



# National Survey of Standardized Patient Demographics

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## INTRODUCTION

Growing evidence suggests that patients from minoritized demographic backgrounds experience lower quality of care when compared to patients from majority demographic backgrounds, even after accounting for well-established confounding variables such as socioeconomic status and access to healthcare. One potential reason for this substandard care is that medical trainees lack adequate exposure to opportunities to learn about and interact with patients from marginalized communities in controlled settings. A key avenue for such interactions might include learning opportunities with a diverse population of Standardized Patients (SPs). Virtually all medical schools utilize SP interactions to help students develop interpersonal and clinical skills. The opportunity to encounter patients from various backgrounds in this environment may provide an effective mechanism of improving cultural and structural competency; in other words, learning from a diverse SP population may help students to more effectively work with patients from a variety of backgrounds. However, little is known about the demographics of the standardized patient population, or about whether SP programs seek to increase the diversity of their SPs.

## METHODS

### Survey Design

- A Qualtrics survey was designed by research team in collaboration with a SP Program Coordinator in Chicago that focused on demographic statistics of the SP population at individual simulation centers.
- Survey questions included:
  - Number and type (resident, medical student, etc.) of learners served
  - Total number of SPs employed
  - SP employment contracts
  - SP Race/Ethnicity demographics
  - SP Gender demographics
  - SP Disability demographics
  - Program Diversity Efforts
  - Barriers to employing minority SP candidates

### Recruitment

- A list of all LCME accredited US MD programs was compiled with associated simulation centers.
- Initial invitation to participate in standardized patient demographics survey emailed en masse to program coordinators or site directors.
- Due to a low response rate, contacts were emailed individually after contact information was confirmed on simulation center websites.

### Data Analysis

- Incomplete surveys were removed from the data set, leaving 26 completed surveys from 163 contacted simulation centers
- All Quantitative results were categorically compared to US Population parameters based on 2019 US Census\*.
  - Racial/ethnic demographics were analyzed utilizing Inverse Simpson Diversity Index.
  - Higher values on the index represent more diverse populations.
- Qualitative and short answer responses from survey respondents were examined for common themes.

## FIGURES

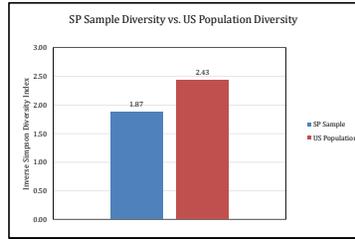
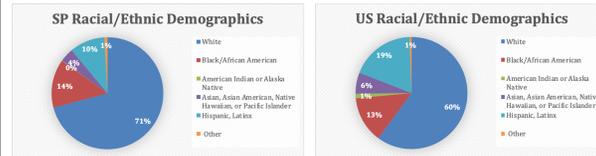
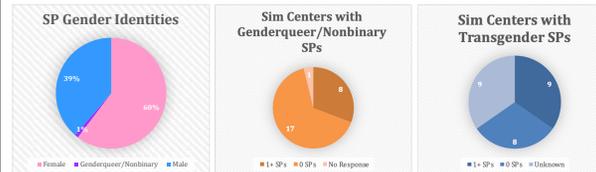


Figure 1: Inverse Simpson Diversity Index measures the richness and health of a diverse population. It is sometimes used as a measure of the effective number of species in a population. This result indicates that the SP population may not adequately reflect the US population.



Figures 2 & 3: (2) Sample of SP Racial/Ethnic Demographics is based on estimates from 26 responding simulation centers of varying sizes and locations (n=3007). (3) US Racial/Ethnic Demographics based off 2019 US Census data.



Figures 4 - 6: (4) Sample for Gender Identity is based on estimates from 26 responding simulation centers of varying sizes and locations (n=3084). (5) 1.1% (33 of 3084) of the SP sample was reported as genderqueer/nonbinary. All 33 came from a total of 8 simulation centers (n=26). (6) 0.06% (19 of 3084) of the SP sample was reported as transgender. All 19 came from a total of 9 simulation centers (n=26).

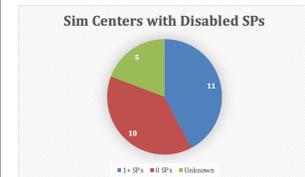


Figure 7: 2.7% of the SP sample (n=2999) was reported to have disabilities. All 81 came from a total of 11 simulation centers.

## PRELIMINARY RESULTS

### Racial/Ethnic Demographics

We hypothesize that the racial/ethnic demographic distribution of SPs in the US does not adequately represent the US patient population. A comparison of SP population and US population Inverse Simpson Diversity Indices (Figure 1) appears to support this hypothesis. In particular, Figures 2 and 3 indicate that the SP Hispanic/Latinx SP population (10.2%) appears to be an underrepresentation of the US Hispanic/Latinx population (18.5%).

### Gender Identities

Preliminary data indicates that about 1.1% of the SP population is composed of Genderqueer/nonbinary individuals (Figure 4). Notably, only 8 of the 26 responding simulation centers reported at least one genderqueer/nonbinary SP (Figure 5). Due to limited availability of national surveys, it is difficult to provide a satisfactory estimate of the genderqueer/nonbinary US population. Current data also suggests male SPs (38.6%) may be underrepresented when compared to the US population (49.2%). Both trends warrant further observation.

### Trans/Cisgender

We hypothesize that the distribution of transgender SPs in the US does not adequately represent the US patient population. Preliminary analysis suggests that this population (0.7%) may be well-represented when compared to the US population (estimated 0.6%), however only 9 of the 27 responding simulation centers reported at least one transgender SP. In addition, 9 of the 26 responding simulation centers stated that they either do not ask or were not aware of how many transgender SPs they employ (Figure 6).

### Disability

We hypothesize that the distribution of SPs with disabilities does not adequately represent the US patient population. Preliminary analysis suggests that this population (2.7%) may be underrepresented when compared to the US population (8.6% in individuals aged 19-64). In addition, only 11 of 26 responding simulation centers reported at least 1 SP with a disability. 5 of the 26 were either unsure of how to define disability or did not ask SPs to identify disabilities (Figure 7).

### Barriers

Of the 26 responding simulation centers, 16 cited specific barriers to increasing the diversity of their standardized patient population. These barriers generally fell under one of two umbrella categories:

- Minority groups have little interest in becoming SPs
  - "Very few Hispanics, Asians, or other races apply."
  - "We can't force people to apply..."
  - "General distrust of medical institutions in African American communities"
- Minority groups field poorly qualified candidates.
  - "...we turn down a lot of people during our audition"
  - "Local community has low literacy rate & portraying our cases requires higher literacy"

## Discussion

Promoting diverse SP demographics has been identified by many as a key objective for improving the clinical training of medical students. However, our preliminary data suggests that programs often struggle to achieve this goal. Overall, Hispanic, Asian, disabled, and LGBTQI populations appear to be the most underrepresented. Further data acquisition and formal statistical analysis is required to verify these findings.

A low response rate and low completion rate has made it difficult to achieve adequate statistical power and raises concern for response bias. Improving the response rate and completion rate is a future goal for the research team. Ensuring survey questions are understandable and have clear definitions may reduce the rate of incomplete surveys.

The current data does not account for local community demographics from responding simulation centers. Communities with higher percentages of minority populations may have artificially elevated the representative SP sample. For instance, SPs from Detroit represented over 10% of the Black/African American SPs in our sample. Future iterations of this discussion will need address this potential source of error.

\*2019 US Census does not track Genderqueer/Nonbinary or Transgender. US population estimates for Transgender individuals is based on the 2016 Williams Institute Report. Limited data is available to provide an accurate estimate of Genderqueer/Nonbinary individuals in the US.