A Multi-University Comparison Between Longitudinal Integrated Clerkships and Block-Based Educational Models in Australia
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Method

The FRAME RCS 2013 Survey was used with the following inclusion criteria to define a student in the longitudinal integrated clerkship category. Respondents must have answered “Yes” to participating in a longitudinal integrated clerkship, and they must have been based in the same primary clinical attachment for 14 weeks. All other students were placed in the block-based category. This gave a sample size of 603 students. We formulated 5 hypotheses based on consultations with past and current LIC students. Based on questions:

1) Students undertaking a LIC received better academic support than those in a block-based program. Based on questions: (18A) I felt well supported academically by my RCS (18C) I felt academically isolated during my rural placement (19D) My RCS clinical supervisors assisted me in identifying my learning needs (19F) My RCS clinical supervisors facilitated a learning environment (19G) My RCS clinical supervisors gave me sufficient autonomy in a clinical setting (19H) My RCS clinical supervisors gave me constructive feedback (19K) My RCS clinical supervisors provided me with appropriate clinical responsibilities (19O) Overall my clinical school provided an excellent clinical education. We formulated 5 hypotheses based on consultations with past and current LIC students.

2) Students undertaking a LIC are more confident in their clinical abilities than those in a block-based program. Based on questions: (22A) I am confident taking a purposeful history (22B) I am confident completing a focused physical examination (22C) I am confident writing a meaningful file entry

3) LIC students have a better attitude towards interprofessional practice than those in a block-based program. Based on questions:

(a) I can describe common situations where conflict may arise in inter-professional teams (24P) I can describe common situations where conflict may arise in inter-professional teams (24Q) I can participate actively in the resolution of conflicts that arise in inter-professional teams. Students undertaking a LIC are more confident in providing care to an Aboriginal or TSI than those in a block-based program. Based on questions: (18F) Overall my RCS placement impacted positively on my wellbeing (18G) I felt socially isolated during my RCS placement (18D) My RCS informed me about health and counselling services I could access for support if needed (18E) My RCS clinical supervisor treated me with respect.

4) LIC students report better mental wellbeing and support than those in a block-based program. Based on questions: (18F) Overall my RCS placement impacted positively on my wellbeing (18G) I felt socially isolated during my RCS placement (18D) My RCS informed me about health and counselling services I could access for support if needed (18E) My RCS clinical supervisor treated me with respect.

5) Students undertaking a LIC were more confident in providing care in an Aboriginal or TSI than those in a block-based program. Based on questions: (20E) I think that the medical curriculum at my RCS promotes an understanding of and commitment to improving the health status of Aboriginal and Torres Strait Islander people (23I) If need more information about a patient’s culture, I would feel comfortable asking the patient or family member (23A) I apply knowledge of Aboriginal health to provide culturally secure health care (23C) I communicate appropriately with Aboriginal people (23E) I have the ability to communicate effectively with Aboriginal people.

The data was analyzed using SPSS, and the Mann-Whitney U test was performed on each of the hypotheses with a 95% level of confidence. This allowed nonparametric testing of two populations against an alternative hypothesis.

Table 1: Comparison of Specialty Preference, Before and After Rural Placement, Block-Based (BB) v Longitudinal Integrated Clerkship (LIC)

<table>
<thead>
<tr>
<th>Preference</th>
<th>Before (%)</th>
<th>After (%)</th>
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<tbody>
<tr>
<td>General Practitioner</td>
<td>1st</td>
<td>25.0</td>
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<tr>
<td></td>
<td>2nd</td>
<td>27.4</td>
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<tr>
<td></td>
<td>3rd</td>
<td>30.7</td>
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<td></td>
<td>4th</td>
<td>22.4</td>
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<td>6.9</td>
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</table>

Results

Upon analysis of the data, students undertaking a block-based placement reported better mental wellbeing and support than those in a LIC. This was shown to be statistically significant at a 0.05 level (p < 0.018). The histogram in Figure 1 displays these differences. Students were also found to be more interested in pursuing a GP specialty after their LIC placement. These changes in preferences for specialty study can be seen in Table 1. All other tested hypotheses were found to show no significant differences between the two groups.

Discussion

The LIC program has been adopted in multiple medical schools across Australia, and gives students a learning experience more similar to practicing as a rural general practitioner. When the program was first established, there was concern that relevant information or performance was not being assessed. We found no discernible difference between the self-evaluated academic progress between LIC and Block-based students. Other studies have also found no longitudinal learning has long been known to increase student knowledge. LIC students (Bonnay et al., 2014) found that LIC students actually performed better than the rest of their cohort. This may be attributed to the close attention that LIC students are given by their preceptors, ensuring they have covered the required materials and the additional attention provided when they feel their knowledge is insufficient.

In another study, a focus group involving LIC students (Bonnay et al., 2014) explored how integrated students felt in the medical team and how they developed their interprofessional skills. The majority of students felt included in their medical team and stated that their preceptor made sure they were included and that they contributed. Although they did not find any differences between LIC and Block-based students with their reported interprofessional practice, a study by Myhre et al. (2014) found that LIC students reported a better attitude towards interprofessional practice. They attributed this to more exposure to medical teams, possibly facilitated by a longer rotation.

Our analysis showed that students in a Block-based program self-reported better mental wellbeing than those in a LIC program. We suggest that this is due to the uncertainty of the academic schedule, rather than a lack of support, or pressure on their placement. Block-based students have a rotational system where they focus on a specific area of medicine for the entirety of a rotation. LIC students have the added uncertainty of not knowing what they will see, or have to study that day and that knowing if they have covered everything, since they are not continuously immersed in the topic. LIC students have a statistical significant difference in future specialty preferences, with students undertaking a LIC ranking General Practice and Rural Medicine higher after completion.