Scanning for Bias: Developing a Reflective Process Tool for Pharmacotherapy Course Case Studies

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BACKGROUND

- Addressing social determinants of health (SDoH) in pharmacy education is essential but this must be done without inadvertently encouraging bias.
- There is a strong association between race and structural inequities, which largely explains the disparities in health status and outcomes rather than traditional "race-based medicine".[1]
- Tools have been developed in medical education to help limit implicit bias when developing case-based curriculum, but these tools are limited for pharmacy education.[2,3]

OBJECTIVE

- To design a bias scanning reflective tool to help faculty and instructors evaluate the use of patient demographics and SDoH within pharmacotherapy case studies (PCSs) in order to best prepare future culturally intelligent pharmacists.

METHODS

An initial literature review was conducted to assess implicit bias tools within pharmacy education	• Six tools were found specifically within medical education • Nine articles were found relevant to the study
Initial tool was created in Qualtrics and adapted using peer-reviewed articles and existing bias checklists	• Addressing Race, Culture, and Structural Inequality in Medical Education: A Guide for Revising Teaching Cases[2] • The Ohio State School of Medicine Adapted Upstate Bias Checklist[3]
The pilot was independently tested by the research team using a collection of pharmacotherapy case studies	• Research team used the tool to review seven cases from a second-year pharmacotherapy course • Results were compared to understand how questions were interpreted in application and feasibility
Tool was then sent to pharmacotherapy course directors for feedback on usability and feasibility	• Courses directors were from first-, second-, and third-year pharmacotherapy course directors • Research team met with course directors to obtain live feedback and provide clarification

TOOL DESIGN

Introduction	Patient Factors*	Determine Relevance of Patient Factors Used	Reflection on Patient Factors Used	Final Thoughts
• Identifies evaluator and course/learning activity • Captures information to send post-survey report	• Features 15 unique patient characteristics - user can select which factors are present in the PCS	• Pertinent to the clinical management • To provide different perspectives/diverse backgrounds • Different reason than listed**	• Presents common negative perceptions and connotations • Captures if user will make potential changes to learning material and how	• Additional comments

*Patient Factors: (1) disability, (2) biological sex and/or gender identity, (3) health belief, religion, and/or faith traditions, (4) immigration status nationality, language, or culture, (5) incarcerated persons, (6) mental health, (7) military veteran, (8) older adults, (9) patient visual images, (10) poverty or socioeconomic status, (11) race and/or ethnicity, (12) rural residence, (13) sexuality or sexual orientation, (14) substance use, (15) weight

** Prompts user to provide context

RESULTS

Faculty Feedback

- All pharmacotherapy course directors surveyed felt positive about the tool and its value
- Suggestions to aid in usability were received by the research team and implemented in an updated version of the tool
- One key recommendation was to provide examples of negative connotations associated with patient factors for selection opposed to free-text responses to help increase awareness and reflection

Changes/Additions to Tool

Figure 1. Relevance of Patient Factors Used Matrix

Based on the patient characteristics/categories selected, please check the box if the statement is true.

	Inclusion is pertinent to the clinical management of the patient (if used in case format)	Inclusion is to provide different perspectives/diverse background	Inclusion is for a different reason not listed
Disability (including physical or cognitive/intellectual disability)	☐	☐	☐
Biological sex and/or Gender identity	☐	☐	☐
Health Beliefs, Religion, and/or Faith Tradition	☐	☐	☐
Immigration Status, Nationality, Language, or Culture	☐	☐	☐
Incarcerated Persons	☐	☐	☐
Mental Health (e.g. depression, anxiety, eating disorders)	☐	☐	☐
Military Veteran	☐	☐	☐
Older Adults (generally age 65 and older)	☐	☐	☐
Patient Visual Images (e.g. profile pictures, dermatological conditions)	☐	☐	☐
Poverty or Socioeconomic Status	☐	☐	☐
Race and/or Ethnicity	☐	☐	☐
Rural Residence	☐	☐	☐
Sexuality or Sexual Orientation	☐	☐	☐
Substance Use (e.g. alcohol, tobacco, narcotics)	☐	☐	☐
Weight (e.g. underweight, overweight, obesity)	☐	☐	☐

Table 1. Rewording of Select Terms and/or Questions Used in Tool

Before	After
• "Please include any stereotypes that may be present relevant to this demographic characteristic."	• "This patient characteristic/category can sometimes be unintentionally associated with the following negative perceptions/connotations."
• "Based on the above responses, are there any changes to make to the case?"	• "Based on the above responses, do you anticipate making any of the following changes to the learning material?"
• "Is the inclusion of … clinically relevant?	• Inclusion is pertinent to the clinical management of the patient (if used in case format)

Figure 2. Example of Negative Perceptions/Connotations for Race/Ethnicity

- ☐ Presenting race as a risk factor for disease occurrence or outcome without explaining role of social determinants of health (poverty, access to healthcare, etc.)
- ☐ Explicit biological differences between racial or ethnic groups stated or implied without additional detail
- ☐ Consistently showing images of certain populations when addressing chronic conditions (e.g. black individuals when addressing diabetes or obesity)
- ☐ Implying that all of a certain population are undocumented/migrant workers
- ☐ Stating or implying that all patients from a particular culture participate in certain practices or reject certain medical interventions (e.g., "Muslim women are not permitted to be examined by male physicians")
- ☐ N/A

CONCLUSIONS

- This study is ongoing and the feedback and recommendations from the initial pilot iteration of the bias scanning tool have been important for informing next steps for piloting implementation.
- Faculty/instructor training on utilization of tool will occur in Fall 2024
- Implementation of tool scheduled for select Spring 2025 courses

References
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