Models of Collaboration Between Primary Care and Mental Health and Substance Use Services

What you need to know

- Collaboration between mental health and primary care strengthens relationships among health care providers to provide patients with continuous and complete care.
- Four models emerged from the literature that examine collaboration between mental health and primary care.
- The Collaborative Care Model seems to be the most effective, and has proven successful when including all components, but also when adapted in a range of healthcare systems.
- Research needs to be expanded to look at the long-term effects of collaboration and its effect on a variety of mental illnesses and substance use problems.

What’s the problem?

Ontario has identified several priorities for its health care system. Among them are greater integration of services and improved access to high-quality and consistent care (Government of Ontario, 2015). But access to care is inconsistent. For example, people with mental illness or substance use problems are less likely to receive the care they need (Centre for Addiction and Mental Health, 2016). In Canada, an estimated one in five persons, or over 6.7 million, are affected by mental illness or substance use problems. By 2041, it is projected that this number will increase by 1.3 times to 8.9 million. This represents a significant burden on the healthcare system. In 2011, the direct cost of mental illness and substance use was over $20 billion, accounting for hospitalizations, physician visits, and medication (Smetanin, et al., 2011).

A number of approaches have been suggested to decrease rates of mental illness and substance misuse. One such approach is collaboration between mental health and substance use and primary care providers, which can take many forms. The overarching goal of this holistic approach is to strengthen relationships among health care providers to ensure patients receive continuous and complete care (Reilly et al., 2013). The focus of this rapid review was to look at models of collaborative care between primary care and mental health and substance use.
What did we do?

We conducted a search of academic literature in April 2016 using the following databases: Cochrane Reviews, PsycINFO, and Medline. Studies were included if they examined collaborative care between primary care and mental health and/or substance use providers. The search was limited to English language systematic reviews and meta-analyses from 2006 to 2016. We also searched relevant databases such as the Evidence Exchange Network, HealthEvidence.org and Google to identify key publications that may have been missed. We excluded any research that explicitly mentioned a US focus, due to the difference in health care systems between the US and Canada.

What did we find?

Four models emerged from the literature examining collaboration between mental health, substance use and primary care, which are discussed below. The bulk of the research focused on the Collaborative Care Model (CCM). Other identified models include Consultant-Liaison, Replacement/Referral, and Training Primary Care Staff. The effectiveness of each model is discussed, along with some barriers and facilitators.

Collaborative Care Model

I. Description

This model was initially developed for chronic disease management, which emphasizes the need to focus on primary care instead of prioritizing acute symptoms (Wagner, Austin, & Von Korff, 1996). The model has been applied in mental health care in the United Kingdom (UK), Italy, Germany and the Netherlands and involves practitioners from different specialties working together (usually a primary care physician, a case manager, and a mental health specialist) in a coordinated way to ensure the client receives the right service, at the right time, in the right place.

Collaboration can take many forms. However, the six core components, described in greater detail below, that act independently or interdependently are as follows:

a) patient self-management support;

b) delivery system redesign;

c) use of clinical information systems;

d) provider decision support;

e) health care organization support; and

f) linkage to community resources (Woltmann et al., 2012).
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The intent of this model is to have a planned approach to care. In some cases, the model has been modified to focus on the following four components:

a) a multi-professional approach;  
b) a structured management plan;  
c) scheduled patient follow-ups; and  
d) enhanced inter-professional communication (Gunn, Diggens, Hegarty, & Blashki, 2006).

Levels of Collaboration in CCM

The level of collaboration in a CCM varies (Bower, Gilbody, Richards, Fletcher, & Sutton, 2006; Ministry of Health, 2012). Collaboration levels include low, medium, and high.

- Low collaboration involves a consultation relationship between providers that provides formal feedback to the primary care provider (PCP), but does not necessarily involve face-to-face contact. Feedback is triggered by a referral in response to a patient’s needs, and there is minimal communication between practitioners about the care plan (Craven & Bland, 2006; Jeffries et al., 2013). Communication between practices is an example of low collaboration (Ministry of Health, 2012).

- Moderate collaboration has more frequent check-ins between providers, and may involve a shared care plan, and co-location of services. Usually a care manager is involved to guide the process (Craven & Bland, 2006; Jeffries et al., 2013). The co-location of services can take place at the primary care site, or at the mental health/substance use site. This is called “reverse-shared care” (Ministry of Health, 2012).

- High collaboration or integrated care uses a shared space and regular communication between providers to carry out a shared care plan. The providers have ongoing relationships to discuss cases and review decision-making (Craven & Bland, 2006; Jeffries et al., 2013). Wrap-around teams create a continuous service of care for patients (Ministry of Health, 2012).

Core Components of CCM

The CCM is complex, and there is variation in the literature as to what “ingredients” make the most successful model. Two of the reviews explicitly mention that the presence of three out of six criteria is considered acceptable for collaboration. That said, they don’t indicate which criteria are the crucial ones (Kilbourne, Goodrich, O’Donnell, & Miller, 2012; Woltmann et al., 2012). One review uses delivery system redesign, clinical information systems, self-management, and decision support as their key criteria for collaborative care (Katon, 2012). The six components of CCM include:
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a) **Patient Self-Management Support**

Having patients as active members in their care and participate in decision making is a focus of self-management support. Examples include introducing behavioural change strategies, psychoeducation, problem-solving therapies, and motivational support (Goodrich, Kilbourne, Nord, & Bauer, 2013; Haddad & Tylee, 2011; Woltmann et al., 2012). The self-management component has been identified as important when dealing with complex or co-occurring conditions. People with bipolar disorder by itself or in conjunction with substance use problems need greater psychoeducation and coaching on how best to manage their illness and to look for early warning signs of an episode (Kilbourne et al., 2012). In children’s depression, patient/parent psychoeducation, increased follow-up tracking, and patient’s ability to choose medication or therapy are associated with a reduction in depressive symptoms and increased patient/provider satisfaction (Kolko & Perrin, 2014).

b) **Delivery System Redesign**

A collaborative team dedicated to working together to help the individual is a key component of the CCM. Roles for PCP and specialists can be redefined so that the care they provide can be more proactive. Care/case managers are important in this system redesign to shift away from fragmented healthcare (Goodrich et al., 2013; Haddad & Tylee, 2011; Meyer, Peteet, & Joseph, 2009). PCPs are responsible for screening and diagnosis, but the care is overseen by the case manager, which involves assessing individual needs and helping to develop and monitor a care plan, and working with the individual to tailor it appropriately. The literature notes that nurses are most likely to be case managers, which has been found effective for improving symptoms of depression and likelihood of taking medication (Haddad & Tylee, 2011; Magruder & Yeager, 2007), but trained mental health professionals or health care assistants are also effective in this role (Haddad & Tylee, 2011). The use of case managers has been found to be effective for complex or co-occurring mental illnesses (Kilbourne et al., 2012).

c) **Use of Clinical Information Systems**

Clinical information systems allow providers to stay up to date using technology and keep patient data all in one place. For example, electronic health records with mental health notes embedded, protocols, test results and reminders to follow-up with patients are all kept in the same online area (Goodrich et al., 2013; Haddad & Tylee, 2011; Woltmann et al., 2012).

d) **Provider Decision Support**

Decision support to facilitate the provider team can come in the form of mental health specialists, local clinical champions, or the availability of evidence-based guidelines to help inform practice (Goodrich et al., 2013; Haddad & Tylee, 2011; Woltmann et al., 2012). This support can take place in person, via telephone, or online, however, most studies do not report the mode that mental health specialists
provide decision support, and the frequency that it occurs, therefore it’s hard to understand the most effective scenario (Sighinolfi et al., 2014). There is evidence that this component can improve prescribing, but there is mixed evidence on its effectiveness for improving mental health (Meyer et al., 2009; van der Feltz-Cornelis, Van Os, Van Marwijk, & Leentjens, 2010).

e) Health Care Organization Support

Support at the leadership level of an organization is a critical element of the CCM. This involves ample staff and resources for service delivery, and garnering support from internal and external partners (Goodrich et al., 2013; Haddad & Tylee, 2011; Woltmann et al., 2012). This support can also come in the form of training staff about the CCM to ensure they have all the knowledge needed to provide the best care, and linking staff with non-clinical partners such as informatics to create efficient workplaces (Goodrich et al., 2013; Kilbourne et al., 2012).

f) Linkage to Community Resources

Knowledge of which resources are located in the community enables providers to deliver a holistic approach. This can include clinical and non-clinical help including referral to support groups, housing resources, or home care programs. Goodrich et al. (2013) mention the creation of “health neighbourhoods” which create a network of local organizations (e.g. employment and housing supports) to increase patients access to services.

Stepped Care

Although not compulsory, the model can be delivered using a stepped care approach where the intensity of treatment is matched to the needs of the patient. The initial treatment response should be proportionate to one’s state of illness, and careful monitoring of treatment should be applied to determine if or when a step-up is necessary (Bower, Knowles, Coventry, & Rowland, 2011; Richards, 2012). More intense interventions include, 1) increased case manager consultations with patients, then 2) commencing or increasing specialist consultations with the patient and PCP, finally 3) the specialist may choose to assume care for the patient (Meyer et al., 2009). The case manager is important for the stepped care component of the CCM as they are the main linkage between PCPs and the patient, and can help determine when stepping-up or down is necessary (Richards, 2012).

Research on the effectiveness of stepped care is limited, though it has been adopted in the UK (Haddad & Tylee, 2011). One review looking at two randomized studies found that there was a positive effect after one year on depression symptoms, and patients taking medication as prescribed, but the effect disappeared at two years (Barbui & Tansella, 2006).
II. Effectiveness

The literature shows that collaborative care is more effective than usual care when including all components of the CCM, but has also been shown to be effective when modified and used in a range of healthcare systems (Sighinolfi et al., 2014). Most of the literature for the CCM has focused on its effect on depression. One systematic review and meta-analysis examined eight studies with over 2,000 patients and found improvements in depression, treatment response, and greater likelihood of taking prescribed medication, in response to collaborative care (Huang, Wei, Wu, Chen, & Guo, 2013). Similarly, Hine, Howell & Yonkers (2008) also found that collaborative care has positive effects on patients on taking prescribed medication and depression, in addition to greater patient satisfaction with care.

While most of the research focuses on adult outcomes, there is evidence of benefits for other age groups. Hine, Howell & Yonkers (2008) examined a few studies with the elderly, and one study found that 45% in a collaborative care group had a 50% decrease in depressive symptoms, compared to only 19% of people in a control group. Another study in the same review looked at physicians perceptions of collaborative care for depression in the elderly. Pre-intervention data showed that only 54% were satisfied with their resources to provide care; after the collaborative intervention was put in place, that number rose to 90% (Hine, Howell, & Yonkers, 2008). There is also evidence for the effectiveness of CCM’s in pediatrics. One review looking at CCMs for children and adolescent depression found that participants who received collaborative care, as opposed to care as usual, saw a greater decrease in depressive symptoms, increased satisfaction and adjustment, and service use. This was significant at six month follow-up but not 18 months (Kolko & Perrin, 2014).

The evidence for collaborative care has recently expanded beyond depression. A meta-analysis examining multiple disorders (depression, bipolar disorder, anxiety, and comorbid/other disorders) found that CCMs had small to medium effects across disorders for improvements in clinical symptoms, mental and physical quality of life, and social role function, with no increase in health care costs (Woltmann et al., 2012). Of note in this meta-analysis is the encouraging outcome that collaboration can affect not just mental health, but physical health as well. Another review found collaborative care to be more effective than usual care for not only depression, but also panic disorder, generalized anxiety disorder, and mental illness in conjunction with Hepatitis C treatment (Meyer et al., 2009).

Evidence for the long-term effects of CCMs is mixed. One study examining depression and anxiety found positive effects one to two years post intervention but no positive effect beyond two years for depression. No research has examined a timeframe greater than two years for anxiety-related outcomes (Archer et al., 2012). In contrast, Meyer et al. (2009) noted improvements in depression after six months, and benefits remained at five years. Similarly, Katon and Seelig (2008) found improvements in depression at two to five years with collaborative care compared to usual care.
III. Barriers and Facilitators

Research shows there are several barriers to adopting a CCM model in primary care. Stigma, insufficient training of providers, and insufficient resources to support treatment were all acknowledged (Magruder & Yeager, 2007). There is also a lack of clarity surrounding just how intense interventions need to be. For example, how many sessions are required between a patient and a care manager, and should they be conducted in person or will telephone suffice (Haddad & Tylee, 2011)? Additionally, a lack of capacity has been identified as a barrier in the form of fewer providers in geographically remote areas, and as insufficient training and knowledge among staff (Kolko & Perrin, 2014).

Facilitators for successful CCM integration include clear communication between team members, and greater access to consultation services to increase provider confidence (Kolko & Perrin, 2014). Craven & Bland (2006) identified several suggestions to help collaboration between providers. These include remembering that collaboration doesn’t happen overnight and requires preparation, time, and adequate supportive structures. The authors also suggested that co-location, or having practitioners housed under the same roof, can be used as a strategy to decrease stigma for patients.

The rise of technology to deliver components of the CCM is a promising practice (Meyer et al., 2009). Mode of delivery can include videoconferences, telephone, or computer/internet based communication. These could help circumvent the lack of access rural patients face, and may increase access among those who are reluctant due to stigma. There’s also evidence showing that these technological approaches offer an effective and feasible way to screen, diagnose, and treat mental illness and substance use problems (Goodrich et al., 2013; Jeffries et al., 2013; Kilbourne et al., 2012; Magruder & Yeager, 2007; Woltmann et al., 2012). Such virtual communications can be between healthcare provider and patient, but also among providers for consulting purposes (Meyer et al., 2009).

Consultant-Liaison Model

I. Description

In the Consultant-Liaison Model, the PCP is mainly responsible for a patient’s care and a mental health specialist holds a consulting role. The specialist is usually a psychiatrist, but can also be a mental health nurse, psychologist, or social worker (Gillies, Buykx, Parker, & Hetrick, 2015). The key feature of this model is that only two health professionals are involved, compared to the CCM where a case manager is typically included as well. The consultant can provide education, problem solving, and feedback to the PCP regarding diagnosis, prescribing, or treatment strategies (Barbui & Tansella, 2006; Gillies et al., 2015). In this model, the mental health specialist can interact with the patient, but it’s not required.

II. Effectiveness

Evidence on the effectiveness of the Consultant-Liaison Model is mixed. Gilles et al. (2015) found this model to be effective for some mental illnesses, especially depression, noting improved mental health, satisfaction
with care, and more patients taking medication as prescribed, compared to patients receiving standard care. However, they also found that this model was not as effective as having three professionals collaborating (a feature of the CCM) for outcomes such as general health status and mental illness symptoms. Barbui and Tansella (2006) found the Consultant-Liaison Model reduced PCP prescribing, deemed positive in this case as these medications are often overprescribed, but the effect was short-term with no evidence on long-term effectiveness. Finally, one more review discussed face-to-face contact between the PCP and specialist, but found little evidence for its effectiveness (Haddad & Tylee, 2011).

It’s unclear in this model what level of collaboration between professionals is helpful. Collaboration can range from one consultation between PCP and mental health specialist to frequent contact, and can be done in person or via telephone or internet (Gillies et al., 2015).

III. Barriers and Facilitators

No specific barriers or facilitators were identified in the literature for this model.

Replacement/Referral Model

I. Description

The Replacement/Referral Model takes place when a PCP refers the patient to a mental health professional. Mental health professionals can include counsellors, psychologists, community nurses or nurse therapists, psychiatrists, and social workers (Barbui & Tansella, 2006). In this model, PCPs and mental health professionals interact and work together in informal ways, including sharing medical records and discussions on the patient’s care and potential referrals (Harkness & Bower, 2009). The treatments provided by the mental health professionals to clients include non-directive counselling, behaviour therapy, cognitive-behaviour therapy, cognitive analytic therapy, brief dynamic psychotherapy, problem-solving therapy, practice-based psychiatric clinics, counselling on taking medication as prescribed, and social casework (Barbui & Tansella, 2006).

II. Effectiveness

Similar to the Consultation-Liaison Model, there is some evidence that Replacement/Referral Models significantly reduce psychotropic prescribing by PCPs and reduce likelihood of transfer to an additional mental health professional after the initial referral. However, the effects weren’t maintained in the long-term (Barbui & Tansella, 2006; Harkness & Bower, 2009).

III. Barriers and Facilitators

Some barriers to adopting this model in primary care include the refusal or failure of patients to access the referred mental health provider, insufficient numbers of mental health providers, particularly in rural areas, and insurance limitations (Meyer et al., 2009). A facilitator of this model is to have the mental health
professional as a permanent and important member of the team (Harkness & Bower, 2009).

Training Primary Care Staff Model

I. Description

The Training Primary Care Staff model includes the use of videos, written material, small group teaching sessions, roleplay delivered by multi-disciplinary teams, guideline implementation strategies, clinician education, and educational meetings (Barbui & Tansella, 2006).

II. Effectiveness

In the UK, a primary care educational program was developed and delivered by a multidisciplinary team and included videotapes, written materials, small-group teaching sessions, and role play. Evidence shows it had no impact on diagnosis rate or clinical improvement of depression (Meyer et al., 2009). Similarly, another study showed that guideline implementation and educational strategies were largely ineffective for clinical improvement, quality of life, and depression outcomes (Barbui & Tansella, 2006). However, these strategies were seen to be effective if they were grouped with nurse case management, collaborative care, or other similarly intensive quality improvement strategies (Barbui & Tansella, 2006). Finally, a review specific to pediatrics discussed how mental health skills training for providers was associated with improvements in child functioning in one study, but other studies report limited effectiveness (Kolko & Perrin, 2014).

III. Barriers and Facilitators

No specific barriers were identified in the literature for this model. Meyer et al. (2009) did however identify that this model’s effectiveness may be increased by having education as an ongoing component, with interactive simulation components. Other promising approaches include the use of technology for training, and allowing PCP’s to learn by practicing and teaching others (Kolko & Perrin, 2014).

What are the limitations of this review?

The literature available on collaboration models between primary care and mental health mainly examines depression and bipolar disorder, so we cannot generalize to other mental illnesses. There is also not much literature available on integrating primary care and substance use. Additionally, certain groups, such as First Nation populations, are underrepresented in the literature.

One review attempts to determine the “active ingredients” in the CCM, but notes that further research is needed, as studies vary on which components they include, and it’s hard to identify which is the most crucial or if all are needed. The terms and language used in the literature is also varied, so it is hard to determine if they are referring to the same models under different names (Archer et al., 2012).
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The long-term effectiveness of these models is still unknown and requires further research (Sighinolfi et al., 2014). Archer et al (2012) did a long-term follow-up, but had a limited number of studies and found no differences between CCM and usual care after two years or more of follow-up.

Although this review aims to survey the literature on collaboration between primary care and mental health and substance use services, due to time constraints it is not necessarily comprehensive, but instead focuses on systematic reviews to provide an overview of the evidence. Therefore it’s possible that other key studies were missed in this process.

What are the conclusions?

The rapid review examined four possible models of collaboration between primary care and mental health and substance use. The majority of the literature focused on the Collaborative Care Model (CCM). There’s evidence that the CCM is effective in improving mental health outcomes for a variety of mental illnesses, with some research demonstrating effectiveness for substance use problems as well (Jeffries et al., 2013; Kilbourne et al., 2012). There’s no clear answer as to what components in the CCM are necessary for success, and what combination might be most effective.

Recently, the Centre for Addiction and Mental Health released a Mental Health and Primary Care Policy Framework that suggests principles for a comprehensive approach to mental health and primary care. Principles include:

- primary care should be equitable and accessible to those with mental illnesses;
- mental health should be a core feature of primary care; and
- people with mental illnesses should receive high-quality care in collaborative and integrated environments (Centre for Addiction and Mental Health, 2016).

Several facilitators and promising practices emerged from the literature about increasing the effectiveness of collaborative care in general, including clear and frequent communication and linkages between teams, increased role clarity, multi-sectoral involvement, and adequate preparation, time, and having supportive structures in place (Canadian Centre on Substance Abuse, 2015; Craven & Bland, 2006; Fuller et al., 2011; Kolko & Perrin, 2014).

The practices that emerged are similar to recommendations by the World Health Organization (2008) for integrating mental health into primary care, which also include advocacy to shift attitudes, policies and planning that support integration, collaboration with other sectors, and also the knowledge that integration is a process, not an event.
References


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