Barriers and Resistance to Informatics in Behavioral Health

Nancy M. Lorenzi[a], Robert T. Riley[b], Naakesh A. Dewan[c]

[a] Vanderbilt University, Nashville, Tennessee, USA
[b] Riley Associates, Nashville, Tennessee, USA.
[c] University of Cincinnati, Cincinnati, Ohio USA

Abstract

The levels of resistance to a new informatics system can vary widely both between and among specific groups. The relevance to today's behavioral medicine area is obvious. The aim of effective change management techniques is not to eliminate all resistance. This is typically impossible when a group of any size is involved. The aims are (1) to keep initial general resistance at reasonable levels, (2) to prevent that initial resistance from growing to serious levels, and (3) to identify and deal with any pockets of serious resistance that do occur despite the previous efforts. His article outlines areas of resistance to behavioral informatics and offers suggestions for overcoming the resistance.

Keywords:

Resistance; Change; Behavioral Informatics

Introducing Informatics Systems into Organizations

While a new information system may be straightforward in a technical sense, the systems must be implemented within complex organizations comprised of equally complex individuals. Change within organizations very commonly engenders significant resistance. Whenever we talk about resistance to *any* change, we must ensure that we have correctly identified the change(s) being resisted. This chapter is dedicated to the topic of resistance to change. Its categories, levels, and the organizational strategies to overcome resistance will be outline below.

There are four categories of resistance that are useful in analyzing specific situations:

- *Resistance to environmental changes*—these are changes in the organization's general environment that will have impact on the way that the organization functions and possibly on its very survival.

- *Resistance to general organizational or systems changes*—these are changes in the way the organization is structured or the broad systems that it

uses to pursue its mission. These changes might result from either external or internal forces.

- *Resistance to the changers*—in this case, it matters little what the change is. If "they" are for it, I am against it!

- *Resistance to a specific change*—this is the type of resistance that a new or updated computer system might engender, based upon its own merit or the process by which it is implemented.

Why is it so important to accurately identify the real source of the resistance? If we do not, we can waste a lot of time, money, and staff goodwill by using inappropriate solutions to the real problem. For example, high quality training on how to use a new system can be a tool to combat the latter type of resistance, but it will do little good against the first three. The management lesson is this—identify and fight the real problem first. If the real problem is resistance to what is happening in health care, deal with the problem at that level first.

Levels of Resistance

The levels of resistance to a new informatics system can vary widely both between and among specific groups. The term *resistance* can mean virtually anything: a less-than-enthusiastic response, a refusal to participate in training, actively organizing protests among colleagues, or actually sabotaging the system through either acts of omission or commission. Incidentally, such sabotage is more common than often realized.

The aim of effective change management techniques is not to eliminate all resistance. This is typically impossible when a group of any size is involved. The aims are (1) to keep initial general resistance at reasonable levels, (2) to prevent that initial resistance from growing to serious levels, and (3) to identify and deal with any pockets of serious resistance that do occur despite the previous efforts.

Confidentiality

In the behavioral area, concerns about confidentiality are both real and serious. The potentials for patient harm are tremendous. [1] Yet, confidentiality has also been used by those resisting computer systems in the health care area. Confidentiality never has been and never will be an absolute. Health care professionals must insist that both the computerized and non-computerized systems with which they interact are designed and operated with high, realistic standards of confidentiality.

Acceptance of Accountability

The health care area has actually been fortunate that managed care developed so slowly. The stresses currently being undergone have impacted most professions several years earlier. For a variety of reasons, society is unwilling to "trust" its professionals in the way it did in the past. Therefore, society is demanding accountability, which in turn means measurability. As a result, the introduction of new computerized systems often raises the specter of increased measurement and increased supervision by those paying the bills. This is a reality, but the information system is merely implementing it, not causing it.

Why Physicians May Resist Informatics

Resistance to change in health care organizations is certainly not limited to physicians; however, their dominant role makes their resistance especially telling. Physicians have readily accepted many changes in the practice of medicine over the past fifty years such as the use of new medical devices, new drugs, and new surgical procedures. Why then is informatics so commonly resisted? Here are some specific reasons that are quite relevant to physician resistance to informatics.

Perceived low personal benefits: Physicians often perceive that the informatics system will have little positive impact on making their job easier or improving patient care.

Fear of loss of status: If the proposed system involves activities such as direct physician order entry, the physicians may perceive a loss of status in doing data entry. System generated alerts" can be an assault on the professionals' egos.

Fear of revealing ignorance: The computer represents a completely new area of knowledge to many physicians and an area in which they may not be confident of their learning skills. To these physicians, accustomed to being viewed as assertive sources of knowledge, the informatics area can be perceived as a potential source of embarrassment.

Fear of an imposed discipline: Many clinical systems impose a lack of flexibility that makes physicians feel that their needs, desires, and historic procedures are being made secondary to the "needs" of the new system.

Fear of wasted time: Physicians are notoriously time-conscious and tend to resist the training or learning time necessary to become comfortable with informatics systems. They are highly sensitive to time required to use the system and are not necessarily charitable in judging whether the new system takes more or less time than previous methods. The prospect of long run benefits may well not outweigh the perception of reduced short run efficiencies.

Fear of unwanted accountability: Even those with a limited understanding of informatics realize that modern systems can be capable of accumulating significant databases that can be used to analyze the activities of individual system users. Those accustomed to being held accountable on only a few broad measures often fear the creation of an environment in which their performance can be quickly and easily monitored on a wide range of variables. At a more dramatic level, increased measurement and data raise the specter of potential increases in legal liability. [2]

Fear of new demands: A subtle fear is a concern about what new informatics systems will do to the accustomed and comfortable ways in which physicians fill their time. One of the impacts of informatics upon other professions has been that computerized systems have increasingly assumed the burden of the routine, freeing the professional for the more complex and creative aspects of the professional role.

The breadth of the above concerns shows how difficult the problem of overcoming physician resistance can be. When dealing with a group of physicians all of the above concerns can appear in varying combinations among individuals within the group.

Key Organizational Strategies

The realities of complex care are forcing most behavioral health organizations to sharply upgrade their computer systems. As this occurs, there are several organizational strategies that can smooth the implementation process. These following strategies have proven effective in many situations. [3]

Collecting benchmark data: One of the first steps in preparing to implement a new system is to gather accurate performance data for the existing system(s). A common form of resistance to a new system is the making of constant unfavorable comparisons to the old system. While presenting factual data will not overcome emotional reactions, it is important that unfounded allegations about the new system not go unanswered.

Analyzing the benefits: early in the overall process, an accurate cost benefit analysis must be performed from the

viewpoint of the physician users—and other major user groups as well. A very valid question for any user is "What's in it for me?" If the answer is, "Nothing," then why should the user embrace the system? This situation typically calls for a rethinking of the overall system design to ensure that there are some benefits for all the affected groups.

General organizational climate: if the general organizational climate is relatively negative, attack that problem directly with sound organizational development techniques. Installing an informatics system—no matter how good it may be—will not solve this problem.

Background education: this is where the broader issues raised above must be addressed in a straightforward manner. Why is the system needed? How will confidentiality standards be maintained? What will the system are able to measure over time? How will these measurements be used? People are entitled to answers to these questions if we expect their support. People at all levels of the organization must be educated in this way, not just the clinical staff.

Potential champions: an informatics system needs champions. The optimal approach is to identify several *medically respected* physicians to fulfill this champion role. These people should be integrated into the planning process from the beginning with their advice sought on virtually all aspects of the development and implementation process.

General ownership: developing respected champions is only the first step in building general ownership in the system. The primary twin tools for general ownership are involvement and communication. The single best tool in building ownership is participation in the overall process— planning, design, selection, implementation, etc.—by those that the new system will affect.

Building ownership: The danger is that the participation process often attracts the "amateur techies" in the organization, either by self-selection or by appointment. It is critical to have some participation from key power people. In health care organizations, this often translates as people who are highly respected *clinically*.

Rapid implementation: as indicated above, a potential downside of involving people early to build ownership is the waiting period between the early involvement and the actual implementation. Within reason, it is a good strategy to concentrate resources on a limited number of projects to minimize the waiting period for system implementation. This will lessen the efforts needed to rebuild the ownership developed in earlier stages.

Realistic expectations: no matter how good the new informatics system is, it will not improve the quality of the coffee. If the physicians are oversold on what the new system will do, the system is doomed to be regarded as at least a partial failure. This includes setting realistic expectations for the impacts on *initial productivity* during the early im-

plementation stages. It is almost inevitable that productivity will initially decline, no matter how good the system and the preparations for its implementation.

Timely training: getting physicians to participate in informatics training in a traditional classroom sense is notoriously difficult. Any training must be brief, high quality, closely timed to the point of need, and specifically directed to the physicians' needs. The style, pace, and depth of training may need to be adjusted for all the various user subgroups. Those doing the training should have outgoing, positive personalities. Good training does more than merely build skills.

Timely, appropriate training: quality training can help significantly in reducing anxieties about using a new system. However, the timing is critical. Training that is either too early or too late will waste resources and raise frustrations, not alleviate them.

Extensive support: with modern software tools, there is no excuse for developing systems without extensive contextual on-line user support written in language that the users can understand. Supplementary written support should also be provided in a format most comfortable for the users.

System stability: physicians are busy people. Even if they are willing to invest the time to learn the system, they almost certainly will not be willing to spend the time to relearn the release of the month. Well-crafted software is relatively stable, at least in its user interface, and effective prototyping should sharply limit the number of changes necessary in the interface. There will be bugs but correcting them should not require constantly modifying the user interface.

Protecting professional egos: although it is costly, skilled one-on-one or very small-group training may be an effective strategy for those physicians and other professionals most likely to be affected by computer phobia. This is especially important if these particular professionals are also highly respected medically by their peers within the organization.

Feedback processes: any aggressive change management strategy should contain multiple mechanisms for actively soliciting feedback at all stages of the change process. The alternative is to have rumors, half-truths, and even untruths flooding the grapevine. When feedback is solicited and obtained, it must be processed promptly and return feedback provided. Not every issue can be resolved to everyone's satisfaction. This is life in the real world. Still, people must feel that both they and their concerns are regarded as important.

Having fun: smart change managers try to introduce an element of fun into the change management process whenever possible. Two techniques that we have seen used numerous times to stimulate the introduction of new clinical systems are lunch-time or end-of-day sessions with free pizza and soft drinks and sessions that feature some non-

threatening competition between the physicians and the system or between physicians using the system and physicians not using the system.

Summary

Experience tells us that motivated, involved people can make bad systems work. After all, they have done it for years. In the same way, unmotivated—or even worse, negatively motivated—people can bring the best system to its knees.

References

[1] Edwards, H.B. "Managed care and confidentiality" *Behavioral Health Management*, November/December, 1995; 25–27.

[2] Lorenzi, NM, Riley, RT, Ball, MJ, Douglas, JV. Transforming health care through information: case studies. New York: Springer-Verlag, 1995.

[3] Lorenzi, N. M. & Riley, R. T. Organizational aspects of health informatics: Managing technological change. New York: Springer-Verlag, 1994.

Address for correspondence

Nancy M. Lorenzi, Ph.D.
Professor of Biomedical Informatics
Vanderbilt University Medical Center
Nashville, TN 37232-8340
Telephone: 615-936-1423
Fax: 615-936-1427
Email: nancy.lorenzi@mcmail.vanderbilt.edu