

Medical Information: Females Bear the Burden and Are Not Prepared

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Abstract

Emergency department personnel seem constantly complaining that many patients arrive unprepared to provide important medical information that may have an impact on their care. This manuscript reviews in detail some interesting findings from a study done to assess the completeness of information provided to emergency department personnel. The results reviewed suggest that, although both men and women are poorly prepared with information, the bulk of responsibility has men deferring to female relatives to provide information, regardless of race. The poorest responses were to questions about medical history and advance directives. The reasons for and potential approaches to remedy the information-based problems are reviewed.

Introduction

Most people do not wish to make a visit to an emergency room (ER) or go to the doctor's office. However, statistics indicate that about 117 million times per year in the US, people will visit an ER as a patient.¹ This number indicates that for every 100 people in the US, there will be about 40 ER visits per year. When repeat patient visits per year are factored into these numbers of yearly visits, the data still indicate that about one person in every four (about 25% of the US population) visits an ER once per year. These data indicate that ER visits are common in the US and that for everyone in the US, there is about a one in four chance that they will, during any given year, visit an ER as a patient.¹ Office visits are far more numerous, about 1.1 billion, excluding ER visits. At each visit, medical information is requested from either the patient or their caretaker(s). During a study of how well people were prepared for an ER visit, data indicated that females carry the largest burden for emergency

medical information. The purpose of this paper is to review recent data² that give evidence for the dependence on females for medical information, to review recent evidence that shows that poor medical information is provided to ER staff by most patients, and to discuss methods that may help both men and women address this serious gap in medical information.^{2,3}

Material and Methods

All patient data were garnered by a single physician over six months. Patients were interviewed, diagnosed, treated, and given a disposition by this same physician during their ER stay; the only patients excluded were those that began, finished their workup, or were given a disposition by another physician before this doctor began or ended his ER shift. All other patients were seen from their initial workup to disposition by this physician and were included in this study. All patients were seen during day shifts (7AM – 7PM) at one small (five-bed) hospital ER, Texsan Heart Hospital, in San Antonio, TX. This hospital was a specialty hospital that has mainly cardiac patients as inpatients during the study. It recently changed its name to Methodist Texsan Hospital and changed its focus of being a specialty hospital to more general care.²

Data were collected by the verbal response of the patient to questions asked by the physician, nursing staff, and registration clerk, and documented for each patient at the time of patient disposition. In addition, after the patient interview, family members, friends, home health care givers, and the patient's physician(s) were also interviewed to help confirm or correct the data collected by the patient's verbal response. Occasionally, the patient produced written documentation as an answer to questions. For the written documentation to be considered

a patient response, the patient had to have the document on his or her person while undergoing an interview, not a document provided at a later time by someone else.

The data then were recorded as either yes (+) or no (-) for some questions or complete (+) or incomplete (-). A few questions garnered responses that led to follow-up questions. These follow-up questions allowed additional information to be gained but were only asked when a specific question was answered as “no” or “ask” or “check with” (see questions below). When the patient produced written documentation to answer a question, this written documentation was then determined to be complete or incomplete by checking with family members, friends, home health care givers, patient records (charts), and the patient’s physician(s) to the best of our ER staff’s ability, depending on the availability of access to these sources. The questions that were asked and evaluated or followed-up with additional questions are as follows:

- Allergies – Do you have any allergies to medicine, foods, or other things? Answer + if list is complete (verbal or written); answer – if patient does not remember allergies or has to refer the staff to another person or their previous medical record. If the allergy list is later revised or is found to be incomplete, this fact was noted.
- Medications – Do you have a list of your medications, including strength and time(s) of day taken? Answer is + if patient produces an up-to-date list of medications, including strength and time(s) of day taken, either written or verbal format; answer is – or incomplete if the verbal or written list is not current or is revised during the ER stay. A – response to the medication question generated a secondary question: where or who can we contact to get this medical information? Patient responses to this question were documented. For example, if the patient said to ask his wife or to check his medical records or call his doctor, the first “contact or source for information” suggested by the patient was documented.
- Medical history – Could you describe your current and past medical history. A + response was a verbal or written medical history that was complete. A – or incomplete history occurred when the patient said they do not remember, check my medical records, revised their history during the ER stay, or if other sources (for example, relatives, old charts, or the patient’s doctor) are consulted to complete the medical history.
- Surgical history – Could you describe any surgical procedures done at any time during your life? A + response was a verbal or written medical history that was complete. A – or incomplete history occurred when the patient said they do not remember, check my medical records, revised their history during the ER stay, or if other sources (for example, relatives, old charts, or the patient’s doctor) are consulted to complete the medical history.
- Name of patient’s doctor(s) – Who is your primary care doctor and who are any other doctors that treat you? A

+ answer is the name(s) of at least one doctor that potentially can be contacted by the ER staff; a – answer was the equivalent of “I do not have a doctor” or patient provided a doctor’s name but there was no way for the ER staff to contact the doctor (for example, Dr. Jones at an out-of-state hospital whose hospital name the patient cannot recall).

- Person(s) to contact in case of an “emergency” – Who can we contact in case of an emergency? A + response is a person’s name and their phone number; a – response is no named person or a named person with an incorrect or no phone number, unless that person accompanied the patient to the ER and provided the information to the ER staff. Unfortunately, verification of the contact person’s information was not routinely recorded.
- Prior ER visits – Have you ever been a patient in this ER? A + response is a yes answer and is confirmed by checking the ER records; a – response is either a no answer or a yes that is not confirmed by the hospital ER records.
- Advance directive(s) – A + response is a yes answer; a – answer is a no answer to the first question. If the patient’s answer was that they had a directive, a follow-up question was asked: do you have a copy of the directive with you? The answer to the follow-up question was recorded.
- Insurance information – Do you have health insurance? A + response is yes and verified by the ER clerk; a – response is either a yes answer but the clerk cannot verify the insurance or simply a no answer. This question was asked after initial ER assessment of the patient.

Patients comprised a convenience sample; all patients (or their guardians) were interviewed, treated, and either released, admitted, transferred to another hospital, or decided to leave against medical advice (AMA). None died during the ER shifts when the examining ER physician was on duty. All patients that arrived at the ER were seen regardless of their complaint or condition.²

Table 1: Patient Population (309 patients)*.

Race	%
Anglo male	26
Hispanic male	24
Anglo female	22
Hispanic female	21
Black male	4
Black female	2
Asian male	0
Asian female	1

* Males = 53% and Females = 47%

Results

Over a six-month period a total of 309 patients were seen from arrival to disposition in the hospital ER by a single physician who recorded patient responses to questions. Table 1 shows the

demographics in percentages of the sex and race of the 309 patients included in the study. The majority of patients were Anglo and Hispanic males and females (total = 93%). When compared to the population of people in San Antonio, Texas, our patient population was considerably older with a median age of 60, 28 years older than the mean age of the city's population. Also, the hospital had a disproportionate share (higher) of white versus Hispanic patients as compared to the city's population, but both white and Hispanic patients had the same percent of insured and uninsured patients arrive at the hospital (93% insured versus 7% uninsured). When all patients' insurance statistics were calculated and compared to the national average of insured patients seen in ERs across the US, the hospital clearly showed a higher percentage of insured patients that visited its ER (91.5% insured versus 84.7% nationally in the US). Every patient had a contact person listed (100%), but the accuracy of this contact person information was not confirmed.

Most of the patients (96%) initially said they knew their allergies, but during their stay, 13% that were initially "positive" that they gave an accurate allergy history had it changed or modified during their ER stay. The majority of the 13% of altered allergy history that was corrected was corrected by women (Figure 1).

Figure 1: Responses to allergy questions.

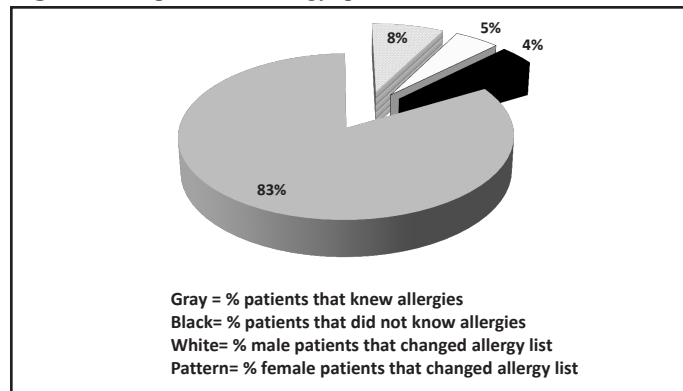
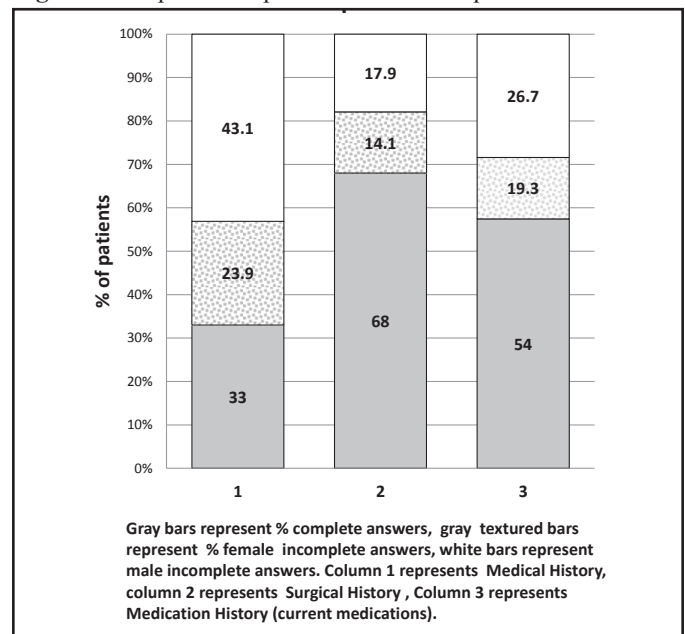


Figure 2 shows the response of patients to three common and important medical questions. Column 1 shows the low percentage of patients (33%) that knew their medical history. Men were exceptionally poor at knowing their medical history (43.1% did not know all of their history) as compared to women (23.4%). Males and females did know their surgical history better (68%) than their medical history; more males (17.9%) than females (14.1%) did not know their surgical history (Figure 2). The third medical question asked was to have the patient identify the medication(s) they currently take. The numbers of men and women that knew their medications were not very high (54%); males were worse than females (27% and 19%, respectively) in identifying their medications. Because preliminary study suggested that revision of the medication lists might be high, in addition to documenting the revision, the source(s) for the revision in medications was also documented. Although occasionally more than one source was listed per patient, Figure 3 shows the ten listed sources patients used or requested in the ER to correct or complete their medication documents. The sources are listed in order of frequency beginning with the source that

was the primary one for individual patients. "Check my chart for my medications" is the paraphrased answer of 23.5% of patients, while 19.1% corrected, completed, or updated their own list in the ER. The majority of other sources was closely related to the patient and was female (51.3%), mainly a daughter or wife. The few other sources were documented as mother, sister, parents, husband, niece, or son (Figure 3). Combined, all of these ten sources comprised about 40% of the responses related to medications, with males and females both deferring the questions to a female relative. Those questions deferred to females comprised about 20% of all responses related to medications with the majority of men deferring to their female relatives. When this 20% of responses deferred most often by male patients is added to the approximate 54% of all visits to the ER being females,⁴ it results in the burden for females to provide for about three-fourths of all medical information, especially medications, to emergency personnel (Figure 4).

Figure 2: Responses of patients to medical questions.



Other answers to questions were documented; prior visit to study ER (57% had prior visits) and identity of a treating physician (80% could identify a treating doctor, although only 43% of female in this 80% could). Only 7% of the study patients were uninsured, but 57% of those were males.

One question asked in this study population that was answered by both males and females that elicited a poor percentage of positive or complete responses was whether the patient had an effective (signed) advance directive of any type with them in the ER. Figure 5a shows that only 10% of females and 11% of males responded that they had an advance directive, and, when asked if they had a signed directive with them, an overwhelming 99% responded they did not (Figure 5b).

Significant differences between Anglo and Hispanic males and females in answering the study questions were not found.

Figure 3: % of people who modified their original medication list and who or what the patient said supposedly had a correct list of their medications.

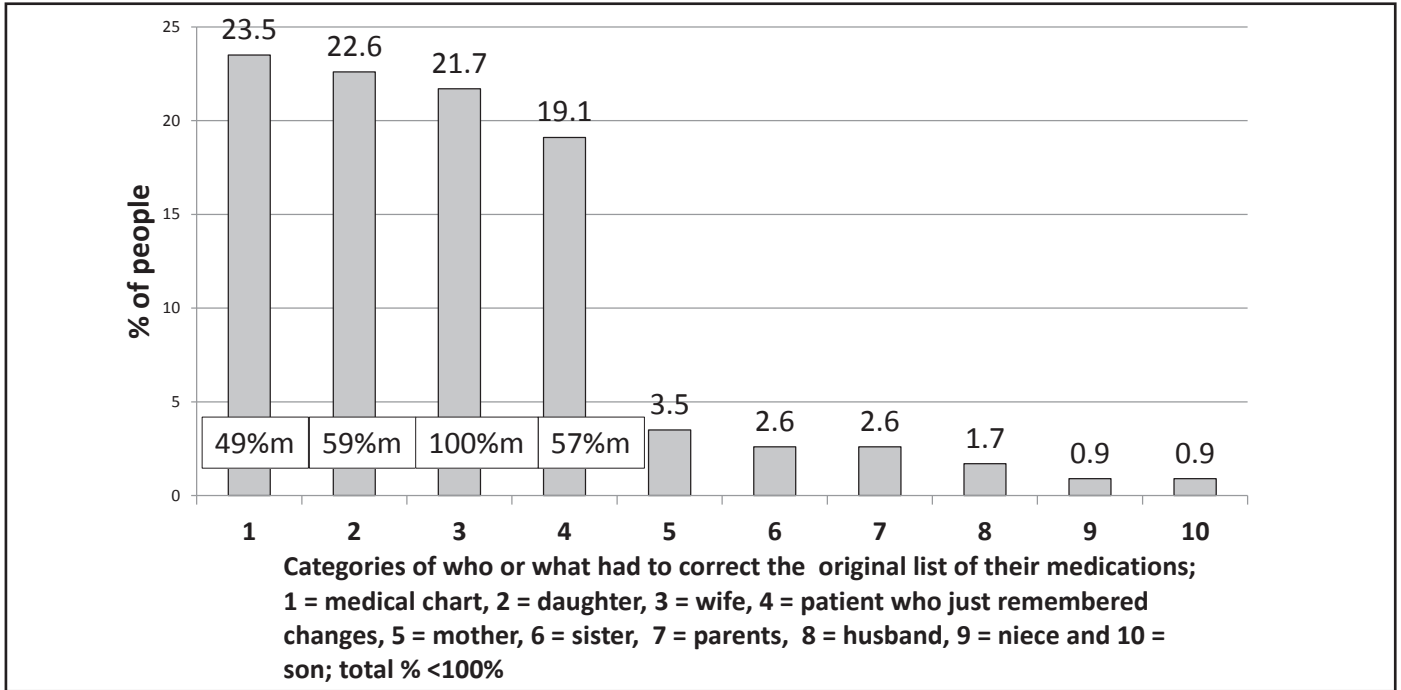
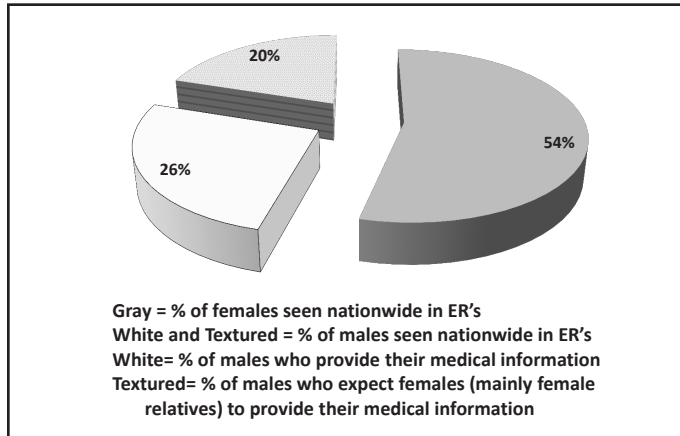
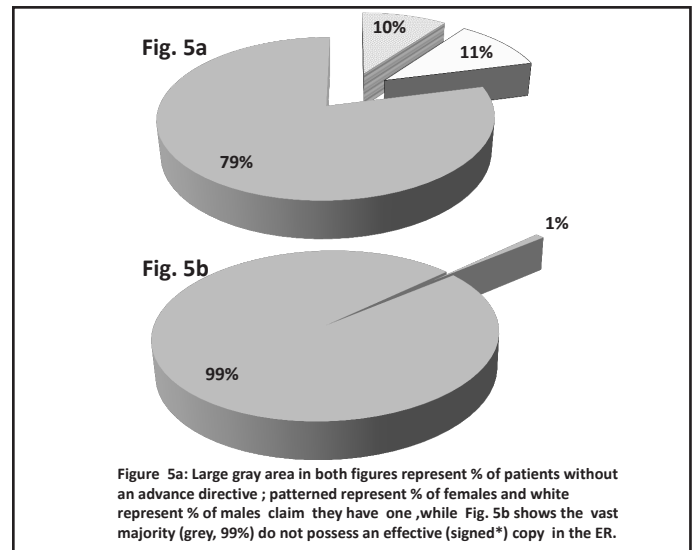


Figure 4: % of people who provide (or expected to provide) medical information to ER Staff.



large number of patients and their caregivers about allergies and medications along with the lack of completeness of surgical and especially medical histories found while they were being examined, treated or admitted (Figures 1-2). Second was the large number of patients and caregivers that expected sources other than themselves to provide essential information to the ER staff and the additional finding that female relatives were considered to be one of the main repositories of such information (Figures 3-4). The third surprise was the high number of patients that had no directives (Figure 5a) and fourth was the high number of patients with doctors and previous ER visits to the study-centered hospital that arrived without an effective directive (Figure 5b).

Figure 5: % of Patients that said they have an advance directive (Fig. 5a) and % of patients with an effective * advance directive (Fig. 5b).



Discussion

The data in Table 1 clearly show that the patient population in this study was composed of similar numbers of males and females that represented an older population. However, the study population had about the same number of Anglo and Hispanic patients that comprised the large majority of patients, although the city of San Antonio has a predominant Hispanic population (61%). One reason for this may be because the hospital was well known to be a private hospital that mainly designed to care for patients with a cardiac history or complaint; another reason may be due to the high median age of the patients (60 years old) so that a high percentage of patients could be eligible for Medicare coverage.

The patient response to commonly asked questions was surprising in several ways. First was the revisionism exhibited by a

Although some ER clinicians, especially those that have worked in charity hospitals, may not be surprised at the data, the specialty hospital ER staff was concerned because at least 57% of patients had at least one prior visit to the hospital and the majority (80%) of patients had doctors who likely had asked them similar questions in an office setting. Thus, they had experienced most or all of the questions and likely had been given advice about what to bring with them if a future ER visit happened. This study suggests that either a large number of patients cannot or will not take the advice to prepare for a future ER visit or the ER staff is failing to get their message to prepare for future visits across to patients and caregivers. The poor preparation could also be due to a combination of all three situations. The data from previous studies that examined only a few aspects about the accuracy of patient health information support the conclusion that patient recall of their personal medical information is poor.⁵⁻⁷ The data reviewed here show greater details, document the depths in percentages of the various areas where patients lack information, and agree with the decades of experiences that many healthcare providers have had and with the few that are documented.⁵⁻⁷

Two major points are derived from the studies presented in review; first, the majority of the study population was poorly prepared to provide accurate and complete medical information in several categories to emergency health care providers, and, second, the bulk of medical information was either expected to be provided or is provided by females. The latter finding occurred because the majority of males in the study were poor medical information providers and often deferred to their female relatives to provide medical information.

How are these information problems solved? Understanding that males (regardless of race) are very poor at knowing and providing medical information and defer to females to provide such information may make people aware that cultural changes are needed. Change in behavior seems unlikely to occur rapidly, although perhaps some males will make some efforts to become more responsible for their own medical information. More immediate results may be to emphasize the importance of keeping accurate medical information available to men and women when discharged from the hospital or clinic. Since this study and others strongly suggest that patients routinely are missing important information on arrival at ERs and clinics, developing ways to help both males and females assimilate, mod-

ify, and easily carry it 7/24/365 days per year seems a priority. Although the Electronic Medical Record would help solve this problem, there are so many problems to develop this nationwide; no one expects this to happen quickly or inexpensively.⁸ However, developing a complete, private, easily accessible, and portable method to help females (and males) have good to excellent medical information has been recently accomplished. The methods involve templates that can be filled out by the person, are password protected, and portable. Some are available as phone applications; others are available as pre-programmed flash (thumb) drives. These are relatively inexpensive (about 20 – 30 dollars), small, durable, and easy to transport. We urge doctors, insurance companies, lawyers, and caregivers to encourage their patients and clients to carry one at all times.

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