

# Graduate Medical Trainees Perspectives on Personalized Medicine



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## Background

- An increasing number of providers are being asked to interpret and discuss genetic test results with their patients<sup>3</sup>
- Practicing clinicians have low levels of knowledge of genomics<sup>3,4</sup>
- No previous studies have assessed graduate medical trainees (GMTs) knowledge of or attitudes towards personalized medicine (PM)

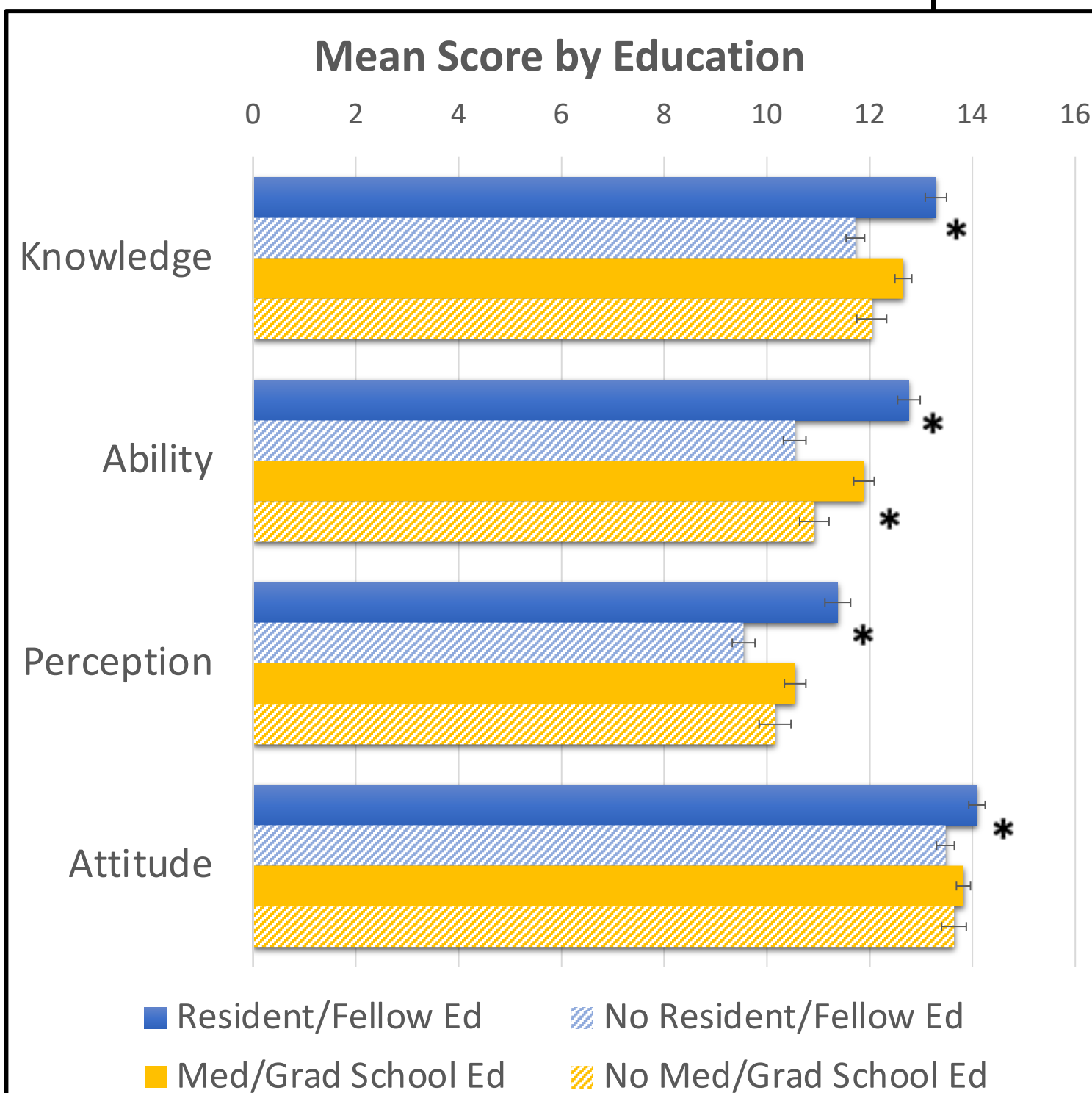
## Study Aim

- To evaluate the knowledge, skills and attitudes local GMTs have toward personalized medicine, including disease genetics & pharmacogenetics (PGx)
- Results will inform future curriculum development for GMTs

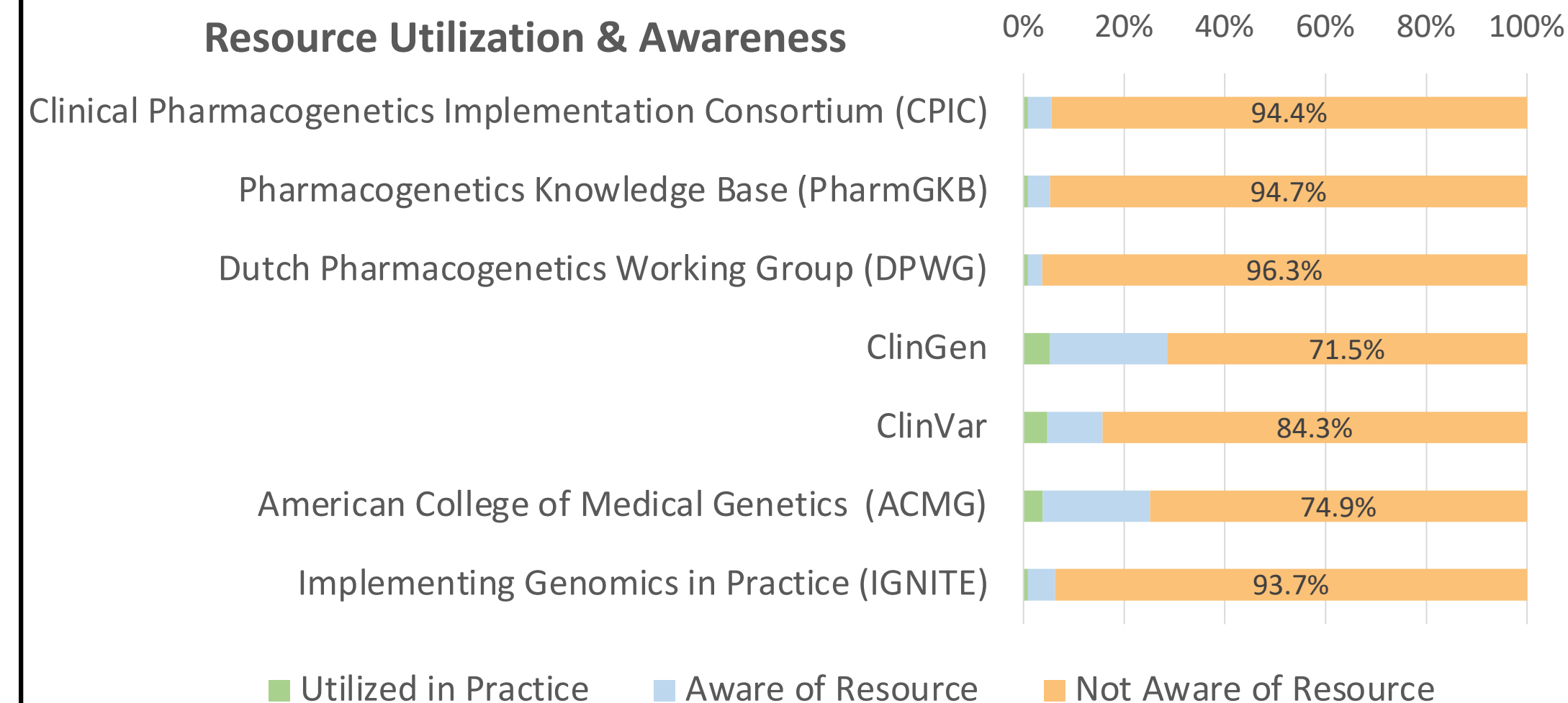
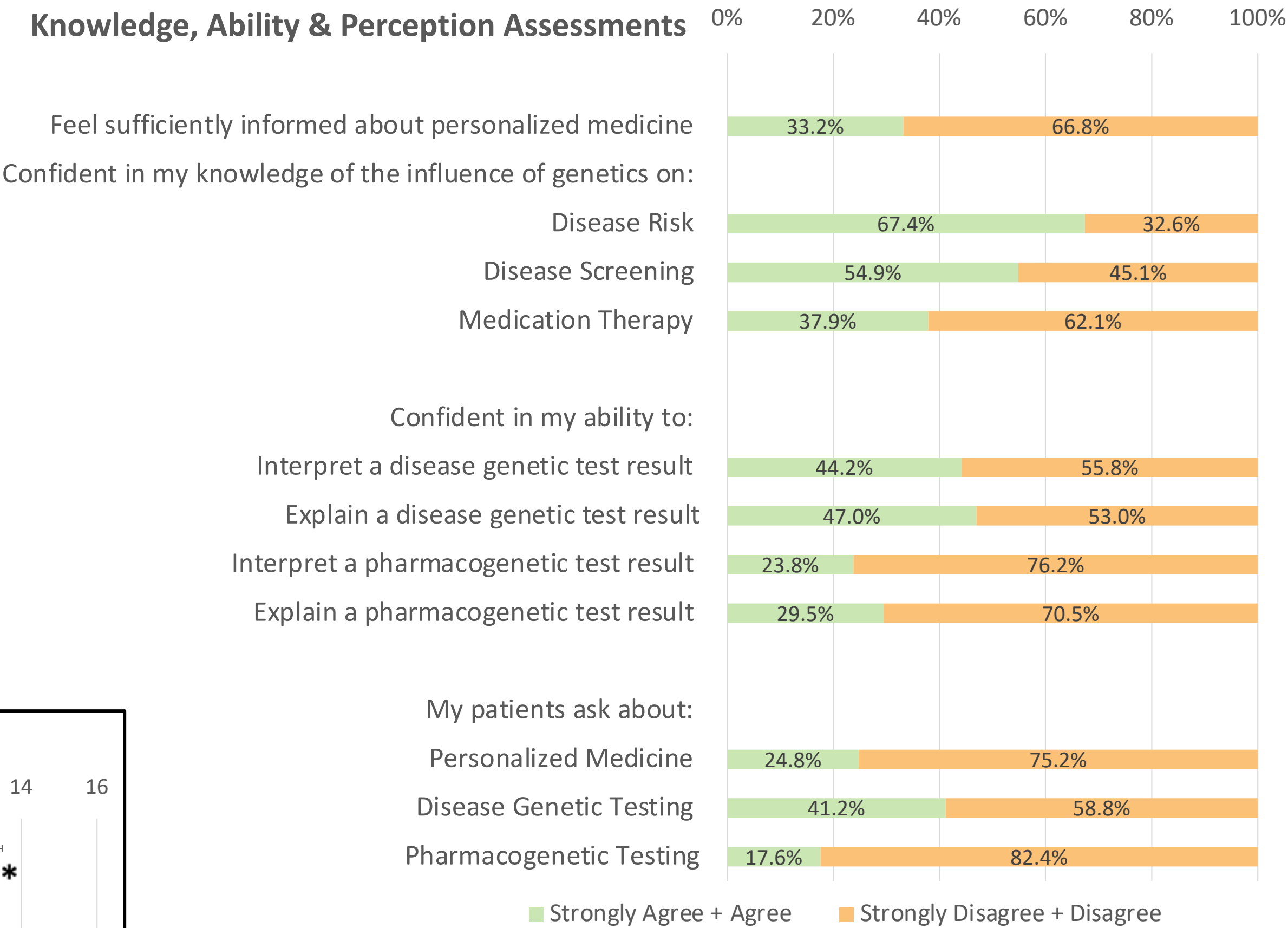
## Methods

- An anonymous, 47-item web-based survey was administered to all GMTs affiliated with University of Colorado from December 2019 to January 2020
- Three email reminders were sent and participants were incentivized with the chance to win 1 of 10 gift cards following survey completion
- Descriptive statistics were calculated & associations between categorical variables were assessed using Chi square tests;  $p < 0.05$  was considered significant

- Of 1190 GMTs contacted, 319 (26.8%) GMTs returned questionnaires with at least 90% of primary survey questions (excluding demographics) completed
- Respondent characteristics: 75.6% residents, 59.7% women, 76.2% non-Hispanic whites
- 73.7% (n=235) of respondents reported receiving PM education in medical and/or graduate school (M/G)
- 49.5% (n=158) of respondents reported receiving PM education in residency and/or fellowship (R/F)
- 40.3% (n=128) of respondents had not utilized any PM resources in the past
- \* denotes  $p < 0.05$



## Results



## Discussion

- Majority of respondents did not feel sufficiently informed about PM and were unaware of the resources available to help integrate PM into clinical care
- Respondents who reported receiving PM education in R/F were significantly more likely to report confidence in their knowledge of and ability to apply PM compared to those who did not receive PM education in R/F ( $p < 0.0001$ )
- Respondents who reported receiving PM education in M/G reported similar confidence in their knowledge of PM compared to those who did not receive PM education in M/G

## Conclusions

- PM education in M/G is not sufficient to improve GMTs' knowledge of PM
- PM curricula developed specifically for GMTs affords the possibility to improve future clinicians' knowledge of and ability to apply PM in the clinical setting
- Future research is needed to assess PM curricula for GMTs and its impact on clinical care

## References

- Hamilton JG, et al. Primary Care provider's cancer genetic testing-related knowledge, attitudes and communication behaviors: A systematic review and research agenda. *J Gen Intern Med.* 2017 Mar; 32(3):315-24.
- Mikat-Stevens NA, Larson IA, Tarini BA. Primary-care providers' perceived barriers to integration of genetic services: a systematic review of the literature. *Genet Med.* 2015 Mar; 17(3):169-76.