A REVIEW OF THE EFFICACY OF THE PEDIATRIC INTEGRATED CARE MODEL

George Realmuto M.D. Professor Emeritus Psychiatry University of Minnesota

The pediatric population is burdened by mental illnesses that arise at this age and then continue throughout a person's life. Most care is not delivered by a specialist such as a Child and Adolescent Psychiatrist but rather in the office of the pediatrician or family practice provider. Persistent workforce shortages among pediatric mental health specialists requires care to be delivered by primary care or all to frequently the care is not delivered at all. The proportion of pediatric primary care services devoted to mental health care varies by the availability of specialized resources, school identification strategies, payment models, ethnicity and enrollment in government health programs and the willingness of the primary care provider to deliver such specialized care. The collaborative care model can help solve the last of this list of barriers. The size of the mental health needs and the cost of such care has been estimated to be about twelve billion dollars. (Peron R, Bisko RH, Blumberg SI et al Mental Health surveillance among children in the United States 2005-2011 MMWR Suppl 2013,62(2):1-35.)

The above-mentioned structural barriers to quality, local and timely care are longstanding and solutions have been approached through consideration of alternatives to usual service system practices. These efforts include the **collaborative care model** which was adapted from a quarter century old experience with the adult chronic care paradigm. (Wagner EH, Austin BT VonKorff M. Improving outcomes in chronic illness Manag Care Q 1996:74(4)511-544. These models are sub grouped under the larger title of collaborative care which was elaborated in a clinical practice guidelines document by the American Academy of Child and Adolescent Psychiatry in 2010. (https://www.aacap.org/App Themes/AACAP/docs/clinical-practice-center/guide.to.building-collaborative-mental-health-care-partnerships.pdf) The collaborative care model is not a monolithic structure and multiple variations exist. Various methods of delivery of care within collaborative care can flourish as the resources, needs and traditions of a community are harnessed. The main change is an alternative to the antiquated single office practitioner model of service provision. The standard for a collaborative care model is one that includes four necessary components. They consist of mental health education, psychiatric consultation to primary care, care coordination and direct clinical service. While seemingly straightforward the processes of each of these components is modifiable, customizable, site specific, resource adjusted, and system centered.

The design of the integrated collaborative care model:

The usual configuration of the integrated collaborative care model unites the primary care clinician, a care manager and the consulting child and adolescent psychiatrist (CAP) into a family centered, holistic service. The model expands and augments the elements of the basic skill set of each of these team members beyond that of routine care. The participation of all three roles avoids the dilemma of delivering care with only a piecemeal understanding of the child's needs and the limitations to the knowledge base of the provider. The ticket of

admission to a collaborative care approach is a child with a physical illness such as diabetes who in addition suffers from a mental illness and/or addiction and/or a disruptive behavior disorder. This combination of problems could expose gaps in clinical care expertise of the primary care clinician regarding effective treatment of a mental illness such as depression or anxiety and a maladaptive behavior disorder emerging from untreated mental illness. Similarly the psychiatric disorders can be impediments to the care of the diabetes or other illness that present to primary care The success of a regimented evidence based protocol that primary care recommends for best practice treatment may be thwarted by the low motivation of a depression, the constant worries and stress of an anxiety disorder or the defiance of a behavior disorder. It is only with the assistance of the tripartite team within collaborative care that the chance of success increases.

Collaborative team members roles:

The Care Manager:

The care manager, often a social worker by training, engages with the collaborative team and patient and family through an eclectic and integrated set of tasks. Beyond brokering supportive services which may be the sum total of a social worker's traditional responsibilities much more is achieved in this model. The care manager may provide updates on progress and functioning on key measures both to the team *from the family* and updating and refining plans and treatments *to the family.* Additionally, communication and interaction with community affiliates (school, extracurricular, extended family and caregivers) are ways that the integrated model closes gaps on important aspects of the child's life and facilitates a more facile engagement with patient, family and community.

Primary care clinician:

The team leader of the integrated collaborative care model is the Primary care clinician (PCC). This role is expanded from the narrow delivery of physical health evaluation and treatment. It is certainly not unusual for the PCC to be responsible for mental health care of straightforward non-complex mental illnesses. Consultation from the child and adolescent psychiatrist could be described as a specific and collegial educational and technical support and if necessary, the back up service provider to the child and family regarding the psychiatric issues. With a model that builds in assurances of timely availability of comprehensive psychiatric methods of assessment and intervention the PCC can be free to take on complex cases with the understanding that a handoff to a higher level of experience and expertise is always available. The PCC is then equipped to manage increasingly complex, comorbid and challenging psychiatric illnesses.

Child and Adolescent Psychiatrist:

Sometimes officed off site but available by video, telephonic or internet methods the Child and Adolescent Psychiatrist is responsible for evidenced based, family focused, child centered suggestions to team members. The CAP is responsible for reviewing the medical record and whatever other methods

the team and health system devises to store medical, psychological, social, educational and ecological data. With the primary care clinician the CAP can suggest data collection methods to measure interim and long term outcome measures that will follow functional progress Other specific services of the CAP include diagnostic refinement, attainable and achievable treatment planning, a biopsychosocial treatment formulation and specific medications and psychosocial interventions Responsibilities alsop include participation in regularly scheduled team meetings that review collaborative care cases and assist in creating workflow routines for clinical sharing and team building.

Overarching objectives of the collaborative care model:

Ongoing health care disorders are best understood in the context of the child's relationships with family, community and self, the child's potential, limitations and resilience, and the history of pervious heath care and trauma related experiences that impinge upon the present health issues. In care that is complex medically a formula for integrating all of these elements must be employed. Collaborative care is a useful model to maximize the efforts of the three professionals and to bring the patient's relevant world to bare on attaining health.

While integrated care might be thought of as a setting specific activity i.e., inpatient or outpatient, while difficult to manage logistically, it could exist within a health system as a format to follow the child through every facet of care.

Effectiveness of the collaborative care model:

A recent review of multiple studies considered several questions that previous studies of the modelhadr failed to answer. After an extensive review of published reports the authors analyzed high quality papers most of which employed randomized effectiveness methodology. Many different illnesses were the focus of the collaborative models' interventions and included behavior problems, ADHD, anxiety, depression, autism, eating disorders as well as risky behaviors and addiction. The studies were a mixed bag of collaborative models which limited the generalizability of the conclusions. The authors of the review thought it necessary to encourage further well designed work to more definitively resolve questions of cost effectiveness, fidelity to the model and adoption by clinicians, generalizability of the population serviced, sampling bias, burdens of collaborative care to the participants, retention and adequacy of treatment dosage, barriers to implementation and billing and coding conundrums, Alicia Callejo-Black, BA, David V Wagner, PhD, Krishnapriya Ramanujam, PhD, Ann Jeline Manabat, Sarah Mastel, BS, Andrew R Riley, PhD. A Systematic Review of External Validity in Pediatric Integrated Primary Care Trials *Journal of Pediatric Psychology*, Volume 45, Issue 9, October 2020, Pages 1039-1052, https://doi.org/10.1093/jpepsy/jsaa068.

However other reviews cast a more positive light on what we know about collaborative care. A review of 6 randomized controlled trials and nonrandomized quasi-experimental studies focused on the question of rates of treatment initiation and completion that was improved due to the collaborative care model . The findings of this review indicate that the integrated/collaborative care model within the pediatric primary care setting is associated with increased mental health treatment initiation and completion and higher patient satisfaction. The model was also associated with improved child adaptive behavior and positive mental health outcomes. Kimberly Burkhart, PhD1 , Kenneth Asogwa, MD2 , Nida Muzaffar,

MD2 , and Mary Gabriel, MD. Pediatric Integrated Care Models: A Systematic Review. Clinical Pediatrics 2020, Vol. 59(2) 148–153.

The largest metal analysis of integrated clinical service model which included more than 13.000 participants had more to say about how well the model produced better care. Compared to usual office based standalone providers, the integrated model was modest superior. When models where providers were more tightly tethered around a patient needs, the effectiveness of integrated care was larger. It appeared that the model does not serve every need equally well. Treatment was better delivered than prevention. And better for mental health disorders than for addiction. Asarnow JR, Rozenman M, Wiblin J, et al, Integrated medical-behavioral care compared with usual primary care for child and adolescent behavioral health a meta analysis. JAMA Pediatrics2015:169(10)929-937.

As medical care becomes more elaborate around specific conditions, the range professionals participating increases, the division of labor, specification of roles, definition of responsibilities is increasingly more common. The danger is fragmented poorly informed treatment decisions. Primary care as the point of contact with youth and their families should share in the advantages of team-based coordinated care especially for complex medical with psychiatric disorders. To meet the needs of caring for complex organ system disorders including brain and mind, the range of the primary care clinician must be bolstered and supported. The clinical studies on the collaborative care model increasingly show that as the roles, responsibilities and integrating tasks of a clinical care team are specified, skills acquired and multidiscipline informed care delivered, care becomes more effective.