The COMPASS Model for Improving the Care of Patients with Chronic Mental and Physical Diseases

There is substantial scientific evidence that collaborative care management for patients with chronic physical and mental health conditions can greatly improve their quality of care, outcomes and satisfaction, as well as be cost-effective and even cost saving in the long run. However, these care models have not been widely used in primary care settings, in part because existing payment models do not fully cover their costs and existing care models do not support their delivery.

Through a three-year cooperative agreement with the Centers for Medicare and Medicaid Services (CMS), a consortium of 10 organizations is developing, implementing and evaluating a collaborative care management model (CCMM) to improve the care of patients with both physical and mental health conditions. This paper explains the COMPASS (Care of Mental, Physical and Substance Use Syndromes) model and reviews the scientific evidence that supports its effectiveness in treating patients with diabetes and/or cardiovascular disease who also have depression and possibly risky substance use. This evidence suggests that implementing COMPASS effectively can help care systems achieve the Triple Aim of improving the health of the population, the patient’s care experience, including quality, and the affordability of care for these patients.

What is COMPASS?
COMPASS is a collaborative care management model designed to create in a primary care setting a system to treat adult patients who have depression along with poorly controlled diabetes and/or cardiovascular disease, with its first enrollees being Medicare and Medicaid patients who meet these criteria. Practices also have the option to add systematic screening and brief intervention for risky substance use.

The COMPASS model is being offered in seven states through a consortium led by the Institute for Clinical Systems Improvement. Other consortium partners include the Community Health Plan of Washington, Kaiser Permanente Colorado, Kaiser Permanente Southern California, Mayo Clinic
The Need for COMPASS

One-third of Medicare patients have diabetes and another 30% have coronary artery disease; when depression is present (15% of the time), health care costs are 65% higher.\textsuperscript{2-4} The majority of patients with depression have other chronic conditions. In the Improving Mood-Promoting Access to Collaborative Treatment (IMPACT) study, which included more than 1,800 patients with depression age 60 and older, the mean number of chronic medical illnesses in the population was four.\textsuperscript{5} More than 60% had chronic pain (mostly from osteoarthritis). Yates et al. found in the STAR*D trial that over half of patients with depression had functionally significant chronic co-morbidities, especially those of older age, lower income, unemployed and lower education.\textsuperscript{6}

There is a bidirectional relationship between depression and many chronic medical disorders, with each side contributing to disease and care costs for the other.\textsuperscript{7-9} Among health plan members with the 15% highest number of office visits in two successive years, for example, 20% were depressed, and 42% had one or more chronic medical conditions, plus 50% more hospitalizations and hospital days/year than high utilizers without depression.\textsuperscript{10} Patients with depression and diabetes or cardiovascular disease have poorer self-care, greater functional impairment, and an increased risk of developing complications and mortality.\textsuperscript{11}

Primary Care Setting

The primary care clinic is where most people with diabetes, cardiovascular disease and depression first visit for care, yet depression is often overlooked as physicians are often more comfortable treating physical ailments.

For example, while about 75% of patients with depression see a primary care provider, he or she only detects about 50% of patients with depression. Then, only about 50% of the patients with symptoms of depression receive treatment. And even when depression is recognized and the patients receive treatment in the primary care setting, only 20-40% of treated patients see substantial improvement in the year following diagnosis.\textsuperscript{12}

By addressing mental and physical chronic diseases with the COMPASS model, the physician will more readily identify patients with depression or risky substance use. By treating these behavioral diseases, patients can better deal with their physical chronic diseases.

COMPASS Integrates Best of Collaborative Care Models

The foundation for many collaborative care management models like COMPASS is the chronic care model of Wagner et al.,\textsuperscript{13-16} which has become widely accepted as the
basis for redesign of primary care.\textsuperscript{17-18} Over the past 10 years, the chronic care model has been used as the basis for many changes in care delivery.\textsuperscript{19-25} It has become the dominant model for the medical home now viewed as one of the most promising vehicles for achieving the Triple Aim.\textsuperscript{26-27}

There is significant evidence that an application of the chronic care management model to depression in primary care improves patient outcomes, both in the short term and over 18-24 months.\textsuperscript{28-30} A recent study showed that a multi-condition collaborative care model can be used to improve both depression and medical disease control in patients with co-morbid depression, diabetes and/or heart disease.\textsuperscript{31}

The COMPASS model was designed by integrating several existing and proven CCMMs and the best practices discovered in their implementation. These include: the IMPACT model for depression; the DIAMOND (Depression Improvement Across Minnesota, Offering a New Direction) program (based on IMPACT); TEAMcare, which addresses depression and diabetes and cardiovascular disease, and SBIRT (Screening, Brief Intervention, and Referral to Treatment) for risky substance use.

The common CCMM elements that make the COMPASS model applicable to patients with multiple conditions include:

1. Thorough initial evaluation, including screening for relevant co-morbidities, measuring condition severity, and supporting patient self-management to control key disease parameters, including PHQ-9, HbA1C, SBP and LDL
2. A computerized registry for care monitoring of both individual patients and overall panel management
3. Treatment to target and treatment intensification when there is a lack of clinical improvement
4. Prevention of avoidable hospital and emergency department admissions and readmissions
5. A care manager to monitor condition status, provide self-management support, refer to community resources, coordinate care, communicate recommendations by the physician consultant(s) about medication changes to the primary care physician, and provide proactive follow-up
6. Expert physician consultant(s) with clearly defined roles to provide a weekly review of inadequately responding cases with the care manager and suggest treatment changes to improve depression and glycemic, lipid and blood pressure control, or further evaluation to the primary care physician
7. Aggregate data evaluation and quality improvement

There is strong evidence for the Triple Aim benefits of this model for depression\textsuperscript{31-33} and alcohol/substance use in adults\textsuperscript{34}, as well as strong evidence it will also be effective for other chronic mental and physical health conditions.\textsuperscript{35} COMPASS will be implemented for patients with depression and diabetes or cardiovascular disease (with screening and treatment for at-risk drinking and substance
use as an option). The COMPASS intervention will also focus on reducing unneeded emergency department visits, hospitalizations, and use of tests and consultations that do not add value in order to reduce overall health care costs and to achieve Triple Aim goals.

COMPASS is a team-based model to treat both mental and physical chronic illnesses. It has been developed based on the following successful CCMMs.

**IMPACT**

Researchers at the University of Washington developed the IMPACT model, which applies the CCMM elements listed previously to treat depression in primary care. In a five-year research study conducted in 18 primary care clinics in five states, IMPACT was compared to usual care for depression with nearly 2,000 adults age 60 and over who had clinical depression. Results of the IMPACT trial showed that when compared to care as usual, this approach lessened both depression and physical pain, improved patient functioning, and resulted in a higher quality of life. The IMPACT program was found to be more effective than usual care in each of the eight participating health care systems.

IMPACT demonstrated a 10% savings in total health care costs for Medicare patients with depression over a four-year period, even though the IMPACT intervention only lasted one year. Savings were to $3,365/patient.

Since the conclusion of the original study, the IMPACT model has been implemented by more than 500 primary care clinics in different health care systems.

Katon and Seelig’s systematic review of controlled trials of collaborative care for depression concluded that such programs as IMPACT double antidepressant adherence, improve depression outcomes lasting 2-5 years, increase patient satisfaction with their depression care, and increase provider satisfaction with treating depression. A recent meta-analysis of 69 collaborative care trials found strong evidence of improved quality of depression care and improved depression outcomes compared to usual care. Over the past 10 years, several large organizations have implemented the IMPACT model for depression on their own.

**DIAMOND**

Led by the Institute for Clinical Systems Improvement and based on the IMPACT model, DIAMOND is a unique, statewide implementation of a collaborative care management model for depression that involved more than 80 primary care clinics over a four-year period.

Like the IMPACT model, DIAMOND utilizes a team approach that includes the primary care physician, a care manager and a consulting psychiatrist. Both IMPACT and DIAMOND use the PHQ-9 measurement tool and a registry to track patient progress.

The initiative requires clinics offering DIAMOND to track patient depression severity at regular intervals and to report this and various care process measures for central aggregate analysis, creating a model for the evaluation component of the COMPASS initiative. These data suggest that, among the
more than 9,000 patients with depression that have been included in the DIAMOND program so far, remission rates have been substantially better than rates reported by clinics without the program, according to MN Community Measurement, which publicly reports on clinics’ performance on managing a number of disease conditions.

Introduced in 2008, DIAMOND has proven it is a highly effective treatment model for patients with depression in primary care. At the end of 2011, participating DIAMOND clinics collectively reported that 30% of their patients with depression achieved remission (a PHQ-9 score of 9 or lower) within six months of initial assessment and 40% of their patients achieved a response (a drop of at least 50% in their initial PHQ-9 score).

The results were even better for the subset of patients for whom the DIAMOND clinics were able to administer a follow-up PHQ-9 at the six-month mark. Half of those patients were in remission, while two-thirds reported a response to their depression care.

 Patients enrolled in the program indicated that they liked this collaborative type of care better than what they previously received from their primary care clinic. Besides better patient outcomes, DIAMOND clinics have found that their depressed patient follow-up procedures have become more efficient and team communications have improved.

**TEAMCare**

Katon et al. have recently demonstrated the feasibility, effectiveness, and cost effectiveness of extending the collaborative care management approach to adult primary care patients with depression and poorly controlled diabetes or heart disease. This approach integrated a medical nurse into primary care to help improve patient self-management, increase patient self-monitoring of glucose and blood pressure, and improve intensification of medication to enhance depression, glucose, lipid and blood pressure control. The care manager was supervised weekly by both a psychiatrist and physician consultant who made recommendations about medications that the care manager then communicated to the patient’s primary care physician.

They showed in a randomized trial that patients assigned to their collaborative care management model had greater improvement in HbA1c levels, systolic blood pressure, LDL cholesterol levels, and depression scores than patients in a usual care control group. They had greater improvements in disability levels, quality of life and satisfaction with care. A recent cost-effectiveness analysis of this model showed strong evidence of cost savings over a two-year period.

Systematic reviews have demonstrated the effectiveness of the chronic care model for diabetes care, and suggest that the more elements like those in the CCM M, the greater their effect. Additional research has demonstrated strong correlations between the presence of chronic care model elements and both process and outcome measures of quality for diabetes.

**SBIRT**

SBIRT is an evidence-based approach that identifies and helps those patients with risky
substance use behaviors. SBIRT provides brief interventions for individuals with risky alcohol and/or drug use behaviors, and for those who may have more significant substance abuse concerns, SBIRT provides a timely referral for specialty treatment.

A study of SBIRT programs funded by the Substance Abuse and Mental Health Services Administration (SAMHSA) revealed a 39% decrease in alcohol consumption and a 68% decrease in drug use among patients after six months.\textsuperscript{50} SBIRT randomized controlled trials resulted in significant overall treatment cost savings.\textsuperscript{51-52}

**Targeting Diverse Populations**
With its implementation across seven states, and specifically targeting Medicare and Medicaid patients, the evidence suggests the COMPASS model will affect under-served and low-income people who tend to have disparate rates of services and outcomes.

Ethnic minorities traditionally receive less care for depression than do white populations.\textsuperscript{53} Also, the targeted population will predominantly have multiple co-morbidities and risk factors. Wells et al. have demonstrated that, four years after a randomized trial of a CCMM for depression, health outcome disparities were reduced by markedly improving health outcomes and reducing unmet needs among Latinos and African Americans.\textsuperscript{54}

**Implementation of COMPASS**
Proactive identification of patients will occur through systematic screening and assessment for the target conditions. For eligible patients, COMPASS will be the clinic’s standard of care for treating these multiple mental and physical chronic diseases. The COMPASS care manager will be specially trained to work with patients who have depression along with diabetes or cardiovascular disease, and possibly risky substance use. Care managers will have varied backgrounds depending on the clinic population and current staffing models. They may be nurses, social workers, medical assistants, etc.

The care manager coordinates the patient’s care, provides education and supports self-management for the target conditions. They regularly monitor symptoms, lab values, scores and adherence to treatment in person or by telephone. A computerized registry is used to track patient status and progress.

A consulting psychiatrist for depression and a consulting physician for diabetes or cardiovascular disease review the COMPASS caseload weekly with the care manager. The systematic case review team discusses all new patients and those not adequately responding to treatment to determine if changes to care plans are needed. Treat-to-target guidelines and evidence-based protocols are used for recommendations. Treatment changes recommended by the physician consultants are conveyed to the primary care physician by the care manager after each supervision session. The primary care team meets regularly to discuss individualized patient goals that form the basis for the patient’s care plan.

If the patient is not progressing after changes in treatment, they may be referred to a specialist. When the patient reaches optimal targets, a maintenance plan is created.
Conclusion
Evidence strongly suggests that by combining components and best practices of several collaborative care management models into COMPASS, the new model can effectively treat patients with depression, diabetes and/or cardiovascular disease, and possibly risky substance use. The evaluation of this three-year study will determine if COMPASS can provide a sustainable model for treating both chronic mental and physical diseases with the goal of achieving the Triple Aim of better health, care and lower costs.

References


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