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# EPA 9—Collaborate as a Member of an Interprofessional Team: a Short Communication from the AAMC Core EPAs for Entering Residency Pilot Schools

*David Richard Brown* **&** *Colleen C. Gillespie* **&** *Jamie B. Warren*
**On behalf of the AAMC Core EPAs for Entering Residency EPA 9 Pilot Workgroup**

## Background

Medical schools are grappling with ways to implement competency-based curricula and decision-making processes for the Core Entrustable Professional Activities (EPAs). A group of ten schools convened by the Association of American Medical Colleges (AAMC) is in the midst of piloting the Core EPAs to inform implementation efforts and develop best practices. An AAMC Drafting Panel identified functions associated with each EPA, the competencies that must be integrated in order to perform an EPA, and two broad milestones: behaviors expected of a pre-entrustable learner and behaviors expected of an entrustable learner [1]. Three pilot schools have been collaborating to conceptualize curriculum and assessments for EPA 9: Collaborate as a member of an interprofessional team.

The complexity of the modern health care setting, the epidemic of medical errors, the chronicity of modern diseases, and the recognition of the importance of social and behavioral determinants of health have led to a growing focus on the functioning of interprofessional teams. As one of the 13 core EPAs, interprofessional collaboration (IPC) is also one of the eight competency domains of the Physician Competency Reference Set [2]. Calls to collaborate abound, and team training has been linked with improved outcomes [3]; nonetheless, the core medical student training necessary to develop interprofessional, collaborative, and team skills across divergent educational and practice settings are not well defined. Likewise, the developmental milestones for articulating the objectives of interprofessional education have not been fully established. Thus, the core challenge of the EPA 9 Working Group was to begin to determine *how* to decide if our graduates can be entrusted to collaborate as a member of an interprofessional team – that is, how would we evaluate the adequacy of existing assessments and curriculum and what would be the basis for recommending new assessment approaches and curricular activities?

## Activities/Results

To answer these questions, the authors (educators and researchers) from three medical schools participating in the AAMC Core EPA Pilot (FIU, NYU, OHSU) met via phone biweekly and in person biannually. We recognized that our challenge was to translate the concept of EPAs to the real world of medical school—and thus, describe below our efforts to "operationalize" EPA 9.

We performed a literature and MedEd Portal search (using terms such as interprofessional, collaboration, and teamwork) for existing assessment tools; we did not find any validated workplace-based assessments that document developmental progression toward entrustment in IPC. Therefore, through an iterative process of discussion and feedback between the workgroup members and members of the local institutions, we sought to map a developmental framework for IPC.

We first circulated the functions, vignettes, and critical competencies for EPA 9 (taken from the Core EPA curriculum developers' guide [1]), and revised them into observable behavioral learning outcomes. We then identified key learning outcomes from the literature, including behaviors reflecting conflict management, negotiation, and employing team communication strategies. These additional references included the set of consensus interprofessional competencies from the Interprofessional Education Collaborative (IPEC) [4], Brown's "phenomenon of collaboration" [5], Edmonson's "inclusive leadership" [6], Salas's "team competencies" [7, 8], and "TeamSTEPPS" [9].

Next, we used Miller's pyramid of clinical competence [5] to organize the outcomes along a developmental continuum (from novice to proficient) based on the distinctions between cognition (knows and knows how) and behavior (shows how and does). We also classified learning outcomes as representing knowledge, skills, attitudes, or practices. We believe that outcomes that fall into the "does" category form the core of entrustability and therefore, when fully integrated, constitute EPA 9. Behavioral learning outcomes from earlier stages of the pyramid (knows, knows how, shows) and attributes that contribute to but are not sufficient for establishing workplace-based performance (e.g., knowledge, skills, attitudes) were used intuitively to establish the earlier developmental stages of entrustability.

We subsequently grouped learning outcomes into domains. Consensus was reached on five domains, four of which align with competency domains identified by IPEC: Ethics/Values, Roles/Responsibilities, Interprofessional Communication, and Teamwork. Teamwork was then combined with Roles/Responsibilities to form the domain of Collaboration. The fifth domain, Trustworthiness, was referred to the Core EPA Pilot's Entrustment Working Group to consider as a fixed element required for entrustment for all EPAs. After mapping learning objectives by domain in a developmental behaviorally-anchored framework, we confirmed that all of the learning objectives could be mapped back to EPA 9 functions and critical competencies as defined in the curriculum developers' guide [1].

Ultimately, we created a set of expectations arrayed along a developmental continuum that could be used to monitor how students are developing in terms of their future ability to collaborate as a member of an interprofessional team (Table 1). While we believe Table 1 will be useful to entrustment committees to inform decisions on entrustment in IPC, testing and validation of this and other assessment tools has not yet been undertaken.

Finally, using the Tool for Assessing Cultural Competence Training as a reference framework [10], we grouped learning outcomes by domain into a Tool for Assessing Interprofessional Collaboration Training (TAIPCT, Table 2). In addition to the practices (P) of the EPA 9 learning objectives, we included knowledge (K), skills (S), and attitudes (A) to reinforce the need for

curricula (and assessments) to focus on foundational and behavioral aspects of IPC. The goal of this tool is to identify the sites, settings, learning activities, and assessments for EPA 9-related curricula; map curricular gaps and opportunities; and map points of feedback, assessment, and summative judgment. We are currently using the TAIPCT at our institutions and have found that all three provide foundational pre-clerkship experiences in teamwork, making it clear basic science educators are critical to even EPAs such as IPC. Additionally, schools share longitudinal approaches that spiral through the curriculum. Nonetheless, explicit curriculum and feedback on IPC are not yet fully integrated into students' clerkship and sub-internship clinical rotations. Once completed, this inventory process will suggest opportunities for reinforcing interprofessional education and providing feedback on and further directions in IPC skills and practices.

These efforts, in summary, involved first "de-constructing" the EPA in order to place its constituent competencies on a developmental pathway to entrustment, followed by mapping those developmental competencies to current curriculum and assessment strategies at our schools to inform the design of new curricula and assessment approaches.

*Discussion*

This process helped us understand how individual competencies are linked in a developmental pathway to EPA 9 (Table 1) and set the groundwork for each school to assess the degree to which students' curricular and teamwork-based activities provide them with the knowledge, skills, attitudes, and practice opportunities that will lead to entrustment to collaborate as an interprofessional team member (Table 2). The process also highlighted some of the distinct challenges that will come with implementing curricula and assessments for EPA 9.

Entrustment decisions for IPC require adequate opportunities for meaningful interprofessional collaborative practice in the clinical setting. The Medicare billing and supervision rules and their local interpretation and implementation combined with the rotational nature of most medical school curricula complicates the degree to which students may have legitimate participation in interprofessional teams [11]. Ensuring that these opportunities exist and including robust assessments during these experiences will be necessary. Assessments will need to expand beyond the traditional evaluation by attending physicians and residents; true assessment of IPC skills requires input from a wide range of interprofessional team members.

Additionally, specific IPC behaviors that are relevant to future entrustment can be assessed in contexts that don't require full participation in teams. Examples include recognizing one's role as a learner, seeking education from other healthcare professionals, and behavior in small groups and in dyadic interprofessional patient-care focused relationships.

Overall, we believe that this EPA 9 expectations framework will help guide us in designing and refining a curriculum that supports and assessment tools that measure both the development of individual competencies necessary for IPC and the ability of students to integrate those competencies into the critical tasks that result in effective collaboration.

**Significance**

"Collaborate as a member of an interprofessional team" is a cross-cutting activity in modern health care practice. As such, EPA 9 is subject to criticism that it is not a "discrete" task, is "inseparable from other EPAs," and is "too broad" to be considered an EPA [12]. Our workgroup devoted considerable time over the past year to the development of a framework for expectations and a curriculum assessment tool to help answer the core question of whether we can make defensible decisions to entrust medical students to perform EPA 9.  What we have learned to date suggests a qualified "yes."  If we very clearly articulate the foundational and developmental behaviors that are essential to EPA 9, if we match expectations to opportunity for meaningful participation in interprofessional clinical experiences, if we design formative and summative assessments that are well-aligned to the critical competencies and the integration of those competencies, and if we ensure that activities and feedback are relevant, timely, and influential, then we believe that we can entrust our graduates to collaborate on interprofessional teams and that such efforts will contribute to improvements in quality of care.

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**Table 1. EXPECTATIONS FOR DEVELOPMENT OF INTERPROFESSIONAL COLLABORATIVE PRACTICE SKILLS**

| | Competency Domain (IPEC) | Observable Behaviors on a Developmental Trajectory | | | |
|---|---|---|---|---|---|
| | | **Requires focused Remediation** | **Foundational Expectations** | **Developing Expectations** | **Ready for Indirect Supervision** |
| **EPA 9:** Collaborate as a member of an interprofessional team. | Inter-professional Ethics and Values | Demonstrates disrespectful or unethical behavior; intimidates; dominates | Respects other perspectives; recognizes team needs over personal needs; identifies ethical issues in a team setting | Seeks other perspectives; seeks input from IP team members (including family); contributes to ethical decision making in a team | Embraces diverse perspectives; gains trust/respect of IP team members (including family); practices ethically within an IP team |
| | Roles, Responsibilities, and Teamwork (Collaboration) | Does not recognize roles in IP team, meet responsibilities, or help others; negatively impacts team relationships | Describes roles in IP team; meets responsibilities; begins to assimilate as a team member; develops team member relationships | Recognizes role of self/others in the IP team; coordinates/clarifies responsibilities; seeks help appropriately; maintains team member relationships | Utilizes abilities of all IP team members; shares responsibility to optimize team outcomes; recognizes when others need help and provides assistance; demonstrates leadership and followership skills |
| | Inter-professional Communication | Does not communicate important information or seek/respond to feedback; does not respond well to/exacerbates conflict; dismissive of IP communication skills* | Listens to team members; clarifies different forms of communication; invites input from others; recognizes that conflict is expected and trials conflict management strategies; tries IP communication skills* | Updates team members; encourages open exchange of ideas; responds positively to/gives effective feedback; recognizes own/others response to conflict; uses conflict management strategies; demonstrates use of IP communication skills* | Coordinates care; provides and elicits complete information for transitions of care; manages self appropriately during difficult situations; anticipates and resolves conflict; uses a shared mental model and IP communication skills* to maximize outcomes |

*Call-out, closed-loop, SBAR, etc

**Table 1. EXPECTATIONS FOR DEVELOPMENT OF INTERPROFESSIONAL COLLABORATIVE PRACTICE SKILLS**

This developmental framework is intended to be used by students, faculty, and committees charged with entrustment decisions, through the compilation of multi-source assessments. Individual course- or activity-level assessments may be mapped to the framework. The framework can also be adapted for use by front-line teaching faculty in providing formative feedback and for faculty development to develop a shared mental model of expectations for collaborative team skills. Assessment of students using this framework may show that proficiency in dimensions of interprofessional collaboration is demonstrable in the pre-clerkship years. Longitudinal use of the framework could enable students to show improvements in or consistency of teamwork skills.

**Table 2. TOOL FOR ASSESSING INTERPROFESSIONAL COLLABORATION TRAINING (TAIPCT)**

| | Learning Objectives | Educational Activity | Level of the Learner | Assessment/ Evaluation |
|---|---|---|---|---|
| | **IPEC* Domain: Interprofessional Ethics and Values** | | | |
| K | • Describes the impact of power and values on team dynamics in IP collaboration | | | |
| K | • Recognizes that emotional intelligence is important for IP collaboration | | | |
| K | • Describes ethical frameworks for decision-making | | | |
| S | • Contributes to ethical decision making in an IP team; practices ethically | | | |
| A | • Encourages an open exchange of ideas | | | |
| A | • Prioritizes team needs over personal needs to optimize delivery of care | | | |
| P | • Embraces input from and diverse perspectives of all IP team members | | | |
| P | • Gains trust and respect of IP team members (including patients and family) | | | |
| | **IPEC* Domain: Roles,Responsibilities, and Teamwork (Collaboration)** | | | |
| K | • Describes the unique roles of self and others within an IP team | | | |
| S | • Advocates for inclusion of all necessary IP team members to optimize care | | | |
| S | • Seeks help when needed, helps others when requested, recognizes when others need help | | | |
| S | • Assimilates as a member of an IP team; accepts role on IP team | | | |
| S | • Develops and maintains team member relationships | | | |
| S | • Demonstrates leadership and followership skills | | | |
| A | • Shares responsibility for problem-solving to optimize team outcomes | | | |
| P | • Coordinates, clarifies, and meets responsibilities on the IP team | | | |
| P | • Accomplishes assignments by working with appropriate team members | | | |
| | **IPEC* Domain: Interprofessional Communication** | | | |
| K | • Describes types of IP communication skills (e.g., call-out, closed loop, SBAR) | | | |
| K | • Recognizes that conflict is expected within teams and describes conflict management strategies | | | |

| | | | | |
|---|---|---|---|---|
| S | • Describes impact of conflict styles (e.g., competing, collaborating, compromising, avoiding) | | | |
| | • Listens; clarifies different forms of communication | | | |
| | • Uses appropriate, respectful language and IP communication skills (e.g., call-out, closed loop, SBAR) | | | |
| A | • Encourages an open exchange of ideas from all IP team members | | | |
| | • Invites, positively responds to/incorporates, and provides effective feedback | | | |
| P | • Provides and elicits complete information for transitions of care; coordinates care | | | |
| | • Utilizes/creates a shared mental model to maximize outcomes | | | |
| | • Anticipates conflict and emotional responses of oneself and others | | | |
| | • Professionally manages oneself to achieve best outcomes for patient, family, and IP team | | | |

This tool is designed to describe where important content related to IP collaboration is taught within the overall curriculum and to facilitate identification of gaps or duplications. It can be used for faculty development or as a curriculum assessment or inventory. In the "Educational Activity" column, list specific lectures, workshops, clinical activities, or other learning opportunities related to the individual learning objectives. In the "Level of the Learner" column, identify the year of training and/or specific courses or clerkships in which the educational activities occur. In the "Assessment/Evaluation" column, identify any relevant assessments for that objective/activity. The tool may be completed by students or course directors and then combined to achieve a comprehensive look at where the IP collaboration curriculum and related assessments are nested within the overall curriculum, or where additional curriculum or assessments may be needed. Lie et al. provide detailed instructions for using the similarly structured Tool for Assessing Cultural Competency Training [10].

**\*IPEC Domains of Competence** adapted from: Interprofessional Education Collaborative Expert Panel. (2011). Core competencies from interprofessional collaborative practice.  Washington, D.C.: Interprofessional Education Collaborative.

K = Knowledge            S = Skills          A = Attitudes              P = Practices