

The KISS Principle in Family Practice:

Keep It Simple and Systematic

A clear, deliberate, consistent approach will beat the alternative every time.

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Covered in FPM Quiz

Family physicians make many important contributions to patient care with their pragmatic approach and their individualized attention to the needs of each patient they see. Their tendency to follow the classic admonition of KISS ("Keep it simple, stupid") is an important counter to the tendency of subspecialists and academic researchers to recommend unnecessarily complicated and expensive approaches to patient care. However, these positive characteristics of family physicians can also get them into trouble.

By focusing so intently on individual patients and pragmatic solutions, family physicians often miss the broader solutions that could improve care for entire panels of patients. Our individual mind-set also causes us to practice in isolation – even when we belong to a group – and to do things our own way, rather than the best way, which limits our abilities to provide safe, effective, efficient patient care. In many ways, we are just working harder, not smarter, and the collective results are not what we want.

In fact, a steadily rising chorus of studies and reports suggests there are serious problems with the quality of care patients receive. These problems have been summarized and dramatized in two recent reports from the Institute of Medicine: *To Err Is Human: Building a Safer Health System*, published in late 1999, and *Crossing the Quality Chasm: A New Health System for the 21st Century*, published in 2001.

The *Quality Chasm* report raised particular concerns for family physicians since it focused on key areas for the specialty: clinical preventive services and chronic disease care. It highlighted the extent to which people miss important preventive services, such as screening tests, immunizations and risk-factor management. It especially called attention to the sorry state of chronic disease care, with only 20 percent to 50 percent of people with common chronic conditions under good control. The report concluded that drastic action is needed to solve these problems and that care quality should be improved across six dimensions: safety, timeliness,



In today's complex health care environment, family physicians must retain their pragmatic and patient-centered approach yet learn to employ systems thinking.



A system is a group of interacting elements functioning as a complex whole, such as the human body or your office appointment system.



Systems thinking requires that you stop depending on your own memory, attitudes and attention; instead, use reminders, redundancy, teamwork, simplicity and standardization to ensure that the right thing happens every time for every patient.



The deliberate provision of care will result not in impersonal care but in care that is safer and more appropriate for more patients.

effectiveness, efficiency, equity and patient-centeredness (or "STEEP").

So what is the solution to this incredibly complex problem? I believe the answer is to retain our pragmatic and patient-centered approach yet make use of systems and systems thinking – to shift from "Keep it simple, stupid" to "Keep it simple and systematic." Apparently, so does the Accreditation Council for Graduate Medical Education. In 1999, it identified six general competencies that would be required for every specialty's residents, and one of those six basic competencies is systems-based practice. The Institute of Medicine also recommended systematic solutions to health care's problems in its *To Err Is Human* and *Quality Chasm* reports.

What is a system?

The *American Heritage Dictionary* defines a system as "a group of interacting elements functioning as a complex whole." As physicians, we should understand systems very well, since the human body is such an amazing example of them. We were trained to first understand the underlying cause of symptoms (i.e., make a diagnosis) and to avoid simply treating symptoms. Thus, systems thinking means approaching problems with a curiosity about their interactions and root causes, and devising solutions that address those root causes whenever possible. Peter Senge, in his landmark book *The Fifth Discipline: The Art and Practice of the Learning Organization*, identified systems thinking as one of the five basic concepts needed for the truly effective function of any organization.

To improve the quality of care we provide to our patients, family physicians need not only to understand systems thinking but also to apply it to groups of patients, while still individualizing care to each patient. Above all, we need to get organized – to go beyond depending on our own memory, attitudes and attention. Reminders, redundancy, teamwork, simplicity and standardization are the components of systems thinking and the keys to solving many of the problems we face today in family practice.

KEY POINTS

- Systems thinking means approaching problems with a curiosity about their interactions and root causes, devising solutions that address those root causes and applying those solutions broadly.
- Reminders, redundancy, teamwork, simplicity and standardization are useful components of systems thinking.
- Few practices would survive if they managed their charges and billing on an ad hoc basis, but many practices take this approach with clinical care.

Some believe that adopting systematic approaches for all of our patients with similar health problems and needs will limit our ability to customize and individualize their care. However, the goal of systems thinking is not to treat all situations or all patients alike but to understand when specification and standardization are appropriate and when they are not. Where we lack reasonable levels of certainty and clinical agreement, we should embrace flexibility, innovation and experimentation based on patient needs until we can identify best practices. But where we have reasonable evidence to support a certain process (e.g., beta blockers after a heart attack), it makes sense to specify and standardize the key elements of care. This deliberate provision of care will result not in impersonal care but in care that is safer and more appropriate for more of our patients.

Current systems in your practice

Typically, family physicians do systematize some things. Few practices would survive if

they managed their charges and billing on an ad hoc basis, relying on their memory and odd scraps of paper to track

their financial affairs. Similarly, nearly all practices have adopted a standardized way to schedule patient appointments and cover after-hours call.

Systems thinking can dramatically improve what few "systems" we do have. A good example of this is the usual office appointment system. Most appointment systems are problematic for receptionists, physicians, nurses and patients alike. Mark

Murray, MD, has demonstrated in many practices that applying systems thinking to the problems of standard appointment systems allows major improvements that benefit each of those participants in medical care.^{1,2,3} He realized that most current appointment systems are unnecessarily complex and inefficient. They require an enormous array of appointment types and expensive telephone triage

work that do not serve anyone very well. By standardizing appointment types, working down the backlog of previously scheduled appointments and using simple repeated measurements to monitor the system, he demonstrated that it is possible to reduce staff time and hassles, simplify the physician's life and get patients in when they want to be seen. His appointment system, called open access or

GETTING STARTED

For practices interested in more systematic approaches to patient care, here are some simple examples with specific steps to help you get started. Although each of these systems can be implemented by a single physician in a group practice, it will be easier and more effective if you can get your colleagues to agree to use the same system.

Acute care: Uncomplicated urinary infections in women

Get physician agreement on an evidence-based guideline for uncomplicated urinary infections in women, making modifications to suit your practice, if needed. A good one developed by practicing physicians is available on the Institute for Clinical Systems Improvement Web site at www.icsi.org.

Train your office nurses in following the guideline to provide treatment to women who call in with dysuria, frequency or urgency, as long as specified complications are not present.

Specify how the nurses should document these encounters for verification by a physician and establish a way to charge for them.

Train the person who answers your phone to triage such calls to the nurses, and inform your patients that this service is available to simplify the task of getting relief for this minor but urgent problem.

Chronic care: Diabetes care tests and visits

Get physician agreement on the frequency of important tests for patients with diabetes (e.g., microalbumin tests, eye exams, HbA_{1c} tests, lipid profiles and foot exams) and on the minimum frequency of visits. Again, a good start can come from visiting www.icsi.org.

Identify 10 to 15 charts of random patients with diabetes from each physician (or 25 from the whole practice) and have a nurse audit each chart using a simple checklist to determine whether each test has occurred at the correct frequency in the past year. Summarize and review the results as a group.

Ask your rooming nurses to scan the charts of visiting patients to see whether they have diabetes (usually 3 to 5 percent of patients), attach a mark or label to the charts of those who have diabetes to simplify future identification, and check to see whether the patients who have diabetes have had each of the services needed in the right time interval. Remember that patients with diabetes make many visits to your practice for other reasons that could be used to check on their care.

If diabetes-related tests or visits are needed, have the nurse either arrange for them or attach a note to the chart as a physician reminder about what is needed.

Repeat the audit every three months to assess progress and need for any changes in the system.

Consider adding immunizations, smoking status, blood-pressure control or review of patient compliance with diet or home glucose testing to the above standing orders for the nurses.

Preventive care: Smoking cessation

Get physician agreement on an evidence-based guideline for smoking cessation. A good one is available from www.icsi.org.

Get agreement on the following system to implement the smoking-cessation guideline:

- **Ask:** Replace a less-important vital sign (e.g., pulse or respiration) with smoking status. Have the rooming nurse collect this information as a routine part of each visit (it is not necessary to recheck nonsmokers).
- **Assess:** Reminded by the vital sign, ask patients who smoke whether they are interested in quitting.
- **Advise:** If the patient is not interested in quitting, advise the patient of its importance.
- **Assist:** If the patient is interested in quitting, ask the patient to set a quit date and discuss various methods of assistance (information, counseling or pharmacotherapy). If an unusual amount of help is desired, refer the patient for nurse assistance or to an external program.
- **Arrange:** If the patient has set a quit date, have the nurse phone the patient two to four days after that date. If the patient has started on medication, tell the patient to schedule a follow-up visit for the following two to four weeks.

Train nurses in how to provide smoking-cessation information or referrals, and set up a flow sheet to track each contact with the patient about smoking.

Before implementing the system, ask a nurse to audit the charts of 20 patients who smoke and have recently visited your office, and use a checklist to count how often each of the five "As" (above) were noted at the last visit.

After the system has been in place for one month, repeat the audit every three months to assess progress and the need for any changes in the system.

Consider expanding the system to include other preventive services, using the rooming nurse to assess and address preventive needs of individual patients as they come in for visits.

Expanding your work

Once you and your colleagues have implemented systematic changes such as these, you will undoubtedly discover other areas of patient care that will benefit from a similar approach.

As you work to improve the efficiency and effectiveness of your practice, just remember to "keep it simple – and systematic."





Just as family physicians have an appointment system and a billing system, they should have a smoking-cessation system and a preventive care system.



The author's smoking-cessation system, which involved no computerization – only consistent use of a paper flow sheet and delegation of key roles to staff – multiplied his practice's quit rates by 500 percent.



The systematic approach that worked for smoking cessation also worked with a whole range of preventive services and chronic disease care.



High-quality care stems from innovative systems-based ideas and the ability to test, implement, adapt and maintain them.

advanced access, operates on a few simple rules, chief among them, "Do today's work today." The result is an appointment system in which everybody wins.

What we need is for family physicians to start applying to clinical care the systems thinking that Murray applied to appointments. (For guidance, see "Getting started," page 65.)

Applying systems thinking to clinical care

I have long been interested in improving clinical preventive services. It began 20 years ago when my frustration with my ineffectiveness with helping our smoking patients to quit led me to set up a system in our two-physician practice. Our system of consistent identification of all smokers, physician reminders, nurse follow-up, phone calls and cessation support multiplied our quit rates by 500 percent.^{4,5,6} No computerization was involved – only consistent use of a paper flow sheet and delegation of important complementary roles to our office staff.

Later, as I worked with interested practices to implement similar systems for smoking cessation, I learned that the same approach would also work with a whole range of preventive services. Moreover, there were real efficiencies of scale in doing so. After an extensive literature review, my colleagues and I devised a generic model of this approach, with 10 integrated component processes that we called "The Prevention System."^{7,8} It includes clinic-wide guidelines, a routine way to identify the services each patient needs, reminders and a routine follow-up system, among other components.

With heightened systems thinking from these experiences, I could also see that many of the problems of chronic disease care were very similar. In fact, one of the major deficiencies in care for patients with any chronic condition is the inconsistency with which they receive specific screening tests, effective treatments or even regular follow-up visits. The tools of systems thinking that worked well for smoking cessation and preventive care (e.g., guidelines, reminders and routine follow-up) also fit well into the chronic care model, a framework that has become widely

accepted as the key to improved care for patients with all types of chronic diseases.⁹

In short, a great deal is known about what is needed to improve care quality for our patients and work life for ourselves. High-

quality care is not the result of trying harder or acquiring more staff, resources or technology. Rather, it stems from innovative systems-based ideas

and the ability to test, implement, adapt and maintain them. If more family physicians could understand and apply the KISS principle ("Keep it simple and systematic"), we could rejuvenate our specialty – and maybe even get home in time for supper with our own families. **FPM**

Send comments to fpmedit@aafp.org.

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