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Integrative medicine is integral to providing patient-centered care

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The Institute of Medicine's (IOM) report *Crossing the Quality Chasm* details a roadmap to quality twenty-first century health care for all Americans¹. This health care system of the future would be built upon six "best practice" principles; one of which is patient-centeredness. The IOM defines patient-centered care as "respectful of and responsive to individual patient preferences, needs and values and ensuring that patient values guide all clinical decisions¹." In this model of care, patients and their families are invited into the decision-making process, and their preferences for care are given weight equal to the clinician's expertise. This model also contemplates that evidence-based decisions will use the best available research evidence (Figure 1)². Many believe that high quality health care cannot be achieved without thusly incorporating the patient's experience. Improved clinical outcomes, enhanced patient satisfaction and reduced costs have been achieved across a wide variety of diseases and conditions using patient-centered approaches³.

First proposed in 1978, the Planetree model is identified as one of the three models most likely to accelerate the implementation of patient-centered care in ambulatory and acute care settings⁴. A main feature of the Planetree model is the use of integrative medicine (IM) as a method to achieve patient-centered care. IM is "healing-oriented, and embraces conventional and complementary therapies...Definitions abound but the commonalities are a reaffirmation of the importance of the therapeutic relationship, a focus on the whole person and lifestyle—not just the physical body, a renewed attention to healing, and a willingness to use all appropriate therapeutic approaches, whether they originate in conventional or alternative medicine. Integrative medicine represents a broader paradigm of medicine than the dominant biomedical model. It comes from a growing recognition that high-tech

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medicine, while wildly successful in some areas, cannot fully address the growing epidemics of chronic diseases⁵.” ”

Every five years the National Health Interview Survey (NHIS) asks tens of thousands of Americans about their health and IM use. The use of traditional healing practices is common. Thirty-eight percent of adults report using IM, and asthma and allergies rank in the top fifteen most common medical conditions for which IM is used⁶. In 2012, 12.1% of healthy children (no chronic conditions) aged 4-17 years used IM. Prevalence of IM use increased to 15.5% in children reporting one chronic condition and to 17.4% in those reporting two or more chronic conditions⁷. However, in children reporting a respiratory condition, allergies (food, respiratory, skin, hay fever) or eczema, IM use (including vitamins and minerals) increased to 64.7%, 64.1% and 62.2%⁷, respectively. Adults used nonvitamin, nonmineral dietary supplements more than any other approach⁸, and children used vitamins and minerals most often⁶.

When folk medicines (remedies including prayer, healing touch or laying on of hands, charms, herbal teas or tinctures, magic rituals)⁹ are included in the broad definition of what constitutes IM, rates of use increase substantially, with 80% of adolescents diagnosed with asthma¹⁰ and 93% of adults diagnosed with asthma reporting use¹¹. IM is costly: in 2007 \$33.9 billion was spent by patients for visits to IM practitioners and the purchase of complementary products¹².

The scientific evidence in support of IM is limited. Despite data that indicate a correlation between low levels of vitamins, antioxidants, minerals such as magnesium, and fatty acids and greater rates of asthma and atopy, dietary supplementation has not consistently been shown to prevent or treat disease¹³. The best support for dietary supplementation comes from a small number of clinical trials among asthma patients whose diets were supplemented with Vitamin D¹⁴ and allergy patients whose diets were supplemented with probiotics¹⁵. A small randomized controlled trial of mindfulness meditation did not improve lung function or disease control in asthma patients¹⁶ although hyperventilation reduction breathing techniques improved asthma symptoms in two studies of children with asthma¹⁷ and in a large study (N= 600) of adults with asthma¹⁸. Cardiopulmonary fitness improves with physical training in adults with asthma despite no objective improvements in lung function¹⁹. However, no recommendations could be made for acupuncture in asthma due to a lack of evidence²⁰. The Cochrane group is currently performing-but has not yet published-a review of yoga as a treatment for asthma²¹. Despite little evidence of IMs efficacy, data suggests that these approaches are well-tolerated and are not harmful.

In 2009, the IOM Summit on Integrative Medicine and the Health of the Public proposed IM as a patient-centered solution to the American health care crisis⁴. With its high consumer demand and holistic approach to wellness and illness, IM is capable of satisfying the IOM mandate of seeking and valuing the voice of the patient in care decisions. But IM is not without limitations and many questions remain. Is IM a model of care appropriate for specialty care? Can providers' concerns about IM's safety and effectiveness be adequately addressed?

The IOM proposed ten rules for improving health care; seven of those rules are specific to patient-centered care and provides a framework within which to consider the advantages and shortcomings of IM. Those seven rules are:

Care is based on continuous healing relationships

“Touch, time and talk” are the most common explanations offered for why patients prefer alternative practitioners to allopathic care. Medical education curricula have recently been revised with an eye toward creating a new generation of humble healers who excel in touch, time and talk, and who are genuine in their interest in others’ perspectives. Humility will require a new approach to patient-provider relationships. Future healers will need to be self-aware, empathetic, and appreciative of the opportunity to care for the sick and vulnerable²².

Brief top-down instructions to subordinates, long a part of the culture of medicine, will need to be replaced by sustained engagement with equal partners. In the patient-centered continuous care setting common to allergy practice, patient satisfaction and clinical outcomes are optimized²³. Most health care providers would like to practice in this manner. Unfortunately, care systems interfere with health care professionals’ ability to engage with patients by demanding shorter appointments and electronic charting.

Care is customized according to patient needs and values

Patients often have a different orientation to what a cluster of symptoms means (illness representation), why disease occurs (explanatory model) and how/who to treat²⁴, prompting many to seek care outside the biomedical systems. In fact, 80% of the world’s healthcare is non-biomedical²⁵. Patient-centered care has been proposed as an approach to cultural competency education, preparing providers to be responsive to and respectful of different epistemological worldviews that conflict with the medical model. Cultural competency training improves nonjudgmental attitudes and behaviors, and increases the likelihood that patients’ beliefs and treatment preferences will be elicited by providers²⁶. When clinicians understand patient preferences, they can facilitate discussion of the risks and merits associated with specific treatment options in a way the patient understands, and with respect for the patient’s goals. The skill of providers in initiating discussions characterized by shared decision-making can help reconcile differences between patient and provider preferences, leading to a mutually agreed upon, high quality decision that best matches the patient’s needs with evidence-based recommendations. Research has demonstrated that those clinicians who use these types of effective communication skills see greater intentions to self-manage²⁷ and improved medication adherence and enhanced disease control in adults²⁸ and children with asthma²⁹.

The patient is the source of control

Compared to conventional biomedicine, patients believe that IM offers more opportunity for personal control over their health, helping them cope with illness and exercise active control over their health care decisions³⁰. Too often, providers construct complex plans for achieving health goals without patient input and without considering whether patients can - or want to - implement the plan or agree with the goals set for them. Since chronic disease is

largely managed at home, at the discretion of the patient and the patient's family, it is imperative that the patient's values are held in equal regard. Incongruous provider and patient goals likely contribute, in part, to dissatisfaction with conventional biomedical care and to low rates of adherence to medical recommendations,²⁷⁻²⁹.

Knowledge is shared and information flows freely

"Doctor" comes from the Latin *to teach*. Historically, medical education emphasized "hard" scientific knowledge over the "soft" science of interpersonal communication and patient education, areas in which IM disciplines excel³¹. Luckily, that emphasis is changing. For disease self-management to be successful, patients need to have access to clinical knowledge that facilitates their learning to live with illness. While providers may believe they are *educating* patients, too often they are merely *informing* patients. For example, providing patients with a printed handout, a web resource or oral instruction is nothing more than the transmission of facts that can be tested later to quantify what patients know. To be transformational, clinical knowledge must help patients gain the skills and personal experience needed to competently manage their condition. To be successful at disease management, the patient's concept of health – what it is, how it is achieved and how it is sustained - must be considered in addition to the externally specified targets set by clinicians^{32,33}.

Decision-making is evidence-based

Support for patient self-management is the basis for patient-centered care. A number of clinical decision aids are available to assist patients in weighing the evidence in support of one treatment protocol over another³⁴. When presented with the "truth", clinicians expect that patients will select the most effective treatment (even when providers themselves do not practice in accordance with evidence-based guidelines³⁵). Yet the evidence supporting many treatment recommendations is lacking. At other times, patients simply do not find the evidence compelling.

How should providers respond when patients want to integrate alternative therapies with little - or no - evidence of effectiveness into a treatment plan that includes safe and efficacious prescription therapies? The provider's response should be predicated upon answers to certain questions. Is the IM likely safe? Will patients continue to take prescription therapies as advised? Will patients be able to afford the costs of both treatments? Will decisions about "stepping down" therapy be made by the medical team? If the answer to these questions is yes, then the therapeutic alliance would be strengthened by supporting the patient's decision to use IM, notwithstanding IMs high cost and the negligible evidence demonstrating its efficacy. Even where providers think that IM offers nothing more than a placebo, its use should be supported since the placebo effect is known to be a potent intervention.

Safety

The greatest challenge posed by IM occurs when the patient rejects evidence-based medical treatment in favor of a therapy that has the potential for serious interactions or adverse

events. If a minor is involved, the role of the clinician is to make clear that protection of the child is the first priority. But the right to self-determination is a challenge in caring for adults. In the case of potentially dangerous IM practices, providers need to get to “no” just like in any clinical situation in which patients request inappropriate tests and treatments. When the context of the request is explored using open therapeutic communication, the provider-patient partnership can be preserved³⁶. Structured approaches to evidence-based IM shared decision-making are often successful in dissuading the patient from using a harmful treatment by substituting a “safe” alternative³⁷. Without offering another option, there is a risk that the patient will reject conventional care altogether. In addition, offering safe IM choices may increase the patient’s willingness to try conventional treatment, offering the clinician a “foot in the door” to provide care to a patient who otherwise might never acquiesce to biomedical treatment.

Needs are anticipated

Like all patient-centered care models, IM focuses heavily on health promotion and wellness, stressing proactive rather than reactive care. This is particularly important in self-management of conditions where loss of control can result in life-threatening situations, and where symptoms can persist despite adherence to evidence-based treatments. With its emphasis on healthy living and stress reduction, IM offers a variety of lifestyle behaviors which may support symptom self-management of their disease. Practice based IM treatments, if accommodated, can empower patients to create truly “personalized” care that enhances their satisfaction with biomedicine and with allopathic providers, setting the stage for improved clinical outcomes.

Integrative medicine is, and has always been, a patient-centered model of delivering care. Despite its shortcomings, IM must be incorporated into the new patient-centered paradigm. IM is a healing tradition that offers patients control over their health vis-à-vis a tailored plan that is safe, evidence-based, supports shared knowledge, and anticipates needs. In the redesigned health systems of the future, IM encourages that patients receive the care they need - and the care they want. It is only then that health can truly be optimized.

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References

1. Institute of Medicine (IOM). Crossing the Quality chasm: A new health system for the 21st century. National Academy Press; Washington, D.C.: 2001.
2. The Evidence-based medicine triad. Florida State College of Medicine; <http://med.fsu.edu/index.cfm?page=medicalinformatics.ebmTutorial>
3. National Healthcare Quality Report. Agency for Healthcare Research and Quality; Rockville, MD: May. 2013 Publication no. 14-005

4. Shaller, D. Patient-centered care: what does it take?. The Commonwealth Fund; 2007. Publication no. 1067. <http://www.commonwealthfund.org/publications/fund-reports/2007/oct/patient-centered-care--what-does-it-take>
5. Maizes, V.; Rakel, D.; Niemiec, C. Integrative medicine and patient –centered care. Commissioned Report for the IOM Summit on Integrative Medicine and the Health of the Public February. 2009. <http://www.iom.edu/~media/Files/Activity%20Files/Quality/IntegrativeMed/Integrative%20Medicine%20and%20Patient%20Centered%20Care.pdf>
6. Barnes PM, Bloom B, Nahin R. Complementary and alternative medicine use among adults and children: United States. 2007 December 2008.CDC National Health Statistics Report no. 12.
7. Data Resource Center for Child and Adolescent Health. <http://childhealthdata.org/browse/survey>
8. Peregoy, JA.; Clarke, TC.; Jones, LI.; Stussman, BJ.; Nahin, RL. Regional variation in use of complementary health approaches by U.S. adults. National Center for Health Statistics; Hyattsville, MD: 2014. NCHS data brief, no 146
9. Barnes PM, Powell-Griner E, McFann K, et al. Complementary and alternative medicine use among adults: United States, 2002. Adv Data. 2004; 343:1–19. [PubMed: 15188733]
10. Reznik M, Ozuah PO, Franco K, et al. Use of complementary therapy by adolescents with asthma. Archives of Pediatrics and Adolescent Medicine. 2002; 156:1042–4. [PubMed: 12361452]
11. George M, Topaz M, Rand C, Sommers MS, Glanz K, Pantaloni MV, Mao J, Shea J. Inhaled corticosteroid beliefs, complementary and alternative medicine and uncontrolled asthma in urban minority adults. Journal of Allergy and Clinical Immunology. 2014; 134:1252–9. 12. [PubMed: 25218286]
12. Nahin, RL.; Barnes, PM.; Stussman, BJ.; Bloom, B. National health statistics reports 2009. National Center for Health Statistics; Hyattsville, MD: 2007. Costs of complementary and alternative medicine (CAM) and frequency of visits to CAM practitioners: United States.
13. Silvers WS, Bailey HK. Integrative approach to allergy and asthma using complementary and alternative medicine. Ann Allergy Asthma Immunol. 2014; 112:280–5. [PubMed: 24679731]
14. Sutherland ER, Goleva E, Jackson LP, Stevens AD, Leung DY. Vitamin D levels, lung function, and steroid response in adult asthma. Am J Respir Crit Care Med. 2010; 181:699–704. [PubMed: 20075384]
15. Goldin BR, Gorbach SL. Clinical indications for probiotics: An overview. Clin Infect Dis. 2008; 46:S96–S100. Supp. [PubMed: 18181732]
16. Pbert L, Madison JM, Druker S, Olendzki N, Magner R, Reed G, Allison J, Carmody J. Effect of mindfulness training on asthma quality of life and lung function: a randomised controlled trial. J Thorax. 2012; 67:769–76.
17. Barker NJ, Jones M, O'Connell NE, Everard ML. Breathing exercises for dysfunctional breathing/hyperventilation syndrome in children. Cochrane Database of Systematic Reviews. 2013; (12) Art. No.: CD010376.
18. O'Connor, E.; Patnode, CD.; Burda, BU.; Buckley, DI.; Whitlock, EP. Comparative Effectiveness Review. Agency for Healthcare Research and Quality; Rockville, MD: Sep. 2012 Breathing exercises and/or retraining techniques in the treatment of asthma: comparative effectiveness. No. 71 AHRQ Publication No. 12-EHC092-EF
19. Carson KV, Chandratilleke MG, Picot J, Brinn MP, Esterman AJ, Smith BJ. Physical training for asthma. Cochrane Database of Systematic Reviews. 2013; (9) Art. No.: CD001116.
20. McCarney RW, Brinkhaus B, Lasserson TJ, Linde K. Acupuncture for chronic asthma. Cochrane Database of Systematic Reviews. 2003; (3) Art. No.: CD000008.
21. Yang ZY, Yuan JQ, Mao C, Huang YF, Wu XY, Gao YM, Tang JL. Yoga for asthma (Protocol). Cochrane Database of Systematic Reviews. 2013; (2) Art. No.: CD010346.
22. Coulehan J. On humility. Ann Intern Med. 2010; 153:200–201. [PubMed: 20679563]
23. Schatz M, Zeiger RS, Mosen D, Apter AJ, Vollmer WM, Stibolt TB, Leong A, Johnson MS, Mendoza G, Cook EF. Improved asthma outcomes from allergy specialist care: a population-based cross-sectional analysis. J Allergy Clin Immunol. 2005; 116:1307–13. [PubMed: 16337464]
24. Kleinman A, Eisenberg L, Good B. Culture, illness, and care: clinical lessons from anthropologic and cross-cultural research. Ann Intern Med. 1978; 88:251–8. [PubMed: 626456]

25. World Health Organization. Traditional medicine. 2003. <http://www.who.int/mediacentre/factsheets/2003/fs134/en/>
26. Kutob RM, Bormanis J, Crago M, Harris JM Jr, Senf J, Shisslak CM. Cultural competence education for practicing physicians: lessons in cultural humility, nonjudgmental behaviors, and health beliefs elicitation. *J Contin Educ Health Prof.* 2013; 33:164–73. [PubMed: 24078364]
27. Speck AL, Nelson B, Jefferson SO, Baptist AP. Young, African American adults with asthma: what matters to them? *Ann Allergy Asthma Immunol.* 2014; 112:35–9. [PubMed: 24331391]
28. Wilson SR, Strub P, Buist AS. Shared treatment decision making improves adherence and outcomes in poorly controlled asthma. *Am J Respir Crit Care Med.* 2010; 181:566–577. [PubMed: 20019345]
29. Rivera-Spoljaric K, Halley M, Wilson SR. Shared clinician-patient decision-making about treatment of pediatric asthma: what do we know and how can we use it? *Curr Opin Allergy Clin Immunol.* 2014; 14(2):161–7. [PubMed: 24553296]
30. Astin JA, Shapiro SL, Lee RA, Shapiro DH Jr. The construct of control in mind-body medicine: implications for healthcare. *Altern Ther Health Med.* 1999; 5:42–7. [PubMed: 10069088]
31. Heusser P, Scheffer C, Neumann M, Tauschel D, Edelhäuser F. Towards non-reductionistic medical anthropology, medical education and practitioner-patient-interaction: the example of Anthroposophic Medicine. *Patient Educ Couns.* 2012; 89:455–60. [PubMed: 22306457]
32. Rameckers E. Using health outcomes data to inform decision-making: patient perspective. *Pharmacoeconomics.* 2001; 19(Suppl 2):53–5. [PubMed: 11700790]
33. Worstell M. Asthma: individual patient perspective and current unmet needs. *Clin Exp Allergy.* 2000; 30(Suppl 1):11–5. 34. [PubMed: 10849468]
34. Patient decision aids. <http://decisionaid.ohri.ca/>
35. Baiardini I, Braido F, Bonini M, Compalati E, Canonica GW. Why do doctors and patients not follow guidelines? *Curr Opin Allergy Clin Immunol.* 2009; 9:228–233. [PubMed: 19390434]
36. Paterniti DA, Fancher TL, Cipri CS, Timmermans S, Heritage J, Kravitz RL. Getting to "no": Strategies primary care physicians use to deny patient requests. *Arch Intern Med.* 2010; 170:381–8. [PubMed: 20177043]
37. Jansons LL, Lynch RL, LeBlanc A, Tilburt JC. Shared decision making in complementary and alternative medicine therapies. *Pediatr Ann.* 2012; 41:522–7. [PubMed: 23205655]

Figure 1.
The Evidence-based Medicine Triad