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Exploring the Factors Influencing Medical Student Engagement with Rural Clinical Placement Opportunities

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Abstract

Recruiting and retaining professionals such as doctors, allied health professionals and teachers to rural communities has been a significant issue in Australia for decades. Research has established that a successful rural clinical placement can significantly influence a graduate's work location choices. However, less is known about the factors that support or discourage a student's engagement with rural clinical placement opportunities. This research project used semi-structured interviews and thematic analysis to understand the factors experienced by Curtin Medical School's first cohort as they engaged with the opportunity to undertake a rural clinical placement. The project identified several motivators and barriers which will enable the Medical School to modify and adapt processes for future students. The problematic barriers specific to undergraduate students are identified and warrant an appropriate plan for managing those obstacles. This research will form part of a broader longitudinal tracking of the Curtin University medical graduates, to determine if the Curtin Medical School meets its stated objective to increase the number of graduates working in rural locations.

Keywords: *rural clinical placement, rural, remote, rural education, students, medical*

Context

Curtin Medical School (CMS) offers an undergraduate Bachelor of Medicine, Bachelor of Surgery (MBBS) program, and was founded with a core focus on providing doctors for rural Western Australia, recognising the significant shortages that exist. On the basis that rural-origin students are more likely to work rurally in the future, CMS quarantines 25% of entry places for rural-origin students and provides specific entry opportunities to encourage rural applicants. CMS works in close partnership with the Rural Clinical School of Western Australia (RCSWA), which coordinates all rural clinical placements for the three Western Australian universities offering medical degrees: the University of Western Australia, the University of Notre Dame Australia, and Curtin University. In other Australian states and jurisdictions, each medical school operates its own rural clinical school, making the RCSWA model unique to Western Australia.

Western Australia has several distinctive characteristics inherently linked to the shortage of medical practitioners in rural locations. The state is massive (see Figure 1), covering 2,527,013

square kilometres, the second-largest country subdivision in the world. Yet it has a comparatively small population of 2.7 million people (Australian Bureau of Statistics, 2021), with more than 90% of the population living in the southwest corner of the state. The remaining ~10% of the population is sparsely spread over the rural and remote regions of the state. Wyndham, in the north, is 3549 kilometres by road from Albany, in the south (see Figure 1).

Figure 1: Map of Western Australia



Note: “Western Australia location map” from https://commons.wikimedia.org/wiki/File:Western_Australia_location_map.png by Diceman-commonswiki, 2005, used under CC BY-SA 3.0. Text added.

The Curtin Medical School commenced in 2017 with an initial cohort of 60 students. Course entry is highly competitive; for example, more than 2000 applications were received in 2019 for approximately 100 places. In 2020, the inaugural Curtin Medical School cohort (2017 entrants) entered their fourth year of study, a year dedicated to clinical placements. This research project sought, in part, to help Curtin Medical School identify the motivators and barriers experienced by the students as they engaged with a rural clinical placement opportunity offered through the Rural Clinical School of Western Australia. It is widely recognised that rural clinical placements represent a unique and valuable learning experience and a vital component of a comprehensive medical training program (Johnson et al., 2018).

Funded by the Rural Health Multidisciplinary Training Program, clinical placements have long been a feature of the medical education landscape. A recent review of this program found that the more than 20-plus year program has resulted in a range of quality teaching innovations and

high levels of student satisfaction (Kristine Battye Consulting Pty Ltd, 2020). Students particularly value clinical placements as they present the opportunity to apply theory to practice within a workplace context (Atkinson, 2016). At Curtin Medical School, student interest in rural medicine is nurtured through a series of rurally-focused enrichment experiences for all medical students from the first year of their studies. In particular, the program seeks to identify and support student interest in an extended rural clinical placement in year four of their studies, a year typically dedicated to clinical placements in Australian undergraduate medical programs. While the specific location of the placement is dictated by availability, students have the opportunity to specify interest in urban, rural or remote settings, and the length of placement in each setting.

It is well established that a successful rural placement experience, particularly of extended duration (Hays, 2017), can significantly influence a graduate's decision to undertake rural practice, thus helping to address the maldistribution of Australia's medical workforce (Skinner et al., 2021). The literature confirms that a rural placement experience has similar impact in other disciplines such as education (Hudson & Hudson, 2019) and allied health workers (Bradley et al., 2020).

Part of a longitudinal study, this project investigated the experience of a cohort of undergraduate medical students as they engaged with a rural placement opportunity. Through exploration of the factors that influenced the students' decision-making, the project identified that the main motivators for preferencing remote placement locations were a sense of altruism and the desire for challenge. The primary barriers to engagement with rural placements were the financial and logistical considerations related to relocating for a rural placement; issues related to independent living; and the students' inability, due to age, to access government support while living away from home, as is usually required for a rural clinical placement.

Literature Review

High achieving students will often choose their intended university course based on the institution's reputation (Wouter et al., 2017). Universities are referred to, in various ways, to describe their reputation (e.g., 'Ivy League' in the United States), which includes factors such as prestige, academic quality, and employment outcomes. As this study considered the first cohort in a new degree, the research literature was reviewed to search for potential characteristics of students who could be considered 'pioneers'. There is little evidence in the literature that first-year entrants to new courses are significantly different as a cohort. Moreover, as entry to medicine in Australian universities remains highly competitive (Razack et al., 2015), securing medical school offers (Soutar & Turner, 2002) is crucial. Applicants are highly motivated to maximise their chance of being offered places (Wilson et al., 2012) at different institutions. Unlike other courses of study, they accept the need to relocate to study medicine (Department of Education, Skills and Employment, n.d.). The significant proportion of interstate entrants to the new Curtin University degree in 2017 is not significant in that medical places are highly sought after across the country. There was no evidence in the literature that entrants to a new medical degree were more or less likely to display specific characteristics.

This paper sought to examine the current Australian literature regarding the factors influencing medical student engagement with rural clinical placement opportunities. After the removal of duplicates and screening of abstracts, 132 papers met the inclusion criteria. Full articles were assessed for their relevance, and 30 were included for final review. These papers were assessed to include data reflecting students' experiences of factors that influenced their decision-making as they engaged with the placement opportunity. Common to the papers were motivating factors which, collectively, fall under the theme of education and experience, including the perception that rural clinical placements offer improved hands-on learning, an increased opportunity to work in smaller teams, and the potential for closer doctor/patient relationships (Rural Health Workforce [RHWA], 2015). Motivating factors also included the impression that

rural placements offer students greater responsibility, autonomy, and the opportunity to develop a broader range of skills (Young et al., 2016). The review further identified several motivating factors that are personal: altruistic intentions relating to workforce needs, the desire to make a difference, and a sense of commitment to rural communities (Ray et al., 2018); an interest in Indigenous health (Medical Deans Australia & New Zealand, 2019); the desire to experience or test rural living (Puddey et al., 2015); and the perception that rural living offers a more fulfilling living experience (Hays, 2017).

The literature also identified several factors that act as barriers to engagement with rural location experiences. Two significant barriers were the higher financial cost of a rural placement (Smith, Cross, et al., 2018) and concerns about isolation from family and friends (Monash University Medical Students Society [MUMUS Inc.], 2015). Other factors that may be barriers to engaging with rural clinical placement opportunities include the education needs of children (Australian Medical Association [AMA], 2017), the availability of spousal employment opportunities (May et al., 2017), the limited range of leisure options in a rural setting (McGrail et al., 2017), and the perception of loss of amenity in a rural setting compared to urban living and practice (AMA, 2017). Several barriers were identified which were considered the result of student misinformation or misunderstanding about rural placements, including the perception that rural placements are viewed unfavourably by the medical profession and offer less access to the latest technologies (RHWA, 2015) and poorer quality infrastructure and facilities (Young et al., 2016). Research also indicates a student perception that rural placements offer reduced exposure to complex cases than those offered by urban placements (RHWA, 2015), though this contradicts research identifying student perceptions that rural placements offer a greater diversity of training experiences (Ray et al., 2018; Young et al., 2016).

Methods

The data utilised in this project were collected via semi-structured interviews. The open-ended approach typical of semi-structured interviews enables systematic and comprehensive exploration of responses, with the potential to produce qualitative evidence that would be lost in online surveys or net promoter score models (Raasens et al., 2017). Each interview commenced with a general conversation to get to know a little about the student and create a relaxed setting for discussion. Students were asked several questions (see Appendix A), using natural language and normal conversational flow.

The interviews were conducted late in the 2019 academic year, after the allocation of all clinical placements for the 2020 academic year. The participants were third-year medical students enrolled at the Curtin Medical School. Participation was voluntary. A total of 22 students (37% of the total cohort) were interviewed, two of whom (9%) identified as rural-origin. The study involved 11 males and 11 females. The gender balance was coincidental and was in contrast to the total year group cohort, which comprised 19 (33%) males and 38 (67%) females. The average age of the participants was slightly older than the year group, with 18 of 22 participants (82%) aged 20 or 21 at the time of interview. Four of the five oldest students in the cohort (25, 26, 30 and 36 years) participated in the study.

As each interview was completed, the lead researcher transcribed the notes resulting from the interview to a standard summary sheet. The notes were then de-identified in the summary sheet. To ensure participant anonymity, the second researcher had access only to the statements produced by the lead researcher once they had been de-identified. Additionally, the quotes chosen for inclusion in the final paper were analysed for a vocabulary feature or conspicuous fact associated with each speaker's identity.

The motivators and barriers identified by the students were independently listed and interpreted through thematic analysis (Braun & Clarke, 2012) by the second researcher, using an explorative

approach to reveal patterns and overarching associations between the statements. The emergent themes included domestic, personal, health, financial, location-specific considerations and personal perspectives.

As a percentage of interview participants, the students who were living in Western Australian at the start of medical school was proportionately higher (15 of 22 students or 68%) compared to the whole group cohort (30 of 57 students or 53%). This may be logically explained by the timing of the interviews, the majority of which were conducted immediately after the students' final exams. As such, several students in the cohort, who had been living interstate prior to starting medical school, had already left Western Australia to return to the eastern states for the inter-semester break when the interviews were conducted.

To accurately capture the student voice, this study purposefully collected student input immediately after the process of rural placement selection had occurred, in a timeframe that would mitigate the impact of recall bias (Althubaiti, 2016). Recall bias has been previously identified as an issue in medical education research (Johnson et al., 2018; MUMUS Inc., 2015); yet the limited student-sourced data available on the topic of clinical placement has commonly been collected after the clinical placement experience has taken place. This approach is problematic because the passage of time and the transformative experience of the rural clinical placement (Greenhill et al., 2018) are likely to impact students' recall of their experiences of navigating the decision regarding that placement.

Results

Through the thematic analysis, themes that emerged as motivators to applying for a rural clinical placement were identified as:

- the location's reputation for providing an excellent teaching and learning experience;
- hospitals with reputations for providing a diversity of experiences and allowing specific learning opportunities, particularly more favourable staff-to-student ratios;
- locations that were deemed to be unique and challenging, so as to provide potentially valuable personal and professional experiences linked to personal growth;
- feedback from previous participants in rural clinical programs, endorsing particular locations;
- locations typically identified as 'non-tourist destinations' were over-represented in location preferences for rural placements, with specific rationales expressed (e.g., a desire to work in locations with an Indigenous population);
- a sense of adventure and seeking new life experiences was ubiquitous in rural applicants.

Themes that emerged as barriers to applying for a rural clinical placement were identified as:

- undergraduate students are typically not aged 22 or over at the time of commencing their rural placement year. As a result, their access to specific government support payments may be subject to a parental means test (Centrelink, 2019);
- a year-long clinical placement severely restricts the amount of time available to generate income;
- whilst travel to and from a rural placement and ongoing accommodation are provided, the other costs (e.g., food, clothing, other travel) make the option of the experience prohibitive;
- primary relationships with a partner and family determine the capacity to live away from the current home location;
- a lack of knowledge about the available geographical locations created reticence to apply;
- terminating current living arrangements would represent significant problems and issues when a rural placement concluded, as does the logistics (e.g., storing furniture) if relocating for a clinical placement;

- less-commonly articulated, interviewees suggested that perceptions of rural life were less positive;
- the potential absence of existing support networks (e.g., friends, family, medical specialists) and the perceived dependence on these networks excluded seeking a rural placement.

Analysis of the data provides several new insights into the factors influencing student engagement with rural clinical placement opportunities. Student comments, as examples of feedback, are italicised.

A sense of altruism and a desire for challenge appeared as solid motivators for location preferencing:

There are so many more increased one-to-one training opportunities in a rural placement.

I really want the opportunity to push myself and learn.

I wanted to be thrown in at the deep end and see what I could achieve.

Locations that would not be commonly identified as ‘popular destinations’ by most Western Australians were more highly preferred than two locations in the southwest which are widely known throughout Australia as major holiday destinations. Of the locations in the far north of the state, the students who preferred hard-to-staff locations, such as Port Hedland, Karratha, and Carnarvon, over locations frequently considered more agreeable, such as Broome and Esperance, articulated a sense of challenge associated with those locations. All of these locations are visible on the map in Figure 1.

Frequently, when asked in the conversation what the student knew about a location at the time of selection, they indicated they had no personal knowledge of the location at all:

It was the feedback from the students who had been to Carnarvon that made me want to go there. I didn’t even know where it was.

As an interstate student, going to a remote location is an amazing opportunity to see WA.

It’s a great chance to get outside my comfort zone.

I had no idea where Karratha was and picked it because the students who had been there said it was a fantastic experience.

The project identified that barriers were a much greater preoccupation for the students than motivators, especially the financial and logistical implications of taking a rural clinical placement. For example, students identified that relocating from an existing residence to take up a rural clinical placement could require the termination of their current living arrangements:

I have a great [house] in Perth and just could not give that up.

I didn’t want to risk house-sharing with people I did not know when there would be no options to live elsewhere.

The students also identified that maintaining current urban accommodation arrangements would be of great importance for the period following their clinical year placement and expressed concern about the difficulty of finding accommodation in Perth upon their return. It is anticipated that this will be a particularly pressing issue for students in the foreseeable future. Changes to the housing rental market arising from the COVID-19 pandemic have resulted in vacancy rates below 1% (Real Estate Institute of Western Australia [REIWA], 2020), making it significantly challenging for students to locate suitable accommodation.

Students also identified that relocating for an extended clinical placement could represent major financial and logistical problems relating to the management of their household belongings, while preparing for and during the clinical placement, as well as after the clinical placement (e.g.,

the need to re-establish a household in Perth). Their concerns ranged from the cost and complexities of storing furniture and personal belongings not required for the relocation, if they were forced to terminate current living arrangements, to the potential future cost of replacing any items discarded due to being unable to identify affordable storage options.

I have nowhere to store all the stuff I've accumulated and could not afford to replace it.

As 47% of the cohort had relocated from interstate to accept the offer to study in the Curtin Medical School program, many interviewees identified that they had already moved multiple times within the Perth area before finding suitable house-sharing arrangements, which were both affordable and desirable:

I relocated [twice] and could not consider asking my partner to relocate again.

Students also identified that relocation for an extended clinical placement would require them to give up current employment. This would not only impact their earning capacity during the clinical placement, but it could also be a significant factor upon return from the clinical placement.

I've been saving for three years to have enough money not to need to work during my rural placement.

I have to work and my job is not something I can risk giving up.

For students with partners, the housing and employment issues were magnified twofold. Several had partners who had already relocated to Perth, in order to enable the interviewee to accept an interstate offer for their studies. One student noted that his partner had relocated from Melbourne and that he felt obligated to remain in Perth for his clinical year, despite personally wanting a rural placement. One student identified that she had intentionally sought and accepted a rural clinical placement location within driving distance of Perth, to enable her partner, now working full-time in Perth, to commute regularly to see her. Another sought a rural placement close to a town where her partner's family lived and where the prospect of him gaining employment was likely.

My wife works in Perth and is currently [studying].

My partner is from [a rural community], and it's our long-term plan to live there.

My partner is my main support system and I needed him to be able to relocate with me.

I needed a location where my partner could get work, as we would be living independently.

The students also identified concerns with the added financial burden presented by the cost of travel to some of the more remote locations, should the need arise to return to Perth or home (for many) to the eastern states. Particularly in Western Australia, Australia's largest jurisdiction, many rural placements are in locations well removed from major transport routes. For some locations, such as Port Hedland (1625 kilometres from the closest major metropolitan centre) and Carnarvon (893 kilometres), the cost of airfares and the long driving distances involved were the most commonly expressed barriers. While the placement program pays for the cost of travel to and from the placement, students recognised that they would be personally liable for additional trips. Given that travel bookings made close to the time of travel are notoriously more expensive, some students speculated that, if an emergency arose requiring them to return to Perth during the placement or onwards to interstate locations, they would be unable to afford the airfare:

Students are scared of being stranded in a distant location and unable to afford to return when an issue arises.

RCS only pays for one trip home, and so I could not afford to choose a far-north location. I really did want to go far-north.

There's a hardship bursary, but you can only apply for it once you're on placement, and I just could not afford to take that risk.

Overwhelmingly, the most frequently stated barrier was the issue of access to the Centrelink Youth Allowance. If the students have not reached the age of 22 and are living in their parents' home, the federal government considers them to be 'dependent', and access to the Youth Allowance and associated subsidies is subject to a parental means test (Centrelink, 2019). In contrast, students over the age of 22 are deemed 'independent' by the federal government, regardless of their living situation and access to the allowance is not subject to a parental means test (Centrelink, 2019).

Interviewee comments further identified concerns relating to feelings of domestic self-confidence. Interviewee comments demonstrated that reliance on parents was common and extended to many areas of domestic support. Many students identified that they had never lived away from home nor been self-reliant in domestic matters:

I don't know how to cook.

I've never purchased groceries.

Few other academic programs require undergraduate students to relocate for a year, with the requirement of self-sufficiency, whilst simultaneously working long hours and over a 24/7 roster.

Individual students raised unique barriers, for example:

I am playing [high level sport] and received a placement to a town which doesn't have a team, so I declined the offer. I'd listed towns with [sporting] teams in my preferences and told them that at the interview.

Considering that rural locations welcome high-standard sporting team members, the broader issue is the lack of flexibility with the allocation of places to accommodate a student.

Discussion

The study revealed many motivators and barriers that are either new to the literature or add to the existing literature. Analysis of the students' comments identified that a sense of altruism was a central motivating factor for their interest in rural placements. The notion of 'I want to go where I can make a difference' was expressed repeatedly. While research on the influence of altruistic intentions on student engagement with rural clinical placement opportunities is limited, parallels can be found within proxy literature showing altruism as a factor in doctor recruitment and retention in rural practice locations (Ray et al., 2018). Additionally, a recent report showed that "commitment to community service/ socially accountable practice" (Woolley et al., 2021, p. 96) was a main motivator for the practice intentions of medical students approaching graduation. Altruism has also been a consistent but minor motivating factor contributing to the development of medical students' understanding of and approaches to rural medical practice (Ray et al., 2018). Students' comments identified that a primary motivator for location preferencing was the perceived opportunity for growth offered by 'challenging' locations.

Whilst the interviewed students did not specifically identify previous rural experiences as motivators to rural placement, in the conversational style of the interviews, many identified that they had been involved in volunteering projects either whilst at medical school or prior to it. One student described a rural volunteering activity that had involved interviewing residents and, on a later trip, one resident warmly greeted the student in town. The student was touched that the resident had remembered him and his name. The student referred to the community's friendliness, although the student did not make the connection that this was a motivator to applying for a rural clinical year placement. This was replicated in several interviews, which

created an awareness that the perception of what indicates a motivator or barrier is highly nuanced.

Rural placements may be perceived as more challenging than metropolitan placements, due to the greater diversity of cases offered by the rural clinical environment (Young et al., 2016). Research has shown that student excitement around the diversity of clinical experience is a significant factor arising from recent rural placements (Ray et al., 2018) and was a significant factor in student satisfaction with rural clinical placements (Smith, Sutton, et al., 2018). This project suggests that the appetite for the diversity of learning experiences exists before the clinical placement experience. Additionally, the students' comments suggest that it may be a motivating factor for preferencing remote placement locations, which may otherwise be rarely preferred. Research has recently identified that improved understanding of the factors impacting location preferencing for internships may influence the uptake of rural internships by junior doctors (McGrail et al., 2020). Similarly, improved understanding of the factors impacting student engagement with rural placement opportunities affects location preferencing for remote placements.

Several barriers to student engagement with rural placement opportunities were identified by this project, including financial and logistical concerns relating to residential relocation. Compared to urban placements, which are typically within commuting distance of a student's existing residence, rural clinical placements usually carry the burden of requiring relocation from a current residence. Students' comments highlighted the diversity of issues resulting from the relocation: the need to support or terminate current living arrangements, an issue which would be particularly onerous for students who have already relocated from other states or countries to attend the medical program; the need to remove and place into storage the domestic accoutrements of keeping house and the costs associated with paying for storage; likewise, the costs associated with re-establishing a Perth residence when the placement is finished. As one student commented, "*I'd have to uproot my whole life.*" Although financial concerns are commonly reported as a significant issue during rural clinical placements (Smith, Cross, et al., 2018), this project identified nuanced elements of this factor. These are new to the literature and deserve further exploration. Interviewee comments further identified that relocation from the students' current residence for a rural placement may also require the need to terminate current employment arrangements. This impacts the students' capacities to earn a living while on placement and after the placement experience.

These financial issues are compounded by the impact of age and means requirements of the Commonwealth Governments' Youth Allowance (Centrelink, 2019) for students and apprentices, a government subsidy intended to provide financial assistance to students. Students of undergraduate programs are typically under the age of 22 at the time of their 4th year placement. If they still live in their parents' home, their eligibility for the Youth Allowance is subject to a parental means test. In contrast, students who have reached their 22nd birthday are considered 'independent', regardless of their living situation. Of the 17 Curtin students participating in this study who had received rural placement offers, two students (12%) would be over 22 years old at the commencement of their 2020 placement, seven (41%) would turn 22 after the start of a 2020 placement, and eight students (47%) would turn 21 in 2020. For the undergraduate students who commented on this issue, the impact of a parental means test on their ability to access the Centrelink Payment represented a significant issue. Curtin Medical School has commenced negotiations with other undergraduate medical schools and the Rural Clinical School of Western Australia to determine options and to advocate for potential changes to government allowances to accommodate rural clinical students under 22 years of age. Addressing this one issue would significantly reduce this significant barrier to seeking a rural clinical placement through the provision of financial assistance with the increased costs associated with a rural clinical

placement, and the impact that a rural placement has on the ability of a student to maintain existing employment and income, as previously discussed.

Additionally, at the time the survey was taken in 2019, a Centrelink provision for 'dependent' students who had to temporarily relocate for study, for instance, to go on a rural clinical placement was not identified by the students. This limitation meant that some students deemed to be dependent could not be confident of receiving government support even whilst living away from home.

This study also offered insight into students' concerns relating to the potential cost of unanticipated travel should they be required to return home, that is, in the case of a family emergency. While the cost of the initial trip to and from placement is covered by the Rural Clinical School of Western Australia program, students would be responsible for any additional travel required during their placement. For some rural placement locations, this cost could be high.

Also new to the literature, this project identified a lack of self-confidence, among the interviewees, about living away from family support. While fear of isolation from family and friends is a common concern in existing literature (MUMUS Inc., 2015), interviewee comments suggested a level of reliance on parents that extended to many areas of domestic support, to a degree not previously explored by research. It is anticipated that some observers will be judgemental of the interviewees' comments regarding living independently, potentially seeing them as the result of an immature or over-parented youth. Instead, these deeply personal comments reflect a sophisticated awareness of a possible disjuncture between the students' self-identified competency in independent living and the domestic challenges, such as limited food choices and shopping opportunities arising from a rural clinical placement experience. While research on this issue is limited, student experience internationally suggests that the lack of confidence in domestic skills competency (Simonds et al., 2020) may be more widespread in contemporary youth than previously identified. The students' comments may be, in fact, early indicators of a broader generational change in Australian society.

Data indicate that young Australian adults are increasingly more likely than previous generations to co-reside with their parents (Australian Institute of Family Services, 2016). Young adults, who live with their parents typically complete less than 8% of the routine domestic tasks in the household, such as shopping and cooking (Craig et al., 2015), and this extended dependence on parents is likely to impact the development of competency and confidence in independent living skills. Additionally, the use of food delivery services, particularly among young adults living in urban areas (Roy Morgan Research, 2019), may also be a significant factor. Finally, remote communities often experience food insecurity and supply issues, especially in relation to fresh fruit and vegetables (National Rural Health Alliance, 2016). The impact this could have on a student's confidence in self-catering could be significant and highlights the diversity of challenges placement students face when going rural or remote for the first time.

These findings highlight the highly subjective nature of students' experiences with factors relating to rural clinical placement opportunities. Internal university processes that are agile and designed to address the subjective needs of students will more adequately support motivators and address the barriers to increase successful student engagement with placement opportunities. Future research on the topic should include a review of systems processes to identify best practice.

Given the practical nature of these findings, it is anticipated that undergraduate students in other disciplines would experience similar issues, particularly the age barrier to accessing government assistance for living away from home for the duration of the placement. This is a federal government agency issue that can impact every undergraduate student across Australia in every field of study that offers rural placements. Addressing this single issue offers the potential to

change the training and recruitment of professionals into rural communities by more adequately supporting students who wish to engage with rural clinical placement opportunities.

Limitations to the Study

As the inaugural intake for a new medical school, the cohort was skewed as an entry group and undersized compared to following year groups. As a result, and despite the high response rate, the sample size was limited to 22 students. While small sample sizes are not unusual in qualitative studies (Dworkin, 2012), the applicability of the outcomes revealed by the study to other cohorts will only be determined through further research.

The project did not produce the data necessary to identify the motivators and barriers that prevented students from applying for rural clinical placements. This would be a valuable question to explore in future research.

Additionally, the interviews with students who elaborated on their answers, thus voluntarily extending the length of the interview, provided a depth and background that was demonstrably different from interviews with students who moved through the questions without elaboration. In hindsight, it may have been preferable to have planned extended interviews, but, at the time of planning, there was concern that the participation rate would be adversely affected if participation required a more significant commitment from the time-poor students.

While this project has served the purpose of contemporising our understanding of the motivations and barriers experienced by undergraduate medical students, the research would need to be expanded to other disciplines to identify any differences in outcomes.

Conclusion

While it is well established in the literature that a successful rural clinical placement experience can significantly influence a graduate's decision to undertake rural practice, less is known about the factors that motivate or create barriers to a student's engagement with a rural clinical placement opportunity. For this cohort of undergraduate medical students, the primary motivators were a sense of altruism and the desire for challenge. The primary barriers experienced by the students were financial and logistical considerations related to relocating for a rural clinical placement, students' inability to access government support while living away from home as is usually required for a rural clinical placement, and issues related to independent living. The outcomes of this project suggest that the factors experienced by students as they engage with rural clinical placement opportunities are interconnected yet independent, idiosyncratic, and dynamic. Having a better understanding of the factors experienced by the students will present universities and other stakeholders with the opportunity to improve support mechanisms for students as they engage with rural clinical placement opportunities.

Declaration of Interest

The authors report no potential competing interests.

Curtin University, reference HRE2019-0569, approved this research.

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Appendix A: List of Interview Questions

1. Where is your clinical placement location for next year?
 - If a rural location was identified: Is your placement location your first preference? OR
 - If a metropolitan location was identified: Did you apply for a rural clinical placement?
 - If the student did not apply for a rural placement: Can you tell me why you didn't apply? OR
 - If the student applied for a rural placement and was unsuccessful: How did you feel about not being offered a rural placement?
2. This statement was made: We are keen to identify the motivators and barriers to future students applying for a rural clinical placement.
 - What do you think are the motivating factors in applying?
 - What do you think are the barriers to applying?
3. Was there any part of the application process for rural clinical placement that could be changed or improved?
4. Are there any other comments you'd like to make?