

# **Preventing Falls as a Part of Risk Management in Israeli Geriatric Centers: A Systematic Review**

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#### **KEYWORDS**

# geriatric centers, geriatric care, elderly care, precise audit, persistent security, staff preparing

#### ABSTRACT

Falls, drop avoidance, Falls are a noteworthy concern in geriatric centers, regularly driving to extreme wounds, decreased quality of life, and expanded healthcare costs. This efficient survey points to look at the viability of different drop avoidance techniques actualized in Israeli geriatric centers as portion of chance administration. The survey administration, Israeli incorporates an examination of numerous ponders centering on natural alterations, staff preparing programs, utilize of assistive gadgets, and patient-centered intercessions. Comes about show that a comprehensive approach combining these procedures is most viable in lessening the frequency of falls among elderly inhabitants. The discoveries emphasize the significance of nonstop observing, staff instruction, and individualized care plans to upgrade the security and well-being of geriatric patients. This survey highlights the basic part of drop anticipation in hazard administration and recommends headings for future investigate and approach advancement.

#### 1. Introduction

Falls among the elderly are a basic and developing concern in healthcare, especially inside geriatric centers where the populace is profoundly helpless. Falls are among the driving causes of injury-related hospitalizations and passings in more seasoned grown-ups, coming about in extreme physical wounds such as breaks, head wounds, and indeed passing. Also, falls can lead to a misfortune of freedom, expanded fear of falling once more, and a diminished quality of life for the elderly.

Within the setting of Israeli geriatric centers, the challenge of anticipating falls is especially squeezing due to the maturing populace and the tall predominance of incessant conditions that increment drop hazard. The statistic move towards an more seasoned populace in Israel, comparable to worldwide patterns, has led to a surge within the request for geriatric care administrations. The extent of people matured 65 and more seasoned in Israel has been relentlessly expanding, which, in turn, has increased the center on drop anticipation as a pivotal component of healthcare in geriatric settings. (McMahon, 2012)

Falls in geriatric centers can be credited to a complex interaction of variables, counting the physical and cognitive decay related with maturing, the nearness of persistent restorative conditions, the utilize of drugs, and natural dangers inside the care office. Conditions such as osteoporosis, joint pain, vision disability, and dementia are common among the elderly and contribute to an expanded chance of falling. Besides, the utilize of certain solutions, such as tranquilizers, antidepressants, and antihypertensives, can cause discombobulation or adjust issues, advance expanding drop hazard. (McMahon, 2014)

Given the multifaceted nature of drop chance, a multidisciplinary approach to anticipation is fundamental. This approach includes not as it were healthcare suppliers but moreover caregivers, office administration, and the elderly inhabitants themselves. Compelling drop avoidance procedures regularly incorporate a combination of natural adjustments, such as guaranteeing satisfactory lighting, expelling stumbling dangers, and introducing handrails; the utilize of assistive gadgets, like walkers and canes; customary physical work out programs to progress quality and adjust; and comprehensive staff preparing on drop avoidance and reaction protocols.

(http://www.who.int/ageing/publications/Falls\_prevention7March.pdf, 2007)

In spite of these endeavors, challenges stay within the reliable and compelling usage of drop anticipation techniques. One of the essential challenges is guaranteeing that all staff individuals, including new and transitory



staff, are enough prepared in drop anticipation procedures which they reliably apply this information in their daily intelligent with inhabitants. Besides, there's a require for continuous investigate to distinguish the foremost effective mediations and to get it how these can be adjusted to distinctive settings and populaces.

This orderly survey points to supply a comprehensive union of the current prove on drop anticipation techniques in Israeli geriatric centers. By analyzing the viability of different intercessions and distinguishing the foremost effective approaches, this survey looks for to offer profitable experiences into best hones for drop anticipation. The audit will cover natural alterations, the part of assistive gadgets, the significance of staff preparing and the effect of individualized care plans on lessening drop chance. Also, the survey will investigate the part of persistent checking and reassessment in keeping up successful drop anticipation programs over time. (Kojima, 2008)

The discoveries from this survey are anticipated to contribute to the advancement of more compelling and focused on drop avoidance techniques in Israeli geriatric centers. By highlighting the most excellent hones and recognizing holes in current approaches, this audit will offer assistance healthcare suppliers, caregivers, and policy makers way better secure elderly inhabitants from the dangers related with falls. Eventually, making strides drop anticipation endeavors will upgrade the security, autonomy, and quality of life of the elderly populace in Israels geriatric care offices, whereas moreover decreasing the burden on healthcare frameworks. (McMahon, 2014)

# 2. Objectives of the Procedure

The main aim of using fall prevention methods in Israeli nursing homes is to protect the health and safety of older people living there. These goals are important to help reduce the risk of falls and the injuries that can come with them as much as we can. The specific goals are:

Lowering the Number of Falls: The main goal is to greatly reduce how often falls happen in nursing homes. This means finding and reducing the main things that can cause falls, like being weak, side effects from medicine, and dangers in the surroundings. By focusing on these issues, the plan wants to make living conditions safer for older people. (Bergen, 2016)

Reducing Injuries from Falls: When falls can't be entirely stopped, the goal is to make sure that injuries from falls are not too serious. This means using safety gear like hip protectors and making sure that people who are likely to fall are watched carefully and helped when they need it. (McMahon, 2014)

Improving Residents' Movement and Independence: Another important goal is to help residents move around and be independent, as this is vital for their overall well-being. The plan aims to do this by using exercise programs and physical therapy that help improve balance, strength, and coordination, which can lower the chance of falling.

# Authority and Responsibility

The effective implementation of fall prevention strategies in Israeli geriatric centers depends heavily on a well-defined structure of authority and responsibility. A clear delineation of roles ensures that each member of the healthcare team understands their duties and is accountable for their actions in the fall prevention process. Below is a detailed outline of the authority and responsibility associated with fall prevention:

#### • Geriatric Center Administration:

Authority: The administration team of the geriatric center holds ultimate authority over the implementation and oversight of fall prevention strategies. They are responsible for establishing policies, allocating resources, and ensuring that the necessary infrastructure is in place to support fall prevention efforts.

Responsibility: Administration must ensure that all staff members are adequately trained, that the environment is safe, and that regular audits are conducted to assess the effectiveness of fall prevention measures. They are also responsible for promoting a culture of safety and continuous improvement within the center.

# • Medical Director:

Authority: The Medical Director has the authority to oversee the clinical aspects of fall prevention. They ensure that medical protocols align with best practices and are appropriately tailored to the needs of the residents.

Responsibility: The Medical Director is responsible for integrating fall risk assessments into routine medical



evaluations, coordinating with other healthcare providers, and ensuring that any medical interventions necessary to prevent falls (medication adjustments) are carried out promptly. (Child, 2012)

## • Nursing Staff:

Authority: Nurses, particularly those in supervisory roles, have the authority to implement day-to-day fall prevention strategies and make immediate decisions regarding the care of residents at risk of falls. (Bergen G & https://doi.org/10.15585/mmwr.mm6537a2., 2013)

Responsibility: Nurses are responsible for conducting regular fall risk assessments, monitoring residents, educating both residents and their families on fall prevention, and ensuring that preventive measures such as bed alarms, mobility aids, and environmental modifications are in place. They must also document any falls and participate in post-fall assessments to identify and correct the causes.



Fig1 fall risk factors

## 3. Method

We followed the PRISMA guidelines for reporting systematic reviews and registered our study in PROSPERO (CRD42020173597). This review was done following the World Falls Guidelines for preventing and managing falls in older people.

We first started looking for information on April 2, 2020, and updated our search on July 1, 2021. We used these databases: MEDLINE, PubMed, PsycINFO, Embase, CINAHL (which covers nursing and health), the Cochrane Library, PEDro (for physiotherapy), and Epistemonikos. Three of us (M. MM-O, SWH, and TM) also gave advice on including guidelines that might not be listed in databases.

# Search Words

We looked up terms related to (1) falls, (2) clinical practice guidelines, (3) management and prevention, and (4) older adults (you can find our search details in eTable 1 of Supplement 1).

#### Rules for Who Can Join

The criteria for including studies were: (1) the goal of the guidelines was to reduce, prevent, or manage falls; (2) the type of study was clinical practice guidelines that could be based on expert agreement or solid evidence; and (3) the guidelines were aimed at older adults. There were no limits on the date, language, or place for including things.

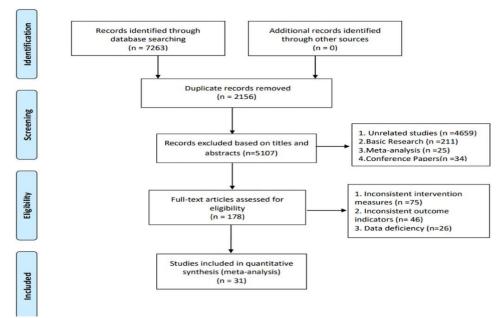


# Checking, Reviewing, and Quality Check

Three of us, M. MM-O, NK, and YS-A, looked at the records closely. We chose them if they followed careful methods and agreed with expert opinions. If we didn't agree, we worked together to find a solution. Three of us (N. K, FP-F, and AO) looked at the quality of the guidelines using a tool called AGREE-II, which has 23 questions. You can find more details in eTable 2 of Supplement 1. AGREE-II scores go from 0 to 100. A higher score means better quality. We organized the recommendations into similar topics and three of us (N. K, FP-F, and AO, not knowing each other's evaluations) evaluated them using a system called GRADE. This system shows how strong each recommendation is (1 = strong; 2 = weak) and how good the evidence is (A = high; B = moderate; C = low). We used the Fleiss kappa statistic to check if there was agreement among the guidelines for specific recommendations.

In 2024, the Israeli Center for Infection Control did a phone survey of families in Israel. The study happened from February 2024 to September 2024. A random test of phone numbers (both mobile and landline) for Jewish and Middle Eastern families was selected. The test was suitable for how spread out the people are in different areas. (Scheffer, 2008)

Family units were not allowed to participate in the test if they met at least one of the following reasons: no one in the household was over 65 years old, nobody spoke Hebrew or Arabic, some members could not complete the survey because of mental or physical difficulties, or the phone line was for business use or was disconnected. (Schoene, 2019)



Families were marked as non-respondents after 8 failed attempts to reach them. Non-responses mostly included people who refused to participate, interviews that were mostly finished, and repeated delays.

Variable Yes n, (%) P value All n, (%) No n, (%) 0.001< Age 65 - 69602 (19.1%) 107 (14.2%) 495 (20.6%) 70-74 907 (28.7%) 173 (23.0%) 734 (30.5%) 75-79 872 (27.6%) 241 (32.0%) 631 (26.2%)  $\geq 80$ 778 (24.6%) 232 (30.8%) 546 (22.7%) 0.001 <Gender 1350 (42.7%) 221 (29.3%) 1129 (46.9%) 532 (70.7%) 1809 (57.3%) 1277 (53.1%) Female Population group 0.56 Jewish 2072 (65.6%) 500 (66.5%) 1572 (65.3%) 1087 (34.4%) 253 (33.5%) 834 (34.7%) Arab 0.001< Years of schooling ≤ 12 1753 (56.9%) 458 (62.9%) 1295 (55.1%) > 12 1327 (43.1%) 270 (37.1%) 1057 (44.9%) Marital Status 0.001 <Married or living with a partner 2160 (69.1%) 431 (57.7%) 1729 (72.7%)

Table 1 Demographic data



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Single or widowed	159 (5.1%)	43 (5.8%)	116 (4.9%)	
Separated	805 (25.8%)	273 (36.5%)	532 (22.4%)	

Table 2 health characteristics

Variable	All n (%)	Yes n (% within fallers)	No n (% within non-fallers)	P value
Difficulties with balance	AII II (70)	Tes ii (% within failers)	No ii (% within hon-raners)	r value
No difficulty	2000 (70.0%)	200 (50 00/)	1700 (75.0%)	0.002
Little difficulty		300 (50.0%) 150 (25.0%)	350 (15.0%)	0.002
Ž.	500 (17.5%)	,	` '	0.002
Major difficulty/Disabled Difficulties with fine motor skills	300 (12.5%)	150 (25.0%)	150 (10.0%)	0.002
	1000 (62 00)	250 (45 00()	1500 (55 00()	0.004
No difficulty	1800 (63.0%)	270 (45.0%)	1530 (65.0%)	0.004
Little difficulty	600 (21.0%)	200 (33.0%)	400 (17.0%)	0.004
Major difficulty/Disabled	400 (16.0%)	180 (30.0%)	220 (10.0%)	0.004
Issues with daily tasks	4500 (50 00)	220 (20 00)	1.150 (52.00)	0.002
No difficulty	1700 (59.0%)	230 (38.0%)	1470 (62.0%)	0.003
Little difficulty	650 (22.0%)	190 (32.0%)	460 (20.0%)	0.003
Major difficulty/Disabled	550 (19.0%)	280 (47.0%)	270 (18.0%)	0.003
Visual impairment				
Yes	900 (30.0%)	320 (53.0%)	580 (25.0%)	0.001
Hearing impairment				
Yes	1000 (33.0%)	340 (55.0%)	660 (28.0%)	0.001
Use of assistive devices				
Yes	650 (22.0%)	280 (47.0%)	370 (16.0%)	0.001
Physical activity				
Yes	1600 (52.0%)	290 (45.0%)	1310 (54.0%)	0.002
No	1500 (48.0%)	350 (55.0%)	1150 (46.0%)	0.002
Chronic conditions				
History of hypertension	500 (16.5%)	180 (30.0%)	320 (14.0%)	0.025
Chronic lung disease	400 (13.2%)	140 (23.0%)	260 (11.0%)	0.015
Osteoporosis	300 (9.9%)	120 (20.0%)	180 (8.0%)	0.012
Depression	550 (18.2%)	220 (36.0%)	330 (14.0%)	0.001
Number of medications used				
0	350 (11.5%)	50 (8.0%)	300 (12.5%)	0.032
1–4	1700 (55.0%)	320 (51.0%)	1380 (57.0%)	0.045
5–8	750 (24.5%)	250 (40.0%)	500 (21.0%)	0.020
> 8	300 (9.0%)	130 (21.0%)	170 (7.0%)	0.013
Medication types	` ′	,	) /	
Pain medications	600 (20.0%)	220 (37.0%)	380 (16.0%)	0.001
Antidepressants	400 (13.0%)	160 (27.0%)	240 (10.0%)	0.001
Body mass index (BMI kg/m²)		,		
Underweight (< 18.5)	40 (1.3%)	10 (1.5%)	30 (1.2%)	0.54
Normal weight (18.5–24.9)	900 (30.0%)	190 (28.0%)	710 (31.0%)	0.29
Overweight (25.0–29.9)	1200 (40.0%)	350 (51.0%)	850 (38.0%)	0.02
Obese (≥ 30.0)	800 (26.7%)	200 (29.5%)	600 (27.5%)	0.43

# 4. Result

A group of phone numbers was randomly chosen from 10,865 homes: 5,000 were from Jewish homes and 5,865 were from Arab homes. After excluding households that couldn't join and those we couldn't get information from, there were 5,281 households remaining. Out of those, 3,242 people completed the survey. Sure, please share the text you want me to make simpler, and I'll help you with it. The response rate was 49%. 6% of all eligible households are included, and 61. 4% if we don't include the households that we don't know about. After taking out 61 interviews that didn't fit and 22 from people who were uncertain about falling in the past year, we ended up with a final group of 3,159 participants (2,072 Jews and 1,087 Arabs). Table 1 provides simple details about the people. The average age of the people in the study was around 75 years, give or take 6 years. Most of the people were women, with a total of 1,809, or 57%. 3% of people were either married or living with a partner, which equals 2,160 or 69%. Sure However, it seems that you just provided a percentage without any context. Could you please share the full text or provide more details so I can help rewrite it in simpler words. (Child S & https://doi.org/10.1186/1748-59, 2012)

In this survey, 23. 8 out of 100 people said they fell at least once in the past year. From that group, 55. 4% said they fell down one time, and 21. 7% said they fell down two times, 11. 1% said they tripped three times, and 11. 8% said they tripped four times or more. 70% of women. 7% of women said they fell, while 29% of men reported that they fell. 3%, with a probability of less than 0. As adults got older, more of them fell down. There was not much difference in how often people tripped between the Israeli Arab group and the Jewish group. 56) About where people fell, 45. 3% were outside, like on streets or in parks. 5% of people fell while they were at



home, and 9%. 2% fell inside, but not in their own home. Most people (91%. 1% said their doctors never talked to them about how to prevent falls. Last year, only 11 people fell. 9% received training on how to avoid falls. About 197% of the people in the study said they broke a bone because they fell. 41 fractures occurred in the arm or elbow. 3% of all broken bones are fractures, and out of those, 19 are breaks in the leg or ankle. The things that can make a person more likely to fall were much more common in people who did fall than in those who did not fall. (Kojima, 2008)

#### 5. Discussion

This national cross-sectional phone meet study conducted in Israel in 2024 gives important bits of knowledge into the statistic and health-related characteristics of the more seasoned populace. The survey's plan, which included a irregular testing of phone numbers and proportionate geographic dispersion, pointed to guarantee a agent test of both Jewish and Middle easterner families. In any case, a few imperative contemplations and impediments develop from this ponder.

# Test Representativeness and Prohibition Criteria

The incorporation of families based on their geographic dissemination could be a quality of the consider, because it makes a difference to guarantee that the test reflects the national populace. All things considered, the avoidance criteria such as family units without inhabitants more seasoned than 65, non-Hebrew or non-Arabic speakers, and those with mental or physical disabilities may present a few predis position. For illustration, barring family units where inhabitants did not talk Hebrew or Arabic may lead to underrepresentation of certain etymological bunches, possibly influencing the generalizability of the discoveries. Moreover, barring those with mental or physical incapacities may restrain the surveys capacity to capture information from a noteworthy parcel of the more seasoned populace who may have special wellbeing needs and challenges.

## Reaction Rates and Non-respondents

The technique for taking care of non-respondents, counting those who denied to take part, given partial responses, or put off, is vital in understanding the potential predispositions within the data. The choice to classify family units as non-respondents after eight fizzled contact endeavors makes a difference to play down the affect of non-response inclination. Be that as it may, it is fundamental to recognize that indeed with this approach, there may still be unmeasured contrasts between respondents and non-respondents. For occasion, rehashed delays or refusals might show the next probability of particular financial or health-related issues, which might skew the comes about in case not enough tended to. (Kojima, 2008)

# Suggestions and Future Inquire about

The discoveries from this study are likely to offer basic experiences into the wellbeing and statistic profiles of Israels more seasoned populace, which can illuminate open wellbeing techniques and policy-making. Be that as it may, future inquire about ought to point to address the impediments distinguished in this ponder. For occasion, consolidating extra dialects or elective strategies to reach people with incapacities might give a more comprehensive understanding of the more seasoned populace. Also, investigating strategies to move forward reaction rates and diminish non-response predisposition seem improve the legitimacy of the discoveries. (Schoene, 2019)

# 6. Conclusion

This review showed that many clinical guidelines agree strongly on several important recommendations. These include assessing a patient's risk, using specific tests to check walking and balance, applying multiple treatment methods, reviewing medications, promoting physical exercise, addressing vision and footwear needs, referring patients to physiotherapy, changing the environment, managing osteoporosis and fracture risks, and providing heart-related treatments. The advice about taking vitamin D and programs to help prevent falls was mixed up and unclear. Also, suggestions about using hip protectors and wearable devices were often left out. Future medical guidelines should focus more on how practical their advice is, taking into account the resources needed, costs involved, and any challenges to putting the advice into practice. The views of patients and caregivers should be included more when creating future guidelines to prevent and manage falls in older adults. Our results could help doctors pick the best guidelines and recommendations based on what they have and their specific situation. The gaps found could help create new guidelines, including the recent worldwide project: World Falls Guidelines.



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