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# Repeat Visits Among Elders In An Urban Emergency Setting

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## Abstract

**Objectives:** This pilot project seeks to understand recidivism rates among urban elderly in an academic emergency department (ED). Secondary goals include analysis of specialty versus primary medical care among frequent users of emergency services, as well as the effect of geriatric medicine on ED recidivism.

**Methods:** A convenience sample of elderly patients 60 years old and older completed a brief survey designed to identify primary hospital and clinic affiliations, number of ED visits within a month, and any previous geriatric assessments.

**Results:** Forty-eight patients participated: African Americans (50%), Caucasian (23%), Latinos (21%), and Other (6%). Approximately 79% of ED elders reported established links to institution. Only 35% of these elders identified a primary care clinic. 35% of elders surveyed indicated 2 or more ED visits within a 30-day period. 85% indicated no formal geriatric assessment or interdisciplinary geriatric team care.

**Conclusion:** This study suggests that ED recidivism rates among elders may be both health care system and patient issues. System problems contributing to high ED usage appear to be due to high specialty care and absence of coordinate geriatric care. Patient problems associated with ED recidivism may be linked to inability to identify a primary care provider. These data underscore the need for novel interventions on behalf of high risk elderly to decrease ED recidivism rates. Creating health systems with better collaborations are likely to benefit elderly by decreasing their reliance on emergency services.

## INTRODUCTION

By the year 2010, the number of persons over the age of 85 will be increasing at a rate three to four times greater than the growth rate of the general population<sup>1</sup>. Several studies have found that the elderly utilize emergency services at a rate much higher than expected.<sup>1,2,3,4</sup> Data released in 2003 from the National Center for Health Statistics showed that elder patients, age 75 years of age and over, had the highest rate of emergency department visits approximately 60 visits per 100 persons per year.<sup>5, 6</sup> Reasons for ED recidivism is largely unknown and unstudied. To the best of our knowledge, no research has focused on investigation of recidivism rates among elders in the emergency department, nor has there been a systematic identification of factors contributory for increased utilization of acute care services. This report provides preliminary data from a pilot project to determine ED recidivism rates and examine contributing factors.

## METHODS

**Study Design.** This study entailed a survey of elderly patients asking about recurrent ED visits, primary study hospital affiliations, primary care and specialty clinic use. The University Institutional Review Board approved this study. Patients were excluded if their vital signs were unstable, had unresolved pain or dyspnea, or had other medical issues that precluded an ED-based interview. All interviews occurred after patient evaluations, treatments, and discharge plans were completed.

**Study Setting and Population.** A convenience sample of elderly patients 60 years old and older completed a brief interview- driven survey that samples their primary hospital affiliation, number of ED visits within one month, identification of a primary care clinic, specialty clinic use, and any previous geriatric assessments. The study was performed during August 2003 in an urban tertiary care/ academic medical center ED with an annual census of

50,000 and an EM residency-training program.

Survey Content and Administration. The instrument was piloted and revised on the basis of the preliminary data. Trained research assistants and the principal investigator recruited study participants, obtained informed consent, and verbally administered the survey. Research assistants staffed the ED on rotating shifts from 9 AM to 12PM and 6 PM to 10PM daily. Research assistants identified potential subjects prior to discharge from the emergency department and after completion of their emergency department evaluation. Eligibility was determined based on predetermined criteria: 1) eminent discharge from the ED; 2) ability to give verbal consent; 3) ability to immediately complete the instrument.

Data Analysis. Data were collected and maintained without patient identifiers. Data analysis included descriptive analysis, paired sample t-tests, calculation of odds ratios and chi-square analysis using SPSS 11.5.

**RESULTS**

A total of 55 subjects were approached, 7 were excluded because of an inability to give consent; 48 participated in the study. The ethnic distribution of respondents was African-Americans (50%), Caucasians (23%), Latinos (21%), and Other (6%). Gender analysis revealed 63% female and 38% male participants.

Demographics, study hospital affiliations, identification of primary care clinic, specialty clinic use, and previous geriatric assessment are presented according to number of ED visits within a 30-day period in Table 1. Overall, 79% of respondents reported established links to the institution. Only 35% of elders identified a primary care clinic. 35% of all respondents were ED recidivists as defined by two or more ED visits within a one month period. Latinos had the highest recidivism rates (40%), followed by African-Americans (38%), and Caucasians (36%). Recidivism rates were 59% for those respondents who did not identify a primary care clinic. 41% of those with two or more specialty clinic affiliations were frequent users of the ED.

**Figure 1**

Table 1: Demographics, study hospital affiliations, primary care and specialty clinic identifications, and prior geriatric assessments by respondents according to number of ED visits within a 30-day period

	Overall	>1 ED visit during month	1 ED visit during month	OR	95% CI	p-value
Total N	48 (100%)	17 (35.4%)	31 (64.6%)	-	-	-
Mean Age	71.81 ± 8.33	71.18 ± 6.68	72.16 ± 9.20	-	-	0.70
Sex						
Male	18	8 (47.0%)	10 (32.2%)	1.87	0.47-7.51	0.31
Female	30	9 (52.9%)	21 (67.7%)			
Race						
African American	24	9 (52.9%)	15 (48.4%)	1.20	0.31-4.63	0.76
Caucasian	11	4 (23.5%)	7 (22.6%)	1.05	0.21-5.17	1.00
Hispanic	10	4 (23.5%)	6 (19.3%)	1.28	0.25-6.55	0.73
Other	3	0 (0%)	3 (9.7%)	0.00	0-4.24	0.54
Study Hospital Affiliation	38	13 (76.5%)	25 (80.6%)	1.28	0.25-6.55	0.73
Primary Care	17	7 (41.2%)	10 (32.2%)	1.47	0.36-5.95	0.54
Specialty Clinic Use	22	9 (52.9%)	13 (41.9%)	1.56	0.40-6.07	0.46
Geriatric Clinic	7	2 (11.8%)	5 (16.1%)	0.69	0.08-4.90	1.00

Subset analysis based on ethnicity revealed that elderly Latinos(L) had the highest rate of ED recidivism when compared to African Americans (AA) and Caucasians (C), but African Americans had the highest percentage of elderly using the ED three or more times in a one month period(16% vs. 9% (C) and 10%(L)). African Americans also had the highest subspecialty clinic use in addition to having the highest percentage of identifiable primary care.

**DISCUSSION**

These results highlight several interesting findings about recidivism rates among elderly patients in the emergency setting. Firstly, less than half of the respondents reported a primary care clinic affiliation even though 79% of them felt that they had a clinical relationship with the medical center. Elderly patients often present as extremely complex patients for a number of reasons that often extend beyond just physical disease.<sup>7, 8</sup> Without specific primary care input, the medical and psycho-social complexity often unique to an aging population can cause frequent use of hospital and emergency care. These settings are not always ideally equipped to handle chronic conditions and frailty.<sup>7, 8</sup>

Secondly, almost half of all respondents reported several specialty clinic affiliations which may be reasonable in an elderly patient population; however, high outpatient clinic use has been suggested as a factor associated with increased utilization of acute care services.<sup>9, 10</sup>

Thirdly, most of the participants indicated no formal geriatric assessment or interdisciplinary geriatric team care. Studies have shown that specialized, comprehensive geriatric assessment and management in an outpatient setting is effective in maintaining functioning and the ability to

perform daily activities without an increase in cost.<sup>9, 11</sup> In addition, key quality indicators suggest that collaborative approaches to the geriatric patient are necessary to improve outcomes.<sup>11, 12</sup> Geriatric Medicine programs that are interdisciplinary based have the potential to break the cycle among elderly of over utility in the acute care setting.<sup>12, 13</sup> In the emergency setting, this could translate to decreased recidivism rates among elders.

Overall, these results suggest that recidivism rates among elders especially in the emergency department are complex and may represent both systems and patient issues.

### STUDY LIMITATIONS

Our study has several important limitations. The study was performed in only one ED on a small convenience sample of elderly patients. This may significantly bias the results toward our institution-specific culture, and thus may not be generalizable to other institutions. However, because our institution is a tertiary care facility it maybe a representative sample. In addition, a small sample size may have limited our ability to detect statistically significant differences among this patient population. The survey method asked participants to recall the number of ED visits and specifics regarding clinic use. Although all participants gave verbal consent, patients were not prescreened for competency and there may have been a number of factors that could affect recidivism that were unable to gather.

### CONCLUSIONS

Creating health care systems with better collaborations between Geriatric Medicine and Emergency Services are likely to yield useful results for the elderly.<sup>14, 15</sup> All too often emergency departments stand alone rather than being tightly integrated into a continuum of healthcare. Reasons for ED recidivism are largely unknown and unstudied. A multidisciplinary approach is ideal in managing the elderly patient and stresses the development of expertise in this field by all physicians and not just geriatricians. These preliminary data underscore the need for a novel intervention

on behalf of high-risk elderly to decrease ED recidivism rates.

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