

Pediatric Integrative Mental Health

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The Whole Child Center



**THE
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WHO WE ARE OUR OFFICE MEDIA RESOURCES PATIENT INFO WHAT'S NEW FAQs

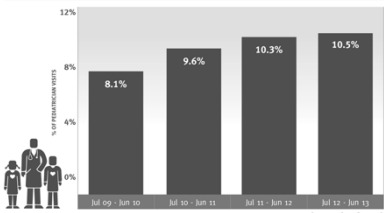
The Whole Child Center is a revolutionary pediatric practice. Our mission is to provide children and families with high-quality, state-of-the-art integrative and ecologically sustainable healthcare.



www.wholechildcenter.org

Pediatric mental health: The scope of the problem

Figure 1. Proportion of Visits with Mental Health Diagnosis
Visits by Patients Aged 6-17 to Pediatricians on athenahealth Network



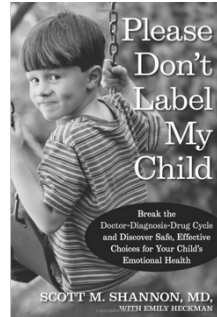
Period	% of Pediatrician Visits
Jul 09 - Jun 10	8.1%
Jul 10 - Jun 11	9.6%
Jul 11 - Jun 12	10.3%
Jul 12 - Jun 13	10.5%

Source: athenaResearch

www.athenahealth.com/blog/2013/10/28/data-points-to-behavioral-health-as-a-growing-challenge-for-pediatricians

What are mental health conditions?

- Anxiety
- Depression
- OCD
- ADHD
- Autism

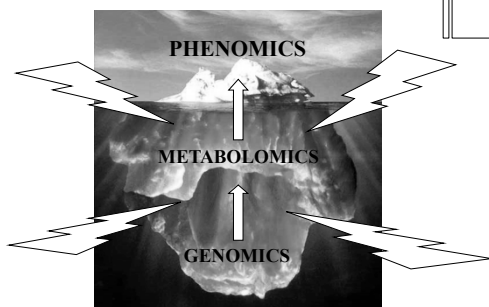


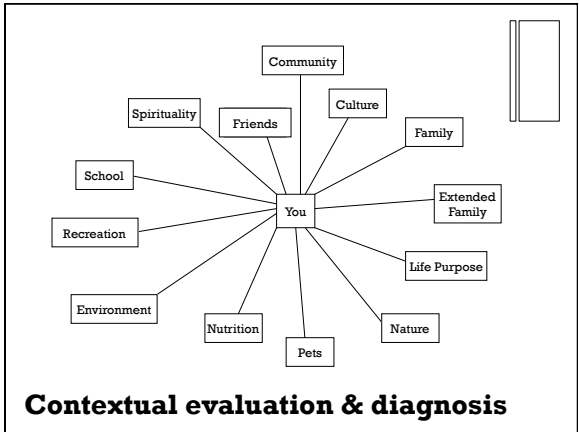
Defining EMB conditions (emotional, behavioral and mental health)

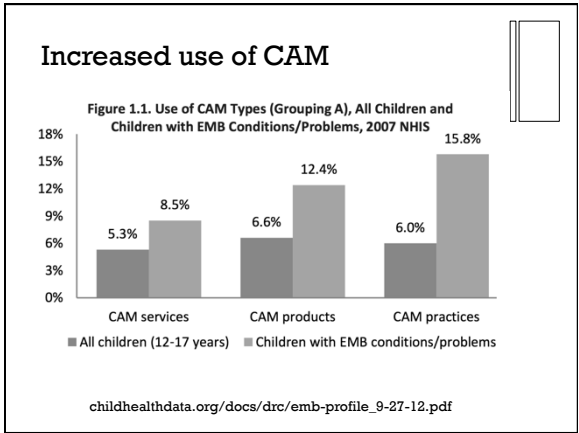
What we see = What we label and treat



The functional medicine model









What is Integrative Medicine?

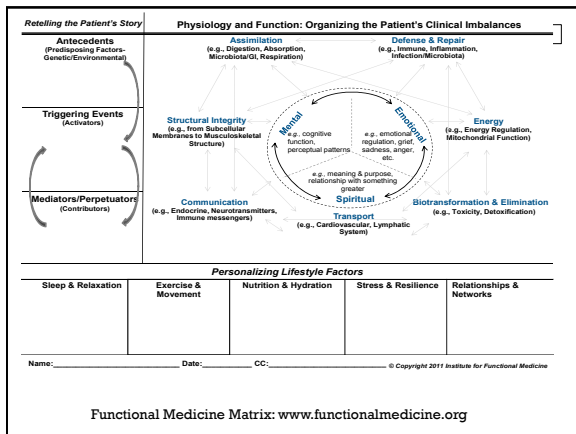
- Integrative
- Preventive
- Eco-sustainable
- Context-centered
- Relationship-based
- Personalized
- Participatory



wholechildcenter.org/whole-child-medicine

Evaluation





Areas of Investigation

- Interview/history, exam ("taking a history" vs. listening to a story)
- Review prior lab work and evaluations
- Genomics/Epigenetics
- Environmental factors
- Nutritional: Things to avoid, things to add
 - Food allergies/sensitivities and special diets
 - Vitamins, minerals, EFAs, AAs
- GI: microbiome/dysbiosis, enzymes/malabsorption, inflammation/"leaky gut"
- Metabolomics: methylation, sulfation, oxidative stress, detoxification, mitochondrial dysfunction
- Immune dysregulation: acute/chronic infections (PANDAS/PANS)
- Hormonal: oxytocin, testosterone/estrogen, thyroid, adrenal
- Neurotransmitters: excitatory and inhibitory, neuro-gut-immune connections

Emerging hot topics

- Post-infectious neuroimmune syndromes: PANDAS/PANS
- Nutrigenomics: e.g., MTHFR mutations
- Psychoneuroimmunology: The microbiome & "psychobiotics"

Ethical framework

		Effective	
		Yes	No
Safe	Yes	Use/Recommend	Tolerate
	No	Monitor closely	Advise against

Cohen MH, Kemper KJ, Stevens L, et al: Pediatric use of complementary therapies: ethical and policy choices. Pediatrics. 2005 Oct;116(4):e568-78.

PANDAS/PANS

- Concept of post-infectious neuroimmune syndromes
- Challenges in practice: How broad a clinical condition? How best to evaluate (labs)? When to treat? How to treat? When to stop treatment? How to handle behavioral recurrences? How to handle resistant cases?

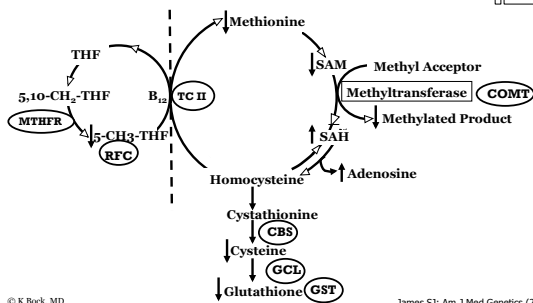
Chang K, et al: Clinical Evaluation of Youth with Pediatric Acute-Onset Neuropsychiatric Syndrome (PANS): Recommendations from the 2013 PANS Consensus Conference. J Child Adolesc Psychopharmacol. 2015 Feb;25(1): 3-13. doi: 10.1089/cap.2014.0084. <http://www.ncbi.nlm.nih.gov/pubmed/25325534>

Nutrigenomics



Source: Netherlands Nutrigenomics Centre

Example: MTHFR

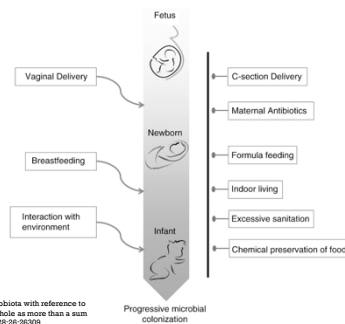


MTHFR references

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- Mohammad NS, et al: Aberrations in folate metabolic pathway and altered susceptibility to autism. *Psychiatr Genet.* 2009 Aug;19(4):171-6.
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- James SJ, et al: Metabolic biomarkers of increased oxidative stress and impaired methylation capacity in children with autism. *Am J Clin Nutr.* 2004 Dec;80(6):1611-7.
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Psychobiotics

- The Microbiome
- Gut-Brain Axis
- Psychobiotics



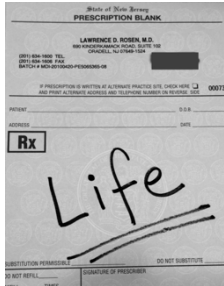
Toh MC, Allen-Vercore E: The human gut microbiota with reference to autism spectrum disorder: considering the whole as more than a sum of its parts. *Microb Ecol Health Dis.* 2015 Jan 26;26:26309.

Psychobiotics references

- Toh MC, Allen-Vercore E: The human gut microbiota with reference to autism spectrum disorder: considering the whole as more than a sum of its parts. *Microb Ecol Health Dis.* 2015 Jan 26;26:26309.
- Christian LM, et al: Gut microbiome composition is associated with temperament during early childhood. *Brain Behav Immun.* 2015 Mar; 45:118-27.
- Pärtty A, et al: A possible link between early probiotic intervention and the risk of neuropsychiatric disorders later in childhood: a randomized trial. *Pediatr Res.* 2015 Mar 11.
- Zhou L, Foster JA: Psychobiotics and the gut-brain axis: in the pursuit of happiness. *Neuropsychiatr Dis Treat.* 2015 Mar 16;11:715-23.
- Dinan TG, et al: Psychobiotics: a novel class of psychotropic. *Biol Psychiatry.* 2013 Nov 18;74(10):720-6.

Treatment: *Rx Life* An integrative approach

- Food
- Activity
- Rest
- Nature
- Mindfulness
- Creativity
- Connection



Rx Food



courtesy HealthBarnUSA.com

Rx Activity



"Snap the Whip" by Winslow Homer

Rx Rest



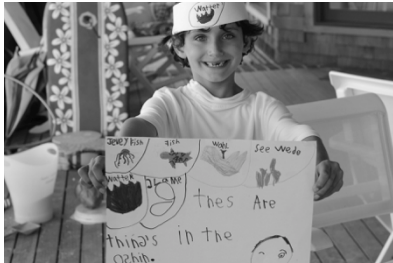
Rx Nature



Rx Mindfulness



Rx Creativity



Rx Connection



Rx for Optimal Mental Health

- We must be willing to ask the questions and listen to the stories – spend at least as much time on the evaluation phase as the treatment phase.
- Establishing the relationship is a key part of the therapeutic process.
- Be aware of the environmental context (family, school) of symptoms.
- Mindfully select investigation and therapeutic strategies, with respect to risk and benefit (safety, efficacy, cost-effectiveness). Think lifestyle first, and proceed with selective use of integrative therapies.
- Be realistically optimistic.
- Communicate with the family, plan early and regular follow up.
- Communicate with the health care team. Be open to collaboration.



For further reading...

- Dr. Scott Shannon: *Mental Health for the Whole Child; Parenting for the Whole Child*
- Dr. Kathi Kemper: *Mental Health, Naturally*
- Dr. Martha Herbert: *The Autism Revolution*
- Dr. Dzong Vo: *The Mindful Teen*