

Assessing and Managing the Social Determinants of Health: Defining an Entrustable Professional Activity to Assess Residents' Ability to Meet Societal Needs

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DOCUMENTING WHAT RESIDENTS learned by teaching children to waltz is not yet as simple as 1, 2, 3 but perhaps it just became easier.

—C. Andrew Aligne, MD, MPH¹

A collaborative effort of the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties, the Milestone Project provides a framework and structure for advancing competency-based medical education through outcomes assessment. In this effort, developmental milestones have been defined for each competency within the 6 ACGME competency domains and 1 additional domain of personal and professional development created by the pediatric community, identifying and creating performance measures to track learner development from medical school through unsupervised practice.^{2,3} To optimize the feasibility, acceptability, and educational impact of assessment in the initial milestones era, 21 of the competency areas will be used for initial assessment in pediatrics.⁴

Within programs, milestone assessment can be further tailored for individual educational experiences, focusing on the content and outcomes best learned and developed in those settings.⁵ This focused assessment specific to different contexts lends itself to the use of entrustable professional activities (EPAs),⁶ which seek to assimilate the granularity of multiple competencies and their respective milestones to more holistically describe physicians' developmental progression in activities central to the specialty. EPAs can apply to multiple settings (ie, care for the well newborn) or to single settings (ie, asthma exacerbation in an acute care setting). One activity required of pediatricians across multiple contexts is assessing and managing the social determinants of health (SDH). Because the majority pediatric residents, regardless of their ultimate practice type, setting, or location, will care for patients in poverty, we believe learning to assess and manage the

SDH is critical to meeting the population's needs; therefore, a defined EPA in this area is necessary.⁵ Thus, the purpose of this article is to explain the importance of assessing and managing the SDH as an EPA and then identify milestones to build an EPA to describe and track development of these skills.

A FOCUS ON SOCIAL DETERMINANTS OF HEALTH: ALIGNING TRAINING WITH POPULATION NEEDS

In the 2011 US Census, 46.2 million people were living in poverty, including 16.1 million children from all racial backgrounds and in metropolitan, suburban, and rural areas.⁷ Material hardships associated with poverty, including hunger, safety, utility shut-offs, and substandard housing, which frequently affect children,^{8–11} often have interprofessional interventions that can be implemented in the health care setting.^{8–10,12,13} Children raised in poverty have poorer health, including higher rates of behavioral and developmental problems and asthma, which correspond to both poor health outcomes and higher health care utilization.^{11–14} Because adverse social circumstances can also dramatically change a child's life course,¹⁵ ensuring physicians develop the skills to assess and manage the SDH is critical. Indeed, the prevalence and impact of child poverty led to the Academic Pediatric Association's new strategic plan to combat child poverty.¹⁶

DEFINING ASSESSMENT AND MANAGEMENT OF SOCIAL DETERMINANTS OF HEALTH AS AN EPA

A set of EPAs for a specialty are intended to speak to the entirety of educational outcomes necessary for that specialty. Although we believe draft lists of proposed EPAs for pediatrics¹⁷ are inclusive, and one could argue that

Table. Development Steps for SDH EPA

EPA Title	Assess and Manage the SDH
Justification	According to the 2011 US Census Bureau, the poverty rate in the United States is 15%, accounting for 46.2 million people. The most severely affected group is female-led households with children. No region of the country is unaffected, and affected families are from all racial backgrounds and live in metropolitan, suburban, and rural areas. ⁷ The recent research on impacts of the SDH in this population is staggering. Thus, the prevalence and importance of SDH makes it vital to assess and manage them as a routine part of health care, and to ensure the development of the skills to assess and manage them is an explicitly defined educational outcome based on the needs of the population.
Description of the activity (functions/specific activities required)	Patient-level activities: The provider addresses the social determinants of the patient currently being seen in the office. Clinic-level activities: The provider recognizes that many patients seen in the clinic/office have similar social determinants and incorporates resources for providers into the electronic medical record. Community-level activities: The provider recognizes the importance of addressing social determinants in his or her community and engages local community agencies by participating in health fairs and volunteering at the local school. Population-level activities: The provider recognizes the prevalence of social determinants in his or her community as well as the need to address, intervene, and evaluate population-based outcomes. He or she establishes a partnership with a local community agency to address some of these unmet needs and evaluates processes and outcomes for patients and for the population as a whole.
Link to ACGME competency domains	Patient care. Medical knowledge. Practice-based learning and improvement. Interpersonal and communication skills. Professionalism (including pediatric-defined area subcompetencies for personal and professional development ^{3,4}). Systems-based practice.
Required knowledge, skills, and attitudes	<i>Defined by the content of the 9 pediatric milestone subcompetencies chosen as critical to this area:</i> Develop and carry out management plans (patient care ACGME competency domain). Humanism (professionalism). Cultural competence (professionalism). Participate in the education of patients, families, students, residents, and other health professionals (practice-based learning and improvement). Advocate for quality patient care and optimal care systems (systems-based practice). Know how to advocate for the promotion of health and the prevention of disease and injury in populations (systems-based practice). Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds (interpersonal and communication skills). Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics (medical knowledge). Demonstrate trustworthiness that makes colleagues feel secure when one is responsible for the care of patients (personal and professional development).
Sources of information to track developmental progress during training	Assessment data from advocacy rotation and/or longitudinal advocacy projects, ambulatory clinic or community health center, ED, inpatient, and other patient care–focused educational experiences. Feedback from parent surveys during clinical visits. Critical review and evaluation of advocacy projects. Critical review and evaluation of community and volunteer experiences. Critical review and evaluation of scholarly activity in the area of SDH and vulnerable populations
Estimated levels for entrustment decisions	Entrustment for unsupervised practice: Level 3. Entrustment to supervise others: Level 4
Basis for formal entrustment decisions	The study of milestones and subsequently developed EPAs is in its infancy. It is difficult to determine the number and mix of evaluation metrics (eg, direct observations, parent feedback, community experiences, advocacy projects) that will be required to formally assess entrustment decisions for assessment and management of SDH.

SDH = social determinants of health; EPA = entrustable professional activities; ACGME = Accreditation Council for Graduate Medical Education; ED = emergency department.

assessing and managing the SDH is embedded in other EPAs in the proposed list, such as “provide a medical home for well children of all ages” and “apply public health principles and quality improvement methods to improve care for populations, communities, and systems,” there are potential unintended consequences of not

defining the assessment and management of SDH as an EPA for general pediatrics. First, and most importantly, training programs and institutions that are not facile in assessing and managing the SDH may not emphasize developing these abilities in their learners unless explicitly called out as important. Second, those who do focus on

these skills may not have a sufficient framework for assessing the development in their learners to ensure they are achieving the development they desire and feel patients need from their care providers. Beyond general pediatrics, we also feel that defining an EPA focused on SDH is important for those subspecialties with substantial focus on caring for patients from underserved populations (eg, pediatric emergency medicine and pediatric hospital medicine).

DEVELOPMENT OF AN EPA ON ASSESSING AND MANAGING THE SOCIAL DETERMINANTS OF HEALTH

The steps in developing our EPA of “assessing and managing the SDH” are based on those outlined by ten Cate¹⁸ (Table). For our purposes here, we will use the most recently described terminology, where “competency domain” refers to the 6 ACGME domains (eg, patient care), “competencies” refer to the 48 specific activities that fall within those domains (eg, gather essential and accurate information about the patient), and “milestones” refer to the 4 or 5 described levels of development for each of the 48 competencies.^{19,20} Although EPAs do not need to, and often will not, map to all areas of the chosen competency framework (such as the ACGME competency domains), we thought it was important to map to all 6 ACGME competency domains plus the new domain of personal and professional development defined by pediatrics because assessing and managing the SDH requires the integration of all these competency domains.^{2,3} Specifically, assessing and managing the SDH includes screening patients’ families for SDH related to poverty (ie, food insecurity, housing conditions) and non-poverty-related SDH (ie, domestic violence, depression, unmet educational needs) and customizing counseling and interventions to the patients and families’ social-environmental circumstances. The latter includes utilizing integrated health care services such as social work or legal services through medical–legal partnerships and referring to appropriate community resources (ie, food banks, public benefit agencies, Early Intervention, parenting groups, job and GED training resources). Although this proposed smaller subset of competencies with their associated milestones could be considered discretely, together, they can be used to define an EPA specific to “assessing and managing the SDH.” Thus, development in these areas maps well to a defined subset of the competencies, with their associated milestone levels within all 7 competency domains (6 ACGME plus personal and professional development) as follows:

- Develop and carry out management plans (patient care ACGME competency domain).
- Humanism (professionalism).
- Cultural competence (professionalism).
- Participate in the education of patients, families, students, residents, and other health professionals (practice-based learning and improvement).

- Advocate for quality patient care and optimal care systems (systems-based practice).
- Know how to advocate for the promotion of health and the prevention of disease and injury in populations (systems-based practice).
- Communicate effectively with patients, families, and the public across a broad range of socioeconomic and cultural backgrounds (interpersonal and communication skills).
- Demonstrate sufficient knowledge of the basic and clinically supportive sciences appropriate to pediatrics (medical knowledge).
- Demonstrate trustworthiness that makes colleagues feel secure when one is responsible for the care of patients (personal and professional development).

The required knowledge, skills, and attitudes described in the milestones for these 9 competencies were used to comprise vignettes using a hypothetical learner in an example outpatient setting to provide a behavioral description of levels of development along the continuum of this EPA (Supplemental Material). This approach is based on the work of Carraccio, Englander, and Gilhooly, and the intent is that these vignettes would allow the reader to extrapolate the core behaviors to other settings where activities of assessing and managing the SDH are carried out, such as the inpatient environment or emergency department.¹⁷ These EPA vignette levels can also be used to derive faculty and resident development activities as well as assessment tools to track development.

SOCIAL DETERMINANTS OF HEALTH EPA: A STRATEGY TO ENSURE EDUCATIONAL OUTCOMES

Determining learners’ progression toward the goal of unsupervised practice in assessing and managing the SDH, and then potentially supervising the development of others is critical. Although these 9 competency areas above are broad and will be covered in many clinical and nonclinical contexts (ie, not specific to the arena of SDH), they become context specific to SDH if faculty use them to assess residents’ experiences with vulnerable and underserved populations. Indeed, we recommend these competencies be used in this manner during advocacy- and community-related rotations or experiences, as well as clinical rotations that have a high proportion of patients from underserved populations (ie, emergency department, continuity clinic, hospital medicine).

CONCLUSION

Assessing and managing the SDH is a critical element of patient care that impacts long-term outcomes and aligns with the Academic Pediatrics Association’s strategic plan to eliminate child poverty.¹⁶ Although many training programs have developed educational experiences on SDH, objective assessment of learners’ skills remains difficult. Implementing milestones and EPAs creates an opportunity for improved assessment and development of these

essential skills across the medical education continuum and across pediatric training programs. Defining the assessment of management of SDH as an EPA may prove to be an important framework to assess the learner's ability and trustworthiness in caring for patients from underserved populations to serve societal needs.

SUPPLEMENTARY DATA

Supplementary data related to this article can be found online at <http://dx.doi.org/10.1016/j.acap.2013.11.001>.

REFERENCES

1. Rezet B, Hoffman BD, Kaczorowski J. Pediatrics in the community: integrating community pediatrics into residency training. *Pediatr Rev*. 2010;31:159–160.
2. Hicks PJ, Schumacher DJ, Benson BJ, et al. The pediatrics milestones: conceptual framework, guiding principles, and approach to development. *J Grad Med Educ*. 2010;2:410–418.
3. American Board of Pediatrics; Accreditation Council for Graduate Medical Education. The Pediatrics Milestone Project. January 2012. Available at: <https://www.abp.org/abpwebsite/publicat/milestones.pdf>. Accessed February 12, 2012.
4. van der Vleuten C. The assessment of professional competence: developments, research and practical implications. *Adv Health Sci Educ*. 1996;1:41–67.
5. Frenk J, Chen L, Bhutta ZA, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet*. 2010;376:1923–1958.
6. ten Cate O, Scheele F. Competency-based postgraduate training: can we bridge the gap between theory and clinical practice? [viewpoint]. *Acad Med*. 2007;82:542–547.
7. Pickering C, Roth E, Aligne CA. Pediatrics in the community: the Beacon Burners Running Program: empowering kids to run round and round without reinventing the wheel. *Pediatr Rev*. 2008;29:249–250.
8. Cook JT, Frank DA, Berkowitz C, et al. Food insecurity is associated with adverse health outcomes among human infants and toddlers. *J Nutr*. 2004;134:1432–1438.
9. Wood DL, Valdez RB, Hayashi T, Shen A. Health of homeless children and housed, poor children. *Pediatrics*. 1990;86:858–866.
10. Cutts DB, Meyers AF, Black MM, et al. US housing insecurity and the health of very young children. *Am J Public Health*. 2011;101:1508–1514.
11. Weinreb L, Goldberg R, Bassuk E, Perloff J. Determinants of health and service use patterns in homeless and low-income housed children. *Pediatrics*. 1998;102:554–562.
12. Krieger J, Higgins DL. Housing and health: time again for public health action. *Am J Public Health*. 2002;92:758–768.
13. Sandel M, Hansen M, Kahn R, et al. Medical–legal partnerships: transforming primary care by addressing the legal needs of vulnerable populations. *Health Aff (Millwood)*. 2010;29:1697–1705.
14. Sandel M, O'Connor G. Inner-city asthma. *Immunol Allergy Clin North Am*. 2002;22:737–752.
15. Sameroff AJ, Seifer R, Barocas R, et al. Intelligence quotient scores of 4-year-old children: social–environmental risk factors. *Pediatrics*. 1987;79:343–350.
16. Academic Pediatric Association; American Academy of Pediatrics; APA Task Force on Child Poverty. A strategic road-map. Available at: http://www.academicped.org/public_policy/pdf/APA_Task_Force_Strategic_Road_Mapver3.pdf. Accessed November 11, 2013.
17. Association of Pediatric Program Directors. Important points about “Entrustable Professional Activities (EPAs).” Available at: https://www.appd.org/home/PDF/Newborn_EPA_mapped_to_Milestones_Vignettes_for_APPDmembers.pdf. Accessed September 20, 2013.
18. ten Cate O. Nuts and bolts of entrustable professional activities. *J Grad Med Educ*. 2013;5:157–158.
19. Englander R, Cameron T, Ballard AJ, et al. Toward a common taxonomy of competency domains for the health professions and competencies for physicians. *Acad Med*. 2013;88:1088–1094.
20. Accreditation Council for Graduate Medical Education. ACGME program requirements for graduate medical education in pediatrics. September 30, 2012. Available at: http://www.acgme.org/acgmeweb/Portals/0/PFAAssets/2013-PR-FAQ-PIF/320_pediatrics_07012013.pdf. Accessed November 11, 2013.