

# The value of peer mentoring for the psychosocial wellbeing of junior doctors: a randomised controlled study

Sonia Chanchlani<sup>1</sup>, Daniel Chang<sup>2</sup>, Jeremy SL Ong<sup>2</sup>, Aresh Anwar<sup>2</sup>

**The known** Mental health problems are common among junior doctors. There is little information about effective strategies for assisting them at the individual and hospital levels.

**The new** We found that peer-led mentoring provides junior doctors with an improved sense of community and support, and helps them better navigate their complex professional environment.

**The implications** Peer-led mentoring programs for interns should be considered nationally, as such programs can reduce the burden of mental health problems among junior doctors.

The transition from medical student to intern can be daunting and have a negative impact on the health and wellbeing of young doctors. Most junior doctors responding to a 2008 national survey published in the *MJA* satisfied criteria for low job satisfaction (71%), burnout (69%) and compassion fatigue (54%).<sup>1</sup> In a subsequent national survey, the proportion of doctors with very high psychological distress was ten times that for other professionals in Australia (5.9% *v* 0.5%); those under 30 years of age more frequently reported high levels of stress.<sup>2</sup>

Revelations about the widespread extent of bullying in hospital culture<sup>3</sup> have brought into sharp contrast the importance of formal strategies for improving support for the psychological wellbeing of junior doctors. The 2009 Australian Medical Association Council of Doctors in Training encouraged mentoring programs in hospitals,<sup>1</sup> but the value of peer mentoring relative to other support mechanisms requires further evaluation and research. Peer mentoring is a recognised support mechanism for specialist trainees, medical students and doctors from ethnic minorities,<sup>4</sup> and for medical academics.<sup>5</sup> Research in Australia and overseas has led to the conclusion that formal strategies for reducing rates of psychological morbidity and burnout during internship are needed.<sup>6-8</sup>

Qualitative research sheds light on stakeholder perceptions and improves understanding of contextual factors underlying successful interventions.<sup>9</sup> This type of research is critical when designing comprehensive solutions for public health problems that depend on identifying and managing socio-behavioural factors.<sup>10</sup> Interviews are a flexible and powerful tool that aid investigation of difficult research questions,<sup>11</sup> taking into consideration the impact of an individual's environment, support mechanisms, and sense of wellbeing on their responses and actions.<sup>12,13</sup>

Our objectives were to explore the value of a peer mentoring program for interns and to assess the demand for and benefits of such a program in an Australian hospital. We hypothesised that a

## Abstract

**Objective:** To explore the value of a peer mentoring program for first year medical interns and to assess the demand for and benefits of such a program in an Australian hospital.

**Design, setting and participants:** Randomised controlled study of the impact on first year interns of peer-led mentoring by second and third year interns, undertaken during 2015 at the Royal Perth Hospital, a tertiary teaching hospital.

**Methods and main outcome measure:** Interns were recruited and randomised 1:1 to being assigned or not assigned a mentor. Qualitative outcome data were collected in semi-structured interviews and focus groups at 12 months to assess psychosocial wellbeing and job satisfaction.

**Results:** Fifty-three of 79 interns (67%) applied to participate in the program. Twenty-six mentor-mentee pairs matched by sex and career preferences were established; 27 interns were allocated to the control group. Iterative data analysis identified two major themes related to the value of the mentorship program: aiding navigation through the complex health care system, and enhancing a sense of community. Participants with mentors reported high satisfaction with the program and a positive impact on stress levels, morale, sense of support, job satisfaction, and psychosocial wellbeing compared with participants without mentors.

**Conclusion:** An optional peer mentoring program enhances junior doctor support structures, builds a sense of community, and helps participating interns navigate their new professional environment. Our trial provides a feasibility model that could be adapted to local conditions, regionally or nationally.

**Trial registration:** Australian New Zealand Clinical Trials Registry, ACTRN12618000455268; 29 March 2018 (retrospective).

peer-led mentoring program would have a positive impact on the psychosocial wellbeing of junior doctors.

## Methods

### Peer mentoring program: design and recruitment

Prior to the formal research program, a 6-month pilot program for ten randomly matched pairs of interns (postgraduate year 1) and residents (postgraduate years 2 and 3) in the same hospital was undertaken (unpublished data). We established in follow-up focus group interviews that interns preferred peer mentors 1 or 2 years their senior; residents who had completed medical school more than 4 years ago were perceived as less able to relate to the immediate experiences of new interns. Participants also preferred to be matched with mentors by sex and career preferences, and no formal training program in mentoring was deemed necessary, as mentees were satisfied with the program resource pack.

<sup>1</sup>Centre for Medical Officer Recruitment and Education (CMORE), Royal Brisbane and Women's Hospital, Brisbane, QLD. <sup>2</sup>Royal Perth Hospital, Perth, WA.

✉ [soniachanchlani@gmail.com](mailto:soniachanchlani@gmail.com) • doi: [10.5694/mja17.01106](https://doi.org/10.5694/mja17.01106) • See Editorials, p. 391, 392 • Published online 22/10/2018

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The program was launched in 2015 as a 12-month randomised controlled study (retrospectively registered: Australian New Zealand Clinical Trials Registry, ACTRN12618000455268; 29 March 2018).

Recruitment emails with fact sheets and registration forms were sent to 150 prospective resident mentors and 79 first year post-graduate doctors at Royal Perth Hospital before the start of the 2015 academic year and during the intern orientation week. Interns who applied were randomised 1:1 (using an online random sequence generator; [random.org](http://random.org)) to being assigned or not assigned a peer mentor. There were no exclusion criteria.

The pairs were matched by career preferences and sex, and supplied with a program resource pack, which included details about roles and responsibilities, a code of conduct, confidentiality plan, optimal contact schedule, the governance structure for the program, emergency contact details, and a mental health escalation plan. Suggested discussion topics for mentors and mentees included workplace scenarios, work–life balance, administrative problems, career development and uncertainty, performance, efficiency and time management, relationships with colleagues, access to further learning, and personal problems. The program design was purposeful and flexible, allowing peer-initiated meetings at times and locations of mutual convenience.

### Focus groups

Semi-structured interview questions (online [Appendix](#)) were drawn from validated tools<sup>14–16</sup> employed in quantitative surveys in the United States and the United Kingdom. The interviews explored the degree of communication between members of mentoring pairs, as well as the overall value of the program for the emotional burnout, organisational engagement, job satisfaction, sense of support, and the psychosocial wellbeing of the mentee.

### Data collection

The participants were introduced to the study authors during the recruitment period and rapport was developed through regular personal and email contact. Interviews and focus groups at the end of the academic year were initially advertised by email, and a purposeful sampling method was subsequently applied.<sup>17,18</sup> The sample size was determined by the point at which data saturation or redundancy was reached during post-program interviews;<sup>18</sup> that is, when it was decided that sufficient information had been collected, so that further collection and analysis were unnecessary.

### Consent and confidentiality

Informed consent and confidentiality were discussed before individual and group interviews. Interviews (30–60 minutes) were undertaken by the authors (SC or DC) in a distraction-free side room of the doctors' common room at a mutually convenient time, recorded, and transcribed.

### Data analysis

Inductive thematic analysis<sup>19</sup> commenced with transcription of the interview recording, followed by a highly iterative process of data immersion. The interviewed respondents were offered the opportunity to amend the transcript in accordance with respondent validation.<sup>20</sup> As patterns of codes led to identification of subthemes, the transcripts were reviewed and compared with relevant published literature to ensure a broad range of perspectives and to reduce systematic bias.<sup>19</sup> Data source triangulation<sup>21</sup> included interviews with mentors, interns without mentors, and members of the medical education team. During the final analysis, all data were checked against themes to confirm patterns

### 1 Baseline characteristics of the intervention and control groups

	Intervention	Control
Total number	26	27
Sex		
Men	12 (46%)	15 (56%)
Women	14 (54%)	12 (44%)
Age (years), mean (SD)	27.2 (1.6)	28.4 (1.4)
Career preference		
Surgical	4 (16%)	3 (11%)
Medical	2 (8%)	4 (15%)
Other	3 (12%)	2 (7%)
None	17 (64%)	18 (67%)
Sex of matched mentor: mentee preference		
Man	0	1 (4%)
Woman	1 (4%)	2 (8%)
No preference	25 (96%)	24 (88%)

and recurring regularities related to the research question and relevant publications.<sup>19</sup>

### Ethics approval

Ethics approval was granted by the Royal Perth Hospital Human Research Ethics Committee (reference, 14-086).

### Results

Fifty-three of 79 new interns (67%) applied to participate in the program; 26 mentor–mentee pairs were matched, and 27 interns were allocated to not receiving a mentor.

The intervention and control groups were similar in terms of sex, age, and career preferences ([Box 1](#)). Data saturation was reached after interviewing ten interns from the intervention group and ten from the control group, eight mentors, and two staff members of the medical education unit responsible for supporting junior doctors (CONSORT chart: online [Appendix](#)).

Two key themes related to the value of the program emerged: aiding navigation through the complex health care system, and enhancing a sense of community. Throughout the commentaries, the overarching concept of the necessity for support was identified as a key concept, consistent with the questions and conclusions highlighted by the 2009 survey.<sup>1</sup>

### Aiding navigation through the complex health care system

A pattern of codes related to “career advice and support” were identified and categorised as the subtheme “difficult macro-environment”, consistent with previous reports that junior doctors felt pressured to further their careers.<sup>1</sup> Our program alleviated some aspects of these problems; one intern noted that “career stream matching was useful, as I was able to learn which courses and terms could facilitate career.” Another confirmed that “it was great to have a formal mentor for continuity, support, and career advice” and that the program provided “great support during the job application process.”

Concerns about furthering their careers were probably compounded by difficulties coping with the demands of a new clinical

## 2 Codes extracted from interview transcripts for the theme “Navigating the complex health care system”

Subtheme	Sample quotes that illustrate code
Difficult macro-environment Codes: Career advice	<ul style="list-style-type: none"> <li>• Career stream-matching useful, was able to learn which courses and term could facilitate career early on</li> <li>• It was great to have a formal mentor for continuity and support and career advice</li> <li>• Great support during job application process</li> <li>• Taught me clinical skills</li> </ul>
Difficult micro-environment Codes: Hospital/organisational questions	<ul style="list-style-type: none"> <li>• Would definitely turn to my mentor if I was feeling harassed or had issues with the organisation</li> <li>• Learned how to navigate system, apply for leave, when to escalate to seniors, specific rotation etiquette</li> <li>• Great during first few terms</li> <li>• Great support and to ask for tips</li> <li>• I was worried about starting a certain term, but was reassured and given tips</li> <li>• Good to have a heads up pre terms</li> <li>• Having a mentor would have helped with issues relating to leave, preparation for night shifts, how to maximise salary sacrificing, and which bosses are good to approach for research.</li> </ul>

placement.<sup>1</sup> Recurring concepts related to the need for support other than clinical- or career-related support were coded as “navigating hospital and organisational questions” and collated in the subtheme “difficult micro-environment.” One intern stated, “I would definitely turn to my mentor if I was feeling harassed or had issues with the organisation”; another “learned how to navigate the system, apply for leave, and when to escalate to seniors.” A third intern “was worried about starting a certain term, but was reassured and given tips.”

Conversely, a participant in the control group confirmed that “having a mentor would have helped with issues relating to leave, preparation for night shifts, how to maximise salary sacrificing, and which bosses are good to approach for research.”

Concerns about broader career support and organisation-specific support were combined as the first major theme, aiding navigation through the complex health care system (Box 2).

### Enhancing a sense of community

Several concepts related to requiring support were coded as “debrief and reassurance” and collated as the subtheme

“establishing support networks.” It has been reported that first year interns find it difficult to maintain social and personal relationships.<sup>1</sup> This led to the emergence of the second major theme, the value of the program for enhancing the sense of community (Box 3). Participants noted, for example, that it was “great to meet pre- and post-term to discuss hesitations and debrief”, and that it was “good to see a familiar face around hospital.” They confirmed that it was “nice to meet someone when you are new and don’t know anyone” and “knew of others who would really appreciate having someone to debrief with.”

Directly questioned about the impact of the program on stress levels, morale, sense of support, job satisfaction, and the psychosocial wellbeing of junior doctors, all interview participants (interns with or without mentors, members of the education unit) indicated that they believed the program helped new junior doctors in these areas when compared with interns without mentors. Further, satisfied interns expressed a keen interest in becoming mentors the following year, indicating that many felt the program offered future interns significant benefits.

No harms or unintended consequences arising from the study were reported by doctors in the intervention and control groups.

## 3 Codes extracted from interview transcripts for the theme “Sense of community”

Subtheme	Sample quotes that illustrate code
Establishing support networks Codes: Debrief/talking/reassurance	<ul style="list-style-type: none"> <li>• It was great to have a formal mentor for continuity and support and career advice</li> <li>• Great support during job application process</li> <li>• I chose RPH for that community feeling, everyone helps everyone, I love it, I'm applying to work at RPH again.</li> <li>• Great to meet pre- and post-term to discuss hesitations and debrief</li> <li>• Nice to have someone who cares!</li> <li>• Great support and to ask for tips</li> <li>• I was worried about starting a certain term, but was reassured and given tips</li> <li>• Good to see a familiar face around hospital</li> <li>• Good to talk to someone</li> <li>• I felt supported</li> <li>• Great to debrief</li> <li>• Nice to meet someone when you are new and don't know anyone</li> <li>• Knew if I was worried I could talk to them</li> <li>• I would really appreciate having someone to debrief with</li> </ul>

## Discussion

The two overarching themes identified by our study are underpinned by the concept of support: career and organisational support, and social and personal support. This finding highlights the fact that peer mentoring can provide an opportunity to debrief, maintain professional relationships, discuss principles of self-care, and facilitate long term career goals. These findings were consistent with previous reports that “to flourish, physicians need some degree of choice (control over their lives), camaraderie (social connectedness), and an opportunity for excellence (being part of something meaningful).”<sup>22</sup> The authors of a key article also noted that one source of psychosocial distress and low job satisfaction among Australian junior doctors may be their difficulties in coping with the demands of constantly changing clinical placements, furthering their careers, and maintaining social and personal networks.<sup>1</sup> We found that peer mentoring is not only a useful avenue of support in these areas, but may also facilitate reporting problems that require further escalation and executive management.

Our findings highlight the value of a well designed peer mentoring program for providing support for many of the problems faced by junior doctors. Positive experiences were also reported by the resident mentors. Mirroring the success of similar initiatives with senior clinicians,<sup>5</sup> vocational medical trainees in the UK,<sup>23</sup> and nurses,<sup>24</sup> the intervention was perceived to have had a positive impact on stress levels, morale, sense of support, job satisfaction, and psychosocial wellbeing in the group of interns assigned mentors.

## Governance

Our program is not designed to replace the existing support mechanisms that local medical education units are required to maintain. Peer mentoring should be an additional mechanism that helps interns better use existing sources of support.

In Australia and New Zealand, Postgraduate Medical Education Councils have been established to oversee site-specific training and educational opportunities for junior medical staff during the early postgraduate years, and have a general responsibility for supporting and attending to their education, training, and welfare requirements.<sup>25</sup> We recommend governance and maintenance of the individual health organisation’s peer mentoring program by the site-specific medical education unit responsible for supervising the junior medical workforce, supported by Postgraduate Medical Education Councils.

## Limitations

Confounding factors, such as differing baseline levels of psychosocial distress, rotation through clinical units with differing demands, and external personal stressors, may have affected our results. Limiting the study group to employees of one hospital will have eliminated the effect of organisation-related confounders. It was difficult to control for bleeding of influence or information between the intervention and control groups. Although members of the control group reported a sense of disappointment, they were reminded of the need for controlled trials to clarify the value of interventions.

Whether those who chose not to participate in the study were as vulnerable to workplace stressors as those who participated is unknown. Mandatory program participation may benefit interns who find it difficult to ask for help. The benefits of a randomly allocated control group included minimisation of participant selection bias. The study design also controlled for demographic

differences between the two groups and improved the internal validity of the study. Further, the control group data were required for source triangulation (ie, to confirm statements by the intervention group participants). However, a more ethnographic approach, without a control group, may have achieved more clear-cut results. Alternative strategies worth exploring include comparison of our semi-structured mentoring program with a more formal, structured program.

The study timeframe was too short for assessing the impact of the program on patient safety and long term staff retention.

The involvement of the first author (SC) in the design and development of the peer mentoring program as well as in the study itself was a potential source of bias. However, objectivity was strenuously maintained throughout the data collection process, aided by multiple validation techniques and continuous oversight by colleagues and supervisors. Further, the first author was employed in medical administration at the hospital, but participants were assured that she would have no role in the recruitment and term allocation process for the following year.

## Conclusion

Most investigations of the mental wellbeing of health care workers have quantified their level of psychosocial distress and highlighted the need to evaluate potential interventions. We explored the value of peer mentoring for the psychosocial wellbeing and job satisfaction of first year interns in semi-structured interviews. Iterative thematic analysis led us to conclude that the peer mentoring program aided navigation through the complex health care system and enhanced a sense of community, and participants perceived a positive impact on stress levels, morale, sense of support, job satisfaction, and psychosocial wellbeing for interns with a matched peer mentor. A well designed peer-led mentoring program can thus improve the mental health and job satisfaction of junior doctors by providing additional support, building a sense of community, and helping them navigate their new professional environment.

Our novel investigation explored the value of peer mentoring of Australian pre-vocational junior doctors, and provides a feasibility model that could be adapted regionally or nationally. The program is generalisable and has a number of positive features, including its low cost, effectiveness, ease of recruitment, and self-sustaining nature, as satisfied interns were keen to be mentors in the following year. Maintaining the program in different health care settings, cost–benefit analysis of the benefit for mentors of their participation, the long term impact on staff recruitment and retention, and the effect of junior doctor burnout and stress on safety should also be investigated.

On the basis of our findings, we specifically recommend that:

- all health organisations responsible for supporting junior doctors consider implementing peer mentoring programs that match interns with residents 2–3 years their senior;
- the positive experiences reported by resident mentors be further investigated;
- further quantitative analysis of the long term psychosocial distress and burnout of doctors described by the studies that brought attention to these important problems be undertaken to support broader implementation of similar interventions.

**Competing interests:** No relevant disclosures.

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