September 2008

Research Briefing

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Physicians Overestimate Patient Understanding of Health Information

Objectives
The purpose of this study was to assess the effectiveness of the communication of health information between physician and patient following a routine health visit.

Background
The study took place in an academic outpatient practice in New York City. Nineteen physicians and 145 patients participated. Following medical visits, both providers and patients were given questionnaires to assess the information exchange that had taken place during the visit.

Patients were asked about their perception of the delivery of health information by physicians. Physicians' attitudes regarding the importance of health information delivery to patients was measured, as well as their perceived self-efficacy in delivering this information to patients.

Findings
Patient education level and language barriers were associated with the inability of patients to understand health information. Thirty-five percent of patients did not feel they understood the health information provided.

The majority of physicians (71%) correctly assessed their patients' ability (or inability) to understand the health information they provided. In the 29 percent of cases with incorrect assessment, physicians were nearly four times more likely to overestimate than

	Patient feels that he/she:	
Physician perceives that:	Can comprehend	Cannot comprehend
Patient can comprehend	59%	23%
Patient cannot comprehend	6%	12%

physician and patient disagreement regarding comprehension

underestimate patient comprehension (23% vs. 6%).

Ix Implications
The findings of this study point to the need for more objective and systematic approaches to delivering patient education and measuring patient comprehension.

Physicians should be made aware of the likelihood of overestimating patient comprehension of health information. Simply providing health information in lay terms may not be adequate; in fact, it may lead physicians to incorrectly assume they have effectively delivered health information. Attempts should be made to understand cultural and social differences in verbal, nonverbal, and social cues. It is possible that physicians are mistaking indications of patient attentiveness (i.e., listening) for patient understanding.

More formal and reliable methods of assessing patient comprehension should be utilized. Comprehension evaluations and reading ability assessments could be adapted for use by physicians. Another simpler solution would be for physicians to ask patients to describe to them, in their own words, their understanding of the information conveyed during the visit. This would provide an opportunity for the physician to clarify specific areas of misunderstanding or important details left out by the patient.

Citation
Lukoschek, P., et al. 2003. Patient and Physician Factors Predict Patients' Comprehension of Health Information.

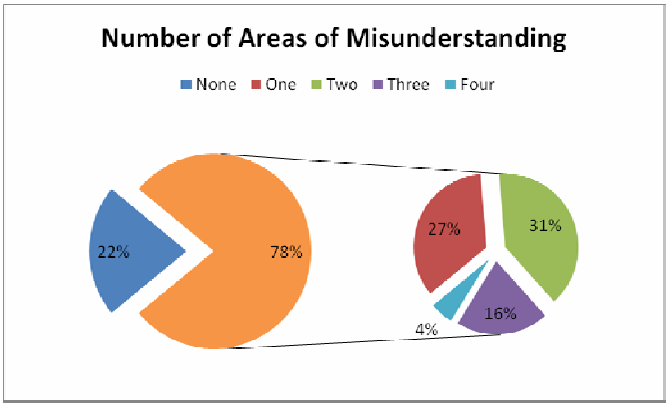
Patients Overestimate Their Understanding of Health Information

Objectives
The purpose of this study was to assess patients' understanding of their emergency department (ED) care and discharge instructions, as well as to determine the extent to which they were aware of any comprehension difficulties.

Background
Structured interviews were conducted with adult English-speaking patients or their primary caregivers after ED discharge from two health systems in the Midwest (n=140). Both health systems provided patients with similar handwritten discharge instruction sheets with space allotted for diagnosis, medications/prescriptions, and instructions.

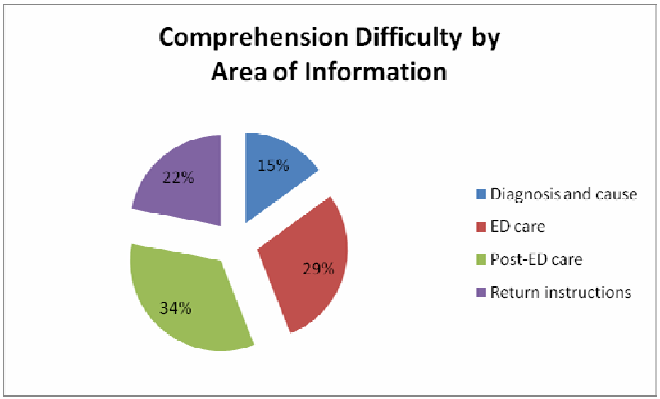
Patient comprehension was measured through comparison of patients' recall of information and information obtained from a chart review. The four areas of information measured were diagnosis and cause, ED care, post-ED care, and return instructions.

Findings
Over three-quarters (78%) of patients lacked understanding in at least one information area. Half (51%) demonstrated comprehension difficulties in two or more areas.



When comparing levels of understanding across the four areas of information, patients had the most difficulty with post-ED care (34% of comprehension difficulties occurred in this domain). Post-ED care information includes details about medications, ancillary

measures, and follow-up instructions. Slightly less (29%) of comprehension difficulties occurred in the domain of ED care. In terms of return instructions, 22% of comprehension problems occurred in this domain. Finally, the least amount (15%) of comprehension difficulties occurred in the diagnosis and cause domain.



Strikingly, of the patients experiencing comprehension difficulties, only 20% perceived a problem with their comprehension. This pattern was consistent across all four areas of information related to the ED visit. Participants with strong comprehension were less likely to perceive comprehension difficulties than participants with weak comprehension. However, the majority of all comprehension problems were not perceived, regardless of actual level of comprehension.

Ix Implications

Asking patients whether or not they understand medical instructions is not an adequate way to measure comprehension. Asking patients to explain information/ instructions in their own words, before being discharged from the ED, is likely a better strategy. This approach allows for the quick identification of areas of poor comprehension and guides the provider to focus discussion on areas where comprehension is weak.

Although handwritten or printed discharge instructions are considered a best practice, this should not be the only method of communicating discharge instructions to patients.

Discharge instructions should be organized in a way that better facilitates improved patient comprehension. Specifically, it may be useful for discharge instructions to specifically address the four domains of care: diagnosis, ED care, post-ED care, and return instructions).

Citation

Engel, Kirsten G., et al. 2008. Patient Comprehension of Emergency Department Care and Instructions: Are Patients Aware of When They Do Not Understand? Annals of Emergency Medicine, 11 July 2008 (Article in Press DOI: 10.1016/ j.annemergmed.2008.05.016).

Fatal Medication Mistakes

Objectives

The purpose of this study was to determine what percentage of fatal medication errors (FMEs) occur at home, what percentage of FMEs involve alcohol and/or street drugs, and whether or not these percentages have changed over time.

Background

Due to changes in health care over the last 20 years, trends in the provision and oversight of medication have changed as well. Health care is increasingly being provided in outpatient, rather than inpatient, settings. This shift in care has resulted in reduced professional oversight and monitoring of medication adherence. Also, more medications have become available in over-the-counter formulations. Additionally, the use of multiple medications to treat single conditions

Category	Description	Increase
Type 1	At home, involving alcohol and/or street drugs	3196%
Type 2	At home, not involving alcohol and/or street drugs	564%
Type 3	Not at home, involving alcohol and/or street drugs	555%
Type 4	Not at home, not involving alcohol and/or street drugs	5%

has increased significantly.

All official US death certificates between January 1, 1983 and December 31, 2004 were analyzed (n=49,586,156). Analyses focused on cases where the accident location was coded as "home" and cases where deaths were officially acknowledged as FMEs (n=224,355).

Individual deaths were coded into 4 mutually exclusive categories (see table above): Type 1, Type 2, Type 3, and Type 4.

Findings

Between 1983 and 2004, there was an increase in FMEs in all 4 categories. The most dramatic increase was in Type 1 FMEs with a 3,196% increase over the course of 22 years. The increases in Type 2 and Type 3 FMEs were similar, with 564% and 555% increases, respectively. The smallest increase was found for Type 4 FMEs, with a 5% increase over 22 years.

While there have been notable increases in FMEs occurring at home and FMEs involving alcohol and/or illicit drugs, the combination of these two factors appears to be particularly dangerous.

Ix Implications

Patients are increasingly playing a critical role in their own medication consumption and management, sometimes with deleterious consequences. Patients need additional information and support in order to properly use medications at home. Information therapy efforts should be tailored to individual circumstances such as the literacy level and primary language of the patient.

Information therapy interventions should be ongoing and targeted to the moment in care. In addition to receiving information at discharge, patients continue to need information in the form of periodic reminders. Reminders might include medication refill reminders, drug-specific information, other treatment reminders, or reminder information about when - and under what circumstances - to seek follow-up care.

Before being discharged from the hospital or treated from an outpatient clinic, patients need to be evaluated for their capacity to manage their own medicines. Patients should be screened for alcohol and drug use prior to the prescription of medications. Patients need to be better educated about the risks associated with their prescriptions. Initiatives should also focus on monitoring medication usage in the home.

Citation

Phillips, David P., et al. 2008. A Steep Increase in Domestic Fatal Medication Errors With Use of Alcohol and/or Street Drugs. Archives of Internal Medicine, 168(4), 1561-1566.