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Do rurally focussed dental programs produce regional and rural dentists? An exploratory cross-sectional survey examining Australian dental graduates of 2015.

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ABSTRACT

Objective: This study compared the early career practice destinations and intentions of dentists graduating from rurally-focussed Australian universities with those graduating from metropolitan universities.

Participants: 2015 Australian dental graduates from James Cook University (JCU), University of Queensland (UQ), Griffith University, Charles Sturt University (CSU), La Trobe University, and University of Adelaide (UoA) practicing in Australia in 2016 (n=46).

Design: Cross-sectional design comparing Dental school attended (metropolitan or and personal drivers.

Main outcome measure: Rurality of early career practice location in 2016 based on the Modified Monash Model (MMM) classification.

Results: 2015 Dental graduates from three rurally-focussed universities (JCU, CSU, La Trobe) were statistically more likely to practice in both regional (MMM 2-3) and rural/remote towns (MMM 4-6) in 2016 compared to graduates from three metropolitan universities (UQ, Griffith, UoA) (p=0.030; POR=4.6 and 5.6, respectively). Practice intentions and personal drivers associated with working in a rural area (MMM 3-6) were: “I considered working rurally upon time of graduation” (p=0.010), “I wanted to step outside my comfort zone” (p=0.001) and “I wanted exposure to a wide range of procedures” (p=0.020).

Conclusions: Evidence suggests Dental school graduates from a rurally-focussed university are more likely to work in regional and rural areas compared to graduates from a metropolitan school. Personal drivers for early career regional and rural Dental practice included intention for an individual’s personal and clinical boundaries.

KEY WORDS: dental graduates, intentions, practice location, university, workforce

INTRODUCTION

The Australian dental workforce has increased significantly over the past decade; however, severe geographical maldistribution currently disadvantages those living in rural areas¹ Thus, recruiting and retaining dentists is a critical challenge for rural community health services.^{2,3}

To strategically address the rural Australian workforce deficit with an educational intervention, three rurally focussed dental schools have been established since 2007,⁴ each with curricula providing students with additional education and training experiences informed by health delivery discrepancies between metropolitan and rural communities. However, while these new rurally focused dental schools have been operating for almost a decade, little has been done to investigate whether they are actually producing more rural dentists than their metropolitan counterparts.

This study investigates the practice location of Australian dental graduates who completed their degrees from three rurally focussed and three metropolitan dental programs in 2015.

METHODS

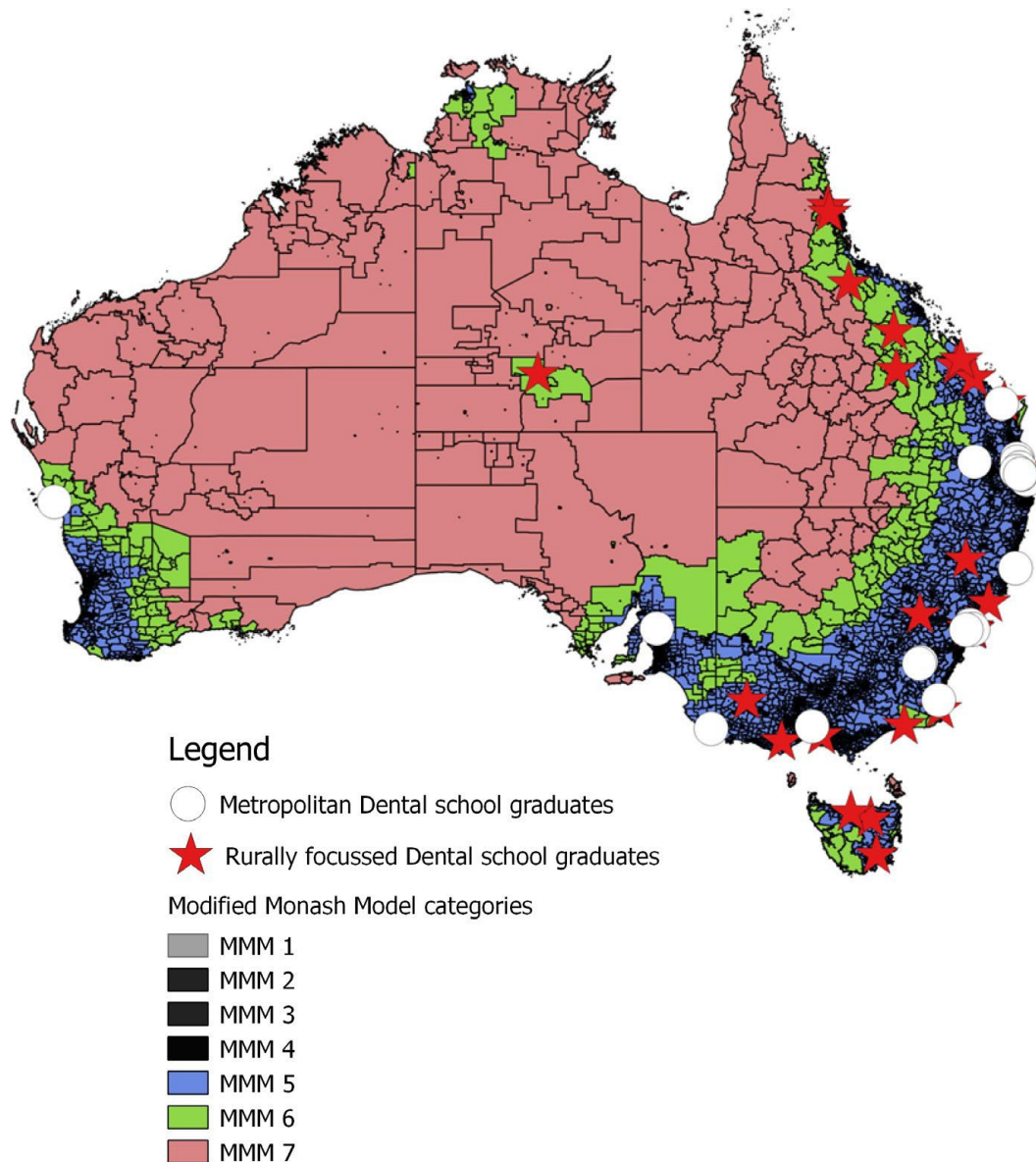
The study used a cross-sectional design, with data collected via the online platform SurveyMonkey. Eligible participants included dentists who graduated in 2015 from three metropolitan dental programs (University of Queensland, Griffith University and University of Adelaide) and three “rurally focussed” dental programs (Charles Sturt University, La Trobe University and James Cook University), each of which explicitly delivers rurally oriented curriculums. Universities offering 4-year postgraduate dental programs were excluded from this study.

Purposive and snowball sampling methods were used to recruit eligible participants via an online survey link in closed Facebook forums (Aussie Dental Forum, Dental Product Review, Next Generation Dentists) as well as in respective forums for the 2015 final-year cohort groups of each participating university. Participants were asked their university attended and suburb of main practice during their first postgraduate year. Location was categorised according to the Modified Monash Model (MMM) which calculates rurality based on both town size and geographical remoteness (based on the Australian Statistical Geography

Standard Remoteness Area index). Practice locations in MMM 1 were classified as “metropolitan,” MMM 2-3 locations as “regional,” while those in MMM 4-6 as “rural/remote.”

A two-sided chi-square test for trend with prevalence odds ratios (PORs) was used to describe the likelihood of graduates going to different MMM-classified practice locations depending on type of dental program attended, while ARCGIS software was used to create a geographic information system (GIS) map showing the 2016 practice locations of participating graduates from the metropolitan and rurally focussed dental programs (represented by white circles and red stars, respectively; Figure 1).

FIGURE 1 Geographic information system (GIS) map showing practice locations in 2016 of 46 dental graduates from 6 Australian dental programs (classified for rurality using the Modified Monash Model)



Ethics approval

The James Cook University Human Research Ethics Committee (H7054) approved the study.

FINDINGS

Twenty dental graduates (42%) worked in a metropolitan location, 14 (30%) worked in large and medium-large regional locations, while the remaining 12 (26%) worked in remote or small-to-medium regional (“rural/remote”) areas. The 26 dental graduates from the 3 rurally focussed universities were statistically more likely to practise in both regional (MMM 2-3) and rural/remote towns (MMM 4-6) in 2016 compared to the 20 graduates from the 3 metropolitan universities ($P = .030$; POR = 4.6 and 5.6, respectively). In addition, the GIS map identified that “rurally focussed” dental graduates practised in more inland areas, whereas graduates from metropolitan programs mostly remained working around urbanised areas located on the coastal strip (Figure 1).

COMMENT

This study suggests dental students who attend rurally focused universities are more likely to work in regional and rural areas upon graduation. Furthermore, the GIS map demonstrated that rural graduates practised in more inland (rural/regional) areas, whereas metropolitan graduates remained around major cities located on the coastal strip. It can be speculated that the various strategies implemented by the rurally focussed universities empowered individuals to be comfortable and confident with rural practice. However, further longitudinal studies are needed to assess the retention of these “rurally” trained dentists in their mid to later career.

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