

Promoting Informed Decision-Making in a Primary Care Practice by Implementing Decision Aids

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Empowering patients to be effective advocates for their health requires that they have adequate information and understanding about their health conditions. Many patients have limited health literacy which is a marker for vulnerability and a risk factor for poor health outcomes.¹ Providing vulnerable patients with information in a format they can easily access is challenging. One novel approach is to modify processes of clinical care so that medical practices deliver necessary and accessible information to patients in conjunction with their provider's visit. The goal is to improve the quality of medical care in clinical practice by promoting informed decision-making.²

Ethical principles support informed decision-making. Patients should be aware of the choices and treatments for their medical care, the potential outcomes of these choices and treatments, and have their personal values considered in decisions about their medical care. Although ethical principles support informed decision-making, evidence suggests that these ideals are not always being met in clinical practice. According to criteria developed by Braddock and colleagues, a minority of patient decisions are actually informed.³ Using the least stringent criteria, they found that approximately 20% of interactions met the criteria for an informed decision. These studies, and others, indicate that improvements are needed to ensure that informed decision-making is occurring in clinical practice.³⁻⁶

Barriers to Informed Decision-Making

Multiple barriers at the provider, patient, and system levels impede informed decision-making. At the provider level,

competing demands and limitations imposed by the current standard of time of clinical encounters are important barriers. In addition, providers are not typically trained to facilitate informed decision-making in clinical practice. Patients may have limited knowledge and/or low health literacy. Additionally, they may have little experience participating in medical or health decisions and may not recognize the important role they can play in clarifying their values and incorporating them into decisions. System barriers include low compensation for time spent in decision-making compared with compensation for performing procedures and inadequate infrastructure to support decision-making, such as reminder systems, registries, or scheduling systems.

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Potential Approaches to Promote Informed Decision-Making

Several approaches could be employed to overcome barriers and to promote informed decision-making in clinical practice. One approach would be to target system barriers by increasing reimbursement that would allow for longer patient visits and providing resources for infrastructure that would facilitate informed decision-making. This approach involves policy

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changes on the national level. Another approach would be to train providers to implement informed decision-making. Studies to test whether this approach will be effective are being conducted.⁷ However, systematic implementation of training is difficult and variation in physician uptake may decrease the net effectiveness of this approach. Another approach would be to educate patients about informed decision-making and thus modify expectations about interactions with their physicians. Again, adoption of this approach may vary and its effectiveness has not been established.

Practice-Based Approach to Promote Informed Decision-Making

Another approach would be to focus on helping individual practices implement decision support. Similar to the Chronic Care Model, practices could implement system changes that focus on decision support to bolster informed decision-making.⁸ The rationale for this approach is that providing information to patients is the first critical step towards achieving informed decision-making. However, the consistency with which providers supply information for specific medical decisions is variable and may not be the most efficient use of their time. Relying on a systematic approach to provide information makes sense because it assures the fidelity and takes the burden of providing information away from the provider. The provider can then focus the time in the patient encounter on individualizing the decision-making process to the particular patient based on their personal values, which is the second critical step for informed decision-making.

Decision Aids to Promote Informed Decision-Making

Decision aids are promising tools that serve to provide information to patients and prepare them for their visit with the provider. Decision aids assist with identifying the nature of the decision, inform patients about the relevant options, present information regarding the consequences of the different options (benefits, harms, costs), help the patient assess his or her values with respect to the decision in question, and prepare the patient to use this information to reach a decision along with his or her provider. Decision aids have been developed in paper-based, video, and computer formats and have addressed a range of health questions from preventive services (e.g., prostate cancer screening) to single-event treatment decisions (e.g., breast conserving therapy vs. mastectomy for breast cancer) to treatment of chronic conditions (e.g., therapy for benign prostatic hyperplasia).⁹ Decision aids delivered in a video format are particularly useful, as they may help patients overcome health literacy barriers.

One of the advantages of using patient decision aids is that robust evidence supports their effectiveness. Effectiveness of decision aids was demonstrated in a recent Cochrane

Collaboration systematic review of 55 randomized trials.^{9,10} Patients who view decision aids have increased knowledge and more realistic expectations about their treatment options. Decision aids also increased the likelihood that individuals prefer an active to a passive role in clinical decision-making.

Implementation of Decision Aids

Although decision aids have been shown in randomized trials to be effective in promoting informed decision-making, there is little data available on how best to implement them in clinical practice. In our internal medicine practice at the University of North Carolina (UNC), we have been testing ways to improve the quality of decision-making for our patients with a goal of achieving informed decision-making. In this commentary, we will share our experience and plans, as we believe that implementing decision aids has the potential to empower patients, overcome health literacy issues, and improve the quality of medical care.

Patient Decision Quality Initiative at UNC

The cornerstone of our initiative is the use of video decision aids, either in a DVD format or by streaming video over the internet. To promote decision aids, we have undertaken efforts to redesign our practice systems and develop a culture change focused on providing decision support to our patients.

Implementation of decision aids in primary care is known to be difficult. We have identified several key elements to the effective delivery of decision aids. Achieving high levels of decision aid use requires: (1) that the practice be able to identify which patients are eligible for specific decision aids and then communicate this information to the providers and/or the patient; (2) that the practice determine how best to deliver decision aids to the eligible patients, including determining when and where the decision aid should be viewed and who within the practice should be responsible for making sure the patient receives the decision aid; and (3) that the practice ensures that the patient is able to have any remaining questions answered after viewing.

Identifying Patients Eligible for Decision Aids

We are developing an automated process using administrative data (visit scheduling), clinical data from our electronic medical record (labs and tests), and financial billing data to identify potentially eligible patients for one or more decision aids. To augment this information we will also use patient-generated data from our computerized Health Risk Assessment for symptomatic conditions such as osteoarthritis or benign prostatic hyperplasia. We plan to use these automated systems to prioritize decision aid delivery based on a clinical algorithm and patient preferences and to provide delivery based on patient wishes, either electronically or by mail.

Decision Aid Delivery Systems

For the second step, the delivery of decision aids, we have tested the effectiveness and efficiency of several delivery models. With support from the nonprofit Foundation for Informed Medical Decision Making,¹¹ we tested several different delivery systems (see Table 1).

The mail-out approach reached the greatest number of our patients, but decision aid viewing was limited (8%).¹² When viewing was facilitated by a care assistant, decision aid viewing increased (66% viewed a portion of the decision aid), but knowledge about the material was adequate in only about one-quarter of the patients. When these two approaches were combined, almost three-fourths of the patients (71%)

Table 1.
Delivery Models for Decision Aids

Delivery Model	Rationale	Process	Topic	Efficacy
Mail-out ^a	Maximize number of patients getting decision aid	Mailed to patients due for screening.	CRC screening: <i>Colon Cancer Screening: Deciding What's Right for You</i>	Compared to usual care, 11% increase in CRC screening in attending physician patients with 8% of patients reporting viewing the decision aid; no increase in CRC screening in resident physician patients
In clinic by care assistant ^b who is charged with delivering decision aids to patients	Maximize viewing of decision aid	Care assistant facilitated in clinic, using a portable DVD player, administering a knowledge survey, entered the viewing status and knowledge score into the electronic medical record to alert the physician.	PSA screening: <i>Is Having a PSA Test Right for You?</i> Bariatric Weight Loss Surgery: <i>Weight Loss Surgery: Is it Right for You?</i>	66% viewed a portion of the decision aid and 27% answered three knowledge questions correctly
Prior to visit, mail-out with in-clinic follow up by care assistant	Decrease distractions of in-clinic viewing and maximize knowledge	Using the mail-out approach, prior to an upcoming visit with the care assistant following up during their visit to determine viewing status, administer knowledge questions, and encourage in-clinic viewing if they had not watched the video.	PSA screening: <i>Is Having a PSA Test Right for You?</i>	71% viewed a portion of the decision aid and 51% answered three knowledge questions correctly
Office staff delivery of decision aids using CQI techniques to implement changes in staff responsibilities	Care assistant too resource intensive; difficult to sustain	Re-design our practice practice work flow in order to prioritize decision aid delivery by front desk and nursing staff. To modify their responsibilities we will use CQI methodology, promoting change through a series of Plan-Do-Study-Act (PDSA) cycles.	8 to 10 decision aids	In progress

a Lewis CL, Brenner AT, Griffith JM, Pignone MP. The uptake and effect of a mailed multi-modal colon cancer screening intervention: a pilot controlled trial. *Implement Sci.* 2008;3:32.

b Miller KM, Griffith JM, Lewis C, Malone R, Pignone M. Feasibility of in-clinic viewing of patient decision aid videos. Poster presentation to: Society for Medical Decision Making; October 20, 2008; Philadelphia, PA.

viewed a portion of the decision aid and about one-half had adequate knowledge after viewing. We conclude from this work that the combined approach will obtain the best reach, uptake, and fidelity.

Implementing multiple decision aids simultaneously may be too costly if we rely on care assistants to facilitate the process. We plan to redesign our practice work flow in order to prioritize decision aid delivery by front desk and nursing staff. To modify their responsibilities we will use Continuous Quality Improvement (CQI) methodology, promoting change through a series of Plan-Do-Study-Act (PDSA) cycles.¹³

Concerns in Vulnerable Populations

To date, use of decision aids has been tested primarily in more educated populations. This may be an important issue

particularly for those with low educational attainment and limited health literacy who are at risk for poor health outcomes. Our initiative will provide patient decision aids in video format which may help overcome health literacy issues. On the other hand, a delivery system that only uses email or the internet could potentially exacerbate the "digital divide" among vulnerable patients with limited resources resulting in poorer health outcomes for these vulnerable patients.

Informed decision-making is an important component of quality medical care. To promote informed decision-making we have undertaken a new initiative to redesign our practice and develop a culture change focused on providing decision support to our patients. We believe that implementing decision aids has the potential to empower our patients, overcome low health literacy and other markers of vulnerability, and improve the quality of our medical care. **NCMJ**

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