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An Updated Framework to Reduce Implicit Bias and Promote Diversity, Equity, and Inclusion in Pharmacy Residency Recruitment

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TAKE HOME POINT – Evaluation of existing processes for resident or employee recruitment can identify potential sources of bias and lead to modification of screening, interview, and selection processes. New frameworks can include clear, objective criteria for assessment of candidates.

ABSTRACT

Purpose: The purpose of this initiative was to align Emory University Hospital Midtown's pharmacy residency recruitment process with values of inclusive hiring and the standards set by the American Society of Health-System Pharmacists.

Summary: Emory University Hospital Midtown implemented a comprehensive initiative to enhance the inclusivity of its pharmacy residency recruitment process. This manuscript outlines the multifaceted approach, including the establishment of a residency recruitment committee and redefining the candidate screening, interview, and selection processes. Key measures included a screening tool, structured interviews, and simulations to objectively evaluate candidate qualities and reduce implicit bias. Additionally, the hospital prioritized education to create awareness of implicit biases.

Conclusion: The revised framework for pharmacy residency recruitment serves as a model for other institutions in the pharmacy and healthcare sectors. Hopefully this initiative inspires other organizations to reevaluate their recruitment practices, ensuring implicit biases do not interfere with selecting top candidates. The commitment to ongoing quality improvement and impact of these changes reflects one institution's dedication to creating a fair and equitable recruitment process for pharmacy residents.

BACKGROUND

The 2022 American Society of Health-System Pharmacists (ASHP) Pharmacy Residency Standards for Postgraduate Residency Programs, effective July 1, 2023,

require that "Programs ensure the documented procedure aims to reduce implicit bias throughout the continuum of the recruitment, selection, and ranking process" (ASHP Accreditation Standards, 2024). ASHP has created a diversity resource guide which identifies several strategies residency programs should utilize to reduce bias in the selection and ranking process. These strategies include implementing a holistic approach to assess applicant's unique experiences, reviewing tools and rubrics to identify potential biases, requiring bias training for staff participating in the pharmacy residency recruitment process, and developing a committee focused on diversity in pharmacy residency recruitment (ASHP Diversity Resource Guide, 2024).

These requirements are supported by current literature that is increasingly emphasizing the importance of inclusive hiring to ensure selection of top candidates. Several studies have shown how candidate characteristics such as their name, physical appearance, school name, names of preceptors or references can lead to unintended discrimination due to evaluators' subconscious thoughts or opinions (Harzer et al., 2021; Leadership IQ, 2023;). Additionally, several studies demonstrate how specific candidate experiences do not necessarily translate into desired skills (Van Iddekinge et al., 2019). Without a structured framework

addressing bias, candidate ranking decisions may be made more on gut instincts than a candidate's actual ability, and a program may inadvertently be de-selecting candidates who could become the most successful residents.

To mitigate these challenges, residency programs have used a variety of new recruitment methods. Situational and behavioral based questions, blinded application reviews, and use of multiple mini-interviews are just a few of many different strategies that have gained popularity within residency program recruitment due to their notable successes (Bergelson et al., 2022). In addition, studies have shown that there are disproportionally low numbers of underrepresented minority groups in medicine and pharmacy residency programs compared to their overall representation in the U.S. population. A 2021 study of the 20 largest medical specialties accredited by the Accreditation Council for Graduate Medical Education found that none of these programs reflected the proportion of certain ethnic groups in the general population (Bennett et al., 2021). Similar observations were seen with pharmacy residencies, with white candidates experiencing a higher match rate relative to the number of applicants and Black/African American candidates experiencing lower match rates (Cummins et al., 2024).

While previous publications have discussed various methods, such as blinded interviewers and structured interviews, to reduce bias in the selection process, our program recognized that conducting blinded interviews was not feasible due to insufficient manpower and resources. The committee wanted to develop creative strategies to ensure that well-qualified candidates were not inadvertently screened out or unknowingly discriminated against.

With all of this in mind, the Emory University Hospital Midtown (EUHM) Department of Pharmacy created a residency recruitment committee in August 2022 to meet the new ASHP standard. This initiative was developed organically as the committee members recognized a pressing need within the current selection process to address potential biases and ensure inclusivity. The goal of the committee was to address inclusive hiring which is a process that "actively recognizes diversity and embraces a wide range of qualities and perspectives that candidates bring to the organization… inclusive hiring practices aim to level the playing field for all applicants to fight against recruitment bias and any form of discrimination" (Academy to Innovate Human Resources).

The purpose of this manuscript is to detail the strategies developed by this committee to foster a more inclusive residency hiring process and to assess their effectiveness in reducing bias.

PROCESS
Committee Formation and Structure

At the end of the 2021-2022 recruitment cycle, EUHM's Residency Advisory Committee agreed to reevaluate the recruitment process for the following academic year. A chair was appointed by the Residency Program Director and tasked with forming a residency recruitment committee to review and optimize the existing process. An email was sent to ASHP-designated pharmacy preceptors at EUHM to determine interest in the committee. A post-recruitment survey was also sent to preceptors who participated in the last recruitment cycle. One of the committee's initial priorities was to participate in a pharmacy resident-led grand rounds presentation on inclusive hiring and in institution-led multidisciplinary implicit bias training. Through these sessions, the committee identified that not all candidates may have had equal opportunities for relevant experiences prior to applying for residencies. Areas of potential bias that were identified and changes made to the selection process are detailed in Figure 1.

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The committee met monthly throughout the academic year. The first two meetings in the spring were open forums for committee members to share feedback on the existing recruitment process, review survey responses, and provide ideas for change and improvement. Committee members provided suggestions in three key areas: 1) the screening rubric used for initial review of residency candidates; 2) the existing interview structure, questions and evaluation; and 3) the "papercut meetings," defined in previous years by the program as meetings to select candidates to interview and to determine the final rank list.

The residency recruitment committee then formed three subcommittees, each looking at one of those areas. While the residency recruitment committee was responsible for oversight of developing the new recruitment process, preceptors in the residency program were also recruited for screening of candidates, interviews, and papercut meetings to distribute workload more evenly (hereafter referred to as "reviewers" or "preceptors").

Priorities and Actions - During the initial meeting of the residency recruitment committee, the group identified two key questions that guided the analysis of the existing recruitment process: 1) what qualities are most important in a resident, and 2) do our screening and interview processes identify those key qualities in an unbiased manner? Committee members collaborated to define institution-specific success and submitted qualities thought to be important to this definition based on available literature. The committee then determined which part of the recruitment process, screening, or interview would best reveal each quality, and if a specific component of the application (e.g., letter of recommendation) or interview (e.g., question or simulation) would be better to assess that quality (Table 1).

The Subcommittees then designed the screening rubric and interview structure using the key qualities as the framework. Two orientation sessions were conducted to provide thorough walkthroughs of the updated screening and interview processes.

Screening - Development of the screening tool was centered around the qualities identified as predictive of success in the residency program. To reduce bias, the evaluations within the screening tool were intentionally created to be as objective as possible. The screening tool was divided into three sections. The first section included three qualification questions pertaining to grade point average (GPA) and submission of the supplemental application and transcripts. Applications that did not meet the pre-determined
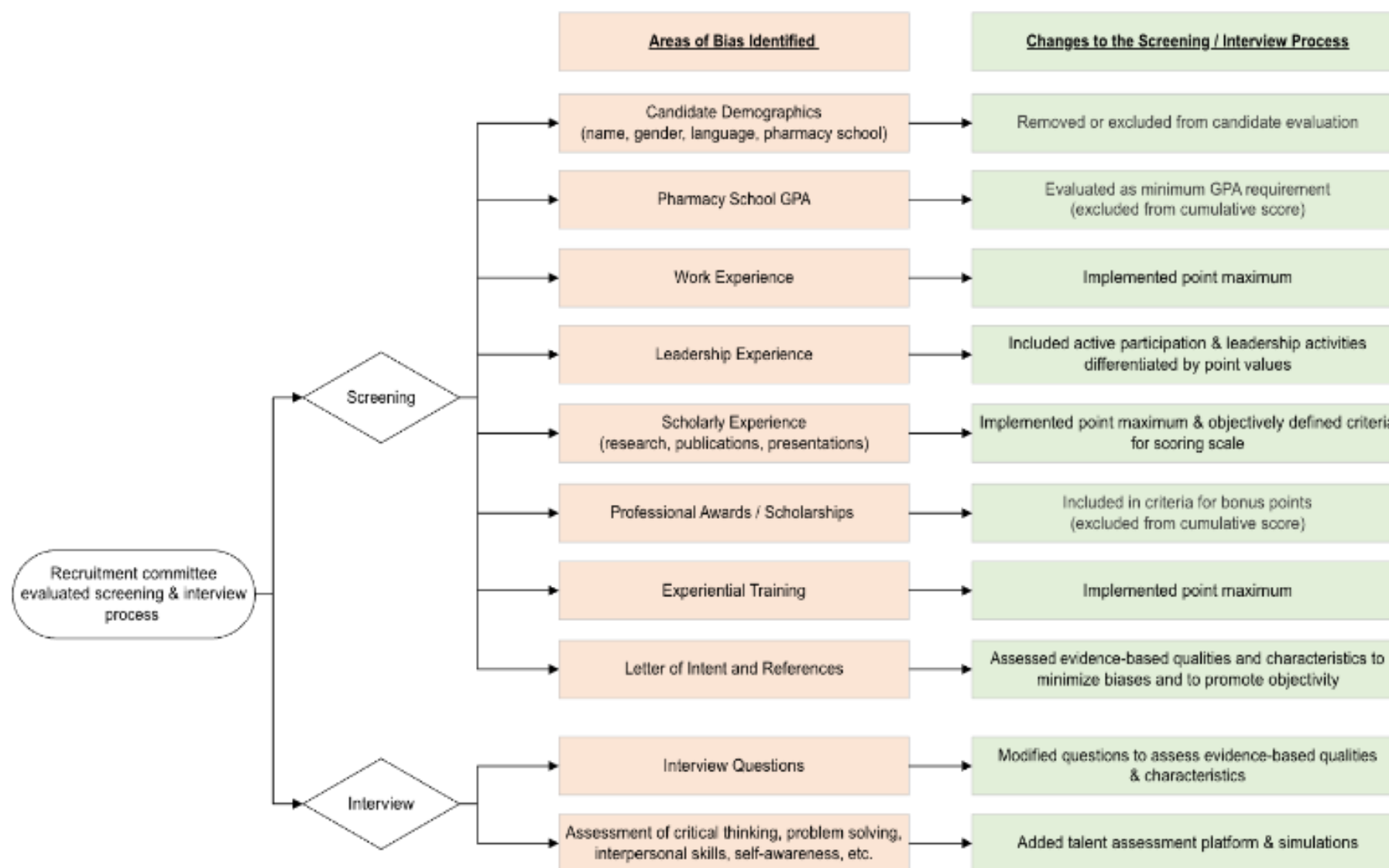
Figure 1: Areas of bias and modifications made to pharmacy resident screening and interview process

Table 1: Desired Candidate Qualities and Skills Determined by Residency Recruitment Committee

Category	Screening, Interview, or Both	Qualities
Commitment to care	Interview	Passion for patient care
		Cultural sensitivity/Empathy
	Both	Strong work ethic
		Ownership
Critical thinking, problem solving, creativity	Interview	Critical thinking
		Ability to problem-solve
		Creative solutions to complex problems
	Screening	Project management
Interpersonal skills, teamwork, and communication	Interview	Accepting of different personalities
		Friendly, approachable personality
		Ability to build relationships
	Screening	Good communication
		Necessary assertiveness
		Dependability
	Both	Professionalism
Motivation / growth	Interview	Perseverance
	Screening	Purpose in wanting to do a residency (at EUHM)
	Both	Growth mindset
		Desire to do more and be more
		Goal-oriented
		Innovator
		Initiative to learn, create
Self-awareness / humility	Interview	Confident humility
		Teachable
		Supportive autonomy
		Willing to learn/ask for help
		Open-minded
	Screening	Receptive to feedback
		Able to incorporate and adapt feedback
		Adaptable
		Ability to self-reflect
	Both	Awareness (emotional intelligence)

GPA cutoff or did not include the supplemental application or transcript were ineligible for review.

The second section of the screening tool focused on the character evaluations and narrative comments of the letters of recommendation. The character evaluations scores were worded as "fails to meet," "appropriate," or "exceeds" for each characteristic. Reviewers were instructed to award or deduct points based on their assessments of the characteristics or narrative comments if explicit keywords related to the characteristic were mentioned.

The third section of the tool searched for our desired qualities through all other materials within the application including *Curriculum Vitae* , letter of intent, and supplemental materials. The supplemental materials consisted of two open-ended questions for candidates to answer. Guidance was provided to assist with scoring in this section. A scoring tool was created using Microsoft Excel to tally up points from each of the three sections using a weighted model. This tool was internally validated based upon archived applications. The standard deviation between the validated scores were obtained to establish the threshold for bringing in a third reviewer, if necessary. More weight was given to qualities determined to be identifiable only from the screening process. Each candidate was randomly assigned to a pair of evaluators for scoring. Any score above

the standard deviation required additional review and the average of the three scores were used. The final scores obtained from the screening tool were entered into the Pharmacy Online Residency Centralized Application Service website.

Interview Selection Process and Meeting Structure - The papercut meeting included a broad group of preceptors that work with residents, and its primary objective was to select candidates who would be extended invitations for interviews and identify alternate candidates. To ensure a productive discussion, rankings were distributed to preceptors prior to the meeting. Candidates were ranked from highest to lowest based on screening scores. Particular attention was given to those ranked in the middle due to the very small differences in scores. Preceptors were expected to review their assigned applicants and be prepared to present them to the group. Following the presentation, other preceptors provided input and asked questions.

Prior to the deliberations, several ground rules were established. First, all reviewers agreed to trust the efficacy of the screening tool. Second, any discussion points were expected to be presented in a professional and respectful manner, promoting inclusivity of thought. Last, any perceived bias was promptly identified and addressed by the meeting facilitator or other attendees. During the meeting,

each reviewer pair was allotted uninterrupted time to provide their insights on each of their candidates. Additional input could be provided by others with firsthand experience with a candidate.

A majority vote was required to retain or modify a candidate's ranking. Elevating a candidate's position could be justified by exceptional qualities, attributes, or experiences that might not have been fully captured by the screening tool. Conversely, lowering a candidate's rank could be a result of significant red flags, untrainable qualities, misalignment with the values and strengths of the residency program, or deficiencies in desired attributes.

Interview Process – Interviews during the 2022 recruitment cycle were conducted virtually but were designed to be easily replicated in person. The process included an interview portion alongside two unique simulation activities.

The interview component consisted of questions targeting one or two of the qualities or skills determined by the recruitment committee. Interviewers were provided with an interview scoring rubric. Candidate responses were scored on a numeric scale with the option to select N/A if unable to assess an answer. Explicit criteria, keywords, and descriptive examples of answers that would meet the desired scoring in the scoring rubric were included.

To develop the new interview questions and scoring tool, the interview subcommittee reviewed and revised questions used in previous interviews to ensure their relevance, while also creating new questions to best assess the predetermined qualities. Additionally, any questions that demonstrated bias towards candidates with specific types of experiences were removed. Each candidate spent time on two virtual interview rooms, each focusing on five questions. This approach allowed candidates opportunities to ask questions and take breaks in between sessions.

The interview process also included two simulations, providing evaluators the opportunity to assess candidates' interpersonal communication, critical thinking, and adaptability - qualities that may be challenging to evaluate in the traditional interview setting. In one simulation, focused on teamwork, candidates were randomly paired and Candidate One was provided a drawing and instructed to direct Candidate Two to draw the same item. The second simulation focused on assessing candidates' ability to express empathy and passion for patient care through a mock patient counseling session. To separate the assessment from

candidates' clinical knowledge, fake drug names were used.

DISCUSSION

Our previous approach to the pharmacy resident selection process was notably subjective and introduced bias due to a reliance on the titles of letter writers, research experience, school of pharmacy attended, and advanced pharmacy practice experiences. The former screening rubric lacked clarity and was based upon loose criteria with flexible point allocations during application review leaving applicants' fates subject to individual reviewers' interpretations. We created a new process to mitigate these issues and to meet the new ASHP standards. While several resources provide guidance on following an unbiased recruitment approach, the committee did not find any published criteria or frameworks specific to residency recruitment and thus created its own.

The goal of this initiative was to optimize the residency recruitment process while reducing bias and potential discrimination. Knowing that candidates' unique skills are better predictors of success in residency than their job-related experiences, the residency recruitment committee first defined the specific skills and qualities required to be successful within a pharmacy residency program. These skills and qualities were then distributed amongst the screening and interview processes based on where they could best be evaluated. The modified process provided preceptors with clear guidance and specific criteria for awarding points in both the screening and interview rubrics as well as in the rankings of candidates. The new interview process included two simulations and two interview panels, which allowed for the evaluation of candidates in real-life scenarios and in response to structured questions. The ranking meeting similarly benefited from structured discussions regarding candidate feedback and ranking criteria.

Although we were focused on minimizing bias in our processes, we did choose to continue to use a GPA cutoff in our initial review of candidates as it was part of the screening process in prior years, though notably, the cutoff was lowered. Because GPA has been correlated with higher match rate (Philips et al., 2016), the use of this criterion for candidate selection is controversial as it may limit recruitment of a diverse workforce (Maurer, 2020) and remains an area for further investigation.

The main limitation of our new framework is a lack of objective measures that highlight the transition of the residency selection process from a subjective, potentially biased process to a more objective process and identifies any aspects of the process that may still be more subjective in nature and prone to

bias. One way to demonstrate this may be to evaluate the difference in the range of screening and interview scores between reviewers in the old and new processes to see if larger variance existed among reviewers prior to implementation of the new process. Next steps include an ongoing annual quality improvement process as well as applying this framework to the next residency recruitment cycle with a large selection committee and identifying variations in screening and interview scores per section to identify any aspects of the framework that may still be subject to more bias or interpretation.

CONCLUSION

EUHM has undertaken a transformation in its pharmacy residency recruitment process to reduce biases and potential discrimination. Recognizing the imperative to reduce implicit bias and promote fairness, the residency recruitment committee made key improvements in the screening, interview, and selection processes. The development of a new screening tool, structured interviews, and simulations aimed to assess candidate qualities objectively. This updated process addressed previous subjectivity and elevated transparency, making the process more equitable. The impact of this work has influenced divisions within the pharmacy department to update their recruitment practices including other residency programs and clinical pharmacist interviews. Future steps involve measuring and evaluating the impact of these changes on bias and recruitment practices by the ability to reproduce the results with various selection committees on the same subset of candidates. The authors' hope is this revised framework will serve as a tool for other institutions and healthcare disciplines to adopt to incorporate more objective criteria into their recruitment processes.

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