

Starting With Lucy: Focusing on Human Similarities Rather Than Differences to Address Health Care Disparities

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Abstract

Problem

Multicultural or cultural competence education to address health care disparities using the traditional categorical approach can lead to inadvertent adverse consequences. Nontraditional approaches that address these drawbacks while promoting humanistic care are needed.

Approach

In September 2014, the Cleveland VA Medical Center's Center of Excellence in Primary Care Education Transforming Outpatient Care (CoEPCE-TOPC) collaborated with the Cleveland Museum of Natural History (CMNH) to develop the Original Identity program, which uses a biocultural anthropologic

framework to help learners recognize and address unconscious bias and starts with a discussion of humans' shared origins. The program comprises a two-hour initial learning session at the CMNH (consisting of an educational tour in a museum exhibit, a didactic and discussion section, and patient case studies) and a one-hour wrap-up session at the Louis Stokes Cleveland VA Medical Center.

Outcomes

The authors delivered the complete Original Identity program four times between March and November 2015, with 30 CoEPCE-TOPC learners participating. Learners' mean ratings ($n = 29$; response rate: 97%) for the three initial learning

session questions were consistently high (4.2–4.6) using a five-point scale. Comments to an open-ended question and during the audio-recorded wrap-up sessions also addressed the program objectives and key elements (e.g., bias, assumptions, stereotyping).

Next Steps

The authors are completing additional qualitative analysis on the wrap-up session transcriptions to clarify factors that make the program successful, details of learners' experience, and any interprofessional differences in interpreting content. The authors believe this innovative addition to health care education warrants further research.

Problem

Health care disparities continue to affect the quality of care received by racial and ethnic minority groups within the U.S. health care system.¹ The Institute of Medicine noted indirect evidence that bias, stereotyping, and clinical uncertainty during clinical encounters contribute to health care disparities.² Further, additional research has found that physicians' unconscious biases (UBs)—or the cognitive processes by which human beings unconsciously use information to interpret situations—contributes to all types of disparities

in care.³ The Institute of Medicine and others recommend addressing disparities through multicultural or cultural competency education, respectively, in the health professions.^{2,4} Both of which traditionally include specifically reviewing the different beliefs and health behaviors of a variety of cultures.^{2,5}

In the literature there has been abundant discussion about how this traditional approach, often called the categorical approach, can lead to inadvertent adverse consequences. Firstly, information about cultures cannot be reduced to a defined point in time and location; culture is not static but, rather, a complex, dynamic phenomenon which evolves over time. Secondly, the categorical approach includes further reductionist thinking that reinforces or even creates internal bias and stereotypical thinking.^{2,4-6} Thirdly, the Cultural Competency 2.0 position makes similar conclusions by pointing out that by discussing *different* cultures or groups, they immediately become the *other* and the persons in the room having the discussion become the *us*.⁷ Finally, the use of the word

different makes the assumption that someone or something is *normative*, and that is usually those who are doing the observing. Within patient care, this may result in the quick characterization of patients, lumping them into categories or types.⁷

Nontraditional approaches to cultural competency curricula have been offered. However, it is our belief that none of them address the aforementioned drawbacks while promoting humanistic care in an efficient manner.^{3,4} In this report, we describe our novel Original Identity program, which we developed to begin addressing health care disparities while avoiding the pitfalls of traditional approaches. The framework of this program teaches learners how to engage with patients of other cultures regardless of familiarity with that particular cultural group.

Approach

We conceptualized and developed this project as part of the culture and health curriculum that is integrated within

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the Louis Stokes Cleveland VA Medical Center's Center of Excellence in Primary Care Education Transforming Outpatient Care (CoEPCE-TOPC) program starting in September 2014. The CoEPCE-TOPC is an interprofessional program committed to training future health care professionals to work in a patient-centered medical home model. Trainees participating in the program include internal medicine, nurse practitioner, and health psychology residents as well as nurse practitioner students. Through a collaboration with the Cleveland Museum of Natural History (CMNH), our team developed Original Identity, a novel program to help learners recognize and address UB using a biocultural anthropologic framework (BAF).

The discipline of anthropology uses self-assessment of personal and cultural biases as a starting point in understanding and dealing with different cultures. More specifically, the BAF looks at humans as cultural and biological animals that are continually adapting to their environment through both cultural change and genetic evolution. Although these adaptations have historically been reduced to racial categories, both biological and cultural variability must be taken into account to assess human population variation.

In addition, educational strategies for increasing awareness of UB, although not widely used in medical education, have been investigated in other fields including psychology and education theory.^{3,4} We integrated those strategies into the BAF as a means of delivering program content. Through understanding biocultural variation in human populations and discovering their own UBs, we aimed to give learners a new framework for understanding health disparities beyond traditional categorical approaches.

Program content

Each faculty member of our team, which includes a museum educator, a PhD curator of human health and evolutionary medicine (N.M.B.), and two internal medicine physicians (M.M., M.K.S.), delivers designated sections of the program, which comprises a two-hour initial learning session at the CMNH and a one-hour wrap-up session at the Louis Stokes Cleveland VA Medical Center (see Table 1). Specific objectives of the program include being able to list the components

of health care disparities including sources of bias, stereotyping, and clinical uncertainty, and to define approaches to factors that contribute to health care disparities such as language barriers, racial and ethnic differences, clinical uncertainty, and trust within the health care system.

Delivered to advanced learners in the CoEPCE-TOPC program, the three-part structure of the initial learning session includes a guided reflection and educational experience in the CMNH Human Origins Gallery, a didactic and discussion section titled "Shared Genetic Heritage and Culture Construction of Race," and two applied patient case studies. Using this structure, we reverse the typical approach of multicultural or cultural competency teaching by *starting* with a discussion of our shared biological heritage using the Human Origins Gallery, which introduces a model of "Lucy" (*Australopithecus afarensis*), one of our early human ancestors. Learners begin a process of self-discovery by viewing and reflecting on how they are similar to Lucy. While remaining in the exhibit, this reflective experience is followed by covering the migration of *Homo sapiens* out of Africa and an outline of the genetic constriction event that occurred early in the evolution of *H. sapiens*, which resulted in humans having a genetic similarity of 99%.^{8,9}

While some learners are familiar with these and other evolutionary principles, they often are not sure how to apply this knowledge to their medical practice and their understanding of health. The "Shared Genetic Heritage and Culture Construction of Race" didactic and discussion section explores our shared genetics and allows learners to reflect on race as a biocultural construct. Learners are provided with specific medical examples of how the forces of evolution affect disease prevalence in human populations and about how humans continue to evolve. One example of this is the high prevalence of sickle cell anemia in areas of endemic malaria due to a genetic adaptation to an environmental disease risk that is heightened by cultural practices such as house and agricultural field construction. Thus, this genetic predisposition is not linked specifically with a skin color if endemic malaria is not a factor, which illustrates to learners that reducing health disparities to a biological basis is problematic and that they need to be mindful of biocultural

factors when reading medical literature and engaging with patients.

To help learners translate the BAF into practice, we end the initial learning session with two patient case studies. The purpose of these cases is to explicitly tie together the entire experience for the learners. One case focuses on race and cultural bias, and the second shifts the focus to gender bias, thereby illustrating how the BAF is transferable to all patient groups. Learners use their new understanding of humans' shared genetic heritage and cultural constructs to examine the sources of their own UBs and reconceptualize these beliefs. The physician faculty member encourages learners to candidly discuss their own UBs and consider strategies for managing them during a clinical encounter.

During the wrap-up session, held one week later, learners discuss their reactions, observations, and additional applications of the BAF. Additional applications are identified by the learners from experiences in patient care settings, and the group often discusses examples from current media. Using these points of discussion, the physician faculty member also presents an additional application of the BAF by illustrating how socioeconomic status variation historically has been a confounder to health care disparities and that it is important to examine the source of knowledge they are using during patient encounters.

Program evaluation

At the end of the wrap-up session, learners could provide feedback on the Original Identity program's initial learning session by completing minute paper evaluations,¹⁰ which included three numeric-scale questions (see Table 2 for an explanation of the scales). The first of these questions asked learners to rate the usefulness of the session overall, the second asked learners to rate how much their confidence was increased regarding use of the tools or skills addressed, and the third asked how likely they would be to recommend the program to colleagues. In addition, an open-ended question asked learners to reflect on what kinds of tools or skills they gained from the session. We also audio recorded and transcribed all of the wrap-up sessions to monitor learner progress and improve the learning experience.

Table 1

Original Identity Program^a Sections, Learning Objectives, Topics Covered, Educational Strategies, and Methods, Louis Stokes Cleveland VA Medical Center's Center of Excellence in Primary Care Education Transforming Outpatient Care in Collaboration With the Cleveland Museum of Natural History (CMNH), March–November 2015

Section	Learning objectives	Topics covered	Educational strategies ^b	Methods
Initial learning session (at CMNH)				
Human Origins Gallery	<ul style="list-style-type: none"> Recognize similarities and differences in hominid ancestors, which include <i>Ardipithecus ramidus</i>, <i>Australopithecus afarensis</i>, and species in the <i>Homo</i> lineage. Learn that migrations of hominids out of Africa as well as migrations of people to the Americas have a shared genetic heritage, yet that genetic makeup has been constricted, resulting in humans having a genetic similarity of 99%.^{8,9} 	<ul style="list-style-type: none"> This section begins with learners viewing a model of "Lucy," the <i>Australopithecus afarensis</i> discovered in the Afar Region of Ethiopia by former CMNH curator Dr. Donald Johanson. They are provided with reflection questions about what they might think about Lucy's age, sex, and race, as well as what they might think if she was their patient. Then through a guided tour, they cover the hominid fossil record from <i>Australopithecines</i> to the <i>Homo</i> lineage. Special attention is paid to the origins of bipedalism and the morphological features that make us human. The tour ends with a discussion of the migration of <i>Homo sapiens</i> out of Africa. 	<ul style="list-style-type: none"> Reflection Refocus cultural knowledge 	Educational tour in museum exhibit
"Shared Genetic Heritage and Culture Construction of Race"	<ul style="list-style-type: none"> Learn about the shared genetic heritage of all humans and the biocultural construction of race to understand the implications for diagnosis and health outcomes. 	<ul style="list-style-type: none"> This section consists of a presentation that helps learners to organize and apply their new knowledge about our hominid ancestry, and to learn about genetic variation and how it does not equate to race. Learners get a crash course in evolution, human variation, and health. After the basics, the section moves to how traditional racial categories cannot capture the nuances of genetic variation in human populations. The relationship between disease and ancestry are explored through two key examples: (1) patterned variation in human skin color in response to UV light and its relationship to rickets, and (2) sickle cell anemia and its relationship to endemic malaria throughout the tropics, not specifically in Africans or people of African ancestry. This section also discusses human variation and health disparities using an anthropological lens. This lens focuses on the importance of both biology and health in creating health disparities rather than teaching learners specific cultural perspectives. Learners are challenged to think about people, including themselves, complexly to confront conscious and unconscious bias and stereotyping. 	<ul style="list-style-type: none"> Refocus cultural knowledge Exposure to one's own biases 	Didactic presentation and group discussion
Patient case studies	<ul style="list-style-type: none"> Evaluate sources of bias, stereotyping, and clinical uncertainty (components of health care disparities). Describe ways to approach specific factors contributing to health care disparities, such as language barriers, racial and ethnic differences, clinical uncertainty, and trust within the health care system. 	<ul style="list-style-type: none"> Case 1: Learners are introduced to a patient whose gender, race, cultural background, and native language are ambiguous, and discuss how they would navigate the encounter. During this discussion the learners frequently reveal the assumptions they make about the patient, what these assumptions are based upon, and how they would affect the encounter with the patient. The physician faculty member then uses these discussion points as a springboard to highlight the many conscious and unconscious biases that typically frame our patient interactions and the effect these biases can have on health care delivery. Case 2: Learners are introduced to a patient who does not identify with either the female or male gender and uses gender-neutral pronouns. The physician faculty member leads a discussion about how to manage one's own feelings about gender identity and how to approach the patient respectfully and openly. Learners exchange ideas regarding how to ensure that the patient's preventive health needs are met while using appropriate, nonjudgmental language. 	<ul style="list-style-type: none"> Reflection Exposure to one's own biases Positive, counter-stereotypical exemplars Support of role models 	Guided group discussion

(Table continues)

Table 1

(Continued)

Section	Learning objectives	Topics covered	Educational strategies ^b	Methods
Wrap-up session (at the Louis Stokes Cleveland VA Medical Center)				
Reinforcing discussion	<ul style="list-style-type: none"> Summarize key concepts from the previous week and review how, if common human origins apply, this would change their approach to health care disparities. List examples in current media related to culture, race, gender, and socioeconomic status (SES) and apply concepts, such as race as a social construct, to clinical situations. Question situations where bias, assumption, and stereotyping are poorly used as a source of knowledge during patient encounters. 	<ul style="list-style-type: none"> Discussion using traditional 2-by-2 table to demonstrate how historically SES variation in our society has been a confounder to health care disparities and allows one to quickly attribute outcomes to racial variation and not the more common SES variation. Examples identified from current media: <ul style="list-style-type: none"> Who is Rachel Dolezal? (http://www.cnn.com/2015/06/16/us/rachel-dolezal/index.html) Caitlyn Jenner, formerly Bruce, introduces herself in <i>Vanity Fair</i> (http://www.nytimes.com/2015/06/02/business/media/jenner-reveals-new-name-in-vanity-fair-article.html?_r=0) 	<ul style="list-style-type: none"> Reflection Debrief and feedback Support of role models 	Open and guided group discussion one week following initial learning session

^aSpecific objectives of this program were to list the components of health care disparities including sources of bias, stereotyping, and clinical uncertainty, and to define approaches to factors that contribute to health care disparities.

^bEducational strategies for increasing awareness of unconscious bias are adapted from Teal CR, Gill AC, Green AR, Crandall S. Helping medical learners recognize and manage unconscious bias toward certain patient groups. *Med Educ.* 2012;46:80–88.³

Outcomes

We delivered the complete Original Identity program four times between March and November 2015, with 30 CoEPCE-TOPC learners participating. Those participants included 14 (47%) internal medicine residents, 5 (17%) nurse practitioner residents, 5 (17%) nurse practitioner students, and 2 (7%) health psychology residents; 4 (13%) participants did not indicate a specific profession. As illustrated in Table 2, learners' mean ratings ($n = 29$; response rate: 97%) for the three questions on the initial learning session were consistently high (4.2–4.6), indicating that they found the session useful, their confidence with regard to using the tools or skills covered increased, and they would recommend the session to colleagues. The lowest-scoring area was increased confidence in using the tools or skills covered, illustrating an area for improvement.

In support of the program's objectives, the majority of the responses to the open-ended question asking what tools or skills the session addressed listed bias, assumptions, and stereotyping, or to think differently about their approach during patient encounters. For the same participant group described above, learner understanding of the program objectives was further illustrated during the four

audio-recorded wrap-up sessions. For example, when asked their thoughts and reactions to the initial learning session, typical responses included:

I think it's helpful in maybe uncovering some of our own internal biases that you don't necessarily take the time to reflect [on] and acknowledge.

and

I think it was just a great exercise to do, just to realize that a lot of us do make assumptions and then just step back and realize that we do it. And we have to, you know, try to better ourselves on evaluating patients and not making that assumption.

Also, some learners noted observations they had during clinical interactions that

related to the program. For example, one learner shared:

And so I was in my Hep-C Clinic this week and there was a man who had come to start treatment. And he was a white guy who was in a higher socioeconomic background and he was a really heavy drinker. But the assumption had been made by somebody months ago that he didn't warrant really extensive evaluation in that area and that there was just a question made and then it never was followed through [on]. Whereas I think if it was a minority person in a lower or nonminority in a lower socioeconomic standpoint that they would have pressed it more. And so it impeded the treatment of this man [who was in Hep-C Clinic] because when they found this out they had to address this issue.

Table 2

Learner Minute Paper Evaluation Results ($n = 29$) on the Initial Learning Session, Original Identity Program, Louis Stokes Cleveland VA Medical Center's Center of Excellence in Primary Care Education Transforming Outpatient Care in Collaboration With the Cleveland Museum of Natural History, March–November 2015

Thinking about the initial learning session overall and the three activities:	Median	Mean	Standard deviation
Please rate the usefulness of the session overall. ^a	5.0	4.4	0.9
Please rate how much your confidence increased regarding using the tools or skills from the session. ^b	4.0	4.2	0.9
If this session was recommended not mandatory, how likely would you be to recommend it to your colleague? ^c	5.0	4.6	0.9

^aOn a five-point scale, where 1 = not at all useful and 5 = very useful.

^bOn a five-point scale, where 1 = not at all and 5 = very much.

^cOn a five-point scale, where 1 = would not recommend and 5 = would strongly recommend.

There were two main lessons learned during the process of developing and administering this program. First, given the interprofessional nature of the faculty team and the innovative content of the session, it was important that each faculty member gain a high understanding of the content. To address this, the members of our faculty team observed each other's sections and provided ongoing feedback to improve content delivery and connections between the sections. These refinements, along with learner feedback, led us to clarify the learning experience and objectives.

Second, it was essential to use patient case studies to highlight culture, race, and gender biases in a clinical context. The cases exemplified the effect of UB on individual patient care and challenged learners to uncover their own UBs. Similarly, the wrap-up session focused on further contextualizing what they had learned so they could apply it to daily clinical care and critically question clinical guidelines that make specific recommendations based on race or gender alone. All of these components assist learners in balancing between the deductive population health approach and the inductive patient-centered approach to clinical encounters as they grapple with questions such as "Why do certain drugs work better in one racial group versus another? Might it have more to do with biocultural elements, such as diet, than genetic causes as traditionally thought?"

Next Steps

The Original Identity program has become an integral part of the Louis Stokes Cleveland VA Medical Center's CoEPCE-TOPC culture and health curriculum. In our experience, it has been an efficient program that resonates with a wide variety of health care professionals. However, this program is just the first step in developing a larger integrated curriculum that includes resources for learners to increase confidence in tools or skills to mitigate the influences of UB in clinical practice. To further inform this goal, we are completing additional qualitative analysis on the wrap-up session transcriptions, through

which we hope to clarify factors that make the program successful, details of learners' experience of the program, and any interprofessional differences in interpreting content.

In developing this program, our collaboration with the CMNH was essential. Most medical education institutions are located in areas with a natural history museum or a university with anthropology faculty who can facilitate the implementation of a similar program. If a close-proximity collaboration is not possible, however, there are many online natural history resources that institutions could use to set up a similar program. Given the persistent reality of health care disparities, we believe our approach is an innovative addition to health care education that warrants further exploration and research.

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