INFORMATION TECHNOLOGY AND INFORMATION MANAGEMENT IN BEHAVIORAL HEALTH: A VISION FOR THE FUTURE

This paper was drafted by a task force of representatives from the Software and Technology Vendor's Association (SATVA) and other stakeholders in the behavioral healthcare field. The initial drafts were distributed to over 500 professionals for feedback and the paper was then revised in an iterative process that included further feedback. Primary editing was conducted by Sharon Hicks (SATVA Chair-Elect for 2006) with significant input from other members of the Board and the Executive team. This paper is draft version 8.1 from March 2005.

Abstract

The purpose of this white paper is to outline the vision of the writers and reviewers that information technology and information management are critical components in transforming the current services delivery system for behavioral health care into an effective, efficient, and consumer-friendly, recovery-oriented system that will meet the goals set forward in the President's New Freedom Commission on Mental Health report, the President's National Health Information Infrastructure initiative, the Institute of Medicine's *Crossing the Quality Chasm* and *Patient Safety* reports and the earlier IOM reports on *Treating Drug Problems* and *Broadening the Base of Treatment for Alcohol Problems*. Given the importance of technology in achieving the goals outlined by the sources noted above, the paper seeks to outline some of the tasks, issues and opportunities that the move to greater use of technology presents to the field. As a practical and efficient first step, we propose a National Summit of behavioral health leaders to discuss the role of behavioral health services in current and anticipated health information technology initiatives.

Behavioral Health Definition

In this paper, the term "behavioral health services" is used to refer to both mental illness and substance abuse services that are covered under commercial insurance coverage, Medicaid coverage, Medicare coverage or are reimbursed via grants from either federal, state or local dollars to the local responsible entity. We understand there is some controversy regarding use of the term behavioral health and a well-founded desire among some to distinguish each type of service separately. However, space constraints inclined us to use the shorter term, at times with the abbreviation BH, to refer to the full spectrum of services that are outlined above.

Introduction

This white paper will outline a vision that was developed by the Software and Technology Vendors Association (SATVA), in conjunction with a wide range of other stakeholders in the behavioral healthcare field. The recommendations made in this paper represent just a few of the many steps the field can take to participate in the formulation and benefits of the overall health information technology infrastructure and to increase the usefulness and pertinence of that work for the BH field. The underlying principles used to create this plan are taken from a number of sources but are particularly inspired by the information technology-related recommendations in the reports of the Institute of Medicine's Crossing the Quality Chasm and the President's New Freedom Commission on Mental Health. While the first report was developed to address issues in the general healthcare system, and the second to address issues in the mental health system, it is the authors' contention that their information technology-related recommendations easily generalize to the entire behavioral health field.

There is almost universal agreement that one facet of the solution to the problem of spiraling growth in the costs of health care will be widespread adoption of computerized health information systems. Of perhaps even greater significance is the potential to enhance patient safety and improve quality of care through the introduction of clinical components into computer based information systems. Given that people tend to receive their care from more than one provider, across different systems of care or even across geographic regions, the full clinical and financial benefits of computerization will be fully realized only after a national health information infrastructure is established. The assumptions for this kind of system are based on the ability of a care provider, with appropriate permissions by the consumer, to access an electronic health record (EHR) in real time regardless of the "home base" of that client.

While most of the national policy and standard-setting work to promote this infrastructure has focused on medical-surgical care, it is vital for behavioral health to articulate its unique requirements and positions within that context. In addition, we also propose a broader vision that encompasses the full spectrum of behavioral health services that extend beyond those in the traditional health care system. These services can include special education components, services in non-traditional settings, services provided by consumers, services provided by lay professionals, etc. They can frequently involve an interface and overlap with other human service

entities such as child welfare, juvenile justice, mental retardation/developmental disabilities, and others.

A significant difference between the behavioral health industry and physical health is that, related to the types of services that are delineated above, much of the reimbursement does not flow from the traditional fee-for-service models that originate with either a federal program like Medicaid or Medicare, or commercial insurance. For instance, "program funded" or "base funded" services provide a safety net of behavioral health services for uninsured and underinsured consumers. Appendix A provides an illustrative example from the substance abuse field of how complex the billing procedures can be with these funding sources. Those who develop standards pertaining to services funded by these sources will have to include and encourage consensus from a relatively broader group of stakeholders than would be necessary in general health care.

To further complicate the picture, many behavioral health services are not covered by any payer and therefore are not defined by the existing code sets that are acceptable on claim forms. For example, certain services like Recovery Support and Consumer-run Rehab are rarely reimbursed by commercial insurers and are therefore not well documented by the providers of the service. This makes it difficult for regulatory entities to understand what actually happened during a service and to determine the appropriateness of the specific intervention. It also creates challenges for computerizing standard documentation formats for these services when they are not well defined in their paper-based system precursors.

The Behavioral Health Market

Most behavioral health organizations use computerization primarily to support the complex and demanding business of getting paid for services. Consequently, the focus on clinical information and decision support systems receive disproportionately (when compared with medical-surgical) less attention.

The Centers for Medicare and Medicaid estimate total medical spending in 2001 at $1.14 trillion[1]. In its 1999 report, the U.S. Department of Health and Human Services estimated that behavioral health represents 7.6% of overall health expenditure[2]. It is therefore reasonable to estimate that spending for the mental health and substance abuse treatment is approximately $104 billion[3]. From an information technology point of view and, in fact from the point of view of the whole market, we believe that the most important question is:

If the percentage of the dollars that must currently be focused on administration alone (e.g., billing, reimbursement and reporting) could be reduced and a portion redirected to improving clinical processes through related information technology, how much more quickly will the industry be able to realize the vision of improving the quality of clinical care to consumers and improved focus on consumer outcomes?

[1](Office of the Actuary, Title XVIII and Title XIX of The Social Security Act, November 1, 2003 http://www.cms.hhs.gov/publications/overview-medicare-medicaid/default2.asp)
[2] *Mental Health: A Report of the Surgeon General—Executive Summary* *http://www.surgeongeneral.gov/library/mentalhealth/summary.html*)
[3] The Center for Substance Abuse Treatment, Spending Estimates, Page 9

Among the drivers for this significant administrative expenditure are the following:

1. Lack of single, universal, standards for encounter reporting –Many states and local governmental entities, lacking other necessary reporting infrastructure, have used the HIPAA transaction code sets as a vehicle to accomplish non-claims related reporting. As a result, many treatment providers need to report all the services they have completed, irrespective of payer, and substantial demographic information to either the local or state level oversight entity.
2. Privacy requirements are complex – Most every state and territory has some specific regulation about the protection of clients' mental health data and most have even more stringent requirements for substance abuse related information. In fact, in some states, substance abuse and mental health are subject to completely different, and sometimes conflicting, regulations.

Information Management

To assure that we are addressing the needs of the entire BH industry and not just the part that is integrated with or parallel to, the medical-surgical industry, we have defined technology very broadly. In fact we have decided to use the phrase information management rather than information technology in order to more clearly describe what we are discussing.

The term information management encompasses both the administrative functions like patient registration, medical records, billing, and information systems functions like hardware, software, telecommunication and data communication that is generally referenced under the term information technology. In addition, we also add:

- computerized decision support for diagnostic and treatment decision-making, including support of evidence-based protocols
- measurement of clinical outcomes and ongoing use for quality management
- evaluation of medical-cost offset and use for benefit redesign and disease management
- training in information management and use of information technology in clinical training programs

We recognize that the adoption of technology in the behavioral health industry is complicated because of the nature of the work and the variability in funding mechanisms. We believe there should be at least a minimal standard for the various software and technology tools that should conform to the following underlying principles:

1. Be flexible and sustainable, taking into account all components of successful implementation (e.g. support, training, ongoing development, overhead/ongoing costs, etc.).
2. Focus on improving the efficiency of service delivery and on reducing waste where possible (parsimony).
3. Focus on consumer-friendly and consumer-directed health care.
4. Support improvements in business practice (accountability/compliance/clinical best practice).

5. Encourage mechanisms to improve necessary sharing of clinically important data, while recognizing reasonable privacy and security.
6. Provide for comparable data collection/validation to allow for analysis/benchmarking.

Rationale for Action

In the remaining sections of this paper, we are recommending steps that we believe will be helpful in moving toward the transformation of the behavioral healthcare service delivery system to embrace the use of technology in the care delivery infrastructure. As early as 1990, the IOM stated that "to manage the large amount of information involved and to provide rapid access to that information, computerization of the clinical data base is logical[4]. In March, 2001, the Institute of Medicine (IOM) Committee on Quality of Health Care in America released a report that identified four critical forces that could significantly improve healthcare[5]. One of these forces was Health Information Technology (HIT). HIT was defined by the IOM as electronic health records, clinical alerts and reminders, computerized workflow (e.g., order entry) and computerized decision support[6]. The report stated, "There must be a renewed national commitment to building an infrastructure to support health care delivery, consumer health, quality measurement and improvement, public accountability, clinical and health services research, and clinical education."

In medical environments, the IOM reports low adoption of HIT, estimating that as of 2003, less than 10% of all facilities across the United States have a comprehensive HIT system in place[7]. In most behavioral health settings, attempts to use existing medical-surgical information systems have not been successful. While these areas will not be fully discussed in this paper, we will outline two which we believe to be especially significant:

1. The behavioral health field extends beyond medical services to social, vocational, and other supportive services. Medical information systems are designed assuming that a clinician, usually an MD or someone working under the supervision of an MD, is providing a specific, procedure code-based service to a client. In contrast, behavioral health systems must take into account that a service may be provided by a non-traditional provider, in a non-traditional setting, and may even have non-traditional reimbursement requirements.
2. The behavioral health market has complex billing, financial reimbursement and regulatory reporting requirements. As already stated, approximately 8% of the estimated spending for behavioral health is focused on those areas. Oversight and funding of behavioral health services is much broader and more varied than the components covered by the Center for Medicare and Medicaid Services and insurance systems. Therefore, solutions that simplify matters will have to involve a greater number of stakeholders.

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[4] *Broadening the Base of Treatment for Alcohol Problems,* Institute of Medicine report, 1990
[5] *Crossing the quality chasm: a new health system for the 21st century*. 2001, Washington, D.C.: National Academy Press.
[6] *Priority areas for national action : transforming health care quality.* 2003, Washington, D.C.: National Academies Press.
[7] Ibid.

In a 2005 report entitled "Patient Safety: Achieving a New Standard of Care", the Institute of Medicine (IOM) stated that a national health information infrastructure is needed to:

- provide immediate access to complete patient information and decision-support tools for clinicians and their patients
- capture patient safety information as a byproduct of care and use this information to design even safer delivery systems

The report described the many important benefits of an electronic health record system for enhancing patient care, including:

- computer-assisted diagnosis and treatment planning, with reminder and alert systems to help prevent inappropriate care
- more immediate access to real-time and complete patient health information at the point of care delivery

In 2004, President Bush established the Office of the National Coordinator of Health Information Technology (ONCHIT) within the Department of Health and Human Services (DHHS). Its purpose is to promote development of the nation's health information infrastructure to improve patient care. Recently Senator Edward Kennedy introduced legislation to support the work of ONCHIT through Title XXIX – Health Care Information Technology that would be added to the Affordable Health Care Act. Also recently, following the recommendations from ONCHIT, two Representatives of Congress submitted the National Health Information Incentive Act of 2005 that would authorize DHHS to give grants, revolving loans and tax credits to health care providers to buy IT systems.

Expected Changes to Service Delivery

One of the rationales for focusing on technology is that care delivery systems are changing rapidly. Technology must be part of the tool set that enables care delivery systems to incorporate these changes into the much needed services they provide to their constituencies. One of the most significant changes is the increased use of standard protocols, best practice models, evidence based treatments, etc. The most prominent demonstration of this trend can be seen in the best practice "tool kits" developed under the auspices of SAMHSA in community mental health, substance abuse and other public sector treatment settings and in the SAMHSA's National Registry of Evidence-based Programs and Practices.

In addition, in the past five to ten years, the research done in the area of behavioral health has led to the development of medications that bring hope to persons whose prior prognoses were guarded. There has been a greater acceptance of a genetic model of causality in behavioral health illness, but without losing the focus on the bio-psychosocial models that hold that a person is more than just the sum of his parts. We postulate that these models show promise for being used in the general medical service delivery system as well, given that many chronic medical illnesses could benefit from analysis of psychosocial components in recovery models. Information management is a vital component to help busy physicians and other

health care professionals in the medical service delivery system keep pace with and implement these innovations.

We project that advancements in psychotropic medications will continue and will in time be joined by a broader range of medications for addictive disorders. This will be augmented with innovation in the use of "devices" to address behavioral health conditions (e.g., use of a brain implant to address depression through serotonin stimulation). There is a likelihood that increased experimentation in integrated service delivery models will continue, spurred in part by federal funding grants. In addition, the movement in our industry toward a "health maintenance" model and the related application of recovery/resilience models as a long-term/life-long approach to behavioral health management will be continuing. Information management will be essential to the effective application of these approaches.

Given the shift away from service delivery at a single centralized site (e.g. hospital) to a more decentralized and community based model that can include home-based or school-based services, the use of technology is a clinical imperative. As an industry, we no longer can wait 72 to 96 hours for the record of a service to find its way to a chart. This growth in community based services occurs in conjunction with an increase in consumer and family driven/delivered services. This is one of the reasons that consumer and family advocates must be at the stakeholder table when discussing technology in service delivery.

Another important trend that needs to be supported by information management is the integration of behavioral health service delivery with social service and education/justice services. Again, when providing services in this manner, information management must play a significant role--not only in the context of compliance with protocols, etc. but also in the ability to demonstrate effectiveness of services.

Expected Changes in Technology

In tandem with the changes forecast above, we believe that technology innovations will lead to increased ease-of-use and a greater acceptance of computer-based interventions. These interventions have provided effective adjuncts to face-to-face treatment for more than two decades, with many research publications to substantiate their value. With the increased adoption of electronic communication and computer-based technologies in behavioral healthcare, it is likely that these interventions will be more widely adopted[8].

In addition, greater adoption of the following innovations, developmental changes and scientific discoveries are likely to occur within the next two to five years:

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[8] For one example please see (*Proudfoot, J., Ryden, C., Everitt, B., Shapiro, DA., Goldberg, D., Mann, A., Tylee, A., Marks I., and Gray, JA. (2004) Clinical efficacy of computerised cognitive-behavioural therapy for anxiety and depression in primary care: randomised controlled trial. British Journal of Psychiatry, 185, 46-54)*

1. Expanded use of computers and the Internet
2. Increased ability to access and use data remotely – greater bandwidth, wireless devices, added capacity of personal tools, etc.
3. Increased use of and acceptance of telemedicine in behavioral health care
4. Increased use of genetic technology
5. Increased use of biometric identification
6. Introduction of interventions that use brain-machine interfaces

These advances will make computers ubiquitous in service delivery in physical medicine, education, social service delivery, etc. These advances will also lead to systems that are more helpful in decision making rather than simply acting as a vehicle to document the services that have occurred.

In fact, we project the use of "smart systems" that act as in-house experts to support best practices in both direct care delivery and the development of standards of practice. This in turn will lead to more sophisticated decision support/workflow management and greater availability and use of benchmarks. We have a significant challenge in behavioral health service delivery to be able to benchmark our service performance to that of other comparable organizations providing similar services. This is a critically important step towards ongoing improvement of services, and information management is a vital component for us to get there.

Obviously, the development and implementation of these kinds of innovations are fraught with legal, ethical and political issues. These must all be discussed and resolved before final decisions are made and proposed models are adopted.

Expected Changes in the Regulatory and Funding Environment

As discussed in the introduction, one major impetus for increased use of information management in behavioral health service delivery is the need to realize greater efficiencies and effectiveness in treatment. In anticipation of shrinking funding sources, greater regulatory control and other economic pressures, we project that payers will require or otherwise stimulate even more demands for demonstrations of efficiencies and effectiveness in the health care system in the months and years ahead.

We expect increased offerings of benefit options like health spending accounts and voucher-like defined benefits that shift control of dollars directly to consumers and allow them to make choices about the services that they receive and the providers from whom they receive those services. Within such benefit options, providers will be in the position of having to market to consumers that they are able to give the best, most effective and most friendly care. To do so they will need to provide compelling data on the types and effectiveness of the services they provide. The primary platform for featuring this type of continually updated data will be the web, and consumers who participate in this type of benefit option will need to be fairly sophisticated users of information management.

These trends in benefit design are not resident in just the publicly funded insurance market. More and more employers are transferring insurance choice and cost management to employees. This can include providing employees a fixed payment

for health insurance spending as well as offering selection of cafeteria healthcare insurance options. Again, this puts providers in the position of needing to truly understand their own care delivery patterns as well as being able to demonstrate the effectiveness, both cost and clinical, of the care that they deliver.

These developments and others, like the increased use of EAP and other gatekeeper services to control access to services and spending of healthcare dollars, make the case that increasing the use of technology is an imperative rather than a choice. The healthcare system in our country is at the beginning of major changes in which consumers will be required to make more decisions. Information will become a differentiating factor in that providers who can make the leap to the information age will be more likely to succeed than those that simply cannot.

Because of inadequate funding, many community-based non-profit centers that provide behavioral health and social services to culturally and racially diverse populations do not have the capital needed to implement functional information management. The same is true for many other types of behavioral health provider organizations, particularly those smaller in size and those exclusively providing substance abuse treatment services. This poses a serious dilemma not only to those organizations, but to the nation's care delivery system and the consumers who they serve.

Recommendations and Summary

The work of developing a national information infrastructure for behavioral healthcare services is long-term and resource-intensive. It will involve participation in ongoing standard-setting committees in the broader health care field, and establishment of standard-setting initiatives specific to our own field. We must address the crucial challenge of funding and creating resources for this initiative so it is sustainable and successful over the long term. Many of the standards setting groups are already in place.

We would recommend that the following items are part of the strategic focus of the workgroups that will be involved in developing the overall solutions:

1. Survey the current state of technology in behavioral healthcare to identify extent of current IT adoption, infrastructure readiness of organizations yet to fully adopt IT, barriers to widespread adoption, and accessibility of the range of types of IT functionality for the behavioral health market.
2. Develop mechanisms, including an operational plan to simplify reimbursement processes, to ensure that some of the estimated $8 billion currently spent on billing, financial reimbursement and regulatory reporting can be redirected to fund critically needed technology infrastructure and innovation in behavioral healthcare.
3. Promote the adoption of clinically-related technology within behavioral healthcare services through financial and other incentives, technical assistance, education, and other means.
4. Develop and promulgate standards for content and information technology, including standardized data elements and the IT infrastructure required to support those standards.

5. Develop and promulgate content standards for electronic behavioral health records, including standardized datasets associated with clinical assessments, treatment planning, and process and outcomes reporting crucial to the decision support, monitoring and evaluation of clinical services.
6. Work with the broader health care informatics field to develop and promulgate information technology standards for interoperability and related elements that will facilitate the building of a national health information infrastructure while addressing the consumer privacy and confidentiality concerns that are so important in behavioral health care.
7. Work with the broader health care field on development of standards and procedures for certification of software, attending particularly to elements that pertain specifically to behavioral health, and promote compliance with these standards.
8. Develop a ten-year strategic plan for behavioral health IT.

National Summit

SAMHSA and SATVA are co-sponsoring A National Summit in the fall of 2005 with invited guests representing a broad group of stakeholders/leaders in behavioral health policy and service delivery. Invitees will include behavioral health representatives from private sector provider trade and professional associations, managed care and third party payer trade associations, large group purchasers of behavioral health benefits; federal, state and local government agencies; consumer and family organizations; and accrediting organizations. In addition, we will invite informatics representatives from the general healthcare, social services, corrections and related fields, since behavioral healthcare services and related management of information must be functionally coordinated if not fully integrated with these other fields.

The Summit representatives will be asked to consider the role that information technology and information management can play in creating and implementing solutions to the current challenges faced, supporting organizational and system transformation, and improving care and safety for persons receiving behavioral health services. The goals of the Summit are to:

- develop consensus for a strategic vision and strategy for implementation of a long-term plan for building a national information infrastructure for behavioral health that is complementary to and functionally coordinated with the plan for a broader national health information infrastructure;
- generate a specific and practical plan for next steps towards achieving the vision.
- improve care and safety for persons receiving behavioral health services.

Participants in this Summit will be involved in problem solving and creative thinking around issues that have confronted our industry for quite some time. Given the attention that HIT and EHR have been receiving from a national policy point of view, this may be the best time for behavioral health to get the attention that it requires, and the support that it deserves, to begin a significant process of transformation. It is expected that the work begun during the Summit will continue well after the event and will directly touch the policy decisions that guide the future of our industry.

Appendix A

Example of billing complexity:

A person who has a commercial insurance coverage lives in a county that receives funds from state and federal monies to ensure certain clinical service to its residents. This person is diagnosed with an illness and referred to both outpatient therapy and methadone treatment. Her commercial insurance does not cover methadone treatments. This person will then have her outpatient care billed to and paid for by her commercial insurance carrier but will have to go to a program for her methadone treatment that receives funds from the resident county that enables them to provide methadone to indigent and/or uninsured persons.

From a billing and reporting perspective, the provider will need to create an 837 to bill the outpatient services to the commercial insurer and will need to create some other format (maybe an 837, another type of bill or maybe a program funding reconciliation record) to report the decrementing of the program funds already received by the county.

These alternate funding resources serve to increase the number of entities providing funding (payers) and therefore the group of stakeholders, who will have to agree with, and implement, any standards that are developed. These program funded or base funded programs are often the safety net for mental health and substance abuse services, for uninsured and underinsured residents of various states.