Pediatricians are drowning in a sea of advice. With hundreds of AAP guidelines as well as quality indicators from internal and external audits, pediatricians can feel like they are constantly being asked to do more with less. Computer-based solutions like templates and quickly become bloated and burdensome to the clinician. Moreover, every reminder to do one thing will distract from another (sometimes more important) thing. A different kind of computer decision support system is needed. Over the course of the last 15 years teams at Indiana University and, now, Wake Forest University have developed a different kind of decision support that captures data directly from patients and creates a tailored agenda for each child’s primary care visit. Multiple randomized controlled trials and scores of manuscripts show that it improves care and generates data useful for quality improvement and research.

Dr. Downs will present an overview of this work to illustrate three observations emerging from the study this miniature learning health system.

- Patient reported data can be immediately used to inform, tailor, and prioritize clinical care;
- Decision support can be accomplished when competing prompts are prioritized and selected to optimize care for each patient;
- Data collected through routine care can “feed” a clinical research enterprise.
Steve Downs is the Associate Director for Clinical Informatics at the Center for Biomedical Informatics and Vice Chair for Learning Health Systems in the Department of Pediatrics at Wake Forest University. He was the founding director of Children’s Health Services Research at Indiana University where he retains adjunct faculty status. He received his medical degree and master’s in medical informatics from Stanford University and his residency in pediatrics and a Robert Wood Johnson Clinical Scholars fellowship at the University of North Carolina at Chapel Hill, where he served on the faculties of pediatrics, biomedical engineering and public health.

Dr. Downs’ work is at the interface of decision sciences and medical informatics. He has published scores of articles on decision analysis, cost-effectiveness analysis, utility theory, and computer-based clinical decision support over the last 20 years. He is the chair of the Partnership for Policy (PPI) Implementation at the American Academy of Pediatrics and is an elected fellow of the American College of Medical Informatics. He received the AAP Oberst award for significant contributions to the field of clinical information technology and the John M. Eisenberg Award for Practical Application of Medical Decision Making Research from the Society for Medical Decision Making.

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