Gruppo di ricerca geriatrica

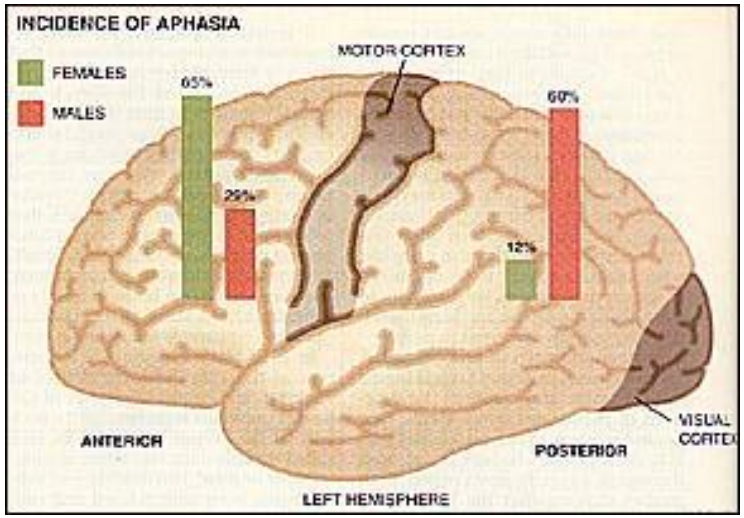
Gruppo di Ricerca Geriatrica

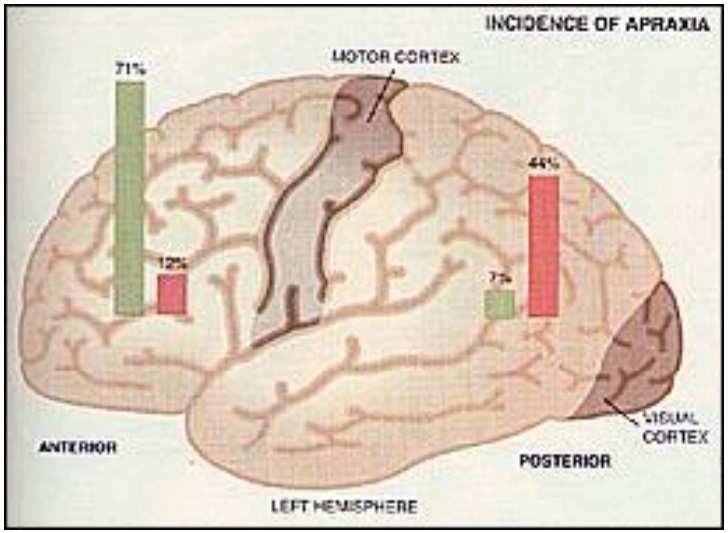
Journal Club

26 Febbraio 2010

PER UNA GERIATRIA DI GENERE

Alessandra Marrè


INCIDENCE OF APHASIA
FEMALES
MALES
MOTOR CORTEX
65%
29%
12%
60%
ANTERIOR
POSTERIOR
LEFT HEMISPHERE

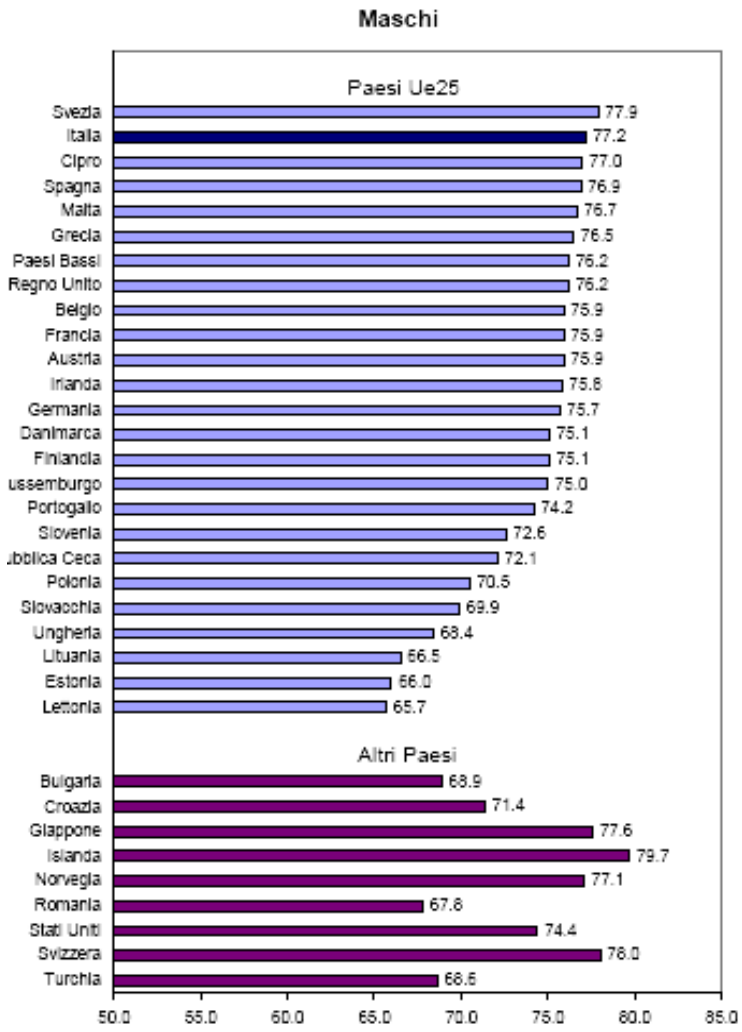

INCIDENCE OF APRAXIA
MOTOR CORTEX
71%
12%
7%
44%
VISUAL
CORTEX
ANTERIOR
POSTERIOR
LEFT HEMISPHERE

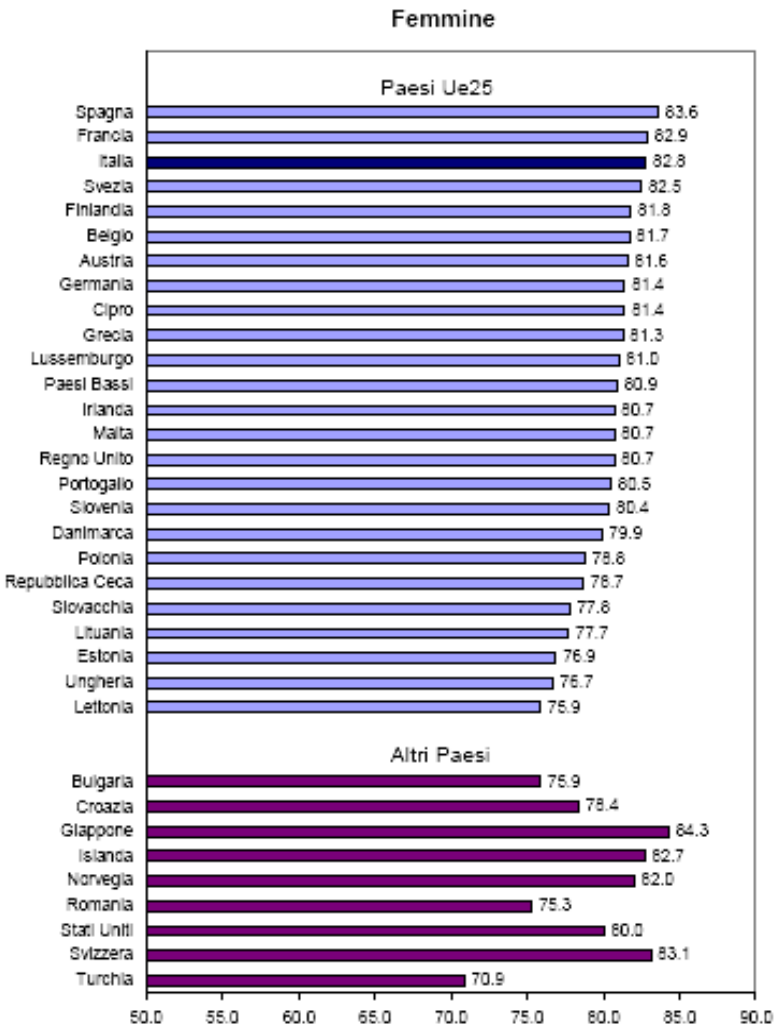
Life expectancy in older persons

Years still to live

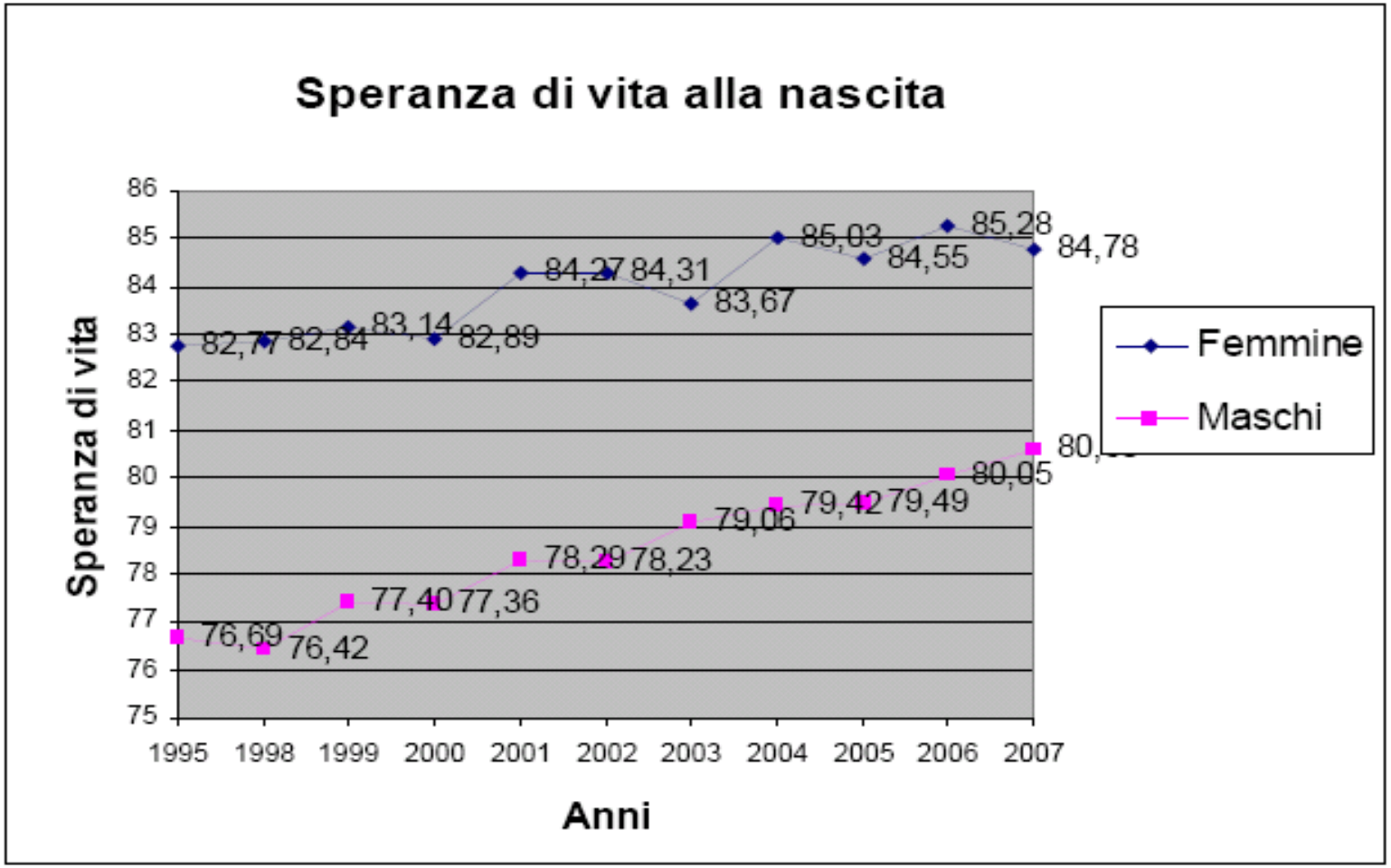
	Men						Women					
Age	**70**	**75**	**80**	**85**	**90**	**95**	**70**	**75**	**80**	**85**	**90**	**95**
Healthy	**18.0**	**14.2**	**10.8**	**7.9**	**5.8**	**4.3**	**21.3**	**17.0**	**13.0**	**9.6**	**6.8**	**4.8**
Average	**12.4**	**9.3**	**6.7**	**4.7**	**3.2**	**2.3**	**15.7**	**11.9**	**8.6**	**5.9**	**3.9**	**2.7**
Frail	**6.7**	**4.9**	**3.3**	**2.2**	**1.5**	**1.0**	**9.5**	**6.8**	**4.6**	**2.9**	**1.8**	**1.7**

Based on NCMS Life Tables of the United States 1997,
Adapted from Walter LC and Covinsky KE. JAMA 2001:285; 2750-6





Estratto da 'Nota informativa' ISTAT del 24 ottobre 2006 – Tavole mortalità della popolazione residente.


Speranza di vita alla nascita
Speranza di vita
Anni
86
85
84
83
82
81
80
79
78
77
76
75
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
82,77
82,84
83,14
82,89
84,27
84,31
83,67
85,03
84,55
85,28
84,78
76,69
76,42
77,40
77,36
78,29
78,23
79,06
79,42
79,49
80,05
Femmine
Maschi

Epidemiologic Reviews
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Gender Gap in Longevity and Disability in Older Persons

Anne B. Newman[1,2] and Jennifer S. Brach[2,3]

INTRODUCTION

Women live longer than men, but older men have fewer disabilities than do older women. The purpose of this review is to examine the magnitude of the difference in longevity and disability that exists between older men and older women. Possible explanations for the differences in longevity and disability will be presented.

gap in longevity is now decreasing between men and women. However, the larger number of women surviving at every age has resulted in a much larger number of older women than of men. In the United States, there are about 20 million women over age 65 years compared with 14 million men. The ratio of women to men at age 65 is about 120 women for every 100 men, and by age 85, it is 250 women to 100 men (1). Because of these trends, the major-

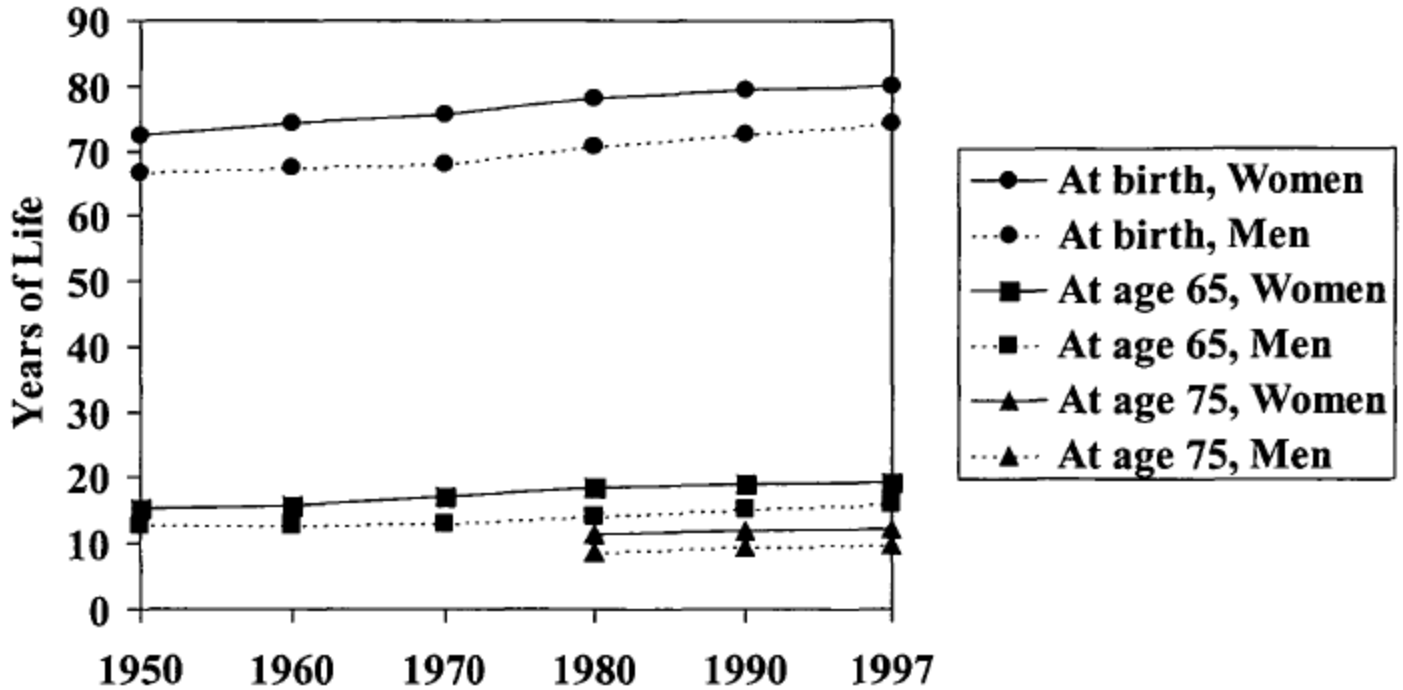


FIGURE 1. Life expectancy at birth, at age 65 years, and at age 75 years, by sex, United States, 1950–1997. (Source: National Center for Health Statistics, 1999 (1)).

TABLE 1. Age-adjusted death rates per 100,000 population, United States, 1997*

Cause of death	Men	Women
Heart disease	173.1	95.4
Cerebral vascular accident	27.9	24.2
Neoplasms	150.4	107.3
Lung cancer	52.8	27.5
Chronic obstructive pulmonary disease	26.1	17.7
Motor vehicle accident	21.7	10.2
Suicide	17.4	4.1
Homicide	12.5	3.3

* Source: National Center for Health Statistics, 1999 (1).

Selected leading causes of death, by sex

	1997				
	Deaths		Both sexes	Males	Females
	number	%	Rate[1]		
All causes	**215,669**	**100.00.00**	**658.07.00**	**844.00.00**	**521.06.00**
Cancers	58,703	27.02.00	181.05.00	229.07.00	148.05.00
Diseases of the heart	57,417	26.06.00	173.00.00	230.08.00	129.07.00
Cerebrovascular diseases	16,051	7.04	47.08.00	52.08.00	43.09.00
Chronic obstructive pulmonary diseases and allied conditions	9,618	4.05	29.00.00	44.05.00	20.01
Unintentional injuries	8,626	4.00	27.06.00	37.08.00	17.09
Pneumonia and influenza	8,032	3.07	23.07	31.05.00	19.02
Diabetes mellitus	5,699	2.06	17.04	20.06	14.08
Hereditary and degenerative diseases of the central nervous system	5,049	2.03	15.00	16.07	13.09
Diseases of arteries, arterioles and capillaries	4,767	2.02	14.03	19.05	10.06
Psychoses	4,645	2.02	13.06	13.03	13.04
Suicide	3,681	1.07	12.00	19.05	4.09
Nephritis, nephrotic syndrome and nephrosis	2,654	1.02	8.00	11.00	6.01
Chronic liver diseases and cirrhosis	2,03	0.09	6.04	8.09	4.02
Neurotic disorders, personality disorders and other nonpsychotic mental disorders	1,163	0.05	3.05	4.08	2.05
HIV infection	626	0.03	2.00	3.06	0.05

1. Age-standardized mortality rate per 100,000 population.

Source: Statistics Canada, Health Statistics Division.

Last modified: 2008-05-14.

Dimessi da tutti gli ospedali italiani e degenza media per sesso e classi di età uguali e superiori a 65 anni. Anno di riferimento 2005 (Fonte: Ministero della Salute)

Fascia di età	Maschi	%	Femmine	%	Totale
Da 74 anni	869.117	55,05	709.618	44,95	1.578.735
degenza media	8,96		9,55		
75 anni e oltre	894.687	44,11	1.133.670	55,89	2.028.357
degenza media	9,84		11,25		
Totale ultra 65enni	1.741.631	48,73	1.832.440	51,27	3.574.071
degenza media	9,93		11,35		
Totale dimessi 2005	3.505.435	48,81	3.675.728	51,19	7.181.163

The Relationship of Gender and In-Hospital Death: Increased Risk of Death in Men

Gordon, Howard S.; Rosenthal, Gary E.

Medical Care 1999. 37:318-324

Conclusions. The findings indicate that in-hospital death rates are generally higher in men than in women, after adjusting for severity of illness. In addition, the risk of in-hospital death in men and women was influenced by diagnosis. These differences may reflect gender-related variation in the utilization of hospital services, the effectiveness of care, over- or underestimation of severity of illness, or biological differences in men and women.

Race and Sex Differences in Mortality following Fracture of the Hip

Steven J. Jacobsen, MD, PhD, Jack Goldberg, PhD, Toni P. Miles, MD, PhD, Jacob A. Brody, MD, William Stiers, PhD, and Alfred A. Rimm, PhD

ABSTRACT

This paper describes the all-cause mortality experience, following a fracture of the hip, of 712 027 persons covered by the Medicare program from 1984 through 1987. White women experienced the lowest mortality rate (17.2 per 1000 person-months), followed by Black women (22.9 per 1000 person-months), Black men (33.5 per 1000 person-months), and White men (33.7 per 1000 person-months). The observed race-sex differences in survival were found at all ages and regardless of the number of comorbid conditions listed with the discharge diagnosis. While these data demonstrate marked race-sex differences in survival following hip fracture, the cause of these differences is not immediately apparent and demands further investigation. (*Am J Public Health.* 1992;82:1147–1150)

Excess mortality or institutionalization after hip fracture: men are at greater risk than women.

Fransen M, Woodward M, Norton R, Robinson E, Butler M, Campbell AJ
J Am Geriatr Soc. 2002; 50:685-90

Mortality During the 2 Years or Institutionalization/Mortality Status at 2 Years for Hip Fracture Cases Versus Controls, Stratified by Gender

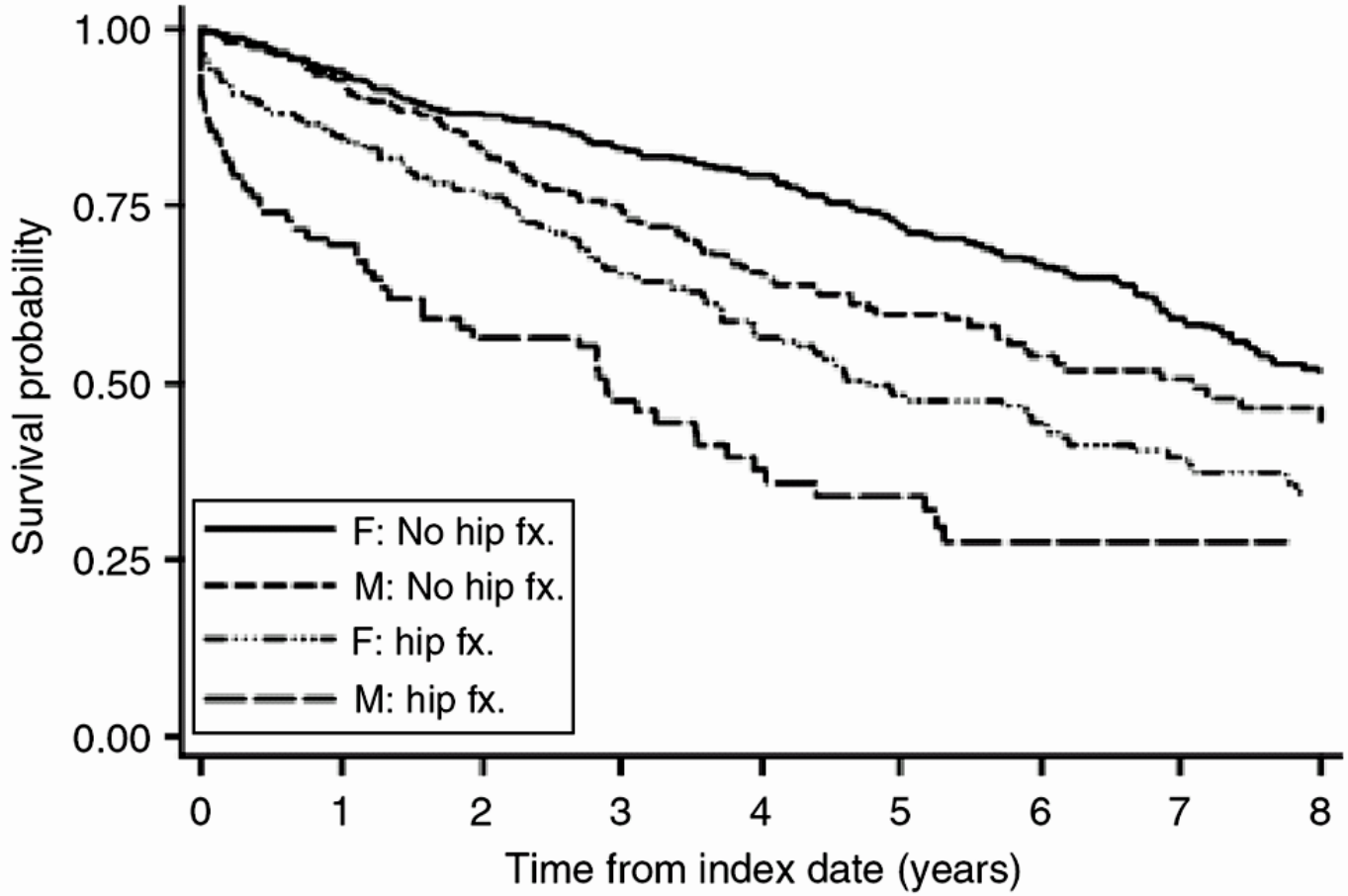
	Mortality		Institutionalization/Mortality	
	Women	Men	Women	Men
Adjustment	odds ratio (95% confidence interval)			
Age, marital status, cohabitation	2.21 (1.53–3.18)	7.31 (3.77–14.20)	2.64 (1.96–3.55)	8.68 (4.78–15.74)
Age, physical function	1.71 (1.16–2.52)	6.96 (3.40–14.25)	2.04 (1.48–2.82)	7.92 (4.15–15.11)
Age, medical history	1.43 (0.91–2.26)	5.03 (1.93–13.07)	1.66 (1.15–2.38)	5.57 (2.43–12.77)
All (variables in Tables 1–3)	1.34 (0.83–2.16)	7.18 (2.04–21.99)	1.48 (1.02–2.19)	6.89 (2.75–17.27)

(Fransen M. et al, JAGS 50:685-690, 2002)

Adjusted mortality after hip fracture: From the cardiovascular health study.

Robbins, J. A., Biggs, M. L., and Cauley, J.

J Am Geriatr Soc. 2006, 54:1885-1891



Kaplan-Meier survival curves for Cardiovascular Health Study participants with hip fracture and age- and race-matched comparison participants without hip fracture, by sex. M = male; F = female.

JAGS 54:1885–1891, 2006

Osteoporosis has been considered a predominantly women's disease. Only one of three to five hip fractures occurs in men.

Koval et al,1995; Trombetti et al, 2002

Previous studies that have examined gender difference in funcional recovery have reported either no difference, a disavantage for women, or for men

Journal of Gerontology: MEDICAL SCIENCES
2006, Vol. 61A, No. 5, 495–499

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Gender Differences in Functioning After Hip Fracture

William G. Hawkes, Lois Wehren, Denise Orwig, J. Richard Hebel, and Jay Magaziner

Results. Men in the study were generally younger and suffered greater comorbidity at time of fracture. Men further suffered higher mortality in the year following fracture. Among survivors, little difference between men and women was seen in patterns of recovery of function following fracture.

Conclusions. Hip fracture is not a problem affecting just women. Recovery following fracture for men is probably no better than that for women, even after mortality differentially eliminates the frailest male participants. However, psychosocial factors, greater comorbidity, and higher rates of certain complications among men may require adjustments to interventions designed to restore function. Further research into the consequences of hip fracture for men and women is needed.

Gender differences influence the outcome of geriatric rehabilitation following hip fracture

Zeev Arinzon, Shay Shabat, Alexander Peisakh, Reuven Gepstein, Yitshal N. Berner

The purpose of this study was to evaluate the association between gender and geriatric rehabilitation outcome after traumatic hip fracture. Ninety-nine community-dwelling elderly patients (older than 65 years), 64 women and 35 men, who were admitted to geriatric rehabilitation after operated hip fracture were studied. We assessed the patients' clinical and demographic data, preoperative risk (ASA), type of fracture and orthopedic repair, pain intensity (VAS), cognitive (MMSE), mood (Zung IDS), and functional status (FIM) on admission and at the end of geriatric rehabilitation. Men had higher mean number of comorbid conditions at the time of the fracture. Men recovered more from depressed mood in comparison with women during the rehabilitation. Significant improvement in FIM motor subscore on discharge was found in both groups. The FIM motor subscore gain was higher in men (24.47) in comparison with women (19.22, $p = 0.036$). Those differences were demonstrated in mean subscores of transfers ($p = 0.004$), and locomotion ($p = 0.019$). Women were more functionally dependent in locomotion, transfers and sphincter control. There were no differences between the groups by duration on rehabilitation stay. Recovery after hip fracture depends in large part on the pre-fracture health and functional ability of the patient. Gender differences in functional recovery may affect therapeutic and rehabilitative decision making. Functional recovery after traumatic hip fracture was better in men in comparison with women.

Archives of Gerontology and Geriatrics 50 (2010)

General characteristics of studied patients on admission to geriatric rehabilitation. (mean ± S.D. or *n*/%).

	Women	Men
Age	76.53 ± 6.67	78.97 ± 6.81
BMI	25.32 ± 1.98	23.52 ± 1.29
Marital status		
Married*	20 (31)	21 (60)
Single/divorced†	30 (47)	8 (23)
Widowed	14 (22)	6 (17)
Family assistance‡	19 (30)	18 (51)
Comorbidity§	2.94 ± 1.49	3.34 ± 2.11
Medical history		
Ischemic heart disease	43 (67)	25 (71)
Hypertension	27 (42)	17 (49)
Chronic obstructive pulmonary disease‖	23 (36)	16 (46)
Congestive heart disease	8 (13)	10 (29)
Diabetes mellitus	11 (17)	6 (17)
Cerebrovascular accident	6 (9)	3 (9)
Hospitalized in past 6 months	5 (8)	4 (11)
ASA class	2.09 ± 1.03	2.43 ± 1.07
I–II	46 (72)	22 (63)
III–IV	18 (28)	13 (37)

	Women	Men
Type of operation		
Nailing	17 (27)	8 (23)
PCCP	24 (37)	17 (49)
Arthroplasty	23 (36)	10 (29)
FIM (Total)	70.95 ± 17.49	69.43 ± 20.17
Motor	43.34 ± 12.14	41.57 ± 16.00
Locomotion	3.72 ± 1.69	3.34 ± 1.73
Self-care	17.97 ± 9.46	17.94 ± 9.40
Sphincter control	8.31 ± 2.64	7.86 ± 3.07
Transfers	13.34 ± 3.51	12.43 ± 3.91
Cognitive functioning	27.61 ± 7.70	27.86 ± 6.16
Type of fracture		
Garden I–II	15 (23)	7 (20)
Garden III–IV	21 (33)	6 (17)
Extracapsular stable[¶]	16 (25)	16 (46)
Extracapsular unstable	12 (19)	6 (17)
Zung IDS	62.52 ± 13.11	57.23 ± 15.08
MMSE	23.41 ± 5.73	23.23 ± 4.17
VAS[#]	7.77 ± 1.29	7.03 ± 1.92

[*] $p < 0.01$, $\chi^2 = 7.71$.
[†] $p < 0.05$, $\chi^2 = 5.52$.
[‡] $p < 0.05$, $\chi^2 = 4.57$.
[§] $p < 0.01$.
[‖] $p < 0.05$, $\chi^2 = 3.93$.
[¶] $p < 0.05$, $\chi^2 = 4.44$.
[#] $p < 0.05$.

Improvement in FIM scores following rehabilitation, (mean ± S.D.).

	Women	Men	*p*
Primary FIM outcome measures			
Admission total FIM	70.95 ± 17.49	69.72 ± 19.96	>0.05
Discharge total FIM	91.50 ± 23.50	95.61 ± 18.03	>0.05
p	<0.001	<0.001	
FIM subscores			
Admission FIM motor	43.34 ± 12.14	41.72 ± 15.80	>0.05
Discharge FIM motor	62.56 ± 18.34	66.19 ± 14.92	>0.05
p	<0.001	<0.001	
Admission FIM cognitive	27.61 ± 7.70	28.00 ± 6.13	>0.05
Discharge FIM cognitive	28.94 ± 7.58	29.42 ± 4.67	>0.05
p	>0.05	>0.05	
Derivative FIM scores			
FIM gain			
Total FIM	20.55 ± 14.11	25.89 ± 11.82	>0.05
FIM Motor subscores	19.22 ± 13.19	24.47 ± 9.35	0.036
FIM efficiency			
Total FIM	0.52 ± 0.62	0.61 ± 0.30	0.022
FIM motor subscores	0.49 ± 0.59	0.58 ± 0.29	0.011

Functional outcome on discharge (n/%).

	Dependent	Assistance	Independent
Locomotion			
Women	18 (28)	34 (53)	12 (19)
Men	6 (27)	15 (43)	14 (40)
p	>0.05	>0.05	0.022*
Self care			
Women	11 (17)	36 (56)	17 (27)
Men	6 (17)	18 (51)	11 (31)
p	>0.05	>0.05	>0.05
Sphincter control			
Women	15 (23)	45 (70)	6 (4)
Men	7 (20)	17 (49)	11 (31)
p	>0.05	0.033†	0.005‡
Transfers			
Women	17 (27)	32 (50)	15 (23)
Men	6 (17)	14 (40)	15 (43)
p	>0.05	>0.05	0.044§
FIM motor subscores			
Women	9 (14)	40 (63)	15 (23)
Men	6 (17)	15 (43)	14 (40)
p	>0.05	>0.05	>0.05

* $\chi^2 = 5.28$.
† $\chi^2 = 4.57$.
‡ $\chi^2 = 7.74$.
§ $\chi^2 = 4.04$.

Predictors for functional outcome (FIM motor) following rehabilitation.

Gender	Variables	p	Adjusted R^2
Women	VAS on admission	<0.001	0.431
	VAS on discharge	0.015	
	Zung IDS on discharge	0.091	
	Hemiarthroplasty/or total arthroplasty	0.002	
	Duration of geriatric rehabilitation stay	0.021	
	Extracapsular unstable fracture	0.023	
Men	VAS on admission	0.001	0.604
	Family support	0.005	
	Hemiarthroplasty/or total arthroplasty	0.002	
	Complication rate	0.012	
	Age	0.019	

Age and Gender Differences of Patients With Hip Fracture and Depression

Sandra S. Swantek, M.D.
Marion Zucker Goldstein, M.D.

Although gender is not related to outcome among patients who undergo elective surgery, men who undergo emergency surgery have a higher risk of mortality. Compared with women who fracture their hips, men who do so may have a higher risk of death because they have more comorbid medical conditions and diminished ability to perform activities of daily living, are older, and are more likely to live in a nursing home. However, there is evidence suggesting that depression may also be a factor. Depression as a risk factor for hip fracture, particularly among women, has been studied. Besides the association between depression and diminished bone density, other factors are likely to play a role. For example, depressed patients are likely to have difficulty concentrating and attending to the environment, which increases the risk of falls.

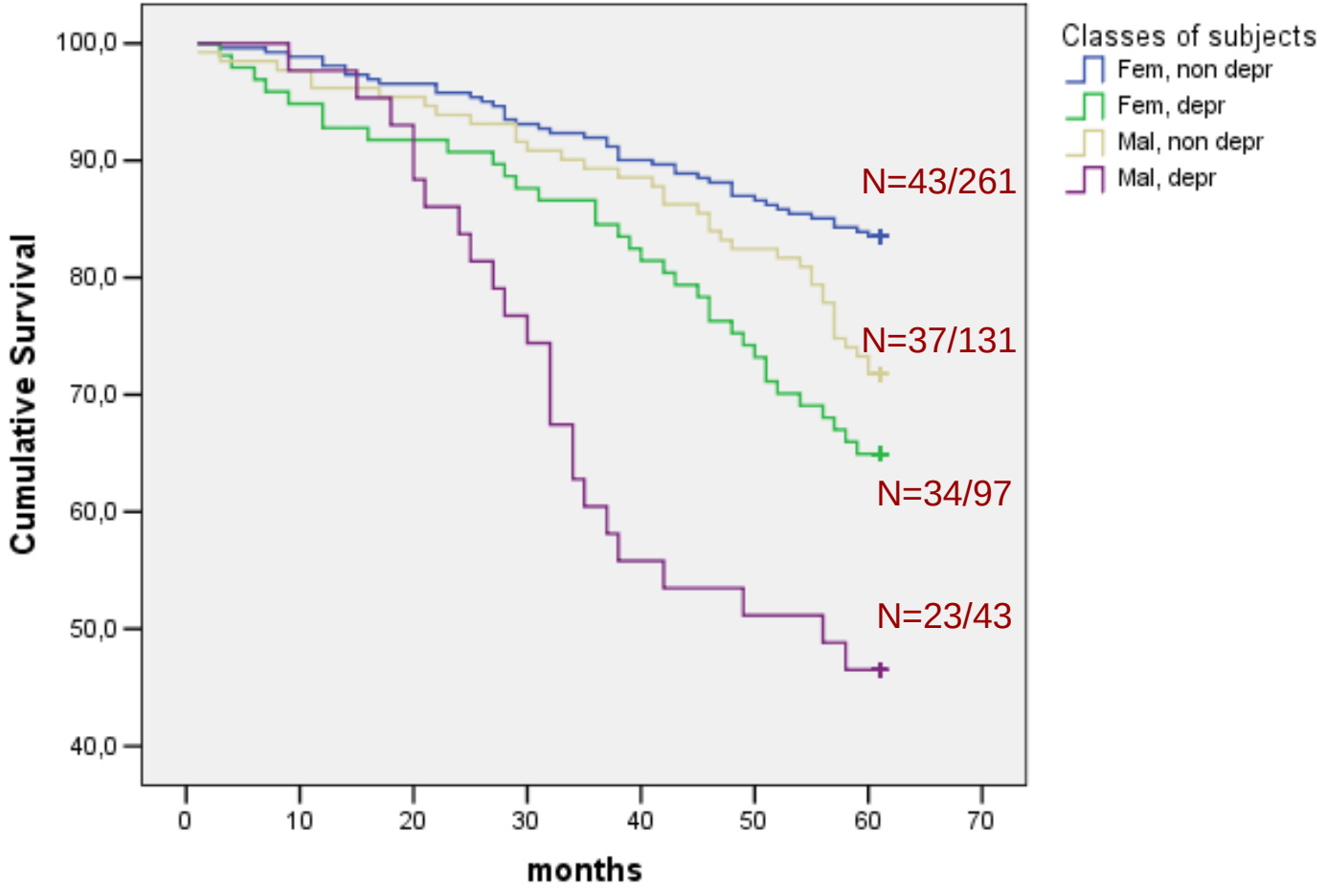
OCTOBER 2007–VOL. 55, NO. 10 JAGS

Table 1. Association Between Hip Fracture and Depression in 766 Elderly Patients Admitted to a Geriatric Rehabilitation Unit

	Total (N = 766)	Women (n = 565)	Men (n = 201)
Fracture Status		n/N (%)	
Not fractured	286/623 (45.9)	219/439 (49.9)	67/184 (36.4)
Fractured	68/143 (47.5)	57/126 (45.2)	11/17 (64.7)

Data are expressed as number of depressed patients over the total number of subjects for each specific group.

Mortality rates in elderly persons living at home according to depressive symptoms



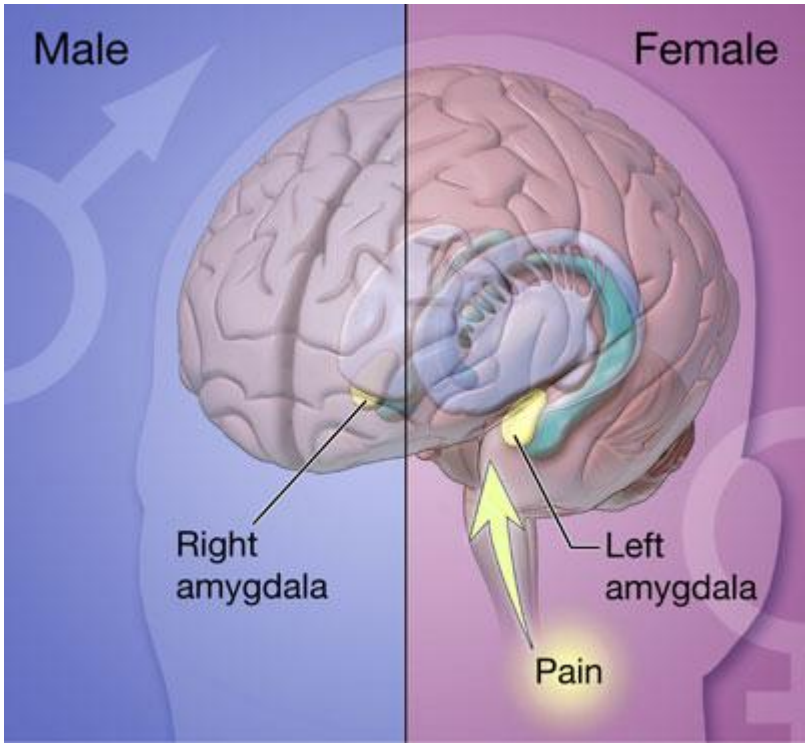
Does Gender Influence ED Management and Outcomes in Geriatric Abdominal Pain?

Rebekah L. Gardner, Richard Almeida, Judith H. Maselli and Andrew Auerbach

Prior studies have suggested gender-based differences in the care of elderly patients with acute medical conditions such as myocardial infarction and stroke, but it is unknown whether these differences are seen in the care of abdominal pain. The objective of this study was to examine differences in evaluation, management, and diagnoses between elderly men and women presenting to the Emergency Department (ED) with abdominal pain. For this observational cohort study, a chart review was conducted of consecutive patients aged 70 years or older presenting with a chief complaint of abdominal pain. Primary outcomes were care processes (e.g., receipt of pain medications, imaging) and clinical outcomes (e.g., hospitalization, etiology of pain, and mortality). Of 131 patients evaluated, 60% were women. Groups were similar in age, ethnicity, insurance status, and predicted mortality. Men and women did not differ in the frequency of medical (56% vs. 57%, respectively), surgical (25% vs. 18%, respectively), or non-specific abdominal pain (19% vs. 25%, respectively, $p = 0.52$) diagnoses. Similar proportions underwent abdominal imaging (62% vs. 68%, respectively, $p = 0.42$), received antibiotics (29% vs. 30%, respectively, $p = 0.85$), and opiates for pain (35% vs. 41%, respectively, $p = 0.50$). Men had a higher rate of death within 3 months of the visit (19% vs. 1%, respectively, $p < 0.001$). Unlike prior research in younger patients with abdominal pain and among elders with other acute conditions, we noted no difference in management and diagnoses between older men and women who presented with abdominal pain. Despite a similar predicted mortality and ED evaluation, men had a higher rate of death within 3 months.

Journal of Emergency Medicine, 2008

Gender and Pain



In experiencing pain, the right amygdala is activated more in men, and it has more connections to regions of the brain involved with external environment. In women, the experience of pain activates the left amygdala more, which has more connections to regions of the brain associated with internal functions

Gender differences and health status in old and very old patients.

Rozzini R, Sleiman I, Maggi S, Noale M, Trabucchi M.

OBJECTIVES: To examine gender differences according to health status, social support, and DRG reimbursement in a population of elderly patients admitted to a hospital geriatric ward in Italy and also to examine the patterns of these differences across old age strata. DESIGN: Observational study. PARTICIPANTS: A total of 2171 patients, 70 years and older (females = 1088), consecutively admitted for acute care to a geriatric ward in a general hospital during a 30-month period were included. Patients were stratified into 3 age groups: 70 to 79 (n = 1038, females = 521), 80 to 89 (n = 948, females = 476), and 90+ (n = 185, females = 91). MEASUREMENTS: Demographics, main reason for hospitalization, Charlson Index, APACHE II score, APACHE II-APS subscore, serum albumin, number of currently administered drugs, cognitive status, depression, functional status, length of stay, Diagnoses Related Group (DRG) weight, in-hospital, and 3-month mortality were recorded. Differences were evaluated according to gender across old age strata. RESULTS: In the group of 70- to 79-year-old patients, significant differences were found regarding number of comorbidities, biological and clinical markers of clinical severity (ie, serum albumin, APS, delirium), and functional status on admission (ie, the greater impairment was found in male patients, with a higher in-hospital and 3-month mortality). Moreover, females had less social support and more often live alone. DRG weight parallels clinical complexity, whereas length of stay is comparable. Gender differences were less evident in the 80-89 year-old patients and almost absent in those 90+. CONCLUSIONS: Data indicate that on hospital admission gender differences are significant in young old patients, but not in old and very old, suggesting a poor survivorship of males with increasing age.

J Am Med Dir Assoc. 2009

Caratteristiche di 890 pazienti ricoverati in Riabilitazione da luglio 2008 a luglio 2009 (medie)

	Uomini (251)	Donne (639)	P
Età	79.5	81.4	ns
BMI	24.8	24.8	ns
N° farmaci ingr	6.2	5.7	ns
MMSE	21.6	21.0	ns
GDS	4.9	5.8	ns
BRASS	14.9	15.4	ns
Barthel premorboso	82.0	80.6	.006
Barthel ingresso	54.1	57.2	ns
Barthel dimissione	67.3	73.2	.000
FIM ingresso	77.5	76.6	.001
FIM dimissione	89.8	91.6	.000
Tinetti ingresso	13.2	12.7	ns
Tinetti dimissione	18.7	19.3	ns
Durata degenza	27.6	29.3	ns

Caratteristiche di 890 pazienti ricoverati in Riabilitazione da luglio 2008 a luglio 2009 (%)

	Uomini (251)	Donne (639)
Coniugato	60.1	19.0
Vive solo	24.3	42.1
Sd geriatriche		
demenza	28.6	339
delirium	14.8	16.9
depressione	24.7	33.3
incontinenza	34.7	52.0
cadute	29.5	36.4
Esito		
domicilio	72.3	76.1
ospedale	7.2	4.6
RSA	5.6	9.7
decesso	5.2	1.9

Caratteristiche di 335 pazienti ricoverati in Riabilitazione per frattura di femore dal 2003 al 2008

	Uomini (55)	Donne (280)	P
Età	81.4	82.9	ns
Vive solo	16.7%	36.9%	.002
BMI	22.8	23.0	ns
N° farmaci ingr	6.6	5.2	ns
MMSE	18.3	19.7	ns
GDS	5.6	5.8	ns
Charlson	2.98	1.54	.000
Barthel premorboso	78.6	83.9	.006
Deamb. premorbosa	12.2	12.7	ns
Barthel ingresso	22.8	27.0	.039
Barthel dimissione	77.5	76.6	.002
Deambul dimissione	7.6	9.6	.005
Cammina alla dim (≥12)	35.2%	58.1%	.002
Albumina	2.83	2.73	ns
Durata degenza	27.7	28.5	ns
Deceduti a 1 anno	27.3%	14.6%	.002
RSA a 1 anno	9.1%	11.8%	ns

Alla luce di dati così controversi, è possibile immaginare percorsi di cura genere-specifici?