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A Common Factors Approach to Improving the Mental Health Capacity of Pediatric Primary Care

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Abstract

To expand the mental health service capacity of pediatric primary care, we ask whether there are evidence-based skills to allow providers to 1) immediately begin treatment for children with emotional and behavioral problems while diagnostic procedures are being pursued, and 2) offer evidence-based care to children who do not meet criteria for a specific diagnosis. We discuss why the epidemiology of child mental health problems poses difficulties for disorder-specific mental health interventions, and review evidence that “common factors” contributing to the outcome of mental health treatments define a core set of skills that primary care providers might use to complement disorder-specific interventions.

Keywords

Primary care; Pediatrics; Mental health; Psychotherapy process

Introduction

Up to 20 percent of children and adolescents in the United States are thought to have an emotional or behavioral disorder (Costello et al. 2003). Twice as many have functional problems related to behavior or feelings, but do not meet criteria for a diagnosis (Angold et al. 1999). These problems often go untreated, with lifetime consequences. For example, 75% of adults with anxiety disorders report the onset of their condition as before age 21; their median time from onset to first treatment contact ranges from nine to 23 years, depending on the disorder (Wang et al. 2005).

A main strategy for improving children's mental health care has been to position services where children spend their time. This includes engaging family members so that treatment happens in the home, improving the mental health promotion and treatment capacity of schools and community programs, and increasing the mental health service capacity of primary medical care providers (World Health Organization 2005). In this paper we focus on the role of primary care providers—family physicians, primary care pediatricians, nurse practitioners and physicians' assistants—in the identification and management of child mental health problems. Mental health problems are well-represented among children seen in primary care: as many as one quarter meet criteria for at least one diagnosis, and as many as 40% have clinically significant functional problems (Bernal et al. 2000; Briggs-Gowan et al. 2000; Costello and Shugart 1992).

At present, however, there is reason to believe that the mental health promotion potential of pediatric primary care is not being fulfilled. Studies in the US and UK suggest that pediatricians and general practitioners identify only one quarter of children and adolescents with mental problems (Kramer and Garralda 1998; Horwitz, et al. 2003). Lack of discussion between parents and providers may be one reason for low detection rates. In one US study, more than half of parents with emotional, behavioral, or developmental concerns about their children apparently chose not to discuss them with their child's doctor (Horwitz et al. 1998). Even when cases are detected in primary care, problems may be under-treated and receive minimal follow-up from a primary care provider or specialist (Gardner et al. 2003). It is estimated that, in the US, families follow through with only 40% of mental health referrals that are made in primary care (Rushton et al. 2002).

These difficulties are not surprising in the context of the structure of pediatric primary care. Visits are short with many competing concerns (Epner et al. 1998). When problems are found, consultation and referral sources are limited (World Health Organization 2005). In addition, pediatric providers report that they lack the skills and knowledge to manage most mental health problems (Olson et al. 2001).

Limitations of Current Models for Expanding Primary Care Mental Health Capacity

Wagner and colleagues' "chronic care model" (CCM) (Wagner et al. 1996) is the foundation of most current efforts to improve mental health services in adult and pediatric primary care.

Wagner and colleagues reviewed the literature on treatment of chronic medical problems and identified five elements associated with improved outcomes: treatment that employs evidence-based guidelines; optimizing practice organization to implement those guidelines (including use of specialized non-physician providers and active follow-up of patients); improving support for patient self-management; helping generalist providers access specialist consultation; and setting up clinical information systems that allow the practice to understand its overall success with patients (Table 1). As implemented in primary care practices, core CCM components commonly include: a means of accurately diagnosing the target condition; an evidence-based treatment protocol specifically for that diagnosis; and non-physician staff with responsibility for carrying out and monitoring the results of the treatment, including tracking patients, promoting adherence and making treatment adjustments as needed (often referred to as “stepped care”). CCM interventions also usually include elements of collaboration between the primary care practice and a mental health specialist (for formal and informal consultation and to facilitate a transition to specialty treatment when needed) (Kilbourne et al. 2004). Several CCM interventions have been successfully tested for adult depression; one successful trial has been reported for adolescent depression and one program has been described that addresses a range of behavior and emotional disorders (Asarnow et al. 2005; Campo et al. 2005).

To date, CCM-based interventions have shared three main limitations with regard to their use in pediatrics. First, CCM interventions are most often built around protocols for treatment of a single, specified condition. This requires an efficient mechanism to make a diagnosis and a relative lack of co-morbidities whose presence could change the effectiveness of treatment. These requirements are difficult to meet in pediatric primary care for several reasons. In pediatrics the lack of agreement between parents, teachers, and children regarding child mental health symptoms and impairment complicates the diagnostic process (Brown et al. 2006). In addition, about one-third of children who meet diagnostic criteria for one condition also meet criteria for another (Briggs-Gowan et al. 2000). Finally, for every child seen in primary care with a specific mental health diagnosis, there are one or more who have significant problems with functioning but who do not meet diagnostic criteria (Costello and Shugart 1992; Briggs-Gowan et al. 2003), and potentially twice as many whose parents have concerns about their child’s behavior or mood (Blanchard et al. 2006). Thus, while pediatric primary care providers do need to know how to diagnose and care for children with specific, common disorders, they also need to know how to care for children for whom it is difficult to apply a single diagnostic label (or any label).

Another limitation is that published CCM trials have all relied on adding office staff or asking existing staff to focus a portion of their time on a specific diagnosis. This typically has been a nurse-specialist who participates in diagnosis, treatment, and follow-up. Although some trials of interventions for depression among adults have found that these programs were cost-effective from a societal or integrated health system viewpoint (Schoenbaum et al. 2001; Simon et al. 2007), they generally have resulted in an overall increase in cost to the primary care practice (Simon et al. 2001). Not all practices may find them feasible, or find it justifiable to invest resources in one particular condition. In low and middle-income countries, where most health care expenditures are focused on acute medical

conditions, mechanisms are needed to deliver mental health care within the context of existing resources (Patel et al. 2007).

Finally, practitioners may be stymied if they invest in a highly structured treatment program but find that some of their patients are not receptive to that form of treatment. In one CCM-based study of adult depression that focused on use of antidepressants, the intervention was thought to be highly cost-effective for patients who were receptive to medications, but it showed no advantage over usual care (and may have been detrimental) for patients with negative attitudes toward medication (Pyne et al. 2005). In pediatrics, parents vary considerably in their attitudes toward different types of therapy for common childhood mental health problems, particularly towards diagnostic labels and medication (Bussing et al. 2005; Brown et al. 2007c).

In this paper, we propose a variant of the CCM that includes many of its core elements— basing treatment on scientific evidence, monitoring progress, adjusting treatment as needed, collaboration between primary and specialty care—but that places greater weight on the therapeutic role of core primary care staff in the course of routine interactions with patients and their families (Table 1, Fig. 1). We propose this variant as a practical means of expanding mental health services where resources are limited, or as a means of increasing the impact of traditional CCM interventions in settings with access to additional personnel and specialty mental health consultation.

Common Factors in Mental Health Treatment

As noted above, a central challenge to applying the CCM in pediatric primary care is the need to make a diagnosis and apply a specific treatment. We ask if there are evidence-based skills that would allow providers to 1) immediately begin treatment for children with emotional and behavioral problems while diagnostic procedures are being pursued, and 2) to offer evidence-based care to children with emotional and behavioral problems who do not meet criteria for a specific diagnosis. The answer to these questions may be found in what is known as the common factor approach to mental health treatment (Grencavage and Norcross 1990; Bickman 2005; Castonguay and Beutler 2006). Common factor theory is based on the premise that therapies could be designed to help broad classes of people rather than specific individuals defined by demographics and diagnosis. Some mental health problems might ultimately require specific treatment, but there appear to be elements of treatment common to diverse therapies across multiple diagnoses that, together, have a powerful influence on outcomes. This is in contrast to the medical model of mental health care (the “specific effects” approach), which proposes that illnesses first need to be defined and then treated with psychotherapeutic or pharmacologic interventions that are highly specific to the illness (Bickman 2005).

Common factors relate to the process of care. They include characteristics of the *participants* in the process of care (e.g., attitudes of patients and providers), the participants’ *interaction* (the development of their relationship and the skills used to build relationship), and the skills providers use to *influence behavior change* (Castonguay and Beutler 2006; Karver et al. 2005; Beutler et al. 2006). In adult psychotherapy, common factors are thought

to account for as much as 30% of the variation in patient outcomes, compared to the 15% of variation accounted for by specific treatments (Lambert and Barley 2002).

Although authors use different and sometimes overlapping vocabulary (Castonguay and Beutler 2006; Karver et al. 2005), common factor theory includes but makes a clear distinction between the impact of the patient-provider relationship (and skills that promote it) and providers' use of skills that influence patient behavior change across a broad range of conditions. Provider interpersonal skills that build relationships with patients include demonstrations of empathy, warmth, and positive regard (Karver et al. 2005). Skills that influence behavior change include the ability to clearly explain the patient's condition and treatment, to keep discussion focused on immediate and practical concerns, and to keep the treatment session organized.

Practice Elements

A concept related to common factors is the notion that multiple, highly specific therapies targeted at the same or related conditions may have common therapeutic elements that could be, at a minimum, used as first-line treatment for all the related conditions. These elements are distinct from common factors in that they are semi-specific—they apply to a cluster of related problems and diagnoses—while common factors are thought to apply to psychotherapeutic interactions involving a range of diagnoses not thought to be causally related. For example, Moses and Barlow (2006) identified what they call three “common principles” among evidence-based psychologic treatments for adult anxiety and depression (altering cognitive appraisal, modifying emotion-driven behavior, and preventing emotional avoidance). They proposed and are testing the efficacy of psychotherapy based on these three elements for a mixed group of patients with a range of anxiety and depressive disorders. Hawaii's Evidence Based Services Committee (2004) did a similar analysis and identified what they called “practice elements” that were included in multiple therapies for specific conditions within broad problem areas in child mental health treatment (examples given in Table 2). The World Health Organization has explored the effectiveness of training general practitioners to use a similar approach based on broad diagnostic categories outlined by the International Classification of Disease (ICD) (Goldberg et al. 1995).

Common Factors in Child Psychotherapy

While common factors have been most carefully studied in adult psychotherapy, recent reviews and meta-analyses have proposed a range of possible factors for child and adolescent treatment and examined the evidence for their relationship to clinical outcomes (Karver et al. 2006; Dew and Bickman 2005) (Table 3). In Karver and colleagues' review (2006), two groups of therapist skills had the strongest relationship with outcomes: what they called “therapists' direct influence skills” (e.g., explaining processes, focusing discussion on practical concerns, addressing barriers to treatment), and “relationship factors” (e.g., the ability to build a therapeutic relationship with the child). Participant factors (e.g., therapists' interpersonal skills and parent and child willingness to take part in treatment) had a positive but smaller impact on outcomes.

Though not originally conceptualized as functioning via common factors, several other child mental health treatments and interventions illustrate the influence of common factor mechanisms. “Motivational enhancement” in the treatment of adolescent substance use (Tevyaw and Monti 2004) is a set of skills that combines relationship factors (demonstrating provider acceptance and warmth) and influence skills (developing discrepancy, making statements that affirm self-efficacy, exploring readiness to change). Interventions that address participant factors (parents’ beliefs about and barriers to help seeking) increase rates of attendance at initial mental health appointments (McKay et al. 1996). In early intervention programs for children at developmental risk, efforts targeting participant factors (promoting parent-program involvement) are more strongly associated with outcomes than the amount or type of services delivered (Dunst et al. 1988).

Evidence that a Common Factor Model may be Applicable to Pediatric Primary Care

Parallels between common factor theory and models of primary care suggest common factor interventions may be easily adopted in primary care settings. In primary care, the principle of “relationship centered care” (RCC), initially articulated by the Pew-Fetzer Task Force on Advancing Psychosocial Health Education and endorsed by the Institute of Medicine’s Committee on Behavioral and Social Sciences in Medical School Curricula, respects the values and perspectives of both patients and clinicians as in common factor theory (Beach et al. 2005). RCC is focused on developing clinicians’ abilities to establish genuine, trusting relationships with patients. RCC concepts of “learning to acknowledge areas of agreement and disagreement on values and expectations,” and “acknowledging that affective engagement, rather than affective neutrality” strengthens the therapeutic bond between the patient and provider, map closely onto the participant and relationship categories of common process factors. Elements of RCC, measured in general medical and pediatric settings, have been associated with increased disclosure of psychosocial information, decreased symptom burden, and adherence to care (Little et al. 2001; Thom et al. 2002; Wissow et al. 2003).

Motivational enhancement, which as noted above includes common factor elements, has been widely proposed for use in both pediatric and adult primary care (Sindelar et al. 2004; Britt et al. 2004; Resnicow et al. 2006). However, consistent data have yet to emerge showing that it can be incorporated into day-to-day practice, sustained, and improve outcomes in primary care settings (Pill et al. 1998; Miller and Mount 2001).

A recently completed trial (Wissow et al. 2008) randomized pediatric primary care providers to receive written materials or three hours of interactive training in the use of skills drawn from patient-centered care, motivational enhancement, family therapy, family engagement, and solution-focused cognitive therapy. These skills included teaching the provider how to elicit parent and child mental health concerns, partner with families to find acceptable treatment, and increase their positive expectations about treatment. The trial followed children who made routine visits to control and trained providers after screening to detect problems with mental health symptoms and functioning. Six months later, mothers of children who had seen trained providers had significantly greater decreases in distress.

Among minority children, those seeing trained providers had significantly greater improvements in mental health impairment compared to those seeing control providers.

Common factor theory's emphasis on patient and provider attitudes and expectations is also congruent with models of children's mental health services based in medical sociology. The Network Episode Model (Costello et al. 1998) and the Gateway Provider Model (Stiffman et al. 2004) propose that the social context of the child, parent, family, and clinician influence help-seeking for mental health problems and the processes and outcomes of mental health services. In particular, child and parent knowledge and attitudes about mental health problems, and interactions among family members and friends, influence decisions to seek help or disclose problems to health professionals. Subsequently, the attitudes and knowledge of "gateway providers"—social workers, teachers, primary care providers and others who tend to be first points of contact when families seek help—determine whether concerns are recognized and receive an appropriate response. In support of these models, research has suggested that pediatric primary care providers' confidence in their mental health treatment skills and feelings of burden associated with treating mental health problems are associated with whether mental health problems are discussed and identified (Brown et al. 2007a; Brown et al. 2007b). Common factors add family/community context and interpersonal process to the CCM's trajectory of stepped care.

Implications of a Common Factor Adaptation of the Chronic Care Model in Pediatric Primary Care

Adopting a common factor approach to delivering mental health services could have many implications for the organization of primary care, including methods of case-finding, the kinds of treatment offered, collaboration with specialty care, and training needs.

Provider Awareness of Family Attitudes and Expectations

Common factor theory and research emphasizes that the process of seeking care for mental health problems begins before the clinical encounter. Providers need skills to efficiently explore and respond to patients' perceptions of mental health problems and services. Parents may not always see primary care as a place to receive mental health advice about their children (López-Stewart et al. 2000). Providers will need greater awareness of how mental health issues are perceived in their community.

Common factor theory also suggests that providers will need to build relationships with and be attentive to the needs of both child patients and their parents. Parent mental health problems influence the course and outcomes of child problems (Rishel et al. 2006), so attempts to influence behavior may need to be directed to parents as well as to children, including motivating parents to seek care for their own emotional or behavioral difficulties. In child psychotherapy, alliance between therapist and parent predicts attendance at treatment sessions, but alliance with children predicts treatment outcome (Hawley and Weisz 2005). In an observational study of children's emergency room asthma care, we found that parents were more satisfied when doctors had worked to build a relationship with them as well as with their children (Wissow et al 1998).

Common Factors and the Assessment and Diagnostic Process

The idea that there may be powerful but relatively non-specific mechanisms for treating concerns raises questions about the role that making a diagnosis should play in primary care mental health treatment. As noted, the CCM begins with making a diagnosis. Treatment then proceeds in “steps” or cycles of re-evaluation with increasing treatment intensity as needed to achieve the desired clinical outcome. The common factor model potentially gives diagnosis a more variable role, suggesting instead that treatment begins immediately by identifying and responding to the patient’s particular emotional and behavioral concerns, with more specific diagnosis and treatment being pursued as necessary (Fig. 1):

Treatment for all Patients Regardless of Diagnosis

Using common factors, treatment of all children would include a relatively diagnosis-independent component. The way in which family members and the provider interact as problems are revealed, the extent to which caring and optimism are communicated, and the extent to which the interaction promotes the family’s own problem-solving, use of resources, and behavior change, are treatments applied to every case. That is, treatment begins immediately by building positive expectancies, eliciting and responding to the family’s formulation of their problems, building a working relationship around those issues, and promoting behavior change. Presumably, in some or many cases, this may be all the treatment required. Symptoms abate or functioning improves and minimal ongoing support is required from the provider.

Initiating Care Within Diagnostic Categories

When families have more focused concerns, or if a screening instrument suggests that a child’s problems are predominantly within one broad diagnostic category, treatment may advance a level of specificity to also include “practice elements” or “principles” common to proven therapies for disorders within that category (Chorpita et al. 2005; Evidence Based Services Committee 2004) (Table 2). Again, no further diagnostic steps may be necessary if symptoms and functioning improve. If further diagnosis is needed, the provider’s ongoing use of common factors relationship and behavior influence skills would have, hopefully, increased the family’s willingness to undertake additional testing or consultation.

Moving Immediately to Diagnosis

Within some symptom areas, there may be frequently-occurring conditions for which there are thought to be core, essential responses that are contingent on making a diagnosis. For example, given the belief that medication is considered the cornerstone of effective therapy for ADHD, children who seem to have attention problems might be moved quickly along the diagnostic path (for example, immediately seeking reports on classroom behavior and performance) simultaneously with less specific interventions. Similarly, children suspected of having developmental or learning problems might be moved along quickly to specific testing, with the rationale that common factor interventions will be therapeutic or address co-morbid problems but that a specific diagnosis is needed to access services in school and the community. Table 4 provides an initial exploration of need for specific diagnoses within broad diagnostic categories.

Treatment for Specific Diagnoses

Using common factors (with or without “practice elements”) would never replace the need for primary care providers to provide or facilitate access to evidence-based, condition-specific treatment for some children. However, the number of children requiring condition-specific treatment might be smaller (and the conditions primary care providers chose to treat specifically may change) if children with less severe problems improve with less specific treatment and never reach the point in their care where a diagnosis is made.

Identifying Emergencies

Finally, as in the original CCM, primary care providers would still need knowledge of how to identify and refer children likely to have conditions or symptoms requiring urgent help, including suspected abuse or neglect, suicidal or homicidal thoughts, mania, hallucinations and delusions, acute intoxication, and delirium.

Implications of Common Factors for Consultation/ Referral/Collaboration Between Primary Care and Mental Health Professionals

Facilitating primary care providers’ access to specialized consultation is a core element of the CCM (Wagner et al. 1996). In particular, primary care providers need support clarifying problematic diagnoses and making treatment decisions as cases become more complicated or severe. Adoption of a common factor model would not alter these needs, but would add others. Mental health consultants would also need to help providers decide on the level of diagnostic certainty necessary for the child or family, and they may also be called on to help troubleshoot the use of common factor therapeutic techniques. Collaboration may thus come to involve “decision support” at multiple levels to help the primary care provider answer the following questions: Has the primary care provider made the correct initial assessment about severity and broad treatment category? Is there a clue to a specific diagnosis that should be pursued sooner rather than later? Is there a common factor intervention that might better engage the family and strengthen or repair the therapeutic relationship? However, unlike in the original CCM, using a common factors approach allows treatment to begin before decision support can be obtained.

Common Factors and Practice Organization

Implementing the CCM relies heavily on changes in practice organization that facilitate delivery of evidence-based care and make it possible to track patients’ progress (Wagner et al. 1996). Adding a common factors component to the CCM would not reduce the need to track patients, but it may make it possible for existing staff to build mental health care into their present roles. The main new question to ask would be who, in the practice, interacts with patients in a way that demonstrates the practice’s receptivity to handling emotional and behavioral problems, who might be in a position to influence patients’ decisions to disclose problems, and who is involved with delivering and facilitating treatment. The primary care provider may be the main individual with these roles, but in many settings other office personnel may be involved. For example, aides recruited from the practice community may help greet patients, ascertain their needs, take vital signs, and lead patients to examination rooms. Especially in communities where patients come from a different culture than the

medical staff, these aides may have a major role in creating expectations about care, influencing the kinds of concerns for which patients seek help, and supporting patients in carrying out treatment recommendations (Getrich et al. 2007; Reinschmidt et al. 2006). Training these staff to use a set of common factors skills may help them better carry out these functions.

One particular aspect of practice organization on which common factor approaches could have an impact is the time involved in providing care. Emotional and behavioral problems complicate many chronic pediatric conditions, and use of common factor skills that promote disclosure of these problems might increase visit length and complexity. It seems equally possible, however, that visit length could be unaffected or even improve. Common factors training assists the clinician in focusing and organizing visits. To the extent that child or parent emotions or behavior disrupt visits for medical or mental health problems, addressing the disruption more effectively could improve time management during the visit. Clinicians may also be able to increase the number of problems they can handle in a given period of time. Roter and colleagues' (1995) found that training primary care providers to use a subset of common factor skills (influence skills centered on developing a focus on the patient's problems; relationship skills including showing positive regard, expressing empathy, providing reassurance) reduced emotional distress among adults and did not increase visit length.

Common Factors and Longitudinality

The CCM presupposes establishing a longitudinal relationship between patients and a site of care. Longitudinality is required to assess the outcomes of initial treatment, make necessary adjustments, and provide support for treatment adherence and other aspects of patient self-management. Primary care researchers have debated whether longitudinality also implies a continuous relationship between a patient and a unique provider, or whether what matters more is continuity of the medical information that allows monitoring changes in the patient's condition over time (Starfield 1980). Given that treatment based on common factors relies in part on establishing a relationship between patient and provider, it might be assumed that a common factors adaptation of the CCM would require continuity of provider as well as continuity of medical information. There are two reasons, however, why this might not be the case. First, in psychotherapy, therapeutic alliance, one of the more frequently measured aspects of patient-provider relationship (Karver et al. 2006), is felt to be established in the first few visits and changes relatively little afterward (Horvath 2000). Second, studies of smoking cessation counseling in primary care suggest providers can have an influence on patient behavior one or a few visits (Cornuz et al. 2002). Continuity of provider (primary care physician or other member of a practice) may still be preferable or more powerful, but use of common factors skills may be effective even in situations where continuity of provider is not possible.

Common Factors and Training

The common factor approach may provide an answer to the volume of specialized knowledge that primary care providers would need to learn if they were to implement diagnosis-specific treatments for many commonly occurring problems. Instead, they would

first try to master a core set of skills and interventions applicable to all emotional and behavioral problems. Next, they would learn “practice elements” common to a few broad categories of conditions. They would also need a means of identifying a smaller set of conditions that require emergent or more specific evaluation. Considerable evidence exists that some common factor skills can be readily taught and maintained over long periods of time (Finset et al. 2003; Fallowfield et al. 2003). At least one trial has suggested that a core set of skills can be taught with a minimal time commitment (4 h spread over several weeks) (Wissow et al. 2008).

Implications for Those Who Fund Primary and Mental Health Care

Although reimbursement is not the leading barrier to providing mental health care reported by pediatric practitioners, it is one of those most commonly cited (Olson et al. 2001; Horwitz et al. 2007; Wiley et al. 2004). As with all efforts to improve the quality of mental health services in primary care, financial incentives for clinicians may facilitate the adoption of a common factors approach. Payers may have to agree more widely than they do now to reimburse for mental health care without a specific diagnosis, and to compensate both primary care and mental health professionals for time consulting with each other.

Common factors approaches could have a variety of effects on the cost of pediatric care. If more mental health problems are disclosed, and pediatricians decide to address them, some visits could get longer and more expensive. Referrals to expensive specialty services could increase. However, there may be changes that offset these increases. Children with mental health care problems typically use more health services than other children (Riley et al. 1993; Bernal et al. 2000). In addition, children of mothers with mental health problems use more primary care services (Tonb et al. 1999) and are more likely to use costly acute services rather than preventive care (Minkovitz et al. 2005). Thus, using common factors approaches in routine visits might reduce some primary care utilization if mental health issues that are co-morbid with or masquerade as medical problems are better addressed. Families that are more engaged in the treatment process may be more likely to follow-through on mental health referrals, adding to the efficiency of mental health care itself. As noted above, previous CCM mental health interventions among adults in primary care have suggested that increased costs are offset by decreased use of specialty mental health care (Katon et al. 2006, Von Korff et al. 1998).

Research Needs

Research to further explore the utility of a common factors adaptation of the CCM might proceed on three levels. First, it is imperative to understand whether using a common factors approach has a positive impact on patient outcomes. Will a common factors adaptation of the CCM lead to better functioning of children and their families, and is there evidence that providing evidence-based treatment to those who don't meet diagnostic criteria prevents progression to more serious problems? Will patients without mental health problems be put off by probes for “anything else” after they state their somatic concerns? Could using a common factors-based protocol negatively impact patients in settings where specialty consultation and traditional diagnosis-driven treatment is readily available? In these settings, should all patients move immediately to diagnostic steps without waiting to see if common

factors interventions succeed? Will there be delays in evaluation or referral for children who truly need specialized services? Or, will the use of common factors techniques during the diagnostic process increase its accuracy and the acceptance of treatment or referral?

As second set of questions involves how to implement common factors interventions in the diverse context of pediatric practice. We highlight some of these questions, matching them to domains of the CCM, in Table 1. Chief among them are understanding which common factors skills to teach, which staff members to teach them to, how practices can be prepared to manage and track the kinds of problems that children and their parents reveal, and what the impact may be on practices' business plans. As these questions are explored, are there clues as to how common factors training can be disseminated, and how clinicians' common factors skills can be maintained at a high level? Continuing education time is limited and expensive, and training in mental health competes with training needs for other conditions. Common factors training may be more marketable than other mental health training if the skills taught seem useful for other chronic pediatric conditions such as asthma or diabetes.

A third realm of research would explore the impact of common factors approaches on the larger child and adult mental health care system. Are the referrals received by specialized mental health providers (of child, adult, or family services) altered in volume, appropriateness, or willingness to stay in care? Does adoption of common factors training facilitate implementation of other enhancements to primary care mental health services such as co-location (Williams et al. 2006) or facilitated consultation (Sarvet 2006)? The larger mental health system context could also have an impact on primary care providers' motivation to learn about common factors. Those in high-resource areas might want to better treat the low-severity children who are not referred on to specialized services and whose treatment is based in primary care. Providers in low-resource settings may be motivated to learn about common factors as a way of helping families with more serious problems wait out the greater barriers to seeking specialized care.

Conclusion

The concept of common factors appears to offer a strategy for modifying current models of treatment in primary care to better match the epidemiology of children's mental health problems and the resources available in pediatric practices. There appears to be a solid evidence base in child psychotherapy for the use of a core set of relationship building and behavior influence skills, and preliminary evidence that these skills can be taught to primary care providers and improve clinical outcomes. Should this evidence be confirmed, further work will be needed to refine the set of skills that primary care providers might learn and to understand the optimal mix of common factors and more specific forms of treatment.

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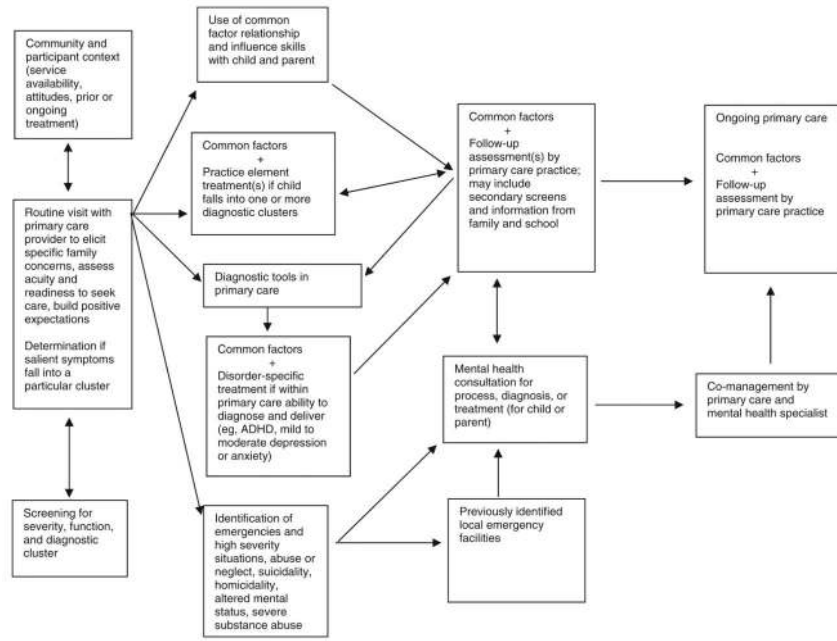


Fig. 1.
Common factors adaptation of a chronic stepped care model

Table 1
Five domains of the Chronic Care Model applied to mental health care, additions/modifications related to common factors treatment, and research needs related to designing a modified model

Chronic care model domain ^a	Standard CCM components as implemented ^b	Common Factors CCM additions/variatio	Research needs related to CCM implementation
Use of evidence-based, "planned care" (versus improvised, inconsistent, or incomplete treatment) using protocols or guidelines that target specific diagnoses	Implement screening and further assessments to identify patients with specific diagnoses Implement one or more diagnosis-specific protocols; protocol-driven "stepped care" based on initial response to treatment	Common factors skills as initial treatment [engagement, relationship building, direct influence skills] Targeted diagnostic steps based on initial severity, suspected cluster of symptoms, response to less-specific treatment "Semi-specific" treatments based on symptom clusters ["practice elements"—therapeutic interventions found to be effective across a range of related conditions] Diagnosis-specific protocols retained for some conditions	Which common factor skills will prove to be most effective across the broadest range of problems and ages? Which practice elements can be readily used by primary care providers? What screening and assessment tools would be most helpful and efficient to assess and monitor severity and to help assign children to particular symptom clusters? Can simple logic be designed to help providers know when to proceed immediately to greater diagnostic specificity? Once common factor and common element interventions are in place, how will they change the conditions for which diagnosis-specific protocols should be made available in primary care?
Practice (re)design that facilitates providing all needed aspects of "planned care." May include assessment of and changes to: <ul style="list-style-type: none"> • Appointment systems • Staff roles • Patient follow-up • Practice leadership (as it relates to care for specific conditions) 	Formation of collaborative care team (mental health, primary care); leadership may rest with primary care physician, mental health clinician, or non-physician staff Non-physician staff have primary role in screening, treatment planning and implementation, and follow-up functions Primary care physician may identify cases and have role in treatment planning but main role involves managing medical comorbidities and medication	Greater emphasis on interactions with all physician, nursing, and paraprofessional staff as having potential to be therapeutic (increase engagement, motivate change) Primary care physician, through use of common factor and some "practice element" skills, retains role in treatment, especially for patients with comorbid medical problems All office staff members who have contact with patients considered as candidates for training in practice elements and other mental health treatment skills	In any given practice, which staff members have the greatest ability to influence or are "naturally" involved in providing emotional support and/or behavioral advice? Which help motivate patients to disclose concerns and chose to follow-through with treatment? Does common factors training reduce providers' sense of burden in dealing with mental health problems and contribute to greater willingness to offer care? Does implementing common factor interventions require restructuring of appointment grids or allocation of primary care provider time? Is there an impact of using a common factors approach on practices' financial health? Will there be a net change in visit numbers and revenue? Do agreements with public or private payers regarding covered services need to be re-negotiated?
Enhanced patient education focused on: <ul style="list-style-type: none"> • Self-management • Behavioral change • Psychosocial support • Patient participation in decision-making and self-care 	Patient education focusing on self-management Collaborative development of treatment plans and goals Staff actively explores barriers to treatment Mechanisms for active outreach/follow-up at regular intervals	Collaborative planning and goal setting built into routine interactions for all conditions rather than just for those targeted by the CCM protocol Primary care staff actively assess (in routine interactions) patient interest in behavioral change and tailor interactions to fit	Are currently available pediatric patient educational materials adequate to support common factors interventions? If using common factors techniques results in greater disclosure of parent mental health problems or other family psychosocial problems, how can pediatric practices best respond? Will patients welcome or be concerned about a step-wise approach to diagnosis (which could involve some degree of "watchful waiting")?
Expert systems Mechanisms that increase the expertise of generalist practitioners,	Training for primary care providers and non-physician staff addresses attitudinal, practical, and knowledge barriers	Training addresses similar issues as CCM but has major component based on skills used in	How can common factor training be most efficiently delivered?

Chronic care model domain^a	Standard CCM components as implemented^b	Common Factors CCM additions/variatio	Research needs related to CCM implementation
<p>allowing them to bring specialty-level knowledge, when needed, into the primary care setting. Includes:</p> <ul style="list-style-type: none"> • Provider education • Decision support • Consultation 	<p>Mental health professionals serve as consultant to primary care practice</p> <ul style="list-style-type: none"> • Consultation may be directly with non-physician primary care staff • Consultation with primary care physician mainly focuses on medication and diagnosis, but can include direct assessment or re-assessment of the patient if treatment goals not achieved. 	<p>communication with patients and management of primary care visit</p> <p>Mental health professionals consult on treatment process as well as outcome. Consultation includes:</p> <ul style="list-style-type: none"> • Deciding on the level of diagnostic specificity needed for a given patient • Helping with problems of engagement and behavior change (in addition to medication and diagnosis) • Consultation with non-physician and physician staff not exclusively focused on medication management and diagnosis but also the use of brief interventions that are feasible in primary care 	<p>What package of common factor, practice element, and condition-specific training will be most attractive to practicing clinicians?</p> <p>How does training need to be adapted to providers with different training and cultural backgrounds and levels of experience?</p> <p>If opportunities to practice skills are necessary (i.e., with standardized patients or in role plays) how can this type of training be made widely available?</p> <p>How can clinical and non-clinical staff obtain supervision and maintain their skills in having therapeutic interactions with patients?</p> <p>Can psychiatrists who increasingly specialize in diagnosis and pharmacotherapy provide consultation on therapy process? Would they make good common factor trainers?</p>
<p>Establishment or refining of information systems capable of generating reminders for patients and staff and for monitoring outcomes at an individual and aggregate level</p>	<p>Active follow-up of patients</p> <p>Access to clinical information</p> <p>Ability to aggregate practice data to assess outcomes</p>	<p>Information systems have to efficiently capture a wider range of “problems” and describe their severity and stage of diagnosis</p>	<p>What sort of description/classification system is most suited to mental health care that incorporates common factors interventions (for example, DSM-PC)?</p> <p>In addition to patient clinical outcomes, what markers can practices use to monitor their effective use of common factor principles?</p>

^aCategories from Wagner et al. 1996

^bBased on Campo et al 2005; Asarnow et al. 2005; Rost et al. 2000

Table 2

Common “Practice elements” of evidence-based treatments (EBT) for youth with behavioral and emotional problems (adapted from Evidence Based Services Committee Report 2004)

Type of problem	Practice elements (% of EBTs in which present)
Anxious or avoidant behaviors	Exposure (97%)
Attention and hyperactivity problems	Tangible rewards (92%), parent praise (83%), parent monitoring (83%), time out (83%), commands/limit setting (58%), parent psychoeducation (58%), response cost (58%)
Depression or withdrawn behavior	Child psychoeducation (86%), cognitive/coping skills (71%), problem solving skills (71%), behavioral rehearsal skills (64%), social skills training (57%)
Disruptive behavior and willful misconduct	Tangible rewards (89%), commands/limit setting (73%), time out (70%), parent praise (68%), problem solving (54%)

Table 3

Summary of common factors related to child and adolescent mental health processes and outcomes (based on Karver et al. 2006; Tevyaw and Monti 2004)

Factor domain	Factor	Definition
Client/patient	Child/youth expectancy	A priori beliefs about outcome of care and the roles of those involved
	Child/youth willingness to participate	Willingness to take part in treatment; actual degree of participation
	Parent willingness to participate	Willingness to take part in treatment (as opposed to child alone); actual degree of participation
Therapist	Parent expectancy	A priori beliefs about outcome of care and the roles of those involved
	Interpersonal skills	Demonstration of caring, empathy, acceptance
	Therapist direct influence skills	Explaining clearly, providing a rationale for treatment, focusing on practical concerns, addressing barriers
Client-therapist relationship	Ability to manage resistance	Ability to avoid confrontation, to empathize and engage over disagreements
	Client-therapist relationship (with child/youth)	Development of working or therapeutic alliance (affective bond, agreement on goals and tasks of treatment)
	Client-therapist relationship (with parent)	Development of working or therapeutic alliance (affective bond, agreement on goals and tasks of treatment)

Table 4

Possible diagnostic clusters based on DSM-PC “Child manifestations” and their relationship to the need for pursuit of specific diagnosis during common factors/common elements treatment

Diagnostic cluster^a	Comments regarding priority for making a diagnosis
Developmental competency Cognitive skills Academic skills Motor development Speech and language	Appropriate response from school and community agencies not possible without firm diagnosis
Impulsive/hyperactive/inattentive Hyperactive/impulsive Inattentive	Given evidence that medication is a central element of treatment, need to move quickly to diagnostic steps
Negative/Antisocial behaviors Negative emotional behaviors Aggressive/oppositional behaviors Secretive antisocial behaviors	For pre-adolescents, good evidence for effectiveness of parenting training
Anxious symptoms	Panic disorder, anxiety related to trauma, obsessive-compulsive symptoms have specific effective therapies
Sadness and related symptoms	Assessment for suicidal thoughts mandatory

^aCriteria for thinking about each cluster:

1. Are there particular diagnoses or syndromes within each that require immediate specific diagnosis because:
 - a. there could be a threat to life
 - b. only a formal diagnosis will permit adequate system response
 - c. there is a well-proven intervention available that is thought to be essential and that requires a diagnosis to institute
2. For all clusters, the greater the degree of functional impairment, the quicker one would want to move toward establishing a diagnosis and/or implementing a specific evidence-based treatment or “practice element.” There should be some part of the provider’s initial assessment aimed at understanding the degree of functional impairment