The Cost Consequences of Unsuccessful Patient Communication

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When health professionals fail to communicate successfully with patients, it costs. It costs in unnecessary pain, in avoidable deaths, in poor health outcomes, in the prolongation of illnesses, and in many other ways that harm the patient and befuddle the people trying to care for them. It also costs in terms of the *financial* part of the equation, in large sums of money that get spent unnecessarily because of the communication breakdowns and barriers that occur with surprising frequency in health care settings.

The bibliographic references described below provide some of the hard evidence of how costly communication breakdowns in healthcare settings can be, in terms of real money unnecessarily spent. Taken together, they begin to build a picture of a much larger financial problem than most health care institutions are aware of, or perhaps care to acknowledge.

There are many ways in which these unnecessary expenses can be reduced or avoided, but serious action to reduce these costs are unlikely to happen unless and until key decision-makers understand and acknowledge the scope and extent of the financial costs of inaction.

Patient Experience and Institution Scoring

Patient and institution surveys are now a significant factor in determining Medicaid and Medicare payouts to healthcare institutions. "Patient experience" is thus becoming more of a buzzword, as institutions realize the financial benefits. The sources below explain some of the background regarding this change, and the factors that contribute to the idea of the "patient experience."

Beaulieu, Debra. "AMGA 2016: Linking Patient Experience to the Bottom Line." *HealthLeadersMedia*. BLR, 17 Mar. 2016. web.

"The risk for not giving patients a good experience financially now becomes very high, so hospitals or practices…stand to lose a lot of money." The term patient experience has been a buzzword since Medicare & Medicaid Services began publicly publishing Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores in 2008. Then in 2012, this was intensified when a portion of hospital reimbursement became tied to these scores, with that portion going up to 2% by 2017. In addition, factors such as malpractice suits and the age of consumerism further contribute to the financial burden that hospitals and institutions face by not focusing on patient experience.

The Joint Commission. (2010). ***Advancing effective communication, cultural competence, and patient and family centered care: A roadmap for hospitals*****. Oakbrook Terrace, IL.**
The Joint Commission published this "road map" several years ago, in conjunction with its newly-developed standards for patient communication, in order to provide hospitals with specific insights and suggestions regarding how to implement practices that can help them meet the new standards. The document updates the definition of communication that should guide hospitals in their thinking about patient:provider communication, and illustrates the many ways that, when health care administrators, providers, patients, and families work in partnership, the quality of safety and health care rises, costs decrease, and provider and patient satisfaction increase. Cultural competency and patient- and family-centered care lead to increased patient satisfaction and adherence to treatments, which can also reduce costs, by increasing the overall score of the healthcare institution.

Manary M, Staelin R, Kosel K, Schilman KA, Glickman SW. (2014). "Organizational Characteristics and Patient Experiences with Hospital Care: A Survey Study of Hospital Chief Patient Experience Officer." ***American journal of medical quality: the official journal of the American College of Medical Quality*****, 30:5 pg 432-40**
Understanding organizational strategy, leadership, operations and culture is key to policy efforts to improve the patient experience and boost incentive-based payments to hospitals. With the 2013 changes to Medicare's Value-Based Purchasing (VBP) initiative, scores from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) now represent 30% of incentive-based payments. A national survey revealed that 91% of hospital boards surveyed have specific goals for improving the patient experience, but there is little understanding as to which approaches actually work. This article explores the management processes, organizational approaches, and important inhibitors to improvement of patient experience.

Avoiding Readmissions

Communication breakdowns too often result in costly patient readmissions. These two articles provide an introduction to decreasing readmission rates.

Pecci, Alexandra Wilson. "1 in 4 readmissions avoidable, researchers say." ***HealthLeaders Media*****. 11 April 2016.**
Fundamental system flaws are greatly contributing to patient readmissions to hospitals. A study found that around 27% of those readmissions could have been prevented with increases in emergency department care coordination, ability to keep post-discharge appointments, disease monitoring, avoiding premature hospital discharge, and clearer communication to patients regarding whom to contact after discharge. The study also found that over half of the preventable readmissions could have been avoided in the initial hospital admission process. With increasing evidence of preventable hospital readmissions

across healthcare institutions, these findings are the first step to identifying and addressing the fundamental issues that cost hospitals extra time and money in readmissions.

Shinkman, Ron. "Seeking A Root Cause For Readmissions." Online Posting. *California Healthcare News*. Payers & Providers, 17 Mar. 2016. Web.
Clinical causes behind hospital inpatient readmissions within 30 days of discharge are often just poor communication between health officials and patients. Researchers at the University of California San Francisco studied over 1,000 readmissions and their causes, determining that 27% of those likely could have been avoided, and 15% definitively could have been avoided.

Patient Adherence to Treatments

One of the main reasons for readmissions is lack of patient adherence to treatments once patients leave the hospital. Many misunderstandings come from miscommunication during patient discharge. The sources below outline some of the reasons miscommunications occur, ways to avoid miscommunications, and methods to increase patient retention of treatment information.

Austin, P. E., Matlack, R.,2nd, Dunn, K. A., Kesler, C., & Brown, C. K. (1995). Discharge instructions: Do illustrations help our patients understand them? *Annals of Emergency Medicine*, 25(3) 317-320.
Many instances of costly repeat visits come from patients' misunderstanding of or failure to correctly follow physicians' instructions. The addition of illustrations to discharge instructions significantly improves patient comprehension. There is an especially large effect among patients who are nonwhite, female, or have no more than a high school education. Adding illustrations to discharge instructions could cut down on health institution costs because patients would be less likely to return for retreatment.

Delp, C., & Jones, J. (1996). Communicating information to patients: The use of cartoon illustrations to improve comprehension of instructions. *Academic Emergency Medicine*, 3(3) 264-270.
Patient compliance with home care instructions is crucial to cutting costs of repeat visits to healthcare institutions. Using cartoon illustrations can provide an effective strategy for conveying information and improving patient compliance with Emergency Department release instructions, including reading the instructions, remembering the instructions, and carrying out the instructions.

Dinh, T., Clark, R., Bonner, A., & Hines, S. (2013). The effectiveness of health education using the teach-back method on adherence and self-management in chronic disease: A systematic review protocol. *JBI Database of Systematic Reviews & Implementation Reports*,*11*(10), 30–41. [Article]

Using the "teach-back" method, wherein patients must repeat back to the provider the protocols for managing their disease,can help amplify disease-specific patient knowledge, adherence to treatments and self-management. This can in turn result in patient knowledge retention, lower hospital readmission and re-hospitalization rates, and lower treatment costs.

Haskard Zolnierek, Kelly B., and M. Robin DiMatteo. "Physician Communication and Patient Adherence to Treatment: A Meta-Analysis."*Medical care* 47.8 (2009): 826–834. *PMC*. Web. 7 Apr. 2016.
Communication between patients and their physicians, and physician training on how to communicate, have a significant positive effect on patients following medical treatments and prevention recommendations. Through analysis of 106 studies and 21 experiments, researchers found that patients' risk of nonadherence to treatment is 19% higher when their physician does not communicate well with them, and odds of adherence are 1.62 times greater when the physician has undergone communication training. These findings reflect that effective communication and training physicians on communication methods is an important part of healthcare and its positive outcomes.

Hausman, A. (2001). Taking your medicine: Relational steps to improving patient compliance. *Health Marketing Quarterly*, 19(2) 49-71.
Patient non-adherence to physicians' instructions is a major problem that costs billions of dollars each year. One-way communication from physician to patient and "patient education" will not solve adherence problems by themselves. Instead, the solution revolves around open, bi-directional information exchange, active listening by both parties, and truly informed consent on the part of patients.

Mayeaux, E. J., Jr, Murphy, P. W., Arnold, C., Davis, T. C., Jackson, R. H., & Sentell, T. (1996). Improving patient education for patients with low literacy skills. *American Family Physician*, 53(1) 205-211.
Patients who misunderstand their diagnosis and treatment plans often exhibit poor adherence to treatment instructions, resulting in extra costs for healthcare institutions. Physicians who speak in simpler language repeat their instructions and demonstrate key points, while avoiding too many directives, enhance their patients' understanding. Easy-to-read written patient education materials and oral instructions should be short and simple, contain culturally sensitive graphics and encourage desired behavior.

Rau, Jordan. "Hospital Discharge: It's One Of The Most Dangerous Periods For Patients." *California Healthline*. California Health Care Foundation, 03 May 2016.
The most risky transition in patient care, and one that causes many deaths each year, is from the hospital to the home, especially when additional home care is required. Federal data show that, in hospitals, "fewer than half of patients say they confidently understood the instructions of how to care for themselves after discharge." Additionally, in nursing homes, in pharmacies and within at-home care agencies, communication breakdowns often

occur in assessing and documenting patient medication, as well as in creating and adhering to treatment plans. All of these dangerous transitions put patients at greater risk for unintended adverse, and sometimes deadly, affects.

Medical Errors

Medical errors often result from miscommunication. These errors can occur anytime from patient arrival and check-in, to diagnosis, to in-hospital treatments. The sources below discuss the gravity of medication errors, as well as leading causes of medical errors, including communication breakdowns.

Al Qubaisi, M., Stewart, D., Tonna, A., & Strath, A. (2014). Health professionals' beliefs, attitudes and experiences of medical error reporting: A systemic review protocol. *JBI Library, Vol 12, No 10.*
Medication error reporting is a vast problem across the healthcare continuum. This study seeks to synthesize health professionals' beliefs, attitudes and experiences of medication error reporting, making comparisons among doctors, nurses and pharmacists. In terms of cost consequences, these results suggest that medication errors, and the resultant extra costs, constitute a larger problem than has been previously estimated.

Eunjung Cha, Ariana. "Researchers: Medical Errors Now Third Leading Cause of Death in United States." *Washington Post*. The Washington Post, 3 May 2016.
Medical errors in hospitals and healthcare facilities are now the third-leading cause of death in the United States after heart disease and cancer, claiming 251,000 lives every year. The reasons for this high number of deaths range from bad doctors, to communication breakdowns when patients are passed from one health official to another, to the tremendous diversity and complexity in the way healthcare is delivered. Martin Makary, a professor of surgery at the Johns Hopkins University School of Medicine who led this telling research, advocates for information surrounding medical errors to be publicly shared, so that doctors can learn from each other's mistakes.

Communicating Around Information Barriers

Many medical errors and misunderstandings in communication between health providers and patients result from information barriers, including language, culture and/or low health literacy. The sources in this section discuss the need for the careful attention that doctors must place on explanations when communicating with someone with information barriers, and suggest tools and methods for communicating around these barriers.

Bennett, C. L., Ferreira, M. R., Davis, T. C., Kaplan, J., Weinberger, M., Kuzel, T., Seday, M. A., & Sartor, O. (1998). Relation between literacy, race, and stage of presentation among low-income patients with prostate cancer. ***Journal of Clinical Oncology : Official Journal of the American Society of Clinical Oncology*****, 16(9) 3101-3104.**
Low literacy may be an overlooked but significant barrier to the diagnosis of early-stage prostate cancer among low-income white and black men. The development of culturally sensitive, low-literacy educational materials can improve patient awareness of prostate cancer and improve the frequency of diagnosis of early-stage cancer. Early diagnosis and patient participation and understanding of treatments can cut costs associated with complex treatments of advanced cancer.

Blackstone, S. W. & Pressman, H (2011). Patient communication in health care settings: New opportunities for augmentative and alternative communication. ***Perspectives on Communication Disorders and Sciences in Culturally and Linguistically Diverse Populations, 18, 3-11.***
Augmentative and alternative communication (AAC) practitioners, educators and researchers have a unique role to play in preparing people with complex communication needs for future healthcare encounters. Without their participation and advance preparation, effective communication between these patients and healthcare officials would not be possible, resulting in increased risk for malpractice claims and costs for health institutions.

Dreger, V., & Tremback, T. (2002). Optimize patient health by treating literacy and language barriers. ***AORN Journal*****, 75(2) 280-5, 287, 289-93; quiz 297-300, 303-4.**
More than 90 million Americans have limited literacy skills. Almost two million US residents cannot speak English, and millions more speak it poorly. By adapting teaching techniques to patients' special needs, nurses can ensure that patients understand their health problems and plan of care. Statistics dramatically demonstrate the high cost of neglecting these needs. Patients who do not understand their plan of care do not comply with instructions and, therefore, suffer unnecessary and frequently costly complications.

Houts, P. S., Bachrach, R., Witmer, J. T., Tringali, C. A., Bucher, J. A., & Localio, R. A. (1998). Using pictographs to enhance recall of spoken medical instructions. ***Patient Education and Counseling*****, 35(2) 83-88.**
Designing education materials for non-literate people can be vastly simplified by viewing illiteracy as a memory problem. Pictographs have been used in non-literate societies to help people remember spoken instructions and, today, they could be used to help non-literate people remember spoken medical instructions. This study tested that hypothesis, and results indicate that pictographs can enhance memory of spoken medical instruction--often to a higher level.

Jacobson, T. A., Thomas, D. M., Morton, F. J., Offutt, G., Shevlin, J., & Ray, S. (1999). Use of a low-literacy patient education tool to enhance pneumococcal vaccination rates.

A randomized controlled trial. ***JAMA : The Journal of the American Medical Association,*** **282(7) 646-650.**
Immunizations cut hospital costs by preventing the need for costly future treatments. A simple, low-literacy educational tool increased pneumococcal vaccination rates and patient-physician discussions about the vaccine in an elderly, low-literate, indigent, minority population. This study suggests that simple communication techniques can raise awareness of the pneumococcal immunization or other vaccines and thus cut future costs.

Adverse Events

Within the hospital, communication breakdowns can lead to adverse events and harm to patients. Patients with information barriers, such as those discussed in the previous section, are especially at risk of such adverse events.

Bartlett, G., Blais, R., Tamblyn, R., Clermont, R., & MacGibbon, B. (2008). Impact of patient communication problems on the risk of preventable adverse events in the acute care setting. ***Canadian Medical Association Journal*****,** ***178*****(2), 1555–1562. [PubMed]**
Patients with communication problems are at the highest risk for preventable adverse events. The volume of liability cases can affect hospital insurance, and ineffective communication can cause events that can end in a liability case. Hospitals that want to prevent the events that lead to unnecessary harm to patients, and avoid the extra monetary costs of these events, need to focus on interventions to reduce the risks for these patients.

Divi, C., Koss, R., Schmaltz, S., & Loeb, J. (2007). Language proficiency and adverse events in U.S. hospitals: A pilot study. ***International Journal of Quality Health Care*****,** ***19*****(2), 60–67.[Article]**
In a study of six hospitals over seven months, about half of patient adverse events involving patients with limited English proficiency resulted in some physical harm, and most of theseadverse events were caused by communication errors. Moreover, almost half of those events had a level of harm serious enough to warrant suing the hospitals, resulting in substantially increased costs.

Hemsley, B., Georgiou, A. Hill, S, Rollo, M., Steel, J., & Balandin, S. (2015). An integrative review of patient safety in studies on the care and safety of patients with communication disabilities in hospital. ***Patient Education and Counseling*****. http://dx.doi.org/10.1016/j.pec.2015.10.022**
Patients with communication disabilities in hospitals are prone to safety incidents of varying types and degrees. While more research needs to be conducted to determine the causes and effects of these safety incidents, improving patient care and communication will greatly reduce the risk of harmful patient safety incidents that cost health institutions many millions of dollars each year.

The Joint Commission. (2013). *Sentinel event data: Root causes by event type: 2004 to June 2013. Adult acute and intensive care in hospitals*. Oakbrook Terrace, IL: Author.
When researchers examine multiple types of sentinel events, or unexpected occurrences involving death or serious injury, poor communication is always among the top four reasons that the events occurred. When taken as a whole, communication is either the second or third leading cause of all sentinel events for the entire year. Because sentinel events lead to liability claims for healthcare institutions, improving effective communication methods can lead to fewer malpractice claims and lower expenses for paying out those claims.

Malpractice Claims

Many adverse events result in malpractice claims, resulting often in large payouts to patients, families and substantial legal fees. Malpractice claims are one of the largest contributor to extra costs procured by institutions due to harm caused by miscommunication. The articles below highlight some of the main reasons that a patient would bring a malpractice claim against a health institution or doctor, leading causes of events leading to those malpractice claims, and ways to reduce the number or risk of malpractice claims per year.

Ambady, N., Laplante, D., Nguyen, T., Rosenthal, R., Chaumeton, N., & Levinson, W. (2002). Surgeons' tone of voice: A clue to malpractice history. *Surgery*, 132(1) 5-9.
Hospitals spend large amounts on malpractice claims each year. Interpersonal aspects of care, such as the communication behaviors of physicians, are often cited as central to patients' decisions to initiate malpractice litigation. There are clear associations between poor communication, including tone of voice and dominance over the patient, and malpractice cases brought against surgeons.

Beckman, H. B., Markakis, K. M., Suchman, A. L., & Frankel, R. M. (1994). The doctor-patient relationship and malpractice. Lessons from plaintiff depositions. *Archives of Internal Medicine*, 154(12) 1365-1370.
The patient's decision to litigate is most often associated with perceived lack of caring or collaboration in health care delivery. Deserting the patient, devaluing patient and/or family views, delivering information poorly, and failing to understand the patient and/or family perspective are some of the most common reasons for patients to perceive a lack of care or collaboration.

Cole, S. A. (1997). Reducing malpractice risk through more effective communication. *The American Journal of Managed Care*, 3(4) 649-53.
Malpractice risk can be reduced through improving communication behaviors of physicians, health plan administrators, and other providers. Improving interviewing and training and learning methods are key steps to decreasing occurrence of negligence litigation and thus cutting costs for major healthcare centers.

Hickson, G. B., Clayton, E. W., Entman, S. S., Miller, C. S., Githens, P. B., Whetten-Goldstein, K. & Sloan, F. A. (1994). Obstetricians' prior malpractice experience and patients' satisfaction with care. ***JAMA : The Journal of the American Medical Association*****, 272(20) 1583-1587.**
Communication is a significant factor in medical care that cannot be overlooked, as it represents a leading reason for patients to sue. This study of perinatal injury cases highlights communication breakdowns between physicians and parents in malpractice claims and reemphasizes the preventive steps that can save hospitals millions of dollars each year.

Hickson, G. B., Clayton, E. W., Githens, P. B., & Sloan, F. A. (1992). Factors that prompted families to file medical malpractice claims following perinatal injuries. ***JAMA : The Journal of the American Medical Association*****, 267(10) 1359-1363.**
Physicians who have been sued frequently are more often the objects of complaints about the interpersonal care they provide, even by their patients who do not sue. The complaints revolve primarily around feeling rushed, never receiving explanations for tests, and being ignored. Hospitals that deal effectively with these kinds of communication problems can save money not only through fewer malpractice claims, but also through higher scores on patient satisfaction surveys.

Huntington, B., & Kuhn, N. (2003). Communication gaffes: A root cause of malpractice claims. ***Baylor University Medical Center Proceedings, 16,*** **157-161, Retrieved on November 16, 2005, from**
http://www.baylorhealth.edu/proceedings/16_2/16_2_huntington.pdf
This article addresses and provides a response to the medical malpractice insurance crisis, specifically related to the availability of diminishing medical malpractice insurance, skyrocketing insurance premiums, bankruptcy of insurance carriers and refusal to write insurance policies in certain states. The article discusses the "art" of communication as it occurs in everyday patient encounters as one key answer to ending this crisis.

Levinson, W., Roter, D. L., Mullooly, J. P., Dull, V. T., & Frankel, R. M. (1997). Physician-patient communication. the relationship with malpractice claims among primary care physicians and surgeons. ***JAMA : The Journal of the American Medical Association*****, 277(7) 553-559.**
Decreasing malpractice risk and the resulting costs of claim payouts requires improving communication. No-claims primary care physicians used more statements of orientation (educating patients about what to expect and the flow of the visit), laughed and used humor more, and tended to use more facilitation (soliciting patients' opinions, checking understanding, and encouraging patients to talk).

Rice, B. (2005, July). Ten ways to guarantee a lawsuit. ***Medical Economics*****. Retrieved on November 16, 2005, from**
http://www.memag.com/memag/article/articleDetail.jsp?id=168737

The malpractice crisis is rife among clinicians and physicians. Based on information from malpractice attorneys and risk management consultants, the nonclinical aspects of the problem, such as ineffective communication and subsequent problematic relationships with their physician, motivate patients to sue. Improving communication methods in healthcare settings could help alleviate the malpractice crisis.

Virshup, B. B., Oppenberg, A. A., & Coleman, M. M. (1999). Strategic risk management: Reducing malpractice claims through more effective patient-doctor communication. ***American Journal of Medical Quality: The Official Journal of the American College of Medical Quality*****, 14(4) 153-159.**
Many malpractice suits are brought as an expression of anger about some aspect of patient-doctor relationships and communications. Improving the patient-doctor relationship is likely to be reflected in increased patient approval and in a lowered incidence of malpractice claims, resulting in a decrease in hospital spending on malpractice-related claims.

Communication and Awareness Training

Current efforts to fix these grave and expensive communication-related issues include communication and awareness training for doctors and nurses. The sources in this section give examples of training programs and discuss their effectiveness through randomized controlled trails.

Bowling, A., & Ebrahim, S. (2001). Measuring patients' preferences for treatment and perceptions of risk. ***Quality in Health Care : QHC*****, 10 Suppl 1 i2-8.**
A greater understanding of patients' preferences for mode of treatment is central to current models of shared patient-doctor decision making. It is also of potential importance in enhancing patient adherence to treatment and, in turn, patients' health outcomes. Health services, with their costs and number of malpractice claims ever growing, increasingly aim to be responsive to patients' concerns and ultimately to enhance the quality of health care. Hence there is a need for awareness of patients' preferences for treatment, and to develop appropriate, valid and reliable methods of eliciting these preferences.

Clark, N. M., Gong, M., Schork, M. A., Evans, D., Roloff, D., Hurwitz, M., Maiman, L., & Mellins, R. B. (1998). Impact of education for physicians on patient outcomes. ***Pediatrics*****, 101(5) 831-836.**
An interactive seminar based on theories of self-regulation led to patient-physician encounters that were of shorter duration, had significant impact on the prescribing and communications behavior of physicians, led to more favorable patient responses to physicians' actions, and resulted in reductions in health care utilization. Self-regulation seminars can aid in reducing the costs of providing unnecessary healthcare to asthma patients, due to the reduced need for care and more effective treatment.

Kim, S. S., Kaplowitz, S., & Johnston, M. V. (2004). The effects of physician empathy on patient satisfaction and compliance. *Evaluation & the Health Professions*, 27(3) 237-251.
Patient-perceived physician empathy significantly influences patient satisfaction and adherence to health instructions. Identifying the components of physician and health providers' empathic communication that need improvement and then trying to refine provider skills to better serve patients can increase patient satisfaction and compliance, lowering costs for health centers.

Kurtz, S. M., Silverman, J., Draper, J., & Silverman, J. (2005). *Teaching and learning communication skills in medicine (2nd Edition)*. Oxford ; San Francisco: Radcliffe Pub.
Communication skills are essential for medical diagnosis, decision-making, treatment, education and prevention, all of which relate to costs. This book promotes a process of communication training that is evidence and problem based, experiential, and includes synthesis of literature on the complexities and deficiencies of physician-patient communication over a twenty-five year period.

Levinson, W., & Roter, D. (1993). The effects of two continuing medical education programs on communication skills of practicing primary care physicians. *Journal of General Internal Medicine: Official Journal of the Society for Research and Education in Primary Care Internal Medicine*, 8(6) 318-324.
Educational training programs on communication skills have a positive effect on both medical outcomes and physician and patient satisfaction. After trainings, physicians ask more open-ended questions, more frequently ask patients' opinions, and impart more biomedical information. In addition, patients tend to disclose more biomedical and psychosocial information to their physicians, and demonstrate fewer signs of outward distress during the visit.

Levinson W, Lesser CS, Epstein RM. (2010) Developing physician communication skills for patient-centered care. University of Toronto: *Health Aff (Millwood),* Jul; 29(7):1310-8.
The rapidly increasing emphasis on patient-centered care requires greater emphasis on training physicians in effective communication skills. However, most physicians receive limited training in this area. Training for all levels of medical personnel is essential to successful delivery of patient-centered care, including patient satisfaction and adherence to treatments, and the cost savings that result from these outcomes.

Pill, R., Stott, N. C., Rollnick, S. R., & Rees, M. (1998). A randomized controlled trial of an intervention designed to improve the care given in general practice to type II diabetic patients: Patient outcomes and professional ability to change behaviour. *Family Practice, 15(3) 229-235.*

Changing behavior for the long-term is a very difficult process. In a study of how physicians were affected by training on patient-centered care, analysts found that after two years only 19% continued to apply the method systematically. This highlights the need to understand the factors associated with professional uptake and subsequent ability to sustain changes in behavior. Other studies have found that money is an effective motivation for behavioral changes, highlighting the importance for physicians to understand the cost-saving benefits of effective communication methods.

Woodcock, A. J., Kinmonth, A. L., Campbell, M. J., Griffin, S. J., & Spiegal, N. M. (1999). Diabetes care from diagnosis: Effects of training in patient-centred care on beliefs, attitudes and behaviour of primary care professionals. *Patient Education and Counseling*, 37(1) 65-79.
Patients always notice positive effects of communication training. In this study of nurses trained in communication with patients with diabetes, patients were able to receive greater information from the nurses who had been through trainings. Even though it may sometimes seem to add to the stress felt by healthcare professionals, effective communication can lead to cost savings, because of increased patient understanding and participation.

Patient Centered Care and Patient Participation

Many argue that one of the best ways to improve communication between health practitioners and patients is through use of patient-centered care (PPC). The practice of patient-centered care emphasizes the importance of patient involvement in treatment, care and diagnosis. Patient participation increases understanding of and adherence to treatments, proper diagnosis through increased provider awareness and time, and increased patient satisfaction. As seen throughout this bibliography, all of these factors can contribute to reducing adverse effects on patients and costly consequences for institutions, including low scores on institution surveys, patient readmissions, medical errors and/or malpractice claims.

Epstein RM, Fiscella K, Lesser CS, Stange KC. Why the nation needs a policy push on patient-centered health care. *Health Aff (Millwood)*. 2010;29(8):1489–1495. [Abstract/Free Full Text]
To advance patient-centered care, the nation needs a coordinated and focused national policy that helps physicians acquire necessary skills and to encourage organizations to use patient-centered care as the norm. To support these policies, the authors emphasize the importance of patient-centered care in reducing complications and extra costs resulting from racial, ethnic and socioeconomic differences.

Epstein RM, Franks P, Fiscella K, et al. Measuring patient-centered communication in patient-physician consultations: theoretical and practical issues. *Soc Sci Med*. 2005; 61(7):1516–1528.[CrossRef][Medline]

As the practice of patient-centered care (PCC) increases and more literature guiding its use is published, Epstein *et al.* call for a standardization of the definitions, measurements and practices of PCC. He lays out nine key areas for improving comprehension of PPC among patients and providers, and suggests using observational and survey measures to determine the standards.

Frankel, R. M., & Stein, T. (2001). Getting the most out of the clinical encounter: The four habits model. The *Journal of Medical Practice Management : MPM*, 16(4) 184-191.
Medical interviewing is the foundation of medical care and is the clinician's most important activity. The four key patterns of physician behavior are (1) investing in the beginning, (2) eliciting the patient's perspective, (3) demonstrating empathy, and (4) investing in the end. These patterns offer an efficient and practical framework for organizing the flow of medical visits to incorporate patient participation and increase the kind of patient understanding that reduces the likelihood of costly follow-up treatments.

Greenfield, S., Kaplan, S. H., Ware, J. E.,Jr, Yano, E. M., & Frank, H. J. (1988). Patients' participation in medical care: Effects on blood sugar control and quality of life in diabetes. *Journal of General Internal Medicine : Official Journal of the Society for Research and Education in Primary Care Internal Medicine*, 3(5) 448-457.
To maximize disease control and minimize hospital re-treatment costs, hospitals must enable patients to participate more effectively in their own medical care. This study shows that patients who know more about their medical records are able to elicit more information from the physician during visits. This information can then be used to negotiate medical decisions with the doctor, significantly reducing function limitations and increasing patient adherence to treatments.

Hurtig, R., Nilssen, M., Happ, M. B., & Blackstone, S. (2015). Adult acute and intensive care in hospitals. In Blackstone, S. W., Beukelman, D. R., & Yorkston, K. M. (Eds). *Patient-provider communication: Roles for speech-language pathologists and other health care professionals*. San Diego: Plural Publishing Inc.
Poor patient-provider communication, which can occur for a variety of reasons, can lead to serious medical mishaps, increased health care utilization and poor patient outcomes. With the Affordable Care Act, reimbursement policies in the United States are increasingly tied to measurable outcomes, patient satisfaction, patient safety, and accountability, making it ever more important to focus of effective communication to cut costs.

Kravitz, R. L. (2001). Measuring patients' expectations and requests. *Annals of Internal Medicine*, 134(9 Pt 2) 881-888.
Patients' expectations, requests, and satisfaction are wide ranging, and conceptually are closely related to patients' expectations of care. When the two are not aligned, there can be significant clinical consequences. Patients’ needs can easily be identified and met with

adequate physician communication, which in turn can save hospitals millions of dollars in malpractice claims.

Maguire, P., & Pitceathly, C. (2002). Key communication skills and how to acquire them. *BMJ (Clinical Research Ed.)*, 325(7366) 697-700.
When doctors use communication skills effectively, both they and their patients benefit. Doctors identify their patients' problems more accurately. Their patients are more satisfied with their care and can better understand their problems, investigations, and treatment options. Patients are more likely to adhere to treatment and follow advice on behavior change. Patients' distress and vulnerability to anxiety and depression are reduced. All of these factors can lead to cost savings for healthcare institutions.

Protheroe, J., Fahey, T., Montgomery, A. A., & Peters, T. J. (2001). Effects of patients' preferences on the treatment of atrial fibrillation: Observational study of patient-based decision analysis. *The Western Journal of Medicine*, 174(5) 311-315.
A study of elderly patients with atrial fibrillation showed taking explicit account of patients' preferences would lead to fewer prescriptions for warfarin than under published recommendations.

Street RL Jr, Makoul G, Arora NK, Epstein RM. How does communication heal? Pathways linking clinician-patient communication to health outcomes. *Patient Educ Couns*. 2009;74(3):295–301.[CrossRef][Medline]
Clinician-patient communication influences health outcomes in an indirect way. Street *et al.* make a distinction between such intermediate outcomes as trust, mutual understanding, increased adherence and better self-care skills versus improved health outcomes, suggesting that communication actually improves the former which in turn influences the latter. The authors argue that clinician-patient communication should focus on improving these intermediate outcomes, rather than focusing so directly on improved health.

Wolf, D., Lehman, L., Quinlin, R., Zullo, T., & Hoffman, L. (2008). Effect of patient-centered care on patient satisfaction and quality of care. *Journal of Nursing Care Quality*, *23*(4), 316–321. [Article] [PubMed]
Use of patient-centered care significantly impacts patient satisfaction and quality of service. In terms of cost consequences, these results clearly show that emphasizing patient centered care can lead to an increase in healthcare institution ratings and a consequent reduction in insurance costs. As is demonstrated in many other cited items, improving patient-centered care requires improvements in patient-provider communicative interactions.