

# Giving Context to the Physician Competency Reference Set: Adapting to the Needs of Diverse Populations

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## Abstract

Delineating the requisite competencies of a 21st-century physician is the first step in the paradigm shift to competency-based medical education. Over the past two decades, more than 150 lists of competencies have emerged. In a synthesis of these lists, the Physician Competency Reference Set (PCRS) provided a unifying framework of competencies that define the general physician. The PCRS is not context or population specific; however, competently caring for certain underrepresented populations or specific medical conditions can require more specific context. Previously developed

competency lists describing care for these populations have been disconnected from an overarching competency framework, limiting their uptake. To address this gap, the Association of American Medical Colleges Advisory Committee on Sexual Orientation, Gender Identity, and Sex Development adapted the PCRS by adding context- and content-specific qualifying statements to existing PCRS competencies to better meet the needs of diverse patient populations. This Article describes the committee's process in developing these qualifiers of competence. To facilitate widespread adoption of the

contextualized competencies in U.S. medical schools, the committee used an established competency framework to develop qualifiers of competence to improve the health of individuals who are lesbian, gay, bisexual, transgender; gender nonconforming; or born with differences in sexual development. This process can be applied to other underrepresented populations or medical conditions, ensuring that relevant topics are included in medical education and, ultimately, health care outcomes are improved for all patients inclusive of diversity, background, and ability.

**T**he need for and development of an outcomes-based framework for training and evaluating health professionals is well defined.<sup>1,2</sup> Variability in clinical performance and increasing demand for accountability in practice resulted in the paradigm shift to competency-based education in modern health professional training. Defining the outcomes of such training has rapidly evolved over the past decade, with competencies varying by health professions,<sup>3-5</sup> geographic location,<sup>6,7</sup> and level of training<sup>8</sup>; however, the exponential increase in the number and phraseology of these competencies has created redundancy and unnecessary difficulty in developing training milestones and assessment strategies for each competency.<sup>9</sup> In 2013, using the Accreditation Council for Graduate Medical Education/American Board of Medical Specialties' competencies as a

foundation, Englander and colleagues<sup>9</sup> synthesized over 150 competency lists for physicians and other health professionals across specialties, countries, and the continuum of education and training. This resulted in a proposal for the Physician Competency Reference Set (PCRS), a unifying framework of 58 competencies across eight competency domains, to provide a standardized taxonomy of outcomes defining general physician competence.<sup>9</sup>

Although the PCRS represents an exciting development in competency-based medical education (CBME) as a comprehensive synthesis of existing competencies into a single list that defines the outcomes required of a 21st-century physician, its competencies are abstract and not context or population specific. Patients are diverse, unique individuals with varying families, backgrounds, and life circumstances. Many individuals from diverse backgrounds or populations affected by certain medical conditions experience unequal treatment in health care and/or health disparities.<sup>10-13</sup> A number of constructs have been employed to incorporate specific content into health professional training that addresses the health needs of diverse populations using a competency-

based educational approach: cultural competence,<sup>14</sup> structural competence,<sup>15</sup> and competency sets addressing specific areas of practice or medical conditions.<sup>16,17</sup> As a result of these multiple approaches, however, literally hundreds if not thousands of individual competencies have been designated as requisite to a physician's ability to care for these populations. Despite their intention to improve training, the volume of competencies has created obvious implementation barriers in curriculum design, assessment, and faculty development. Moreover, creating separate sets of competencies addressing diverse populations that are independent from standard competency frameworks such as the PCRS may ultimately diminish the importance of the content addressed by these competency sets. Specifically, these "add-on" competencies may perpetuate the notion that teaching and learning the content addressed by extraneous competencies are outside the scope of an already-dense core curriculum.

Rather than creating a new set of competencies for each population of patients or medical condition, we saw an opportunity to ground the competencies required to meet the needs of diverse patient populations and health concerns in a common

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Acad Med. 2016;91:930-935.

First published online January 19, 2016  
doi: 10.1097/ACM.0000000000001088

competency framework. This Article describes how the PCRS can be adapted to ensure that the requisite competencies are delineated to address the needs of specific patient populations—including those known to have discrepancies in health care and outcomes.<sup>10,12,13</sup> Here we describe using the PCRS framework to delineate competencies required to care for populations who are lesbian, gay, bisexual, transgender (LGBT); gender nonconforming (GNC); and/or born with differences in sexual development (DSD).<sup>11</sup> In sharing this process, we aim to provide researchers and educators with a model for applying context specificity to existing competency frameworks, and thus improve the training required to care responsibly for other specific patient populations.

### Adapting the PCRS as the Framework for Competencies in Caring for Patients Who Are LGBT, GNC, and/or Born With DSD

The Association of American Medical Colleges (AAMC) Advisory Committee on Sexual Orientation, Gender Identity,

and Sex Development was convened in May 2012. The committee was composed of nine individuals, representing diverse health professions and clinical disciplines, who were selected for their clinical expertise and educational leadership across the training continuum. The group's formal charge was to create a strategy for academic medical centers to train health care providers to develop competence in caring for individuals who are LGBT, GNC, and/or born with DSD. The ensuing process (see Table 1) resulted in an adaptation of the PCRS competencies, presented in the landmark publication *Implementing Curricular and Institutional Climate Changes to Improve Health Care for Individuals Who Are LGBT, Gender Nonconforming, or Born With DSD: A Resource for Medical Educators* (chapter 3).<sup>18</sup> In this Article, we focus on the process used to select and further contextualize the PCRS competencies that are integral to providing state-of-the-art care to these populations. We outline below the five major steps in this process: (1) selecting a framework, (2) identifying gaps in performance, (3) selecting

competencies to qualify, (4) writing the qualifiers, and (5) iteratively editing the qualifiers.

#### Step 1: Selecting a competency framework

Our first step was deciding to use the PCRS as a competency framework. Prior to the formation of the committee, other medical associations and committees had developed recommendations of content to include in undergraduate medical curricula to support physician competence in various aspects of LGBT health.<sup>19–22</sup> These foundational documents illustrated the diversity of material experts considered important for both learner outcomes (competencies) and/or curricula. Despite these being recommendations from expert panels in the field, their adoption has been minimal. This lack of uptake is due in part to the fact that the recommendations were not developed within an overarching framework for medical education; thus, they were seen by deans and schools of medicine as “one-offs” or “add-ons” to an

Table 1  
Steps for Adapting the Physician Competency Reference Set to Incorporate Content- and Context-Specific Qualifiers for Underrepresented Populations and Health Conditions

Step	Purpose	Example(s) from the AAMC Professional Competencies to Improve Health Care for People Who Are or May Be LGBT, GNC, and/or Born With DSD
1. Select PCRS as CBME framework	Select a broadly utilized framework in medical education.	N/A
2. Identify gaps in performance	Establish the evidence-based need for improved physician knowledge, skills, and attitudes to address the health of a population.	<ul style="list-style-type: none"> <li>• <b>Health care gap:</b> LGBT communities have experienced difficulties in accessing and receiving care, leading to preventable health disparities; individuals born with DSD have experienced unnecessary treatment and overmedicalization.</li> <li>• <b>Medical education gap:</b> Limited medical education exists in current curricula to address LGBT health; no systematic understanding of curricula addressing DSD.</li> </ul>
3. Determine which PCRS competencies require content- or context-specific qualifiers to address gaps	Support and streamline integration into existing competency-based curricula.	<ul style="list-style-type: none"> <li>• <b>Competence gap:</b> Sexual and gender histories inclusive of sexual orientation and gender identity are minimally taught and performed.</li> <li>• <b>PCRS competency:</b> “Gather essential and accurate information about patients and their conditions....”</li> </ul>
4. Create qualifiers of competence that are assessable	Facilitate evaluation of competence across cognitive, affective, and skill/behavioral domains.	<ul style="list-style-type: none"> <li>• <b>Qualifier of competence (in italics):</b> Gather essential and accurate information about patients and their conditions ... <i>by sensitively and effectively eliciting relevant information about sex anatomy, sex development, sexual behavior, sexual history, sexual orientation, sexual identity, and gender identity from all patients in a developmentally appropriate manner.</i></li> </ul>
5. Develop an iterative process for editing qualifiers	Achieve consensus on competencies that require qualifiers and finalize qualifier language.	<ul style="list-style-type: none"> <li>• <b>Four iterative rounds of editing</b> to finalize 30 qualifiers of competence for 20 PCRS competencies across eight competence domains.</li> </ul>

Abbreviations: AAMC indicates Association of American Medical Colleges; LGBT, lesbian, gay, bisexual, transgender; GNC, gender nonconforming; DSD, difference of sex development; PCRS, Physician Competency Reference Set; CBME, competency-based medical education.

already-full set of competencies expected of a physician graduate and the resultant required curriculum.<sup>23,24</sup>

Using an established common competency framework already used by medical educators solves this problem. We selected the PCRS competency framework for physicians because it is widely used in medical education across the training continuum. Further, the PCRS is most frequently applied to undergraduate medical education, which is the training period the committee was charged with addressing. However, the steps we describe in this Article for adapting competencies to include content (e.g., knowledge components) or context (e.g., location in curriculum or learning environment) may still be applied to an alternative framework within a certain specialty or at a different training level that demonstrates similar widespread utilization and impact locally and nationally.

### Step 2: Identifying gaps in performance

Next, we reviewed the literature to identify gaps in students', physicians', and health care systems' delivery of care for populations who are LGBT, GNC, and/or born with DSD. Building on colleagues' work—an adaptation of the Tool for Assessing Cultural Competence Training to evaluate LGBT content in medical curricula<sup>20</sup>—we first delineated the measurable outcomes that describe the room for improvement in care delivery. For example, individuals who are LGBT and/or GNC face disparities in accessing and receiving health care that lead to preventable mental, physical, and behavioral health disparities.<sup>11,25,26</sup> Individuals born with DSD often experience excessive and unnecessary treatments.<sup>27–29</sup> Collectively, these populations face implicit and explicit bias in the health care system that can induce fear of the system and avoidance of care.<sup>11,25,30–32</sup> Identifying these gaps in clinician competence explicitly links disparate outcomes directly to professional training and demonstrates how competency-based education can address health disparities. For example, many health professions students and practicing physicians who do not feel comfortable in their ability to provide quality care for LGBT patients<sup>33,34</sup> do not perform complete sexual histories routinely<sup>34,35</sup> and/or harbor implicit bias toward LGBT patients or certain sexual practices.<sup>36</sup> Each of these examples suggests specific gaps in knowledge, skills, and attitudes that interfere with achieving the

requisite competence to provide health care to individuals who are LGBT, GNC, and/or born with DSD.

### Step 3: Determining competencies requiring context- or content-specific qualifiers

Third, we identified the PCRS competencies that required qualifiers to ensure an educational process that successfully develops providers with the competence to care for the target populations. Specifically, we determined the competencies that were necessary to care for patients who are LGBT, GNC, and/or born with DSD and also could be assessed through existing curricula and which required specific curricular material and assessment opportunities not currently available in curricula. For example, the committee decided that this PCRS competency—“Identify and perform learning activities that address one's gaps in knowledge, skills, and/or attitudes”<sup>9</sup>—did not require additional context because its development and demonstration do not require specific attention to the targeted populations. A student who demonstrates this competency should be able to apply that competency in any context, including when providing care to a patient who is LGBT, GNC, and/or born with DSD.

In contrast, a PCRS competency within the Patient Care domain that did require additional context states that all physicians must “Gather essential and accurate information about patients and their conditions through history taking, physical examination, and the use of laboratory data, imaging, and other tests.”<sup>9</sup> Many aspects of health and wellness for individuals who are LGBT, GNC, and/or born with DSD depend on the provider's ability to elicit and address information related specifically to sexual orientation, gender identity, sex development, and sexual history. It is imaginable that a trainee who shows competence in gathering essential information in one context (e.g., with a heterosexual patient) could then fail to demonstrate that same competence when faced with an LGBT or GNC patient or one born with DSD.

There is currently a lack of assessment of student performance in areas critical to the health of the targeted populations, which presented a challenge for selecting the competencies to contextualize.

Therefore, competencies requiring specific qualification were determined on the basis of (1) known performance gaps described in academic literature, such as taking a sensitive history<sup>33–35</sup>; (2) presumed gaps based on absence of curricular content, such as how to provide gender-affirming care to transgender patients<sup>23</sup>; and (3) presumed gaps based on existing health disparities, such as counseling patients on vaccinations based on sexual orientation.<sup>26</sup>

### Step 4: Writing qualifiers of competence

To draft these qualifiers of competence, we used language that appropriately defined a learning outcome within CBME and provided sufficient context to guide subsequent teaching, learning, and assessment of competence for a particular area or population. Specifically, each qualifier was written as an observable ability integrating the knowledge, skills, and attitudes required to address the performance gaps identified in Step 3.

Qualifier language also included a level of granularity critical to understanding individuals' health needs within these communities. For example, because there are gaps in taking a sensitive history inclusive of language describing communities (LGBT, GNC, born with DSD) and concepts (sexual orientation, gender identity, sex development), qualifiers included this level of detail. In the Patient Care competency discussed previously, the needed context and content were qualified with this detail as follows (in italics):

Gather essential and accurate information about patients and their conditions through history taking, physical examination, and the use of laboratory data, imaging, and other tests *by sensitively and effectively eliciting relevant information about sex anatomy, sex development, sexual behavior, sexual history, sexual orientation, sexual identity, and gender identity from all patients in a developmentally appropriate manner.*<sup>18</sup>

Our goal was to create a seamless connection between the broad language of the PCRS and the more granular language required to provide context for and facilitate assessment of competence in caring for patients who are LGBT, GNC, and/or born with DSD.

### Step 5: Developing an iterative process for editing qualifiers

These steps in adapting the PCRS can be repeated across all domains of competence

and their respective competencies as necessary to address context- or content-specific gaps in education and physician training to meet specific populations' needs. In carrying out this step for each of the 58 competencies in the PCRS, our committee determined that 20 of the competencies required qualification. A total of 30 such context- and content-specific qualifiers related to those 20 competencies were created. Certain PCRS competencies required multiple qualifiers to appropriately address the differential health needs within the target communities, as an individual born with DSD may require different care than an individual identifying as LGBT. This process was iterative, requiring four successive rounds of editing to achieve consensus on which competencies required qualification, the final wording of the qualifiers, and to eliminate redundancy.

### Discussion and Next Steps

The AAMC Advisory Committee on Sexual Orientation, Gender Identity, and Sex Development adapted the PCRS in an effort to refine the competencies required for the specific context of providing care for individuals who are LGBT, GNC, and/or born with DSD. Ultimately, we delineated 30 qualifiers of competence for 20 PCRS competencies, with at least one qualifier in each of the eight defined domains of competence. The outcome of this process<sup>18</sup> contains the first adaptation of the PCRS developed to improve the health of specific populations: in this case, individuals with diverse sexual orientations, gender identities, and sex developments. So far, the publication has reached over 500,000 individuals through social media and resulted in over 5,000 online downloads, approximately half of which are medical educators.<sup>37</sup> The positive response to and preliminary impact of the publication demonstrates the need for this effort to adapt the PCRS to include content- and context-specific qualifiers of competence that would ultimately improve care for individuals, communities, and populations whose health needs are underrepresented in medical education.

Adapting an established, widely accepted competency-based framework seamlessly integrates qualifiers of competence into the curricular mainstream. This

decision was purposeful and counteracts the current educational practice in which coverage of topical material related to specific patient populations is considered an "add-on" or optional and may be dropped entirely because of time constraints. Although the qualifiers presented in this Article are specific to training physicians to become competent in caring for individuals who are LGBT, GNC, and/or born with DSD, the underlying process for developing these qualifiers can be applied in other contexts. Inequities in health care and concomitant health disparities experienced by individuals with diverse backgrounds including race, ethnicity, religion, and different language speakers are well described in the literature,<sup>10</sup> as are the bias and discrimination in health care experienced by people based on physical, intellectual, and/or sensory disabilities<sup>38</sup>; mental health<sup>12</sup>; weight<sup>13</sup>; and pain perception.<sup>39</sup> Establishing medical training programs that produce health care providers with demonstrated competence to care for patients with all identities, backgrounds, and abilities is a crucial step toward achieving health equity. The process we outlined here defines a strategy that can be applied not only to individuals who are LGBT, GNC, and/or born with DSD but also to other underrepresented populations or medical conditions, to ensure that relevant topics are included in the medical curriculum, with the ultimate aim to improve health care outcomes for all patients.

Contextualizing the PCRS is merely the first step in making the paradigm shift to CBME. To complete this process, we still need to define performance levels for each competency (milestones), develop an assessment framework, and perform ongoing evaluation of the overall educational program to ensure that desired outcomes are met.<sup>1</sup> Specifically, the context and content addressed by qualifiers of competence must be evaluated using valid and reliable assessments at appropriate levels of training, thereby ensuring that students attain the requisite knowledge, skills, and attitudes.

The PCRS presents the competencies that all medical students are expected to achieve by the time they graduate, thus delineating the curricular content needed to support the development of

competence. The described process for developing qualifiers identifies PCRS competencies that require targeted curricular inclusion and assessment to optimally engage learners and succeed in achieving the desired outcome: physicians who are competent to care for individuals who are LGBT, GNC, or born with DSD. Competencies that were not felt to require qualification, on the other hand, can likely be taught and assessed by engaging learners with a wide variety of patient populations in diverse health care settings. Although a discussion of strategies for implementation is beyond the scope of this Article, we recognize the importance of curricular development in implementing the competencies and detail those strategies in depth elsewhere.<sup>40</sup> Moreover, in recognition of the crucial role of assessment on learning and in evaluating the impact of such implementation initiatives on eventual health care outcomes, *Implementing Curricular and Institutional Climate Changes to Improve Health Care for Individuals Who Are LGBT, Gender Nonconforming, or Born With DSD: A Resource for Medical Educators* proposes potential evaluation strategies.<sup>41</sup>

Although still theoretical, we are excited by the extensive uptake of our contextualized competencies in the United States thus far, and we look forward to learning about the impact of their adoption at medical schools that are including robust assessment strategies as an integral aspect of implementation. In summary, the committee's work demonstrates the use of qualifiers of competence in medical education as a potential means toward improving the health and well-being of individuals who are LGBT, GNC, and/or born with DSD. We hope that the process for adapting the PCRS that we have described will inspire others to provide context to other underrepresented areas of health to strengthen the quality of medical education and train physicians so that sensitive and complete care is provided to all patients inclusive of identities, backgrounds, and medical conditions.

*Acknowledgments:* The authors would like to acknowledge the Association of American Medical Colleges, its Advisory Committee on Sexual Orientation, Gender Identity, and Sex Development, and project manager Tiffani St.Cloud.

*Funding/Support:* This work was funded by a grant from the Josiah Macy Jr. Foundation.

*Other disclosures:* None reported.

*Ethical approval:* Reported as not applicable.

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