



The Community Health and Advocacy Milestones Profile: A Novel Tool Linking Community Pediatrics and Advocacy Training to Assessment of Milestones-Based Competence in Pediatric Residency Training

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In 1996, THE Pediatric Residency Review Committee of the Accreditation Council for Graduate Medical Education (ACGME) required structured, formal training for pediatricians in community health and advocacy to “prepare residents to advocate on behalf of the health of children within communities.”¹ In response to this mandate, many programs developed block and/or longitudinal curricula to introduce concepts and develop skills in community health and advocacy.

In 2005, recognizing the need to not only assess resident competence in community health and advocacy, but also to link that assessment to the 6 competency domains,² the American Academy of Pediatrics (AAP) Community Pediatrics Training Initiative (CPTI) convened an expert panel of residency program directors, advocacy training directors, representatives of the Association of Pediatric Program Directors (APPD), the Dyson Initiative, the Pediatric Residency Review Committee, and the AAP Section on Medical Students, Resident, and Fellowship Trainees. This panel developed a set of best practice goals and objectives for pediatric residents in community health and advocacy, building upon work started by the Dyson Initiative.³ These objectives⁴ were adopted by the Academic Pediatric Association (APA) as a part of their Educational Guidelines for Pediatric Residency⁵ and have been widely used by residency training programs.⁶

Currently, pediatric residency programs are mandated to assess trainee performance on the basis of the work of the Pediatric Milestones Project.^{7–9} Because many programs' curricula were developed before the era of Milestones, program directors face the daunting task of assessing resident performance using tools and curricular objectives designed before development of Milestone language.

The purpose of this work was to create a tool to help residency programs map their curricula in community health and advocacy training to the objectives developed by the CPTI, and link these curricular activities to Milestone-based competencies. The process described for mapping curricula to Milestones can serve as a model for mapping curricula in other parts of the training program to the competencies.

DEVELOPING THE COMMUNITY HEALTH AND ADVOCACY MILESTONES PROFILE AND THE COMMUNITY HEALTH AND ADVOCACY MILESTONES PROFILE MAPPING TOOL

The authors used a combination of expert consensus and a modified Delphi process to achieve consensus among a group of content experts between January 2013 and May 2014.

INITIAL MAPPING: EXPERT CONSENSUS

For the initial phase, we identified 10 individuals from the APPD and the APA Advocacy Training Special Interest Group with experience as residency program leaders and as directors of community health and advocacy training, to participate in the project.

In randomly selected pairs, the 10 participants reviewed the Pediatric Milestones Project document⁸ and identified 5 competency domains that could be assessed through community health and advocacy training: systems-based practice, practice-based learning and improvement, interpersonal and communication skills, professionalism, and personal/professional development.

Each pair was assigned 1 competency domain (eg, practice-based learning and improvement), and individually mapped each of the competencies within that domain to the CPTI objectives. There are a total of 36 objectives in 8 content areas: culturally effective care (5 objectives), child advocacy (6 objectives), medical home (6 objectives), special populations (4 objectives), pediatrician as a consultant/collaborative leader/partner (3 objectives), educational and child care settings (3 objectives), public health and prevention (5 objectives), and inquiry and application (4 objectives). Participant pairs reconciled their differences by consensus and submitted their completed map to the principal investigator. A total of 250 objective/competency matches were identified.

MODIFIED DELPHI PROCESS

We then invited an additional 41 colleagues, including members of the APPD, the APA Advocacy Training Special Interest Group, the Institute on Medicine as a Profession, resident trainees, and the AAP CPTI to participate in a modified Delphi process to achieve consensus on the objective/competency matches. Each was asked to review the map and complete a survey rating their agreement with each of the 250 objective/competency matches in the 5 competency domains using a 5-point Likert scale (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree). A total of 18 of 41 (44%) colleagues completed the entire survey, in addition to the initial 10 experts, resulting in 28 completed surveys.

MAPPING COMPETENCIES TO CPTI OBJECTIVES

All agreement scores were averaged, and 5 objective/competency matches with a mean score <3.5 were removed from the map. The remaining 245 matches had a mean agreement score of 4.31. Each CPTI objective was mapped to a mean of 6.8 competencies. A total of 35 of the 48 competencies in the Pediatric Milestones Project are represented in the final product, including 12 of the 21 currently being reported to the ACGME. Of the 12 mapped competencies that are currently reported, each was mapped to a mean of 10 CPTI objectives (range, 3–20). The resulting product is the Community Health and Advocacy Milestones Profile (CHAMP) and this framework was used to develop the CHAMP Mapping Tool.

USING CHAMP AND THE CHAMP MAPPING TOOL

CHAMP defines the relationship between training objectives in community health/advocacy and Milestones-associated competencies. The CHAMP Mapping Tool allows programs to map their curricula and identify strengths and areas of need, while also helping programs meet the requirements for Milestones assessment and reporting. An example of how CHAMP connects Milestones to training objectives in the content area of child advocacy is shown in the [Table](#).

The CHAMP Mapping Tool may be used in a number of ways:

Starting with the community health and advocacy curriculum: Take individual curricular activities (eg, visit to local Medicaid office) and run down the map, adding the activity to all CPTI objectives that could be met with that activity. The level of learning and assessment information would then be added.

Starting with CPTI objectives: Those with a deeper understanding of training curricula and assessment methods could review each of the CPTI objectives and identify curricular activities within the community health and advocacy training, and in other experiences in the residency training program, that address that objective.

Regardless of the initial approach, columns may be used by each program differently. For some objectives, there might be multiple curricular elements that are used to meet them. In such cases, users may divide the cells, keeping specific assessment methodology for each element. Some programs might prefer to group curricula and assessment more broadly. The use of the CHAMP Mapping Tool will allow educational leaders and residency directors to recognize the value of community health and advocacy training in the overall assessment paradigm while bolstering their curricula with learning activities that lead to deeper learning. Linking CPTI training objectives, mapped to Milestones-based competencies, with specific curricular activities will allow programs to better meet the requirements of Milestones reporting for each resident.

The CHAMP Mapping Tool is designed to assist community health/advocacy training directors and residency program leadership. The tool can serve as a guide to map existing curricula, identify where residents might be assessed along the Milestones continuum using their existing curricula, and help identify gaps in current rotation activities. It might also be used to assist in the design or modification of assessment tools to include competencies that might be more difficult to measure in traditional, hospital-based components of the curriculum. This could be accomplished through identification of high-needs competencies, with subsequent development or identification of curricular activities and associated methods of assessment.

Using the language provided by the CPTI objectives and/or the Pediatrics Milestones Project, one can modify existing assessment tools to include elements that assess particular competencies. For example, a community health and advocacy director might have residents write a reflection piece about a particular experience during their advocacy rotation. This could include a question about identifying cultural biases that they brought to a particular experience during the rotation and how they managed them (CPTI Culturally Effective Care Objective 1). Through their discussion with the resident about this experience and review of the reflection piece, advocacy directors can assess where the resident is on PROF[professionalism]6 (recognize that ambiguity is part of clinical medicine and respond by using appropriate resources in dealing with

Table. Milestone Competencies; Goals and Objectives for Child Advocacy

Graduates Are Expected to:	ICS	SBP	PBLI	PROF	PPD
1. Identify and discuss individual, family, and community (local, state and/or national) concerns that affect children's health.	ICS1 (ICS1) ICS2 (ICS2) ICS3	SPB4 (SPB2) SBP7	PBLI-3 (PBLI2)	PROF 4 (PROF2)	
2. Formulate an attainable plan of action in response to a community health need.	ICS1 (ICS1) ICS3 ICS4	SBP1 SBP4 (SPB2) SBP7	PBLI-2 PBLI-3 (PBLI2)	PROF 4 (PROF2)	
3. Identify and describe resources to effectively advocate for the well-being of patients, families, and communities.	ICS1 (ICS1) ICS3	SBP2 (SBP1) SPB4 (SPB2) SBP7		PROF 4 (PROF2)	PPD6 PPD8 (PROF6)
4. Communicate effectively with community groups and the media.	ICS1 (ICS1) ICS2 (ICS2) ICS3 ICS4		PBLI-8 PBLI-9	PROF 4 (PROF2)	
5. Find and use evidence and data to communicate, educate, effect attitude change, and/or obtain funding to achieve specific health outcomes.	ICS1 (ICS1) ICS3 ICS 4	SBP4 (SPB2) SBP7	PBLI-2 PBLI-6	PROF 4 (PROF2)	
6. Describe and discuss key features of the legislative process, and identify and communicate with key legislators, community leaders, child advocates, and/or agency administrators about child and family health concerns.	ICS1 (ICS1) ICS2 (ICS2) ICS3	SBP4 (SPB2) SBP7	PBLI-8 PBLI-9	PROF 2 PROF 4 (PROF2)	PPD6

SBP indicates systems-based practice; PBLI, practice-based learning and improvement; ICS, interpersonal and communication skills; PROF, professionalism; and PPD, personal/professional development.

Goals and objectives for child advocacy: recognizing their unique roles, pediatricians should advocate for the well-being of patients, families, and communities. They must develop advocacy skills to address relevant individual, community, and population health issues. All Milestone competencies are labeled according to the original Pediatric Milestones document.⁸ Those in **bold** and underlined are among the 21 being reported upon at the time of publication. In some cases, the number assigned to a competency changed in the transition, and those in *italic* represent the label assigned to that competency in the list of 21 Milestones being reported on at the time of publication.⁸

uncertainty), which maps to this CPTI objective (Fig). By developing activities and assessment tools that evaluate resident performance toward these competencies, community health and advocacy training directors may demonstrate to program leadership, in a real and practical way, how their curricula aid in overall resident assessment and Milestones mapping.

Residency program leadership can use the CHAMP Mapping Tool to identify programmatic strengths and needs in achieving defined objectives for community health and advocacy training.⁴ This can help spur innovation and curriculum development. By mapping the CPTI objectives to the entire curriculum, residency leaders might better understand how to achieve the CPTI objectives through curricula within, and beyond, their community health/advocacy-specific experiences. For example, in completing the CHAMP Mapping Tool, a residency leader might recognize that the residents' experience in discharge planning during their neonatal intensive care unit (NICU) rotation is an activity that helps them to understand and gain experience in "coordinating care to meet the special needs of patients with acute and chronic conditions" (CPTI Medical Home Objective 3). This objective maps to 5 of the 21 competencies currently reported to the ACGME, so

the residency leader might modify the existing NICU rotation, or develop an assessment tool to be used in the NICU rotation, to allow assessment of resident performance in these competencies.

Further, program leaders will be able to use the map as part of an overall approach to resident assessment in Milestones reporting to the ACGME. CHAMP maps the CPTI objectives to 12 of the 21 competencies currently being reported.⁸ Many of the competencies that can be assessed through community health/advocacy training are those that can be difficult to assess in other parts of residency training, thereby increasing the value of community health/advocacy training to the residency program.

Finally, the CHAMP Mapping Tool allows each of the objectives to be mapped to a curricular activity that includes level of learning expected, borrowed from Miller's assessment paradigm,¹⁰ as well as identification of the assessment method. This might enable educators to identify curricular activities that yield deeper learning, and include more robust assessment, leading to identification of best-practice examples of curricular activities and their matched competencies.

CHAMP and the CHAMP Mapping Tool are available on the AAP CPTI Web site at: <http://www2.aap.org/commpeds/cpti/CHAMP.html>.

Community Health and Advocacy Milestones Profile (CHAMP) Map					
Community Health and Advocacy Goals & Objectives					
A. Culturally Effective Care Pediatricians must demonstrate skills that result in effective care of children and families from all cultural backgrounds and from diverse communities. Graduates are expected to:	Milestones-Based Sub-competencies		Rotation/ Curricular Activity	Assessment Method/ Demonstration of Competence	Level of Competence to be Demonstrated -Knows -Knows how -Shows how -Does
	As of September 2014				
	Reporting Currently Required	Reporting Not Yet Required			
1. Identify and manage cultural attributes, stereotypes, and biases they bring to clinical encounters	ICS1 ICS2 PBL11 PROF6	PROF2 PROF5	GME core curriculum Continuity Clinic curriculum and practice Community rotation reflection piece	Short essay response and feedback Continuity Clinic evaluation	Knows
2. Integrate into clinical encounters an understanding of diversity (e.g. family composition, gender, age, culture, race, religion, disabilities, sexual orientation, and cultural beliefs and practices) by recognizing and respecting families' cultural backgrounds.	ICS1 ICS2 SBP1 PBL12	PBL18 PBL19 PROF5	Healthy Steps home visits and clinic visits Horizon Hospice home visits Continuity Clinic practice Adolescent rotation Developmental/Behavioral rotation	Healthy Steps and Community, Adolescent, Developmental, and Continuity Clinic rotation evaluations	Knows how
3. Identify children, youth, or families who have limited English language Proficiency and demonstrate the ability to use Professional interpreters and written materials in the family's primary language to maximize communication.	ICS1 SBP1	PBL17 PBL18 PROF5	Continuity Clinic curriculum and practice Family-Centered Rounds Newborn Nursery	Continuity Clinic evaluation General Pediatrics Ward and Newborn Nursery rotation evaluations	Knows how
4. Identify, analyze, and describe health disparities, as well as organizational assets and barriers to delivering culturally effective services.	SBP2 PBL13 PROF2	ICS3 ICS4 ICS5 SBP1 PROF5	Community Health and Advocacy Track (CHAT) Health Disparities in Chicago lecture Community rotation readings	SPH course and evaluation	Knows
5. Describe and outline quality improvement activities to achieve health care equity.	SBP2 PBL13	ICS3 ICS4 ICS5 PROF5	QI Project Community Health and Advocacy Track QI workshop series Patient Safety Conference	QI Project evaluation SPH course and evaluation Informal feedback	Does

Figure. Community Pediatrics Training Initiative (CPTI) Culturally Effective Care Objectives from the Community Health and Advocacy Milestones Profile (CHAMP) Mapping Tool, and how they can be mapped to curricular activities.

LIMITATIONS

This work is the product of a collaborative of community health/advocacy training directors, residency program leaders, pediatric educators, and trainees. It is a consensus-based product, and consequently, might not represent the views and conclusions of the broader public. Of 41 invitees to the mapping process, only 18 participated. It is possible that some bias was introduced secondary to the modest participation rate. Finally, although the authors endeavored to be as inclusive as possible, it is possible that other educators might have reached different conclusions in developing the CHAMP Mapping Tool.

NEXT STEPS

This methodology could be used to develop a library of curricular activities in community health and advocacy training that is stratified on the basis of level of learning achieved, and curated in a scholarly way that will enable programs to share curricula. Programs that have mapped their curricula might then identify activities that meet their needs in terms of resources available, and level of learning demonstration desired. This, it is hoped, will lead to more

robust training of students, residents, and fellows, and eventually to pediatricians who are more effective as advocates for children.

Examples of completed CHAMP Mapping Tools from the Children’s National Health System, Oregon Health & Science University, the University of Illinois at Chicago, and the University of Rochester are available at <http://www2.aap.org/commpeds/cpti/CHAMP.html>.

We invite programs who have completed the mapping exercise to share them with the AAP CPTI, and we will publish them on our Web site to be shared with other programs. Please submit completed or partially completed maps to the Principal Investigator at hoffmanb@ohsu.edu.

CONCLUSIONS

Through the process of developing CHAMP and the CHAMP Mapping Tool, we have shown that it is possible to link pediatric residency training curricula to competencies and milestones for resident assessment. Community health and advocacy training curricula are vital for meeting CPTI objectives and can also be used to assess

competencies that are difficult to measure within pediatric residency programs.

The CHAMP Mapping Tool has multiple benefits. It is an effective means for gauging how well a residency program provides experiences that prepare residents for their professional roles as advocates for children, might aid educators in identifying curricula and activities that involve deeper learning and foster more robust assessment of residents, and can help programs identify objectives in community health and advocacy training for residents that are not being assessed. Additionally the process described for mapping curricula to milestones can serve as a model for mapping curricula in other parts of the training program to the core competencies.

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