults. <sup>17</sup>

Tai Chi is known for enhancing relaxation and balance and has shown it to be suitable for older adults. Tai Ji Quan focuses on the dynamic balance of polarities, promoting holistic body-mind development, health, and self-defense. Otago focuses on strength and balance training for highrisk individuals and is led by physical therapists. On the Move emphasizes cognitive-motor coordination to improve walking efficiency. Bingocize blends exercise, health education, and social interaction in a game-based format, while Matter of Balance addresses fear of falling through behavioral strategies and goal setting. Together, these programs offer a comprehensive approach to fall prevention and may have contributed to the observed decline in fall-related mortality in New Mexico.<sup>17</sup>

## Limitations and Future Directions

Although insightful, there are several limitations of this report. One limitation is that this report focuses on falls deaths and non-fatal falls hospitalizations, which represents the most serious injuries due to falls. Health professionals in a variety of roles (e.g., physical therapists in the Otago Falls Prevention Program) can provide insights into risk and protective factors for falls among older adults for less serious injuries (that typically occur before serious incidents that result in death or hospitalization). Enhanced resource allocation would increase NMDOH capacity to prevent older adult falls through additional implementation of falls prevention programming. As a result, future research should focus on expanding falls prevention programs that involve a range of health professionals and community members who can identify upstream risk and protective factors for less serious falls injuries to maximize the impact of falls prevention initiatives across New Mexico.

On a related note, this report does not include emergency department (ED) data, which is a broader measure of less serious and non-fatal falls injuries that do not result in hospitalization. Since one of the key findings from this report was the differences in findings between falls deaths and (non-fatal) falls hospitalizations, future research should also determine if the pattern of findings for ED visits is similar to falls deaths (dropping between 2019 and 2022) or non-fatal falls hospitalizations (increasing between 2019 and 2022).

Another limitation of this report is that HIDD data does not include federal facilities such as Indian Health Service (IHS), Veterans Affairs (VA) or military hospitals, which results in a systematic undercount of Al/AN, active-duty service members and veterans who are served by these facilities. Future research should incorporate IHS and VA facilities to ensure the accurate representation of these populations in falls injury surveillance, which is the evidence base for the allocation of funds for falls injury prevention initiatives in New Mexico.

## Conclusion

Fall-related injuries among older adults in New Mexico continue to pose a significant public health challenge. While the substantial decline in mortality over the past five years is encouraging, the concurrent rise in hospitalizations indicates that falls remain a serious concern. The disproportionate burden of falls deaths among the oldest adults, males and non-Hispanic Al/AN populations emphasizes the need for targeted and culturally appropriate interventions. Regional differences suggest that localized strategies and improving access to healthcare (including hospitalization) may be necessary to ensure equitable outcomes across the state.

Ongoing support and expansion of evidence-based fall prevention programs through NMDOH remain critical. Enhanced and more targeted resource mapping would support broader promotion, training for health professionals, and the development and sustainability of local programs across the state. Strategic program expansion, particularly through partnerships with healthcare providers and community-based organizations, would strengthen fall-related protective factors, reduce risk, and ultimately help decrease fall-related mortality, hospitalizations, and emergency department visits. These investments would improve the health and quality of life of older New Mexicans, reduce health disparities, and lessen the social and financial burden of falls in the state. These efforts offer a promising pathway to further reduce fall-related injuries, hospitalizations, and the costs associated with one of the leading causes of preventable death and non-fatal injury among New Mexicans aged 65 and older.

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