

Two-Generation Pediatric Care: A Modest Proposal

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To reduce inequities in child health, we need to reduce the gap between what we know and what we do. We must challenge our practices and traditions, develop new solutions and have the strength and courage to change how we practice. Based on my experience that the best way to help children is to help their parents, and the best way to reach parents is through their children, I propose a new frame of a 2-generation approach that focuses not only on the child but also on the parents and their relationship to guide our innovation and target improvements. Pediatricians' knowledge and empathy for families is a special base to use new strategies to test ideas on a small number of families with minimal time and cost. Examples from our work includes the following: (1) identify and refer parents with mental health conditions and lack of effective contraception, (2) develop more effective approaches to explain illness and disease to parents, and (3) educate parents about the impact of social relations from infancy on; love can amplify and stress can impair brain and child development. I encourage clinicians to think about what should be changed and more importantly to be excited and brave enough to take the first steps to design and test an idea.

The accomplishments of biomedical innovation have been spectacular over the past 50 years. Decreases in morbidity and mortality from infectious diseases, cancers, and metabolic illnesses have changed the face of childhood disease and how we think about child health. However, by every health, social, and educational metric, low-income children are doing less well than their peers.^{1,2} We can begin to reduce inequities in child health by reducing the gap between what we know and what we do. Along with traditional research, innovation and improvement in health care are important strategies for closing this knowledge to practice gap.

Although improvement and innovation are necessary for the entire child health care system, nowhere is it more

critically important than for well-child care. The utility and viability of well-child care in its present form has been called increasingly into question.³ We need new ideas to create bigger positive change especially for the health and well being of low income children. The goal of this article is to call on present and future practicing and academic pediatricians to take on the challenge of innovation and change. Clinicians have special knowledge of and natural empathy for families in their practices and are in an ideal position to develop and test new ideas.^{4,5} I propose a new frame to guide innovations and target improvements: a 2-generation approach that focuses not only on the child but also on parents and on their relationship.

abstract

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TWO-GENERATION APPROACH TO CARE: A NEW FRAME AND DESIGN CHALLENGE

Early in my career, I noticed that children were most at risk when mothers and fathers were depressed, heavy alcohol or drug users, victims of domestic violence, or very young.⁶⁻¹² My subsequent work focused on addressing these and related problems of families.¹³⁻¹⁷ Because parents are instrumental in shaping their children's health and development, a 2-generation relational approach (concerning the way people are connected) to care should allow us to expand our efforts to help parents meet their aspirations for their children. In my clinical experience, the best way to help children is to help their parents, and the best way to reach parents is through their children. Life course health science also makes it abundantly clear that to optimize health along the life cycle, one must address risk as early as possible.¹⁸

Although we already do much to help parents, a 2-generation relational approach to care is a new opportunity to have impact on access, change, and outcomes. A 2-generation model of care that colleagues and I are now working on includes the following: (1) Identify and refer parents with health conditions that have adverse effects on their children and themselves. (2) Develop more effective approaches to explain illness and disease to parents. (3) Educate parents about the impact of social relations from infancy on: love can amplify and stress can impair brain and child development. Although family medicine provides a 2-generation approach, if we can deliver a pediatric version that creates real value for families and the health system, we can generate a win-win opportunity. We will bring better care and outcomes to children and their parents justifying value-producing reimbursements to cover the additional time. Such changes can help all families but

low-income families should be a primary focus because they carry a disproportionate burden of poor outcomes.

Human-centered design strategies provide an important and systematic approach to implement change. These human-centered designs use an ecological approach to understand human needs by examining where people live, work, learn, and play.¹⁹ Indeed, these strategies play an increasingly important role in health care systems as we strive to create change and empower patients. A clinician's knowledge of the family's needs, hopes, fears, and competing obligations can provide an important perspective to solve a problem. To develop new interventions, we also need to know about the family's home, neighborhood, and community (faith, friendship, and support systems).

Although this may feel daunting to the busy clinician, college students, medical and nursing students, etc could be enthusiastic and grateful helpers in obtaining information listed above needed for human-centered design. Additionally, testing new ideas can be conducted on a small scale, such as 5 to 10 families in a clinician's practice.⁴ For example, to test a texting-based intervention to remind parents or children to take their medication, exercise, or diet change, a pediatrician or other office staff member can text a small number of patients to see if and how it works, make any needed changes, then go on to a scaled up automated system avoiding much time and money if it does not work.⁵

EXAMPLES OF OPPORTUNITIES FOR CHANGE

Parental Mental Health and Health Behaviors

Children need a supportive and responsive relationship to flourish and to develop resiliency in the

face of adverse conditions. Mental illness and adverse health behaviors in parents (depression, trauma/violence, drug, cigarette smoking, and excessive alcohol use) jeopardize positive family relationships and harm children.²⁰⁻²⁴ Many of these parents have poor emotional regulation and significant difficulty with setting limits. They may be unable to provide consistent basic care and nurturing. Parental cigarette smoking has direct effects on children's cognition, learning, and basic health. These problems need to be identified, and parents need to be engaged and referred to services to benefit from effective treatments.²⁰⁻²⁴ When such services are not available, advocacy with other organizations will be necessary to ensure access to appropriate care.

Pediatricians have a special opportunity to identify and refer parents who struggle with these and related problems. An ongoing trusting relationship with a pediatrician or pediatric nurse practitioner (PNP) is a base that allows direct interviewing about a parent's health and circumstances because we know that parent health is important to children's health. Other means to identify the above problems include validated screening questions,²¹⁻²⁴ family history, including mental illness and substance abuse,²⁵ history of restraining orders,²⁶ etc. Universal screening for depression from the US Preventive Health Services Task Force is now in draft stage.²⁷ Approval is likely. When this is implemented in pediatrics, both the mother and child will benefit.²⁸

Very importantly, the 2-generation model of care provides a new opportunity to prevent unplanned pregnancy for mothers of our patients.²⁹ Preventing unplanned pregnancy has positive health effects for mother and her infant, saves costs in health care, and reduces child poverty by preventing

derailment of a mother's education or disruption of employment. It also expands available resources for each child already in the family: extra money, time, energy, and nurturing. Long-acting reversible contraceptives are available now and are 99.5% effective and safe. Pediatricians can ask new mothers at the 2- or 4-month well-child visit: "When do you plan to have your next baby?" then proactively help her to make arrangements for ideally same-visit family planning, clinic visit, or referral to an obstetrician-gynecologist. Our experience has shown mothers are comfortable and even appreciative of discussing this issue with pediatricians. The discussion can also be an important catalyst when the father is present. Beyond providing information and referral, pediatricians may choose to be trained to implant Nexplanon (Merck and Co., Inc, Kenilworth, NJ). The procedure is relatively simple and quick unlike intrauterine devices. There are significant financial incentives in place because the pediatrician can bill for this service in addition to the pediatric visit, which more than doubles the relative value units and reimbursement.

Finally, the 2-generation approach allows parents to get limited routine care efficiently. Pediatricians and PNPs might be the only clinicians that parents, especially low-income parents, come into contact with. This model does not mean pediatricians take responsibility for the overall health of parents but rather selective aspects such as those above, ideally in collaboration with the parents' physician. In addition, this approach might also include flu shots, culturing throats of parents whose child has a strep throat, tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis, adsorbed vaccine, etc, which will require additional reimbursement for this care. In the future, training and ongoing education will need to adjust to any

new scope of practice. This approach, common 25 years ago before billing restrictions, will save parents missing work to go their doctor for a flu shot or other simple treatment.

Communicating Disease and Illness Information and Management

The development of sophisticated diagnostic technology and effective multimodal treatments exacerbate previous challenges to explain testing, study results, diagnosis, and treatment. A parent's worry about their sick child may further compromise their intake and processing of verbal information. Providing pamphlets and other text-based material may work but are commonly left behind in the examination room or if taken misplaced at home. Studies suggest that poor communication especially with parents of low health literacy contributes to adherence rates of only ~50%.^{2,30-32}

An analogy that works for me: my car has a problem and I take it in to the auto mechanic. He takes a history of symptoms, goes under the hood for a "physical exam," and then explains to me what the problem is and what he is going to do. With all my advanced degrees, I usually have no idea what he is talking about; I do not know the names of the parts, what they do, or how they work together. I think that is what it is like for many of our patients and parents.

Digital and interactive media offer a promising approach to more effective explanations. After all, sometimes a picture (one not drawn by the clinician) is worth a thousand words. Digital interactive media whose use is growing exponentially can provide engaging and actionable information especially for parents with low health literacy. Videos featuring real people giving information who look like and speak the same language as the people accessing the information can be very effective by creating an alignment and reducing a perceived

disparity of competence. The message is that people like them can understand their child's illness and learn to manage it.

Many parents search the Internet for information, but the sheer volume of information is overwhelming, generalized, and often not vetted. Pediatric clinicians and/or office staff can provide links in the office setting and use a covieing approach when appropriate. This approach is more personal and may make the content more valuable to the parent similar to when we show and discuss growth curves, radiographs, ultrasounds, etc. For more extensive explanations, especially for new diagnoses or recurring exacerbations due to poor adherence, an approach similar to the flipped classroom for teaching medical students may be more effective. Parents watch an interactive video on digital media before the office or ward visit, followed by discussion with the physician, perhaps including review of answers to interactive questions. We and others are developing disease management e-books. Some efforts are supported by philanthropy and therefore should be available to clinicians and parents without cost. Even if commercially developed, it will likely be covered by hospitals and/or insurers as a quality metric, especially if it effectively promotes health in children with chronic disease.

Educate Parents About Social Relationships; Love and Stress During Well-Child Care

There have been remarkable advances in our understanding of how positive social relationships can amplify and how stress/violence can impair brain development and early learning. Parents often are not aware of this information. Introducing this important information through specially designed videos may be more effective than verbal discussion. Similar to disease management

videos, the use of parents who look and sound like the primary audience of low-income parents will optimize engagement and acceptance. In focus groups, mothers have also emphasized that many early learning videos do not reflect their life: the mothers portrayed are slim, well dressed, and their hair is combed, children are well dressed and well behaved, the kitchen is clean and orderly. The videos portray happy responsive mothers and children. In reality, parents interact with their child moment to moment in the context of multiple demands. Interactions sometimes have a strong emotional overlay: frustration, anger, fatigue, etc. Parents need to see depictions of challenging situations such as responding to tantrums, getting children to eat or sleep when they do not want to, interpreting and supporting children's push for autonomy, and staying calm and in charge in the face of a child's protest.

We are developing brief vignettes on easily accessible digital media with the faces and voices of parents, not a "talking head," which can validate most parents' struggles and then suggest strategies "to repair" negative episodes. The importance of parents "repairing" significant negative interactions by reconnecting emotionally, verbally ("I'm sorry I yelled, I am hungry, tired, or stressed"), and/or physically (hug or kiss) will be emphasized. Reconnecting to the child after parents have had an angry fight is important to reassure children that their world is safe. Other videos will depict narratives connecting parent actions to children's early learning and brain development. Videos can be viewed on mothers' smart phone before seeing the physician. After a brief discussion with the physician, parents will be encouraged to show and discuss the video with their friends and relatives to encourage more discussion.

These videos will convey the message that there is no "right" or "wrong" way to parent, rather there is value in discussing and understanding with others your parenting goals, behavior and emotions, and connecting your past experiences as a child to your present behavior. Links to related and curated information including clips of other parents expressing their thoughts that led to positive changes in their interactions with their child will also be available. The overall goal is to elicit new and different discussions in the office and home to promote parental self-understanding and comfort, and, hopefully, motivation to make small but important changes in parenting.

CONCLUSIONS

We are facing a new era of change in delivering health care based on burgeoning information technology, biomedical advances, and skyrocketing costs. We must challenge our practices and traditions, develop new solutions, and have the strength and commitment to be willing to change how we practice. Isn't that what we ask parents to do when evidence suggests a change will improve the health of their child?

In anticipation of the understandable and frequent response to the addition of yet another task for the pediatrician: "I can't do any more" or "no time," I encourage clinicians to choose priorities based on evidence of making a difference for families in their practice. Bright Futures was meant to be a blueprint not just for pediatricians but for schools and other community-based agencies, etc. The decision what to provide in the office should also take into consideration what will add the most value relative to what others provide. Some new efforts mentioned in this article provide an opportunity for increased reimbursement or in the case of digital media meeting a quality requirement.

A cornerstone of a 2-generation or parent-focused endeavor will look like this: we ask the parents how is your child doing and then ask the parent how are you doing. What did you do for yourself in the past week? This simple communication shows our appreciation of their hard work, that we care about them, and we recognize they are the key to their child's health, learning, and success in life.

Although policy makers, insurers, and health systems are driving much of the change that is sweeping health care, innovative ideas for change and design to help children and families can come from clinicians.³³ We have a unique opportunity! I encourage clinicians to think about what should be changed and more importantly being excited and brave enough to take the first small scale steps to design and test an idea.

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