

Factors that influence Australian medical graduates' preferences and rural workplace rotations

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Severe medical workforce shortages in rural Australia has prompted research about factors associated with medical graduates working rurally. This research aimed to (i) identify factors influencing whether Australian medical graduates preferred to or actually worked in a rural location, and (ii) determine if Notre Dame Fremantle (*NDF*) medical graduates were more likely than graduates of other Australian medical schools to have a preference for or work rurally.

Longitudinal data from the Medical Schools Outcomes Database (MSOD) were analysed using univariate and multivariate logistic regression, in the setting of twenty Australian medical schools. Participants included Australian or New Zealand citizens and Australian permanent residents who participated in the MSOD commencing medical school and post graduate questionnaires between 2006 and 2013. Outcomes of interest were preferred and actual work locations one (PGY1) and three (PGY3) years post-graduation.

Between 2005 and 2013 there were 27,704 participants who completed the MSOD commencing medical school questionnaire. After exclusion of the 2005 pilot study year and international students, 20,784 met the inclusion criteria, 4028 of which completed PGY1 and/or PGY3 questionnaires.

Self-reported preference for rural practice location at medical school commencement was the strongest independent predictor of whether a graduate would have a rural location preference at PGY1 (odds ratio [OR], 6.06; 95% CI, 4.90-7.50) and PGY3 (OR, 5.90; 95% CI, 4.03-8.63) and actually complete a rotation in a rural location during PGY1 (OR, 1.83; 95% CI, 1.52-2.20) and PGY3 (OR, 1.86; 95% CI, 1.30-2.64). John Flynn Scholarship recipients were more likely to have a preference for rural specialty (OR, 2.37; 95% CI, 1.58-3.56), rural practice location (OR, 1.58; 95% CI, 1.15-2.18), and complete a rural medicine elective during PGY1 (OR, 1.57; CI 95%, 1.20-2.05).

Participants from graduate-entry programs (OR, 0.64; 95% CI, 0.55-0.75) and those with dependent children (OR, 0.50; 95% CI, 0.34-0.72) were less likely to have worked rurally during PGY1 and PGY3 respectively. Despite being a graduate-entry program with a significantly higher proportion having dependent children, *NDF* graduates may be slightly more likely than graduates of other Australian medical schools to have a preference for rural specialty (OR, 1.69; 95% CI, 0.96-2.97) and were equally likely to work rurally during PGY1. Comparison of PGY3 outcomes between *NDF* and other Australian medical schools was not performed due to small sample size (only 78 Notre Dame Graduates completed a PGY3 questionnaire).

Conclusions

Students' preferred location of practice at medical school commencement was the factor most strongly associated with rural preferences and work location for PGY1 and PGY3; this is consistent with Jones, Bushnell & Humphreys' (2014) observation between this factor and rural preferences at medical school exit. John Flynn scholarship recipients were more likely to have a preference for and complete a rural rotation during PGY1 however those from graduate-entry programs or with dependent children were less likely to work in rural areas. These contributions further expand our understanding of the influences of rural workplace outcomes, emphasising the importance of using future MSOD data to evaluate the effectiveness of, and provide local evidence for, Australian medical school selection policies and rural health curricula.

References

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Jones, M. P., Bushnell, J. A., & Humphreys, J. S. (2014). Are rural placements positively associated with rural intentions in medical graduates? *Med Educ*, 48(4), 405-416. doi: 10.1111/medu.12399

Recommendations

1. MSOD to continue collecting data from the commencement of medical school (commencing medical school questionnaire) to capture commencing preferences, specifically rural preferences. A national, systematic data collection on medical students and career pathways is required to ensure evidence-based policy development.
2. When analysing MSOD data to investigate graduates' rural preferences and work locations, researchers should control for the effect of commencing preference by including it as a covariate. Adjusting for this factor is crucial when analysing the effectiveness of other programs such as rural placements, scholarships and extended rural exposure, as without this adjustment effects could be overestimated.

Presenter

Marie Herd is a recent graduate of the University of Notre Dame, Fremantle, and is currently an Intern at Sir Charles Gairdner Hospital in Perth, WA. During her final year of medical studies, she completed Honours research evaluating factors that influence medical graduates' preferences and work rotations in rural areas. Although being brought up in major urban centres, Marie has an interest in rural health and lifestyle, having spent a year of her medical studies in Narrogin as part of the Rural Clinical School of WA program. She has also completed two First Wave Scholarship placements in rural Western Australia and has thoroughly enjoyed the experience. Prior to medicine, Marie completed a Bachelor of Science degree and worked at a Fertility Clinic in Perth as an Embryologist and Medical Scientist.