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THE MENTAL HEALTH QUALITY FORUM

An Ecosystem Approach to Quality

This monograph is derived from "The Mental Health Quality Forum," which consisted of two roundtable meetings held March 15, 2013, in Dallas, Texas, and June 14, 2013, in Washington, DC. The meetings, development of the manuscripts, and development of this monograph were supported by Otsuka America Pharmaceutical, Inc. All participants received a fee for service from Otsuka America Pharmaceutical, Inc. for participation in the meetings.

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THE MENTAL HEALTH QUALITY FORUM An Ecosystem Approach to Quality

A multidisciplinary panel met twice to identify key issues and opportunities in the management of serious mental illness (schizophrenia, bipolar depression, and major depressive disorder). Panelists worked in small groups set up to simulate mental health "ecosystems," designed to mimic the inherent tension among stakeholders in real-world mental health care. The meetings were convened by Otsuka America Pharmaceutical, Inc., with the goals of identifying barriers to quality care, designing a blueprint for pilot initiatives for change, and presenting the findings to organizations that can work toward that change.

This monograph summarizes the panelists' findings and sets the stage for further work toward quality improvement in the care of serious mental illness.

3 The Mental Health Quality Forum: An Ecosystem Approach to Quality—Part 1: Identifying the Barriers to Quality

Forum participants contributed case studies as a springboard to discuss components of quality care in serious mental illness and to identify and prioritize the issues that contribute to suboptimal care delivery.

12 The Mental Health Quality Forum: An Ecosystem Approach to Quality—Part 2: Guiding Development of Pilot Projects to Drive Quality Improvement

In light of the barriers to quality identified in the first meeting, forum participants created a blueprint for pilot initiatives that would help drive process change in the management of serious mental illness.

The Mental Health Quality Forum: An Ecosystem Approach to Quality—Part 1: Identifying the Barriers to Quality

The Mental Health Quality Forum was a 2-meeting multidisciplinary panel focused on issues and opportunities in the management of serious mental illness (defined as schizophrenia, bipolar depression, and major depressive disorder). Participants included psychiatric nurses, managed care administrators, a specialty pharmacy provider, a community mental health center director, psychiatrists, a noted health services researcher in mental health, an American Psychiatric Association employer representative, a quality director, and executives from 2 leading mental health advocacy groups. In the initial meeting, panelists worked in small groups designed to simulate mental health "ecosystems," intended to mimic the inherent tension that often exists between various stakeholders in real-world mental health care. During the course of the meeting, panelists shared their experiences working in mental health to help frame key issues, identified key structures and processes related to quality care for patients diagnosed with serious mental illness, and identified and prioritized key facilitators and barriers related to the delivery of quality care. High-priority issues included needed improvements in the following components of care: care integration, infrastructure/enabling technology, tools to facilitate accountability, quality/performance measures, early screening and intervention best practices, enabling financing structures, consistency in diagnosis between providers, and access to appropriate care. Participants strategically identified methods to resolve these issues and emphasized that the initial focus should be on relatively simple structures and processes (eq., pilot projects) that would be manageable and provide measurable results in the short term. In the long term, the pilot project examples may be used to advocate for larger changes in payment structures, care integration, and societal issues. (J Clin Psychiatry Monograph 2014;20[1]:3–11)

n estimated 9.6 million US adults live with a serious mental illness (SMI).1 Major depression is the most prevalent SMI, as an estimated 6.7% of US adults live with major depression, 2.6% with bipolar disorder, and 1.1% with schizophrenia.^{2,3} Furthermore, an estimated 20% of children in the United States aged 13 to 18 years, and 13% of those aged 8 to 15 years, experience SMI in a given year. 4 Because many individuals with SMI have comorbid substance use, the use of illicit drugs is more likely among adults with mental illness in the previous year (26.7%) than among those without (13.2%).⁵ Among the 20.7 million adults with a substance use disorder, 40.7% have co-occurring mental illness.⁵ Patients with SMI often have insufficient support systems and face socioeconomic difficulties; among US adults living in homeless shelters, about 26% have SMI and 46% have SMI and/or substance use disorders. 6 The total annual direct and indirect US costs associated with SMI are estimated to be in excess of \$300 billion, and SMI costs the United States an estimated \$193.2 billion annually in lost productivity.⁷

The US health care system has failed to successfully meet the mental health care needs of persons with SMI. Approximately 37% of adults suffering from SMI received no mental health services during the preceding year.⁵ The Patient Protection and Affordable Care Act (ACA) in 2010 mandated the development of a National Quality Strategy⁸ to facilitate provision of safe, effective, and affordable health care to all Americans. Subsequently, the Substance Abuse and Mental Health Services Administration has developed the National Behavioral Health Quality Framework (NBHQF) to provide a mechanism to prioritize quality prevention, treatment, and recovery elements at the payer/system/plan, provider/practitioner, and patient/population levels.⁹

The NBHQF will guide the identification and implementation of key behavioral health quality measures to guide funding and to monitor US behavioral health and the delivery of behavioral health care. The National Committee for Quality Assurance has also updated its standards to include requirements to analyze care provided, including the coordination of physical and behavioral health care for persons with SMI,¹⁰ and has added Healthcare Effectiveness Data and Information Set measures for physical health monitoring for the SMI population.¹¹

The US health care system is a complex system with many disconnected stakeholders. Two pertinent aspects of the US health care system are that (1) incentives for insurers, payers, and providers of care are not aligned and (2) there is no central agency governing the system. Moreover, within the mental health arena, many stakeholders are involved in patient management, including psychiatrists, nurses and physician assistants, hospital care teams, outpatient social workers and case managers, physical health care providers, and those involved with housing and other social support systems. Despite the fact that so many people are involved in care of the SMI population, the needs of this population are still not being met.

MENTAL HEALTH QUALITY FORUM

The Mental Health Quality Forum (MHQF), a 2-meeting multidisciplinary panel held in March and June 2013, focused on the identification of key issues and opportunities in the management of SMI (schizophrenia, bipolar depression, and major depressive disorder).

Participants in the Mental Health "Ecosystems"

Panelists worked in 2 small groups set up to simulate mental health "ecosystems," designed to mimic the inherent tension that often exists between various stakeholders in real-world mental health care. The 13 participants included psychiatric nurses, managed care administrators, a specialty pharmacy provider, a community mental health center director, psychiatrists, a noted behavioral health services researcher, an American Psychiatric Association employer representative, a quality director, and executives from 2 leading mental health advocacy groups.

Each of the 2 ecosystem groups included a representative from each of the different constituencies, and the groups worked separately, with opportunities throughout the day to share with all program participants the issues that were discussed in smaller groups.

Objectives of the First Meeting

Participants were brought together to identify the components of quality care for patients diagnosed with SMI and to identify the key issues that contribute to care delivery being suboptimal in this population. After identification of the key issues, participants were asked to prioritize these issues based on the potential impact of addressing them from a systems point of view. In doing so, they were asked to think about which issues should be considered short- and long-term priorities.

THE FIRST MEETING: DEFINING THE PROBLEMS

Prior to the initial meeting, each participant was asked to provide a case study at the patient level (from experience as a health care professional caring for patients or as a family member of a patient) or at a higher level (from experience as an institutional provider, payer, advocate, or quality professional). Patient and institution names were blinded to preserve patient confidentiality and to ensure focus on relevant issues, rather than specific providers. The goal of the case studies was to illustrate 1 or more critical issues that impact the quality of care of patients with SMI. During the meeting, each participant shared their case verbally with the larger group and was given the opportunity to comment on key quality issues that were highlighted by the case study. Despite their disparate backgrounds, the multidisciplinary group assembled for the MHQF noted several common themes in their prepared case studies of SMI:

- Access to appropriate care can be challenging
- Comorbid substance use disorders are a common underlying concern and a potential detriment to quality care with limited treatment options and even more restricted access
- Transition support at many stages of treatment is critical for success

- A "silo" mentality often exists that limits communication between providers and can impact quality care
- There is no consensus on quality outcome measures in SMI apart from clinical outcomes such as suicide or self-harm
- Current incentive structures may negatively impact care and also increase overall cost of care

Kevs to Value-Driven Care

The ecosystem breakout sessions identified 5 major categories considered to be critical in providing value-driven quality care in SMI (Figure 1):

- 1. Improved or stabilized patient function
- Access to and appropriate use of hospital or other inpatient facilities
- 3. Access to and appropriate use of community-based
- 4. Patient satisfaction with care
- 5. Cost-effective care

Barriers to Value-Driven Care

While still in their ecosystem breakout groups, participants next brainstormed lists of barriers to providing value-driven care. While many potential obstacles were discussed, identified issues generally fell into 1 of 5 major categories: providercentered barriers (involving both personnel-related and non-personnel-related issues), patient-centered barriers, access-related barriers, financial barriers, and other barriers.

Provider-centered barriers. Provider-related barriers to care involved both personnel-related and non-personnel-related issues. Discussion of personnel-related issues focused on inadequate levels of personnel to care for patients with SMI, particularly involving medication management. The number of psychiatrists has been declining in recent years, and the significant shortages continue to worsen, especially in child/ adolescent and geriatric psychiatry. 12 Additionally, the panel members expressed their concerns that psychiatrists are often used ineffectively. A nursing shortage also exists in psychiatry, 13 and often there may not be enough nursing staff to administer injectable antipsychotics. 14,15 In some states, nurse practitioners and physician assistants may prescribe medication,¹⁶ but this is not uniform throughout the United States. Some panelists cited prescribing of antipsychotics by primary care physicians who are not trained to treat SMI. Moreover, many community mental health centers and residential facilities have a high rate of staff turnover¹⁷ and therefore may often have inexperienced staff caring for patients. Workers who treat mental illness may experience burnout, 18 as their efforts do not show reward due to the significant barriers they face daily, and panelists felt that this frustration contributed to a certain amount of inertia.

Non-personnel-related issues identified by the panel centered on facility issues related to patient care and on

Costeffectiveness **Improved** Patient satisfaction function **VALUE-DRIVEN CARE** Access to and Access to and measurement of appropriate use hospital and of community. inpatient based care facility use

Figure 1. Five Keys to Value-Driven Quality Care in Serious Mental Illness

the process of care. One major barrier cited was the lack of health information technology infrastructure. While the ACA has mandated use of electronic medical records, ¹⁹ these systems are new, do not always talk to each other, and may be difficult to use. ²⁰ Moreover, providers may be concerned with documenting SMI in an electronic medical record due to patient confidentiality laws. Notably, the 2009 Health Information Technology for Economic and Clinical Health (HITECH) Act authorized \$20 billion in incentives designed to increase adoption of electronic health records; however, many mental health and substance abuse providers were excluded from these incentives. ^{21,22} Another facility-related issue was suboptimal office space, especially for the administration and storage of injectable antipsychotics. ¹⁵

With regard to process of care, panelists cited inadequate time spent with patients due to high case loads, which led to the inability to conduct thorough patient screening. A related issue is the lack of nationally standardized quality measures pertaining to screening and assessment of patients. Furthermore, the need for early screening and intervention, better continuity of care, consensus guidelines for practice, and improved social services were cited as provider-related issues.

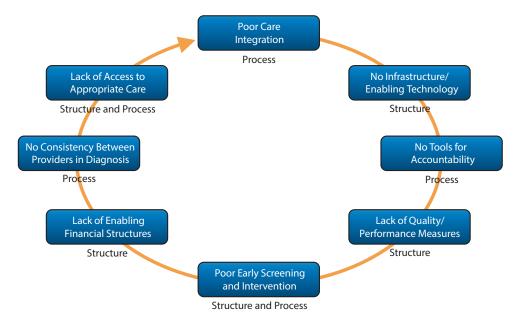
Patient-centered barriers. Individuals with SMI are a difficult population to treat. Frequently, patients with SMI have co-occurring substance use disorders⁵ that act as barriers to treatment access and success.²³ Cognitive impairments that affect some patients with SMI may lead to a lack of insight into their diagnosis and treatment and difficulty understanding medication regimens, which may in turn contribute to medication nonadherence.^{24,25} Lack of available or acceptable

housing for patients with SMI was also mentioned as a problem. About 30% of people who are chronically homeless have mental health conditions,²⁶ and the subset of patients who are transient may lack transportation to treatment appointments.²⁷ Multiple family members may also have SMI diagnoses, which contributes to an unstable social network for many patients with SMI.²⁸

Access-related barriers. One major access issue that was discussed related to pharmacologic treatment for SMI. Many patients with SMI are covered by Medicaid, and there is a great deal of variability in coverage from state to state. ^{29,30} Formulary restrictions and the prior authorization process were seen as barriers to care. Furthermore, prescriptions often have a limited number of refills; therefore, psychiatrists may need to see patients more often, in part to meet frequent prior authorization paperwork requirements. Furthermore, availability of prescribing providers adds to the difficulty of medication access and consistency. Finally, patients may have difficulty with attending follow-up appointments after a hospitalization, which increases use of emergency room services.

Financial barriers. Financial barriers impact providers and patients. Funding for the treatment of individuals with SMI tends to be low, and the funding streams that do exist are "siloed," in that they are insular and do not function collaboratively. Panelists expressed that financial incentives for providers are not linked to quality outcomes and are often misaligned. Providers commented that while they would like to use injectable antipsychotics more often, reimbursement rates for the injections often do not cover their cost. 31,32 Moreover, hospitals are paid on a case rate or per-diem basis,

Figure 2. High-Priority Issues Impacting Quality Care in Serious Mental Illness



and these rates are also too low to justify administration of a costly injectable antipsychotic.

Patients with SMI also have health care coverage and financial difficulties. A recent survey by the National Alliance on Mental Illness (NAMI) reported that approximately 37% of people with mental illness are covered by Medicaid, and 37%, by Medicare, while 10% have no insurance at all.²⁹ Furthermore, 71% earn an income of \$20,000 or less per year, and 20% of those respondents live on less than \$5,000 per year.²⁹ Even though many generic antipsychotics have very low copays—often under \$5—the cost may still be too high for an unemployed consumer without access to health insurance. Patients may not be able to even afford basic public transportation to access care or follow-up visits.

Other barriers. Other barriers to care cited by participants involved frequent inpatient readmissions, incarcerations, and other involvement (or lack thereof) of the justice system with the SMI population.

IMPROVING QUALITY OF CARE: WHAT WILL HAVE THE MOST IMPACT?

After the initial brainstorming session, the MHQF met as a larger group to discuss the issues they had identified in their breakout groups. Eight broad, interrelated categories of issues were determined to be of high priority in terms of their potential impact on quality care in SMI: poor care integration, no infrastructure/enabling technology, no tools for accountability, lack of quality/performance measures, poor early screening and intervention, lack of enabling financial

structures, no consistency between providers in diagnosis, and lack of access to appropriate care (**Figure 2**).

Care Integration

The MHQF participants recognized that care for the population with SMI is fragmented. Optimal treatment of SMI often requires integration of many components/providers, which include hospitals as well as many entities outside the traditional health care system, such as hospitals, community-based physicians, substance abuse providers, the justice system, homeless shelters, halfway houses, and food pantries.

MHQF participants also recognized that current care is not optimal. The current focus of the US health care system at large is on reduction of readmissions from other diseases—not readmissions for behavioral health issues. Participants were hopeful that the new accountable care focus in health care may help create better integration in the treatment of individuals with SMI. Along these lines, one panel participant mentioned the integration of primary care and mental health care via specialty patient-centered medical homes for the mentally ill. The goal of patient-centered medical homes is to coordinate the variety of services patients might need, and further implementation of this model could have a number of benefits for SMI patients.³³

Insufficient effective communication between providers results in suboptimal collaboration in care, screening, and follow-up of patients, and many primary care physicians are undertrained in mental health conditions. Clinicians themselves may be part of the problem. Adequacy of information on medical records was also cited as an area in need of improvement.³⁴ Some attributed this incompleteness to the stigma of

mental illness, while others felt that information is often not shared because information about SMI is frequently deemed "confidential" and not necessarily part of health information exchange between providers.^{35,36} One panel participant expressed the issue as follows:

"Not to blame mental health professionals, but they've sort of created their own problem by thinking that patient information about mental illnesses needs to be behind glass. Actually, legal regulations say that it doesn't, as long as the information is isolated to diagnosis, history of present illness, and medications—just like a regular medical history. Mental health information can be on a portal not for the world, but for the primary care doctor to see in order to coordinate care as needed."

Infrastructure/Enabling Technology

Panelists observed that the lack of adequate health information technology throughout the care continuum, combined with poor documentation, makes sharing of information between providers difficult. Poor communication and incomplete documentation can result in delay in care or suboptimal care. A recent study of 13 of the top US hospitals determined that in over 70% of the hospitals, nonpsychiatric physicians lacked full access to psychiatric records.³⁵

Another result of inadequate health information technology is that current systems often do not provide the infrastructure to adequately support measuring the process of care. Participants noted a need for infrastructure that supports care design, in order to understand both the care being delivered and the costs associated with that care. One participant commented:

"Health care lags behind most other industries in how technology is used to improve what we do, and, in turn, behavioral health tends to lag behind most of health care."

The recently introduced Behavioral Health Information Technology Act of 2013 bill may be a positive step in the direction of care coordination if passed.³⁷ It would incentivize the meaningful use of electronic health records in mental health care. This legislation would extend the 2009 HITECH Act, which excluded behavioral health providers from such incentives.²²

Tools for Accountability

The panelists emphasized that financial incentives for providers should follow the quality of care given. The CMS Stars bonus programs and Value-Based Purchasing programs³⁸ have drawn significant attention to those measures included in the program; however, mental health measures are not included. Until the use of quality-of-care measures is expanded, incentives and accountability cannot occur. Accountability is dependent on both access to and type of care, not one or the other. Patient engagement is required to ensure accountability,

and patient engagement is difficult to predict or guarantee in patients with SMI. Two panelists were quoted as follows:

"For mental health care, there are so many clinical reasons not to follow the established pathways that it's unclear if a provider is deviating from them or not. You can't incentivize providers if you don't know whether you can fault them or not."

"If a person has access to care, but then gets ineffective services, access by itself doesn't accomplish much. By the same token, appropriate and more effective care doesn't accomplish much for the people who aren't able to gain access to it."

Development (and Use) of Practice Guidelines

Participants also noted that few definitive guidelines exist for the treatment of many mental illnesses in comparison to other health conditions. When guidelines do exist (for example, those published by the American Psychological Association³⁹), clinicians may be reluctant to use them because they feel that the guidelines are too prescriptive and do not apply to the kinds of patients they see, as illustrated by the following panelist quotes:

"Clinical practice guidelines for schizophrenia are abundant, but the question remains: Who's actually using them, and using them routinely?"

"Clinicians see guidelines as practicing 'cookbook medicine' and don't use them."

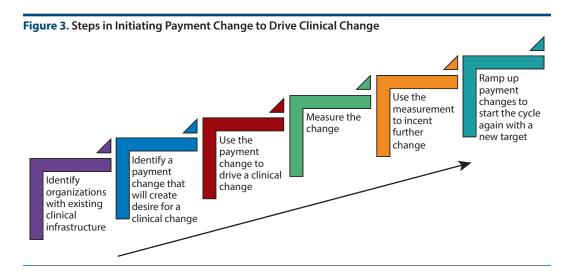
Panelists believed that the current system rewards productivity rather than quality. Patients with SMI benefit from long visits that include time to gather relevant medical and psychiatric history. However, providers are held to productivity requirements that require them to see more patients at the expense of the quality of care they are able to provide to their patients. These productivity requirements are driven by many factors, including payment systems and provider facility mandates. ⁴⁰ Two panelists are cited as follows:

"As productivity requirements have gone up, the focus on getting a longitudinal history has gone down, and, therefore, psychiatric diagnosis has become more problematic."

"My diagnostic pictures have become increasingly more provisional. At this point, I hardly give out a solid working diagnosis."

Early Screening and Intervention

Panelists also felt that early screening for mental illness and intervention in children are lacking. There was a strong feeling that assessing children and adolescents for signs of SMI and treating them at an earlier stage when signs are noticed



may help prevent future, more serious events. One participant illustrated this point as follows:

"Lack of screening and intervention at an early age are major hindrances that end up causing more problems later."

This point ties directly into the earlier argument that the US health care system does not focus on illness prevention and early intervention, emphasizing treatment of a condition rather than screening and early intervention to prevent disease progression. Screening for SMI could become part of routine adolescent wellness visits, as is currently done for scoliosis. When SMIs are allowed to progress, they become more challenging to manage for both the patient and the health care system.^{41–43}

Enabling Financial Structures

In addition to a lack of adequate quality measures, current financial structures also do not enable the adequate treatment of mental illness. There are too few dollars available to treat SMI, and the allocation of the dollars that do exist is skewed. This situation is especially apparent due to the prevalence of public payer coverage in this population.

As one panelist asked:

"What's the pot of money, is it big enough, what are the spigots that let it out, and are they appropriate? Quality care depends on both funding levels and then allocation of funds."

Misaligned financial and quality incentives were seen as a system-wide issue affecting not only providers in traditional settings but also pharmacists:

"As pharmacy providers, we're not incentivized for quality, and payment structures are not necessarily set up properly."

Within physician practices, ineffective resource allocation exists. Even with adequate funds, some resources are not

optimally utilized. Administrative burden was mentioned as a problem along these lines. For example, a large survey showed that for every hour spent in direct care of dually eligible psychiatric patients, psychiatrists and their staff spent 45 minutes on administrative tasks.⁴⁴ One participant mentioned that within his practice, psychiatric practitioners were spending time doing administrative tasks that could have been accomplished by other staff members. However, because those other staff positions were not adequately filled, practitioners had to take time away from patient care to attend to administrative functions.

Participants felt that a change is needed in how services are reimbursed. Fee-for-service models, in which physicians are paid separately for each service provided, may be inappropriate and result in suboptimal care of patients with severe mental health issues.⁴⁰ However, the group did note the difficulties involved in changing payment structures in a difficult-to-treat patient population.

"Certain payment methodologies really restrict innovation as well as the implementation of evidence-based best practices. More prospective payment methodologies allow for greater customization of service design and delivery."

Diagnostic Consistency Among Providers

The participants pointed out that accurately diagnosing severe mental illness was difficult at times, that diagnoses are somewhat subjective, and that definitive diagnoses are often elusive. Panelists believed that no single diagnostic scale is effective and that the lack of a uniform, consistent scale or tool for diagnosis contributes to poor continuity of care:

"We have difficulty with interreliability of diagnoses and treatment. For instance, for inpatient versus outpatient care, we found that the goals were different, the diagnoses were different, and the entire plan of prescriptions ended up being different."

"How many of us have just a single scale we rely on for diagnostic criteria and/or a treatment being effective?"

Because there is no single diagnostic scale, and arriving at a definitive diagnosis is difficult, interrater reliability between providers is inconsistent. Patients are often treated by multiple providers, and each of those providers may diagnose the same patient differently. Disparities in diagnosis also lead to concern among payers that patients may be receiving inappropriate treatment. Lack of consistent diagnoses may lead to fractured care, multiple or conflicting treatment regimens, and added confusion for both patients and providers, as described by a panelist:

"A diagnostic list from a case manager or from a therapist may be completely different from the diagnostic picture given by the prescriber, and may be completely different from the diagnostic picture given by the hospital psychiatric unit the patient was in during an exacerbation of their symptoms. This inconsistency becomes very counterproductive."

Patient Access to Appropriate Care

Access to higher levels of care can be challenging, especially access to substance abuse programs, ⁴⁵ day treatment programs, and halfway houses. However, the ACA does include substance abuse treatment as a mandated service, and it includes provision for training and development of a larger workforce. ⁴⁶

The participants also noted a dearth of child psychiatrists today, ¹² especially those seeing Medicaid and Medicare patients. ⁴⁷

In addition to difficulties with access to higher levels of care, social support systems are also often lacking. Patients with SMI may require additional support in order to maximize their traditional care. One example cited was the difficulty that many patients have in finding transportation to and from physician and counselor appointments and pharmacies. Patients may not have family or caregivers to drive them to appointments or be able to afford bus tickets where public transportation is available. Social support can also help encourage patients to adhere to treatment regimens.²⁵

Accessing medication may also be difficult. Delays in treatment may occur due to prior authorization requirements. ^{48,49} Furthermore, side effects of medication can be challenging and result in medication noncompliance. ⁵⁰

SETTING THE STAGE FOR CHANGE

Participants returned to their breakout groups to prioritize the 8 issues and identify which ones should and could be addressed in the short term (within 3 years) and then in the longer term (more than 3 years in the future). During the breakout sessions, participants moved to a discussion of process rather than simply identifying which issues could be addressed in the short versus long term, as participants agreed that all prioritized issues required both short- and long-term foci.

The participants felt that the initial focus for addressing the many pertinent issues and barriers to quality care in SMI should be on relatively simple structures and processes. The suggestion was made to focus on a pilot project with manageable and measurable goals in the short term (under 3 years). The pilot would then be used to lobby for larger changes in incentives, care integration, and related societal issues. Participants emphasized that they did not believe that a reinvention of the complete mental health care system was warranted, but that a stepwise approach was needed for future change. The process was envisioned as beginning with the identification of organizations that have existing clinical infrastructures and then determining a possible payment change—even a small one, such as paying for care coordination—that could create the desire for a clinical change. Subsequently, the implementation of this payment change could drive the desired clinical change, which could be qualitatively or quantitatively measured. The measured impact could then be used to incent further change, and these applied payment changes could drive the start of another cycle of change, this time with a new target (Figure 3).

The participants suggested an order of prioritization of the problem areas to be addressed, as follows:

- 1. Early screening and intervention
- 2. Adequate quality measures
- 3. Infrastructure development
- 4. Financing structures
- 5. Accountability to evidence-based care
- 6. Coordination of care
- 7. Access to care
- 8. Patient engagement (which overlaps with all other issues)
- 9. Definitive diagnosis

The participants discussed the fact that the media's reporting of recent mass shootings has put a spotlight on the need for better mental health care. Furthermore, the rollout of the ACA has led to an enhanced focus on efforts to coordinate behavioral and physical health care.⁵¹ Panelists felt that this enhanced visibility of mental health care could provide a way to gain support for the pilot project and drive change:

"Right now, there is a window of opportunity coinciding with the Affordable Care Act. So how do we elevate the conversation, and how do we leverage this opportunity to bring about meaningful change in public policy by bringing what we know to scale?"

The participants also noted the importance of the role of funding in driving change. Panelists felt that it was critically important to align financial incentives with program outcomes,

as accountability and compensation will drive change in the provider community, as illustrated by the following panelist quote:

"As they say, money talks. I do believe that communication in general around best practices and advancing them is needed, but if you start changing some of the reimbursement infrastructures and align your financial structures and accountability—and you pay—word travels fast."

However, panelists also recognized that money alone was not the answer. Successful execution of the pilot program, as well as subsequent dissemination of the findings of the pilot program to facilitate implementation in other organizations, would be critical to program success. Measuring return on investment during the pilot projects was also seen as important, as the pilots will need to show a positive return on investment to be broadly accepted and implemented.

"Incentives are important; however, the money is necessary but not sufficient. We need to remember that. Other important aspects are adoption, implementation, and dissemination."

CONCLUSION

The current US health care system does not successfully meet the care needs of the estimated 9.6 million persons¹ living with SMI. An integrated treatment approach among all stakeholders may be optimal for the delivery of comprehensive patient care; yet, in the current US health care system, mental health care is often fragmented and ineffective. The multidisciplinary MHQF panel identified barriers to quality care in SMI, broadly categorized as patient-related, providerrelated, access-related, financial, and other issues. Within these categories, the following were identified as high-priority areas in need of improvement: care integration, infrastructure/ enabling technology, tools to facilitate accountability, quality/ performance measures, early screening and intervention, enabling financing structures, consistency among providers in diagnosis, and patient access to appropriate care. Adequate consideration of the broad range of issues affecting patients with SMI was a theme that was repeated throughout the forum, particularly lack of patient support systems, presence of comorbid substance abuse, and problems with access to care. Panelists believed that a preliminary focus for strategies should be on straightforward structures and processes implemented via pilot projects that would be manageable and measurable in the short term. Looking forward, the results of pilot projects could be employed to provide rationale for larger changes in payment incentives and care integration.

Several small pilot projects have been conducted in limited settings targeting strategic initiatives identified by

MHQF panelists. As demonstrated previously, successful collaborative care programs may include measurement-based care and stepped care, in which treatment changes are made if patients do not meet desired clinical outcomes,⁵² and a collaborative care team that includes all stakeholders (primary care physicians, nurses, clinical social workers, psychologists, and psychiatrists). Previously conducted collaborative care pilot programs have shown improved treatment outcomes in comparison to usual care settings.^{53,54} Evidence across therapeutic areas (not specific to mental health) generally supports the role of integrated health care delivery systems in improving quality of patient care.⁵⁵

Panelists stressed the importance of the current lack of quality/performance measures in mental health care. Such measures do not exist currently in the United States due to a lack of clearly defined outcome measures, inadequate infrastructure to develop and implement quality measures, and lack of a cohesive strategy to apply quality measures across different care settings.56 The use of specific performance or quality measures, such as the National Committee for Quality Assurance benchmarks,¹¹ to measure evidence-based health care for many chronic health conditions has been implemented in the United States in recent years to improve patient care and to facilitate provider and health plan accountability. Some preliminary research has suggested that the tracking of key quality indicators tied to payment incentives, as part of a large quality initiative, may improve the effectiveness of care for patients with depression.⁵⁷ Future pilot projects that address the broad range of issues and barriers identified by MHQF panelists may provide the first steps toward helping to reshape the mental health care landscape in the United States and thereby laying the foundation for long-term improvement of care among the US population of patients affected by SMI.

REFERENCES

- National Institutes of Health, National Institutes of Mental Health. Statistics: Any disorder among adults. http://www.nimh.nih.gov/statistics/1anydis_adult.shtml. Accessed January 31, 2014.
- National Institutes of Health, National Institutes of Mental Health. The Numbers Count: Mental Disorders in America. http://www.nimh.nih.gov/health/publications/the-numbers-count-mental-disorders-in-america/index.shtml. Accessed January 31, 2014.
- National Alliance on Mental Illness. Mental Illness Facts and Numbers. http://www. nami.org/factsheets/mentalillness_factsheet.pdf. Accessed January 31, 2014.
- National Institutes of Health, National Institutes of Mental Health. Any disorder among children. http://www.nimh.nih.gov/statistics/1ANYDIS_CHILD.shtml. Accessed January 31. 2014.
- Substance Abuse and Mental Health Services Administration. Results from the 2012
 National Survey on Drug Use and Health: Mental Health Findings. NSDUH Series H-47,
 HHS Publication No. (SMA) 13-4805. Rockville, MD: Substance Abuse and Mental Health
 Services Administration; 2013. http://www.samhsa.gov/data/NSDUH/2k12MH_
 FindingsandDetTables/2K12MHF/NSDUHmhfr2012.pdf. Accessed January 31, 2014.
- US Department of Housing and Urban Development, Office of Community Planning and Development. The 2010 Annual Homeless Assessment Report to Congress. 2011. http://www.hudhre.info/documents/2010HomelessAssessmentReport.pdf. Accessed January 31, 2014.
- Insel TR. Assessing the economic costs of serious mental illness. Am J Psychiatry. 2008;165(6):663–665.
- 2011 Report to Congress: National Strategy for Quality Improvement in Health Care. Washington, DC: US Dept of Health Human Services; 2011.

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- Substance Abuse and Mental Health Services Administration. National Behavioral Health Quality Framework (Draft). http://store.samhsa.gov/draft/NBHQF_DRAFT_082613.pdf. Published August 22, 2013. Accessed February 3, 2014.
- National Committee for Quality Assurance. 2014 NCQA MBHO Accreditation Requirements. http://www.ncqa.org/Portals/0/Programs/Accreditation/2014%20MBH0%20 requirements.pdf#page=3&zoom=auto,-17,745. Accessed September 17, 2014.
- 11. Public invited to help shape new measures on physical health, comorbid conditions, and care transitions for people with serious mental illness and alcohol or other drug use disorders. National Committee for Quality Assurance website. http://www.ncqa.org/Newsroom/NewsArchive/2014NewsArchive/NewsReleaseJune32014.aspx. Accessed August 8, 2014.
- Caccavale J, Reeves JL, Wiggins J. The Impact of Psychiatric Shortage on Patient Care and Mental Health Policy: The Silent Shortage That Can No Longer Be Ignored. American Board of Behavioral Healthcare Practice website. http://abbhp.org/survey.pdf. Accessed August 26, 2014.
- Hanrahan NP. Analysis of the psychiatric—mental health nurse workforce in the United States. J Psychosoc Nurs Ment Health Serv. 2009;47(5):34–42.
- Getzen H, Beasley M, D'Mello DA. Barriers to utilizing long-acting injectable antipsychotic medications. Ann Clin Psychiatry. 2013;25(4):E1–E6.
- 15. Kane JM. Organizational barriers to using long-acting injectable antipsychotics in practice. *J Clin Psychiatry*. 2014;75(6):e16.
- Mid-Level Practitioners Authorization by State. Office of Diversion Control, Drug Enforcement Administration website. http://www.deadiversion.usdoj.gov/drugreg/ practioners/mlp_by_state.pdf. Accessed August 6, 2014.
- Substance Abuse and Mental Health Services Administration. An Action Plan for Behavioral Health Workforce Development. HHS Publication No. SMA 11-4629.
 Rockville, MD: Substance Abuse and Mental Health Services Administration; 2007. http://www.samhsa.gov/workforce/annapolis/workforceactionplan.pdf
- Pedrini L, Magni LR, Giovannini C, et al. Burnout in nonhospital psychiatric residential facilities. Psychiatr Serv. 2009;60(11):1547–1551.
- 19. Patient Protection and Affordable Care Act, 42 USC §4103 (2010).
- 20. Fernandopulle R, Patel J. How the electronic health record did not measure up to the demands of our medical home practice. *Health Aff*. 2010;29(4):622–628.
- Miller JE, Glover RW, Gordon SY. Crossing the Behavioral Health Digital Divide: The Role of Health Information Technology in Improving Care for People With Serious Mental Illness in State Mental Health Systems. National Association of State Mental Health Program Directors website. http://www.nasmhpd.org/publications/NASMHPD_HIT%20and%20 BH%20Issue%20Paper_June%202014_Final.pdf. Published June 2014. Accessed July 31, 2014.
- Health Information Technology for Economic and Clinical Health Act. http://www.hhs. gov/ocr/privacy/hipaa/understanding/coveredentities/hitechact.pdf. Accessed August 26, 2014.
- National Alliance on Mental Illness. Dual Diagnosis: Substance Abuse and Mental Illness. http://www.nami.org/Content/NavigationMenu/Inform_Yourself/About_Mental_ Illness/By_Illness/Dual_Diagnosis_Substance_Abuse_and_Mental_Illness.htm. Updated January 2013. Accessed November 12, 2014.
- Lacro JP, Dunn LB, Dolder CR, et al. Prevalence of and risk factors for medication nonadherence in patients with schizophrenia: a comprehensive review of recent literature. J Clin Psychiatry. 2002;63(10):892–909.
- Velligan DJ, Weiden PJ, Sajatovic M, et al. Expert Consensus Panel on Adherence Problems in Serious and Persistent Mental Illness. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. J Clin Psychiatry. 2009;70(Suppl 4):1–46, quiz 47–48.
- Substance Abuse and Mental Health Services Administration. Current Statistics on the Prevalence and Characteristics of People Experiencing Homelessness in the United States. http://homeless.samhsa.gov/ResourceFiles/hrc_factsheet.pdf. Updated July 2011. Accessed August 8, 2014.
- HCH Clinicians' Network. Mental illness, chronic homelessness: an American disgrace. Healing Hands. 2000;4(5):1–2. http://www.nhchc.org/wp-content/uploads/2012/03/ Oct2000HealingHands.pdf
- National Institutes of Health. Information about Mental Illness and the Brain. Biological Sciences Curriculum Study. NIH Curriculum Supplement Series [Internet]. Bethesda, MD: National Institutes of Health; 2007. http://www.ncbi.nlm.nih.gov/books/ NBK20369/?report=classic. Accessed November 12, 2014.
- Hall LL, Graf AC, Fitzpatrick MJ, et al. Shattered lives: Results of a national survey of NAMI members living with mental illnesses and their families (TRIAD). http://www.nami.org/ Content/NavigationMenu/Inform_Yourself/About_Public_Policy/Policy_Research_ Institute/TRIAD/NAMI_TRIAD_Report_FINAL.pdf. Published July 2003. Accessed March 20, 2014.
- Mann C; Center for Medicaid and CHIP Services. Coverage and service design opportunities for individuals with mental illness and substance use disorders. http://medicaid.gov/ Federal-Policy-Guidance/Downloads/CIB-12-03-12.pdf. Published December 3, 2012.

- Accessed November 12, 2014.
- Přikryl R, Přikrylová Kučerová H, Vrzalová M, et al. Role of long-acting injectable secondgeneration antipsychotics in the treatment of first-episode schizophrenia: a clinical perspective. Schizophr Res Treat. 2012;2012:764769.
- 32. Heres S, Hamann J, Kissling W, et al. Attitudes of psychiatrists toward antipsychotic depot medication. *J Clin Psychiatry*. 2006;67(12):1948–1953.
- Alakeson V, Frank RG, Katz RE. Specialty care medical homes for people with severe, persistent mental disorders. Health Aff (Millwood). 2010;29(5):867–873.
- Tai B, Boyle M, Ghitza U, et al. Meaningful use of electronic behavioral health data in primary health care. Sci Transl Med. 2012;4(119):119mr3.
- Kozubal DE, Samus QM, Bakare AA, et al. Separate may not be equal: a preliminary investigation of clinical correlates of electronic psychiatric record accessibility in academic medical centers. Int J Med Inform. 2013;82(4):260–267.
- Clemens NA. Privacy, consent, and the electronic mental health record: the Person vs the System. J Psychiatr Pract. 2012;18(1):46–50.
- The Behavioral Health IT Act: Coordinating Care, Lowering Costs. National Council website. http://www.thenationalcouncil.org/wp-content/uploads/2012/10/12_ BehavioralHealthIT.pdf. Accessed July 26, 2014.
- Centers for Medicare and Medicaid Services. Hospital Value-Based Purchasing. http:// www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospitalvalue-based-purchasing/index.html?redirect=/Hospital-Value-Based-Purchasing. Updated May 8, 2014. Accessed July 21, 2014.
- American Psychological Association. Proficiency in psychology: assessment and treatment of serious mental illness. https://www.apa.org/practice/resources/smi-proficiency.pdf. Published August 2009. Accessed January 31, 2014.
- Morden NE, Mistler LA, Weeks WB, et al. Health care for patients with serious mental illness: family medicine's role. J Am Board Fam Med. 2009;22(2):187–195.
- Robert Wood Johnson Foundation. How can early treatment of serious mental illness improve lives and save money? Health Policy Snapshot. March 2013. http://www.rwjf.org/ content/dam/farm/reports/issue_briefs/2013/rwjf405173.
- National Alliance on Mental Illness. Mental Illnesses: Treatment Saves Money and Makes Sense. http://www.nami.org/Template.cfm?Section=Policy&Template=/ ContentManagement/ContentDisplay.cfm&ContentID=44613. Published March 2007. Accessed November 12, 2014.
- Mental illness exacts heavy toll, beginning in youth [news release]. Bethesda, MD: National Institute of Mental Health; June 6, 2005. http://www.nimh.nih.gov/news/science-news/2005/mental-illness-exacts-heavy-toll-beginning-in-youth.shtml. Accessed November 12, 2014.
- Wilk JE, West JC, Rae DS, et al. Medicare Part D prescription drug benefits and administrative burden in the care of dually eligible psychiatric patients. *Psychiatr Serv*. 2008;59(1):34–39.
- Substance Abuse and Mental Health Services Administration. Results From the 2011
 National Survey on Drug Use and Health: Summary of National Findings. NSDUH Series H-44,
 HHS Publication No. (SMA) 12-4713. Rockville, MD: Substance Abuse and Mental Health
 Services Administration; 2012.
- Mechanic D. Seizing opportunities under the Affordable Care Act for transforming the mental and behavioral health system. Health Aff (Millwood). 2012;31(2):376–382.
- Glied S, Cuellar AE. Trends and issues in child and adolescent mental health. Health Aff (Millwood). 2003;22(5):39–50.
- Seabury SA, Goldman DP, Kalsekar I, et al. Formulary restrictions on atypical antipsychotics: impact on costs for patients with schizophrenia and bipolar disorder in Medicaid. Am J Manag Care. 2014;20(2):e52–e60.
- Goldman DP, Dirani R, Fastenau J, et al. Do strict formularies replicate failure for patients with schizophrenia? Am J Manag Care. 2014;20(3):219–228.
- Lehman AF, Lieberman JA, Dixon LB, et al. Practice Guideline for the Treatment of Patients With Schizophrenia, Second Edition. Am J Psychiatry. 2004;161(2 suppl):1–56.
- Croft B, Parish SL. Care integration in the Patient Protection and Affordable Care Act: implications for behavioral health. Adm Policy Ment Health. 2013;40(4):258–263.
- Katon W, Unützer J, Wells K, et al. Collaborative depression care: history, evolution and ways to enhance dissemination and sustainability. Gen Hosp Psychiatry. 2010;32(5):456–464.
- Hunkeler EM, Katon W, Tang L, et al. Long term outcomes from the IMPACT randomised trial for depressed elderly patients in primary care. BMJ. 2006;332(7536):259–263.
- Gil M, Mikaitis DK, Shier G, et al. Impact of a combined pharmacist and social worker program to reduce hospital readmissions. J Manag Care Pharm. 2013;19(7):558–563.
- Hwang W, Chang J, Laclair M, et al. Effects of integrated delivery system on cost and quality. Am J Manag Care. 2013;19(5):e175–e184.
- Killbourne AM, Keyser D, Pincus HA. Challenges and opportunities in measuring the quality of mental health care. Can J Psychiatry. 2010;55(9):549–557.
- Unützer J, Chan YF, Hafer E, et al. Quality improvement with pay-for-performance incentives in integrated behavioral health care. Am J Public Health. 2012;102(6):e41–e45.

The Mental Health Quality Forum: An Ecosystem Approach to Quality—Part 2: Guiding Development of Pilot Projects to Drive Quality Improvement

The Mental Health Quality Forum, a 2-meeting multidisciplinary panel, focused on issues and opportunities in the management of serious mental illness (SMI). Participants met in small groups designed as mental health "ecosystems" that represented a variety of stakeholders in real-world mental health care. The task of the second meeting was to create a blueprint for pilot initiatives that would effect change in SMI management. The panelists identified 3 areas as key to pilot design: (1) care coordination, (2) quality measures, and (3) enabling financial structures to provide incentives. Participants emphasized that care coordination should include all care providers (including nontraditional and primary care providers) and evaluate each provider's contribution to care, with determination of treatment overlap and gaps. An expanded, centralized care manager role could be implemented; this person would have broad knowledge of general health care and SMI, as well as traditional case manager connections (to housing, employment, benefits, etc). Panelists discussed several factors that will influence quality measures in SMI, including access to care, clinical processes, patient satisfaction, functional status, and patient engagement, and the measures will impact many stakeholders, including health care professionals, hospitals, network/accountable care organization/plans, and patients and caregivers. Both negative metrics (measures of poor care) and positive metrics (measures of good-quality care) were suggested. Payment for care coordination is currently not widespread, and incentives must support the improvement of overall health. Outcomes that could be tied to incentives include those resulting in cost savings (eg, fewer admissions) and in improved overall health. Participants noted that incentives must include payment for ancillary services (eg, education, training) and payment to non-health care providers (eg, jails, child welfare, housing). Further, providers and payers must be held accountable to the incentives. Considerations in payment redesign include coding for services, differences among states, data acquisition, and utilization. For many individuals with SMI diagnoses, care is currently managed primarily by providers within the mental health system, rather than by primary care providers, yet physical health (J Clin Psychiatry Monograph 2014;20[1]:12-20) expenditures are very high in this population.

omprehensive health care for patients with serious mental illness (SMI, defined as schizophrenia, bipolar depression, or major depressive disorder) remains alarmingly inadequate. Among US adults, about 14.8 million live with major depression, 6.1 million live with bipolar disorder, and 2.4 million live with schizophrenia. 1,2 In the United States, numerous (and frequently disconnected) participants are often involved in the management of care for individuals with SMI, including psychiatrists, physical health care providers, nurses and physician assistants, hospital care teams, outpatient social workers, and case managers. Furthermore, people with SMI also often utilize housing resources, correctional facilities, and various patient social support systems. Only an estimated 15.3% of individuals with SMI in the United States receive treatment that could be considered to be minimally adequate, on the basis of history of appropriate medication and physician visits consistent with care guidelines.³

While the first meeting of the Mental Health Quality Forum (MHQF) served to identify key issues in SMI management, implementation of the forum's recommendations into viable initiatives remained a challenge. The US system lacks a specific organization or entity that would be readily capable of driving the implementation of recommendations. Identification of a few key issues in the second forum meeting enabled a targeted focus for discussing associated pilot initiatives. Such initiatives can facilitate change in health care processes in SMI patient management, provided that an approach is developed

for disseminating the findings to organizations that can implement the recommendations.

MENTAL HEALTH QUALITY FORUM

The MHQF, a 2-meeting multidisciplinary panel held in March and June 2013, focused on the identification of issues and opportunities in the management of SMI.

Three months after the initial MHQF meeting, participants reconvened to review critical issues identified at the prior meeting, agree to principles and focus to guide solution development, create a blueprint for solutions-oriented pilots across 3 critical areas, and discuss next steps to help drive change in mental health care.

Participants in the Mental Health "Ecosystems"

As in the first meeting, the 13 participants included psychiatric nurses, managed care administrators, a specialty pharmacy provider, a community mental health center director, psychiatrists, a noted behavioral health services researcher, an American Psychiatric Association employer representative, a quality director, and executives from 2 leading mental health advocacy groups.

After initial large-group discussion, 3 "ecosystem" groups were formed to suggest the dynamics between various stakeholders in real-world mental health care. Each group

Table 1. Key Elements of the DIAMOND Study of Collaborative Care for Depression^a

Roles

Care manager

Administers PHQ-9 weekly to monitor symptoms Meets with patients weekly to monitor and discuss treatment adherence and any problems with treatment plans; builds patient

Consulting psychiatrist

engagement and trust

Consults with care manager weekly to discuss the manager's caseload. Meetings cover adherence issues, comorbid conditions, and changes to patients' medication, psychotherapy, and overall progress.

Meets with primary care physician (prescriber of the patients' medications) periodically to consult on various issues relating to the patient's psychiatric care and to suggest changes if progress is not seen

Processes

Validated symptom assessment

Patient Health Questionnaire-9 (PHQ-9) is used so that measurement of symptoms is standardized and reliable

Evidence-based guidelines and stepped-care approach to treatment

Evidence-based guidelines serve as the foundation for treatment planning

Treatment is systematically stepped up in response to lack of progress

Patient registry

Serves as a central record of every patient's symptom development (eg, PHQ-9 scores), medication changes, and behavioral activation. Allows collaborative care team members to access information and track progress

Relapse prevention plan

Designed by the care manager when the patient reaches remission to outline the patient's maintenance plan and help the patient to recognize symptoms if they return in the future

^aBased on reference 10.

Abbreviation: DIAMOND = Depression Improvement Across Minnesota, Offering a New Direction.

worked separately, with opportunities throughout the day to share with all program participants the issues that been discussed in smaller groups.

Objectives of the Second Meeting

Comprehensive review of the prior meeting's findings emphasized that the barriers to quality care in SMI are interrelated and are likely to require addressing both structures and processes of care, with the following issues identified: poor care integration, lack of infrastructure/enabling technology, no tools for accountability, lack of quality/performance measures, poor early screening and intervention, lack of enabling financial structures, diagnostic instability among providers, and lack of access to appropriate care.

At the second meeting, panelists suggested that the findings from the first meeting be modified to reflect the impact of existing workforce challenges. They were concerned that this issue would grow to pose an even larger barrier with the full implementation of the Patient Protection and Affordable Care Act (ACA). Further, they expressed additional concern about enormous capacity deficits in the current mental health system.

THE SECOND MEETING: PLANNING PILOTS TO DRIVE CHANGE

Considering the DIAMOND Collaborative Care Model

As a starting point for designing a pilot, the panelists looked at a recent initiative undertaken in Minnesota to improve collaboration between primary care and mental health providers and thereby improve depression treatment: Depression Improvement Across Minnesota—Offering a New Direction (DIAMOND).

The DIAMOND initiative was developed by the Institute for Clinical Systems Improvement, a nonprofit health care improvement organization. This initiative employed a teambased collaborative care model for caring for patients with depression in 75 Minnesota-based primary care clinics. The design was based on a model proven to be effective in the Improving Mood: Promoting Access to Collaborative Treatment (IMPACT) trial. 6.7

DIAMOND has shown positive patient outcomes, including improvements in depression remission and treatment response.⁸ Evidence from studies of the effect of integrated health care delivery systems on patient physical health generally supports the role of integrated delivery systems on improved quality of patient care.⁹ While such documented progress has been made in the treatment of patients with depression with collaborative care management, similar initiatives in the management of patients with other forms of SMI are not as widespread.

Strategies From the DIAMOND Initiative: Opportunities and Caveats

Participants discussed the key elements of the DIAMOND initiative in order to identify strategies that might be helpful in designing a pilot for improving SMI care. **Table 1** provides a summary of the model.

In DIAMOND, participating primary care clinics were trained on implementation of 4 processes and 2 roles. The processes included a consistent method for assessment and monitoring (the Patient Health Questionnaire-9 [PHQ-9]11,12), a patient registry tracking system, a stepped-care treatment approach with treatment adjustments based on PHQ-9 scores and use of the Institute for Clinical Systems Improvement depression guideline, 13 and a relapse prevention plan created by the care manager. The 2 roles were those of a care manager and a consulting psychiatrist. The care manager educates the patient about depression, supports self-management goals, serves as a liaison in the stepped-care approach, and configures the relapse prevention plan. The consulting psychiatrist performs a weekly caseload review with the care manager, focusing on new patients as well as patients who are not improving; meets with the primary care physician as needed; and provides treatment recommendations based on guidelines. In addition, DIAMOND employed detailed quality measures, assessed at 6 and 12 months, that were based on the proportion of patients

Figure 1. Challenges Discussed by Panelists in Applying the DIAMOND Methodology to Collaborative Care Initiatives in Serious Mental Illness (SMI)

SMI is different "Two of the differences for psychiatry are that, first, the community mental health provision aside, the majority of psychiatric care is still delivered outside the commercial insurance industry, and, second, the issue of privacy—and the various understandings of what it entails—has gotten in the way of developing consensus or value around collecting data in SMI."

Psychiatrists are different

"With psychiatrists, part of the resistance to measurement may be driven by a general feeling of being beaten up by the system. By feeling like they already have so much administrative work to deal with and now someone's telling them they have to measure performance. Part of the issue is just a lack of understanding, in some cases, of what performance measurement really means."

Measurement in SMI is challenging

- "Another area of difficulty, relative to other specialties, is a resistance to measurement. It's a bias within the mental health culture."
- "For some specialties, organizations have taken a proactive lead in saying, 'As providers, we're going to be measured. We're going to be incented based on this. We need to create measurements and be at the forefront.' This hasn't happened in psychiatry."

Abbreviation: DIAMOND = Depression Improvement Across Minnesota-Offering a New Direction.

with PHQ-9 tests administered, PHQ-9 score increases or decreases, and patient suicide statistics.

Furthermore, DIAMOND employed payment redesign, as a single billing code for DIAMOND services was established and used only by certified DIAMOND clinics. This involved a single claim code for coverage of any of the following bundled services: patient tracking and registry updates by care manager, care manager contact with patients, care manager use and administration of PHQ-9, and weekly psychiatrist consultation and caseload review with care manager. Associated fees, which were agreed upon through plan and medical group contracting, were paid to certified clinics for a set of services covered under the care management program. Payment was eventually based on outcomes, rather than simply process of care. At the end of 2011, across all DIAMOND clinics, 53% of patients with depression achieved remission and 70% achieved response within 12 months of initial assessment.8 In 2010, the DIAMOND initiative was awarded the American Psychiatric Association Gold Award for Community-Based

Panelists believed that DIAMOND was a useful case study and were particularly interested in the bundled reimbursement code. They also noted some limitations to a DIAMOND-like pilot program for persons with other forms of SMI. Financial incentives alone were not believed to be sufficient to cause a change in provider behavior or outcomes, although it was noted that the bundling of different activities into 1 billable

code was a motivating factor in DIAMOND. Measurement (via PHQ-9) was critical to the success of DIAMOND, and one panelist pointed out that no analogous measure exists in SMI. Specifically, panelists believed that the length of current measurement tools used in SMI act as a deterrent against their regular use in clinical settings. In addition, panelists believed that psychiatrists are different than primary care physicians, in that psychiatrists feel that the current health care system is harder for them to navigate than other physicians. Specific concerns related to the application of the DIAMOND study design to SMI are listed in Figure 1.

DESIGNING A PILOT PROGRAM FOR CHANGE

Participants were asked to recommend pilot programs that could be implemented anywhere, demonstrate program success, and create momentum for further system change. Panelists focused on 3 areas: (1) care coordination, (2) measurement of results, and (3) payment change. Stipulations were that pilots should not be dependent on dramatic changes to infrastructure, to assume that the current fee-for-service (FFS) system driven by Medicare and Medicaid will remain intact except in limited cases (demonstrations, pilots at local level), and should include measures that a provider can measure and own. Participants were divided into 3 groups to focus

on ideas for pilot elements within their area of expertise (care coordination, payment incentives, quality measures), brainstorm ideas based on group members' experience and knowledge specialty areas, prioritize proposed pilots, and then select the best ideas to share with the forum.

Care Coordination

The forum agreed that care coordination in SMI can be defined in many ways. It may involve coordination between physical health and behavioral health, coordination within the behavioral health system, and coordination between behavioral health and social service agencies. The group discussed the relationship between coordination of these care processes and improved outcomes:

"We should start by defining the outcomes we want. We consult the evidence base to find out what works to achieve the outcomes, and then care coordination is any activity that supports and facilitates access to the treatments that will achieve those outcomes."

The breakout session teams created a list of care coordination pilot elements:

- 1. Define coordination of care
- 2. Define roles of stakeholders and patient care team
- Provide education and training to implement coordination tools
- Conduct risk stratification on an ongoing basis to facilitate care adjustment when needed—include unification of behavioral, social, and community factors
- 5. Include a relapse screener and medication protocol
- 6. Establish a unified care portal for all stakeholders
- 7. Provide information technology (IT) to support care management
- 8. Include patient input in goal setting

Participants believed that care coordination would require reengineering the current system to improve integration and communication between stakeholders. Care management that was centralized, rather than clinic-based, was hypothesized to possibly produce better outcomes, as it might be easier to monitor the quality of care provided. Notably, the participants made a distinction between *care* management and *case* management, with care management encompassing the whole person's well-being and case management focusing narrowly on the immediate needs of the patient's behavioral health condition. The care (not case) manager was considered to be the chief coordinator and should be patient-focused and accountable:

"Being a care manager is not just connecting people and being a 'traffic cop.' It's not just pointing people in the right direction, but also holding them accountable." "The care manager is attached to the patient. The role entails putting patients and their goals at the center and then figuring out which providers need to be connected in order to achieve those goals."

Reduction of time spent on administrative tasks was also discussed. A new functional role of "chart manager" was proposed to handle such tasks:

"Consider adding a chart manager to help support the care manager—someone who would take care of all the paperwork to free up the care manager to provide client care."

Panelists believed that successful care coordination would require information exchange systems. Appropriate clinician access to information exchange systems would require more than simply monetary incentive, with one participant noting from past experience that it might be beneficial to monitor whether or not clinicians actually use the information exchange system:

"With managers realizing that clinicians weren't using the system, suddenly there was a source of accountability feedback."

Different models of care coordination. The forum members identified 4 models of care coordination:

- One organization does everything, inclusive of primary care and mental health care, with 1 care coordinator to facilitate care between these 2 components;
- 2. Primary care and mental health providers are collocated in the same facility, without actual practice linkages;
- 3. Separate primary and mental health care providers collaborate, sharing information and making referrals as needed; and
- 4. Distinct entities who are specialized in case management work with all of the relevant providers to integrate patient care.

Panelists believed that implementing care coordination will require changing the mental health care culture with regard to how patients are treated. For example, *all* practitioners participating in SMI patient care will need to be compensated:

"Change will happen by educating people about the value of care coordination at every level: the administrative level, practitioner level, patient level, and family level. That education is what will make a shift in implementing policy."

"Whatever the practitioner adds to the coordination of care would have a dollar amount that applies to their effort."

Table 2. Evaluation of 2 Negative Quality Measures: Use of Polypharmacy^a and 7-Day Readmission Rates

What variables influence these quality measures?

Access

Clinical processes

Patient satisfaction

Functional status

Patient engagement^b

Who and what is impacted by the measures?

Health care professional Hospital

Network/accountable care organization/plan

Society and community

Patient and caregiver

^aDefined as 2 or more antipsychotic agents overlapping for 90 days.

^bDoes not apply to polypharmacy.

In addition, the forum believed that ownership of care would be critical, in terms of whether primary care or mental health care drives patient care:

"The amount of money available in the system to pay for this coordination will depend on where the coordination lives. Is mental health being integrated into primary care, or is primary care being integrated into mental health? The answer will inform all the dollars."

Quality Measures

Both positive and negative quality measures were proposed for SMI care evaluation.

Positive measures, or measures associated with good-quality care, included the following: (1) appropriate follow-up care and laboratory tests, (2) medical reconciliation with transition, (3) follow-up after hospitalization, (4) team creation, (5) patient-centered (nontraditional) access to care, (6) shared decision-making, (7) medication adherence, (8) patient and caregiver satisfaction, (9) therapeutic alliance—the relationship between the patient and provider, (10) functional status, (11) medical comorbidity screening and management, (12) risk assessment (suicide), and (13) trauma screening in pediatric patients.

Negative measures, or measures of poor-quality care, included the following: (1) polypharmacy (defined as 2 or more antipsychotic agents overlapping for 90 days), including quality of prescribed medication and appropriate linkages to medical management visits; (2) emergency department overuse; (3) misuse of resources; (4) high admission/readmission rates; and (5) transition issues that were "dropped." These quality measures may be evaluated by assessing potential influencers and by considering *who* and *what* is being impacted. **Table 2** shows this type of assessment for 2 of the negative measures, polypharmacy and readmission rates.

Panelists pointed out the importance of listening to patients' viewpoints in quality measurement. Several randomized controlled trials involving shared decision-making have found

improvement in such parameters as treatment adherence and quality of life. ¹⁴ One panelist described personal involvement with a project in which patients, some of whom had been diagnosed with schizophrenia for 20 years, had completed a 20-item questionnaire about their home and work lives. The questionnaire successfully enabled patients to express to their care team, in concrete terms, the issues that *they* found important. Moreover, it was asserted that quality measures in SMI should be part of shared decision-making:

"In developing measures for people with severe mental illness, we need to think about shared decision-making. For patients with severe mental illness, sometimes people ask, 'Is shared decision-making feasible?' But patients are eager to be a part of the decision, as studies have shown. People with schizophrenia are capable of making decisions."

Measures must also be practical, usable, and actionable:

"If quality is measured, so what? Can anyone act on the findings? If we measure something and show that there is a problem—but everyone already knows they should be doing something different anyway—it may give us a little information, but we still need something actionable."

In developing a framework for optimizing health for populations, the nonprofit Institute for Healthcare Improvement set forth the "Triple Aim" goals^{15,16} of (1) improving the patient experience of care, (2) improving patient health, and (3) reducing cost of care. Participants felt that quality measures in SMI should have a population focus and support these 3 goals.

"With the ACA, the focus will be on managing a population. Those measures are different from simply focusing on the individual. As opposed to how we've operated traditionally, from a medical model only, there will now be dimensions in terms of quality of life that are much broader than what payment mechanisms have historically paid for."

"When we define a team to care for people with severe mental illness, we have treatment goals in mind, and then we design the structures. For the patient-centered medical home, ¹⁷ we have the 3 Triple Aim goals: better patient experience of care, a better patient outcome, and a cost savings."

SMI quality measures should also utilize and reward a team approach and recognize the combination of care providers:

"For the quality measures we're discussing, I cannot envision anything that doesn't involve a team. By definition, if the focus is coordination, then a team is involved. Implementing quality measures will involve the creation of teams, and the allocation of patients appropriate to the team."

Figure 2. Designing Core Payment Change Pilots: Three Key Players to Consider



Medicare Advantage, including SNPs

- Medicaid managed care figure out how to work with carved in/out plans
 - "The initial focus would be on managed care plans. They could be carved in or carved out, but they couldn't be state Medicaid fee-for-service carve-out because of state plan amendment issues and regulatory barriers."
 - "An intriguing model in Ohio allows community mental health centers to use their Medicaid system savings to engage in services and supports that traditionally Medicaid wouldn't pay for, like supportive housing and transportation."

Providers

Community mental health centers

- "At the macro level, the states or the big payers might save money, but not at the provider level. An important question to answer is: How can we incentivize providers
- "A good target would be community mental health centers that have care managers."

Commercial

"Incentives need to be case-mix adjusted to avoid cherry-picking of specific patients. They should be based on functionality, diagnosis, or some set of criteria that's risk adjusted."

Abbreviation: SNP = special needs plan.

Measures of quality in SMI should also allow for risk stratification and adjustment. Participants thought that although cost of care is measurable, without an accurate method of adjusting for patient baseline risk related to the severity of SMI, the potential would exist for skewed estimates and results that would be difficult to interpret. Measures should also leverage Centers for Medicare and Medicaid Services (CMS) quality reporting, 18 since Medicare utilizes a wide variety of quality reporting measures that also may apply to the non-Medicare population; in addition, panelists believed that consistent CMS reporting would facilitate the use of specific quality measurement for providers overall. Panelists felt that care transitions should be considered in the development of measures.

"Many of the problems in behavioral health occur at transitions between levels of care providers."

"Often, when I have this conversation with inpatient providers, the readmission metric in hospitals says, 'That's their fault. We're fine. It's their problem over there.' We need metrics in order to examine what occurs at that interface between organizations that really gets to the heart of collaboration."

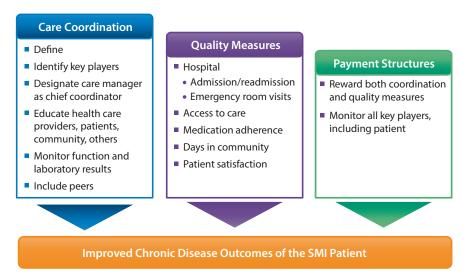
Panelists believed that SMI measures of quality should be significant enough to have both relevance and statistical validity. Participants believed that if stakeholders perceived the measure as nonmeaningful or as impacting only a very small population, the required effort may not be applied to the measure, and the accuracy of the estimate would be questionable. Finally, SMI quality measures should determine and reward stakeholder accountability.

"The quality measurement is only meaningful when you define for what purpose, in whose eyes, with what intent, which kind of cuts? Who is the end user? Who will take action based on these quality measures?"

Enabling Financial Structures

Defining care coordination. The payment change breakout group defined care coordination as *overall* health care rather than mental health care, due to the very high expenditures associated with physical health care in the SMI patient population. Participants believed that improving mental health in the SMI population would result in improved overall health, as major health expenditures among SMI patients often involve management of other chronic illness. However, a major challenge in current SMI care is that patients are generally treated by a mental health system that does not provide physical care management, and, thus, many patients with SMI do not receive adequate physical health care. Indeed, providing improved overall health through optimization of mental health care was seen as the ultimate goal of treatment.

Figure 3. Improved Care Coordination: The Cornerstone of Improved Outcomes in Serious Mental Illness (SMI)



Reimbursement for care coordination. Group members acknowledged that, currently, reimbursement for care coordination in SMI is not widespread. Medicare and Medicaid pay for most SMI care via FFS. Dual-eligible patients account for huge expenditures and would be a good target for an initial care coordination pilot, and early initiatives among these patients may be more likely to lead to payer acceptance.

Medicaid has a rehabilitation option in which a state can pay for care coordination services (eg, targeted case management), but these alone were believed to be insufficient. Several initiatives have been undertaken in hepatitis C care coordination¹⁹; participants noted that both patient and financial considerations seem to be adequately addressed and that they ideally would envision this type of coordination for SMI. Reimbursement models and pilots were discussed, and the possibility of replicating a primary care model was discussed.

Health home model. Some states were noted as experimenting with a health home model for SMI care coordination. The health home model integrates physical and behavioral health care and, under the ACA, is specifically for Medicaid beneficiaries with chronic illnesses. ^{20,21} A 90% federal financial match is provided for 8 fiscal-year quarters, and the health home becomes the care coordination entity between primary care, mental health care, cardiology, hospital care, and family care. Payment is made for the care coordination activities rather than specific treatment services. Panelists identified as a weakness of the model that there are no incentives for providers (such as primary care physicians or cardiologists) to participate.

Outcomes measures for payment increase/decrease. The care coordination breakout group identified outcomes measures for a payment decrease and for a payment increase. Outcomes measures identified for a payment decrease

included hospitalizations, emergency room visits, and high cost; those identified for increased payment included health outcomes (such as glycated hemoglobin levels), psychiatric measures, medication adherence, screening for chronic diseases, postdischarge visits, and improvements in quality of life. Panelists believed that such changes to payment may result in both positive payer and provider reactions if the measurements were perceived as meaningful and impactful, and they asserted that accountability by all stakeholders would be crucial for success.

Group members emphasized that core payment change pilot elements should have several foci, as outlined in **Figure 2**.

Elements of successful incentivization. Panelists also identified the critical elements of successful SMI care coordination and incentivization as (1) defining care coordination services, (2) identifying payment and potential shared savings, and (3) using data and technology to support care coordination. Care coordination services should focus on improved overall health, not just improved mental health. Payment and potential shared savings should focus initially on short-term outcomes and should include both mental and physical health outcomes and all potential providers. Effective use should be made of electronic health records, actuarial analysis, payer databases, and CMS data to support appropriate incentivization of care coordination processes.

Panelists also pointed to the need for a system of accountability to monitor appropriate incentives and comprehensive payment awareness that would increase per-member permonth payment to include care coordination in capitated arrangements and ensure appropriate case-mix adjustment for care coordination in FFS systems. SMI management incentives must also consider incentives and/or payment for ancillary services and non-health care providers, such as judicial systems and child welfare services.

Other payment-related issues. Participants considered other issues for payment of SMI services. They believed that the bundled coding scheme in DIAMOND was useful in allocating payment and suggested that a bundled code be developed for use in an SMI pilot. Because there are many differences between states in SMI care coverage, the ideal pilot would need to be useful and applicable to many states. Data would be required for measurement, but would also need to be sustainable and facilitate communication across provider types and payers. The pilot should focus on managed care plans, not state Medicaid FFS, due to state plan amendment issues and regulatory barriers. Finally, panelists believed that the initial focus of a pilot should involve organizations that have some flexibility in the use of their funds, potentially Medicare Advantage plans including special needs, Medicaid managed care, and commercial plans.

CONCLUSION

The forum participants agreed that improved care coordination is critical to improved patient outcomes for many patients with SMI, while quality measures and changes to payment structures are also important (Figure 3).

Improvement in overall health and functioning are important treatment goals for patients with SMI. The forum believed that improved mental health would translate into improved physical health. Relatedly, physical health has metrics and is important to payers. Improved physical health was identified as a suitable initial target because of its importance to payers on multiple levels and because it can be easily measured by specific indicators (eg, hemoglobin, body mass index) that could be applied across the SMI population. In addition, panelists asserted that better physical health in SMI patients is now of such importance that even a moderate gain would be impressive. An implication of improved physical health would be cost savings, with one participant noting that physical health care accounts for a large proportion of both hospital days and cost in SMI patient management.

Participants suggested other metrics for SMI pilots. They believed that integration should include such measures as healthy lifestyles, healthy eating habits, smoking cessation, weight reduction, good hygiene, and symptom reduction. Collaboration between primary care providers and mental health care providers was deemed to be critical. Panelists believed that SMI should be thought of as a chronic illness, just like diabetes and hypertension, and that those involved in the SMI patient's care should work together to treat the patient's physical and mental health as a team.

The forum believed that case management must be remodeled to *care* management in order to facilitate improved care coordination. The rationale was that today's case managers may not understand all services that may be required by a patient with SMI, since current case management focuses on facilitation of patient housing, employment, and benefits, without information related to patient physical health care.

In contrast, the care managers of tomorrow would be more knowledgeable about health care overall, including such chronic conditions as obesity and diabetes, and would be more familiar with primary care culture and medical terminology to facilitate overall patient well-being. Care managers could motivate a patient toward self-management and serve as a liaison among the patient's various providers. It was noted that the US National Council for Behavioral Health does provide case management—to—care management training²² and that the National Committee for Quality Assurance (NCQA) has accreditation standards for care management.²³

Group members recommended many clinical outcomes measures for patients with SMI, including reduced hospitalizations, readmissions, and emergency room visits, and improved access to care, Healthcare Effectiveness and Data Information Set measures, and medication adherence. The forum emphasized that improved clinical outcomes are of paramount importance:

"If a clinical problem is identified, does it get better? Whether it's a mental health problem that is identified in terms of depression or psychosis symptoms, or a cardiac or other physical problem that is identified—does it get better?"

Panelists also suggested other outcomes measures that would be important for patients with SMI. These include patients' tenure within the community (days spent between admissions or instead of hospitalization), patient satisfaction, and patient-centered medical home–like certification:

"Quality of life in SMI patients encompasses a variety of important variables that actually have very little to do with the health care they're receiving. So, measuring patient quality of life tells us something very important, but not something that will necessarily be related to improving care."

Next Steps: Hand-off of the Findings

Participants could not single out a particular organization for hand-off of the forum's findings. It was agreed that the National Institute of Mental Health would not be a viable candidate. Organizations mentioned for possible involvement included the National Association of State Mental Health Program Directors; Association for Behavioral Health and Wellness; primary care organizations, particularly those active in implementation of the ACA; Institute for Healthcare Improvement; Institute for Behavioral Healthcare Improvement; and California Association of Physician Groups. Finally, the participants felt that hand-off may need to be approached on a state-by-state basis, since each state's mental health system has a different setup.

REFERENCES

 National Institutes of Health, National Institutes of Mental Health. The Numbers Count: Mental Disorders in America. http://www.nimh.nih.gov/health/publications/the-numbers-count-mental-disorders-in-america/index.shtml. Accessed January 31, 2014.

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- National Alliance on Mental Illness. Mental Illness Facts and Numbers. http://www. nami.org/factsheets/mentalillness factsheet.pdf. Accessed January 31, 2014.
- 3. Wang PS, Demler O, Kessler RC. Adequacy of treatment for serious mental illness in the United States. *Am J Public Health*. 2002;92(1):92–98.
- Assessing the impact of health reform on the health care workforce. Michigan Center for Health Professions website. http://www.mhc.org/Portals/michiganhealthcouncil/Files/ file_archive/CHP_Health_Reform_Workforce_FINAL_Nov_2010_1.pdf. Published November 2010. Accessed July 29, 2014.
- Solberg LI, Crain AL, Jaeckels N, et al. The DIAMOND initiative: implementing collaborative care for depression in 75 primary care clinics. *Implement Sci*. 2013;8(1):135
- Hunkeler EM, Katon W, Tang L, et al. Long term outcomes from the IMPACT randomised trial for depressed elderly patients in primary care. BMJ. 2006;332(7536):259–263.
- Unutzer J, Katon W, Callahan CM, et al. Collaborative care management of late-life depression in the primary care setting: a randomized controlled trial. *JAMA*. 2002;288(22):2836–2845.
- Institute for Clinical Systems Improvement. The DIAMOND program: transforming depression care delivery and payment models. 2012. http://mn.gov/health-reform/ images/WG-Workforce-2012-03-21-Institute%20for%20Clinical%20Systems%20 Improvement.pdf. Accessed March 21, 2014.
- Hwang W, Chang J, Laclair M, et al. Effects of integrated delivery system on cost and quality. Am J Manag Care. 2013;19(5):e175—e184.
- A new direction in depression treatment in Minnesota: DIAMOND program, Institute for Clinical Systems Improvement, Bloomington, Minnesota. Psychiatr Serv. 2010;61(10):1042–1044.
- Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med. 2001;16(9):606–613.
- Löwe B, Kroenke K, Herzog W, et al. Measuring depression outcome with a brief selfreport instrument: sensitivity to change of the Patient Health Questionnaire (PHQ-9). J Affect Disord. 2004;81(1):61–66.

- Institute for Clinical Systems Improvement. Depression, Adult in Primary Care. 2013. https://www.icsi.org/guidelines__more/catalog_guidelines_and_more/catalog_guidelines/catalog_behavioral_health_guidelines/depression/. Accessed March 21, 2014.
- Drake RE, Cimpean D, Torrey WC. Shared decision making in mental health: prospects for personalized medicine. *Dialogues Clin Neurosci*. 2009;11(4):455–463.
- Triple Aim for populations. Institute for Healthcare Improvement website. http://www.ihi. org/Topics/TripleAim/Pages/default.aspx. Accessed July 20, 2014.
- 16. Berwick DM, Nolan TW, Whittington J. The triple aim: care, health, and cost. *Health Aff (Millwood)*. 2008;27(3):759–769.
- 17. The Patient-Centered Medical Home: Strategies to Put Patients at the Center of Primary Care. Agency for Healthcare Research and Quality website. http://pcmh.ahrq.gov/sites/default/files/attachments/Strategies%20to%20Put%20Patients%20at%20the%20 Center%20of%20Primary%20Care.pdf. Accessed August 15, 2014.
- Physician Quality Reporting System. Centers for Medicare and Medicaid Services website. http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/ PQRS/index.html?redirect=/PQRS/. Updated June 9, 2014. Accessed August 5, 2014.
- Ward JW, Lok AS, Thomas DL, et al. Report on a single-topic conference on "Chronic viral hepatitis: strategies to improve effectiveness of screening and treatment." Hepatology. 2012:55:307

 –315.
- Centers for Medicare and Medicaid Services Medicaid Health Homes: An Overview.
 Medicaid website. Published July 2014. http://www.medicaid.gov/State-Resource-Center/Medicaid-State-Technical-Assistance/Health-Homes-Technical-Assistance/Downloads/Medicaid-Health-Homes-Overview.pdf. Accessed July 26, 2014.
- Patient Protection and Affordable Care Act, 42 USC §2703 (2010). https://democrats. senate.gov/pdfs/reform/patient-protection-affordable-care-act-as-passed.pdf
- Case management to care management. National Council for Behavioral Health website. http://www.thenationalcouncil.org/training-courses/moving-case-management-to-care-management/. Accessed July 20, 2014.
- NCQA Case Management Accreditation. National Committee for Quality Assurance website. http://www.ncqa.org/portals/0/Programs/Accreditation/case%20mgmt-5_8.2.12.pdf.

