AiMing High in regional Australia: Will the medical education response to COVID-19 transform how we prepare students for internship?

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Abstract

Background: The global outbreak of COVID-19 in early 2020 placed immediate pressure on health services. Undergraduate medical education was consequently impacted with decreased availability of health professionals for teaching and supervising hospital placements. At a time when more Doctors were needed, universities across the globe were required to change the way they taught medicine to ensure students could complete their medical degree without delays. In a state and territory of Australia, the university sector worked with health services and organisations to establish the Assistant in Medicine (AiM) program. The AiM program employed final year medical students to assistant in hospitals, whilst also supporting them to continue their studies. The 2020 AiMing High program that was rolled out at a regional hospital (Bathurst Health Service, New South Wales) was evaluated to determine whether the program was a success from the perspective of hospital staff.

Methods: At the Bathurst Health Service (regional New South Wales), 17 Western Sydney University final year medical students participated in the AiMing High program for 16-weeks. Hospital staff were invited to participate in a survey at the commencement and completion of AiM term. Focus groups/interviews were completed with hospital staff and AiM supervisors. Analysis was completed using descriptive statistics and thematic analysis.

Results: Hospital staff reported that the AiMing High program provided an enhanced learning opportunity for medical students. Staff and supervisors observed students grow in regards to increased confidence and taking on more responsibility, ability to communicate and work in a multidisciplinary team environment, and clinical and professional competencies. It was commonly reported that the students worked at an internship level. The AiM program was seen as a potential new way of providing education, however improvements in staff orientation regarding AiMs scope of practice would be needed.

Conclusions: The AiM program was seen as a success by staff as it added clinical value to this under-resourced regional hospital, whilst also providing students with an education that enabled them to graduate from medicine. Ongoing evaluation of such a program will determine the best way to prepare senior medical students for internship.

Background

The transition from undergraduate medical student to internship is traditionally challenging and stressful. Medical schools internationally and in Australia have sought to facilitate greater preparedness for medical graduates to aid a smoother transition into internship. A senior medical student experience provides the opportunity for students to be embedded within the clinical team while maintaining an educational focus under the jurisdiction of the medical school. One such example is New Zealand’s ‘Trainee Intern’ in 6th year, where the senior medical student is immersed into a clinical team for four, 12-week rotations, whilst still remaining a University student but evaluated via workplace performance rather than traditional assessments.
In 2020, amidst the COVID-19 pandemic, the role of medical students in Australia and internationally became unclear. The pandemic placed immediate pressure on the existing health system, resulting in a need for additional health staff and an inability for students to complete clinical attachments. In New South Wales (NSW), the largest state of Australia by population, a collaborative approach between NSW Health, NSW and Australian Capital Territory Universities (medical schools), Local Health Districts and the Health Education and Training Institute NSW, saw the rapid development and implementation of the Assistant in Medicine (AiM) program. The program sought to utilise final year medical student expertise in the general medical workforce at a clinical level appropriate to their training, to allow for more experienced medical staff to work specifically on the COVID-19 response. Thus, the less experienced medical students were not placed in a high-risk environment, though could potentially backfill anticipated workforce shortages in other areas. From a medical education standpoint, this also enabled the students to participate in a clinical placement and complete workplace based assessments to demonstrate their competence in order to graduate from their studies. This ensured that Australia still had a cohort of 2021 medical interns. From a university perspective, innovative and fast-paced changes were made to curriculum, examinations and assessments to accommodate the AiM program. Importantly, workplace based assessments incorporated newly introduced Entrustable Professional Activities (EPA’s). These activities included a variety of clinical tasks (e.g. taking histories, admission, discharge, handover) which could be observed by a supervising member of the clinical team, with feedback provided to students for reflection. All EPAs were downloaded centrally to a University database so that students’ engagement and progress could be closely monitored. The EPAs provided a means to assess clinical competencies in the workplace to the level at which a graduate is expected to perform, with all AiMs reported to have engaged in the EPAs at a satisfactory level. All AiMs were also required to have a NSW Health initiated mid and end of term assessment form completed.

Despite the pandemic remaining relatively stable in NSW throughout 2020, the AiM program remained in place, providing an opportunity to evaluate this new approach to final year medical education within a regional Australian hospital setting. NSW Health carried out an evaluation of the AiM program across the entire state (i.e. not at a site level), focusing on feedback from the AiMs and their immediate medical team.

Existing Australian literature has documented the experiences and observations of various pre-internship programs from the perspective of students, interns and medical staff. However, to the Authors’ knowledge, there is no research that documents perspectives from all hospital staff. Given the inherent nature of interdisciplinary care in the hospital environment, particularly in regional and rural centres where there are fewer medical professionals, it is essential we learn from the experiences and observations of all staff working in the hospital. Certainly, emerging literature calls for more evidence on the contribution that students can make at distributed healthcare training sites beyond the traditional central academic hospital setting. In countries like Australia, where rural and remote areas struggle with ongoing health workforce issues, the benefits may be many.
The purpose of this project was to evaluate the AiM program at the Bathurst Health Service from the perspective of all Bathurst hospital employees. Specifically, the research sought to explore, from the staff perspective, awareness of the AiM position within the hospital, perceived skills and competency of the AiMs, integration within the team the AiMs were placed, the value of the AiMs to their team/ward, and whether the position might better prepare AiMs for an internship role.

**Methods**

This was a mixed-methods study using a triangulation convergence design, and incorporating open and closed-ended survey questions as well as focus groups and interviews.

Setting: The AiM positions provided medical care and support as part of a multidisciplinary team. They largely worked alongside Junior Medical Officers (JMO’s) and Registrars under the supervision of a clinical supervisor, typically the consultant on the medical or surgical team. The Bathurst Health Service, located within Western NSW Local Health District, employed 17 AiMs, 16 of whom had just completed their 12-month University Rural Clinical School attachment at Bathurst. The Rural Clinical School is part of a federal government funded program (“Rural Health Multidisciplinary Training Program”) that seeks to train health professionals in rural communities to improve recruitment and retention of the health workforce in these areas. Bathurst Health Service is a large regional hospital (117 beds) which provides core speciality services. The 17 AiMs were placed across six teams: rehabilitation, ambulatory care, surgery, paediatrics, medicine, and emergency. The AiMs’ terms in Bathurst ran for 16-weeks. Figure 1 illustrates the process the 17 fifth year medical students went through to become an AiM and what their role involved. A detailed position description of the AiMs is presented in Appendix 1.

Participants and recruitment: All Bathurst hospital employees (approximately 600) were invited via email to participate in a survey, half way through the AiM term and at the end, to capture the varying experiences with, and observations of the AiMs. The survey was developed and informed by the research team, which included experienced clinicians, and was pilot tested by several local clinicians and general staff. The 20-item survey included Likert-type responses and one open-ended question. The survey also asked staff to complete an expression of interest form if they wished to participate in a focus group or interview. Recruitment for staff interviews also occurred by direct invitation to clinical supervisors, nursing and allied health managers, who distributed the invitation to staff. Focus groups and interviews were audio recorded, transcribed verbatim and de-identified for analysis.

Analysis: Descriptive statistics were used to analyse quantitative survey data. All interviews, focus groups and open-ended survey data were combined in one dataset and themes identified via thematic analysis. Two researchers (KP and TD) familiarised themselves with all transcripts as they were completed. Themes were constantly compared, contrasted and discussed between the researchers until all qualitative data had been collected and a consensus on the themes reached. The preliminary thematic map was then shared with all investigators for discussion and further refinement.
Ethics approval was granted by the Greater Western (2020/ETH01616) and Western Sydney University (RH13949) Human Research Ethics Committee.

Results

Interviews and focus groups were completed with 17 health professionals working at the Bathurst hospital. Clinical supervisors and hospital management participated in a focus group half way through the term (week 8; n = 6/10) with one additional interview completed with a supervisor who could not attend the focus group. At the completion of the AiM term, three clinical supervisors participated in a follow-up focus group. Hospital staff participated in interviews towards the end of the term (medical n = 2, nursing n = 2, allied health n = 3). A total of 66 staff members completed the first survey, and 48 completed the second.

All data (qualitative and quantitative) are synthesised and presented according to the main themes and subthemes identified from the qualitative data. The themes are listed in Table 1 and then expanded upon in the subsequent text. The quantitative findings from the survey are presented in Table 2.

Table 1
Themes and subthemes from qualitative data

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>A new way of medical education</td>
<td>- An enhanced program</td>
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<tr>
<td></td>
<td>- Length of term</td>
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<tr>
<td>Preparation for Junior Doctor role</td>
<td>- Ready for internship</td>
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<td></td>
<td>- Supported learning environment</td>
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<td></td>
<td>- Professional competencies</td>
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<td>- Responsibility and steep learning curve</td>
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<tr>
<td>Clinical utility – added value to the health service</td>
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<tr>
<td>Hospital staff orientation to the AiMs</td>
<td>- Staff awareness of the AiMs</td>
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<td></td>
<td>- Staff understanding of the AiMs scope of practice</td>
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<td></td>
<td>- Clear expectations to better prepare staff and AiMs</td>
</tr>
<tr>
<td>Table 2</td>
<td>Survey 1</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Total no. of participants</td>
<td>n = 66</td>
</tr>
<tr>
<td>Proportion that were aware of AiM position</td>
<td>60.6% (n = 40)</td>
</tr>
<tr>
<td>Number/ Proportion that had worked with an AiM</td>
<td>47.0% (n = 31)</td>
</tr>
<tr>
<td>To what extent do you feel prepared to work with and support the AiMs on the wards?</td>
<td>n = 44</td>
</tr>
<tr>
<td>Very prepared</td>
<td>15.9% (n = 7)</td>
</tr>
<tr>
<td>Moderately prepared</td>
<td>43.2% (n = 19)</td>
</tr>
<tr>
<td>A little bit prepared</td>
<td>27.3% (n = 12)</td>
</tr>
<tr>
<td>Not at all prepared</td>
<td>13.6% (n = 6)</td>
</tr>
<tr>
<td>The AiMs provided useful assistance on the ward for day to day patient care:</td>
<td>n = 19</td>
</tr>
<tr>
<td>Strongly/somewhat disagree</td>
<td>10.5% (n = 2)</td>
</tr>
<tr>
<td>Neither agree/disagree</td>
<td>26.3% (n = 5)</td>
</tr>
<tr>
<td>Strongly/somewhat agree</td>
<td>63.2% (n = 12)</td>
</tr>
<tr>
<td>The AiM role improves the efficiency of the clinical team</td>
<td>n = 32</td>
</tr>
<tr>
<td>Strongly/somewhat disagree</td>
<td>15.6% (n = 5)</td>
</tr>
<tr>
<td>Neither agree/disagree</td>
<td>28.1% (n = 9)</td>
</tr>
<tr>
<td>Strongly/somewhat agree</td>
<td>50% (n = 16)</td>
</tr>
<tr>
<td>Compared to usual 5th year medical student placements, the AiM role is better preparing medical students for internship</td>
<td>n = 53</td>
</tr>
<tr>
<td>Strongly/somewhat disagree</td>
<td>1.9% (n = 1)</td>
</tr>
<tr>
<td></td>
<td>Survey 1</td>
</tr>
<tr>
<td>----------------------</td>
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</tr>
<tr>
<td>Neither agree/disagree</td>
<td>26.4% (n = 14)</td>
</tr>
<tr>
<td>Strongly/somewhat agree</td>
<td>71.7% (n = 38)</td>
</tr>
</tbody>
</table>

### A new way of medical education

An enhanced program: The AiM term was described as being a superior program to what has traditionally been delivered to students.

“The experience they’re gaining more than counts for what they would have gained as students” (interview, medical team).

Medical participants described how the AiMs were being provided with mostly practical teaching rather than theoretical, but that this was not detrimental to their studies, as it was believed they already had the theoretical foundations required to practice as a junior doctor. They also perceived that the competencies achieved from participating in the AiM term outweighed that of the traditional 5th year medical term.

“It's a very very good curriculum and I think we should continue this. In the long run it will be fantastic” (interview, medical team)

Overall, participants felt that the clinical exposure and educational experience delivered to the AiMs on their 16-week term was exceptional.

“Our Doctor has shown them many procedures and taught them so much” (survey 1, nurse)

“(The Registrar) did encourage them to do what doctors do, which is to make a plan and follow that through and then evaluate the intervention. And yes they did that at a really high level” (interview, allied health).

Clinical competencies were further developed via more structured education sessions, including a weekly two-hour formal lecture which largely focused on synthesising theoretical information in the context of practical situations the AiMs may be exposed to whilst working in the hospital; presenting cases to medical staff; and participating in teaching activities aligned to the different clinical teams. AiMs also engaged in peer learning activities with junior (4th year) medical students. All AiMs engaged in EPAs at a satisfactory level.

Length of term: The 16-week term provided AiMs with opportunities to develop teamwork skills, provided opportunities for clinical responsibility to develop over time, and provided continuity within a team, which proved helpful as it overlapped with JMO term changeover as explained in the quote below:
Many of the new JMOs who came up from Blacktown during the changeover had said that it (having the AiMs present) assisted the transition for them... there was continuity of patient care because they (the AiMs) knew the patients. That's one. They knew where to find things. They knew how to get from A to Z in the quickest way. All those simple practical things that make your life as a junior doctor easy.

**Preparation for Junior Doctor role**

Ready for internship: Participants explained how they perceived the AiM program had prepared the medical students for their upcoming year as interns in regards to their clinical competencies and also their ability to work in a multidisciplinary team, described in the following quote:

“Towards the end I found their competency approaching that of an intern” (interview, medical)

The staff survey also confirmed the perceived positive impact the AiM program had on preparing the students for internship, with over 71.7% (n = 38) in the first survey and 77.8% (n = 28) in the second survey agreeing that the AiM role is better preparing medical students for internship, compared to the traditional 5th year medical student placements.

Supported learning environment: Provision of a supervised and supported learning environment for the AiMs was observed, which supported growth in the AiMs’ confidence and skills, and the responsibility they took on as acting junior doctors.

“As far as I could see they were learning to do the job, supported to do the job, and then doing the job of a JMO [Junior Medical Officer]” (interview, allied health)

Professional competencies: Participants explained that the ability and confidence to communicate effectively and to work as part of a clinical team was “a skill that is not to be underestimated” (interview, medical team).

The staff surveys found that between 60–85% of survey participants agreed that AiMs were an integral part of team huddles; that they communicated effectively with other team members; they can articulate their own limitations; they can communicate effectively with patients; and they display confidence in communicating with patients.

In the final survey, qualitative open-ended responses illustrated that some staff felt the AiMs did not have the confidence or skills to identify who they were or what their role was, illustrated in the following quotes.

“When communicating with those in the role they did not identify themselves and the limitation of their role“ (survey 2, allied health team)

“They do not introduce themselves as AiMs or wear name badges to identify them. During a met [multidisciplinary emergency team] call I was extremely confused when a (clinician) attended but wasn’t doing anything for the patient because I assumed s/he was part of the medical team, at no point did s/he tell me s/he was an AIM or explain their scope of practice” (survey 2, Nurse)
Despite some barriers with communication, participants also described how the AiM role provided students with a direct opportunity to enhance their skills in how to work in a team environment and communicate effectively across the entire team.

“At first (there was a) lack of confidence … the Registrar that we had was really open to developing students … she taught them to communicate with all of the team” (interview, allied health)

“They’ll be confident in who members of the multidisciplinary team are, how to talk to them, what they can ask them to do, what they’re roles are. That’ll be wonderful value.” (interview, allied health team)

Responsibility and steep learning curve: Participants observed AiMs stepping up in regards to the level of responsibility they were taking on compared to when they were a student, with attendance and punctuality of high standard and a strong desire to follow up patients into the evening and on the following days.

One participant who was interviewed halfway through the placement explained the difficulties that the AiMs experienced in transitioning from student to employee, with the increased responsibility an area the students could improve on:

“they’re grasping between their role as a medical student versus an employee, and sometimes they need to be reminded that they are actually being paid and they’re working as opposed to being here just for their educational purposes” (interview, medical team)

However, participants interviewed later in the term observed and described significant improvements over time in the AiMs’ confidence and ability to work in a team, and also the added value to the team they were in:

“They basically came in and they were more like student doctors to start with, but the growth over the time that they were with us was incredible, and their confidence soared. And they were practising doctors, they were really good, and they were collaborative” (interview, allied health team)

“At the start (they were) very standoffish, very reticent, and no confidence…. And at the end they were part of the family” (interview, allied health team)

**Clinical utility – added value to the health service**

There was an overall feeling amongst participants that the AiMs were valuable health professionals within the Hospital, illustrated in the following quotes:

“AiMs are great on the ward especially as an extra hand with clinical R/V cannulas etc.” (survey 1, nurse)

“They have been a great addition to (our) Team, and very useful to the nursing staff. They have always been willing to assist when asked, and scribe in patient notes, at family meetings, and follow up discharge information, medications etc with GPs and community stakeholders.” (survey 1, nurse)
In some cases, this also allowed other hospital staff to complete additional clinical and administrative activities, demonstrated below:

“(They have) helped with some more of the workload... and it frees up some of my time to do other more departmental running activities” (interview, medical team)

The AiMs also acted as an additional point of contact on the medical team, particularly if senior physicians were busy.

“They were more available (than other staff in the medical team), and they could do some of the basic stuff... they can move on things, to make sure the patients are receiving the care that they need in a reasonable timeframe. They could get a lot of paperwork done...” (interview, allied health team)

In both surveys, approximately two-thirds of participants (63.2% and 64.7%) agreed that AiMs provided useful assistance on the wards. The proportion of respondents that felt the AiMs improved the efficiency of the clinical team increased slightly over the term, with 50% in agreeance in the first survey and 59.1% in the final survey.

Hospital staff orientation to the AiMs

Staff orientation to the AiM position, including knowledge and awareness of AiMs and clear expectations about their scope of practice was discussed by many participants.

Staff awareness of the AiMs: It was felt that many hospital staff, in particularly non-medical staff, were not aware of who the AiMs were, demonstrated by the following quotes:

“I was not aware that the role of AIM existed. It was not communicated to the nursing staff” (survey 1, nurse)

“I think our team would have known about the AiMs, but there would have probably (been) a lot of staff that wouldn’t have known” (interview, allied health)

Staff understanding of the AiMs’ scope of practice: The majority of staff that participated in the interviews had a sound understanding of the AiMs’ scope of practice. Non-medical staff responding to the survey, however, communicated a need for a better understanding of the role of the AiMs to ensure they did not ask the AiMs to perform activities that were outside their scope of practice and to better understand their level of clinical expertise, as illustrated by the following quotes:

“I don’t recall any information on the scope of practice of AiMs so I’m constantly asking if they can do something for me without knowing if I’m placing undue pressure on them when they have to say no” (survey 1, nurse)

“It was commonly voiced amongst nursing staff that we were unsure what the AiMs’ scope of practice was. They seemed to be regularly performing tasks and procedures however we were unsure whether they
were qualified to be doing so” (survey 2, nurse)

It was acknowledged by some participants that the limited orientation was largely the result of a very fast moving program that was evolving each day to meet the potential workforce demands that a COVID outbreak may bring to the hospital.

Clear expectations to better prepare staff and AiMs: Participants across all disciplines felt that both the staff and the AiMs would benefit from a more thorough orientation program with a focus on expectations, illustrated by the following quotes:

“I guess it would be good for some quite strong communication through the managers to staff, to know when they’re going to be here, what their role will be, and how they can support you, and how we can support them… But I think it’s a great program” (interview, allied health)

“Setting expectations and pathways to seek help will be welcomed” (survey 1, medical team)

The survey sought to determine whether staff felt prepared to work with and support the AiMs; only 15.9% (7/44) felt very prepared in the first survey, with an increase to 42.5% (17/40) in the final survey. A similar proportion felt ‘not at all prepared’ in both surveys (13.6% and 12.5%).

Discussion And Recommendations

The AiM program was rolled out in Bathurst, a regional centre of NSW, Australia, as a pandemic preparedness response, and was ultimately and fortunately, not needed for this specific purpose. Rather, the program provided final year medical students with the opportunity to practice as a senior medical student under supervision (otherwise referred to as pre-internship positions or programs), and immerse themselves within a clinical team over a 16-week period. An evaluation of the AiM program was deemed relevant. The evaluation explored the clinical contribution that senior medical students can have in a regional hospital setting, which endures ongoing health workforce challenges. Our findings show that a senior medical student, who is well integrated into the team, can indeed make a positive and valuable contribution to the clinical team. This is in line with newly published international research that also shows that healthcare students, particularly those at a senior level, are a value-add to the health services they are trained in. Van Schalkwyk and colleagues (2018) conclude that three critical success factors are needed for this to occur: “students integrating learning into practice, sharing responsibility for patient care, and taking time to be thorough in caring for patients.” Our findings align with this notion, as staff perceived the AiMs as having fulfilled these criteria and ultimately reaching the stage where they were viewed as being at internship level.

In addition to being a valuable program to the hospital, senior management of the hospital and university perceived the program to be invaluable to students’ learning, providing enhanced clinical learning opportunities and professional development outcomes compared with that of the traditional final year teaching curriculum in Australia. This was echoed by hospital staff, who perceived the program as being an exceptional education opportunity for senior medical students. Staff observed the AiMs undergoing a
steep learning curve, with significant improvements in clinical and professional competencies within a supported learning environment. This was met with increased confidence and responsibility over time, and consequently clinical value to the team. The benefits of a longer clinical term (compared to the usual 5-week placement for year 5 medical students) was also identified by the AiMs that responded to the NSW Health evaluation of the AiM program. They felt that longer times spent on teams supported increased responsibility over time, the ability to become more a part of the team, the ability to communicate with other team members and patients, and the ability to manage conflict. AiMs also reported they were more engaged in patient care and were able to follow and understand the patient journey through the hospital.

It has been suggested that senior medical students that practice under clearly defined skills and capabilities enables them to be utilised to their fullest potential, adding value to the medical team they are placed in, whilst also providing significant learning opportunities to experience practicing as a junior doctor. This evaluation found that many of the hospital staff were unaware of the AiMs’ roles and responsibilities when they commenced, and felt they would have been able to better integrate the AiMs into the teams earlier on had they been better informed of their position from the outset. However, they did acknowledge that the AiM program was rapidly rolled out as a pandemic response and orientation time was somewhat limited. Our findings align with medical staff who responded to the NSW Health AiM survey who also experienced a lack of understanding of the AiMs’ skills and capabilities. According to the AiMs’ themselves however, it was suggested that a position description outlining the skills and responsibilities assigned to their role supported their increased participation in their team and their ability to take on some of the workload. Notably, a review of the Netherlands ‘semi-physician’ year (another form of a pre-internship program), found that the students’ ability to take on their assumed role was directly impacted by the extent to which their supervisor understood their position and how it was interpreted. Our evaluation found that hospital staff wanted the AiMs’ scope of practice to be well defined to ensure patient safety was maintained. Anecdotally, it was assumed that the medical staff would pass on details about the AiMs’ scope of practice, however this was obviously not the case across all wards, possibly due to the busy nature of the hospital and also the speed at which the program was implemented. Future programs must have a process in place that ensures all end-users (i.e. staff and potentially others) are well-informed of any possible changes to their daily practices. NSW Health has already responded to this potential issue and updated their position description on the Assistant in Medicine role. This information however still must be effectively filtered through to all staff.

The role of a student is largely viewed by senior medical officers as an ‘observer’, with the level of responsibility a medical student takes on being influenced by competing educational activities such as tutorials and assessments which are external to hospital activities and rostered separately. It was acknowledged by participants in this evaluation that when the program commenced and AiMs became health employees, they were forced to reflect upon and respond to the differences between their role as a student and what was then expected of them as an employee. Wilkinson and Harris (2002) identified four components of a successful professional medical role, one being ‘getting involved’. Providing an
opportunity to learn how to get involved, take on responsibility and be a part of the team may assist with transitioning to a junior doctor role. From the perspective of the AiMs themselves, an enhanced experience was influenced by an increased level of responsibility given to them and being involved in team decision-making processes. These findings reported by the AiMs were mirrored in our study from the perspective of staff, with participants witnessing an increased level of responsibility that the AiMs took on compared to when they were students, and being valuable members of the team they were placed with. Whilst the staff observed the students stepping up in regards to taking on the higher level of responsibility expected from a senior medical role, medical staff who participated in the NSW Health evaluation noted they felt more empowered to delegate tasks to the AiMs, compared to when they were a student.

The ability to work in a team environment is recognised as one of many skills a medical professional is required to attain. Learning how to adapt to new environments and work with new teams confidently, quickly and effectively is useful, particularly in postgraduate years as medical professionals rotate through various attachments. However, medical students have short term placements and are viewed as individuals rather than as part of the team. This evaluation found that hospital staff observed significant improvements over time in the AiMs’ confidence, level of responsibility they took on, and ability to communicate with and to be integrated into their team. Both nurses and allied health staff emphasised how the AiM program was a positive influence on the students’ ability to work in interdisciplinary care in the hospital environment, and as interns they predicted that these students will be well advanced in their ability to work in a team. Similarly, the NSW Ministry of Health evaluation of the AiMs’ experience (n = 212/424) found that two-thirds felt like a valued member of the team, contradicting medical students perceptions of team inclusiveness.

Future research into the impact that the AiM term had on the graduating students’ confidence and preparedness to commence their internship would determine the actual value of the AiM program on the effectiveness of this new way of medical education in this regional setting.

Strengths and limitations:

A strength of this study is that we captured staff perspectives from a range of positions, including administration, cleaning, allied health, nursing, and medical. A limitation is the relatively small response rate, and also that we could not match the surveys to determine whether the same staff completed the survey at two points in time, or whether we captured the views of different participants. Of note, the staff who responded to this evaluation had already experienced clinical rotations with 16 of the 17 AiMs (whilst they completed their 12-month Rural Clinical School attachment) and hence were well placed to comment on their clinical skills and professional development over the course of the AiM term compared to when they were a student. Lastly, the study is limited in that it is focused on one individual site.

Conclusion
Our evaluation supports the model of addressing pandemic driven work force requirements and medical student education requirements simultaneously with the development of the AiM position. The pandemic response to medical education, with a key focus on ensuring the pandemic did not decrease the number of graduating medical graduates in Australia, provided an opportunity to evaluate a new approach to final year medical education using a senior medical student model. The evaluation demonstrated that the model provided clinical support to an understaffed regional hospital whilst also providing enhanced learning opportunities for senior medical students across numerous domains. This included clinical skills, communication, interdisciplinary teamwork, and responsibility. Enhanced communication within the hospital would support AiMs to be integrated into their teams from early on in their placement and maximise utility, whilst also ensuring patient safety. With the pandemic and the AiM program continuing into 2021, further data can add to the above evaluation to determine the sustainability of the program and whether any variations need to be made.

**Abbreviations**

AiM  Assistant in Medicine  
EPA  Entrustable Professional Activities  
JMO  Junior Medical Officer  
NSW  New South Wales

**Declarations**

Ethical approval and consent to participate: Ethics approval was granted by the Greater Western Human Research Ethics Committee (2020/ETH01616) and Western Sydney University (RH13949). The study was carried out in accordance with the National Health and Medical Research Council's guidelines. Informed consent was obtained from participants who completed the survey. Written consent was obtained from those who participated in a focus group or survey.

Consent for publication: Not applicable.

Availability of data and materials: All datasets analysed during the current study are available from the corresponding author on reasonable request.

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References


Figures

Figure 1

The process of a student becoming an AiM, and their employment details

Supplementary Files

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- Appendix1PositionDescriptionAssistantinMedicine.pdf