EPA 3: Apply Public Health Principles and Quality Improvement Methods to Improve Population Health

Description of the Activity

All physicians engaged in the clinical practice of pediatrics should promote wellness, optimal health behaviors, and injury prevention within populations. Populations can be defined by practice setting, socio-demographic characteristics, geographic region, and/or medical conditions or risk factors.

The specific functions which define this EPA include:

1. Recognizing one’s professional responsibility to populations, communities, and society at large
2. Demonstrating ability to identify populations at risk
3. Applying knowledge of epidemiology and statistical analysis to interpret data, including risk benefit and cost benefit analyses
4. Collaborating with others in the development and/or implementation of projects aimed at improving health or health care systems
5. Utilizing resources (e.g., EHR, patient registries, databases) to advance quality improvement and population health

Judicious Mapping to Domains of Competence

- Patient Care
- Medical Knowledge
- Practice-Based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-Based Practice
- Personal and Professional Development
Enthusable Professional Activities
EPA 3 for All Pediatric Subspecialties

Competencies Within Each Domain Critical to Entrustment Decisions

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<th>Analyzing practice</th>
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Context for the EPA

**Rationale:** Pediatricians and pediatric subspecialists are well trained to care for individual patient and family needs. As members of the community of physicians, they also have an obligation to contribute to, and in some cases lead, the health initiatives done on behalf of populations of patients. These populations can include individuals with shared socio-demographic characteristics, geography, medical conditions, or risk factors. Knowledge and skill in the principles of public health (including basic epidemiological concepts) as well as an awareness of performance improvement strategies, will equip the pediatrician and pediatric subspecialist to identify populations at risk, improve screening or care, and/or enhance health care delivery to populations.

**Scope of Practice:** All physicians engaged in the clinical practice of pediatrics should promote wellness, optimal health behaviors, and injury prevention. Some physicians who care for children will engage in research to improve public health or health care systems, but many will not. Nevertheless, pediatricians and pediatric subspecialists should be able to interpret data to identify populations at risk and apply basic epidemiological principles to critically appraise potential interventions (e.g., risk/benefit). Pediatricians and pediatric subspecialists should collaborate with or lead others when appropriate (e.g., parent groups, disease-oriented nonprofit organizations, community leaders, health professionals, health care administrators) to improve patient care, access to care, and/or health care delivery for patients and populations. Finally, pediatricians and pediatric subspecialists should see their engagement in population health as part of their professional commitment to the health and well-being of children.

**Curricular Components That Support the Functions of the EPA:**

1. Recognizing one’s professional responsibility to populations, communities, and society at large
   - Seeks and identifies ways to more effectively treat conditions, prevent disease, and promote the health of groups of patients
   - Engages in lifelong learning and other activities which focus on performance improvement
   - Identifies and supports advocacy activities for children, through actions such as participation in activities and/or referral of patients to programs as appropriate
   - Recognizes health needs of the community and/or populations served, including unique cultural or health care needs of certain populations
   - Reports systems errors or reportable diagnoses through the identified mechanisms, committees, or agencies, etc.
2. Demonstrating ability to identify populations at risk

- Demonstrates awareness of the obligation and importance to improve the health of populations, particularly in areas of socioeconomic and/or racial/ethnic disparities
- Recognizes critical variations in practice that have led to, or could lead to patient harm
- Appraises literature with an understanding of generalizability and relevance to patient populations

3. Applying knowledge of epidemiology and statistical analysis to interpret data, including risk-benefit and cost-benefit analyses

- Knows basic epidemiological and statistical concepts to interpret basic population data or critically evaluate the medical literature (e.g., sensitivity, specificity, positive predictive value, negative predictive value, normal distribution, mean, median, p-value)
- Appraises the medical literature with an awareness of how to evaluate different study types to determine relevance and potential application to one’s patient population (e.g., articles about therapy, prognosis, disease screening, diagnostic testing, observational studies vs. randomized controlled trials)
- Understands the risk/benefit and cost/benefit basis for practice guidelines and high value care recommendations
- Practices in a risk-benefit and cost-conscious manner, balancing the needs of the individual patient with the importance of resource allocation, and the disadvantages of overdiagnosis and overtreatment of patients or groups of patients

4. Collaborating with others in the development and/or implementation of projects aimed at improving health or health care systems

- Maintains approachability and openness to discuss opportunities to improve practice
- Recognizes and values the input and expertise of others, such as colleagues, parent groups, community leaders, other health professionals, and health care administrators, in identifying and executing solutions to problems
- Works to maintain a safe environment to discuss systems errors and potential solutions
- Understands and engages in quality improvement strategies such as Plan, Do, Study, Act
- Collaborates as a member of interprofessional health care team in efforts to improve population health

5. Utilizing resources (e.g., EHR, patient registries, databases) to advance quality improvement and population health

- Understands that information captured in digital format can be used to identify populations at risk and health promotion opportunities
- Maintains accurate reporting and records in digital repositories such that proper surveillance of patients and populations may occur
- Works with others such as administrators and IT specialists to leverage the power of databases to improve patient care and population health

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