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Prescription drug assistance for elderly patients in the emergency department



Over the past decade, prescription drug costs have risen rapidly and an increasing number of demographic groups, including many older Americans, are unable to afford their medications. This aging population, especially those with other risk factors, are at risk for medication non-adherence due to the inability to afford prescriptions [1–3]. Prior work has shown that cost-related noncompliance is common among the general population of emergency department users. In one study, 25% of emergency department (ED) patients reported cost-related barriers or concerns related to obtaining medications [4]. Additionally, Blanchard et al. found an association between severe cost-related noncompliance and ED utilization among a population of Medicare beneficiaries [5]. This study aims to identify characteristics of elderly patients in an urban academic ED who are unable to pay for prescription medication and target strategies employed by ED social workers to help patients cope with rising out-of-pocket expenses.

We conducted a retrospective analysis of consecutive patients greater than 64 years old who received medical social work (MSW) consultation in the ED at one urban academically affiliated hospital during a six-year study period. Inclusion criteria were those elderly patients who were evaluated with an MSW consult because of their inability to pay for prescription medications. Demographics, medical history, presenting complaints, treatment, and disposition were obtained from ED records. The main study outcomes were the type of hospital and community resources utilized in the ED to help patients cope with medication costs. One investigator performed a blind critical review of a random sample of 10% of the charts to determine reliability. The inter-rater agreement for this sample of charts was determined using kappa statistics.

During the six-year study period, 3259 consecutive elderly patients received MSW consultation in the ED. Overall, 177 elderly (5.4%) received prescription drug assistance during their ED visit. The mean age was 76.4 ± 8.5 years; the oldest patient was 97 years old. Most patients were Caucasian (80.6%), female (52.6%), and lived with a family member or caregiver (48.5%). Major factors identified that seemed to predispose the elderly to cost-related medication problems included polypharmacy (55.9%), social isolation (36.7%), history of diabetes (29.9%), non-traumatic pain (24.8%) and altered mental status (23.1%). A total of 18 specific barriers to medication adherence were identified through MSW consults (Table 1). These barriers included patient-related factors such as cognitive function, drug-related factors such as availability of generic equivalents, insurance limitations such as gaps in coverage, and various logistical barriers to obtaining medications. During the study period, 29 different hospital and community resources were utilized to help elderly patients with prescription drug costs (Table 2).

Table 1
Specific barriers to medication adherence.

• Poor patient understanding of Medicare/Medicaid plans
• Lack of transportation to pharmacy
• Language barrier
• New Rx not covered by insurance (Lovenox®)
• Need for visiting nurse services
• Terminal illness – needs hospice care
• Poor financial planning
• Problems getting meds from pharmacy
• Cannot afford drug co-pays
• Time gap before insurance will pay for Rx
• Donut hole – Medicare coverage gap
• Pre-authorization needed from PCP
• Poor medication compliance (altered mental status)
• Abuse/caregiver neglect
• Self-neglect
• Emotional distress, depression
• Dementia
• No access to primary medical care

Table 2
MSW strategies used to provide prescription drug assistance.

Caregiver and/or patient education	157 (88.7%)
Medicare and Medicaid counseling	93 (52.5%)
Patient and family care funds at SH	32 (18.1%)
Rx filled at hospital pharmacy	31 (17.5%)
Patient Assistance Programs (PAPs)	30 (16.9%)
Visiting nurse services	22 (12.4%)
Coupon, rebate information	19 (10.7%)
Pharmacy discount programs	18 (10.2%)
Expedited follow-up with PCP	17 (9.6%)
Community medical clinic	16 (9.0%)
Transportation voucher to pharmacy	16 (9.0%)
Change in living situation (ECF, subacute rehab)	13 (7.3%)
Drug samples from PCP	12 (6.8%)
Meds from VA clinic/hospital	11 (6.2%)
Home health services for medication management	10 (5.6%)
Rx changed to drug covered by insurance	9 (5.1%)
Hospice referral	8 (4.5%)
Case management visit to home	8 (4.5%)
Financial counseling for patient and/or caregiver	8 (4.5%)
Pharmacy to deliver meds to home	5 (2.8%)

EDs serve a substantial proportion of patients who are socioeconomically disadvantaged and may not have the resources to pay for prescription medications. In this study, we identified several barriers associated with cost-related medication nonadherence (Table 1). There are a number of programs available for low-income elderly patient populations to help with prescription drug costs. These include federal discounts, state-level prescription drug assistance programs, donated prescription drugs, home health services, public and private subsidies for medication costs, and discounts negotiated at pharmacies to provide affordable medications (Table 2). However, there are limits to these programs, including cost limitations, eligibility restrictions, and lack of provider awareness of these resources [1,3]. We found that dedicated social work and case management services in the ED were invaluable in helping older patients access prescribed medications at lower costs, while simultaneously addressing a myriad of psychosocial risks and other economic concerns. Social workers also can provide services such as telephoning aged patients after discharge, procuring walkers and commodes, arranging transportation, and coordinating referrals to community service agencies. Creative solutions like these are necessary to improve the value and ensure the quality of emergency care delivered to older adults while more fully addressing their complex underlying physical, social, cognitive, and situational needs.

Lindsey Ouellette¹
 Rachelle Halasa²
 Andrew Brown²
 Ryan Beckett²
 Deven Patel²

Department of Emergency Medicine, Michigan State University College of Human Medicine, Grand Rapids, MI, United States

Todd Chassee²

Department of Emergency Medicine, Michigan State University College of Human Medicine, Grand Rapids, MI, United States
 Spectrum Health Hospitals, Grand Rapids, MI, United States

Chad Sutcliffe²

Allied Health Sciences Department, Grand Valley State University, Grand Rapids, MI, United States

Jeffrey Jones

Department of Emergency Medicine, Michigan State University College of Human Medicine, Grand Rapids, MI, United States
 Spectrum Health Hospitals, Grand Rapids, MI, United States

Corresponding author at: 15 Michigan St NE Suite 701, Grand Rapids, MI 49503, United States of America.

E-mail address: Jeffrey.Jones@spectrumhealth.org.

24 October 2018

<https://doi.org/10.1016/j.ajem.2018.10.053>

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Does hospital mode of arrival influence women's decisions to participate in research?



The National Institutes of Health recommends that research studies recruit enough subjects to address relevant gender differences [1–3]. Recruiting volunteers for research, however, is a complicated process. Though some work has informed the barriers to and facilitators of research participation amongst women and other minority subjects [4–9], few have focused on how pre-hospital factors, specifically mode of Emergency Department (ED) arrival, may influence the recruitment of female subjects in emergency research settings. Traditionally the point of entry into care, the ED is increasingly becoming the focal point for addressing several public health challenges, such as the growing opioid epidemic, stroke care, and traumatic brain injury. Patients may enter the ED setting via ambulance or walk-in/ambulatory means. Since ambulance use is often associated with higher acuity [10,11], users may be less inclined to engage in voluntary research activities, that may not be immediately related to their clinical care. The present study

attempts to address a gap in the literature, by exploring how ED mode of arrival (ambulance vs non-ambulance) affects research participation in women. We hypothesized that women arriving via ambulance will be less willing to participate in research, compared with those arriving as walk-in/ambulatory patients.

We approached women presenting for care in the ED of a Level 1 Trauma Center in the context of an IRB-approved study examining the association between mild traumatic brain injury and reproductive function. Participants were eligible if they were between the ages of 18 and 45, and had a chief complaint and/or injury mechanism that was suggestive of a concussion or isolated musculoskeletal extremity injury (injury groups for parent study). All subjects were required to have a Glasgow Coma Scale (GCS) score of ≥ 13 and/or deemed capable of providing informed consent (following standard protocol and/or provider approval). As determined by the parent study, subjects were excluded if they were pregnant, < 3 months post-partum, post-menopausal or had full hysterectomies. Eligible subjects were identified by trained and experienced Emergency Department Research Associates (EDRA's) [12] using the chief complaints noted in the medical records.

We compared refusals to consented study participants based on the following variables abstracted from the electronic medical record, and readily available for both groups (Table 1): age at ED visit, injury type, time since injury, mode of ED arrival and injury mechanism. Comparisons were made between groups using 2-tailed independent *t*-tests or χ^2 tests, as appropriate. Logistic regression models were fit in crude and adjusted models, to estimate the odds of refusing research participation. We used $p < 0.05$ to determine statistical significance.

Between January 9th and July 8th 2017, we approached 383 women (Table 1), 21.9% ($n = 84$) declined to participate in the parent research study. The majority (78.1%, $n = 299$) agreed, and were consented. Participants' reasons for refusal varied, and included (data not shown): disinterest in research (29.8%), time constraints (22.6%), pain/fatigue (21.43%), discomfort with the consent process/nature of the research study (10.7%) and family pressure (7.1%). There were no statistically significant differences between the groups with regards to age ($p = 0.28$), injury type ($p = 0.76$) or injury mechanism ($p = 0.69$) or time since injury ($p = 0.12$). Compared with consented women, a larger proportion of refusals arrived via ambulance (29.8% vs. 42.9%, $p = 0.02$), as we had hypothesized. Ambulance arrival was associated with a 77% increased odds of refusal to participate in research in crude estimates (OR 1.77, 95% CI: 1.08, 2.91), compared to non-ambulance use. After adjusting for age, injury type, time since injury and injury mechanism, ambulance use was associated with over two times the odds of research refusal (adj. OR 2.12, 95% CI: 1.20, 3.73).

Though ambulance users met the parent study's inclusion/exclusion criteria, and were not any more severely injured than non-users, there is evidence to suggest that users may have *perceived* their injuries to be more urgent [13]; thus prompting the disinclination to volunteer for research. Subjects who refused cited a variety of reasons for not agreeing to participate, including perceived pain/fatigue. Future studies should investigate the role that ambulance transport plays in patients' perception of their injury severity, and compare that perception to objective assessments of injury severity. How patients' perceptions translate to "research volunteer decision making processes" should also be studied further. Studies should also consider whether ED mode of arrival affects women differently from men in the research decision.

A major limitation of our study is the team's inability to access potentially confounding variables such as education, race, insurance status and other measures of socioeconomic status (SES), which have been shown to affect ambulance use [14]. Future studies should evaluate if, when these covariates are adjusted for, ambulance transport still remains a significant predictor of research refusal.

As the ED increasingly becomes the focal point for addressing several public health challenges, the opioid epidemic notwithstanding, ED-based recruitment efforts should be tailored with the findings from this study in mind.