Journal Club, 22 Giugno 2012

Il Pronto Soccorso e le persone anziane: aspetti clinici e relazionali

Renzo ROZZINI

Di cosa voglio parlare

- **Epidemiologia dell'uso del Pronto Soccorso (PS)**
  - **Chi usa il PS**
  - **L'utilizzo ripetuto del PS**
  - **PS e povertà**
- **PS e RSA**
- **E' possibile «regolare» l'accesso al PS?**
- **Il PS della Poli (Bs) negli ultimi 8 anni**
- **PS: fattori specifici di utilizzo**
- **PS e delirium**
- **PS e assessment**
  - **Il triage geriatrico**
  - **Definizione dei pazienti più gravi**
  - **Definizione del reparto di accettazione**
- **Alternativa al ricovero: l'OBI geriatrico (esperienza di TV)**
- **Conclusioni**

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Negli ultimi anni i Dipartimenti di Emergenza ed Accettazione (DEA), sono andati incontro ad un fenomeno di sovraffollamento ed è un dato oggettivo che le persone anziane ne siano in parte la causa.

I DEA sono un punto chiave nel continuum di cura del paziente: in esso infatti si sovrappongono necessità ospedaliere, ambulatoriali e anche di assistenza domiciliare.

Negli Stati Uniti il Centro per il Controllo e la Prevenzione delle Malattie della National Hospital Ambulatory Medical Care Survey (NHAMCS) ha valutato, tra il 1993 e il 2003, il fenomeno del sovraffollamento dei DEA riscontrando un aumento del numero delle visite da 90.3 a 113.9 milioni a fronte di una riduzione del numero dei DEA.

I dati hanno inoltre mostrato, durante i 10 anni di studio, un maggior numero di accessi al DEA da parte degli ultra 65enni rispetto alle altre categorie di età: 26% versus il 19% per il gruppo tra 22-49 anni e il 16% di quelli tra 50-64 anni.

Anche in Italia si sta osservando lo stesso fenomeno: da uno studio del 2006 si evince che il 21% delle persone che giunge al DEA ha più di 65 anni, in particolare il 71% è ultraottantacinquenne contro il 65% della popolazione generale; la percentuale di coloro che vengono ricoverati aumenta con l'età: va dall'11% per quelli di età inferiore a 65 anni al 56% degli ultranovantenni.

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National Health Statistics Reports

Number 7 ■ August 6, 2008

National Hospital Ambulatory Medical Care Survey: 2006 Emergency Department Summary

by Stephen R. Pitts, M.D., M.P.H., F.A.C.E.P.; Richard W. Niska, M.D., M.P.H., F.A.C.E.P.; Jianmin Xu, M.S.; and Catharine W. Burt, Ed.D., Division of Health Care Statistics

Abstract

Objective—This report presents the most current (2006) nationally representative data on visits to hospital emergency departments (ED) in the United States. Statistics are presented on selected hospital, patient, and visit characteristics.

Methods—Data are from the 2006 National Hospital Ambulatory Medical Care Survey (NHAMCS), the longest continuously running nationally representative survey of hospital ED utilization. The NHAMCS collects data on visits to emergency and outpatient departments of nonfederal, short-stay, and general hospitals in the United States. Sample data are weighted to produce annual national estimates.

Results—In 2006 there were 119.2 million visits to hospital EDs, or 40.5 visits per 100 persons, continuing a long-term rise in both indices. The rate of visits per 100 persons was 36.1 for white persons, 79.9 for black persons, and 35.3 for Hispanic persons. ED occupancy (the count of patients who had arrived, but not yet discharged, transferred, or admitted) varied from 19,000 patients at 6 a.m. to 58,000 at 7 p.m. on an average day nationally. Though overall ED visits increased, the number of visits considered emergent or urgent (15.9 million) did not change significantly from 2005, nor did the number of patients arriving by ambulance (18.4 million). At 3.6 percent of visits, the patient had been seen in the same ED within the previous 72 hours. Median time to see a clinician was 31 minutes. Of all ED visits, 35.6 percent were for an injury. Patients had computerized tomography or magnetic resonance imaging at 12.1 percent of visits, blood drawn at 38.8 percent, an intravenous line started at 24.0 percent, an x ray performed at 34.9 percent, and an electrocardiogram done at 17.1 percent. Patients were admitted to the hospital at 12.8 percent of ED visits in 2006. The ED was the portal of admission for 50.2 percent of all nonobstetric admissions in the United States in 2006, an increase from 36.0 percent in 1996. Patients were admitted to an intensive care unit at 1.9 percent of visits.

Keywords: emergency department visits • diagnosis • injury • medications

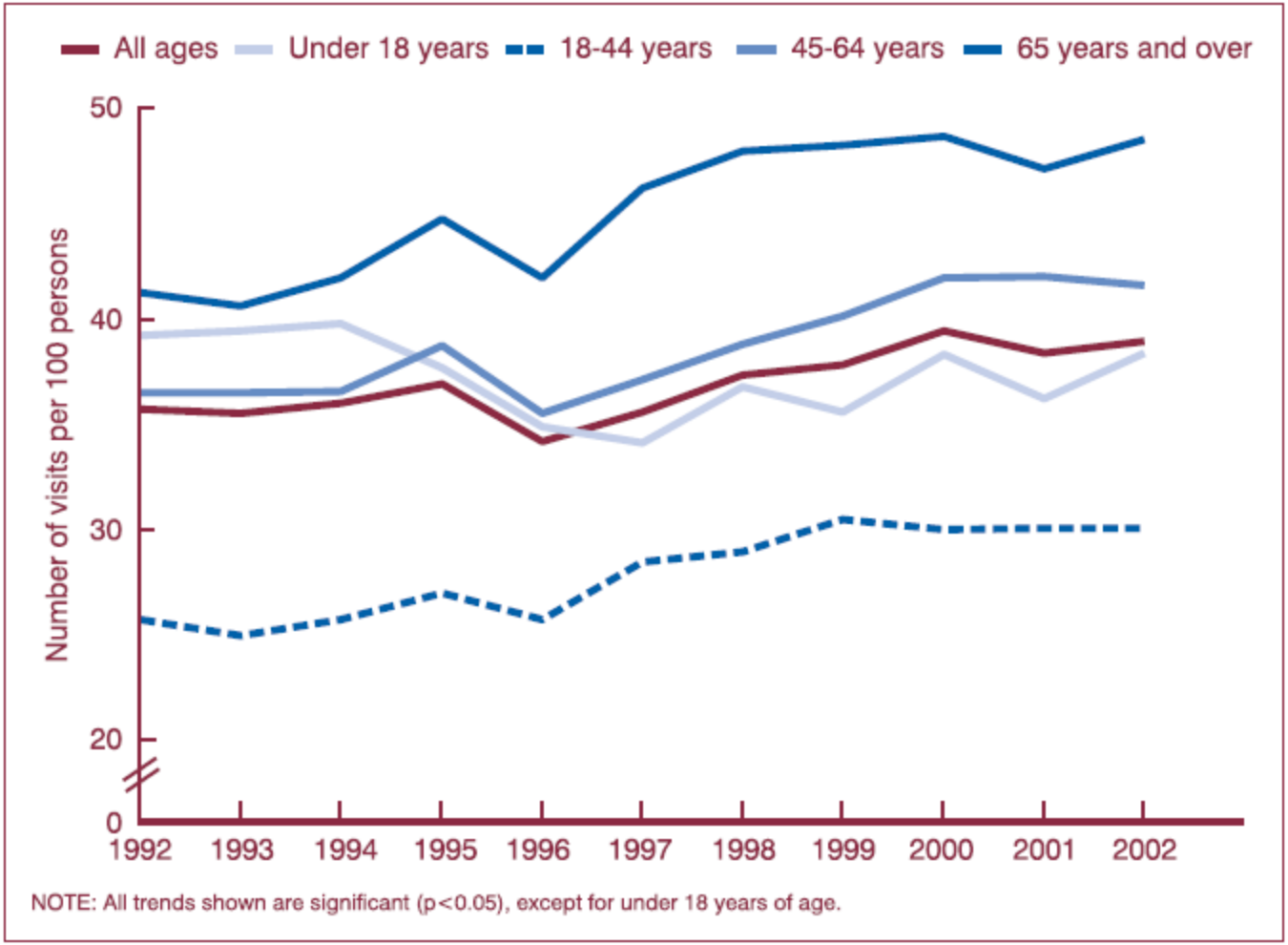

Figure 1. Trends in emergency department visit rates by age: United States, 1992–2002

Highlights

ED Utilization

- From 1996 through 2006, the annual number of ED visits increased from 90.3 million (24) to 119.2 million visits (up by 32 percent). This represents an average increase of about 2.9 million visits (3.2 percent) per year. There were, on average, about 227 visits to U.S. EDs every minute during 2006.
- As the number of visits to the ED has increased, the number of hospital EDs has decreased from 4,019 to 3,833 (25), thus increasing the annual number of visits per ED.
- From 1996 through 2006, the overall population-based ED utilization rate increased by 18 percent, from 34.2 (24) to 40.5 visits per 100 persons (Table 1).
- Population-based utilization rates varied by geographic region, with the West having the lowest ED visit rate (Figure 1).
- About 35.0 percent of ED visits were made to hospitals designated as trauma centers (Table 1).

Patient characteristics

- The age group with the highest annual per capita ED visit rate was infants under 12 months of age, who made 84.5 visits per 100 infants. This represents about 3.5 million visits (Table 2). Three-quarters of these visits were to general EDs, 9.2 percent to pediatric EDs within general hospitals, and 14.3 percent to pediatric hospital EDs (Figure 2).
- Persons aged 75 years and older had the second highest per capita ED visit rate at 60.2 visits per 100 persons. This represents about 10.2 million visits (Table 2).
- The ED visit rate for black persons was about double the rate for white persons in all age groups, whereas Asian or Pacific Islander persons had about half the visit rate of white persons (Table 2).
- The ED visit rate varied little between persons of Hispanic and non-Hispanic ethnicity.
- Persons living in nursing homes made 139.5 ED visits per 100 residents. This represents about 2.1 million visits (1.7 percent) (Table 2).
- Homeless people made 83.6 ED visits per 100 homeless persons (26). This represents about 635,000 visits (0.5 percent) (Table 2).

Increasing Rates of Emergency Department Visits for Elderly Patients in the United States, 1993 to 2003

David C. Roberts, PhD, MPH
Mary Pat McKay, MD, MPH
Alison Shaffer, MS

From the Department of Epidemiology and Biostatistics (Roberts), and Department of Community Health and Prevention (Shaffer), The George Washington University School of Public Health and Health Services, Washington, DC; and the Department of Emergency Medicine, The George Washington University Medical Center, Washington, DC (McKay).

Study objective: In 2005, the Centers for Disease Control and Prevention reported increasing emergency department (ED) visit rates per 100 people. The greatest increase in visit rate was among individuals 65 years and older. Given that older ED visitors have longer lengths of stay in the ED, are more likely to be admitted, and compose a growing proportion of the American population, this finding could have a significant negative effect on ED crowding. The first step toward addressing this issue is a better understanding of the nature of these visits.

Methods: We performed trend analysis for persons aged 65 years and older using 1993 to 2003 National Hospital Ambulatory Medical Care Survey data, an annual national sample of visits to the EDs of nonfederal general and short-stay hospitals. SAS 9.1 computed population estimates and standard errors for number of ED visits. Annual census data were used to compute visit rates per 100 persons. A least-squares test for trend determined slopes and 95% confidence intervals.

Results: Visits for patients aged 65 to 74 years increased 34% during the study period. The visit rate for blacks increased 93% to 77 visits per 100 population, whereas the rate for whites increased 26% to 36 visits per 100. The admission rate did not change significantly during the study period. The number of visits at which 3 or more medications were prescribed increased 44%. The increased visits occurred primarily in the category of "other and undefined" diagnoses (90% increase).

Conclusion: If these trends continue, ED visits in the United States for the 65- to 74-year-old group could nearly double from 6.4 million visits to 11.7 million visits by 2013. [Ann Emerg Med. 2007;xx: xxx.]

0196-0644/$-see front matter

doi:10.1016/j.annemergmed.2007.09.011

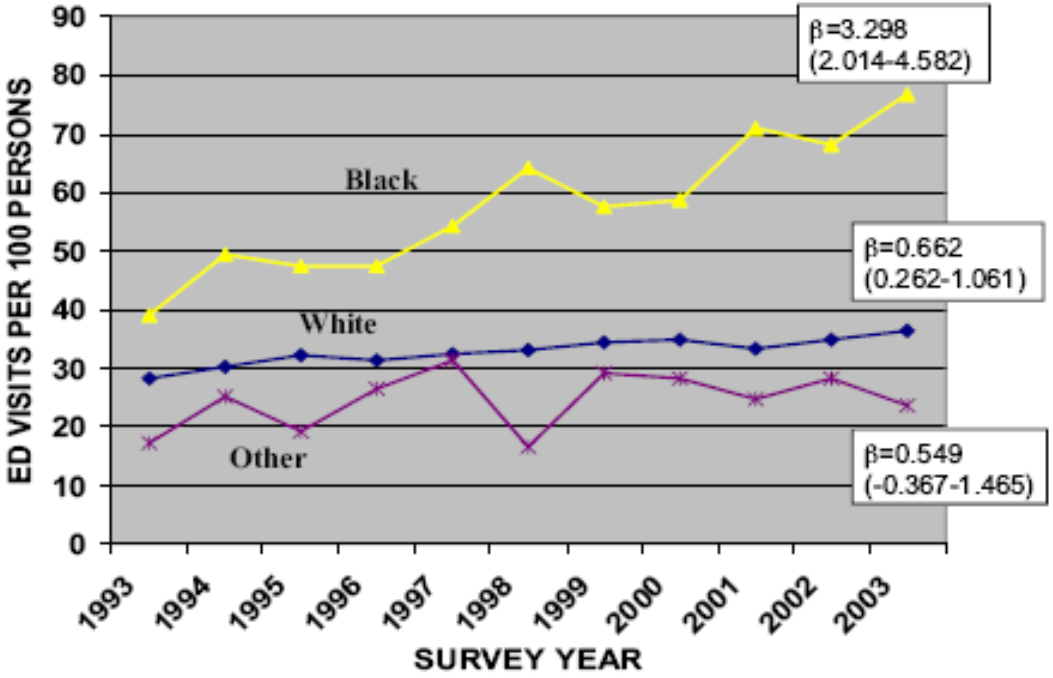

Figure 1. Change in ED visit rates by race, ages 65 to 74 years.

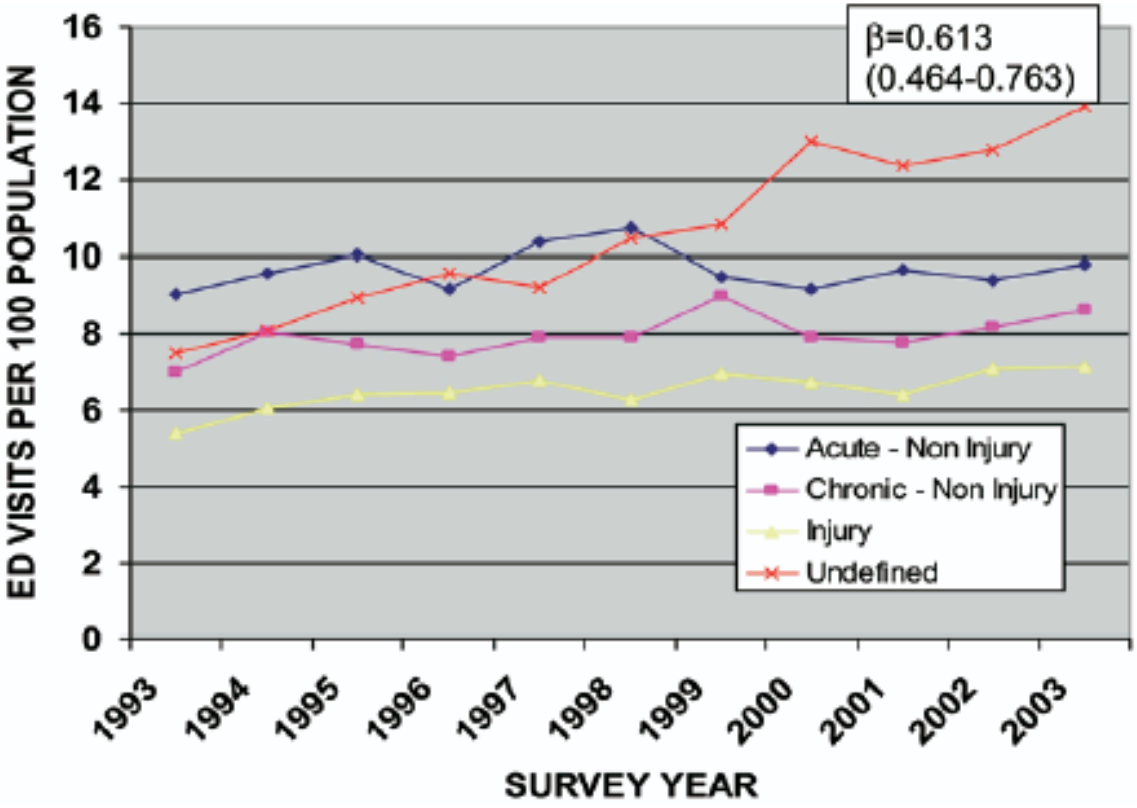
β=0.613
(0.464-0.763)
Acute - Non Injury
Chronic - Non Injury
Injury
Undefined
ED VISITS PER 100 POPULATION
0
2
4
6
8
10
12
14
16
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
SURVEY YEAR

Figure 3. ED visit rate trends by primary payer.

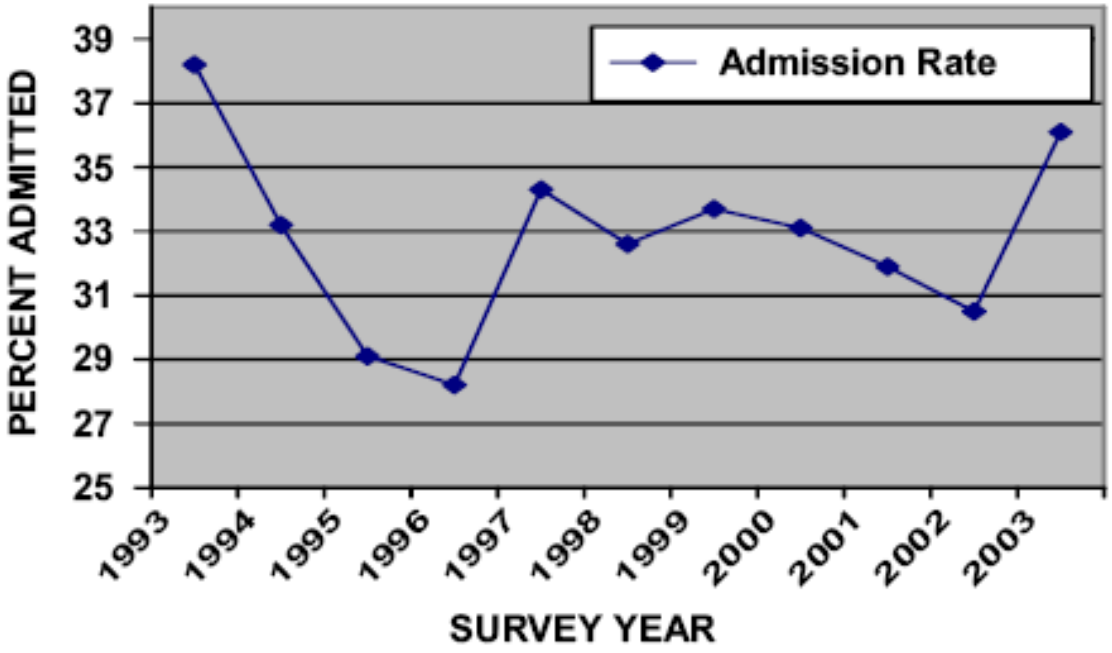

Figure 4. Percentage of ED patients admitted to the hospital.

If the admission rate continues to be essentially static, this will mean the number of admissions from the ED for individuals older than 65 years will increase from 2.1 million to 3.8 million per year.

If trends continue, the effects on ED and hospital crowding could be catastrophic, and planning should begin now.

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National Health Statistics Reports

Number 6 ■ July 24, 2008

Emergency Department Visits by Persons Recently Discharged from U.S. Hospitals

by Catharine W. Burt, Ed.D.; Linda F. McCaig, M.P.H.; and Alan E. Simon, M.D., M.P.H.,
Division of Health Care Statistics

Abstract

Background—Emergency department (ED) visits are rarely used as an outcome of prior hospitalization, but could be an indicator of poor inpatient care or follow-up planning.

Study objective—To examine the rate and characteristics of ED visits of patients recently discharged from any hospital.

Methods—Data from the 2005 and 2006 National Hospital Ambulatory Medical Care Surveys (NHAMCS) and National Hospital Discharge Surveys (NHDS) were used to produce ratios of the numbers of ED visits where patients were discharged from any hospital within the last 7 days to the numbers of hospital discharges. NHAMCS, an annual survey of visits to U.S. hospital EDs, reported data for patients discharged from any hospital within 7 days previous to the ED visit. The NHDS is an annual survey of inpatient discharges from U.S. hospitals. Data from nonnewborn patients were weighted to produce national estimates.

Results—About 2.3 million ED visits (2.0 percent of all visits) were made by persons who had been hospitalized within the last 7 days. This corresponds to 68 ED visits per 1,000 live hospital discharges. About 10 percent of patients at these ED visits presented with medical or surgical complications that may have been related to their recent hospitalization. Uninsured persons were nearly three times as likely as those privately insured to make an ED visit following hospital discharge.

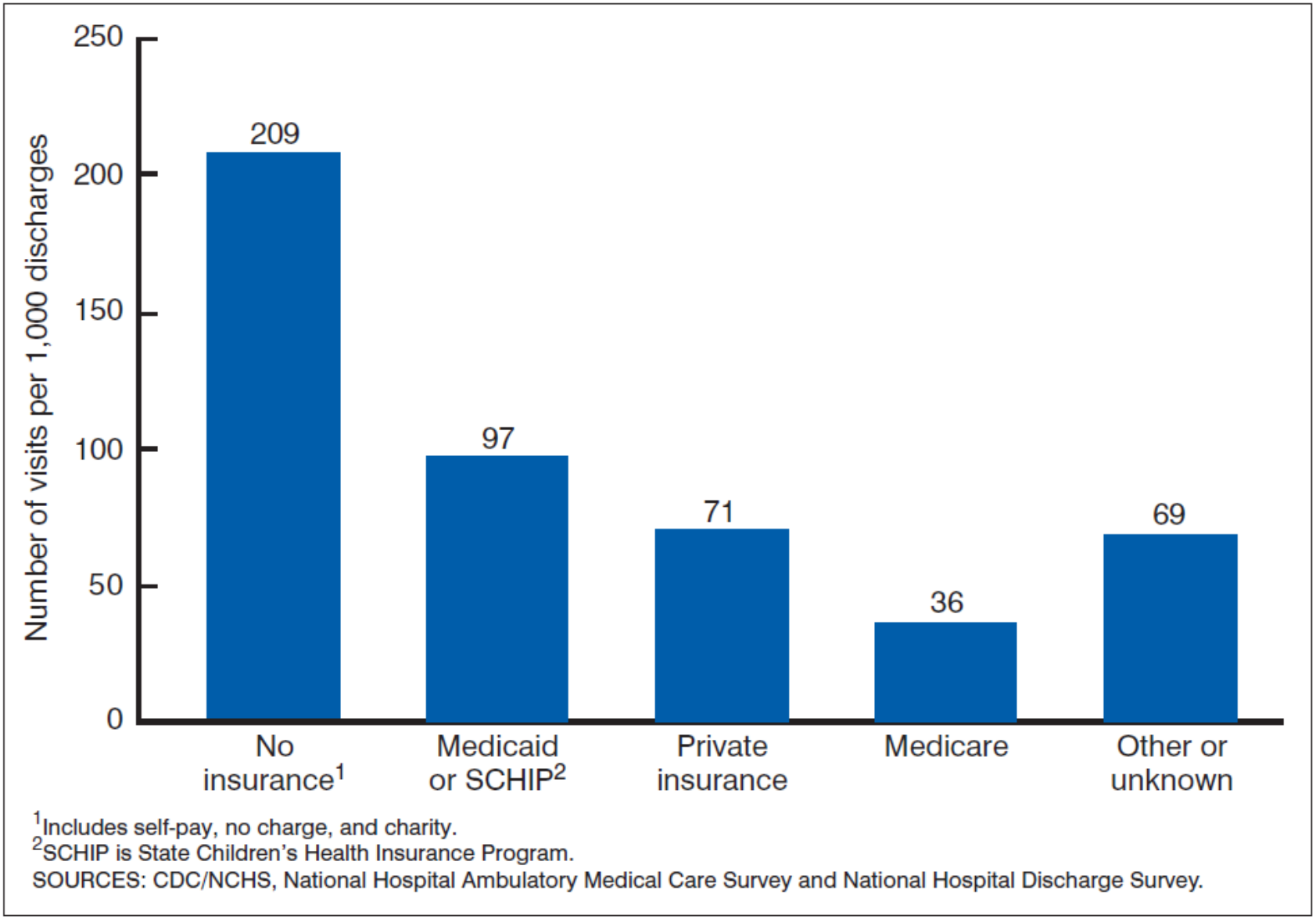
Conclusion—A large number of ED visits following recent hospitalization may be related to prior hospitalization. Returning to the ED after hospitalization may be an important measure to help improve inpatient care quality. Disparities in rates of ED visits following hospitalization may be attributed to differential inpatient or follow-up care.

Keywords: emergency department visits • hospital discharges • survey • NHAMCS • NHDS

Introduction

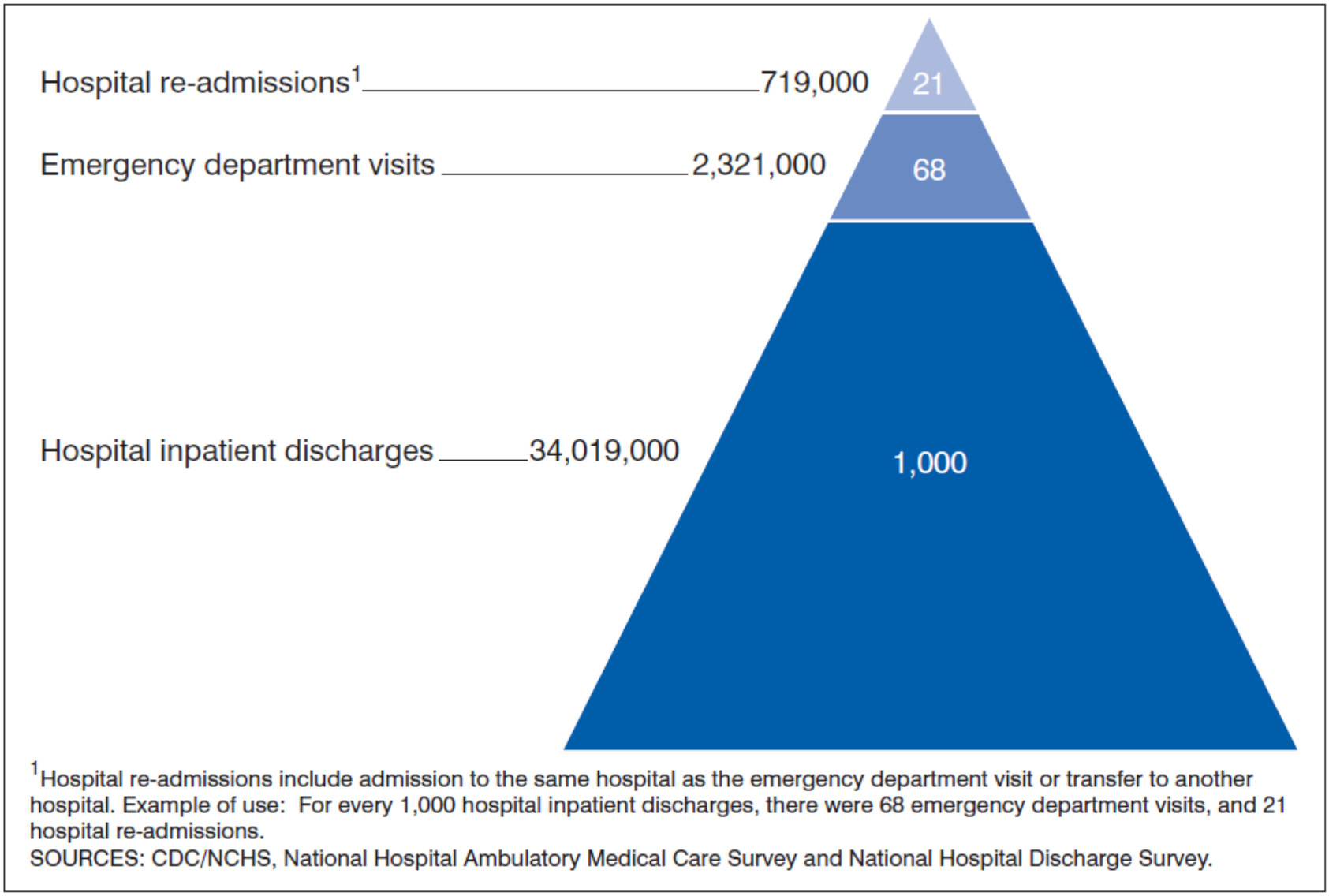
Emergency department (ED) visits are frequently used as an outcome of care in the ambulatory setting, but are rarely used as an outcome of prior hospitalization. Instead, inpatient hospital care has commonly used re-admission as an outcome (1,2). Visiting an ED after hospital discharge may indicate poor care or follow-up planning during the inpatient stay. Investigation into the epidemiology of returning to an ED shortly after hospitalization may assist in identifying potential shortcomings of prior inpatient care, as well as evaluating the economic burden that results from these shortcomings.

There is a paucity of data on ED visits following recent hospitalization. The purpose of this study was to describe the volume and characteristics of ED visits where the patient had been discharged from any hospital within the last 7 days using data from the 2005 and 2006 National Hospital Ambulatory Medical Care Surveys (NHAMCS) and to calculate a ratio of the number of these ED visits per live hospital discharges using data from National Hospital Discharge Surveys (NHDS) in the denominator.



[1]Includes self-pay, no charge, and charity.
[2]SCHIP is State Children's Health Insurance Program.
SOURCES: CDC/NCHS, National Hospital Ambulatory Medical Care Survey and National Hospital Discharge Survey.

Figure 1. Average annual rate of emergency department visits per hospital discharges by expected source of payment: United States, 2005–2006



[1]Hospital re-admissions include admission to the same hospital as the emergency department visit or transfer to another hospital. Example of use: For every 1,000 hospital inpatient discharges, there were 68 emergency department visits, and 21 hospital re-admissions.
SOURCES: CDC/NCHS, National Hospital Ambulatory Medical Care Survey and National Hospital Discharge Survey.

Figure 2. Average annual numbers of emergency department visits and hospital re-admissions within 7 days of a hospital discharge in relation to the number of hospital discharges with corresponding ratios: United States, 2005–2006

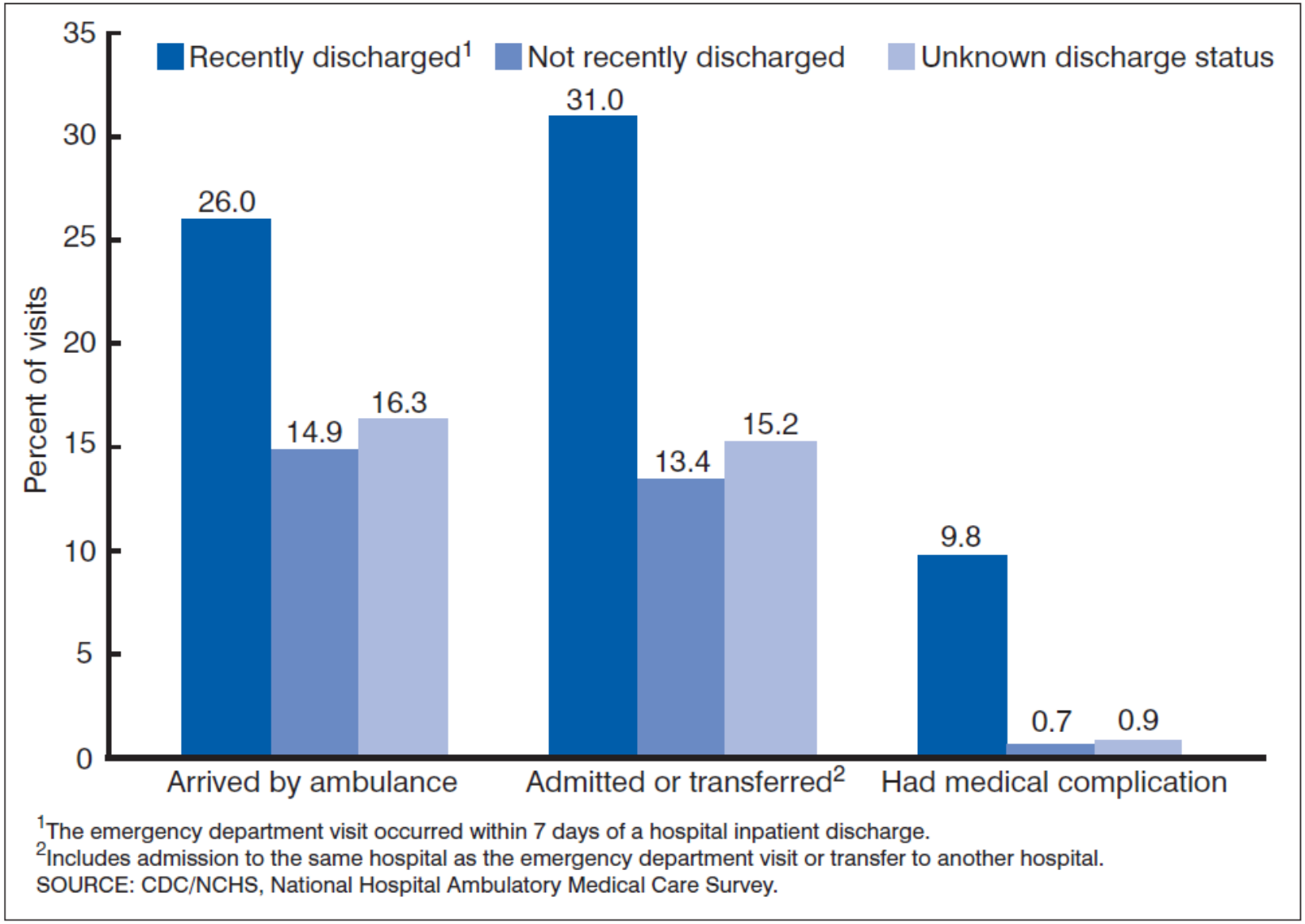


Figure 3. Average annual percentage of emergency department visits with selected visit characteristics by recently discharged status: United States, 2005–2006

Conclusion

A large number of ED visits following recent hospitalization may be related to prior hospitalization. Returning to the ED after hospitalization may be an important measure to help improve inpatient care quality. Disparities in rates of ED visits following hospitalization may be attributed to differential inpatient or follow-up care.

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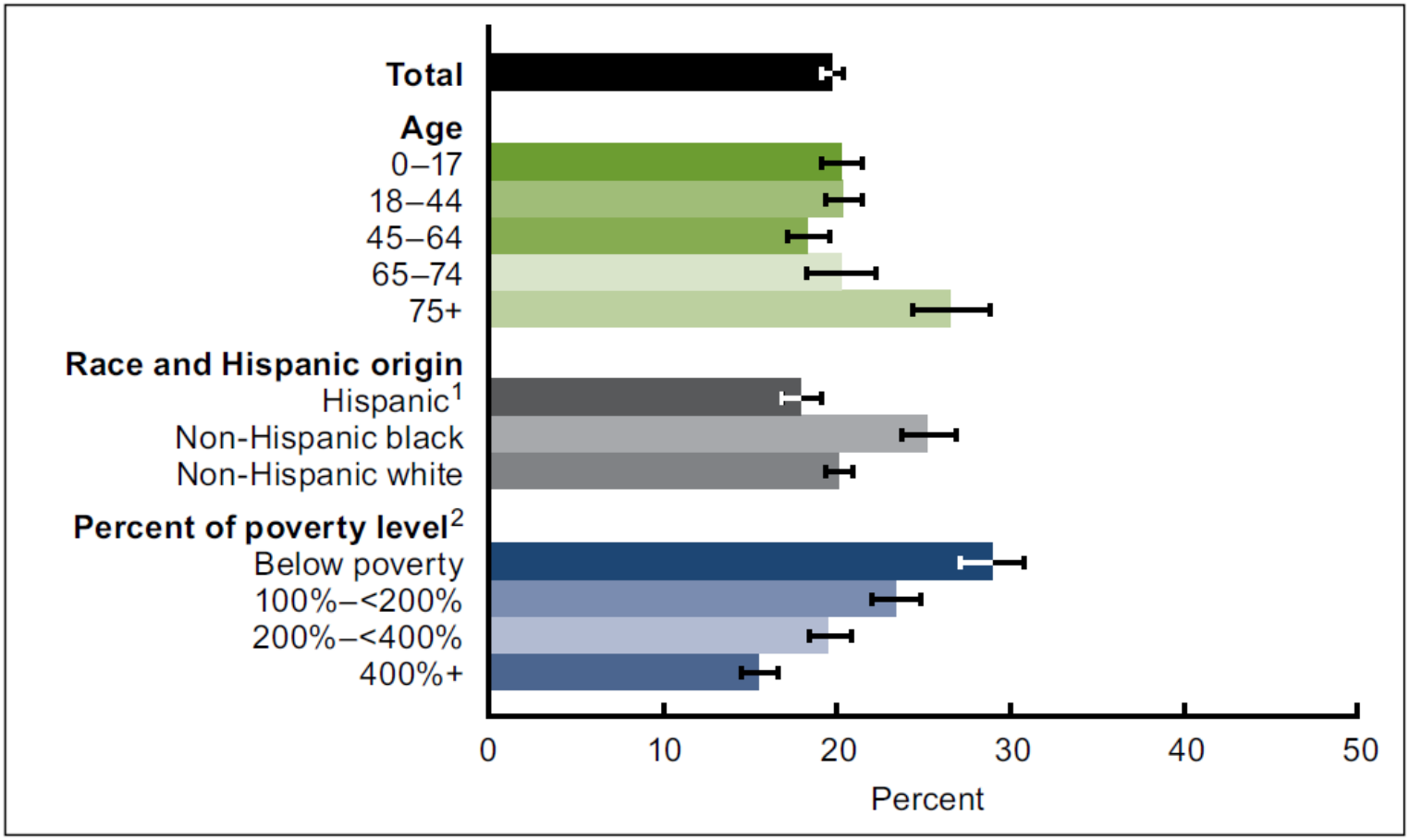
NCHS Data Brief ■ No. 38 ■ May 2010

Emergency Department Visitors and Visits: Who Used the Emergency Room in 2007?

Tamyra Carroll Garcia, Amy B. Bernstein, and Mary Ann Bush

Emergency room use varies by race/ethnicity, age, and family income.

Figure 1. Percentage of persons with at least one emergency department visit in a 12-month period, by selected demographic characteristics: United States, 2007

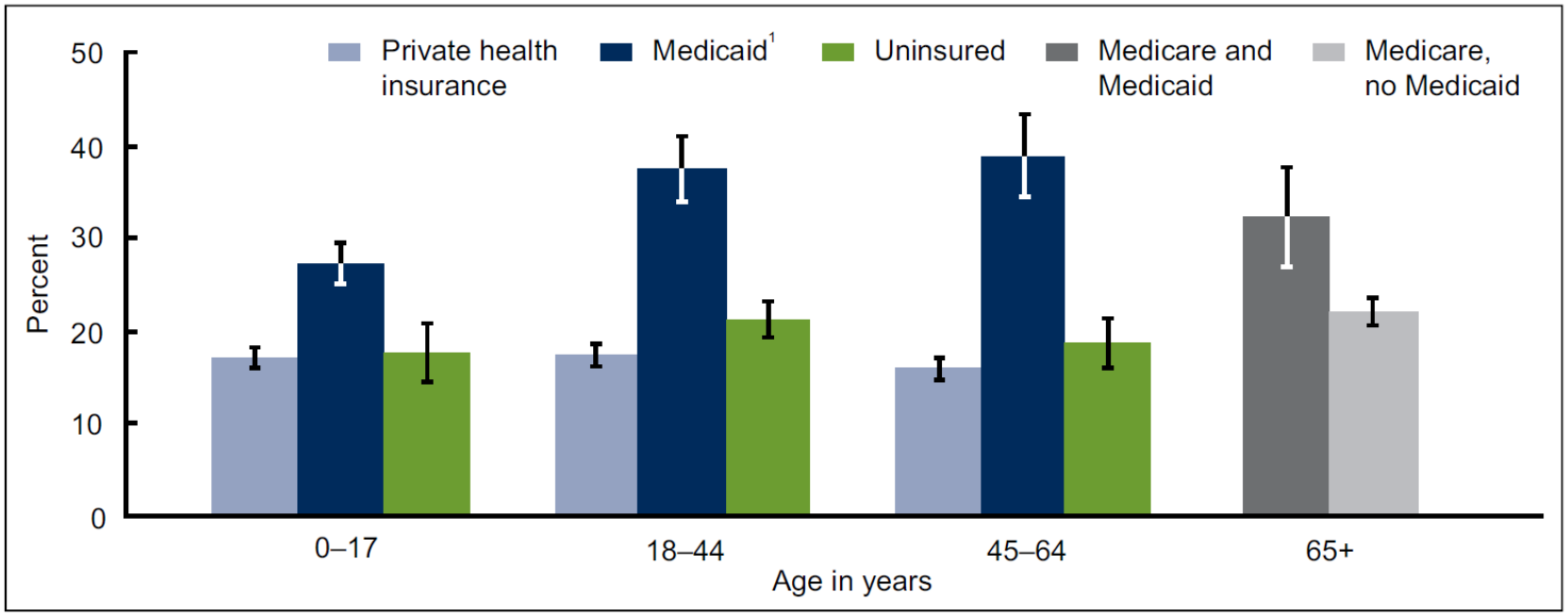


[1]Persons of Hispanic origin may be of any race.
[2]Based on family income and family size and composition using U.S. Census Bureau poverty thresholds.
NOTES: Error bars indicate 95% confidence intervals. Access data table for Figure 1 at:
http://www.cdc.gov/nchs/data/databriefs/db38_tables.pdf#1.
SOURCE: CDC/NCHS, National Health Interview Survey.

ED use is associated with insurance status, with Medicaid beneficiaries being the most likely to have had an ED visit.

- Among Medicaid beneficiaries under age 65, more than one-quarter of children and nearly two in five adults had one or more ED visits in a 12-month period (Figure 2). Medicaid beneficiaries were more likely to have had at least one ED visit in a 12-month period than persons with private insurance and the uninsured.

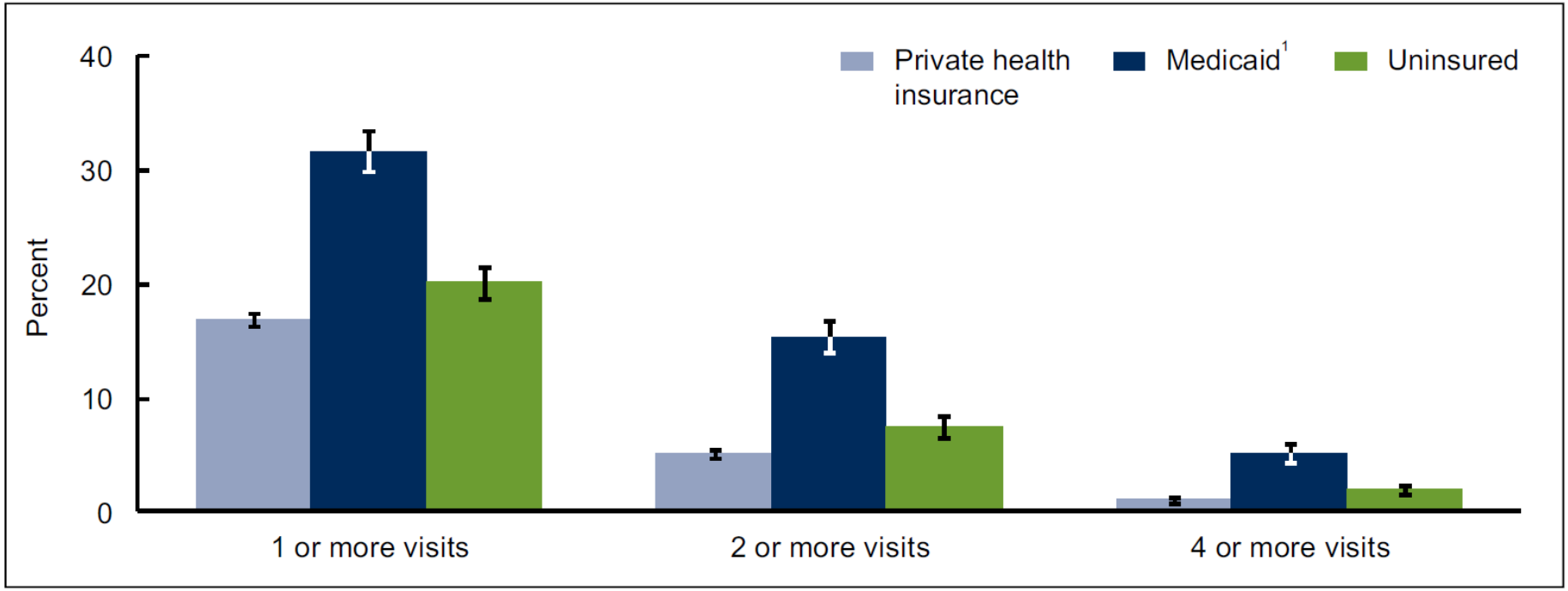
Figure 2. Percentage of persons with at least one emergency department visit in a 12-month period, by age and insurance status: United States, 2007



[1]Includes Children's Health Insurance Program coverage.
NOTES: Error bars indicate 95% confidence intervals. Private, Medicaid, and uninsured categories are mutually exclusive. Persons with both private and Medicaid coverage are categorized as having private coverage. Access data table for Figure 2 at: http://www.cdc.gov/nchs/data/databriefs/db38_tables.pdf#2.
SOURCE: CDC/NCHS, National Health Interview Survey.

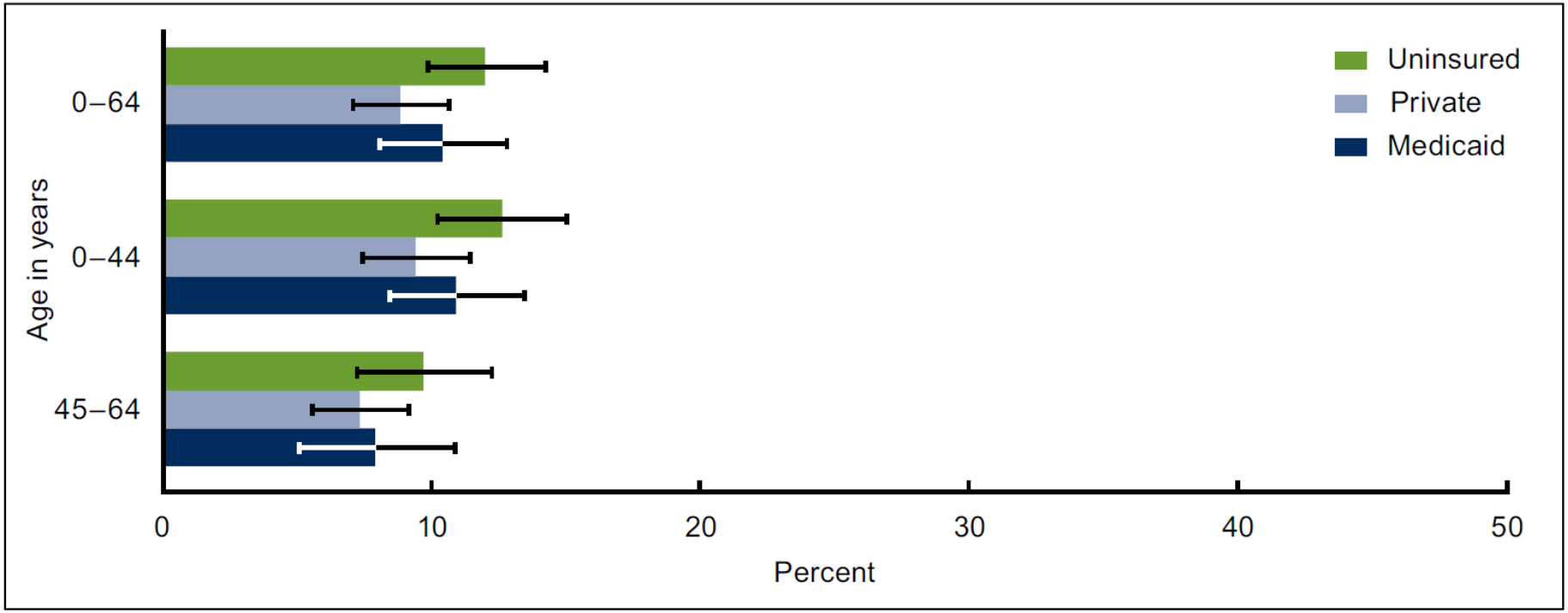
Frequency of ED use was associated with insurance status, with Medicaid beneficiaries being the most likely to have visited the ED multiple times in the past year.

Figure 3. Percentage of persons under age 65 with multiple emergency department visits in a 12-month period, by insurance status: United States, 2007



[1]Includes Children's Health Insurance Program coverage.
NOTES: Error bars indicate 95% confidence intervals. Private, Medicaid, and uninsured categories are mutually exclusive. Persons with both private and Medicaid coverage are categorized as having private coverage. Access data table for Figure 3 at: http://www.cdc.gov/nchs/data/databriefs/db38_tables.pdf#3.
SOURCE: CDC/NCHS, National Health Interview Survey.

Figure 4. Percentage of emergency department visits triaged as nonurgent among persons under age 65, by age and expected source of payment: United States, 2007



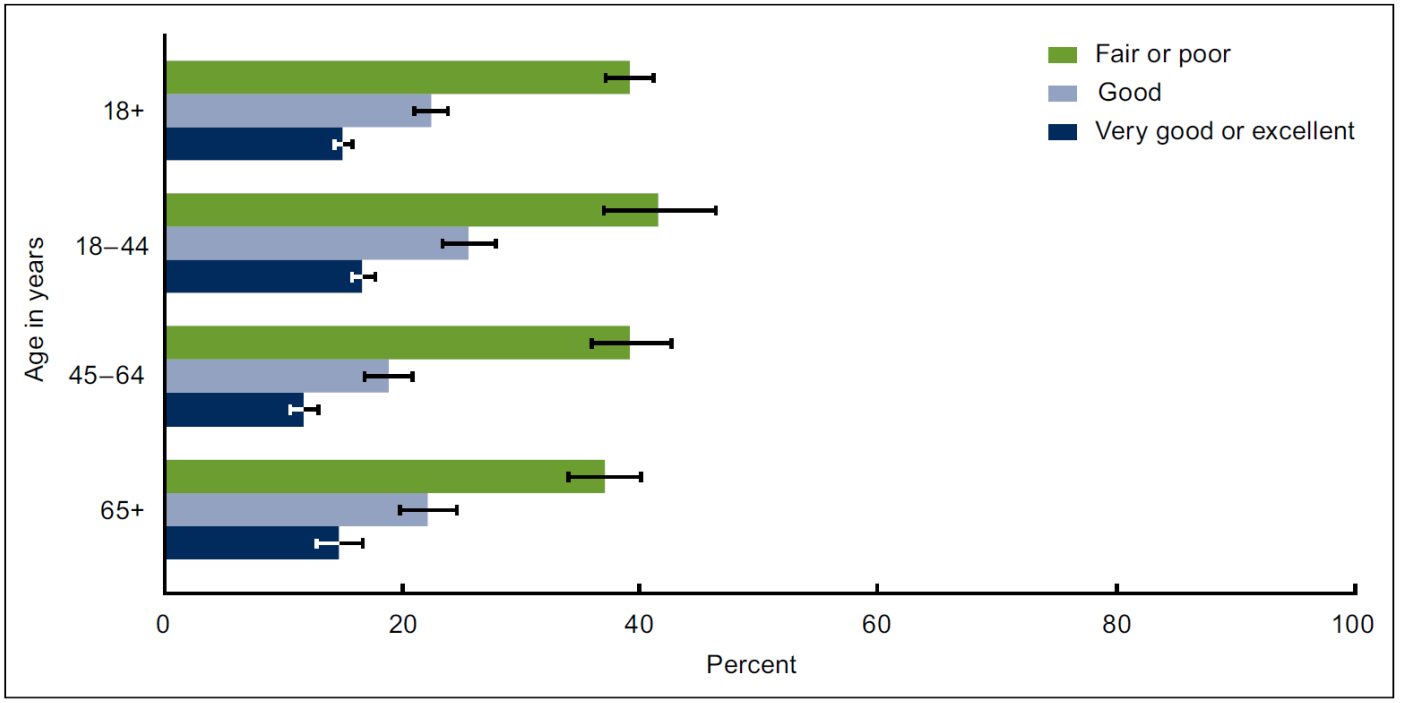
NOTES: Error bars indicate 95% confidence intervals. Nonurgent visits are those where being seen within 2 to 24 hours is appropriate. Private, Medicaid, and uninsured categories are mutually exclusive. Visits with both private and Medicaid sources of payment are categorized as private. No-charge, charity, and self-pay visits are categorized as uninsured. Access data table for Figure 4 at: http://www.cdc.gov/nchs/data/databriefs/db38_tables.pdf#4.
SOURCE: CDC/NCHS, National Hospital Ambulatory Medical Care Survey.

Adults reporting fair or poor health status were the most likely to have used the ED.

- More than one-third of adults aged 18 and over with respondent-assessed fair or poor health status had at least one ED visit during the past 12 months, which was more than twice the rate for adults reporting very good or excellent health (Figure 5).

- Within each health status group, the percentage of adults who had at least one ED visit varied little across age groups.

Figure 5. Percentage of adults with at least one emergency department visit in a 12-month period, by respondent-assessed health status: United States, 2007



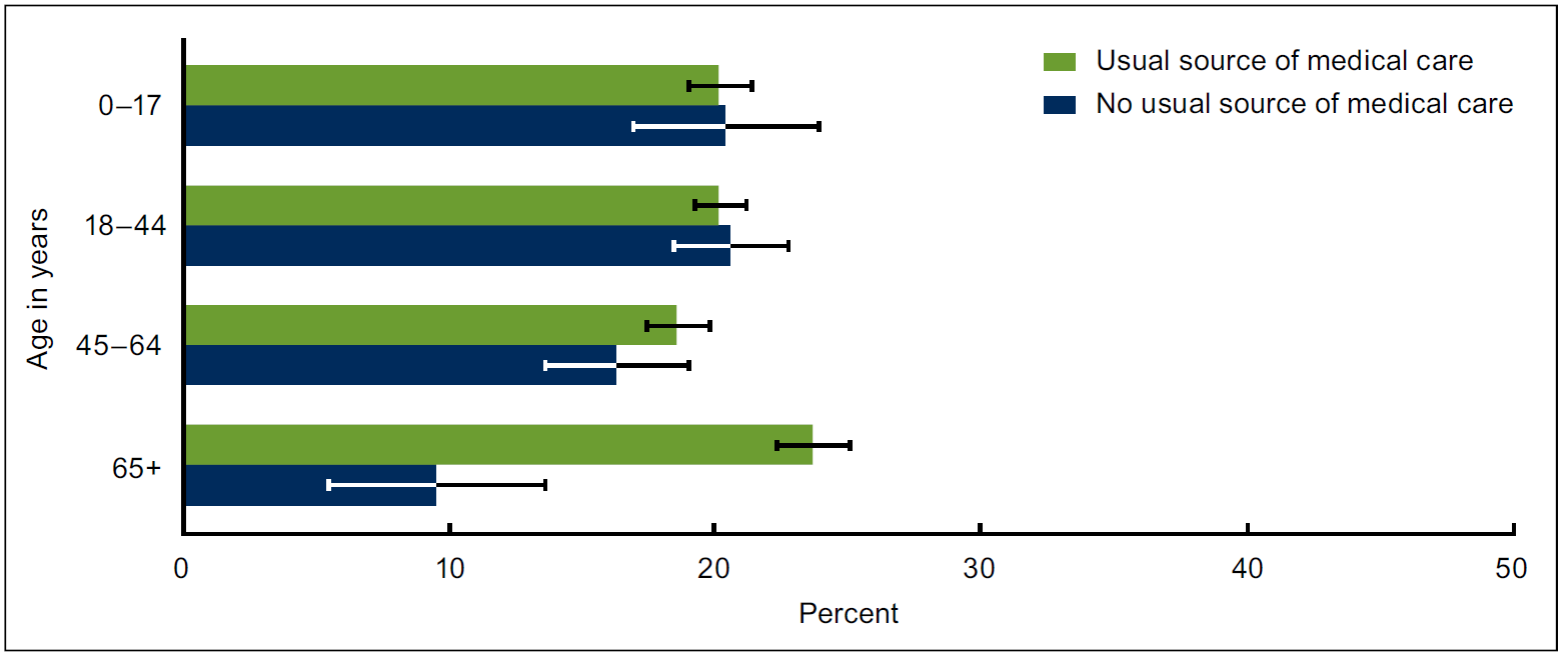
NOTES: Error bars indicate 95% confidence intervals. Access data table for Figure 5 at: http://www.cdc.gov/nchs/data/databriefs/db38_tables.pdf#5.
SOURCE: CDC/NCHS, National Health Interview Survey.

Persons with a usual source of medical care were no less likely to have had at least one ED visit than those without a usual source of care.

- Children and adults under age 65 with and without a usual source of medical care were equally likely to have had at least one ED visit (Figure 6).

- Adults aged 65 and over with a usual source of medical care were more likely to have had an ED visit within a 12-month period than those without a usual source of care.

Figure 6. Percentage of persons with at least one emergency department visit in a 12-month period, by age and usual source of medical care: United States, 2007



NOTES: Error bars indicate 95% confidence intervals. Persons who report the emergency department as their usual source of medical care are defined as having no usual source of care. Access data table for Figure 6 at: http://www.cdc.gov/nchs/data/databriefs/db38_tables.pdf#6.
SOURCE: CDC/NCHS, National Health Interview Survey.

HEALTH CARE REFORM

Health Insurance Status Change and Emergency Department Use Among US Adults

Adit A. Ginde, MD, MPH; Robert A. Lowe, MD, MPH; Jennifer L. Wiler, MD, MBA

Background: Recent events have increased the instability of health insurance coverage. We compared emergency department (ED) use by newly insured vs continuously insured adults and by newly uninsured vs continuously uninsured adults.

Methods: We analyzed 159 934 adult respondents to the 2004 through 2009 National Health Interview Survey. Health insurance status was categorized as newly insured (currently insured but lacked health insurance at some point during the prior 12 months) vs continuously insured and as newly uninsured (currently uninsured but had health insurance at some point during the prior 12 months) vs continuously uninsured. We analyzed the number of ED visits during the prior 12 months using multivariable Poisson regression.

Results: Overall, 20.7% of insured adults and 20.0% of uninsured adults had at least 1 ED visit. However, 29.5% of newly insured adults compared with 20.2% of continuously insured adults had at least 1 ED visit. Similarly, 25.7% of newly uninsured adults compared with 18.6% of continuously uninsured adults had at least 1 ED visit. After adjusting for demographics, socioeconomic status, and health status, recent health insurance status change was independently associated with greater ED use for newly insured adults (incidence rate ratio [IRR], 1.32; 95% CI, 1.22-1.42 vs continuously insured adults) and for newly uninsured adults (IRR, 1.39; 95% CI, 1.26-1.54 vs continuously uninsured adults). Among newly insured adults, this association was strongest for Medicaid beneficiaries (IRR, 1.45) but was attenuated for those with private insurance (IRR, 1.24) ($P < .001$ for interaction).

Conclusions: Recent changes in health insurance status for newly insured adults and for newly uninsured adults were associated with greater ED use. As policy and economic forces create disruptions in health insurance status, new surges in ED use should be anticipated.

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Published online March 26, 2012.
doi:10.1001/archinternmed.2012.34

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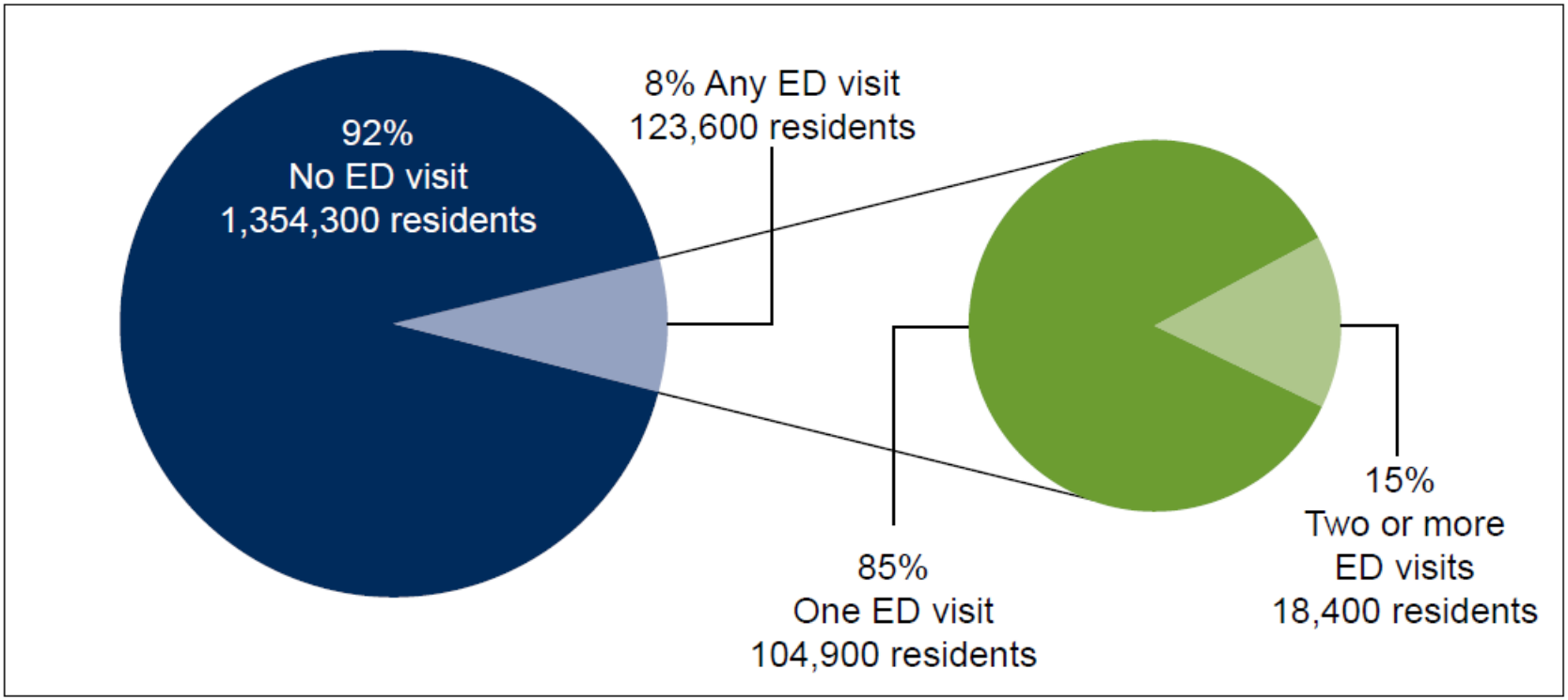
NCHS Data Brief ■ No. 33 ■ April 2010

Potentially Preventable Emergency Department Visits by Nursing Home Residents: United States, 2004

Christine Caffrey, Ph.D., Division of Health Care Statistics

Eight percent of nursing home residents had an ED visit in the past 90 days.

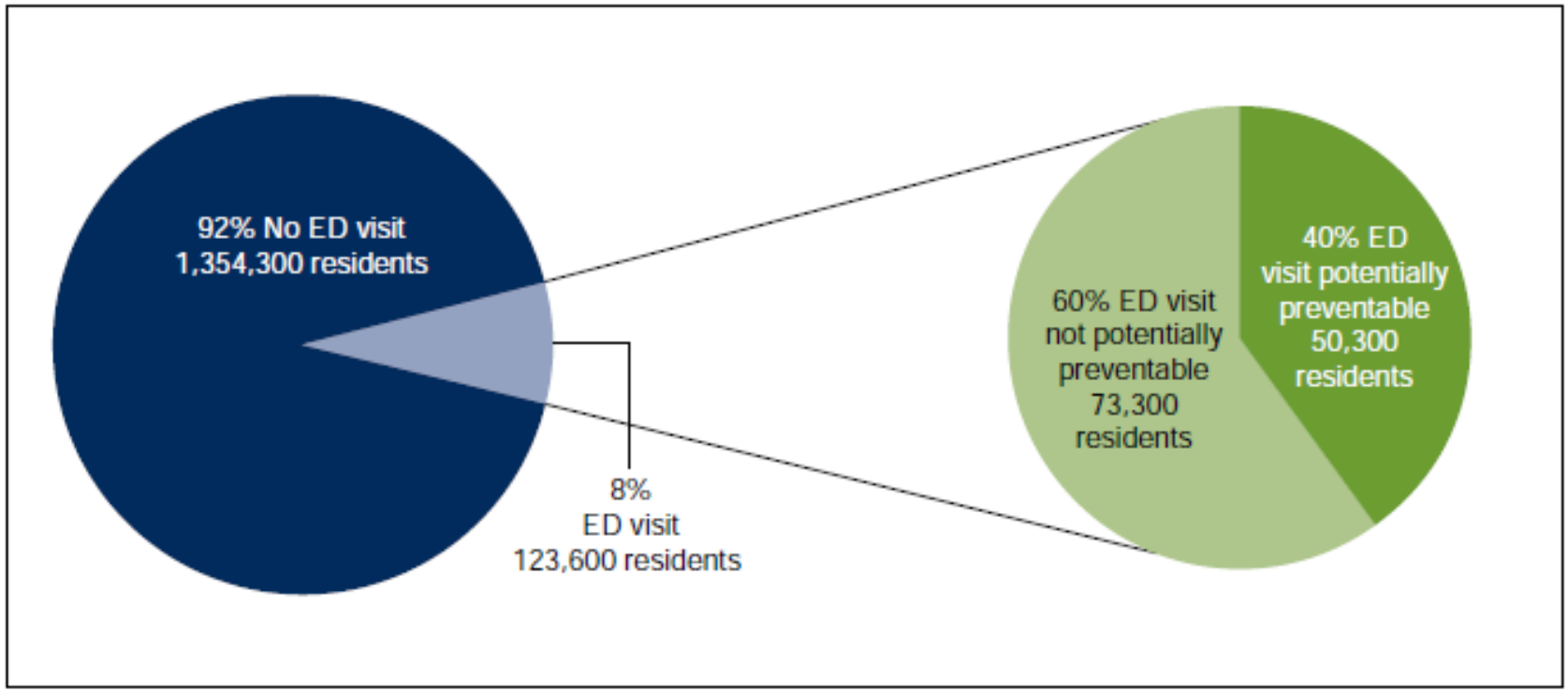
Figure 1. Percentage of nursing home residents with an emergency department (ED) visit in the past 90 days, by number of visits: United States, 2004



SOURCE: CDC/NCHS, National Nursing Home Survey, 2004.

Among nursing home residents with an ED visit in the past 90 days, 40 percent had a potentially preventable ED visit.

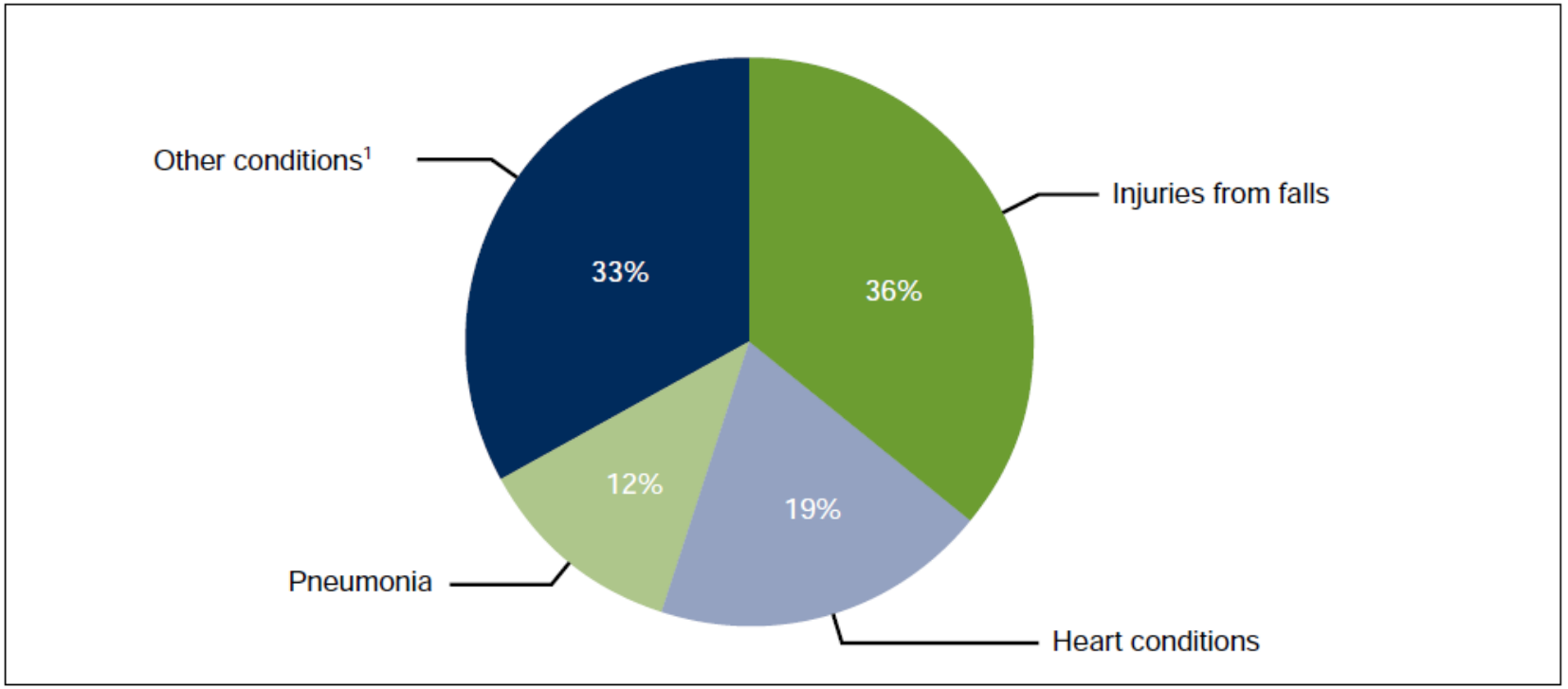
Figure 2. Percentage of nursing home residents with a potentially preventable emergency department (ED) visit in the past 90 days: United States, 2004



SOURCE: CDC/NCHS, National Nursing Home Survey, 2004.

Injuries from falls were the most common conditions accounting for potentially preventable ED visits by nursing home residents.

Figure 3. Percent distribution of the conditions accounting for potentially preventable ED visits by nursing home residents in the past 90 days: United States, 2004



[1]Other potentially preventable conditions included the following: fever, mental status changes, gastrointestinal bleeding, urinary tract infections, metabolic disturbances, and diseases of the skin.
SOURCE: CDC/NCHS, National Nursing Home Survey, 2004.

NCHS Data Brief ■ No. 33 ■ April 2010

Nursing home residents who had a potentially preventable ED visit in the past 90 days had shorter lengths of stay and more medications.

Table. Percentage of selected resident characteristics among nursing home residents with and without a potentially preventable ED visit: United States, 2004

Characteristic[1]	Residents with potentially preventable ED visit	Other nursing home residents
Length of stay more than 6 months	64	70
Taking nine or more medications	56	50

[1]Differences are defined as statistically significant at $p<.05$.
SOURCE: CDC/NCHS, National Nursing Home Survey, 2004.

Di cosa voglio parlare

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- Alternativa al ricovero: l'OBI geriatrico (esperienza di TV)
- Conclusioni

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Emergency Department Utilization Patterns Among Older Adults

Fredric D. Wolinsky,[1,2] Li Liu,[2] Thomas R. Miller,[2] Hyonggin An,[2] John F. Geweke,[2] Brian Kaskie,[2] Kara B. Wright,[2] Elizabeth A. Chrischilles,[2] Claire E. Pavlik,[2] Elizabeth A. Cook,[2] Robert L. Ohsfeldt,[3] Kelly K. Richardson,[1,2] Gary E. Rosenthal,[1,2] and Robert B. Wallace[2]

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Background. We identified 4-year (2 years before and 2 years after the index [baseline] interview) ED use patterns in older adults and the factors associated with them.

Methods. A secondary analysis of baseline interview data from the nationally representative Survey on Assets and Health Dynamics Among the Oldest Old linked to Medicare claims data. Participants were 4310 self-respondents 70 years old or older. Current Procedural Terminology (CPT) codes 99281 and 99282 identified low-intensity use, and CPT codes 99283–99285 identified high-intensity use. Exploratory factor analysis and multivariable multinomial logistic regression were used.

Results. The majority (56.6%) of participants had no ED visits during the 4-year period. Just 5.7% had only low-intensity ED use patterns, whereas 28.9% used the ED only for high-intensity visits, and 8.7% had a mixture of low-intensity and high-intensity use. Participants with lower immediate word recall scores and those who did not live in major metropolitan areas were more likely to be low-intensity-only ED users. Older individuals, those who did not live in rural counties, had greater morbidity and functional status burdens, and lower immediate word recall scores were more likely to be high-intensity-only ED users. Participants who were older, did not live in major cities, had lower education levels, had greater morbidity and functional status burdens, and lower immediate word recall scores were more likely to have mixed ED use patterns.

Conclusions. Nearly half of these older adults used the ED at least once over a 4-year period, with a mean annual ED use percentage of 18.4. Few, however, used the ED only for visits that may have been avoidable. This finding suggests that triaging Medicare patients would not decrease ED overcrowding, although continued surveillance is necessary to detect potential changes in ED use patterns among older adults.

Key Words: Emergency department—Utilization patterns—Medicare, Claims data.

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Age and outcome in acute emergency medical admissions

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Abstract

Background: there is a lack of outcome information with respect to older health service users. The purpose of this study was to examine 30-day in-hospital mortality and its predictors in all elderly patients admitted as a medical emergency to our hospital.
Methods: all patients admitted between 2002 and 2008 were studied, linking anonymised clinical, administrative, laboratory and mortality data. Significant univariate predictors of outcome, including co-morbidity and illness severity score, were entered into a multivariate logistic regression model, adjusting the univariate estimates of the effect of age on in-hospital mortality.
Results: we admitted 23,114 consecutive acute medical admissions between 2002 and 2008; 30-day in-hospital mortality was 20.7% in the over 75 age category versus 4.5% in those younger. The unadjusted OR for a 30-day in-hospital mortality in the over 75 category of 5.21 (95% CI 4.73, 5.73) fell to 4.69 (95% CI 4.04, 5.44) when adjusted for outcome predictors excluding acute illness severity and 2.93 (95% CI 2.50, 3.42) when acute illness severity was added as a covariate. When the interaction between age and co-morbidity is examined, the odds ratio adjusts to 3.22 (95% CI 2.63, 3.6).
Conclusion: acute illness severity is more important than co-morbidity in explaining the outcome in older patients admitted as medical emergencies. Service planning for acute elderly care should be based on effective disease management programmes but recognise the contribution of acute illness severity to outcome when conditions deteriorate.

Keywords: *in-hospital mortality, acute illness severity, age, elderly*

Table 2. Predictors of an in-hospital death

Parameter	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	*P*-value
MDC 4	2.17 (1.93, 2.43)	1.82 (1.53, 2.18)	<0.0001
MDC 5	1.08 (0.93, 1.24)	1.44 (1.16, 1.79)	<0.0009
MDC 1	0.65 (0.55, 0.77)	2.34 (1.84, 2.97)	<0.0001
Readmission	1.12 (1.09, 1.14)	1.05 (1.02, 1.09)	<0.002
ICU admission	14.6 (12.1, 17.6)	9.91 (7.69, 12.8)	<0.0001
Charlson index	1.64 (1.58, 1.71)	1.26 (1.19, 1.34)	<0.0001
Troponin+	8.95 (7.84, 10.2)	3.66 (3.00, 4.47)	<0.0001
Blood transfusion	7.08 (5.92, 8.46)	1.79 (1.38, 2.32)	<0.0001
Year quarter	0.93 (0.89, 0.98)	0.92 (0.86, 0.98)	<0.007
AMAU effect	0.58 (0.52, 0.65)	0.44 (0.37, 0.52)	<0.0001
>75 years	5.60 (4.99, 6.30)	2.93 (2.50, 3.42)	<0.0001
Illness severity	1.84 (1.78, 1.90)	1.53 (1.47, 1.59)	<0.0001

Data adjusted for acute illness severity and log length of stay as described. The OR for LOS was 0.6 (95% CI 0.33, 1.1, $P = 0.1$). MDCs are (4) respiratory, (5) circulatory and (1) nervous. Blood transfusion is units of transfusion >0. AMAU effect: comparison of two consecutive periods (first: 1 January 2002–30 March 2005; second). The ORs for re-admissions, Charlson index and illness severity are unit ORs and reflect change in risk with increasing score. For any re-admission, the value 1.05 indicates an approximate 5% increased risk of an in-hospital death with each re-admission; illness severity indicated an approximate 53% increased risk of an in-hospital death at each decile of the risk score. The unadjusted univariate OR for >75-year group for an in-hospital death was 5.60 (4.99, 6.3). When the model is adjusted for the interaction between age over 75 and co-morbidity, the OR adjusts to 3.22 (2.67, 3.6).

Key points

- Older patients are sicker at the time of emergency admission.
- Those over 75 are 2.9 times more likely to die allowing for acute illness severity.
- Service planning for older patients should be based around comprehensive chronic disease management programmes.

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Lo studio è stato condotto presso il Dipartimento di Emergenza ed Accettazione dell'Ospedale Poliambulanza di Brescia. Il presidio ospedaliero, a carattere generale, consta di reparti specialistici medici (U.O. di Medicina Interna, Geriatria, Neurologia, Cardiologia, Oncologia e Pediatria), chirurgici (U.O. di Chirurgia Generale, Cardiochirurgia, Chirurgia Vascolare, Urologia, Otorinolaringoiatria, Oculistica, Neurochirurgia, Ortopedia e GInecologia), di emergenza ed alta specialità (U.O. do Anestesia Cardiovascolare, Anestesia Polifunzionale, Pronto Soccorso, Terapia Intensiva Cardiovascolare, Terapia Intensiva Polifunzionale) e dei servizi.

Il ricovero ospedaliero può avvenire tramite Pronto Soccorso, programmazione per i pazienti assistiti dal SSN e programmazione per i pazienti solventi.

Lo studio è stato effettuato analizzando i dati relativi ai cambiamenti degli accessi e delle dimissioni dal pronto soccorso della struttura avvenuti un periodo che va dal 1 gennaio 2003 al 31 dicembre 2010.

I pazienti sono stati stratificati in 4 gruppi in base all'età: il primo gruppo di età inferiore a 65 anni, il secondo compreso tra 65 e 74 anni, il terzo tra 75 e 84 e l'ultimo uguale o più vecchi di 85 anni.

Dal 1 gennaio 2008 al 31 dicembre 2010 è stata analizzata la modalità di accesso al Pronto Soccorso e di ricovero nei reparti di degenza, suddividendo i pazienti in 4 gruppi: giunti senza proposta di ricovero, inviati dal medico di base, inviati dallo specialista e inviato dal 118. I pazienti sono poi stati suddivisi in due gruppi: dimessi dall'ospedale o ricoverati in un reparto della stessa struttura.

I ricoveri sono stati poi suddivisi in due gruppi a seconda che il reparto dove venivano ricoverati dal pronto soccorso fosse un reparto medico o chirurgico.

Come indicatore di complessità clinica é stato utilizzato il peso del DRG (Diagnosis-Related Group) sia per i pazienti con patologia medica che per quelli con patologia chirurgica.

Tabella 2: Numero (percentuale) visite DEA-Poliambulanza stratificato per classi di età nel periodo di studio 2003-2010

	2003	2004	2005	2006	2007	2008	2009	2010	*	Test for trend**
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)		
	N=40.944	N=40.772	N=41.895	N=44.352	N=45.185	N=48.749	N=53.335	N=57.643	+30.3	0.000
Etá										
<65	32.618 (79.6)	32.393 (79.4)	32.557 (77.7)	34.297 (77.3)	34.502 (76.4)	37.043 (76.0)	40.728 (76.4)	43.831 (76.0)	-4.1%	0.000
65-74	3.670 (9.0)	3.671(9.0)	3.974 (9.5)	4.196 (9.5)	4.484 (9.9)	4.693 (9.6)	4.934 (9.3)	5.691 (9.8)	+3.2%	0.008
75-84	3.232 (7.9)	3.350 (8.2)	3.689 (8.8)	3.966 (8.9)	4.167 (9.2)	4.491 (9.2)	4.814 (9.0)	5.322 (9.2)	+14.3%	0.000
85+	1.424 (3.5)	1.358 (3.3)	1.655 (4.0)	1.893 (4.3)	2.032 (4.5)	2.522 (5.2)	2.859 (5.4)	2.799 (4.8)	+54.1%	0.000

*Variazione in percentuale della quota dei pazienti per ogni gruppo di etá dal 2003 al 2010; **Chisquare test for trend

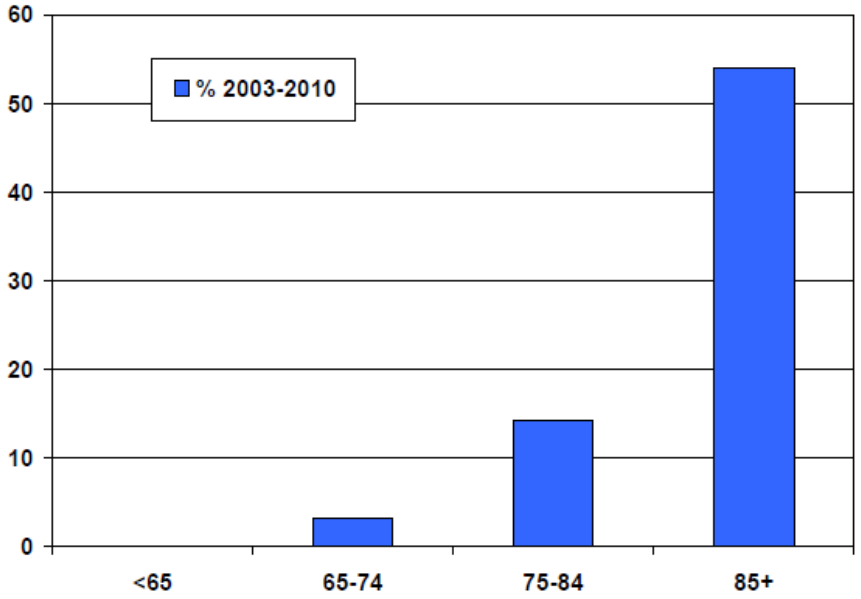


Tabella 3: Modalità di accesso al DEA-Poliambulanza

Accessi a PS (suddivisione per modalità di accesso)				
	2009	%	2008	%
Senza proposta di ricovero	43.639	*82,2*	40.491	*83,2*
Inviato dal medico di base	1.513	*2,8*	1312	*2,7*
Inviato dal medico specialista	575	*1,1*	580	*1,2*
Inviato dal 118	7.135	*13,4*	6.108	*12,5*
Totale	53.098	*100,0*	48.687	*100,0*

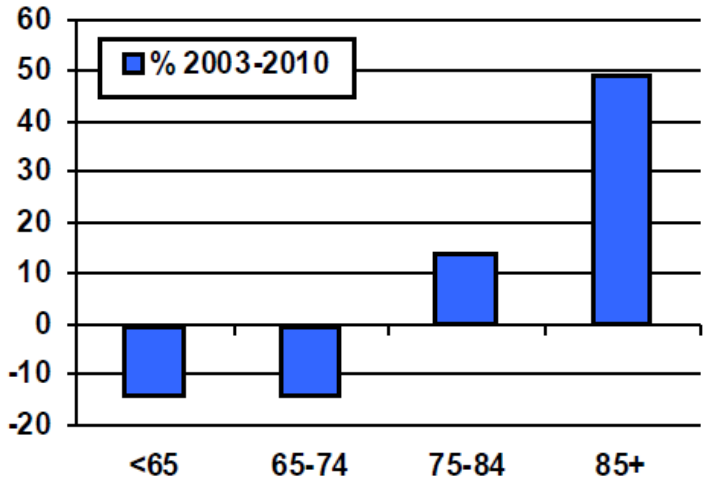
Pazienti ricoverati da PS (suddivisione per modalità di accesso)				
	2009	%	2008	%
Senza proposta di ricovero	6.278	*66,3*	5.159	*66,5*
Inviato dal medico di base	426	*4,5*	403	*5,2*
Inviato dal medico specialista	373	*3,9*	377	*4,9*
Inviato dal 118	2.222	*23,5*	1.668	*21,5*
Totale	9.458	*100,0*	7.752	*100,0*

Tabella 4: Variazione percentuale pazienti ricoverati attraverso DEA-Poliambulanza (2003-2010) stratificati per classi di età e reparto di degenza (medico o chirurgico).

Reparti medici

	2003	2004	2005	2006	2007	2008	2009	2010	*	Test for trend**
	N(%) N=3.536(8.6)	N(%) N=3.763(9.2)	N(%) N=3.752(8.9)	N(%) N=4.088(9.2)	N(%) N=4.107(9.1)	N(%) N=4.346(8.9)	N(%) N=4424(8.3)	N(%) N=4165(7.2)		
Etá										
<65	1.685 (5.2)	1.772 (5.5)	1.684 (5.2)	1.783 (5.2)	1.694 (4.9)	1.842 (4.0)	1805 (4.4)	1818 (4.1)	-14.4%	0.000
65-74	641 (17.5)	617 (16.8)	654 (16.5)	624 (14.9)	719 (16.0)	628 (13.4)	685 (13.9)	664 (11.7)	-14.6%	0.000
75-84	740 (22.9)	844 (25.2)	852 (23.1)	973 (24.5)	966 (23.2)	1044 (23.2)	1055 (21.9)	945 (17.8)	14.0%	0.000
85+	470 (33.0)	530 (39.0)	562 (34.0)	708 (37.4)	728 (35.8)	832 (32.9)	879 (30.7)	738 (26.4)	49.5%	0.000

*Variazione in percentuale della quota dei pazienti per ogni gruppo di etá dal 2003 al 2010 - **Chisquare test for trend



Reparti Chirurgici

	2003	2004	2005	2006	2007	2008	2009	2010	*	Test for trend**
	N(%) N=1.411(3.4)	N(%) N=1.578 (3.9)	N(%) N=1.692(4.0)	N(%) N=1.841(4.1)	N(%) N=1.895(4.2)	N(%) N=1.834(3.8)	N(%) N=1.959(3.7)	N(%) N=1.984(3.4)		
Etá										
<65	807 (2.5)	968 (3.0)	933 (2.9)	1.036 (3.0)	989 (2.9)	910 (2.4)	1019 (2.5)	995 (2.3)	-9.1%	0.000
65-74	268 (7.3)	261 (7.1)	326 (8.2)	315 (7.5)	345 (7.7)	380 (8.1)	353 (7.2)	351 (6.2)	-5.1%	0.000
75-84	246 (7.6)	266 (7.9)	301 (8.2)	338 (8.5)	386 (9.3)	361 (8.0)	385 (8.0)	414 (7.8)	12.7%	0.000
85+	90 (6.3)	83 (6.1)	132 (8.0)	152 (8.0)	175 (8.6)	183 (7.1)	202 (7.1)	224 (8.0)	61.7%	0.000

*Variazione in percentuale della quota dei pazienti per ogni gruppo di etá dal 2003 al 2010
**Chisquare test for trend

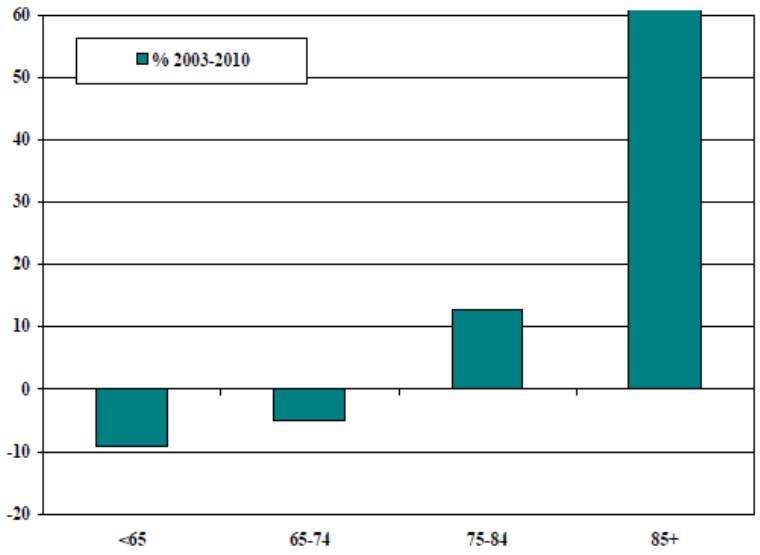
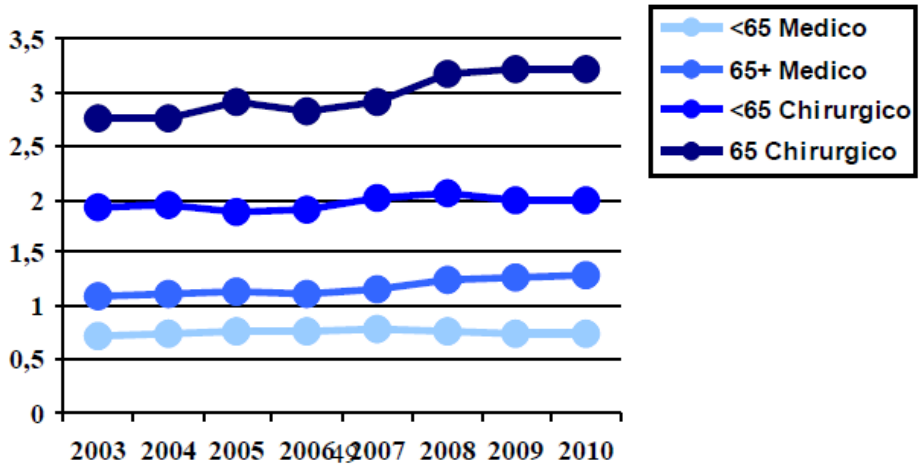


Tabella 5: Peso del DRG nei pazienti ricoverati nei reparti medici e chirurgici nel periodo dal 2003 al 2010, stratificato per etá.

	2003	2004	2005	2006	2007	2008	2009	2010
Reparti medici								
< 65	0.72	0.74	0.76	0.76	0.78	0.77	0.74	0.74
65-74	1.06	1.03	1.05	1.08	1.09	1.12	1.15	1.16
75-84	1.13	1.10	1.15	1.14	1.14	1.25	1.19	1.20
85 +	1.09	1.19	1.21	1.16	1.26	1.33	1.27	1.28
Totale	0.91	0.93	0.97	0.97	1.00	1.04	1.02	1.03
Reparti chirurgici								
< 65	2.07	1.96	1.90	1.92	2.02	2.06	1.99	1.98
65-74	3.03	2.99	3.14	2.93	3.05	3.12	3.21	3.22
75-84	3.16	3.00	2.83	3.15	2.90	3.51	3.02	3.03
85 +	2.33	2.29	2.80	2.43	2.80	2.67	2.64	2.65
Totale	2.45	2.32	2.37	2.36	2.46	2.63	2.49	2.50

Test for trend



Lo studio rileva come gli accessi ad un pronto soccorso (di medie dimensioni di un ospedale italiano, osservato per un periodo di otto anni), siano aumentati significativamente per la popolazione generale ed in particolare per le persone anziane.

Si è osservato un incremento del numero dei pazienti di età compresa tra 75-84 anni e superiore ad 85 anni, che si sono recati in pronto soccorso con un aumento consensuale del numero dei ricoveri nei reparti medici che chirurgici; questo aumento della percentuale dei ricoveri è stato maggiore per i reparti chirurgici.

Il maggior numero di pazienti si reca in PS senza proposta di ricovero o inviati dal 118 e, proprio in queste due categorie, vi è il maggior numero di pazienti che viene poi successivamente ricoverato.

Infine, durante lo studio, vi è stato un aumento della complessità clinica dei malati, sia per quanto riguarda i pazienti affetti da patologie mediche che chirurgiche.

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- Conclusioni

SPECIAL ARTICLE

Emergency Hospitalizations for Adverse Drug Events in Older Americans

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N Engl J Med 2011;365:2002-12.

ABSTRACT

BACKGROUND

Adverse drug events are important preventable causes of hospitalization in older adults. However, nationally representative data on adverse drug events that result in hospitalization in this population have been limited.

METHODS

We used adverse-event data from the National Electronic Injury Surveillance System–Cooperative Adverse Drug Event Surveillance project (2007 through 2009) to estimate the frequency and rates of hospitalization after emergency department visits for adverse drug events in older adults and to assess the contribution of specific medications, including those identified as high-risk or potentially inappropriate by national quality measures.

RESULTS

On the basis of 5077 cases identified in our sample, there were an estimated 99,628 emergency hospitalizations (95% confidence interval [CI], 55,531 to 143,724) for adverse drug events in U.S. adults 65 years of age or older each year from 2007 through 2009. Nearly half of these hospitalizations were among adults 80 years of age or older (48.1%; 95% CI, 44.6 to 51.6). Nearly two thirds of hospitalizations were due to unintentional overdoses (65.7%; 95% CI, 60.1 to 71.3). Four medications or medication classes were implicated alone or in combination in 67.0% (95% CI, 60.0 to 74.1) of hospitalizations: warfarin (33.3%), insulins (13.9%), oral antiplatelet agents (13.3%), and oral hypoglycemic agents (10.7%). High-risk medications were implicated in only 1.2% (95% CI, 0.7 to 1.7) of hospitalizations.

CONCLUSIONS

Most emergency hospitalizations for recognized adverse drug events in older adults resulted from a few commonly used medications, and relatively few resulted from medications typically designated as high-risk or inappropriate. Improved management of antithrombotic and antidiabetic drugs has the potential to reduce hospitalizations for adverse drug events in older adults.

Table 1. Number of Cases and National Estimates of Emergency Department Visits and Emergency Hospitalizations for Adverse Drug Events in Older U.S. Adults, According to Patient and Case Characteristics, 2007–2009.*

Characteristic	Hospitalizations			Emergency Department Visits Not Resulting in Hospitalization		
	No. of Cases (N=5077)	Annual National Estimate (N=99,628)		No. of Cases (N=7,589)	Annual National Estimate (N=166,174)	
		no.	*% (95% CI)*		*no.*	*% (95% CI)*
Age						
65–69 yr	801	14,179	14.2 (12.0–16.5)	1669	36,380	21.9 (19.7–24.1)
70–74 yr	924	18,257	18.3 (16.6–20.1)	1546	32,575	19.6 (18.4–20.8)
75–79 yr	1001	19,248	19.3 (18.2–20.5)	1628	35,702	21.5 (20.1–22.9)
80–84 yr	1110	22,619	22.7 (20.9–24.5)	1366	31,266	18.8 (17.2–20.4)
≥85 yr	1241	25,326	25.4 (23.0–27.9)	1380	30,251	18.2 (16.6–19.8)
Sex†						
Female	2969	59,278	59.5 (57.4–61.6)	4511	99,495	59.9 (57.7–62.0)
Male	2106	40,302	40.5 (38.4–42.5)	3076	66,604	40.1 (37.9–42.3)
Type of adverse event						
Unintentional overdose	3375	65,450	65.7 (60.1–71.3)	3608	75,982	45.7 (40.7–50.7)
Adverse effect	1390	27,613	27.7 (22.3–33.1)	2313	50,240	30.2 (26.0–34.4)
Allergic reaction	267	5,617	5.6 (3.4–7.9)	1388	33,838	20.4 (17.0–23.7)
Other‡	45	948	1.0 (0.7–1.2)	280	6,115	3.7 (2.9–4.4)
No. of implicated medications						
1	4204	82,050	82.4 (78.5–86.3)	6471	141,939	85.4 (82.5–88.3)
2	873	17,578	17.6 (13.7–21.5)	1118	24,235	14.6 (11.7–17.5)
No. of concomitant medications						
None documented	773	18,324	18.4 (12.0–24.8)	2103	56,082	33.7 (22.8–44.7)
1–4	1459	26,731	26.8 (21.9–31.8)	2156	43,819	26.4 (21.2–31.5)
5–9	2115	40,443	40.6 (35.0–46.2)	2554	50,420	30.3 (24.0–36.7)
≥10	730	14,130	14.2 (9.2–19.1)	776	15,853	9.5 (6.8–12.3)

Table 2. National Estimates of Emergency Hospitalizations for Adverse Drug Events in Older U.S. Adults, According to Therapeutic Category, 2007–2009.*

Therapeutic Category	Annual National Estimate of Hospitalizations (N = 99,628)		Proportion of Emergency Department Visits Resulting in Hospitalization
	no.	*% (95% CI)*	%
Hematologic agents	42,104	42.3 (35.5–49.0)	44.6
Endocrine agents	22,726	22.8 (16.7–28.9)	42.1
Cardiovascular agents	9,800	9.8 (7.1–12.5)	42.3
Central nervous system agents	9,621	9.7 (7.6–11.8)	32.2
Antiinfective agents	3,759	3.8 (2.6–4.9)	17.4
Antineoplastic agents	2,882†	2.9 (0.9–4.9)†	51.0
Other agents	3,211	3.2 (2.6–3.8)	15.0
Medications not stated or not known	957	1.0 (0.5–1.5)	20.6
Medications in more than one therapeutic category	4,568†	4.6 (2.7–6.5)	41.2

* Estimates were based on data from the NEISS–CADES project. The proportion of emergency department visits resulting in hospitalization is the ratio of hospitalizations to total emergency department visits for adverse drug events involving the specified therapeutic category.
† The coefficient of variation was greater than 30%.

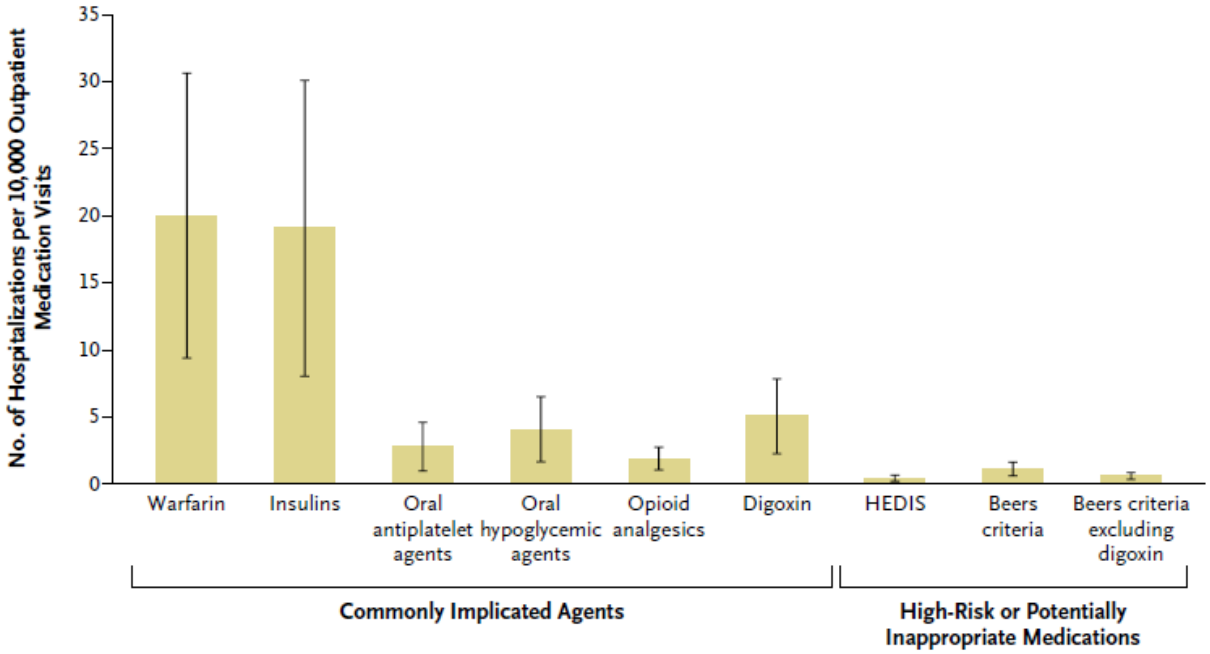

Figure 1. Estimated Rates of Emergency Hospitalizations for Adverse Drug Events in Older U.S. Adults, 2007–2009.

Estimates were based on hospitalization data from the National Electronic Injury Surveillance System–Cooperative Adverse Drug Event Surveillance project for 2007 through 2009, and data for outpatient visits during which medications were ordered or continued are from the National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey for 2007 and 2008. High-risk medications are those designated as such in the elderly by the 2011 Healthcare Effectiveness Data and Information Set (HEDIS).[12] Potentially inappropriate medications are those identified by the updated 2002 Beers criteria for potentially inappropriate medication use in older adults.[13] All high-risk or potentially inappropriate medications were included in the analysis, regardless of the dose, frequency of use, formulation (e.g., short-acting), or duration of use. I bars denote 95% confidence intervals. For oral antiplatelet agents, the coefficient of variation was greater than 30%.

Di cosa voglio parlare

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  - PS e povertà
- PS e RSA
- E' possibile «regolare» l'accesso al PS?
- Il PS della Poli (Bs) negli ultimi 8 anni
- PS: fattori specifici di utilizzo
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  - Definizione dei pazienti più gravi
  - Definizione del reparto di accettazione
- Alternativa al ricovero: l'OBI geriatrico (esperienza di TV)
- Conclusioni

Delirium in the Emergency Department: An Independent Predictor of Death Within 6 Months

Jin H. Han, MD, MSc, Ayumi Shintani, MPH, PhD, Svetlana Eden, MS, Alessandro Morandi, MD, Laurence M. Solberg, MD, John Schnelle, PhD, Robert S. Dittus, MD, MPH, Alan B. Storrow, MD, E. Wesley Ely, MD, MPH

From the Department of Emergency Medicine (Han, Storrow), the Department of Biostatistics (Shintani, Eden), and the Department of Internal Medicine, Division of Allergy, Pulmonary, and Critical Care (Morandi, Ely) and Division of General Internal Medicine (Solberg, Schnelle, Dittus), Vanderbilt University Medical Center, Nashville, TN; and the Veterans Affairs Tennessee Valley Geriatric Research, Education and Clinical Center, VA Service, Department of Veterans Affairs Medical Center, Tennessee Valley Healthcare System, Nashville, TN (Solberg, Dittus, Ely).

Study objective: Delirium's adverse effect on long-term mortality in older hospitalized patients is well documented, whereas its effect in older emergency department (ED) patients remains unclear. Similarly, the consequences of delirium on nursing home patients treated in the ED are also unknown. As a result, we seek to determine whether delirium in the ED is independently associated with 6-month mortality in older patients and whether this relationship is modified by nursing home status.

Methods: Our prospective cohort study was conducted at a tertiary care, academic ED, using convenience sampling, and included English-speaking patients who were aged 65 years and older and were in the ED for less than 12 hours at enrollment. Patients were excluded if they refused consent, were previously enrolled, were unable to follow simple commands at baseline, were comatose, or had incomplete data. The Confusion Assessment Method for the Intensive Care Unit was used to determine delirium and was administered by trained research assistants. Cox proportional hazard regression was performed to determine whether delirium in the ED was independently associated with 6-month mortality after adjusting for age, comorbidity burden, severity of illness, dementia, functional dependence, and nursing home residence. To test whether the effect of delirium in the ED on 6-month mortality was modified by nursing home residence, an interaction term (delirium*nursing home) was incorporated into the multivariable model. Hazard ratios with their 95% confidence intervals were reported.

Results: Of the 628 patients enrolled, 108 (17.2%) were delirious in the ED and 58 (9.2%) were from the nursing home. For the entire cohort, the 6-month mortality rate was higher in the delirious group compared with the nondelirious group (37.0% versus 14.3%). Delirium was an independent predictor of increased 6-month mortality (hazard ratio=1.72; 95% confidence interval 1.04 to 2.86) after adjusting for age, comorbidity burden, severity of illness, dementia, functional dependence, and nursing home residence. The "delirium*nursing home" interaction was nonsignificant (P=.86), indicating that place of residence had no effect on the relationship between delirium in the ED and 6-month mortality.

Conclusion: Delirium in older ED patients is an independent predictor of increased 6-month mortality, and this relationship appears to be present regardless of nursing home status. [Ann Emerg Med. 2010;56:244-252.]

Please see page 245 for the Editor's Capsule Summary of this article.

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- Conclusioni

The Geriatric Emergency Department

Ula Hwang, MD, MPH,[*†] *and R. Sean Morrison, MD*[†‡]

With the aging of the population and the demographic shift of older adults in the healthcare system, the emergency department (ED) will be increasingly challenged with complexities of providing care to geriatric patients. The special care needs of older adults unfortunately may not be aligned with the priorities for how ED physical design and care is rendered. Rapid triage and diagnosis may be impossible in the older patient with multiple comorbidities, polypharmacy, and functional and cognitive impairments who often presents with subtle clinical signs and symptoms of acute illness. The use of Geriatric Emergency Department Interventions, structural and process of care modifications addressing the special care needs of older patients, may help to address these challenges. **J Am Geriatr Soc 55:1873–1876, 2007.**

Key words: emergency medicine; geriatric health services

OLDER ADULTS AND THE ED

Although the aging population will affect all areas of health care, the ED is likely to be disproportionately affected. In 2002, approximately 58% of 75-year-olds had at least one visit to an ED, as compared to 39% of those of all ages, and ED use increased with increasing age.[3] Once in the ED, older patients are more likely to have an emergent or urgent condition, be hospitalized, and be admitted to a critical care unit.[4] In addition, older patients are also more likely to receive a greater number of diagnostic tests, spend longer times in the ED, and have higher charges for their ED services than younger patients.[5]

Table 1. Potential Geriatric Emergency Department Interventions (GEDIs)

GEDI	Goal
Structural modifications	
Soundproof curtains	Reduce risk of delirium by decreasing extraneous noise[14,24]
Hearing assistance or amplifying devices	Improve communication for those with hearing impairment[24]
Removal of noise distracters (e.g., televisions)	
Reclining chairs or padded or lined stretchers	Improve patient comfort[21] Reduce pressure ulcers[22]
Large-faced clocks, calendars, boards with names of hospital and clinical staff	Reminders to improve patient orientation[14] Reduce risk of delirium[14]
Rubber-mat or nonskid floor surfaces Hand rails on walls and hallways Aisle lighting Bedside commodes	Reduce risk of falls and injury[23]
Visual aids (e.g., magnifying glasses, fluorescent tape on call bells, telephones with large keyboards, aisle lighting)	Visual support for visually impaired patients[23] Reduce risk for delirium[11,14]
Sky or ceiling lights or diurnal lighting changes	Reduce risk of delirium by use of natural lighting
Protocol interventions	
Cognitive impairment and delirium	Early identification of patients at risk for these conditions to assist in disposition, treatment, or discharge planning[25,26]
Risk of adverse health outcomes, return visit, or hospitalization screening	Decrease risk of return visits or hospitalization[26,27]
Abbreviated comprehensive geriatric assessments	
Minimum use of urethral catheters and other “tethering” devices	Reduce patient immobility Reduce risk of nosocomial infection and delirium[11,12]
Nursing discharge coordinator	Improve continuity of care Decrease risk of return visits[28] Increase patient satisfaction[28]

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Rapid Emergency Department Intervention for Older People Reduces Risk of Functional Decline: Results of a Multicenter Randomized Trial

Jane McCusker, MD, DrPH,† Josée Verdon, MD,‖ Pierre Tousignant, MD, MSc,†‡ Louise Poulin de Courval, MD, DPH,§¶ Nandini Dendukuri, PhD,*† and Eric Belzile, MSc**

OBJECTIVES: To determine the effectiveness of a two-stage (screening and nursing assessment) intervention for older patients in the emergency department (ED) who are at increased risk of functional decline and other adverse outcomes.

DESIGN: Controlled trial, randomized by day of ED visit, with follow-up at 1 and 4 months.

SETTING: Four university-affiliated hospitals in Montreal.

PARTICIPANTS: Patients age 65 and older expected to be released from the ED to the community with a score of 2 or more on the Identification of Seniors At Risk (ISAR) screening tool and their primary family caregivers. One hundred seventy-eight were randomized to the intervention, 210 to usual care.

INTERVENTION: The intervention consisted of disclosure of results of the ISAR screen, a brief standardized nursing assessment in the ED, notification of the primary care physician and home care providers, and other referrals as needed. The control group received usual care, without disclosure of the screening result.

MEASUREMENTS: Patient outcomes assessed at 4 months after enrollment included functional decline (increased dependence on the Older American Resources and Services activities of daily living scale or death) and depressive symptoms (as assessed by the short Geriatric Depression Scale). Caregiver outcomes, also assessed at baseline and 4 months, included the physical and mental summary scales of the Medical Outcomes Study Short Form-36. Patient and caregiver satisfaction with care were assessed 1 month after enrollment.

RESULTS: The intervention increased the rate of referral to the primary care physician and to home care services. The intervention was associated with a significantly reduced rate of functional decline at 4 months, in both unadjusted (odds ratio (OR) = 0.60, 95% confidence interval (CI) = 0.36–0.99) and adjusted (OR = 0.53, 95% CI = 0.31–0.91) analyses. There was no intervention effect on patient depressive symptoms, caregiver outcomes, or satisfaction with care.

CONCLUSION: A two-stage ED intervention, consisting of screening with the ISAR tool followed by a brief, standardized nursing assessment and referral to primary and home care services, significantly reduced the rate of subsequent functional decline. **J Am Geriatr Soc 49:1272–1281, 2001.**

Key words: clinical trial; emergency department; functional decline; older

The emergency department (ED) has several advantages

Older Patients in the Emergency Department: A Review

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Older patients account for up to a quarter of all emergency department (ED) visits. Atypical clinical presentation of illness, a high prevalence of cognitive disorders, and the presence of multiple comorbidities complicate their evaluation and management. Increased frailty, delayed diagnosis, and greater illness severity contribute to a higher risk of adverse outcomes. This article will review the most common conditions encountered in older patients, including delirium, dementia, falls, and polypharmacy, and suggest simple and efficient strategies for their evaluation and management. It will discuss age-related changes in the signs and symptoms of acute coronary events, abdominal pain, and infection, examine the yield of different diagnostic approaches in this population, and list the underlying medical problems present in half of all "social" admission cases. Complete geriatric assessments are time consuming and beyond the scope of most EDs. We propose a strategy based on the targeting of high-risk patients and provide examples of simple and efficient tools that are appropriate for ED use. [Ann Emerg Med. 2010;56:261-269.]

TARGETING "HIGH-RISK" ELDERLY

Given the lack of time and important workload in the ED, considering every patient older than 65 years for a thorough geriatric evaluation is not realistic. Moreover, the needs of older patients in the ED concerning such evaluations vary. Appropriate screening and elaboration of specific intervention protocols may help emergency physicians target patients prone to benefit from a more detailed evaluation in the ED on one hand and better orient such patients toward the correct ward or community service provider on the other.

1. Before the illness or injury that brought you to the emergency department, did you need someone to help you on a regular basis? (yes)
2. Since the illness or injury that brought you to the emergency department have you needed more help than usual to take care of yourself? (yes)
3. Have you been hospitalized for one or more nights during the past 6 months (excluding a stay in the emergency department)? (yes)
4. In general, do you see well? (no)
5. In general, do you have serious problems with your memory? (yes)
6. Do you take more than 3 different medications every day? (yes)

Figure 4. Identification of Seniors at Risk tool. Each high-risk response indicated on this table counts as 1 point for a total score ranging from 0 to 6. A patient is considered at high risk when the score is 2 or more; adapted from McCusker et al.[96] Reproduced from *Journal of the American Geriatrics Society,* McCusker et al, Detection of older people at increased risk of adverse health outcomes after an emergency visit: the ISAR screening tool, 1999, with permission from Blackwell Publishing.

Postdischarge Adverse Events for 1-Day Hospital Admissions in Older Adults Admitted From the Emergency Department

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Study objective: We assess hospital readmission and death within 60 days in older adults admitted from the emergency department (ED) and discharged by an inpatient service within 24 hours.

Methods: This was a retrospective review of ED patients aged 64 years or older, admitted from 2 hospitals (2004 to 2006), who were discharged home within 24 hours. Excluded were inhospital deaths, observation admissions, transfers to other facilities, patients who left against medical advice, and hospice patients. Outcomes were 72-hour and 30-day readmissions and postdischarge deaths that occurred within 60 days of ED admission. Logistic regression was used to assess for predictors of readmission. A chart review of deaths after discharge was performed to assess for potential contributors to adverse outcomes.

Results: A total of 1,470 admissions met inclusion criteria as 1-day admissions. Of those, 22 (1.5%) patients returned for hospital readmission within 72 hours and 156 (10.6%) within 30 days of discharge. In the multivariable analysis, previous admissions (odds ratio [OR] 1.3; 95% confidence interval [CI] 1.1 to 1.4) and an admission diagnosis of heart failure (OR 2.2; 95% CI 1.0 to 5.0) were associated with 30-day readmission. In 841 individual patients with greater than or equal to one 1-day admission, there were 15 deaths (1.8%) within 60 days. Of those, 11 (73%) patients had abnormal ED ECG results, 6 (40%) were ruled out for acute myocardial infarction while hospitalized, and 3 (20%) had definitive follow-up arranged at discharge.

Conclusion: One-day admissions in hospitalized older adults through the ED do not represent a group at low risk for postdischarge adverse outcomes. [Ann Emerg Med. 2010;56:253-257.]

Please see page 254 for the Editor's Capsule Summary of this article.

Editor's Capsule Summary

What is already known on this topic

Hospitals that have a high frequency of 1-day hospital stays are subject to investigation by Medicare to determine whether the admissions were appropriate.

What question this study addressed

What are the outcomes for older adults admitted from the emergency department and discharged by an inpatient service within 24 hours at 2 Pennsylvania hospitals?

What this study adds to our knowledge

Eleven percent of 1,470 such patients were readmitted within 30 days, and 1.8% died within 60 days of discharge. This group of patients is not at zero risk for adverse outcomes after discharge.

How this might change clinical practice

This study will not change practice but demonstrates that many admissions that are less than 24 hours long are not followed by short-term adverse outcomes.

A Reengineered Hospital Discharge Program to Decrease Rehospitalization

A Randomized Trial

Brian W. Jack, MD; Veerappa K. Chetty, PhD; David Anthony, MD, MSc; Jeffrey L. Greenwald, MD; Gail M. Sanchez, PharmD, BCPS; Anna E. Johnson, RN; Shaula R. Forsythe, MA, MPH; Julie K. O'Donnell, MPH; Michael K. Paasche-Orlow, MD, MA, MPH; Christopher Manasseh, MD; Stephen Martin, MD, MEd; and Larry Culpepper, MD, MPH

Background: Emergency department visits and rehospitalization are common after hospital discharge.

Objective: To test the effects of an intervention designed to minimize hospital utilization after discharge.

Design: Randomized trial using block randomization of 6 and 8. Randomly arranged index cards were placed in opaque envelopes labeled consecutively with study numbers, and participants were assigned a study group by revealing the index card.

Setting: General medical service at an urban, academic, safety-net hospital.

Patients: 749 English-speaking hospitalized adults (mean age, 49.9 years).

Intervention: A nurse discharge advocate worked with patients during their hospital stay to arrange follow-up appointments, confirm medication reconciliation, and conduct patient education with an individualized instruction booklet that was sent to their primary care provider. A clinical pharmacist called patients 2 to 4 days after discharge to reinforce the discharge plan and review medications. Participants and providers were not blinded to treatment assignment.

Measurements: Primary outcomes were emergency department visits and hospitalizations within 30 days of discharge. Secondary outcomes were self-reported preparedness for discharge and frequency of primary care providers' follow-up within 30 days of discharge. Research staff doing follow-up were blinded to study group assignment.

Results: Participants in the intervention group ($n = 370$) had a lower rate of hospital utilization than those receiving usual care ($n = 368$) (0.314 vs. 0.451 visit per person per month; incidence rate ratio, 0.695 [95% CI, 0.515 to 0.937]; $P = 0.009$). The intervention was most effective among participants with hospital utilization in the 6 months before index admission ($P = 0.014$). Adverse events were not assessed; these data were collected but are still being analyzed.

Limitation: This was a single-center study in which not all potentially eligible patients could be enrolled, and outcome assessment sometimes relied on participant report.

Conclusion: A package of discharge services reduced hospital utilization within 30 days of discharge.

Funding: Agency for Healthcare Research and Quality and National Heart, Lung, and Blood Institute, National Institutes of Health.

Ann Intern Med. 2009;150:178-187. www.annals.org

For author affiliations, see end of text.

ClinicalTrials.gov registration number: NCT00252057.

Table 1. **Components of Reengineered Hospital Discharge**

In-hospital component (discharge advocate)

1. Educate patient about relevant diagnoses throughout hospital stay.
2. Make appointments for clinician follow-up and postdischarge testing.
   - Solicit input from patient about convenient date(s) and time(s) for appointments.
   - Coordinate appointments with physicians, testing, and other services.
   - Discuss reason for and importance of physician appointments.
   - Confirm that patient knows location and transportation plan and review barriers to keeping appointments.
3. Discuss with patient any pending in-hospital tests or studies completed and who will follow-up with results.
4. Organize postdischarge services.
   - Be sure patient understands the importance of such services.
   - Make appointments at times convenient for patient.
   - Discuss the details about how to receive each service.
5. Confirm medication plan.
   - Reconcile the discharge medication regimen.
   - Explain what medications to take, emphasizing any changes in the regimen.
   - Review each medication's purpose, how to take it correctly, and important side effects.
   - Be sure the patient has a realistic plan about how to obtain medications.
6. Reconcile the discharge plan with national guidelines and critical pathways.
7. Review appropriate steps for what to do if a problem arises.
   - Instruct how to contact the primary care provider (or coverage) by providing contact numbers for evenings and weekends.
   - Instruct on what constitutes an emergency and what to do in the case of an emergency.
8. Transmit discharge summary to physicians and services accepting responsibility of patient's care that contains the following:
   - Reason for hospitalization with specific principal diagnosis.
   - Important findings.
   - Procedures done and care, treatment, and services provided to patient.
   - Patient's condition at discharge.
   - Complete and reconciled medication list (including allergies).
   - List of acute medical issues, tests, and studies for which confirmed results are pending at the time of discharge and require follow-up.
   - Information about input from consultative services, including rehabilitation therapy.
   - When creating this document, the original source documents—laboratory, radiology, operative reports, and medication administration records—should be in the transcriber's immediate possession and be visible when it is necessary to transcribe information from 1 document to another.
9. Assess the degree of understanding by asking the patient to explain in his or her own words the details of the plan.
   - May require contacting family members who will share in the caregiving responsibilities.

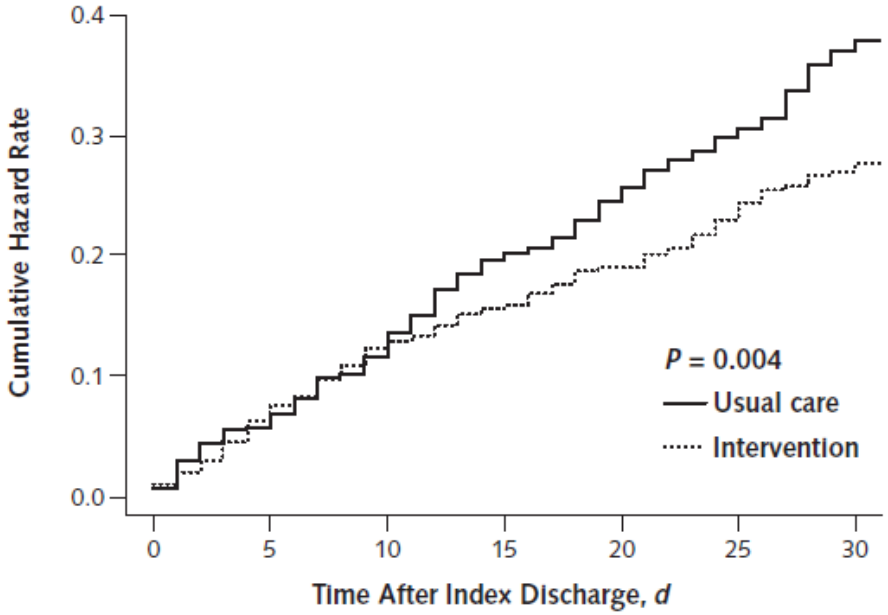
After-hospital care plan

10. Give the patient a written discharge plan at the time of discharge that contains the following:
    - Reason for hospitalization (discharge diagnosis and significant comorbid conditions).
    - Discharge medication list (how and when to take each medication and how to obtain medication).
    - Contact information and picture of primary care provider and discharge advocate.
    - Information for follow-up primary care, specialty care, and outpatient test appointments.
    - Calendar, labeled with scheduled appointments and tests.
    - Information for tests and studies for which confirmed results are not available at the time of discharge.

Pharmacist postdischarge telephone component

11. Call the patient to reinforce discharge plan, review medications, and solve problems.

Figure 2. **Cumulative hazard rate of hospital utilization for 30 days after index hospital discharge.**



Cumulative Events*						
Usual care	30	59	87	111	132	164†
Intervention	30	51	63	75	97	110†

* The denominators for the events were 433 for usual care and 397 for intervention. This represents the number of discharges for each group, which includes index discharges and discharges from all subsequent admissions. At each discharge, the participant is returned to the risk pool. The denominator is thus constant during the entire 30 days.

† Two events for the usual care group and 6 events for the intervention group were removed from this analysis because the date of admission was missing.

La valutazione del paziente in DEA

Il ruolo principale dei Dipartimenti di Emergenza ed Accettazione è quello di effettuare la prima valutazione del paziente e formulare un corretto orientamento diagnostico che permetta una rapida individuazione ed eventuale soluzione del problema e, in caso di necessità, una adeguata accoglienza e collocazione del paziente in un reparto ospedaliero. Proprio il processo diagnostico è stato identificato come un momento cruciale per la gestione del paziente in DEA poiché rappresenta il cuore del lavoro clinico e su di esso si basano le successive scelte sia diagnostiche che terapeutiche.

Nella persona anziana affetta da patologia in fase acuta che si presenta al DEA l'approccio clinico e la raccolta anamnestica possono essere momenti ancora più complessi a causa della frequente presentazione atipica delle comuni malattie, per il riscontro, spesso, di valori di laboratorio alterati rispetto ad un giovane adulto, per l'elevata comorbilità, per la possibile difficoltà di comunicazione dovuta ad alterazioni dello stato di coscienza (es: demenza, delirium) o per l'assunzione di numerosi farmaci. Per tale ragione il più delle volte è necessaria la presenza di una persona che conosca bene il paziente per poter compensare eventuali lacune comunicative o per far luce nella complessa storia clinica del paziente (l'anamnesi è fondamentale perché è il principale atto clinico di indirizzo del work-up diagnostico).

Nel 75% dei casi dei pazienti anziani che giungono al DEA lo stato funzionale non viene considerato e questo è in contrasto con la letteratura che afferma che i 2/3 sono disabili in almeno una ADL e che il 74% si è presentato al DEA proprio per un peggioramento nella funzione. Questa condizione peraltro è noto essere un marcatore di outcome avversi come l'ospedalizzazione, la lunghezza della degenza, i ripetuti accessi al DEA, la necessità di cure domiciliari e la istituzionalizzazione.

In un dipartimento di emergenza, lo spazio è progettato con l'intento di valutare il paziente in tempi rapidi e spesso frazionati poiché l'ambiente è stato creato per ottimizzare al massimo le risorse. La privacy è abbandonata a scapito della produttività così che tende, piuttosto che paraventi fungono da barriere tra i posti letto in un unico spazio aperto consentendo una maggiore possibilità di movimento da parte del personale e la collocazione di più pazienti in una unica stanza; inoltre, i pazienti possono giacere sul strette barelle per ore (anche giorni!) in attesa di esami diagnostici o letti d'ospedale non immediatamente disponibili.

Il pronto soccorso, raramente è un ambiente calmo e silenzioso: il rumore è dovuto sia all'affollamento (pazienti, parenti, personale medico e infermieristico) sia alla presenza di allarmi dei monitor o campanelli che suonano. Tutto questo contribuisce alla difficoltà di comunicazione dei pazienti ed in particolare quelli affetti da deficit cognitivo o quelli con disturbi dell'udito aumentando il rischio di sviluppare o peggiorare un delirium.

Il triage, luogo dove il paziente viene accolto non appena arrivato in pronto soccorso e dove in base alla sintomatologia clinica viene classificato secondo classi di urgenza crescenti per dare la priorità agli infortunati o malati in base alla loro gravità piuttosto che rispetto all'ordine di arrivo, può non essere un luogo adatto alla persona anziana portatrice di multiple comorbilità, politerapia, e carenze funzionali e cognitive che si presentano spesso con sintomi e segni clinici sfumati o differenti dal giovane adulto. Proprio per tali ragioni diviene pertanto di cruciale importanza riuscire ad identificare – in modo quanto più possibile semplice e rapido – quegli anziani che, per condizioni di potenziale fragilità, sia più appropriato assegnare alla gestione di unità geriatriche per acuti (UGA) piuttosto che a unità operative di medicina interna. Infatti, studi controllati randomizzati ci dicono – ormai da oltre 20 anni – che le UGA (o reparti geriatrici per acuti) dimostrano la loro superiorità, anche su outcome primari, quando l'accesso sia riservato a pazienti selezionati per condizioni che, per particolare instabilità o complessità clinica, li qualifichino, almeno su un piano operativo clinico, come "fragili".

Dal DEA al ricovero ospedaliero

Una volta giunto in pronto soccorso, il paziente anziano viene spesso ricoverato e accede più facilmente ad una unità di cura intensiva rispetto al giovane adulto.

Diversi studi hanno dimostrato come il ricovero in ospedale per una patologia somatica acuta produca un aggravamento funzionale e un peggioramento dello stato cognitivo nelle persone anziane rispetto al periodo premorboso. I pazienti, alla dimissione dall'ospedale, presentano spesso sia livelli di autosufficienza peggiori rispetto all'ingresso, che una aumentata necessità di cure domiciliari.

Questo fenomeno non sembra attribuibile solo alla malattia che ha portato all'ospedalizzazione, quanto agli eventi negativi legati al ricovero stesso: immobilizzazione, sedazione legata alla comparsa di stato confusionale acuto, cadute, posizionamento di presidi invasivi (come cateteri vescicali o cateteri venosi centrali, etc).

Malgrado l'evidenza degli effetti avversi sul paziente anziano dopo l'accesso al PS e del ricovero, si è assistito negli ultimi anni ad un sempre maggior ricorso all'ospedale, ed in particolare ai servizi specialistici e di emergenza.

Molte volte risulta difficile immaginare un trattamento extraospedaliero e il rivolgersi ad un pronto soccorso rimane l'unica scelta apparentemente perseguibile, soprattutto quando la criticità del paziente impone cure intensive non gestibili al domicilio, sia perché si richiedono interventi di diagnostica strumentale, sia perché è necessaria la presenza costante dei sanitari, motivata da una possibile rapida e mutevole evoluzione del quadro clinico che comporta scelte terapeutiche immediate.

Per tali ragioni diventa fondamentale identificare le caratteristiche del paziente ricoverato, e di conseguenza quali obiettivi diagnostico terapeutici devono essere ipotizzati per quella persona malata durante il ricovero ospedaliero. È quindi di importanza cruciale il ruolo di valutazione e di orientamento diagnostico che viene effettuato nel Dipartimento di Emergenza ed Accettazione.

Di cosa voglio parlare

- **Epidemiologia dell'uso del Pronto Soccorso (PS)**
  - **Chi usa il PS**
  - **L'utilizzo ripetuto del PS**
  - **PS e povertà**
- **PS e RSA**
- **E' possibile «regolare» l'accesso al PS?**
- **Il PS della Poli (Bs) negli ultimi 8 anni**
- **PS: fattori specifici di utilizzo**
- **PS e delirium**
- **PS e assessment**
  - **Il triage geriatrico**
  - **Definizione dei pazienti più gravi**
  - **Definizione del reparto di accettazione**
- **Alternativa al ricovero: l'OBI geriatrico (esperienza di TV)**
- **Conclusioni**

Il problema della identificazione di sottogruppi di pazienti anziani fragili è stato studiato mediante definizione di un set di criteri di inclusione/esclusione, oppure con sistematica consulenza geriatrica al DEA.
Recentemente nel nostro paese si è tentato di mettere a punto un sistema di stratificazione del rischio che, per semplicità di utilizzazione, possa affiancare il triage tradizionale di attribuzione di un codice rosso, giallo, verde o bianco. Un codice che non sostituisce i processi di Valutazione Multidimensionale (VMD) geriatrica, ma da utilizzare per una più appropriata assegnazione di pazienti afferenti dal DEA all'area geriatrica.

Le variabili disponibili e considerate (età, sesso, stato civile, ricovero ordinario nei 6 mesi precedenti e relativo raggruppamento diagnostico, ricovero in Day Hospital nei 6 mesi precedenti, numero di farmaci nei 3 mesi precedenti, prognosi a distanza di un anno dal ricovero indice) hanno permesso di generare un punteggio, definito "Codice Argento", che si è dimostrato valido nel discriminare la prognosi a 12 mesi dal ricovero indice, separando efficacemente quattro classi di pazienti a rischio di morte progressivamente e significativamente crescente.

Un dato interessante deriva dal confronto della prognosi dopo ricovero in UGA o in Medicina Interna stratificando per valore di Codice Argento: la prognosi risulta infatti simile per bassi livelli di rischio (bassa complessità o "fragilità"), mentre le UGA hanno un performance progressivamente migliore all'aumentare del rischio.

Tabella 1: Variabili prese in considerazione per il calcolo del Codice Argento

Variabile	Coeff. b	Punti
Classe di età (anni)		
75-79	Rif.	_
80-84	0.34	3
85+	0.95	9
Sesso (M vs. F)	0.23	2
Stato civile (Non con./vedovo/divorziato vs. coniugato)	0.10	1
Ricovero in DH (Sì vs. No)	0.52	5
Ricovero ordinario e diagnosi		
Nessun ricovero	Rif.	_
Malattie respiratorie	0.59	6
Neoplasie	1.17	11
Altre	0.19	2
N° farmaci (8+ vs. 0-8)	0.17	2

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AZIENDA ULSS 9 TREVISO

Treviso 11 giugno 2012

L'OB geriatrica di Treviso: i primi dati (7 maggio - 8 giugno)

M. Calabrò

OB geriatrica (razionale ed ipotesi)

Un utilizzo crescente delle strutture di Pronto Soccorso ha portato ad un costante incremento degli accessi
La riduzione progressiva dei posti letto per Acuti ed una sempre maggiore richiesta di appropriatezza dei ricoveri hanno progressivamente mutato la funzione del Pronto Soccorso da "Admit to work" a "Work to admit", con necessità di creare nuove funzioni di filtro ai ricoveri.

Nel presente documento vengono indicati dal gruppo di lavoro dei correttivi considerati "necessari" ed altri "utili" per ottenere a breve un miglioramento del sistema e garantire un rispetto dei livelli essenziali di assistenza nell'urgenza-emergenza.

- **Negli ultimi anni si è assistito ad un progressivo incremento degli accessi al Pronto Soccorso in conseguenza delle seguenti problematiche:**
- **a) un sempre maggior bisogno del cittadino di ottenere dal servizio pubblico una risposta ad esigenze urgenti o comunque percepite come tali;**
- **b) il miglioramento delle cure con aumento della sopravvivenza in pazienti multimorbidi, che con sempre maggior frequenza necessitano dell'intervento del sistema d'emergenza-urgenza;**
- **c) il ruolo di rete di sicurezza rivestito dal Pronto Soccorso per categorie socialmente deboli.**

Con tali premesse prende un nuovo significato il senso dell'emergenza geriatrica di un paziente multimorbido, trattato con polifarmacoterapia, stato funzionale e cognitivo spesso compromesso, in queste condizioni il quadro clinico risulta sempre più complesso:

- **le patologie, anche le più comuni, si presentano spesso in modo atipico**
- **la multimorbilità assume un peso rilevante**
- **la polifarmacoterapia assume un peso rilevante**

Tali pazienti giungono in PS frequentemente accompagnati da scarse informazioni clinico-funzionali e di terapia assunta e accompagnati da badanti non completamente padroni della lingua.

Obiettivi clinici di OBI Geriatrica

- **“Dimissione sicura”**
- **Ricovero appropriato**
- **Inserimento nelle Rete dei Servizi, se necessario**
- **Riconciliazione farmacologica**

Provenienza dei pazienti

Provenienti in OBI geriatrica da PS	**45**
Provenienti da CdR	**3 (+1 nuovo accesso)**
Noti ai Servizi Distrettuali	**10 (+2 nuove prese in carico)**
Noti ai Servizi Sociali	**1**

Esito

Pz. rientrati a domicilio entro 48 ore	**30**
Dimessi da OBI con invio al MMG	**66,7%**
Pazienti ricoverati	**14 in U.O. Geriatria** **1 in U.O: Chirurgia d'Urgenza**

Caratteristiche dei pazienti in OBI Geriatrica

Maschi	**16; 35,5%**
Femmine	**29; 64,45%**
Età media	**85,9**
Barthel Index premorboso	**67,5**
N.° cadute/anno	**0,6**
Charlson Index medio	**6,3**
N.° farmaci alla dimissione	**6,2**
SPMSQ	**4,5**
CAM	**0,1**
Indice di Brass	**14,8**

Indagini richieste

Rx-torace	9
Ecografia addominale	2
Tc-cerebrale	7
Tc-torace con m.d.c.	3
ECG Holter	3
Colonscopia	1
EEG	1
Visita cardiologica	1
Visita neurologica	3
Visita ortopedica	1
Visita ORL	1
Visita chirurgica	1

Media indagini richieste/paziente= 0,73

Decorso clinico ed esito

Motivo ricovero	Accertato	Esito
1) Ipoglicemia jatrogena	Ipoglicemia jatrogena in pz con comorbilità	Dimissione
2) Ematoma subdurale	Ematoma subdurale	Ricovero Geriatria→ Neurochirurgia
3) Episodio comiziale	Episodio comiziale	Dimissione
4) TIA	Severa anemia di ndd	Ricovero in Geriatria
5) Trauma cranico da caduta accidentale	Trauma cranico da caduta accidentale	Dimissione
6) TIA	TIA	Dimissione
7) TIA	TIA	Dimissione
8) Disidratazione	BPN da inalazione	Ricovero in Geriatria
9) Sincope in gastroenterite	Tromboembolia polmonare	Ricovero in Geriatria

Suddivisione per patologie

Patologie cerebro-vascolari	**7**	**15,5%**
Lipotimia e sincope	**7**	**15,5%**
Patologia cardiologica	**5**	**11,1%**
Disidratazione e patologie metaboliche	**3**	**6,7%**
Patologia infettiva	**5**	**11,1%**
Patologia gastroenterologica	**5**	**11,1%**
Traumi e cadute	**4**	**8,9%**
Anemia	**2**	**4,4%**
TVP	**1**	**2,2%**
Sintomatologia aspecifica	**6**	**13,3%**
Totale	**45**	**100%**

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The NEW ENGLAND JOURNAL of MEDICINE

Perspective

Emergency Departments, Medicaid Costs, and Access to Primary Care — Understanding the Link

Arthur L. Kellermann, M.D., M.P.H., and Robin M. Weinick, Ph.D.

Clearly, something must be done to stop the hemorrhaging of state budgets. But ill-considered actions could make things worse. Medicaid was created to ensure that the poorest of the poor have access to care. Rather than confronting the challenge of inadequate access to primary care, Washington State's Health Care Authority is attempting to restrict access to ED care. Instead of blocking the doors to the ED, policymakers in Washington State and elsewhere should draw the proper lessons from Billings's research and unlock the doors to primary care.