

QATS QUALITY ASSURANCE OF TRAINING SETTINGS OVERVIEW ACROSS LOCAL HEALTH NETWORKS

Report on May 2015 Survey of Medical Trainees

Workplace training environments for junior doctors were assessed by the South Australian Medical Education and Training (SA MET) Unit in May 2015. Trainee medical officers ('trainees') across all stages of postgraduate training were able to rate and comment on their clinical learning environments via anonymous online survey. This report presents an overview of findings from the 252 trainees who took part.

1. BACKGROUND

The SA MET Unit was established to monitor and improve postgraduate medical training quality in South Australia (SA) on behalf of SA Health. Standards of clinical training are determined to a large extent by the settings in which junior doctors work and learn. The Quality Assurance of Training Settings (QATS) project aims to collect information about learning environments in SA Health workplaces.

It is intended that the information be used to shape ongoing improvements to the clinical training of SA's junior medical workforce.

QATS functions primarily as a screening tool. By offering trainees a confidential platform to communicate about the educational conditions in their workplace, QATS can gain insight into training experiences that individuals may otherwise be reluctant to share.¹

To maintain respondents' anonymity, data are aggregated before delivery to Local Health Network (LHN) leadership, and areas of concern can be investigated further where indicated.

Pilot work in December 2014 demonstrated the feasibility of QATS' methods and the usefulness of the information obtained, leading to a subsequent round of surveys in May 2015.

3. RESULTS

3.1 Participation

Surveys were sent to 1700 trainees, and 252 responded. As a percentage of surveys sent, response rates varied between data collection streams (Table 1).

TABLE 1 SURVEY DISTRIBUTION AND RESPONSE: OVERALL AND BY DATA COLLECTION STREAM.

RESPONSE TO SURVEY	OVERALL	DATA COLLECTION STREAMS				
		CALHN	SALHN	NALHN	WCHN	INTERNS
Number of responses	252	99	63	34	22	34
Number of trainees sent survey	1700	569	382	288	209	252
Response as percent of trainees	15%	17%	16%	12%	11%	13%

CALHN: Central Adelaide Local Health Network; SALHN: Southern Adelaide LHN; NALHN: Northern Adelaide LHN; WCHN: Women's and Children's Health Network.

2. PROCESS

After gaining approvals from LHN leadership, online surveys were administered in five data collection streams. Interns comprised one stream, while registrars and resident medical officers (RMOs) were streamed by employing LHN. The Chief Medical Officer emailed survey links to interns, and other trainees received links from LHN clinical leaders. Surveys were open for two weeks, and a reminder email was sent one week after the initial contact.

The Postgraduate Hospital Environment Measure² (PHEEM) was used to assess learning environments, chosen for its reliability³ and extensive previous use.⁴ Forty statements (see Box A, appended) are rated on a five-point scale (0=strongly disagree, 4=strongly agree). Answers to four negatively-worded items are scored in reverse. The PHEEM global score is the sum of all item scores, and three subscales (focussed on teaching, role autonomy and social support) are calculated from item sets (see Box A). The survey asked for basic demographic information, and trainees could add comments in text format. Findings are shown as frequency (n) and percent; due to rounding, percent values may not add to exactly 100.

2.1 Reporting context

Data from LHNs are reported separately, and another report describes data from interns. Results from the entire trainee sample are presented here; these can be used as context for LHN findings, by referring to corresponding tables. Some pilot data are also shown, for comparison with recent findings.

¹ Ivory. Listen, hear, act: challenging medicine's culture of bad behaviour. *Med J Aust* 2014; 202.

² Roff et al. Development of an instrument to measure postgraduate clinical learning environment. *Medical Teacher* 2005; 27.

³ Wall et al. Is PHEEM a multi-dimensional instrument? *Medical Teacher* 2009; 31.

⁴ Gough et al. PHEEM 'Downunder'. *Medical Teacher* 2010; 32.

3.2 Work settings

Most of the respondents were based at the larger hospitals within their employing LHN. The majority of CALHN participants were based at RAH (73/110, 66%) or the Queen Elizabeth Hospital (TQEH: 30/110, 27%), while over half of the SALHN trainees (47/75, 63%) worked at the Flinders Medical Centre (FMC). Most NALHN trainees worked at Lyell McEwin Hospital (27/44, 61%) or Modbury Hospital (15/44, 34%).

3.3 Trainee characteristics

Most participants were Australian-trained, and male trainees outnumbered female trainees in the overall sample (Table 2).

TABLE 2 DOMESTIC OR OVERSEAS TRAINING, GENDER AND AGE GROUP: ALL RESPONDENTS.

TRAINING*	n	%	GENDER	n	%	AGE GROUP	n	%
Trained in Australia	155	62%	Female	129	51%	30 + years	139	55%
Overseas-trained	55	22%	Male	120	48%	20 - 29 years	112	44%
<i>no response</i>	42	17%	<i>no response</i>	3	1%	<i>no response</i>	1	<1%
TOTAL	252	100%	TOTAL	252	100%	TOTAL	252	100%

* Interns were asked whether they had completed medical school overseas.

The age profile of participants (more than half were aged 30 or older) was consistent with their stated levels of postgraduate training. While trainees from all levels participated, registrars comprised the largest group of respondents overall (Table 3).

TABLE 3 LEVELS OF MEDICAL TRAINING: OVERALL AND ACROSS FOUR LHN SAMPLES.

TRAINING STAGE	OVERALL		CALHN		SALHN		NALHN		WCHN	
	n	%	n	%	n	%	n	%	n	%
Registrar in specialty training program	147	58%	75	68%	41	55%	15	34%	5	24%
Resident or career medical officer	67	27%	24	22%	21	28%	17	39%	16	76%
Intern	35	14%	11	10%	11	15%	11	25%	..	..
<i>no response</i>	3	1%	..	..	2	3%	1	2%	..	..
TOTAL	252	100	110	100%	75	100%	44	100%	21	100%

3.4 Postgraduate Hospital Educational Environment Measure: Global score

Scores were calculated for the 212 participants who had answered at least 36/40 PHEEM items.¹ Over half of these trainees returned global scores suggesting their educational environments were *more positive than negative, with room to improve*, and a third returned scores indicating *excellent* overall perceptions of their educational environment (Table 4).

TABLE 4 OVERALL PERCEPTION OF EDUCATIONAL ENVIRONMENT: NUMBER AND PERCENT OF TRAINEES IN PHEEM GLOBAL SCORE CATEGORIES.

RANGE	INTERPRETATION OF SCORE RANGE	n	%
0 - 40	very poor	..	..
41 - 80	plenty of problems	20	9%
81 - 120	more positive than negative, room to improve	118	56%
121 - 160	excellent	74	35%
TOTAL		212	100%

Scores calculated for 212 trainees. % uses 212 as denominator.

3.5 Postgraduate Hospital Educational Environment Measure: Subscales

Subscale scores also tended to be in the upper ranges (Table 5). More than half returned subscale scores suggesting they had a *positive perception of (their) job*, half felt their teaching was *moving in the right direction*, and for the majority of respondents, the social supports within their learning environment comprised *more pros than cons*.

TABLE 5 PERCEPTIONS OF ROLE AUTONOMY, TEACHING AND SOCIAL SUPPORT: NUMBER AND PERCENT OF TRAINEES IN PHEEM SUBSCALE SCORE CATEGORIES.

RANGE	INTERPRETATION OF SUBSCALE SCORE	n	%
<i>Subscale I. Perceptions of role autonomy</i>			
0 – 14	very poor	..	..
15 – 28	a negative view of one's role	17	8%
29 – 42	a more positive perception of one's job	122	58%
43 – 56	excellent perception of one's job	73	34%
TOTAL		212	100%
<i>Subscale II. Perceptions of teaching</i>			
0 – 15	very poor quality	2	1%
16 – 30	in need of some retraining	19	9%
31 – 45	moving in the right direction	107	50%
46 – 60	model teachers	84	40%
TOTAL		212	100%
<i>Subscale III. Perceptions of social support</i>			
0 – 11	non-existent	..	..
12 – 22	not a pleasant place	23	11%
23 – 33	more pros than cons	131	62%
34 – 44	good supportive environment	58	27%
TOTAL		212	100%

Scores calculated for 212 trainees. % uses 212 as denominator.

¹ Clapham et al. Educational environment in intensive care medicine. *Medical Teacher* 2007; 29.

3.6 Topics from Postgraduate Hospital Educational Environment Measure

Areas of high performance

PHEEM items attracting positive ratings (agree or strongly agree) from large proportions of the sample suggest these are performing areas in the educational environment (Table 6).

TABLE 6 PHEEM ITEMS WITH WHICH 80% OR MORE OF TOTAL SAMPLE AGREED/STRONGLY AGREED.

PHEEM ITEMS				
<i>In order of % agree or strongly agree</i>	agree or strongly agree	uncertain	disagree or strongly disagree	N*
I feel physically safe within the hospital environment	93%	4%	3%	212
I have an employment contract w information on my work hours	91%	4%	5%	225
My clinical teachers encourage me to be an independent learner	90%	9%	1%	211
I do not have to perform inappropriate tasks	90%	6%	4%	224
There is not racism in this rotation	90%	5%	5%	223
I have the appropriate level of responsibility in this rotation	90%	5%	5%	223
There is not sex discrimination in this rotation	88%	9%	3%	224
I feel part of a team working here	88%	7%	5%	212
My clinical teachers are enthusiastic	86%	11%	4%	224
My clinical teachers have good teaching skills	86%	9%	5%	212
My clinical teachers are accessible	86%	8%	5%	212
I have good clinical supervision at all times	85%	7%	8%	223
I have good collaboration w other doctors in my training program	83%	10%	7%	223
My clinical teachers have good communication skills	82%	12%	6%	223
My clinical teachers promote an atmosphere of mutual respect	82%	11%	8%	212

N = number of responses to item, % uses N as denominator.

Lower performing areas

Items that returned the highest rates of disagreement or strong disagreement - indicating areas of relatively poor performance - are shown in Table 7.

TABLE 7 PHEEM ITEMS WITH WHICH 20% OR MORE OF TOTAL SAMPLE DISAGREED/STRONGLY DISAGREED.

PHEEM ITEMS				
<i>In order of % disagree or strongly disagree</i>	agree or strongly agree	uncertain	disagree or strongly disagree	N
There are adequate catering facilities when I am on call	29%	29%	42%	212
This hospital has good quality accommodation for trainees	20%	50%	30%	222
I am not paged inappropriately	58%	19%	24%	224
I have the opportunity to provide continuity of care	63%	15%	23%	224
I had an informative orientation program	65%	12%	22%	223
I have protected educational time in this rotation	67%	12%	21%	225
I get regular feedback from seniors	69%	11%	20%	212

N = number of responses to item, % uses N as denominator.

Areas of uncertainty

Approximately one in three trainees (39%) were uncertain as to whether good counselling was available for trainees experiencing difficulties, and just over a quarter of the overall sample (27%) were unsure if they had suitable access to careers advice. Similar proportions of the sample were uncertain as to whether accurate unit specific written information was available (24%), and if a no-blame culture existed in the rotation they undertook.

Box A (appended) summarises the trainee responses to each of the 40 PHEEM items.

4. DISCUSSION

Findings

A relatively small number of trainees took part in this round of surveys. The sample size was similar to that of the pilot work, and again, results must be interpreted with this in mind. The extent to which the pilot and present samples 'overlap' is also unknown.

The data presented here may be used to provide context for the LHN-level findings shown in the other reports.

It's difficult to get objective career advice from supervisors as they'll often 'advertise' their own training/career pathway even if it doesn't align with yours. After internship there are no 'careers advice' days/workshops where different fields can be discussed without bias.

Resident Medical Officer

Nevertheless, the ratings data and comments offer useful insights. For example, although needs for career advice extend beyond the intern year, resources may not be made available.

There are teaching/clinical learning opportunities and there is meant to be time available for me to attend. However, the size of the workload often means there's no time for the teaching to occur.

Resident Medical Officer

Too few patients, not enough exposure to keep up or improve skills... Has a role in providing study time.

Registrar

Workload

Comments from separate trainees served to highlight the difficulties posed by very high clinical workloads, and those resulting from too few patients.

Overall reported incidence of racism and sexism were low, and very few participants perceived threats to their physical safety in the workplace. Looking after trainees' health on the job does not stop at the absence of direct threats, however. Trainees having access to quality after-hours catering facilities would seem sensible, but the data suggests widespread inadequacy in this regard.

Nearly 40% (82/212) of respondents did not know whether there were good counselling opportunities available for trainees who were having difficulties. Efforts could be made to improve knowledge of services that are available, given the prevalence and harms associated with poor psychological functioning among medical trainees.

Future plans

SA Health has endorsed further implementation of QATS across LHNs. It is intended that yearly QATS surveys will continue to provide timely insights into developing issues, and deliver enhanced understanding for the impacts of local improvement strategies and broader system reforms.

Discussions are being held as to the time of year that would be most useful to survey trainees, also regarding strategies to improve response rate, and how best to communicate QATS outcomes to stakeholders.

The QATS project may in future include a series of focus groups, to gain greater understanding of issues that are detected among survey responses.

Contact

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BOX A COMPLETE PHEEM ITEM SET WITH SUMMARISED RESPONSES FROM PARTICIPANTS

PHEEM ITEMS	agree or strongly agree		uncertain		disagree or strongly disagree		N*
	n	%	n	%	n	%	
<i>In order of % agree or strongly agree in overall trainee sample</i>							
I feel physically safe within the hospital environment ^S	197	93%	9	4%	6	3%	212
I have an employment contract with information on my work hours ^R	204	91%	9	4%	12	5%	225
My clinical teachers encourage me to be an independent learner ^T	190	90%	18	9%	3	1%	211
‡ I do not have to perform inappropriate tasks ^R	201	90%	14	6%	9	4%	224
‡ There is not racism in this rotation ^S	201	90%	11	5%	11	5%	223
I have the appropriate level of responsibility in this rotation ^R	200	90%	12	5%	11	5%	223
‡ There is not sex discrimination in this rotation ^S	197	88%	21	9%	6	3%	224
I feel part of a team working here ^R	187	88%	14	7%	11	5%	212
My clinical teachers are enthusiastic ^T	192	86%	24	11%	8	4%	224
My clinical teachers have good teaching skills ^T	183	86%	19	9%	10	5%	212
My clinical teachers are accessible ^T	183	86%	18	8%	11	5%	212
I have good clinical supervision at all times ^T	189	85%	16	7%	18	8%	223
I have good collaboration with other doctors in my training program ^S	184	83%	23	10%	16	7%	223
My clinical teachers have good communication skills ^T	183	82%	26	12%	14	6%	223
My clinical teachers promote an atmosphere of mutual respect ^R	173	82%	23	11%	16	8%	212
The training this rotation makes me feel ready for the next stage ^R	168	79%	21	10%	23	11%	212
My clinical teachers have good mentoring skills ^S	166	78%	31	15%	15	7%	212
There is access to educational program relevant to my needs ^T	165	78%	21	10%	26	12%	212
My clinical supervisors set clear expectations ^T	173	77%	30	13%	22	10%	225
I have opportunities to gain appropriate skills in practical procedures ^R	163	77%	24	11%	25	12%	212
My workload in this job is fine ^R	163	77%	18	8%	31	15%	212
I have enough clinical learning opportunities for my needs ^T	162	76%	22	10%	28	13%	212
I get a lot of enjoyment out of my present job ^S	160	75%	33	16%	19	9%	212
Senior staff utilise learning opportunities effectively ^T	154	73%	40	19%	18	8%	212
There are clear clinical protocols in this rotation ^R	163	73%	30	14%	29	13%	222
My clinical teachers are well organised ^T	153	72%	41	19%	18	8%	212
I am able to participate actively in educational events ^T	157	70%	37	17%	30	13%	224
I get regular feedback from seniors ^T	146	69%	23	11%	43	20%	212
Clinical teachers give good feedback on strengths and weaknesses ^T	144	68%	39	18%	29	14%	212
My hours conform to my Job & Person Specification ^R	150	67%	32	14%	41	18%	223
I have protected educational time in this rotation ^T	151	67%	26	12%	48	21%	225
I had an informative orientation program ^R	146	65%	27	12%	50	22%	223
There is accurate unit specific written information available ^R	139	63%	52	24%	30	14%	221
I have the opportunity to provide continuity of care ^R	140	63%	33	15%	51	23%	224
There is a no-blame culture in this rotation ^S	132	62%	48	23%	32	15%	212
I have suitable access to careers advice ^S	131	58%	60	27%	33	15%	224
‡ I am not paged inappropriately ^R	129	58%	42	19%	53	24%	224
Good counselling is available for trainees with difficulties in this rotation ^S	92	43%	82	39%	38	18%	212
There are adequate catering facilities when I am on call ^S	62	29%	61	29%	89	42%	212
This hospital has good quality accommodation for trainees ^S	45	20%	111	50%	66	30%	222

N=number of responses to item, % uses N as denominator. Subscales: T=Teaching, S=Social support, R=Role autonomy. †These items appear on survey with 'negative' meaning (e.g. 'There is racism in this rotation'), and response scores are inverted (0=strongly agree, 4=strongly disagree) for global and subscale score calculations. For comparability with other items, the 'positive' versions (e.g., 'There is no racism in this rotation') are shown.

BOX B SURVEY DISTRIBUTION AND RESPONSE: MAY 2015 AND DECEMBER 2014.

MAY 2015 RESPONSE		DATA COLLECTION STREAMS, MAY 2015				
		OVERALL	CALHN	SALHN	NALHN	WCHN	INTERNS
Number of responses	252	99	63	34	22	34
Number of trainees sent survey	1700	569	382	288	209	252
Response as percent of trainees	15%	17%	16%	12%	11%	13%
DECEMBER 2014 RESPONSE		SURVEY GROUPINGS, DEC 2014				N/A
		OVERALL	CALHN	SALHN	NALHN		WCHN
Number of responses	227	83	23	69	52	
Number of trainees sent survey	1357	514	170	381	292	
Response as percent of trainees	17%	16%	14%	18%	18%	

N/A: In the December 2014 pilot, all trainees were grouped by LHN (no separate stream for interns).

BOX C REPORT TITLES, RESPONDENT GROUP SIZE

REPORT TITLE	SOURCE DATA COLLECTION STREAM					n
	CALHN	SALHN	NALHN	WCHN	INTERNS	
Overview across LHNs	99	63	34	22	34	252
CALHN Trainees	99	..	..	..	11	110
SALHN Trainees	..	63	..	1	11	75
NALHN Trainees	..	..	34	..	11	44
WCHN Trainees	..	..	..	21	..	21
Interns across LHNs	..	..	1	..	34	35

NOTES: One respondent to the NALHN data collection stream self-identified as an intern; their data have been included in the NALHN report and the Intern report. One respondent to the WCHN stream indicated that they worked at SALHN during the rotation; their data are included in the SALHN report, not the WCHN report.

BOX D RESPONDENT CHARACTERISTICS, MAY 2015 AND DECEMBER 2014.

DESCRIPTIVE CHARACTERISTICS	SURVEY ROUND			
	MAY 2015		DEC 2014	
	n	%	n	%
Location of training				
Trained in Australia	155	62%	154	68%
Overseas trained	55	22%	40	18%
No response	42	17%	33	15%
TOTAL	252	100%	227	100%
Gender				
Female	129	51%	116	51%
Male	120	48%	102	45%
No response	3	1%	9	4%
TOTAL	252	100%	227	100%
Age group				
30 + years	112	44%	92	41%
20 - 29 years	139	55%	133	59%
No response	1	<1%	2	1%
TOTAL	252	100%	227	100%
Level of medical training				
Registrar in accredited specialty training	147	58%	139	61%
Resident medical officer	67	27%	49	22%
Intern	35	14%	38	17%
No response	3	<1%	1	<1%
TOTAL	252	100%	227	100%

**BOX E PERCEPTIONS OF THE EDUCATIONAL ENVIRONMENT, MAY 2015 AND DECEMBER 2014:
NUMBER AND PERCENT OF TRAINEES IN PHEEM GLOBAL AND SUBSCALE SCORE CATEGORIES.**

RANGE	INTERPRETATION OF SCORE RANGE <i>PHEEM global score</i>	SURVEY ROUND			
		MAY 2015		DEC 2014	
		n	%	n	%
0 - 40	very poor	..	..	6	3%
41 - 80	plenty of problems	20	9%	24	12%
81 - 120	more positive than negative, room to improve	118	56%	134	66%
121 - 160	excellent	74	35%	39	19%
TOTAL		212	100%	203	100%
<i>Subscale I. Perceptions of role autonomy</i>					
0 - 14	very poor	..	..	3	2%
15 - 28	a negative view of one's role	17	8%	22	11%
29 - 42	more positive view of one's job	122	58%	136	67%
43 - 56	excellent perception of one's job	73	34%	42	21%
TOTAL		212	100%	203	100%
<i>Subscale II. Perceptions of teaching</i>					
0 - 15	very poor quality	2	1%	10	5%
16 - 30	in need of some retraining	19	9%	28	14%
31 - 45	moving in the right direction	107	50%	123	61%
46 - 60	model teachers	84	40%	42	21%
TOTAL		212	100%	203	100%
<i>Subscale III. Perceptions of social support</i>					
0 - 11	non-existent	..	..	4	2%
12 - 22	not a pleasant place	23	11%	35	17%
23 - 33	more pros than cons	131	62%	127	63%
34 - 44	a good supportive environment	58	27%	37	18%
TOTAL		212	100%	203	100%