Computers and Organizational Change: A View From the Trenches

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At the community mental health center where I work, the personal computer is quietly making inroads into the daily work of the clinic. The agency of which the clinic is a part is an urban public mental health system that is one of the largest in the nation. The agency has long been "computerized," but only in the narrow sense of using a big central mainframe for billing and scheduling. As desktop PCs proliferate, even in our underfunded system, the question of how to use them has taken on some intriguing twists. The personal computer has become an important player in organizational change.

When I first came to the agency in early 1995, I was delighted to find a computer on my desk. The clinic administrator explained apologetically that it would probably be sent over to accounting, because psychiatrists weren't expected to use PCs. What would we use them for? I would be issued a terminal, like everyone else, and be tied into the mainframe. The terminal would allow me to use e-mail and to look up schedules—and nothing else.

Time passed, and the PC stayed on my desk. Because the agency felt the irresistible pressure to "keep up with new technology," a few more desktop machines found their way to the clinic, so mine wasn't needed elsewhere. I could keep it and connect to the mainframe via a terminal emulation program. I could also use any other software I could lay my hands on, although it was not clear what use I or any other psychiatrist would have for a PC, which after all was ill suited for any "psychiatric" tasks.

Since then, other currents of change have been at work in the agency. Threats of privatization, reduced funding, and public demands for better-quality care have combined to force some changes on the old bureaucracy. These changes in turn have caused my PC and others to become not an just interesting toy but a necessary tool, even in the traditionally low-tech environment of community mental health—and without my PC being used for any purpose that could be called "psychiatric." This column describes these organizational changes and their results.

The old paradigm

The reigning paradigm in this mental health system has been the centrally controlled hierarchical model, called by some the "mechanistic model." Specific directives emanate from the central office. Employees each do their little piece of work on the "assembly line" of mental health services, reporting their activities directly back to the control center. Vertical communication is the norm, with each "department"—caseworkers, clerical staff, and psychiatrists—isolated in their own hierarchy, although working side by side.

The information system for this arrangement mirrors the structure of work. A central computer holds all the administrative data. Workers each have terminals hooked into the system, into which they can enter only certain types of data and on which they can view only certain types of data, depending on their function in the system. Communication from headquarters to the workforce occurs either through messages on the terminals or through printouts at each of the clinic sites.

In this system, the psychiatrists' work is segregated into little black boxes labeled "M.D. services." Because psychiatrists cannot be easily fit into the hierarchy, they are held at arm's length by the organization. In addition, their special "clinical powers" make them less subject to control from the center. The psychiatrists' "data function" is limited to traditional charting and signing off on various forms managed by the workers in the clinic. In theory, all the little pieces of administrative—and some clinical—data are coordinated and assembled at the top, using the mainframe as the ultimate repository.

I wish I could say that the bureaucracy described here no longer exists, but that is hardly the case. Nevertheless, in many ways the organization has changed fundamentally in just a few short years, coming closer to the principle enunciated by Mosher and Burti (1): "Insofar as possible, authority and responsibility should reside at the lowest possible level within the hierarchy. . . . The system's organizational structure should be as flat as possible. Hence, only major overall policy decisions will need to involve the top administrative-clinical level."

In the evolving new system, the psychiatrist's role has become that of "team leader," with more authority and also more responsibility within the system. Separate hierarchies have been flattened and merged, and the clinical team has assumed primacy over the old insulated vertical hierarchies. And psychiatrists have assumed the role of managers in a complex organization, with the same information needs as managers in other organizations.

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The new paradigm

In a classic article on organizations, Philip Slater (2) commented that "democracy becomes a functional necessity whenever a social system is competing for survival under conditions of chronic change." Decentralization, local control, and psychiatrist-led teams are not exactly democracy but still represent a significant shift from the old mechanistic structure toward a more "organic" one. Along with a greater management role for the psychiatrist has come a need for better access to and control of data.

A concrete example of the new paradigm and the usefulness of the PC can be seen in the tale of the "117." The 117 is a code used in our system to denote the act of authorizing services for a patient. Only the treating psychiatrist has the power to authorize services. If the psychiatrist neglects to fill out the authorization form and submit it by a given date, then further services cannot be billed (even if they are rendered by the same psychiatrist who has the authority to approve the services in the first place). In the old system, caseworkers were sent a large printout with the due dates of the 117 forms for their clients. They then submitted a stack of forms to the psychiatrist for his or her signature. The caseworkers would then fill out another form to indicate that the first form had been signed and submit it to a clerical person for input into the central computer system—in effect, recording it on yet another, electronic form.

Psychiatrists' role in this process was rather passive, consisting of signing forms put in front of them by the dedicated minions of the bureaucracy. Negligence and delays were mostly considered the responsibility of the caseworkers and their supervisors, and they were held accountable through their own hierarchy. The caseworkers themselves were in turn under the direction of the central authority, with the computer as a messenger that told them what forms to obtain signatures for and when.

The change in the organization is that the psychiatrists are the clinical and administrative leaders of teams. They, not the caseworkers, are held accountable for completing treatment authorization forms on time. Along with this more central role comes the need to track the 117 forms for a large number of patients. The old reports are hard to read, often out of date, and cannot easily be obtained on demand. Instead, the psychiatrists in our clinic use a locally generated computer database to track this form. The team then has easy access to the data and can update its own records continually.

Using off-the-shelf database and spreadsheet software, the psychiatrists have developed their own customized applications to help cope with greater administrative responsibility. This process has occurred in our clinic without any specific direction from the central authority, but simply as a matter of necessity. Once a certain amount of patient data become readily available on a desktop database, it becomes easy to track other parameters as well, such as laboratory dates, required assessments, and so forth. It becomes possible to access data about the clinic population as a whole and to view an entire population as a group, not just as one individual at a time.

The organizational change of giving the psychiatrist an administrative role has led directly to a new way to manage information, and the imperative to be able to manage it locally on a desktop machine. Using the mainframe-terminal system to access useful information today seems like relying on a crystal radio for access to news. There is a lot of static, the sound is faint, and tuning is unreliable. A desktop computer with the latest software is, by contrast, like a 24-hour television news channel in stereo.

Psychiatrist-managers at work

Down the hall, my colleague Dr. G sits peering into the monitor, painstakingly entering data into his spreadsheet. The Excel spreadsheet has become the lingua franca of the psychiatrist-administrators in the agency. Practically any information to be reported or distributed must first be recorded in this program. In-house "gurus," usually from outside the official computer department, have developed formats for various kinds of data, ranging from employee performance measures to statistics on new patients seen.

Dr. G is nearing retirement (or at least the possibility of it) and has spent most of his life in private practice. He never had an urge to use a computer until required to. Now he spends almost half his working life "interfacing" with one. The machine has become an integral part of his work. And he likes it.

None of the new uses for computers in the mental health clinic include any direct psychiatric or medical functions. Using computers for charting, history taking, diagnosis, testing, and so forth has never even been tried in our system, and the electronic medical record is only a distant dream. The applications I have described merely reflect use of the machine as a management tool, an organizer of data needed at the interface between the worker and the bureaucracy.

Officially, the agency still operates using a paper-based clinical record, with a few administrative functions handled on a mainframe computer. In practice, PCs are proliferating, filling the data gaps between the centralized computer and the archaic paper system. Like most "knowledge workers" in large organizations, the first thing I do each morning is to fire up the computer and begin the task of collecting, reviewing, and transmitting data. The core tasks of providing psychiatric services haven't changed, but the context has. The demand to assume responsibility for managing large groups of patients in a team-based approach has added new dimensions to the job.

And I couldn't do it without my computer. ♦

References

1. Mosher L, Burti L: Community Mental Health. New York, Norton, 1989
2. Slater P: Democracy is inevitable, in Classics of Organization Theory. Edited by Shafritz J, Whitbeck P. Oak Park, Ill, Moore, 1978