Issue Brief: Behavioral Health and Health IT

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What's the Issue?

Introduction

Behavioral health conditions include mental and substance use disorders. By 2020, mental and substance use disorders will surpass all physical diseases as a major cause of disability worldwide.[1] An estimated 26 percent of Americans ages 18 and older are living with a mental health disorder in a given year, and nearly half will have a mental health disorder over the course of their lifetime.[2,3] While the behavioral health community is largely supportive of appropriate information sharing across settings, often times, behavioral health systems operate independently from broader health systems and differ in the type and scope of information technology used.

Background

Delivering patient-centered care by incorporating all the members of the care team is ideal for improving patient health outcomes. Behavioral health settings are an important part of the continuum of care affecting millions of Americans.

Among patients with behavioral health disorders there are higher rates of physical illnesses including cardiovascular disease, diabetes, and respiratory disease.[4] Behavioral health conditions influence the course of illness with patients suffering increased rates of morbidity (disease) and mortality (death) compared to patients without a co-morbid behavioral health disorder. Research literature documents that persons with serious mental illnesses[5,6] and substance use disorders[7] die younger than the general population – mainly due to preventable risk factors (e.g., smoking) and treatable conditions (e.g., cardiovascular disease). In some instances, co-morbid behavioral health disorders may result in reduced life expectancy up to 25 years.[8] These individuals may experience treatment challenges and poorer outcomes. Generally, they do not receive integrated treatment that treats multiple disorders contemporaneously, as recommended.[9]

Due to the prevalence of co-occurring disease in this population, a significant volume of behavioral health care is delivered in primary care settings. Generally patients with behavioral health disorders receive

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[1] World Health Organization (WHO). (2004). Promoting mental health: Concepts, emerging evidence, practice. Summary report. Geneva, Switzerland: WHO. Retrieved March 25, 2011, from
http://www.who.int/mental_health/evidence/en/promoting_mhh.pdf

[2] http://www.healthypeople.gov/2020/LHI/mentalHealth.aspx?tab=determinants#one

[3] Reeves WC, Strine TW, Pratt LA, et al. Mental illness surveillance among adults in the United States. *MMWR*. 2011;60(3):1–32. Atlanta, GA: Centers for Disease Control and Prevention. Available from
http://www.cdc.gov/mmwr/preview/mmwrhtml/su6003a1.htm?s_cid=su6003a1_w

[4] Morbidity and Mortality in People with Serious Mental Illness. (Oct. 2006) National Association of State Mental Health Program Directors, Medical Directors Council.

[5] Colton CW, Manderscheid RW. Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. Prev Chronic Dis [serial online] 2006 Apr [date cited]. Available from: URL:
http://www.cdc.gov/pcd/issues/2006/apr/05_0180.htm

[6] Eaton W.W., Martins S.S., Nestadt g., Bienvenu O.J., Clarke D., & Alexandre P. (2008). The burden of mental disorders. Epidemiologic Reviews, 30(1), 1-14. Retrieved from http://epirev.oxfordjournals.org/content/30/1/1.full.pdf#page=1&view=FitH.

[7] Chang C.K., Hayes R.D., Perera g., Broadbent M.T., Fernandes A.C., Lee W.E., Hotopf M., & Stewart R. (2011). Life expectancy at birth for people with serious mental illness and other major disorders from a secondary mental health care case register in London. PLoS One. 6(5):e19590.

[8] People with serious mental illness served by our public mental health systems die, on average 25 years earlier than the general population. Morbidity and Mortality in People with Serious Mental Illness. (Oct. 2006).

[9] (Najt, FusarPoli, & Brambilla), 2011; (SAMHSA, 2007).

their first diagnosis from their primary care physician and are subsequently treated by a behavioral health provider.[10] Considering the prevalence of behavioral health disorders and the volume of treatment delivered outside of behavioral health settings, better information exchange is needed to improve health outcomes for this demographic. Innovations in health information technology (health IT) and increasing EHR adoption have great potential to facilitate information sharing and coordination of care across provider settings.

This brief discusses adoption of health IT among behavioral health providers and highlights behavioral health activities supported by the Office of the National Coordinator for Health Information Technology (ONC) and other federal partners. Finally, this brief presents specific actions to improve information exchange among behavioral health providers by presenting targeted next steps.

What Has Happened So Far?

Adoption of Health IT

Integration of care enabled by health IT has great potential to improve health outcomes for individuals with behavioral health conditions. To date, behavioral health providers lag behind eligible hospitals and professionals in adoption of health IT. On average, information technology spending in behavioral health organizations represents 1.8 percent of total operating budgets compared with 3.5 percent of the total operating budgets for general health care services.[11] With the expansion of the Affordable Care Act in 2014, it is estimated that one in six of the newly eligible Medicaid population will present indicators of behavioral health disorders.[12] ONC and its federal partners recognize behavioral health providers are essential to patient care coordination and support initiatives that accelerate health information exchange and increase adoption of electronic health records (EHR) among this sector.

The Health Information Technology for Economic and Clinical Health (HITECH) Act provides monetary incentives and technical assistance to help eligible providers use certified technology to become meaningful users of electronic health records (EHR). In collaboration with ONC, the Centers for Medicare and Medicaid Services (CMS) defines objectives that eligible hospitals and health care professionals must meet in order to receive incentive payments. ONC establishes the standards and certification criteria to ensure that EHR technology is capable of meeting certain minimum requirements. The "meaningful use" of an EHR refers to the use of certified EHR technologies by health care providers in ways that measurably improve health care quality and efficiency.

Since HITECH's enactment, adoption and use of EHRs has increased exponentially. Between 2009 and 2012 adoption of EHRs that met the basic criteria for office-based physicians grew over 80 percent.[13]

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[10] Mechanic, D., and Bilder, S. (2004). Treatment of People with Mental Illness:
A Decade-Long Perspective. Health Affairs, 23(4): 84-95.

[11] Centerstone Research Institute. (2009, June). Behavioral Health/Human Services Information Systems survey. National Council for Community Behavioral Health Care. http://old.thenationalcouncil.org/galleries/policy-file/HIT%20Joint%20Survey%20Exec%20Summary.pdf

[12] Garfield RG, Zuvekas SH, Lave JR, and Donohue JM. "The Impact of National Health Care Reform on Adults with Severe Mental Disorders." American Journal of Psychiatry. (May 2011).

[13] Hsiao Cj, Hing E. Use and characteristics of electronic health record systems among office-based physician practices: United States, 2001-2012 NCHS data brief, no. 111. Hyattsville, MD: National Center for Health Statics. 2012.

Similarly, among non-federal acute care hospitals, adoption of at least a basic EHR system has increased by over 260 percent since 2009.[14]   However, challenges remain for the widespread use of interoperable systems and health IT across providers, particularly those not eligible for incentive payments. Only 4 percent of rehabilitation hospitals and 2 percent of psychiatric hospitals have a basic EHR system.[15] [EHR Payment Incentives for Providers Ineligible for Payment Incentives and Other Funding Study](#) found:

> Collecting information on health IT adoption by the ineligible providers presented significant challenges due to the lack of comparable survey tools, inconsistent definitions and peer-reviewed studies. For ineligible providers, EHR adoption rates ranged from 4 percent to 65 percent. The adoption rates for ineligible providers cannot and should not be compared to adoption rates for eligible hospitals and eligible physicians since they do not measure adoption rates of comparable EHR technology.

ONC is the principal federal entity charged with coordination of nationwide efforts to implement the electronic exchange of health information. As the principal coordinator, ONC has partnered with federal agencies to support existing programs and resources. Recently, ONC released interoperability guidance for providers that are not eligible to receive incentive payments under HITECH. This guidance "is meant to serve as a building block for federal agencies and stakeholders to use as they work with different communities to achieve interoperable electronic health information exchange."[16] Also, the Substance Abuse and Mental Health Services Administration (SAMHSA), an agency within the Department of Health and Human Services (HHS), has partnered with ONC to address issues in adoption of health IT by the behavioral health community.

What Are the Concerns?

Electronic health information exchange to transfer behavioral health data poses unique challenges. Stakeholders in the behavioral health community have identified challenges to the adoption and meaningful use of health IT, which include the following:

1) Cost of Adoption: [Most behavioral health providers are not eligible](#) for incentive payments authorized under HITECH
    a. Sub-issues related to cost:
        i. Upfront financial investment; and
        ii. Cost to sustain EHR system acquired (e.g., software updates and workforce)
2) Poor integration of care between primary and behavioral health providers; and
3) Privacy and Security: policies and standards that address consent and privacy issues with sharing behavioral health information. [17,18]

ONC and SAMHSA are actively engaged in initiatives to promote the safe and secure exchange of health data to integrate primary care and behavioral health treatment.

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[14] ONC analysis of data from the 2011 American Hospital Association Survey Information Technology Supplement. Federal Register Vol. 78, No. 45, March 7, 2013 Notices.

[15] Wolf, L, Harvell J, Jha, A. Hospitals Ineligible for Federal Meaningful- Use Incentives Have Dismally Low Rates of Adoption of Electronic Health Records.

[16] ONC Interoperability Guidance: http://www.healthit.gov/sites/default/files/generalcertexchangeguidance_final_9-9-13.pdf

[17] http://go.nationalpartnership.org/site/PageServer?pagename=issues_health_IT_survey

[18] Not an exhaustive list.

What Are the Opportunities?

Policy Initiatives

In March 2013, CMS and ONC jointly issued a request for information (RFI), "Advancing Interoperability and Health Information Exchange" which sought input on changes to accelerate electronic health information exchange across providers.[19] As part of this request for information, ONC, CMS, SAMHSA hosted a listening session for behavioral health stakeholders to gain their perspective on what would accelerate the use of health IT in this community, considering the current law.

Two hundred submissions were received in response to the RFI, including submissions from behavioral health stakeholders.[20] A vast majority of the comments recommended methods to support the adoption of interoperable EHRs among providers ineligible for incentive payments and expansion of the ONC Health Information Technology Certification Program to include behavioral health-specific certification criteria.[21] In August 2013, ONC released its response to the RFI, Principles and Strategy for Accelerating Health Information Exchange (HIE). This strategy may help guide efforts to accelerate HIE across HHS and work to close the gap in adoption and meaningful use of health IT. The strategy includes three principles:

1. Accelerating HIE
2. Advancing Standards and Interoperability; and
3. Consumer/Patient Engagement.

Likewise, subsequent to the release of HIE strategy, ONC published interoperability guidelines to further support exchange of health information across different care settings, directed toward ineligible providers.

In addition to ONC efforts, SAMHSA has committed to supporting the adoption and exchange of health information among behavioral health providers. In Leading Change: A Plan for SAMHSA's Roles and Actions, a goal is to "enhance capacity for the exchange and analysis of EHR data to assess the quality of care and improve patient outcomes." As part of this goal, SAMHSA's actions steps include:

1. Facilitate adoption of national clinical data exchange standards for behavioral health, especially in the areas of substance abuse treatment and recovery
2. Facilitate adoption of standardized privacy and confidentiality policy, including consent management, with patient data segmentation; and
3. Facilitate the creation of exemplar projects that use national data standards to demonstrate the use of current behavioral health best practices and standard data collection.

Behavioral Health Data Exchange Consortium

The purpose of the Behavioral Health Data Exchange (BHDE) Consortium was to facilitate and address barriers to the intra and interstate exchange of behavioral health data. The project was designed to be

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[19] Federal Register/ vol. 78, No 45/ Thursday, March 7, 2013/Notices. Advancing Interoperability and Health Information Exchange.
[20] Principles and Strategy for Accelerating Health Information Exchange (HIE);
http://www.healthit.gov/sites/default/files/acceleratinghieprinciples_strategy.pdf
[21] Id.

flexible, recognizing the results of the initial research about policies, procedures, and laws would determine the direction and scope of the pilot test activities.

The consortium, spearheaded by ONC and State partners (Alabama, Florida, Iowa, Kentucky, Michigan, Nebraska, and New Mexico) accomplished the following:

> The BHDE Consortium participants created a set of common policies and procedures that aligned with federal regulations as well as the laws of the participating states. In addition, participants put these policies and procedures into practice by connecting their state-level systems to allow DIRECT exchange.

Among the highlights of the consortium's work were sets of policies and procedures developed by the participating states that provide a road map to exchanging behavioral health information at the state level using the Nationwide Health Information Network's DIRECT exchange protocols. The Direct Project was created to specify a simple, secure, scalable, standards-based way for participants to send authenticated, encrypted health information directly to known, trusted recipients over the Internet. These protocols are now in use and being tested across the country. The final report of the BHDE Consortium is due to be released in the near future.

Nebraska's Electronic Behavioral Health Information Network

Prior to HITECH, a grassroots effort developed in Southeastern Nebraska to improve communication and coordination of care among behavioral health providers. The initiative eventually led to the creation of eBHIN, the Electronic Behavioral Health Information Network. The applications used by behavioral health providers includes a link to a portal, enabling behavioral health providers to query and obtain behavioral health information of their patients from other participating behavioral health providers on the network. However, today, behavioral health information stored in and moved through eBHIN is not shared outside eBHIN's network of behavioral health providers.

Nebraska's eBHIN is highlighted in a "bright spots" report among HIEs. Takeaways from Nebraska's eBHIN include:

- Behavioral health information can be exchanged via HIE, but it is critical to build HIE architecture around the privacy requirements and concerns that are unique to the behavioral health care field; and

- DIRECT is a key component in the integration of behavioral health information for point-to-point exchange.

Primary Care and Behavioral Health Integration

ONC convened a roundtable focused on using health IT to integrate behavioral health and primary care. The roundtable report highlights the discussion of essential elements of care integration between behavioral health and primary care settings.

SAMHSA awarded 94 grants to community behavioral health organizations for Primary and Behavioral Health Care Integration (PBCHI). The PBHCI grant program is part of an effort by Congress and HHS to

help prevent and reduce chronic disease and promote wellness by treating behavioral health needs on equal footing with other health conditions. The SAMHSA-HRSA Centers for Integrated Health Solutions provides a robust array of training and technical assistance to PBHCI grantees to assist them in meeting their charge of integrating primary care and behavioral health services.

The SAMHSA-HRSA Center for Integrated Health Solutions funded a cooperative agreement that selected State Designated Entities (SDEs) for the development of infrastructure supporting the exchange of health information among behavioral health and primary/physical health providers. The participating states are Kentucky, Illinois, Maine, Oklahoma and Rhode Island. Prior to this effort, no state HIE in the nation shared behavioral health information through an HIE.

Privacy and Consent

Currently, patient consent decisions about sharing health information are often obtained on a paper form. As more providers and HIEs move to the use of EHRs and other health IT, technology will play an increasing role in electronically capturing and maintaining patient consent.

Technology will also play an important role in identifying and communicating a patient's consent decision related to sharing health information. Health IT systems will need the ability to honor patient consent decisions. The following are a various projects ONC has supported focused on consent:

Data Segmentation for Privacy: The term "data segmentation" refers to the process of sequestering from capture, access or view certain data elements that are perceived by a legal entity, institution, organization, or individual as being undesirable to share. The Health IT Policy Committee recommended that ONC make it a priority to further explore data segmentation in health information exchange, with a wide vision for possible approaches to providing patients more granular control over the exchange and use of their identifiable health information, while also considering implications for quality of care and patient safety, patient educational needs, and operational implications.

The purpose of the pilot projects conducted under the ONC's Data Segmentation for Privacy Initiative (DS4P) is to place into production standards-based technologies that enable the segmentation required by varying disclosure policies, such as 42 CFR Part 2, in an interoperable manner within an electronic health information exchange environment. DS4P is sponsoring six pilot projects:

- U.S. Department of Veteran's Affairs (VA)/SAMHSA Pilot
- Software And Technology Vendors Association (SATVA) Pilot
- Netsmart Pilot
- Jericho/University of Texas- Austin Pilot
- Greater New Orleans Health Information Exchange (GNOHIE) Pilot
- Teradact Pilot

In addition, the U.S. Department of Veterans Affairs (VA) and SAMHSA demonstrated ways to enable sharing of information that is protected by substance abuse treatment confidentiality regulations and produced a 14 minute video overview of the pilot.

Aspiring to Awesome (A2A): The A2A pilot focuses on offering patients specific access control choices. A2A involves normalizing EHR patient information, conducting a needs analysis to understand patient preferences on health information exchange, creating an ethics framework and designing a browser-based interface to allow patients to specify their privacy preferences. This will help provide a mechanism for

implementing patients' preferences regarding who sees what data in their medical record and encourages patient autonomy, privacy, and trust while optimizing medical care of both the individual and the public.

SHARPS: ONC sponsored the Strategic Healthcare IT Advanced Research Projects on Security (SHARPS), to reduce security and privacy barriers to the effective use of health information technology. Under one SHARPS grant, the University of Illinois is working with the Illinois Health Information Exchange (ILHIE) on creating a prototype middle layer system that can evolve over time to provide it with the capability to manage granular consent for behavioral health related information as required by Federal law and Illinois state law. This middle layer would contain what is called a "predicate", which could use clinical decision support tools to identify and redact clinical information according to patient preference and HIE policy.

eConsent Toolkit: The purpose of the eConsent project was to implement innovative ways to gather patients' input on areas in which they want to learn more about consent, educate patients in a provider setting about the electronic sharing of their health information through HIEs, and capture and record choices the patients made.

Consent2Share: The Consent2Share Initiative, sponsored by SAMHSA is working to develop data segmentation software tools that can support and improve protection of privacy. The purpose of this project is to develop a production-grade privacy and consent management system capable of supporting a pilot implementation that will give patients granular choices and support the exchange of sensitive behavioral health information in compliance with current privacy regulations.

Prescription Drug Monitoring Program

Prescription drug abuse – especially of opioids – is one of the fastest growing health epidemics in the U.S. Every day in the U.S., 105 people die as a result of drug overdose, and another 6,748 are treated in emergency departments (ED) for the misuse or abuse of drugs. [22,23] In 2011, drug misuse and abuse caused about 2.5 million ED visits. Of these, more than 1.4 million ED visits were related to pharmaceuticals. [24,25]

Prescription drug abuse is not only deadly- it is costly. Prescription opioid abuse costs were about $55.7 billion, in 2007. Of this amount, 46 percent was attributable to workplace costs (e.g., lost productivity), 45 percent to health care costs (e.g., abuse treatment), and 9 percent to criminal justice costs.[26] AHRQ estimates that care provided in the emergency department costs 2-5 times as much as the same treatment delivered by a family physician or internist.

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[22] Centers for Disease Control and Prevention. Wide-ranging OnLine Data for Epidemiologic Research (WONDER) [online]. (2012) Available from URL: http://wonder.cdc.gov/mortsql.html.
[23] http://www.cdc.gov/homeandrecreationalsafety/overdose/facts.html
[24] http://www.samhsa.gov/data/2k13/DAWN127/sr127-DAWN-highlights.htm
[25] ED visits involving misuse or abuse of pharmaceuticals increased from 2004 (626,470 visits) through 2011 (1,428,145 visits); the most commonly involved drugs were anti-anxiety and insomnia medications and narcotic pain relievers (160.9 and 134.8 visits per 100,000 population, respectively); http://www.cdc.gov/homeandrecreationalsafety/overdose/facts.html
[26] Birnbaum HG, White AG, Schiller M, Waldman T, Cleveland JM, and Roland CL. Societal costs of prescription opioid abuse, dependence, and misuse in the United States. Pain Medicine 2011; 12: 657-667.
http://www.cdc.gov/homeandrecreationalsafety/overdose/facts.html

To address the prescription drug abuse problem, many states have established Prescription Drug Monitoring Programs (PDMPs). PDMPs are state-run electronic databases used to track the prescribing and dispensing of controlled prescription drugs to patients. PDMP data is intended to enhance health care providers' and pharmacists' understanding of their patients' controlled prescription drug history and enable them to intervene when there are signs of misuse. While PDMPs collect a considerable amount of useful data, they are often difficult to access and outside of the clinical workflow.

In 2011, ONC – in collaboration with SAMHSA, the Centers for Disease Control and Prevention, and the White House Office of National Drug Control Policy – launched the Enhancing Access to Prescription Drug Monitoring Programs using Health Information Technology project. This 18-month effort leveraged health IT to integrate PDMP data into the normal clinical workflow to improve PDMP access and clinical decision support. As part of this effort, 13 pilots were conducted to test various connections between state PDMPs and health IT systems (e.g., EHRs, HIEs, and pharmacy dispensing systems). Other activities of the project involved creating and disseminating communication materials to PDMP stakeholders, especially prescribers and dispensers, to create awareness and drive the demand for PDMP data.

What's Next?

Voluntary Certification

The Health IT Policy Committee, a federal advisory committee to the National Coordinator for Health Information Technology, was charged by ONC to prioritize health IT capabilities for voluntary EHR certification to improve interoperability across care settings. The committee will consider certification capabilities needed in care settings ineligible to receive incentive payments under the HITECH Act. The committee will consider applications specific to EHRs used in behavioral health settings. Committee recommendations are anticipated in Spring 2014.

Transitions of Care (ToC)

The ONC Standards & Interoperability (S&I) Framework's Longitudinal Coordination of Care (LCC) Workgroup engaged with the SAMSHA HIT group to review the Massachusetts IMPACT Project Transitions of Care (ToC) dataset. Based on these discussions, the behavioral health community proposed a series of data elements to incorporate in the IMPACT ToC Dataset. The data elements included: behavioral and mental health, severe depression, bipolar disorder, and diabetes. Ultimately, these data elements were grouped under the header for 'Condition Specific Information' and have been incorporated in the LCC Consolidated-Clinical Document Architecture (C-CDA) revisions that are being balloted through HL7 this fall. [27]

PDMP Standards and Interoperability Project

Currently, there are no universal standards in place for sending controlled substance data between PDMPs and EHR systems. The pilots conducted under the Enhancing Access to

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[27] Founded in 1987, Health Level Seven International (HL7) is a not-for-profit, ANSI-accredited standards developing organization dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services. HL7's 2,300+ members include approximately 500 corporate members who represent more than 90% of the information systems vendors serving health care.

Prescription Drug Monitoring Programs using Health IT project (the "Enhancing Access project") demonstrated proof of concept. This fall, a new phase of the project will establish an initiative under the S&I Framework to bring together the PDMP and health IT communities to assess the current PDMP infrastructure (e.g., interfaces, data formats, data transport and data security protocols) and available standards that could be harmonized to allow interoperable communications between PDMPs and health IT systems.

Conclusion

ONC will continue to promote the exchange of electronic health information and interoperability among health care providers. Pilot projects and other initiatives supported by ONC and federal partners have demonstrated how health IT can connect and integrate behavioral health providers with other health care settings. Moving forward, ONC will continue to leverage federal support of health information exchange through a variety of coordinated programs and resources.