INNOVATION AND IMPROVEMENT

The Hennepin County Medical Center Program in Medical Psychiatry: Addressing the Shortened Lifespan of Patients with Mental Illness

Mark Linzer, MD, FACP^{1,3}, Michael K. Popkin, MD², and Ellen Coffey, MD, FACP^{1,3}

¹Department of Medicine, Hennepin County Medical Center, Minneapolis, MN, USA; ²Department of Psychiatry, Hennepin County Medical Center, Minneapolis, MN, USA; ³Division of General Internal Medicine, Hennepin County Medical Center, Minneapolis, MN, USA.

KEY WORDS: mortality; behavioral medicine; medical psychiatry.

J Gen Intern Med 28(3):466–9

DOI: 10.1007/s11606-012-2325-9

© Society of General Internal Medicine 2012

It was early 2011. We had just concluded a program in which hospitalists were assigned to the Psychiatry inpatient service at Hennepin County Medical Center (HCMC). It was a dismal failure. The psychiatry wards, without oxygen in the walls, IVs in the rooms, or tourniquets for blood drawing, were not designed to provide medical care. Meanwhile, the outpatient psychiatric Day Treatment patients needed primary care, as the patients would not travel across campus to the unfamiliar Medicine Clinic. We then had a large influx of chronically ill poor patients with psychiatric and medical illness, brought to HCMC as part of a statewide change in insurance coverage. The Medicine Clinic was not prepared to provide mental health services for these complex patients. Finally, on the Medicine Inpatient Service, there were frequent transfers to Psychiatry of medical patients after the medical illness was stabilized; but once transferred, the medical problems often became hard to manage and the patients were sent back to Medicine. All was not right with medical psychiatric care at HCMC.

The three of us thought a new direction was needed. We forged a collaboration—between the Chief of Psychiatry (Dr. Popkin), a senior general internist (Dr. Coffey), and the new Director of General Internal Medicine (Dr. Linzer). We decided to seek to establish a Center of Excellence in Medical Psychiatry. We would develop new processes for education and medical care on the Psychiatry wards, an internal medicine presence in Day Treatment, a mental health core in Medicine Clinic, and advanced training for Medicine ward nurses to manage behavioral issues. We would seek funding to support these endeavors. And we would not stop until patients with coexisting psychiatric and medical conditions had care at a level equal to their need.

We were driven not only by our own experience of chaos, but also by the increasing national attention to the heightened mortality of patients with mental illness.¹ Among the multiple issues contributing to this mortality gap are lack of self-care, exposure to violence, accidents, suicide, lack of primary care, and adverse metabolic consequences of psychotropic medications. In a 2006 editorial, Thornicroft² said, “even in three Scandinavian countries that provide among the best quality and most equitably distributed health care in the world, this mortality gap has narrowed only by a modest extent over the past two decades... Medical staff, guided by negative stereotypes, often tend to treat the physical illnesses of people with mental illness less thoroughly and less effectively.” At HCMC, a safety net hospital where 65 % of our patients are persons of color, 20 % are immigrants and refugees, and upwards of 30 % of our patients have comorbid mental and physical illnesses, we began to ask such questions as: where should we care for bipolar patients with severe electrolyte abnormalities? And, who will detect and manage a psychiatric outpatient’s elevated cardiac risk? We decided that a comprehensive approach was needed to promote better systems of care while simultaneously developing a new workforce comfortable with the care of these complex patients. We saw this as a mission to reverse an inequity hiding in plain sight: health care disparities between patients with mental illness and those without.

THE HCMC MEDICAL PSYCHIATRY PROGRAM

A Medical Psychiatry oversight group began meeting monthly to address program development. We were fortunate to receive strong financial support from the hospital (HCMC) at many critical junctures. The business case was straightforward. We argued that comprehensive care of patients with coexisting medical and psychiatric illness would sharply diminish transfers, rapid response calls, readmissions, length of stay, and adverse events. With that guiding framework, we built medical programs in the psychiatric inpatient unit, brought internists to practice in the Day Treatment program, embedded mental health professionals in Medicine Clinic, and have been planning for an eight-bed Med-Psych unit on

Received June 14, 2012

Revised July 18, 2012

Accepted December 18, 2012

Published online January 4, 2013

the Medicine Service (Table 1). The underlying premise has been that a patient with medical and psychiatric illness is “one person,” and that this person needs comprehensive care at his or her primary site of care.

FIRST THINGS FIRST

The most striking area of need was for medical support for care on the Psychiatry inpatient service. This 102 bed service encompassed several wards, and in addition to psychiatrists, it was staffed by nurse practitioners (NPs) and physician assistants (PAs) (also known as advanced practice providers or APPs) who managed medical illnesses. When we began, there were *no relationships* between the APPs and the consulting internists. Our first approach was to provide medical support for the APPs with advanced training by senior internists and psychiatrists. We started multidisciplinary “Med-Psych” rounds each Tuesday morning. These rounds were led by the three co-authors and addressed complex medical–psychiatric cases. One case could last the full hour, with a discussion of medical issues (e.g., hypokalemia, hyperglycemia, delirium, hypotension) followed by an exchange on the patient’s psychiatric issues and how these might interact with the medical problems. Management and policy were explored and developed. The rounds began with six to eight people in the room (the APPs

and us). Now, exceeding our expectations, there are usually 25 to 30 attendees, including medical and nursing students, floor nurses, staff psychiatrists, hospitalists, residents (medical, psychiatric, and transitional), pharmacists, and nurse leaders from medicine and psychiatry. The rounds have remained the focal point of the Medical Psychiatry program.

We soon realized there was little standardization as to when the APPs would call a medical consult. We thus developed a triggers program (modeled after a program at the Beth Israel Deaconess Hospital), with vital sign, laboratory, and nursing assessment parameters that would trigger communication between the APPs and a medical consult resident or hospitalist. The goals were to standardize and legitimize calling for consultations, prevent medical deterioration, and avoid rapid response calls. It took months of discussion among attendees to agree on the parameters, disseminate the product, and pilot test the program. Once instituted, we developed a more defined connection between the APPs, the hospitalist division, and the medical consult teams. Programs that were once separate, where no one knew whom they might call and what help they might receive, became integrated, connected, and supportive.

Implementation of these solutions required leaders willing to work outside their “silos,” add teaching time to their schedules, and share control of resources. Given HMC’s financial support for the APPs (in part covered by patient charges), the program has been sustainable. Our Tuesday morning rounds have catalyzed a process of workforce development. Nurses, doctors, and pharmacists have begun to view patients differently, and we anticipate attendees will advance their training in new directions. We are not finished with improving medical coverage for the psychiatry wards. Currently, there are approximately eight APPs covering days and nights along with psychiatry residents; hospitalists “check in” with the APPs in the mornings, staff a 24/7 medical consult service, and often cross cover for admission H and P’s at night. By June of 2013 we plan to initiate expanded hospitalist coverage 52 weeks a year, providing direct and supervisory care with the APPs on the wards.

Table 1. The HMC Medical Psychiatry Program “At a Glance”

Psychiatric Inpatient Service	Med-Psych Tuesday morning rounds
Impetus: Need for medical care oversight	Hospitalists overseeing NPs and PAs
	Triggers program for alerting medical consult team (planned Psych-Med unit)
Psychiatric Day Treatment program	On-site medicine consultations
Impetus: Need for primary care	Risk assessment program
Integrated behavioral medicine service	Five embedded mental health professionals in medicine clinic
Impetus: Influx of 10,000 complex patients	Real-time and linked visits
	Behavioral medicine teaching conference
	Acute psychiatric care
Psychiatric care on inpatient Medicine	Psychiatric liaison consult service (planned Medicine Psychiatry unit)
Impetus: Behavioral challenges on medicine	(planned training for med-surg nurses in Behavioral Medicine)
Registry/database/evaluation	Database of Day Treatment patients (planned database expansion to other sites)
	(incorporation into Performance measurement and Improvement department)
	(parentethical activities are in planning stages)

EXPANDING THE MODEL OF OUTPATIENT PSYCHIATRIC CARE

The psychiatric Day Treatment program had traditionally been isolated from other systems of care. Our oversight group began to hear a consistent message: “We need medical care in Day Treatment!” This daily program (Monday to Friday) where patients attended group and individual visits, often after psychiatric hospitalization, housed dozens of patients who were reintegrating into society. They were also at risk for serious medical illnesses due to their lifestyles, smoking, and use of psychotropic medications. Many of the patients had considerable anxiety about going across campus to visit a primary care provider.

We thus developed a consultation room for general internists *within* Day Treatment. We faced many obstacles: would the patients attend visits? Would internists want to work with this population? What type of follow-up could we arrange? We were delighted to find that a few of our general internists enjoyed working there, and the Day Treatment clinic manager and nurse provided follow-up. Some patients were seriously ill and required urgent attention and hospitalization; it was also a logical venue for medical consultation prior to electroconvulsive therapy. One problem arose after a few months when patients no longer seemed to need the program; we had seen most of them and addressed their medical needs. We subsequently refocused our attention on gauging long-term risk factors that might predispose to premature mortality. Soon we were systematically assessing enrollees for lipid and endocrine disorders, stratifying their cardiovascular risk, and making recommendations. Our next steps are to connect these recommendations with action plans to be implemented right in Day Treatment, such as nutritional, preventive cardiology, and tobacco dependence counseling.

The program to date has been sustainable through patient charges. The majority of primary payers for the Day Treatment patients overall are Minnesota health care programs, including managed care, Fee For Service, and Medicaid. We are planning group visits for nutrition counseling and are exploring billing scenarios for this. A grant from UCare, a local health plan, has allowed us to create a database of 96 patients seen in Day Treatment. We have used the database to track risk factors, guide our future programs, and perform scholarly investigations. We hope to create a new workforce of general internists who are both knowledgeable and empathic when caring for psychiatric patients. To date, the results have been favorable. Most of us who practice there genuinely seem to enjoy it. The work is more complex than we might have imagined; The complex coexistence of medical and psychiatric illness makes the problems both challenging and interesting. The thought that we might be lowering mortality risk is a strong motivator.

A CRISIS LOOMED IN MEDICINE CLINIC

About 2 years ago, the situation in Medicine Clinic suddenly became dire. A budget crisis led to a disruption in state funding for vulnerable patients. As a consequence, close to 10,000 patients with chronic mental and physical illnesses were assigned to HCMC. These patients had previously been supported by a state-funded insurance mechanism called General Assistance Medical Care and came from varied locations throughout the county and the state. The need for mental health support far outstripped our ability to provide it. We thus initiated a program to hire dedicated mental health professionals for the Medicine Clinics. There had previously been one part-time psychologist in place. With the hospital's

support, we added a full-time advanced practice psychiatric nurse, another psychologist (0.6 full-time equivalent (FTE)) and a 0.5 FTE psychiatrist. The intent was to create a full team of mental health providers who could define their mission and goals in a group process. However, there were very real structural and cultural challenges to developing an integrated mental health unit within a busy Medicine Clinic with dozens of staff physicians, 10 APPs, and 70 medical residents. We sought to have the mental health group see their own patients independently, but also to collaborate with the internal medicine providers in real-time consultations and teach us to better manage mental illness in our patients. While a preliminary report from Kings County Hospital³ suggested that an integrated medical-psychiatry outpatient unit could be cost effective by diminishing hospitalizations and emergency department visits, establishing such a unit has required patience and constant trial and error. For example, keeping the mental health providers centrally located has been a high priority; but with space at a premium in Medicine Clinic, difficult decisions with trade-offs have had to be made about where their offices might be.

One key to implementation was spelling out how the mental health providers constituted an effort to improve the abilities of general internists and medicine residents in managing medical patients with psychiatric illness. Funding for the mental health positions has been provided through the hospital, with the return on investment being linked to the high utilization of these complicated patients. The ready availability of mental health providers for prompt care and consultation has been a tremendous addition to the Medicine Clinic. They have guided the internal medicine physicians on medication management decisions and offered real-time counseling for patients in distress. They have also expanded the internists' knowledge base and helped them be more comfortable with the care of patients with psychiatric disorders. We anticipate developing a more accomplished and capable workforce of medicine faculty and residents who can eventually care for many psychiatrically complex medical patients without direct specialty consultation or support.

NEEDS OF THE MEDICINE INPATIENT SERVICE

As we made progress in other settings, the needs of the Medicine Service came clearly into focus. HCMC has long been home to a high quality psychiatric Consultation Liaison Service on the Medicine wards. However, there have always been problems in managing behaviorally challenging patients on Medicine. Typically, when a complex medical patient with psychiatric issues is admitted, they are stabilized and then transferred to Psychiatry. This process is fraught with hazard. Medicine has been poorly equipped to manage patients with aggression or low impulse control. With a fair amount of uncertainty surrounding these management issues,

the Medicine teams have often sought to quickly move patients to a secure, psychiatric setting. Sharp disagreements were often voiced between Medicine and Psychiatry about where patients “belonged” for care. We therefore began serious discussions to institute behavior management training for medical–surgical nurses on the Medicine floor. We also initiated plans to develop a Med-Psych unit (with a comparable Psych-Med unit on Psychiatry) for medical patients with overlying behavioral issues. Proposed metrics of success would include fewer transfers to psychiatry, fewer behavioral emergency team calls, fewer readmissions, and better functional outcomes.

Implementing the Med-Psych and Psych-Med units has been a slow process. Despite a strong commitment to the underlying concepts, these changes in the status quo have taken time. Questions we sought to answer included: Who will round on the patients (Medicine, Psychiatry, or both?), and who will pay for extra personnel, renovations, special beds, and other needs? While nursing leadership has recently stepped up and contributed to the emerging proposals, we are in need of clinician champions to share in moving these ideas forward. We still face the challenges of paying for nurse training time and deciding which patients will be on which units. A novel proposal we are considering is “switching” nurses from Psychiatry to Medicine and vice versa for several weeks to cross-train. We anticipate the units will be self-sustaining. The new workforce that will emanate from these programs will mainly be skilled nurses, cross-trained in medical and behavioral issues. In addition, medicine residents and medical students will benefit from participating in the care of patients with overlapping medical and psychiatric disorders.

PROGRAM EVALUATION

One of our primary goals has been to bring a sense of scholarship to these multiple endeavors. We want to observe, to evaluate, and to formally study the end results of treating our patients and educating our workforce differently. With this in mind, we secured funding to develop a patient registry and database to assess the program’s four components. With grant support from a local health care plan, we began to assess cardiac risks among the patients in Day Treatment program. We wish to expand this effort to include psychiatric inpatients and then medical outpatients with psychiatric disorders. In doing so, we hope to learn about our patients’ diagnoses, comorbidities, risk factors (laboratory, ECG), and outcomes (hospital stays, emergency room visits, and cardiac events), ultimately determining which interventions were most beneficial in improving outcomes. We anticipate folding the database into the HCMC Performance Measurement and Improvement program, thus increasing the likelihood of sustainability.

Summary. While it is gratifying to see a new system of care developing for complex medical and psychiatric patients at HCMC, it has also been a struggle. Bridging two departments, securing funding, and developing a comprehensive approach in Medical Psychiatry has been daunting. We focused first on raising awareness of risk, stereotypes, and needs. We then began the process of culture change, seeking meaningful increments in multiple domains. Mainly, we have done this by being present. The three of us attended multiple activities and meetings designed to further the proposition that patients with medical and psychiatric conditions can be well cared for if we approach them with knowledge, empathy, and the right resources. For those undertaking such a journey, we advise courage, diligence, and a constant refocusing on *why* you have chosen to take this on. In our case, we saw a way to marshal the resources to care for a vulnerable subgroup of our safety net population. Thus, we saw both a need and a way to get there, crucial elements in our ability to maintain focus and forward progress.

Nationally, we look forward to more formal assessments of risk for psychiatric patients and additional training programs in Medical Psychiatry. Pincus and colleagues⁴ provide a clear set of well-validated outcome measures in the care of psychiatric patients, and Alekason et al. describe how to incorporate the care of psychiatric patients into a behavioral medical home.⁵ We are hopeful that the scientific and clinical communities will join us in this urgent agenda for quality improvement, practice redesign, and scholarship.

Acknowledgments: The authors were supported in part for the Medical Psychiatry Program at HCMC via a grant from UCare.

Corresponding Author: Mark Linzer, MD, FACP; Division of General Internal Medicine, Hennepin County Medical Center, 701 Park Avenue South (P7), Minneapolis, MN 55415, USA (e-mail: Mark.linzer@hcmcd.org).

REFERENCES

1. Felker B, Yazel J, Short D. Mortality and medical co-morbidity among psychiatric patients. *Psychiatry Serv.* 1996;47(12):1356–1363.
2. Thornicroft C. Physical health disparities and mental illness: the scandal of premature mortality. *Br J Psychiatry.* 2011;199:441–442.
3. Moran M. Program meshing mental health, primary care meets key goals. *Psychiatry News.* 2011;46(23):1b–28b.
4. Pincus HA, Spaeth-Rublee B, Watkins KE. The case for measuring quality in mental health and substance abuse care. *Heal Aff.* 2011;30(4):730–736.
5. Alekason V, Frank RG, Katz RE. Specialty care medical homes for people with severe, persistent mental disorders. *Heal Aff.* 2010;29(5):867–873.