

Equality, Diversity and Inclusion in the Membership of the Faculty of Public Health Examinations

Executive Summary and Recommendations

A report commissioned by the Faculty of Public Health to examine for evidence of differential attainment in postgraduate Public Health Specialty Examinations



FACULTY OF
PUBLIC HEALTH

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Executive Summary

Public Health is a Speciality which advocates for the principles of health equity and social justice. The Faculty of Public Health (FPH) has committed to tackling inequalities across the public health career pathway. This report is the second in a multi-phased programme of work and is focused on examining for differential attainment in the Public Health postgraduate examinations. Differential attainment refers to the gap in average (not individual) levels of performance between candidates from different demographic groups undertaking the same assessment^{1,2}. Importantly, this gap cannot be explained by a difference in ability and is therefore considered to be unfair³. In the UK, there is extensive evidence of differential attainment across undergraduate and postgraduate examination outcomes, and across multiple intersecting demographic characteristics⁴⁻⁸.

Membership of the Faculty of Public Health (FPH) is a mandated element of the speciality training programme. In order to gain membership, candidates must pass two postgraduate examinations. The first is the Diplomate Examination (DFPH), a written examination which primarily tests knowledge and understanding of the scientific basis of public health⁹. The second is the Final Membership Examination (MFPH), an oral examination which tests the application of relevant knowledge and skills to public health practice⁹. The examinations are open to any candidate with a university degree. This includes candidates who hold a primary medical qualification. Unusually among medical specialties, the examinations are also open to candidates with a professional background other than medicine (BOTM).

This is the first study to examine for differential attainment in the outcome of passing the FPH membership examinations. We analysed ten years of national performance data for all DFPH and MFPH first exam attempts between 2012 to 2022 inclusive. We aimed to identify if demographic characteristics including age, sex, ethnicity, disability status, reasonable adjustment status, professional background, candidate status (UK Registrar, Hong Kong College of Community Medicine, or outside of UK public health specialty training), place of primary qualification and UK training region were associated with the outcome of successfully passing the DFPH and MFPH examinations on first attempt. The year of exam sitting was divided into four categories, in an attempt to account for changes in examination practice over time. We were unable to examine some demographic characteristics, including socioeconomic status, religion, and sexual orientation as the data has not been collected. Chinese ethnicity was analysed separately to the Asian ethnicity category, as 85.6% of candidates of Chinese ethnicity were HKCCM candidates. Overall, the analysis suggests that some demographic groups are less likely to pass the FPH membership exams on first attempt. A summary of the results can be found in Table One.

For the DFPH, in total 1,194 individual candidates sat the examination for the first time between 2012-2022, of which 977 candidates had complete records and were included in univariable and multivariable analysis. The outcome of interest was passing both papers on first attempt. After multivariable analysis, an attainment gap persists suggesting that the variables of increasing age, black, Asian or white other ethnicity, professional BOTM, and candidates who were not UK Registrars are each independently associated with significantly reduced odds of passing both DFPH papers on first attempt. Separate analysis restricted to UK Public Health Registrars only (n=758) showed similar results identifying older candidates, black and Asian candidates and professional BOTM candidates as having lower odds of passing both papers on first attempt. Univariable and multivariable analysis of DFPH exam outcome on first attempt by demographics and professional background can be found in Figure A1 in the appendix.

For the MFPH, in total 813 individual candidates sat the examination for the first time between 2012-2022, of which 675 candidates had complete records and were included in univariable and multivariable analysis. The outcome of interest was passing the examination on first attempt. After multivariable analysis, an attainment gap persists suggesting that increasing age, black and Asian ethnicity are each independently associated with significantly reduced odds of passing the MFPH examination on the first attempt. Univariable and multivariable analysis of MFPH examination outcome on first attempt by demographics and professional background can be found in Figure A2 in the appendix. Separate analysis restricted to UK Public Health Registrars only was not conducted for the MFPH as UK Public Health Registrars comprised 96.2% of the MFPH cohort.

Table 1. Summary of differential attainment by characteristics across the DFPH and MFPH. The table summarises the odds of passing the exam for each demographic variable compared to the reference group.

Characteristic	Evidence of DA in DFPH	Evidence of DA in MFPH
Sex	No. Males and females are equally likely to pass both papers. (no statistically significant difference)	No. Males and females are equally likely to pass. (no statistically significant difference)
Age	Yes. Odds of passing both papers varies by age, even after adjusting for ethnicity, sex, professional background, candidate status and year of exam sitting. The odds of passing both papers decreases by 5% for every 1-year increase in age.	Yes. Odds of passing varies by age after adjusting for ethnicity. The odds of passing both papers decreases by 6% for every 1-year increase in age.
Ethnicity (ref: white British)	Yes. Odds of passing both papers varies by ethnicity even after adjusting for age, sex, professional background, candidate status and year of exam sitting. For every 100 candidates of White British ethnicity who pass the DFPH on first attempt: <ul style="list-style-type: none"> • 10 candidates of black ethnicity pass on first attempt • 44 candidates of Asian ethnicity pass on first attempt • 59 candidates of white other ethnicity pass on first attempt 	Yes. Odds of passing varies by ethnicity after adjusting for age. For every 100 candidates of White British ethnicity who pass the MFPH on first attempt: <ul style="list-style-type: none"> • 12 candidates of black ethnicity pass on first attempt • 40 candidates of Asian ethnicity pass on first attempt
Professional background (ref: Medical background)	Yes. Odds of passing both papers varies by professional background even after adjusting for age, sex, ethnicity, candidate status and year of exam sitting.	No. No statistically significant difference in pass rate based on professional background.

	<p>For every 100 candidates from a medical professional background who pass the DFPH on first attempt:</p> <ul style="list-style-type: none"> 63 candidates from a professional BOTM pass on first attempt 	
<p>Candidate status (ref: PH Registrar training scheme)</p>	<p>Yes. Odds of passing both papers varies even after adjusting for age, sex, ethnicity, professional background and year of exam sitting.</p> <p>For every 100 candidates who are UK Public Health Registrars who pass the DFPH on first attempt:</p> <ul style="list-style-type: none"> 11 candidates from the HKCCM pass on first attempt 12 candidates outside of PH specialty training pass on first attempt 	<p>Yes. Odds of passing varies by candidate status.</p> <p>In univariable analysis, for every 100 candidates who are UK PH Registrars who pass the MFPH on first attempt:</p> <ul style="list-style-type: none"> 35 candidates outside of PH specialty training (excluding HKCCM) pass on first attempt. <p>However, after adjusting for ethnicity and age, this is no longer significant.</p>
<p>Disability</p>	<p>No. No statistically significant difference in pass rate based on declared disability.</p>	<p>No. No statistically significant difference in pass rate based on declared disability.</p>
<p>Adjustment approved</p>	<p>No. No statistically significant difference in pass rate based on having a reasonable adjustment approved for the exam sitting.</p>	<p>No. No statistically significant difference in pass rate based on having a reasonable adjustment approved for the exam sitting.</p>
<p>Place of primary qualification* (ref: primary qualification in UK)</p>	<p>Yes. Odds of passing both papers varies by place of primary qualification.</p> <p>In univariable analysis, for every 100 candidates who obtained their primary qualification in the UK who pass the DFPH on first attempt:</p> <ul style="list-style-type: none"> 13 candidates who obtained their primary qualification outside the UK pass on first attempt. <p>However, after adjusting for age, ethnicity, professional background and candidate status, the estimate is not significant.</p>	<p>N/A</p>
<p>*data on this variable were only available for 2018-2022 candidates</p>		

UK Training region	No. No statistical difference for UK training region influencing pass rate.	No. No statistical difference for UK training region influencing pass rate.
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Notably the characteristics of increasing age, black and Asian ethnicity and professional BOTM were also associated with lower likelihood of success in recruitment into public health specialty training. This analysis therefore suggests that the demographic groups affected by differential attainment at the recruitment stage of the specialty training pathway, are also affected by differential attainment in the examinations.

The purpose of postgraduate examinations is to differentiate between candidates with and without the necessary knowledge and skills for practice. This differentiation based on ability is necessary and appropriate. However, differentials that are connected solely to demographic characteristics are unfair and threaten stated commitments to building an inclusive, diverse and representative workforce. Whilst such inequalities exist, it is unlikely that all colleagues will feel a sense of belonging in the public health workforce. This in turn threatens our ability to effectively tackle health inequalities and to build trust with the communities we serve¹⁰. The significant impact of examination failure on affected individuals' physical, mental, and social wellbeing, in addition to the impact on their workplace learning opportunities, should not be underestimated.

The causes of differential attainment are multi-faceted and complex. The attainment gap is likely to result from differential experiences arising from systematic and structural inequities throughout the educational and workplace training pathway². Recommendations in this report are made based on existing literature, recognising the need for further research within public health settings, co-production of interventions with colleagues with lived experience, and rigorous evaluation of implemented interventions.

Recommendations

	Recommendations	Relevant Stakeholder(s)
1.	Leadership Building an inclusive workplace, and recognising differential attainment as a structural problem, requires organisational and individual leadership across workplace and learning environments.	
1.1	The FPH should review the terminology used across the Fair Training programme of work and ensure that language which recognises that responsibility lies with institutions and organisations to initiate systematic and structural change is consistently used.	<ul style="list-style-type: none"> • FPH Education Committee • FPH EDI Committee/SIG
1.2	A “Fair Exams” task and finish group will be established to engage more widely on the recommendations from this report, prioritise and oversee the implementation of co-produced interventions, and to facilitate collaboration between stakeholders both within and outside of the public health context. This will include considering how best to support candidates sitting the examinations outside of the specialty training programme, including international candidates, through work being explored by the Global Health Committee.	<ul style="list-style-type: none"> • FPH Education Committee
1.3	The findings of this report should be shared with the HKCCM to highlight the attainment gap for Hong Kong Registrars and inform decision-making around how best to support Hong Kong Registrars sitting the DFPH examination.	<ul style="list-style-type: none"> • FPH Education Committee
1.4	Guidance around what it means to build an inclusive public health workplace and learning environment should be developed and shared with training regions and supervisors. This could include the hosting of a learning event to facilitate the sharing of good practice, and to enable discussion and collaboration around any challenging areas within the public health context.	<ul style="list-style-type: none"> • FPH EDI Committee/SIG
1.5	Organisations and leaders should commit to appropriately resourcing the necessary work to address differential attainment, and to recognising the work of colleagues in this space.	<ul style="list-style-type: none"> • All relevant stakeholders
1.6	The FPH should commit to examining for differential attainment and experiences throughout the public health specialty training programme through measures of progress such as ARCP outcomes, CCT outcomes, and measures of training quality.	<ul style="list-style-type: none"> • FPH

2.	Improve data collection to better understand and monitor differential attainment in public health postgraduate examinations To accurately monitor and evaluate the impact of any exam changes on differential attainment, we recommend implementing a systematic approach to collecting candidate characteristics at the point of exam application.	
2.1	An appropriate measure of candidate’s socioeconomic status should be identified, such as the highest educational qualification of either parent, and added to the exam application. The Fair Exams task and finish group should engage with relevant stakeholders to consider if additional demographic data on variables such as sexuality and religion should also be collected.	<ul style="list-style-type: none"> • Fair Exams Task & Finish Group • FPH Education Committee • FPH
2.2	Data on ethnicity (as per the ethnic groups used in the 2021 census in England), place of primary qualification, disability and disability type should continue to be collected systematically via pre-determined categories (including “other”).	
2.3	An appropriate unique identifier should be selected and made mandatory to facilitate linkage across exam sittings, adjustment request applications and application outcomes and enhance compatibility with other datasets.	
2.4	A data dictionary encompassing all data from exam applications should be compiled and routinely reviewed and updated to capture changes in definitions or recording practices over time. This ensures data accuracy and reliability of the dataset ensuring consistency in data interpretation for future monitoring and evaluation.	
2.5	Individual candidate performance by question should be routinely stored in the FPH database to enable future analysis of differential attainment beyond overall pass/fail outcomes, by sections of the syllabus or question type within the exam, across exam sittings.	
2.6	The purpose of collecting this data should be shared with candidates at the time of applying to sit the exam in order to encourage participation and reduce missing demographic data.	
2.7	The Fair Exams Task and Finish group should consider linking FPH examination datasets to FPH Registrar training outcome data to identify the cohort of Registrars who leave training due to repeated examination fails. This group is potentially most disadvantaged by differential attainment and further research to identify this group and understand their experiences may support the development of targeted interventions.	
3.	Understand the unique experiences of candidates from minoritised groups	

	The analysis presented in this report provides a novel description of the patterns of differential attainment in public health postgraduate exams. However, there are inherent limitations to such a quantitative approach, and existing evidence in the wider literature is drawn from undergraduate and postgraduate medical education in clinical settings. As such, it may not be representative of the workplace training environment and experiences of Public Health specialty trainees.	
3.1	Qualitative research should be conducted with Registrars from demographic groups identified to be affected by differential attainment. The research should aim to explore the learning and workplace experiences of Registrars who have both passed and failed the DFPH and MFPH examination on first attempt, to better understand the causes of, and inform potential interventions to address, differential attainment within a public health context.	<ul style="list-style-type: none"> • Fair Exams Task & Finish Group
3.2	Qualitative research should be conducted with Educational Supervisors, Training Programme Directors, Heads of Schools and Examiners to further understand the workplace and learning environments and support available to Registrars sitting and resitting the examinations.	<ul style="list-style-type: none"> • Fair Exams Task & Finish Group
4.	Inclusive assessment practices In addition to interventions in the wider workplace and learning environment, it is important to review the DFPH and MFPH assessments themselves to ensure they provide all candidates with an equitable opportunity to demonstrate their knowledge, skills and competence.	
4.1	The demographics and professional backgrounds of the existing pool of examiners, question setters and standard setters for the DFPH and MFPH should be audited and compared to the composition of the wider specialist public health workforce. The results of this audit should be published, and a plan developed to ensure the diversity and inclusivity of the examiner pool.	<ul style="list-style-type: none"> • Diplomate Examination Development Committee • Final Membership Examination Development Committee
4.2	The current universally accessible information, support resources, and practice questions for the DFPH and MFPH examinations should be assessed against the AOMRC principles, to identify opportunities to improve candidates' familiarity with the assessment format, and their opportunities for formative feedback.	<ul style="list-style-type: none"> • Diplomate Examination Development Committee • Final Membership Examination Development Committee
4.3	The Fair Exams Task & Finish Group should coordinate, review, and recommend high-quality universally accessible formative assessments for the DFPH & MFPH which mirror the summative assessments, working in partnership with the Examination Development Committees. These formative assessments may be used by candidates to support their preparation for the examinations, and by Educational Supervisors and TPDs to support in the	<ul style="list-style-type: none"> • Fair Exams Task & Finish Group

	early identification of Registrars who may require additional targeted support when preparing for their examination attempt.	
4.4	At the next curriculum review, the Examination Development Committees should invite Registrars and Consultants with diverse backgrounds and experiences to collaboratively evaluate the examination syllabi content using the principles of inclusive curriculum design.	<ul style="list-style-type: none"> • FPH Curriculum Assessment Committee
4.5	The causes of differential attainment are structural and systematic. However, the impact of differential attainment is borne by the affected individuals. The FPH Education Committee should consider allowing candidates to pay for paper I and II of the DFPH separately to reduce the financial impact of resit examinations, which falls disproportionately on colleagues from certain demographic groups over others.	<ul style="list-style-type: none"> • Diplomate Examination Development Committee • FPH Education Committee
5.	Inclusive working and learning environments	
	Working and learning in a diverse and inclusive workplace has been identified as a key success factor, facilitating progression through postgraduate training.	
5.1	National, regional and local leaders should celebrate colleagues from diverse backgrounds who have overcome barriers to achieve success.	<ul style="list-style-type: none"> • FPH EDI Committee • Regional Training Programmes
5.2	The FPH EDI Committee and Regional Schools of Public Health should look to develop mentoring programmes to create opportunities for Registrars from minoritised groups to access tailored support and guidance. This may include informal mentoring relationships through networking opportunities.	
5.3	Differential attainment training and support for Educational Supervisors, TPDs and Heads of Schools should be developed and delivered. The training should ensure that supervisors have the necessary knowledge, skills, confidence and resources to support Registrars of all backgrounds, beliefs, and identities.	<ul style="list-style-type: none"> • SEB • NHSE WTE • Regional Training Programmes
5.4	Regional Schools of Public Health should consider how they can support Registrars to develop peer networks, and ensure they have time to make use of the peer support and mentoring they offer.	<ul style="list-style-type: none"> • Regional Training Programmes
6.	Targeted assessment support and feedback	
	Additional assessment support and feedback should be offered to candidates based on individual learning needs.	
6.1	The Examination Development Committees should provide personalised narrative feedback on areas of strength and weakness against the expected standard, for candidates who have failed a paper or examination, in line with AOMRC guidance.	<ul style="list-style-type: none"> • Diplomate Examination Development Committee

		<ul style="list-style-type: none"> • Final Membership Examination Development Committee
6.2	The development of a targeted assessment support offer pre- or post- first examination attempt should be considered. This could include Differential Attainment Champions in each region, who are trained to support Registrars to reflect on their formative and summative examination feedback, to identify and address their learning needs.	<ul style="list-style-type: none"> • SEB • Regional Training Programmes
7.	Evaluation of implemented interventions There is a need for rigorous evaluation of the impact of implemented interventions targeting differential attainment, with a commitment to share evaluation findings transparently to build our collective understanding.	
7.1	All stakeholders should commit to rigorous evaluation of all implemented interventions and to sharing the results publicly.	<ul style="list-style-type: none"> • All stakeholders

References

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Appendix

Figure A1. DFPH exam outcome (passed both papers) on first attempt by demographics and professional background: univariable and multivariable analysis, 2012-2022

Fig A1 (i) All candidates (n=977)

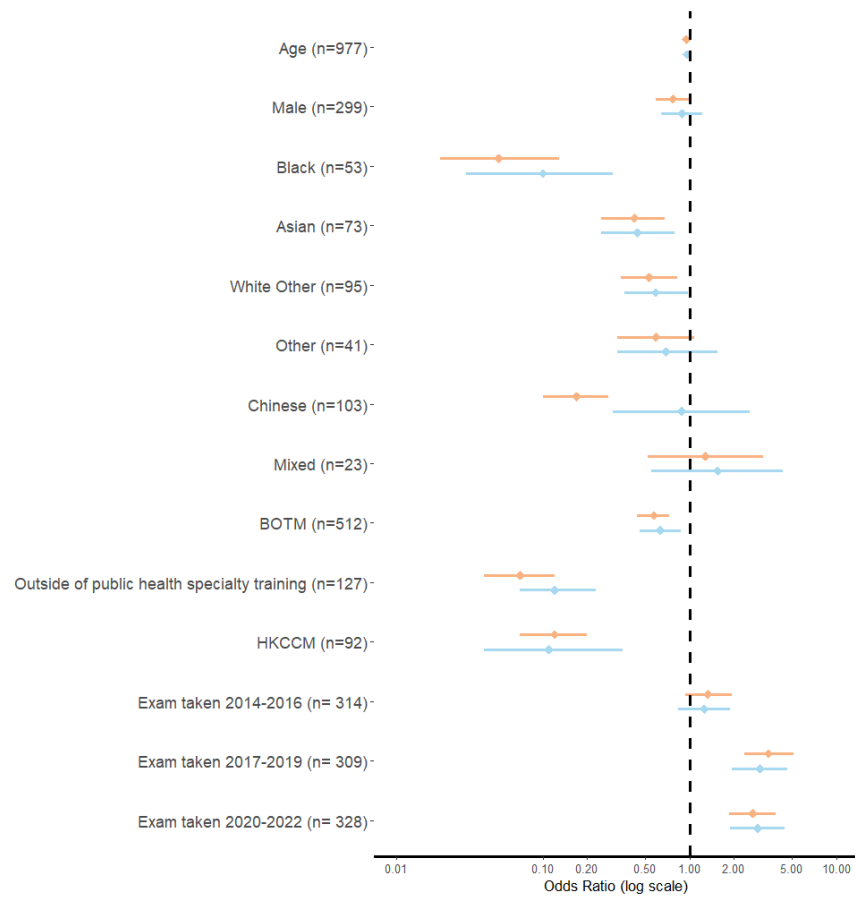


Fig A1 (ii) UK Public Health Registrars only (n=758)

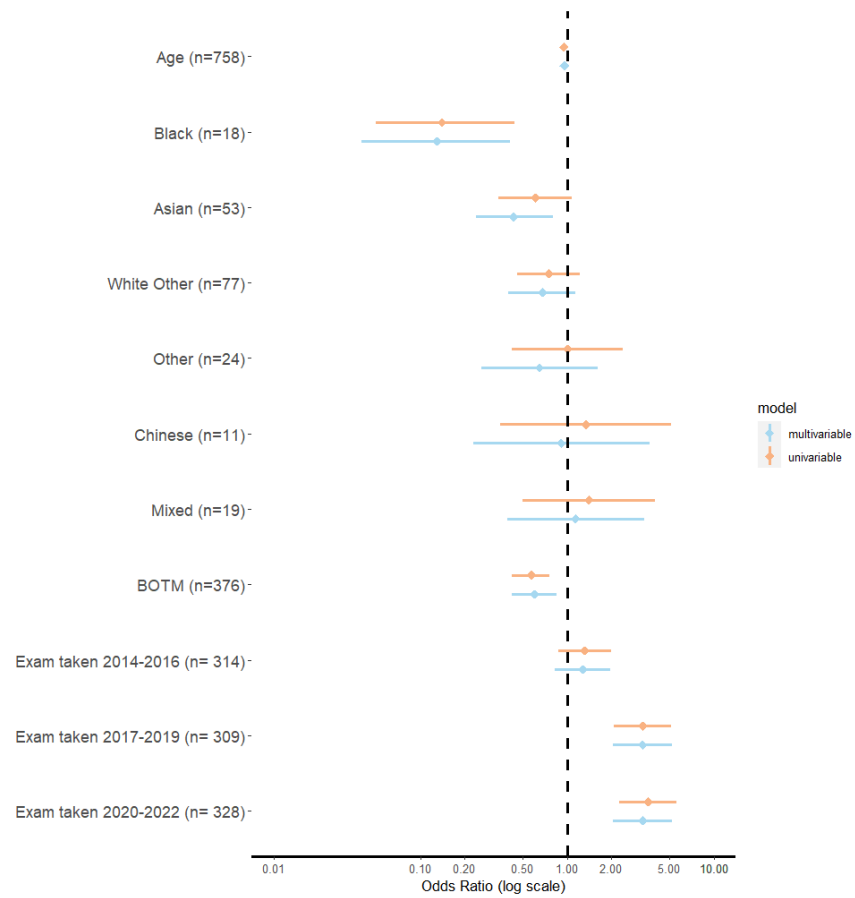
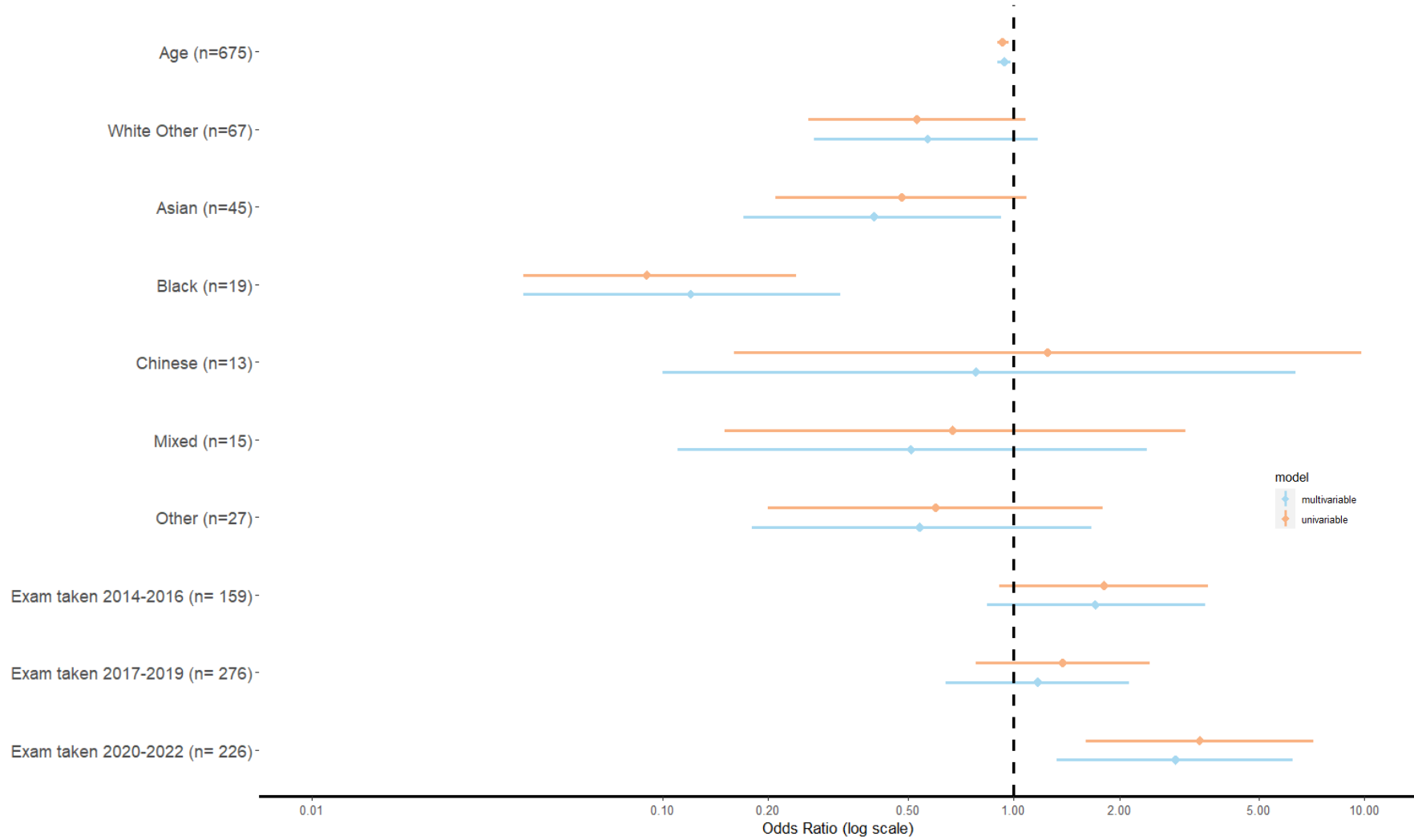


Figure A2. MFPH exam outcome (pass vs fail) on first attempt by demographics and professional background: multivariable analysis, 2012-2022 (n=675)





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