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TITLE

The changing landscape of physiotherapy student clinical placements: an exploration of geographical distribution and student performance across settings.

ABSTRACT

Objective: To describe the geographical distribution of physiotherapy clinical placements and investigate the relationship between geographical setting and clinical placement marks in physiotherapy students.

Design: A retrospective cohort design was used for this study.

Setting: The University of Newcastle, New South Wales.

Participants: Data from entry-level Bachelor of Physiotherapy student clinical placements.

Main outcome measure(s): Data from all clinical placements in the Physiotherapy program between 2003 and 2014 were included. For all clinical placements, student assessment mark, year of study, type of placement and placement location were collected. Placement location was then classified using the Modified Monash Model (MMM) categories: one (most metropolitan) to seven (most remote).

Results: Over the 12 year period of the study 3964 placements were completed. Between 2003 and 2005 the average proportion of clinical placements occurring in metropolitan areas (MMM1) was 78% and in rural areas (MMM categories 3-6) was 22%. In 2014 these proportions had changed to 59% (MMM1) and 40% (MMM3-6). There were significant differences in clinical placement grades between MMM1 and all other categories except MMM2, with lower assessment marks in MMM1 than other categories.

Conclusions: The changing distribution of physiotherapy clinical placements may be reflective of increasing student numbers and greater efforts to support students completing rural and remote placements. This change may lead to a positive effect on the rural and remote physiotherapy workforce. Further research is required to determine the specific training and support needs of students and clinical educators in rural and remote settings.

KEY WORDS

Physiotherapy

Clinical teaching

Student placements

Rural education for allied health

Allied health

What is already known on this subject?

- Physiotherapy in rural and remote areas often differs from metropolitan practice in terms of access to resources and variability of caseload. Many entry-level physiotherapy training programs mandate completion of at least one rural or remote clinical placement.
- Student numbers have increased and this may result in an increasing reliance on rural and remote physiotherapists to provide clinical education experiences.
- The geographical profile of physiotherapy student clinical placements has not been comprehensively examined. Additionally, it is unknown as to whether clinical placement performance assessment outcomes differ between metropolitan and rural/remote settings.

What does this study add?

- The geographical distribution of physiotherapy clinical placements at a regional university were described and while most placements still occurred in metropolitan settings the proportion of placements in those settings was decreasing, with an increasing proportion in more regional and rural locations. Placement performance assessment grades were lower in metropolitan than regional/rural and remote settings.
- The change in placement distribution is possibly related greater efforts to support health professional students to undertake rural and remote clinical placements (such as via the University Departments of Rural Health) as well as to increasing student numbers resulting in greater demand for placements.
- Further research is required to determine the specific training and support needs of students and clinical educators in rural and remote settings.

INTRODUCTION

Clinical placement is an essential component of physiotherapy training programs.¹ In the discipline of physiotherapy, a clinical placement experience involves a student completing workplace education while supervised by a physiotherapist, referred to as a clinical supervisor.¹ Clinical placement allows students to apply theoretical knowledge, as well as develop communication, clinical reasoning and professional skills.²⁻⁴ Throughout clinical placements, students assess and manage patients with a range of health conditions, in a variety of clinical settings and geographical locations. Clinical placements may be based in public, private or community health services and are geographically located across metropolitan, rural and remote areas.⁵ Many entry-level physiotherapy training programs mandate completion of at least one rural or remote clinical placement.

Physiotherapy in rural and remote areas often differs from metropolitan practice in terms of access to resources and variability of caseload.⁶ Clinical placements in rural areas may offer the student an opportunity to experience a diverse caseload, appreciate rural community and culture, and learn multidisciplinary teamwork skills.⁷ Despite the importance of placements in rural areas, it seems that most students complete the majority of their clinical placements in metropolitan areas.^{5,8} This may be partly due to barriers to clinical placements outside metropolitan areas, including accommodation requirements, financial burden, social dislocation and reduced educational resources.^{9,10}

As the number of physiotherapy programs, and therefore students, has increased over recent years there may be an increasing reliance on rural and remote physiotherapists to provide clinical education experiences.¹¹ The geographical profile of physiotherapy student clinical placements has not been comprehensively examined. Additionally, while there is evidence demonstrating equivalent placement assessment marks across geographical settings for medical students the same has not been explored for physiotherapy student placements.¹²⁻²⁰ The aims of this study were to describe the geographical distribution of physiotherapy clinical placements, and to investigate the relationship between geographical setting and clinical placement marks in physiotherapy students.

METHOD

Study design

A retrospective cohort design was used for this study. Approval was granted by the Human Research Ethics Committee of the University of Newcastle (UON).

Bachelor of Physiotherapy clinical placement program

The Bachelor of Physiotherapy program at the UON is an accredited four year undergraduate entry-level qualification. A total of 29 weeks of clinical placement are completed across years two to four of the program. Placements occur in various physiotherapy clinical practice areas, including the 'core' areas of cardiopulmonary, neurological and musculoskeletal physiotherapy. For all clinical placements, students are graded by the supervising physiotherapist. Prior to 2009 clinical performance was graded using a university specific clinical assessment tool, which provided a score from zero to one hundred. Since 2009 a national clinical placement assessment tool, the Assessment of Physiotherapy Practice (APP), has been used. The APP is valid and reliable and contains twenty domains of practice.^{21,22}

Data collection/outcome measures

Data from all clinical placements in the Physiotherapy program at the UON between 2003 and 2014 were included. For all clinical placements the following data were collected: placement assessment mark, student year of study, type of placement, location of placement.

The grades awarded by clinical supervisors for each individual students' placement (from the university specific assessment tool or the APP) were recorded as a mark out of 100. Placements were categorised based on their clinical focus into one of eight types: musculoskeletal, cardiopulmonary, neurological/rehabilitation, orthopaedic, paediatric, general, women's health and other. Examples of placements classified as 'other' included burns and hand therapy.

Metropolitan, rural or remote classification of clinical placement location was undertaken using the Modified Monash Model (MMM).²³ The MMM contains categories from one (most metropolitan) to seven (most remote) based on geographical location, town population and key healthcare indicators. Student placements undertaken internationally were assigned a separate category.

Placement locations were also classified according to New South Wales (NSW) local health districts (LHDs), with eight LHDs covering the Sydney metropolitan area, and seven LHDs covering rural and regional NSW.²⁴ The LHD of Hunter New England is further divided into six clusters, which were included in this study to allow more detailed analysis of the areas surrounding the UON.²⁵

Data analysis

Data were analysed using Stata Statistical Software: Release 14 (StataCorp LP). Categorical variables were presented as frequencies and percentages. The distribution of continuous variables was assessed for normality both visually and using the Shapiro-Wilk test. Due to the non-parametric nature of the data, between group differences were initially assessed by the application of Kruskal-Wallis tests for equality of medians. Where between group differences existed, two-group comparisons were then made using Wilcoxon Rank Sum tests to establish the location of the difference between groups. All tests were assessed at a significance of level of $p=0.05$.

RESULTS

Between 2003 and 2014 3964 placements were undertaken. The geographical distribution of clinical placements according to country, state and Modified Monash Model is presented in Table 1.

TABLE 1

Geographical distribution of clinical placements by NSW Local Health District is presented in Table 2. Table 3 shows the distribution of placement type and student year by MMM category and median grades for each placement type and student year.

Placement types 'general' and 'orthopaedics' had a higher proportion of placements in MMM categories 3-6 than the other placement types. Grades for placement type classified 'general' were compared to those for the specific core placement types cardiopulmonary, musculoskeletal and neuro/rehab. There were significant differences in median grades between placements classified as general and those classified as musculoskeletal and neuro/rehab ($P < 0.05$) with general placements having a lower median grade.

TABLE 2

TABLE 3

Assessment marks for each MMM category and the statistical significance of differences in median assessment marks between MMM categories are presented in Table 4. There were significant differences in clinical placement grades between MMM1 and all other categories except MMM2, with lower assessment marks in MMM1 than other categories.

TABLE 4

DISCUSSION

The aim of this study was to describe the geographical distribution of physiotherapy clinical placements, and investigate the relationship between geographical location and clinical placement marks. The main findings were that most placements took place in geographical areas classified as MMM1. However, the proportion of placements in MMM1 was decreasing, with an increasing proportion in MMM3 locations. Only a small number of placements were completed in MMM5 and MMM6, none in MMM7. This may reflect the small number of physiotherapists working in these areas, and the barriers to accessing these geographically isolated settings.²⁶ Clinical placements in MMM3-6 locations were more commonly classified as general, rather than core, reflecting the diverse caseload and more 'generalist' role of physiotherapists in rural and remote areas.²⁷ There were significant differences in clinical placement grades between MMM1 and all other categories except MMM2, with lower assessment marks in MMM1 than other categories.

The distribution of clinical placements indicated that metropolitan areas were providing the majority of clinical placements, though the proportion of placements occurring in MMM1 was less than reported in other sources.^{8,28} The University of Sydney reported that 72% of all clinical placements were completed in metropolitan Sydney from 2001 to 2003.⁸ Health Workforce Australia data states that 85% of clinical placements in 2013 were completed in areas classified as major cities by the Australian Standard Geographical Classification – Remoteness Area (ASGC-RA).²⁸ The ASGC-RA is has been replaced with the MMM, which classifies these areas as MMM1. In addition, the 1.6% average annual growth of placements in MMM3-6 areas demonstrated in this study is higher than the 1.1% growth in rural and regional areas reported by the University of Sydney.⁸

The shift in the geographical distribution of clinical placements may be reflective of various efforts to support health professional students completing rural and remote clinical placements. Specifically

the establishment of University of Newcastle Departments of Rural Health (UONDRH) in Taree and Tamworth may be among the most effective of these strategies, reflected by increases in the proportion of clinical placements provided by their LHDs. The UDRH programs address many of the barriers students face when undertaking a placement rurally such as providing subsidised accommodation, local pastoral support, community engagement and social activities. Initiatives to increase the number of placements within the footprint of the UONDRH locations have also included education and additional online and face-to face support for clinical supervisors, as well as specific community engagement and interprofessional learning modules for students.

Services for Australian Rural and Remote Allied Health (SARRAH) and the Human Education and Training Institute (HETI) provide further support for students completing rural or remote placements through scholarships and training programs. This additional support may have contributed to the changing distribution of clinical placements. The increase in rural clinical placement numbers is likely to be beneficial to the allied health workforce, particularly physiotherapists, given the well-documented shortage of these professionals in rural and remote areas.²⁹ Students completing a rural or remote clinical placement are more positively inclined towards working rurally upon graduation, potentially contributing towards an easing of ongoing workforce shortages.³⁰

The shift in geographical profile of clinical placements may also be influenced by the increasing number of tertiary institutions offering physiotherapy training programs in metropolitan areas. Rising student numbers creates an increasing demand for clinical placements, resulting in greater competition for available placements. Given this climate, regional universities may take advantage of their rural and remote links by developing sources of clinical placements outside of larger metropolitan areas. More funding and support for the establishment of new University Departments of Rural Health may be required and further investigation of the geographical profiles of clinical placements in other physiotherapy (and other health professional) training programs is required to determine the extent of geographical change across Australia.

Despite the shift towards rural clinical placements and the documented improved support available, students completing rural or remote placements in some settings still encounter various barriers, including accommodation, financial burden, social dislocation and reduced educational resources.^{9,10} In order to further improve the rate of rural and remote placements, students may need additional support when completing these placements. In addition rural areas of Australia remain critically lacking in local physiotherapy services when compared to metropolitan areas.^{31,32} Where physiotherapy positions do exist, recruitment and retention of physiotherapists remains a significant

issue.³¹ Additional support may also be required by clinical supervisors in rural and remote areas, as this has been identified to be a facilitating factor in clinicians supervising students.³¹ Funding and support for more rurally based physiotherapy positions will dually improve health care of rural populations and augment opportunities for students to study in and experience rural communities. Linking these positions with a university through student supervision and including ongoing clinical supervision training may go some way to alleviating the professional isolation clinicians report when working in rural areas.³² Further research is required to determine the most effective form of support for students and for clinical supervisors to further increase placement capacity in rural and remote areas.

Clinical placement assessment marks were lower in the metropolitan classified placements than in all rural and remote settings. It is unclear as to the main contributors to the significant differences seen between clinical placement assessment marks across geographical settings. Some students who are allocated rural and remote placements are returning either to, or close to, their home locale. This may provide greater social and emotional support resulting in improved performance and subsequent higher marks. However for the majority of students this will not be the case and, even for those students who do return home, this would only be for one or two placements rather than all of the required units. Rural and remote settings were also shown to have a higher proportion of general placements however these did not have higher average grades than the other placement types including the more specialised and core placements. It may be that general placements are more effective in promoting better integration of entry-level clinical knowledge and skills therefore resulting in superior student achievement of the clinical placement assessment criteria. It is unknown if the model adopted in rural and remote clinical placements regarding supervisor to student ratio is any different to that of metropolitan settings, or whether this has any impact on student grades.

In contrast, students considered 'challenging' may be less likely to be allocated to rural or remote clinical placements, due to greater difficulty providing support to the student and supervisor in these areas. This may contribute to the higher assessment marks observed in rural and remote areas. Many rural and remote physiotherapists experience difficulty accessing professional development courses, including clinical supervision education sessions, potentially reducing the clinical supervisor training received by these physiotherapists.³² Educators in more rurally based settings may have less exposure, experience and training related to using the APP to assess student performance on placement. This may impact on the standard of assessment of physiotherapy students, resulting in the significant disparity observed between marks for the most metropolitan and most remote

placements. The results of this study indicate that ongoing training initiatives and university support should target clinical supervisors in rural and remote areas, with consideration for differences between metropolitan, rural and remote clinical placements.

The primary limitation of this study was the inclusion of only a single undergraduate university program. There may be differences in clinical placement geographical profiles between institutions, necessitating further investigation. However, this study did include a large dataset, providing adequate power to detect statistically significant differences over the twelve years studied.

The results of this study demonstrate the changing geographical distribution of physiotherapy clinical placements at a regional university. This change may lead to a positive effect on the physiotherapy workforce, and demonstrates the importance of targeted strategies in increasing rural and remote student placement numbers. Further research is required to determine the specific training and support needs of students and clinical educators in rural and remote settings.

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Table 1 –Physiotherapy clinical placements – distribution by geographical location and Modified Monash model classification.

| | Total placements | Year of clinical placement n (%) | | | | | | | | | | | |
|---------------------------------------|------------------|-------------------------------------|-----------|-----------|-----------|----------|----------|-----------|----------|----------|----------|----------|----------|
| | | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
| <i>Location</i> | | | | | | | | | | | | | |
| Total | 3964 | 27 | 102 | 256 | 343 | 370 | 398 | 403 | 503 | 490 | 366 | 341 | 365 |
| Australia | 3922 (99) | 27 (100) | 102 (100) | 255 (100) | 342 (100) | 366 (99) | 391 (98) | 400 (100) | 498 (99) | 482 (98) | 361 (98) | 339 (99) | 359 (98) |
| Internat. | 42 (1) | 0 (0) | 0 (0) | 1 (<1) | 1 (<1) | 4 (1) | 7 (2) | 3 (<1) | 5 (1) | 8 (2) | 5 (2) | 2 (1) | 6 (2) |
| <i>State</i> | | | | | | | | | | | | | |
| NSW | 3669 (97) | 27 (100) | 102 (100) | 247 (97) | 332 (97) | 352 (96) | 385 (97) | 387 (97) | 482 (96) | 464 (96) | 354 (97) | 332 (96) | 352 (97) |
| ACT | 51 (1) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 2 (1) | 11 (2) | 13 (3) | 14 (3) | 4 (2) | 4 (2) | 5 (2) |
| Victoria | 12 (<1) | 0 (0) | 0 (0) | 1 (<1) | 3 (1) | 5 (2) | 2 (1) | 0 (0) | 1 (<1) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| NT | 18 (<1) | 0 (0) | 0 (0) | 2 (1) | 5 (2) | 4 (1) | 0 (0) | 1 (<1) | 1 (<1) | 3 (<1) | 0 (0) | 1 (<1) | 1 (<1) |
| Tasmania | 13 (<1) | 0 (0) | 0 (0) | 0 (0) | 2 (<1) | 1 (<1) | 2 (1) | 1 (<1) | 1 (<1) | 1 (<1) | 2 (1) | 2 (1) | 1 (<1) |
| Other | 10 (<1) | 0 (0) | 0 (0) | 5 (2) | 0 (0) | 4 (1) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 1 (<1) | 0 (0) | 0 (0) |
| <i>Modified Monash Model category</i> | | | | | | | | | | | | | |
| 1 | 2643 (70) | 21 (78) | 78 (77) | 197 (77) | 247 (73) | 263 (72) | 285 (73) | 300 (75) | 336 (67) | 319 (66) | 252 (70) | 229 (67) | 211 (59) |
| 2 | 40 (1) | 0 (0) | 0 (0) | 5 (2) | 11 (3) | 6 (2) | 2 (1) | 3 (<1) | 6 (1) | 4 (1) | 0 (0) | 1 (<1) | 2 (1) |
| 3 | 859 (23) | 3 (11) | 15 (14) | 35 (13) | 53 (16) | 76 (20) | 83 (21) | 73 (18) | 113 (23) | 141 (29) | 94 (26) | 100 (29) | 121 (33) |
| 4 | 148 (4) | 3 (11) | 8 (8) | 13 (6) | 22 (6) | 10 (3) | 12 (3) | 16 (4) | 23 (5) | 7 (2) | 9 (3) | 7 (2) | 23 (6) |
| 5 | 70 (2) | 0 (0) | 0 (0) | 5 (2) | 8 (2) | 10 (3) | 8 (2) | 6 (2) | 19 (4) | 7 (2) | 5 (2) | 1 (<1) | 2 (1) |
| 6 | 13 (<1) | 0 (0) | 1 (1) | 0 (0) | 1 (<1) | 1 (<1) | 1 (<1) | 2 (<1) | 1 (<1) | 4 (<1) | 1 (<1) | 1 (<1) | 0 (0) |
| 7 | 0 | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |

TABLE 2: Physiotherapy clinical placements – distribution by New South Wales Local Health District (LHD)

| | Year | | | | | | | | | | | |
|----------------------------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
| <i>Total placements</i> | 27 | 102 | 256 | 343 | 370 | 398 | 403 | 503 | 490 | 366 | 330 | 352 |
| <i>Hunter New England</i> | | | | | | | | | | | | |
| Greater Newcastle | 13 (48) | 39 (38) | 98 (40) | 118 (36) | 112 (32) | 134 (35) | 104 (27) | 156 (32) | 101 (22) | 112 (32) | 82 (25) | 73 (21) |
| Hunter Valley | 6 (22) | 12 (12) | 28 (11) | 27 (8) | 19 (5) | 20 (5) | 30 (8) | 11 (2) | 12 (3) | 13 (4) | 18 (5) | 54 (15) |
| Lower Mid North Coast | 0 (0) | 3 (3) | 8 (3) | 6 (2) | 6 (2) | 12 (3) | 8 (2) | 12 (3) | 36 (8) | 27 (8) | 26 (8) | 40 (11) |
| Mehi | 0 (0) | 0 (0) | 1 (<1) | 0 (0) | 0 (0) | 0 (0) | 7 (2) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 5 (1) |
| Peel | 2 (7) | 5 (5) | 1 (<1) | 14 (4) | 16 (5) | 18 (5) | 30 (8) | 47 (10) | 30 (7) | 21 (6) | 31 (9) | 34 (10) |
| Tablelands | 0 (0) | 0 (0) | 1 (<1) | 9 (3) | 9 (3) | 8 (2) | 3 (<1) | 3 (<1) | 6 (1) | 3 (1) | 0 (0) | 9 (3) |
| <i>Other NSW</i> | | | | | | | | | | | | |
| Central Coast | 4 (15) | 10 (10) | 27 (11) | 25 (8) | 30 (8) | 56 (15) | 60 (16) | 45 (9) | 56 (12) | 56 (16) | 57 (17) | 39 (11) |
| Mid North Coast | 0 (0) | 3 (3) | 16 (7) | 12 (4) | 20 (6) | 28 (7) | 18 (5) | 30 (6) | 26 (6) | 14 (4) | 15 (5) | 13 (4) |
| Northern NSW | 0 (0) | 0 (0) | 5 (2) | 15 (5) | 18 (5) | 8 (2) | 12 (3) | 20 (4) | 13 (3) | 9 (3) | 6 (2) | 11 (3) |
| Western NSW | 0 (0) | 5 (5) | 8 (3) | 19 (6) | 15 (4) | 11 (3) | 9 (2) | 22 (5) | 22 (5) | 19 (5) | 17 (5) | 15 (4) |
| Far West | 0 (0) | 1 (1) | 0 (0) | 0 (0) | 1 (<1) | 1 (<1) | 0 (0) | 2 (<1) | 2 (<1) | 2 (<1) | 2 (1) | 0 (0) |
| Illawarra Shoalhaven | 1 (4) | 8 (8) | 10 (4) | 14 (4) | 20 (6) | 12 (3) | 11 (3) | 11 (2) | 12 (3) | 3 (1) | 1 (<1) | 1 (<1) |
| Southern NSW | 0 (0) | 0 (0) | 2 (1) | 0 (0) | 0 (0) | 1 (<1) | 0 (0) | 0 (0) | 0 (0) | 1 (<1) | 0 (0) | 0 (0) |
| Murrumbidgee | 0 (0) | 0 (0) | 3 (1) | 3 (1) | 1 (<1) | 1 (<1) | 4 (1) | 12 (3) | 8 (2) | 2 (<1) | 2 (1) | 2 (<1) |
| <i>Metropolitan Sydney</i> | | | | | | | | | | | | |
| Nepean Blue Mountains | 0 (0) | 2 (2) | 0 (0) | 1 (<1) | 1 (<1) | 1 (<1) | 6 (2) | 7 (2) | 7 (2) | 2 (<1) | 0 (0) | 3 (1) |
| Northern Sydney | 0 (0) | 2 (2) | 7 (3) | 12 (4) | 21 (6) | 13 (3) | 16 (4) | 20 (4) | 25 (5) | 12 (3) | 16 (5) | 15 (4) |
| South Eastern Sydney | 1 (4) | 1 (1) | 9 (4) | 20 (6) | 11 (3) | 12 (3) | 9 (2) | 20 (4) | 32 (7) | 13 (4) | 12 (4) | 15 (4) |
| South Western Sydney | 0 (0) | 0 (0) | 1 (<1) | 1 (<1) | 8 (2) | 13 (3) | 13 (3) | 23 (5) | 24 (5) | 8 (2) | 3 (1) | 7 (2) |
| Sydney | 0 (0) | 3 (3) | 5 (2) | 8 (2) | 4 (1) | 4 (1) | 21 (5) | 12 (3) | 6 (1) | 4 (1) | 6 (2) | 5 (1) |
| Western Sydney | 0 (0) | 8 (8) | 17 (7) | 28 (8) | 36 (10) | 29 (8) | 26 (7) | 29 (6) | 46 (10) | 33 (9) | 36 (11) | 11 (3) |

TABLE 3: Physiotherapy clinical placements – distribution and median score (/100) by Modified Monash Model classification, type and student year.

| | Modified Monash Model Category | | | | | | | | | | | | | | | | | |
|-----------------------|--------------------------------|--------------|------|----|----|----|-----|----|----|---|----|---|----|----|---|---|---------------|----|
| | Total | Score /100 | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | International | |
| | n | Median (IQR) | n | % | n | % | n | % | n | % | n | % | n | % | n | % | n | % |
| <i>Placement type</i> | | | | | | | | | | | | | | | | | | |
| Cardiopulmonary | 649 | 80 (16) | 474 | 73 | 8 | 1 | 161 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 |
| General | 904 | 80 (18) | 515 | 57 | 2 | 0 | 258 | 29 | 78 | 9 | 41 | 5 | 12 | 1 | 0 | 0 | 0 | 0 |
| Musculoskeletal | 882 | 81 (16)† | 599 | 68 | 8 | 1 | 228 | 26 | 41 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Neuro/Rehab | 817 | 82 (17)† | 668 | 82 | 10 | 1 | 123 | 15 | 11 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 0 |
| Orthopaedic | 91 | 84 (16) | 42 | 46 | 1 | 1 | 44 | 48 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 426 | 80 (19) | 279 | 65 | 5 | 1 | 65 | 15 | 23 | 5 | 22 | 5 | 0 | 0 | 0 | 0 | 32 | 8 |
| Paediatric | 154 | 84 (18) | 122 | 79 | 4 | 3 | 28 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Women's health | 41 | 84 (19) | 39 | 95 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Student year</i> | | | | | | | | | | | | | | | | | | |
| 2nd Year | 687 | 78 (16) | 498 | 72 | 1 | <1 | 183 | 27 | 37 | 5 | 14 | 2 | 6 | 1 | 0 | 0 | 0 | 0 |
| 3rd Year | 929 | 80 (15) | 651 | 70 | 7 | 1 | 235 | 25 | 23 | 2 | 13 | 1 | 0 | 0 | 0 | 0 | 1 | <1 |
| 4th Year | 2348 | 83 (18) | 1641 | 70 | 32 | 1 | 490 | 21 | 93 | 4 | 44 | 2 | 7 | <1 | 0 | 0 | 41 | 2 |

†Median grades for musculoskeletal and neuro/rehab placements were significantly different to general placements (P<0.05)

Table 4: Student clinical placement assessment marks and differences in median student clinical assessment marks by MMM category (*p* value). MMM category seven has been omitted from this table as there were no placements in settings classified as this category.

| | Median (IQR) | Modified Monash Model category (<i>P</i> value) | | | | | |
|---|--------------|--|------|------|------|------|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 80 (72-88) | - | - | - | - | - | - |
| 2 | 80 (66-89) | 0.39 | - | - | - | - | - |
| 3 | 84 (76-91) | <0.01 | 0.02 | - | - | - | - |
| 4 | 86 (79-93) | 0.01 | 0.01 | 0.04 | - | - | - |
| 5 | 83 (78-91) | 0.01 | 0.04 | 0.82 | 0.27 | - | - |
| 6 | 90 (81-93) | 0.01 | 0.01 | 0.08 | 0.28 | 0.11 | - |