Policy Document

Medical School Transitions

Position Statement

AMSA believes that:

1. There are numerous transitions across the medical journey that expose medical students and graduates to considerable professional, practical and personal challenges.
2. Support from educators, early clinical exposure, peer mentoring and structured orientation are crucial for student preparedness across transitions in medical schools.
3. There is currently inadequate research investigating the impact of medical school transitions on medical students and effective solutions.

Policy

AMSA calls upon:

1. Australian Universities to:
    a. Research the factors impacting medical students during transition points, including professional, practical and personal issues for both postgraduate and undergraduate programs.
    b. Make mental health support accessible, including for off-campus students.
2. Australian medical schools to:
    a. Develop high quality and seamless medical school transitions by incorporating evidence-based practice and research into these programs;
    b. Conduct research into the effectiveness of currently employed medical school transition programs in ensuring student wellbeing and preparedness;
    c. Develop an intra-university curriculum for clinical students which is clear, accessible and centralised;
        i. Audit the delivery of teaching and feedback at individual clinical sites through student feedback and evaluation of outcomes;
        ii. Develop and incorporate appropriate teaching methods including problem-based learning (PBL) and simulation learning across the medical degree and;
        iii. Clearly communicate assessment timelines and expectations.
    d. Include regular formative assessment in preclinical and clinical learning.
    e. Include clinically-correlated teaching and PBL across the medical program
    f. Facilitate closed-loop feedback from students on educator performance and curriculum quality, including:
        i. Tutor feedback surveys;
        ii. Focus group discussion and;
        iii. Student representation for course feedback and on faculty planning committees.

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g. Provide feedback to students on their performance for the purpose of continued learning and developments through:
    i. Individualised feedback
    ii. Peer feedback and assessments.
h. Implementing transparent processes to seek and review feedback regarding transitions and the efficacy of support provided from students, staff, and other stakeholders, including hospitals;
i. Initiate or support inter-cohort peer mentoring programs incorporating professional, personal and academic factors;
j. Use an evidence-based approach to incorporate pre-internship programs for final year students to assist with the student-to-intern transition process;
k. Identify non-academic barriers affecting students' medical school transition experience and provide financial and practical support to aid transition into university and clinical years through measures including:
    i. Travel bursaries;
    ii. Subsidised accommodation;
    iii. Assistance in seeking mental and physical health support;
    iv. Accessible and transparent special consideration guidelines;
l. Organise modules to support the training of medical staff in supervising and teaching medical students in the clinical environment.

3. The Australian Medical Council to:
    a. Ensure that standards for accreditation of primary medical education, prevocational training, and specialist medical education and training are aligned such that completion of one stage is adequate preparation for the following stage of training;
    b. Require medical schools to include clinical skills and reasoning in teaching throughout the degree, and that this learning is reflected in assessments;
    c. Require medical schools to have a clear and well-communicated curriculum for students that is implemented and audited across clinical sites;
    d. Require medical schools to support and utilise robust student feedback pathways and implement closed-loop feedback;
    e. Ensure that intern training authorities require hospitals and health services administering pre-vocational training programs to provide adequate induction and support to junior medical officers throughout their employment.
4. Hospitals and Health Services to:
    a. Implement appropriate, multifaceted clinical orientation programs for incoming medical students and medical graduates;
    b. Employ Intern support officers and the Medical Workforce Unit (MWFU) staff to provide support to interns.
5. Medical student societies to:
    a. Utilise established pathways and take advantage of new opportunities to provide feedback regarding inadequacies in current medical school transition programs;
    b. Implement peer learning and mentoring programs across different year levels (where not provided by the medical school);
    c. Establish or support clear and accessible feedback pathways for both preclinical and clinical students, with closed feedback loops.

Background

The Australian Medical Students' Association (AMSA) is the peak representative body for medical students. As such, AMSA advocates for issues regarding student wellbeing and success in the clinical field, both during and following medical school. Medical education in Australian universities is characterised by three key transitions: from undergraduate studies or secondary school to medical school, preclinical to clinical years, and from the final year of medical school to internship [1].

Overarching Issues within Transitions

Medical school transitions should be aimed at supporting the student through the novel demands of this period, This includes addressing perceived role discontinuity and uncertainty, and improving student wellbeing. Despite this, there are numerous problem areas that are consistent amongst all transition phases which compromise the quality of the transition, the welfare of medical students, and the safety of patients. The barriers faced within these medical school transition periods can be broadly divided into inherently linked three categories – professional, practical, and personal.

Professional issues relate to the new roles, conventions, and expectations faced within the novel setting of each transition, as well as the uncertainty regarding the growing professional identity expected of medical students as they advance through their studies.

Practical issues are associated with the increasing workload, expertise, and confidence that medical school necessitates with continued progression, increasing exponentially with clinical years and internship.

Personal issues involve the mental health aspects of the transition period, developing and maintaining wellbeing skills and coping mechanisms, and responding to novel emotional challenges within clinical practice. This often results in stress, burnout, and ultimately poor patient care [2]. Research has indicated that depression amongst medical students is already twice the population level, peaking at the transition from preclinical to clinical years [3]. Accentuating the already difficult aspects of the medical school transition are issues surrounding physical health, with the progression from secondary school to first year university marking an at-risk period for weight gain and unhealthy nutrition [4].

According to the Australian Medical Association, medical schools have a responsibility to incorporate evidence-based curriculum designed to maintain the health and wellbeing of medical students [5].

Pillars of Transitions

Transitions in medical school present a considerable source of "challenge, ambiguity, and uncertainty" [6] while simultaneously affording a valuable opportunity to pivot from preclinical to clinical learning, and finally independent practice. Negotiating this difficult transition requires considerable collaboration between the medical faculty and hospital in order to establish strong skills for performing in a professional environment, ensure that wellbeing is maintained, and institute clear and accessible feedback and reporting pathways.

Subsequently, there is a need for considerable student support at the time of transition. Ensuring these transitions are managed effectively and that students are prepared for their next stage of practice is critical to both student welfare and the safety of patients. Despite the importance of this component of medical education, there is currently a paucity of research into relevant consequences and interventions.

While the timing and specifics of these transitions differ amongst universities, quality medical school transitions are broadly supported by:

- Exposure to clinical settings early in curriculum, incorporating clinically-correlated and simulation learning.
- Dedicated transition programmes and faculty supports for such transitions.
- Peer and professional mentoring programs.
- Provision of clear expectations surrounding new learning styles and assessment.
- Problem-Based Learning programs (or similar).
- Practical ongoing support (e.g. clinical site orientation).
- Wellbeing support (e.g. counselling, financial aid, and flexible attendance).

Within medical school

Phase 1: Secondary School or Undergraduate studies to Medical school

Transitioning to self-directed learning
Secondary education is largely teacher-centred while university education requires greater self-directed learning. Therefore, the academic difficulties that first year medical students face in the transition from secondary school include having to adapt to studying more independently, managing an increased workload and taking responsibility for their own learning [7].

Effective time management and developing into a self-directed learner improves academic achievement in the first year of medical school. Other strategies to reduce academic overload include supportive tutor-student relationships, formative assessments, and clear objectives [7].

Medical students' perceptions of self-efficacy have also been shown to be negatively correlated with academic burnout [8,9]. Empowering first year medical students by helping them develop personal strategies to direct their own learning can help to improve their mental wellbeing [8].

Burnout
The transition from secondary to higher education is a demanding period for medical students. Half of all direct- and graduate-entry medical students experience burnout within the first two years of medical school [10]. As student engagement during the first year of medical school may impact success in subsequent years, efforts should be made to address challenges such as adapting to the self-directed nature of university learning, academic overload and lack of clinical exposure [8].

Psychosocial difficulties of transition
Non-academic transition challenges faced by some first-year university students include moving residence and separating from family and friends. These potential challenges in transition must be supported effectively to prevent homesickness, loneliness and stress [11]. This also applies to other transitions within medical school which involve relocation.

Transitioning from a non-science background
Although there is limited quantitative research, anecdotally students from a non-science background report difficulties transitioning into a medical program with presumed science knowledge. Some universities, such as Monash University, provide a biology bridging course which may assist these students in transitioning into medical school [12].

Transition from undergraduate studies to postgraduate medical school
Students transitioning from pre-medical university education to first year medical school reported similar challenges as those transitioning from secondary school, including increased volume of information, time pressure and stress. Developing non-cognitive skills is therefore an important component of coping with these obstacles in the transition period [13]. The majority of research on university transitions focuses on the transition from secondary school to university. There is currently inadequate research into difficulties faced by postgraduate students and the support systems which may be beneficial to smoothen their academic transition [14].

Phase 2: Preclinical to Clinical

The second phase of medical school transition from preclinical to clinical years is accompanied by various challenges, including the change in student role and curriculum structure, with these having implications on mental health.

Transformation in Student Role
There is a major shift in learning styles from classroom learning to a vocational setting. Though an immersive learning experience is essential for medical students to gain the essential skills required of them, this change also requires more self-directed learning [15]. The evolution from being a didactic learner to being a part of a professional healthcare team causes confusion regarding the medical student role and responsibility in a clinical setting. Transitioning students also reported a lack of feedback and supervision in clinical settings, ambiguity of their role and responsibility as a medical student, and disclosed a self-perceived inadequacy in knowledge, contributing to their feelings of uncertainty [16]. Furthermore, anecdotal evidence reports students feeling unprepared to face emotional events such as death, the trauma and sufferings of others.

Changes to Curriculum
Students have reported that there is no clear definition of the breadth of the syllabus and the expected knowledge of students in the clinical years [16]. Lectures are conducted by a wide range of professionals and there might be conflicting consensus on the syllabus. Therefore, there is no proper systematic framework for students to anchor their learning leading to difficulty in organising and consolidating their learning. While more research is warranted to evaluate how medical school curriculums can be adjusted to assist students with the transition to a clinical year, adequate support also needs to be given to students to cope with the curriculum.

Implications on Mental Health
Given the significant change in student roles and curriculum from a pre-clinical to a clinical environment, this transition phase may have detrimental effects on medical students' wellbeing if they are unprepared. Studies have shown that there is increased stress and anxiety in this phase of medical school transition. The severity of burnout increases significantly in clinical years, with instances of burnout linked with depressive symptoms [17].

Solutions for Phase 1&2

Structured Orientation
Structured orientation programs are an effective measure of easing students into a new environment. For students commencing medical school, orientation courses can provide a 'learning roadmap' of the years of medical school ahead and allow students to develop an understanding of 'how to learn' [18]. Similarly, studies have demonstrated a need for a purposeful structured orientation for students transitioning into their first clinical year to allow students to familiarise themselves with a professional placement setting where student roles are clearly defined by faculty [15].

This allows for students to adjust their expectations of the student role when navigating each phase of transition, hence reducing uncertainty and anxiety in a new environment [19]. Effective orientation programmes may ease students into each period of transition, whilst providing them with the essential skills and support to succeed.

Earlier Clinical Encounters

The evidence supports clinical skills refreshers, clarification of roles and expectations, assessment processes and student-student handovers. This may be complemented by preclinical educational strategies such as enhancing content contextualization, further opportunities for the application of knowledge and skills, and constructive alignment of assessment tasks and pedagogical aims [20].

Early clinical exposure in medical school and teaching the basic sciences alongside its application to clinical practice enhances medical students' understanding of their future role as a doctor [21]. It also allows for the: development of communication skills, building of confidence during patient interactions and introduction of the key medical and psychosocial issues involved in clinical care [13, 22]. Furthermore, early patient contact seems to alleviate the perceived "shock of practice" experienced during the transition from preclinical to clinical years of medical education, preparing students for their work in a clinical setting [16].

Examples of early clinical exposure include weekly out-patient interactions for first year medical students and work-integrated learning [13, 22]. Clinically-correlated anatomy programs maximise the academic achievement and learning experience of first year medical students [23].

Problem-based learning (PBL)

Overall, the integration of clinical sciences with basic sciences effectively promotes active learning strategies and can help first year students develop an understanding of the learning roadmap. This can be achieved through programs such as PBL tutorials (or similar), large-classroom lectures, role-play with simulated patients and team-based learning [18].

PBL improves the learning outcomes of first year medical students while enhancing their interest in the clinical aspects of human biology [24]. Compared to the didactic lecture-style format, students taught through a PBL format performed better academically and were better able to correctly answer questions testing the application of knowledge in clinical situations [25]. PBL programs also help students gain an appreciation of the accumulating body of knowledge needed in medical practice and improve reflection on their own learning and self-efficacy, enabling students to be better self-directed learners [26].

Nevertheless, adaptation to PBL in the first year of medical school is challenging for secondary school graduates who are unaccustomed to self-directed learning. Interventions to foster problem-finding in PBL cases, including encouragement from tutors and reinforcement using self-assessment, facilitate the acquisition of problem-finding skills in first year medical students [27]. PBL students eventually grow comfortable with the new autonomy and embrace the independence and responsibility over their own learning. They also become more motivated to learn which facilitates the transition to clinical years, while students who have largely lecture-based teaching experience a more difficult transition [28].

Further teaching strategies

Faculties can adopt teaching approaches tailored to the learning styles of individual students, such as by developing teaching tools that facilitate multimodal learning [29]. Additionally, simulation learning can be implemented to effectively increase students' knowledge and skills in patient care, as well as empathy and understanding across a

variety of clinical settings such as caring for the elderly or when conducting a brief alcohol intervention [30].

Mentoring
Peer mentoring programs led by senior medical students promote professional and personal development while also providing important psychosocial support during critical transition periods [10]. When transitioning to university, peer mentoring helps first-year students adjust to campus life, reduces perceived stress and facilitates personal development by building self-confidence, teamwork skills and time management [31].

Peer assessment offers students the opportunity to reassess and improve their interpersonal skills and work habits [29]. Successful mentoring may also involve members of the general community. For example, a program matching first-year medical students with adults aged over 65 was shown to improve students' competency with caring for older patients, and was well-received with minimal attrition [32].

AFTER MEDICAL SCHOOL

Phase 3: Pre-internship Year - Internship

Main Issues
Medical school graduates in Australia feel unprepared to start their internship [1]. The transition to medical internship has been regarded as a physically, mentally and emotionally exhausting "steep learning curve", exacerbated by challenging team relationships, and difficulty seeking help [33].

There are also significant variations between medical schools in terms of levels of preparedness for work [1]. Areas of most concern include the basic skills required of a doctor such as decision making, prescribing, treatment and practical skills [34]. Difficult areas of transition include dealing with violent patients, communicating with patients who may have mental illness, calculating drug doses, and working with patients who may be using complementary alternative medicines [1]. Students may therefore require additional support for these related skills.

Problem Area 1: Clinical Practical Skills
Although there have been improvements in general preparedness , students still report deficiencies in clinical and practical skills as a major concern [35]. In particular, common clinical skills deemed 'inadequate' are: the ability to safely prescribe drugs in appropriate dosages; certain practical procedures (e.g. nasogastric tube insertion); and diagnosis and decision making [36].

Notably, students and recent graduates have expressed their dissatisfaction with the current curriculum being more passive compared to traditional 'clerkship' approaches and teaching ward rounds, which provide students with more opportunities for active decision making [37]. This highlights the lack of practical components in the current curriculum that lead to graduates being underprepared for internship.

Problem Area 2: Difficult Communication
In addition to basic competencies, both graduates and hospital supervisors expressed concern about interns' ability to deal with situations in which communication may be difficult, including breaking bad news, aggression, and mental illness [38]. Students acknowledge having teachings and discussions for difficult communications in their courses but they had little opportunities to practice, leading to low confidence [39].

Problem Area 3: Overall Confidence Level
Although students generally have competence in areas such as history taking and examination and are able to seek help to further their knowledge and skill set, they may have low confidence when beginning their internship due to aforementioned areas of concern [40]. Concerningly, studies have found that even after a year of internship, graduates can still have low confidence in some areas despite having

encountered or conducted these procedures in their training [36]. This highlights the importance of providing feedback frequently both throughout the degree and as training commences to help maintain and improve students' confidence level.

Problem Area 4: Transfer of Information (TOI)
Currently there is no infrastructure or system for information transfer regarding students' physical and mental health from medical school to internship. Such transfer of information without students' consent may result in discrimination and additional pressure in the transition to internship. Alternatively, it may enable health services to provide, and empower interns to access appropriate support services.

Possible Solutions

Interventions to address the lack of preparedness from medical school to internship can be addressed at three levels: educational, social, and developmental [34].

Educational Interventions
Course and curriculum innovation is an important strategy to facilitate the acquisition of the knowledge and skills required to ease the transition from medical student to internship [1].

Medical schools that included PBLs and provided early patient contact produced graduates that were more prepared for internship across most major domains [1]. While PBL as a teaching method has been recognised for decades, its implementation in medical student education can be limited [41]. Given the nature of medical internship, incorporating more chances for PBL and patient interaction are logical steps towards developing students' abilities to apply and integrate foundational concepts into clinical practice [41].

There is some research to show formal transition to clerkship courses or orientation such as the 'Preparation for Internship' (PRINT) course by the University of New South Wales may be effective in improving the student-to-intern transition process [42]. Clinically-orientated PRINT courses for medical students which increase capability in procedural skills, operational management and administrative tasks, has the potential to improve the transition from medical school to internship [42]. Such benefits have been replicated on an international level, where a one-week Internship Boot Camp involving high-fidelity medical simulation, standardised patients, procedural task trainers, and PBL was recalled by most (89%) participants as the most helpful component of their medical school education for internship preparation [43].

Despite these advantages, not all medical schools across Australia have a dedicated PRINT program (Appendix 1), which may contribute to the lack of preparedness experienced by many medical school graduates. Furthermore, these courses have only been implemented on a small scale and further research is required to determine the efficacy, sustainability and limitations of such initiatives to ensure provision of quality PRINT programs. The introduction of pre-internship placements in the final year of medical school is supported by the Australian Medical Association to better prepare graduates for the medical student to internship transition [44].

Social Interventions
Hospitals equipped with a dedicated Intern support officer and Medical Workforce Unit (MWFU) to provide orientation to support interns, workplace support and teaching, especially from junior colleagues, are highly valued during the demanding intern transition [45, 46].

Furthermore, the need for additional support for interns is compounded by the prevalence of mental health problems among junior doctors. A randomised controlled study conducted at a tertiary teaching hospital in Australia showed that optional peer

mentoring programs for first year medical interns enhances junior doctor support structures, job satisfaction, and psychosocial wellbeing compared with participants without mentors [47]. Thus peer-led mentoring programs for interns should be considered nationally, as such programs can reduce the burden of mental health problems amongst junior doctors, build a sense of community and help them navigate their new professional environment. [47].

Developmental Interventions

Empowering medical students by facilitating reflection and transferable learning strategies through the use of portfolios and the promotion of reflection may allow students to become more resilient in the transition process and support their professional development [33]. Optimising reflective practice opportunities within medical training is therefore another under recognised strategy to assist students in coping with the change associated with medical school transitions [33].

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Policy Details

Name: Medical School Transitions

Category: C – Supporting Students

History: Adopted, Council 3, 2020

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Appendix

Summary of Pre-internship status of Medical Programs

Updated from Internships Policy 2016: http://www.amsa.org.au/wp-content/uploads/2016/07/03-Internships-Policy.pdf

University	Pre-internship	Resource	Notes
Adelaide	Yes	https://future.ask.adelaide.edu.au/app/answers/detail/a_id/2671/~/medicine-program-structure-and-curriculum	The final year (year 6) has students completing a one semester pre-internship program.
ANU	No	http://scienceprod2.anu.edu.au/files/CMBE171790-Medical-School-Guide-FA-WEB.pdf	There is no formal pre-internship program.
Bond	Optional	https://www.healthcarestudies.com/Medical-Program-(M.D.)/Australia/Bond-University/	An optional pre-internship rotation is available during the final year.
Deakin	Yes	https://www.deakin.edu.au/__data/assets/pdf_file/0007/1923298/Doctor-of-Medicine-Academic-Calendar-year-4-2020.pdf	A pre-internship program in semester two in final year.
Flinders	Yes	Based on 2016 AMSA Internships Policy Policy	The final year includes pre-intern rotations.
Griffith	No	https://www.griffith.edu.au/study/degrees/doctor-of-medicine-5099	There is no formal pre-internship program.
JCU	Yes	Based on 2016 AMSA Internships Policy Policy	The final year is lightly-assessed, emphasising 'internship-readiness'
Joint Med Program (UNE and UON)	Yes	Based on 2016 AMSA Internships Policy Policy	The final year is a 'pre-intern year'.
Melbourne	Yes	https://handbook.unimelb.edu.au/subjects/meds90025/	Half of the final year is a pre-internship (a four week seminar program and three 4 week clinical placements).

Monash	Yes	https://www.monash.edu/medicine/srh/monash-ruralregional-md-program/5d-placements	The final year is lightly assessed and involves 6 pre-internship rotations.
UNDS	Further clarification needed	Based on 2016 AMSA Internships Policy Policy	The final year is a 'preparation for internship'.
UNDF	Further clarification needed	Based on 2016 AMSA Internships Policy Policy	
UQ	No	https://medicine-program.uq.edu.au/current-students/placements	There is no pre-internship program
Sydney	Yes	https://www.sydney.edu.au/handbooks/medicine_health_PG/coursework_mr/medicine_doctor_sydney_medical_program.shtml	There is a 'pre-internship term' within the final year.
Tasmania	Yes	http://www.tumss.org.au/clinical-schools-2/	A one- to two-week lecture-based pre-internship teaching block at the conclusion of final year.
UNSW	Yes	https://www.handbook.unsw.edu.au/undergraduate/courses/2019/MFAC3510	There is a 'preparation for internship' term within the final year involving two 3-week clinical attachments.
UWA	Yes	https://handbooks.uwa.edu.au/coursedetails?id=c337	Year 4 concludes with a Preparation for Internship unit.
Wollongong	Yes	https://documents.uow.edu.au/content/groups/public/@web/@smah/documents/doc/uow235829.pdf	Phase 4 involves elective, selective and pre-internship (PRINT) rotations.
WSU	No	http://handbook.westernsydney.edu.au/hbook/course.aspx?course=4758.1	There is no pre-internship program.