



Falls: among elderly adults aged 65 years and older

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Background

Falls are a major health problem for persons aged 65 years and older. It is estimated that more than 30% of people aged 65 or older living in the community fall each year. Many fall more than once, and the risk of falling increases with age. Although only 3-10% of these falls result in serious injury, they have serious implications for healthcare resources [1, 2].

Objective of study

To determine the demographic pattern and cost of hospital admissions due to falls in Miami-Dade County's elderly population.

Methods

Hospital inpatient data was obtained from the Agency for Health Care Administration, and the Florida Department of Health. Only cases with injuries classified as principal diagnosis according to the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) 800-999 were included in this study. The mechanism of injury was defined by first external cause of injury code (E-code) between secondary and tenth diagnosis. Ninety percent of the cases with a principal

diagnosis of injury were E-coded in the 2003 hospital discharge data. SAS version 9.03 and ArcGIS 9.0 were utilized to perform the data analysis.

Results

There were 14,835 hospitalizations due to injuries, which accounted for 4.6% of all hospitalizations among Miami-Dade County residents in 2003. Falls (5,439, 36.7% of all injury hospitalizations), motor vehicle-related injuries (2,352, 15.9%) and poisoning (1496, 10.1%) were the top three leading causes of hospitalizations due to injury. Three thousand six hundred and sixty-three (67.3%) hospitalizations due to falls were attributed to persons aged 65 years and older. The hospitalization rate increased from 367.7 per 100,000 population among individuals 65-69 years old to 3,366.4 per 100,000 population among individuals 85 years old and above. The hospitalization rate was higher among females (1,476.3 per 100,000 population) than males (714.3 per 100,000 population); the rate of aged 75 years and above were more likely to be hospitalized due to injuries from falls. Among female elderly adults, white females were more likely

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Figure-1 Hospitalizations from falls per 100,000 population by age group among elderly adults, Miami-Dade County, 2003

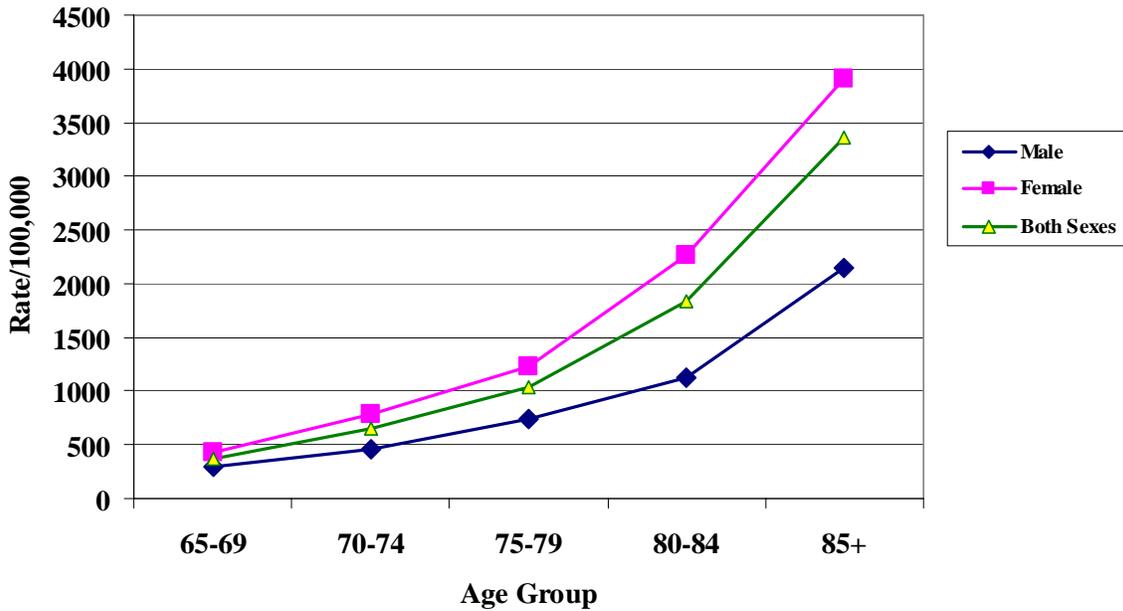


Figure-2 Hospitalizations from Falls per 100,000 elderly population by Race and Age Group, Miami-Dade County, 2003

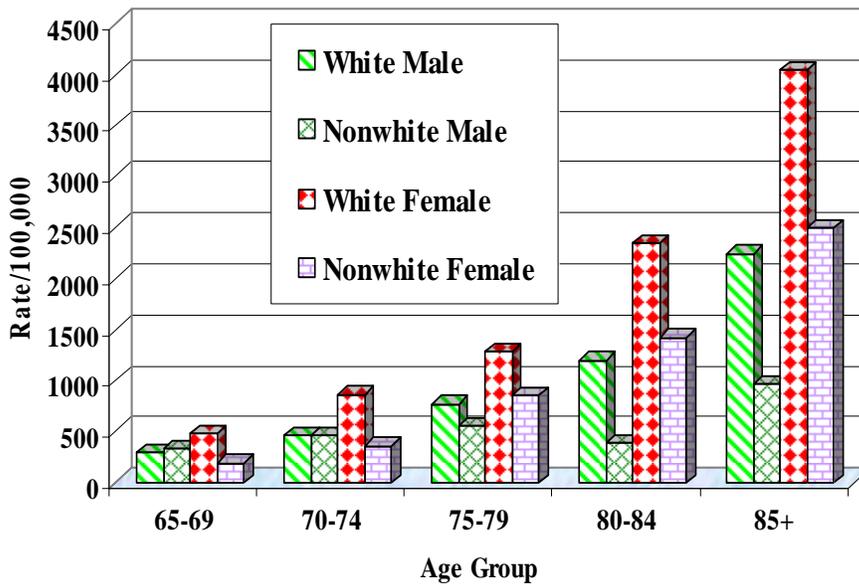
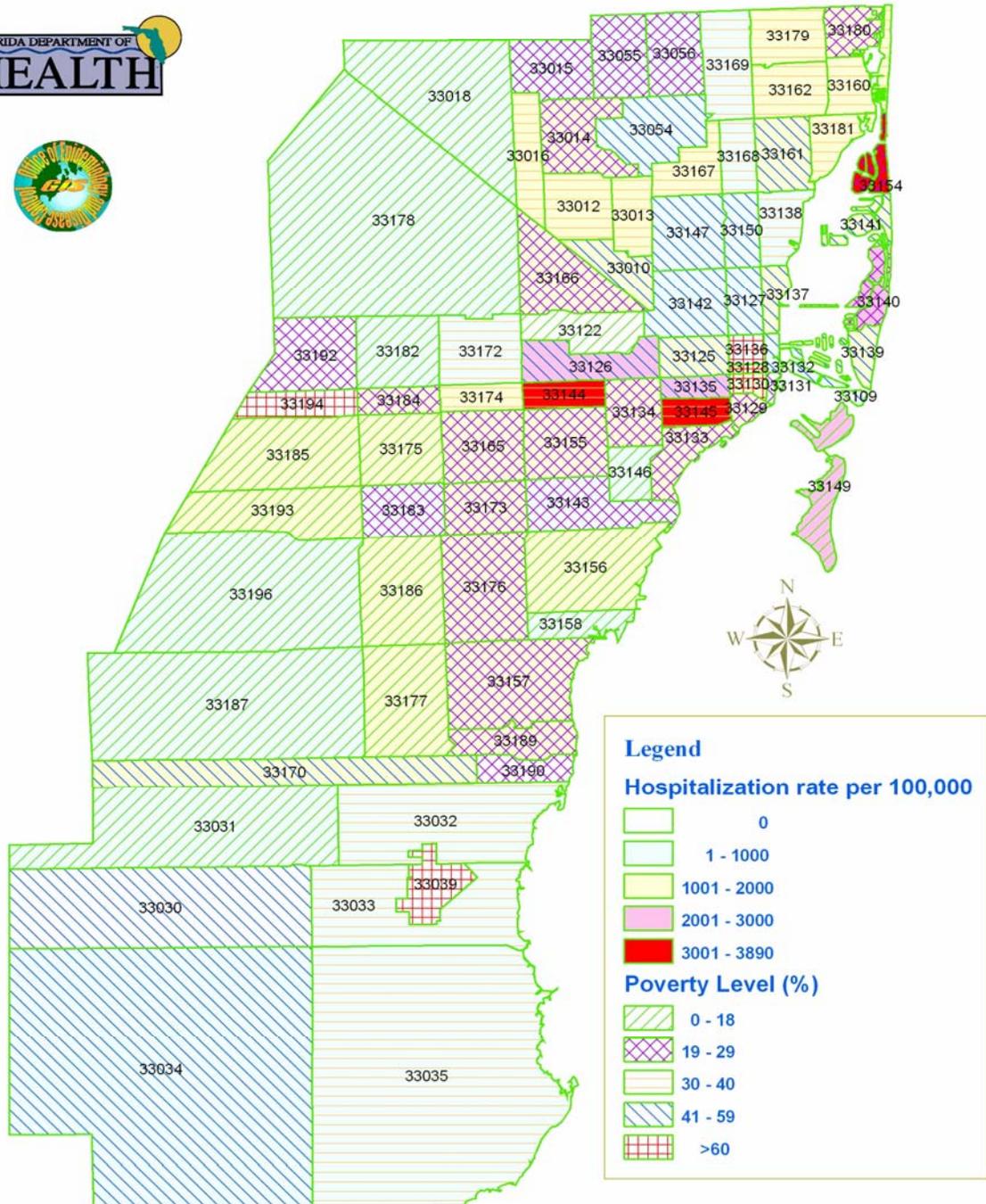


Figure-3 Hospitalizations per 100,000 population among adults aged 65 years and older, with poverty levels, Miami-Dade County 2003



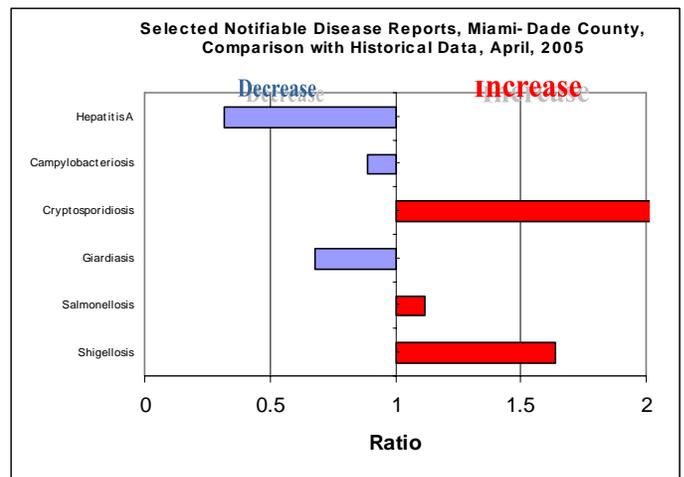
to have hospitalizations due to falls relative to non-white females (Figure-2). The median hospital length of stay was 5 days for both the white and nonwhite elderly patients. The median cost of hospitalization was 24,824 US dollars. Medicare paid 85.8% of all fall-related hospitalizations during the year 2003. No association was found between poverty level and hospitalization rates in Miami-Dade County (Figure-3). High rates of fall-related hospitalizations occurred in Miami Beach and the Central Miami area, which may be explained by their high concentration of population aged 85 years and above.

Conclusion

Falls are a leading cause of hospitalization among adults aged 65 years and older in Miami-Dade County. This has a significant economic and emotional impact on members of our community due to the high cost of hospitalization and additional services required after hospital discharge. More preventive interventions targeting populations at increased risk for falls should be a public health priority in Miami-Dade county and other communities with large elderly populations.

Reference

1. Lesley Gillespie, Preventing falls in elderly people. *BMJ* 2004; 328 (20): 653-654
2. Nordell Eva, Jarnl Gun-Britt, etl. Accidental falls and related fractures in 65-74 year olds: A retrospective study of 332 patients. *Acta Orthop Scand* 2000; 71 (2): 175-179



*Ratio of current month total to mean of 15 month totals (from previous, comparable, and subsequent month periods for the past 5 years).



TO REPORT ANY DISEASE AND FOR INFORMATION CALL:

Office of Epidemiology and Disease Control



- Childhood Lead Poisoning Prevention Program (305) 470-6877
- Hepatitis (305) 470-5536
- Other diseases and outbreaks (305) 470-5660
- HIV/AIDS Program (305) 470-6999
- STD Program (305) 325-3242
- Tuberculosis Program (305) 324-2470
- Special Immunization Program (786) 845-0550



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Monthly Report

Selected Reportable Diseases/Conditions in Miami-Dade County, April 2005

Diseases/Conditions	2005	2005	2004	2003	2002	2001
	this Month	Year to Date				
AIDS ^{Provisional}	124	509	478	368	400	448
Animal Rabies	0	0	0	0	0	0
Campylobacteriosis	11	30	39	37	29	31
<i>Chlamydia trachomatis</i>	268	1241	1254	1367	1504	1026
Ciguatera Poisoning	0	0	0	0	0	0
Cryptosporidiosis	6	11	2	4	1	7
Cyclosporiasis	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0
<i>E. coli</i> , O157:H7	0	0	1	0	0	0
<i>E. coli</i> , Non-O157	0	0	0	0	0	0
<i>E. coli</i> , Other	0	0	0	0	0	0
Encephalitis, West Nile Virus	0	0	0	0	0	0
West Nile Fever	0	0	0	0	0	0
Giardiasis, Acute	16	49	92	40	52	63
Gonorrhea	141	546	454	602	698	538
Hepatitis A	3	18	6	10	29	49
Hepatitis B	10	17	16	15	4	13
HIV ^{Provisional}	173	557	556	564	656	523
Lead Poisoning	13	36	83	52	62	83
Legionnaire's Disease	0	1	1	0	0	0
Leptospirosis	0	0	0	0	0	0
Lyme disease	0	0	0	0	0	0
Malaria	0	0	5	5	4	8
Measles	0	0	0	0	0	0
Meningitis (except aseptic)	0	3	1	1	2	1
Meningococcal Disease	0	3	8	3	7	5
Mumps	0	0	0	0	0	0
Pertussis	0	1	2	0	1	1
Polio	0	0	0	0	0	0
Rubella	0	0	0	0	0	0
Rubella, Congenital	0	0	0	0	0	0
Salmonellosis	35	105	90	108	76	53
Shigellosis	36	88	70	101	61	28
<i>Streptococcus pneumoniae</i> , Drug Resistant	0	5	26	45	42	59
Syphilis, Infectious	11	54	67	62	60	62
Syphilis, Other	56	200	315	376	356	178
Tetanus	0	0	0	0	0	0
Toxoplasmosis	0	0	1	3	7	4
Tuberculosis ^{Provisional}	14	57	72	80	73	39
Typhoid Fever	0	2	1	1	1	0
<i>Vibrio cholera</i> Type O1	0	0	0	0	0	0
<i>Vibrio cholera</i> Non-O1	0	0	0	0	0	0
<i>Vibrio</i> , Other	0	0	0	1	0	0

* Data on AIDS are provisional at the county level and are subject to edit checks by state and federal agencies.

** Data on tuberculosis are provisional at the county level.

