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Narviar C. Barker  
*Georgia State University*

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THE IMPLICATIONS OF COMPUTER TECHNOLOGY  
IN THE  
DELIVERY OF HUMAN SERVICES

Narvior C. Barker  
Georgia State University

Abstract

Social service programs are nowadays required to operate efficiently and effectively. In order to insure that this occurs, service delivery must be documented and evaluated like never before. Nonetheless, at the same time, clients are reporting in ever greater numbers to receive services. Computer technology can assist practitioners to deal with this apparent conflict. For example, computers facilitate documentation, encourage the utilization of advanced research techniques, and free practitioners from paper work, so that increased services can be offered. Accordingly, this technology can be used to improve the delivery of social services.

With human service programs seeking increased accountability, manageability and visibility, the need to measure and evaluate services becomes critical. Equally important is the need to monitor the services rendered, as well as maintain accurate, updated rules on clients and programs within selected geographical areas. Such activity increases the proficiency of programs, integrates service delivery systems, enhances benefits to recipients, and creates reliable information banks. Thus the use of computer technology in human services warrants serious examination.

This article explores the possible impact of technology on clients, human service personnel, education, funding, and confidentiality. Technology may offer such benefits to clients as shortened qualifying and waiting periods for services (eligibility requirements) and more humane execution of treatment (interpersonal relating). It is further noted that a decline in client abuse (dehumanization of services), service

abuse (case management), and repetitious funding (income maintenance) will occur. Computer technology, by definition, utilizes the language of science - through rapidly examining, correlating, and selecting data - relevant to problem-solving (Webster's New World Dictionary, 1976). Meyer (1982) stated that human communication is usually a mixture of bibliography and task or process oriented data. Human service organizations employ social workers, and other health professionals to interpret this data and make the most appropriate, expedient decision for problem solving. The lack of a "third ear" for assessing material often proves problematic for efficient problem solving (Davis, 1979). Consequently, the worker must be attuned to all levels of information. This intake of information allows for the identification of a problem and movement towards a resolution. Therefore, worker attention is a necessary commodity.

Vogel (1985) and Meyer (1982) stated that an examination of client data is a key factor in providing effective and efficient client services. Yet collecting, processing, transferring, storing, and disseminating material can be overwhelming. (Gruenberger, 1973; Gruenberger, 1972). Computers can be programmed to analyze simultaneously several sources of information and identify alternative courses of action. This produces answers to many unexplored questions. With computers, the attention factor is obsolete because this cybernetic device operates on programming. The impact of technology on clients becomes evident through improved worker-client relationships (Panko, 1982; Dalal, 1981). While the computer analyzes and processes client data, the social worker interprets the information and makes decisions regarding client eligibility and use of service. Entries related to the client are then put onto the terminal, minimizing further duplication of services and shortening the waiting period for clients to receive assistance. Equally important is the increased numbers of clients who are seen because the human services worker, who uses this method, reduces actual client contact to a minimum. These benefits enhance worker accountability, client maintenance, and services with respect to agency visibility and client need. Clients will no longer need to duplicate or triplicate their requests for services. This lack of repetitiousness provides an element of humanness to the client/ worker relationship (Panko, 1980). The client then becomes responsible for keeping his/her file current, while the worker records these entries in the computer. A worker's profit from such a system is a decrease in client hostility and suspiciousness, which results from a client having to repeat his/her request for help

numerous times to several different workers.

Technology clearly maximizes the number of patrons served. By workers not having to record, transfer, and/or telephone or write for verification of information, they are more available to clients. With the core of bibliographic data placed on a computer disk, along with all other pertinent client information, the worker can explore problem solving strategies more easily and quickly. The worker simply extracts from the computer selected information relevant to a client. Worker attention is given to the critical elements necessary for problem identification and resolution. Once services are rendered, information is again keyed into the (computer) client file for future reference. This action promotes the humane execution of services through productive client and worker interaction.

Benefits to human service personnel range from more effective time/case management to improved service delivery systems (Schoech and Arangio, 1979). The ability of the computer to document and maintain data far exceeds the worker's ability to recall this information. Wohl (1980) describes the computer as a data bank for client information and referral aides, identifying programs, and service evaluation. Hence, the computer increases a social worker's ability to reach needy populations, while maintaining accountability for services.

As a result of more proficient and increased client services, worker and agency accountability are realized. Documentation on the number of clients served, the services available in a geographical region, and bibliographical characteristics of client populations are easily assessable. Such data enhance worker productivity while making time available for professional development and creativity. The ease with which cases can be maintained and handled are obvious gains to both the worker and agency. Misplaced and/or lost files will become extinct. Also, client income maintenance and case control are easily monitored subsequent to the installation of computers in human service agencies. This virtually eliminates not only the duplication of services, but actually makes available more programs and services to clients who need them most. As a result of computer monitoring, possible fraud and misuse of funds and services can be detected. The refunds from such an investigation then become available for new clients or improved services.

Dalal (1981) stated that human services offices serve two functions -

processing and communicating information. The computer, when effectively programmed, simultaneously handles both. Traditional employee activities such as processing, organizing and controlling the work flow (Wohl, 1980; Dalal, 1981), all part of management, are minimized or eliminated by the computer. This technology, in effect, enhances a worker's ability to provide more creative client services. The time a worker spends filing, collecting, analyzing, assembling, and checking information comprises approximately forty-five to fifty percent of the work day (Wohl, 1980). Another ten percent is used communicating this data to others. This leaves roughly forty percent for service and lunch. According to Meyer (1982) and Dalal (1981), worker productivity is seriously hampered by inadequate, routine, or lost correspondence. Communication problems produce duplication of services, mistakes, omissions and even complaints, all of which reduce efficiency.

The computer can be programmed to update eligibility files, store information, and maintain a list of all clients, employees, and areas served. For example, a social worker may want to check on the number of unwed teenagers in a certain age range, and such a request can be handled by using the computer to determine the number of such women living in any geographical region. A computer may also store all the known facts related to certain pathologies/disorders so that once a client's symptoms are identified a diagnosis can be made, in addition to informing the worker about the appropriate treatment facilities that are available. Even more importantly, for cases of abuse, neglect, or medical illness, medical staff and/or social workers can identify conditions which require immediate attention and place such information in the patient's chart which is then recorded on a computer disk. Thus, when further entries are made in patients' records, the computer can scan pre-existing records and alert staff to any dangerous conditions and identify whether any correctives have been initiated. This monitors treatment, in addition to improving response time to clients.

I am not implying that health and human service workers are poor at processing information. Instead, I am suggesting that these individuals reflect NORMAL human processing. Carlson (1985) stated that the distinction between human and computer information processing reflects optimum versus minimum processing capability. Computers can be programmed to process all the information entered into its system. Human processing responds to selected stimuli at any given time. Simon

(1981) reported that human beings do not possess the cognitive capacity to seek optional responses to inquiries. Yet normal cognitive activity, though functional for general human interaction, may be dysfunctional when optimal answers are necessary.

In summary, human services personnel can benefit in several ways when technology is applied to their office tasks. First, the time, energy, and error factors inherent in media transformation are reduced. Workers no longer will have to contend with outdated material, wait for unreturned telephone inquiries, or lose and/or misinterpret client data that has been transferred from one agency to another. Such media transformation in a human service organization is common practice. Second, the benefits of automation are realized. That is, repetitious or routine tasks which occupy much of a worker's day are eliminated. Additionally, automation makes it possible to avoid duplicating activities. And third, worker control of personal and client schedules fosters better agency functioning.

Also, the computer is an effective teaching mechanism. Its effectiveness is witnessed when training clients. Take, for example, the computer program designed to call senior citizens on a daily basis to confirm physical activity; or the computer programmed to teach words and sounds to stroke and aphasia victims. Furthermore, the computer helps workers manage information presently in use, as well as future data and information they generate. Such data may also be used for teaching and training interns, students, and employees.

Implications for social work education are equally prominent. The training of future social work practitioners must include knowledge of computer technology. As a result of Title XX and other federal legislation, a dramatic shift is witnessed in the utilization of human service workers' time. Worker commitment has been shifted to eligibility determination and redetermination, reporting, and case management, while major reductions in time are evidenced in providing actual services. Contract administration, monitoring, and evaluation are important tasks in social service programs (Gulati, 1983). Therefore, computers can assist workers to maintain a healthy balance between documenting services and client contact.

Again, social workers spend significant segments of their working day feeding information to processing systems, in addition to decoding this

data. Contracts and contract administration are not courses taught routinely to undergraduate or even the graduate level social work students (Gulati, 1983; Carlson, 1985). Yet new demands such as these are being placed on employees both in the public and private sector which are not being met by current training programs (Gulati, 1983; Carlson, 1985). Additionally, strength in research and an understanding of technology are assets for insuring future employability. Through teletraining and the implementation of contract and advanced policy courses, future social work practitioners will, again, be in demand for administering programs.

In short, computer technology offers techniques for monitoring and reporting services efficiently, while at the same time helping social workers and other human service personnel to keep pace with the rapidly changing times.

Accordingly, computer technology is cost effective. In view of space necessary for files, filing cabinets, and record maintenance, the computer requires limited space. Moreover, its memory bank capabilities surpass all human capacity. These benefits prove efficient to the comptroller and secretary whose responsibility is to monitor office management and control equipment and supplies. Gains are also derived from the computer's ability to cross-reference and make necessary corrections (deletions and additions) in important service delivery manuals and documents, as well as improved proficiency in communicating with other programs not only within the immediate community, but statewide. For example, to access the computer for information is clearly more reliable than having to telephone an individual and communicate verbally, while risking the chance of the callee not being available. Such waiting proves costly.

Ultimately, client confidentiality remains an issue of serious challenge. Anyone with the proper access code can enter the computer data bank. Dalal (1981) reported that the security of most existing systems is based on private knowledge, keys, or badges, none of which guarantees security. Protection is guaranteed through positive identification of individuals, based on something not transferrable between individuals (i.e. fingerprint, voice print, signature) (Dalal (1981)). Such scrutiny is not widely used commercially because of the high cost and implementation problems. Consequently, client files and records may not be restricted solely to the assigned worker and immediate agency.

However, in such cases where child abuse and neglect is an issue, or an equally serious social problem, client confidentiality does not need to be protected. Nonetheless, the dangers of easy access are apparent. Yet, the overall advantages of computer technology may be too precious to ignore.

If human services are to be accountable, manageable, and visible, both citizens and social service workers must recognize the capabilities and potential benefits of the computer. "As society has done with other technologies, human service workers must do with the computer. We must learn to understand it, control it, humanize it, and harness it to meet the needs of human service professionals" (Schoech and Arangio, 1979).

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