Evaluation of a novel salaried medical officer position on service provision and performance at a rural health service: an exploratory mixed methods study

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Evaluation of a novel salaried medical officer position on service provision and performance at a rural health service: an exploratory mixed methods study

Objective: to determine the impact of a new salaried medical officer position (HMO) on health service provision and organisational performance.

Method: mixed methods.

Design: General practitioner (GP), nursing and allied health staff were invited to complete a survey to ascertain their overall satisfaction with the HMO position and impact on their workflow. Purposive sampling identified respondents for interviews to further explore the experiences of health service staff. Financial, administrative and quality information was extracted for analysis.

Setting: medium size rural health service in Victoria, Australia.

Participants: GP, nursing and allied health staff employed by, or who provide services to, the health service.

Main outcome measures: satisfaction with the HMO position, ability to address patient concerns, themes from interviews, organisational performance data.

Results: Forty surveys (GP, nursing and allied health) were returned and 10 interviews completed. The mean rating for satisfaction with the HMO position was 8.4 (out of 10). Addressing patient care concerns was rated significantly easier by nursing and allied health staff when the HMO was working (mean difference 3.7, 95% CI 2.6 to 4.8, p<0.001). The interviews identified three broad themes: improved efficiency, increased accessibility and eliminated service gaps.

Conclusion: Health service staff reported that a HMO position at a rural health service improved work efficiency, increased accessibility to timely medical advice and improved quality of care, particularly patients at risk of sudden deterioration.

Keywords: health-service research, general practitioners, service model, medical services, improvement

What is already known on this subject?

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• Rural health services are highly reliant on their GP workforce for medical services.

• There is sparse literature on models to better support the rural GP workforce in this role.

**What does this study add?**

• A salaried medical officer position (HMO) employed to support GPs who provide medical services to a rural health service was considered to have improved the quality of care, and was well accepted by GPs and health service staff.

• These findings strongly support the development and evaluation of further HMO positions in rural health services that have the capability and capacity to sustain this position.
Introduction

General Practitioners (GPs) in rural communities have many roles, including caring for patients in local hospitals. This long-standing arrangement of contracting local GPs to rural health services under a Visiting Medical Officer (VMO) model is heavily reliant on the local GP workforce. Studies have shown that rural GPs who provide procedural services (anaesthetics, obstetrics or emergency medicine) at hospitals work more total hours than those who do not provide this service, with these extra hours directly attributed to the hospital setting with no reduction in private consultation hours. Procedural GPs were also more likely to have a higher burden of on-call. Similarly, a 2012 study concluded that total hours worked by a GP increases as the size of the community decreases, with most of the difference attributed to work activities in public hospitals and on-call.

Over the past five years, the proportion of GPs choosing to work in rural and remote areas has not changed significantly and the effectiveness of current programs focussed on these targets questioned. There have been calls to change the service delivery models in rural health services to make the procedural GP career more attractive. Suggestions include team based rostering across a region and the increased use of telehealth. Rural generalist medicine pathways have also been established or developed in a number of countries to respond to rural health and workforce concerns.

There is sparse literature on models to support VMO GPs providing medical services in rural health services, and therefore an opportunity existed to evaluate a novel arrangement where a salaried medical officer was employed by a rural health service to support its VMO GPs. The evaluation sought to explore the acceptability of the new HMO position in the context of a long-standing VMO GP service. The learnings would not only inform local decision making but contribute to the limited literature on support models for VMO GPs.

The primary aim of this study was to determine the impact of a funded salaried medical officer (HMO, accredited postgraduate year two or greater: PGY2+) position on service provision and performance in a rural health setting, and determine overall satisfaction with the position in order to inform future workforce planning.

Method

Setting

East Grampians Health Services (EGHS) is a medium sized rural health service in Victoria with facilities in Ararat and Willaura, serving a population of around 11,800. Ararat is approximately 90km from the closest regional health service, and approximately 200km from Melbourne. EGHS provides inpatient, residential, home and community-based services. The Ararat facility has an urgent care centre (UCC; ~4,000 presentations/year), inpatient unit (38 adult/pediatric/maternity beds), dialysis, chemotherapy and some outpatient services. A residential aged care facility (45 beds) and hostel are co-located. The Willaura facility is 35km from Ararat and has 8 inpatient beds and a hostel.

VMO GPs who practice at the local medical centre provide medical services, attending EGHS to admit patients, undertake daily ward rounds and review patients as needed in both the inpatient ward
and UCC. A duty doctor is on call after-hours and on weekends. Willaura's service consists of a weekly visit from the duty doctor to review acute patients with ad-hoc review available on request.

**Intervention**

A full-time salaried medical officer (postgraduate year 3-PGY3, HMO) was employed to work 8am to 6pm weekdays (with 4 hours per week protected paid training time) for 12 months. There were no changes to weekend or after-hours medical service arrangements. The HMO supported the UCC (triage, treatment, management and admission with VMO GP consultation) and inpatient unit (ward rounds, progress notes, referrals, medication prescribing and discharge paperwork). Residential care services in Ararat received a 4-hour visitation per week and as needed reviews. The HMO visited Willaura once per week. The VMO GPs continued to provide supervision of the HMO and retained overall responsibility for patient care. The position was accredited by the Postgraduate Medical Council of Victoria, but not a recognised part of the rural generalist training program. The Australian College of Rural and Remote Medicine (ACRRM) also recognised 6 months of this position as accredited registrar training time.

**Data sources - Surveys**

The VMO GPs, nursing staff and allied health staff were administered an anonymous survey in October 2020. This time point reflected an embedded HMO role and for pragmatic reasons avoided the peak of the COVID-19 pandemic.

The survey for VMO GPs elicited responses (semantic scale from 0-10) relating to overall satisfaction, connectedness with patients, workload, income and supervision. The nursing and allied health survey ascertained the overall satisfaction with the HMO position, time savings and supervision of the HMO (semantic scale from 0-10). Free text comments were permitted.

**Data sources - Interviews**

Semi-structured interviews (up to 10) were completed between November 2020 and January 2021 to explore the impact of the HMO position in more depth. The interview guide consisted of questions designed using the constructs of the Consolidated Framework for Implementation Research (CFIR) and the RE-AIM evaluation framework. Interviews were conducted face-to-face or via video-link by investigators JB (research translation coordinator, all interviews) or RW (administration) during business hours in the workplace. Investigator JB has training and experience in qualitative methods. The interviews were audio recorded alongside with field notes taken by the interviewer/s. Neither interviewer was involved in the conceptualisation of the HMO position, the day to day operations of the position or funding decisions and were therefore considered to have a low risk of bias or influence.

**Data sources - Organisational data**

Financial, administrative and quality information collected in accordance with pre-existing business rules was extracted for equivalent 6 month time periods (March to August) in 2019 and 2020 (where possible) for analysis. Equivalent 6 month time periods were selected to avoid any temporal variations in practice. As the HMO commenced in February 2020, March was considered sufficient time for them to orientate into the role. The financial and administrative information included average length of stay

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(general medicine patients), inpatient ward Weighted Inlier Equivalent Separation (WIES), unplanned readmission to the inpatient ward, transfers to another health service (general medicine patients), admissions from the urgent care centre to the inpatient ward and CT scans performed. The quality information included data from the National Antimicrobial Prescribing Survey (appropriateness of antibiotic prescribing) and Victorian Healthcare Experience Survey (care and treatment received from doctors, confidence and trust in the treating doctor, patients who had the opportunity to talk to a doctor if needed). Also extracted were the number of clinical coding queries received.

These organisational data are standard performance measures of interest to health services and are routinely collected (thus form an available data set). Some similar health service data was reported in another Australian study on workforce.\textsuperscript{7} The quality measures are both routinely collected for external reporting. The number of CT scans was identified as a measure of interest based on an incidental finding during the interviews.

Copies of surveys and interview questions are available as Supplementary Materials (S1 & S2).

\textit{Recruitment and consent}

Nursing, allied health and VMO GP surveys included a detachable explanatory statement retained by the respondent. Return of the survey was implied consent.

Nurse Unit Managers (NUM) distributed the paper survey to nursing staff who work day-shift, and participation was voluntary. The allied health version was electronically distributed using existing communications. Investigators SP and RW distributed the VMO GP survey at a practice meeting and the survey was returned in a sealed envelope.

The recruitment for the interviews was purposive using a sampling matrix. Participants either had overall responsibility for services (e.g. Executive, NUM) or interacted clinically with the HMO. Investigator JB contacted potential interview participants via email and written consent obtained. All those approached for an interview consented.

\textit{Sample size}

This study utilises data from multiple sources to develop its findings. The VMO GP survey was distributed to all who provide services to the hospital (n=8). Based on the number of employees in April 2020 (nursing 195, allied health 27), the estimated sample sizes to be representative of the whole population were 65 and 22 respectively (margin of error 10%, confidence level of 95%). The sample size of 10 interviews was pragmatic based on available resources, with the intention of sampling across different professions.

\textit{Analysis}

The survey data is presented using summary statistics and analysed using Chi-square tests where appropriate. The field notes of both interviewers were used to undertake a qualitative description by investigator JB.\textsuperscript{10} Qualitative description is a method of analysis which seeks to describe a phenomenon by staying close to the data with minimal theorisation, and generates a narrative description of the key regularities and patterns in the data.\textsuperscript{10} Access to the interview audio-recordings

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was available where required to check content and extract quotes. Free text comments from the survey were also extracted and analysed.

The organisational quality data is presented descriptively. The financial and administrative data is presented descriptively and analysed using Chi-square tests where appropriate.

Ethics approval

This project received ethical approval from Ballarat Health Services and St John of God Hospital Human Research Ethics Committee (LNR/68210/BHSSJOG-2020-233682(v2)).

Results

Surveys

There were 29 survey responses received from nursing staff (15% response rate), 5 from allied health staff (18% response rate) and 6 from VMO GPs (75% response rate).

The combined mean satisfaction with the HMO position was 8.4 (Table 1), indicating a high level of satisfaction with the HMO position. Nurses (8.8 +/- 1.62) and VMO GPs (8.8 +/- 1.97) reported higher mean satisfaction compared to allied health staff (5.4 +/- 3.58). Addressing patient care concerns was rated significantly easier by nursing and allied health staff when the HMO was working (mean difference 3.7, 95% CI 2.6-4.8, p<0.001). Similarly, nursing staff and allied health staff indicated that they had confidence that the HMO sought input on difficult patient care decisions, with higher ratings provided by nursing staff (7.32 +/- 1.68) compared to allied health (5 +/- 2.12). The VMO GPs were also confident that the HMO sought their input into difficult patient care decisions and reported less time spent on hospital patient specific tasks and an increase in patient connectedness. There was no change in income generated from hospital patient specific tasks (Table 1).

Interviews

There were 10 interviews completed including a representative of the VMO GPs (1), medical imaging (1), Executive (2), pharmacy (1) and nursing (5). The duration of the interviews ranged from 15 minutes to 40 minutes. The interviews broadly reflected the findings of the survey, with a high level of satisfaction with the position. Qualitative analysis identified three broad themes: improved efficiency, increased accessibility and eliminating service gaps.

Respondents described efficiencies in patients receiving review (and subsequent treatments if needed) and VMO GP decision-making.

P1 (Nurse): We can get patients reviewed a lot quicker because [the HMO] also can pop over if he has free time and review someone straight away. We aren’t waiting for the duty doctor when they are free. They are never free! [The HMO] can come within 15 minutes. The duty doctor could never do that…. Something would take 2 hours can now take 30 minutes or 15 minutes.
P9 (Nursing): In urgent care, [the HMO] is there, they can see them straight away. They can assess them. That means if someone needs transfer to another hospital, it is happening quicker because things are getting picked up quicker….If someone has got nausea and they don’t have an anti-emetic written up, and we are ringing a doctor. We used to sometimes leave a message and they’d ring back an hour later. Now we have a doctor there who can just write up the anti-emetic and the patients gets that right away. They are getting better care. It has definitely improved.

Efficiencies in discharge summary completion, transfer decisions and review of test or imaging results occurred for inpatients and within the urgent care centre.

P10 (Executive): Previously I used to do about 17-18 queries a week in terms of coding for discharges summaries and queries to increase our WIES. With the improved progress notes and discharge summaries I get maybe 1-2 a month now so that has had a huge impact.

Nursing, pharmacy and medical imaging staff indicated that the HMO position had improved their workflow.

P8 (Nursing): Very satisfied. It just becomes much more streamlined and easier for us to deliver care.

P5 (GP): It has worked very well indeed. Before the year started, I had my concerns that having a registrar would actually mean more work for us as GPs because we would have to be overseeing the registrar all the time. But in actual fact, it has turned out quite the reverse…Basically he has taken a lot of work off our shoulders, a lot of the routine sort of work…. It has saved us a lot of time

P11 (Pharmacy): It negated disruption to the doctors with constant phone calls for minor things that had to be fixed. It made my life easier on numerous levels. It has probably improved my workflow; less phone calls and less wait.

P6 (Medical imaging): The waiting time for contrast has been reduced. We used to do studies with contrast on a Wednesday afternoon as we had a specialist coming in on site…We used to book all these studies on Wednesday afternoon.. But now with [the HMO] around we can do it whenever. So the waiting time has been reduced a lot.

Greater accessibility of the on-site HMO meant that nursing and pharmacy staff felt more supported and had greater confidence to ask questions.

P1 (Nursing): Because [the HMO] doesn’t have a patient load as well, you can sit down and sort of discuss. If there is anything that you just want to sort of chat about…if you are a little bit worried but it isn’t worth calling the doctor on the day they aren’t coming in, you can have a chat to [the HMO] about what avenue to go down and where to start looking.

More procedures requiring a medical officer could be conducted (e.g. contrast administration) and there was quicker review of the results of imaging performed.
P6 (Medical imaging): If you don’t have a doctor you can’t do CT scans with contrast. The patient had to either wait for a doctor from the medical centre to be free to supervise the scan or in most cases they go to Ballarat or Horsham. Since having [the HMO] around it has been really beneficial for our department at least. We can get the CT scan done straight away. We don’t have to wait around or send the patient home and call them another day…The numbers [of CT scans] have gone up since having a doctor around.

P3 (Executive): It has helped in medical imaging because we can do a lot more work in medical imaging because we have a medical officer on the deck. We’ve done a lot more CTs this year.

The position addressed service gaps and particularly benefited groups of patients such as palliative care, dialysis and those experiencing an acute deterioration.

P7 (Nursing): Dialysis I think has definitely benefitted from having [the HMO]….When we do have an unwell dialysis patient that there is someone they can call on. It gets quite forgotten the dialysis I think. They see their specialist in Ballarat or here. We used to do a lot of phone call stuff but now [the HMO] will come and check them out. That has been a big tick….It makes the treatment better for the patients. Better, quicker.

P1 (Nursing): I think our palliative care patients have probably benefited the most. Being able to get your morphine or midazolam when you really need it. No one deserves to be in pain while they are dying.

N7 (Nursing): Patients gets pain relief and anti-emetics much quicker when required.

There were some challenges in the initial period of the role. For example, situations arose where the VMO GPs and the HMO expressed differing opinions on patient care. Some nursing staff found this challenging while the VMO GP interviewed valued this professional discussion.

P4 (Nursing): I’ve got a system now where I seem to have differing opinions. One doctor wants to do all the bells and whistles and the other doesn’t. I find myself back and forwards between the two doctors and just trying to find a happy medium to meet in the middle somewhere.

P5 (GP): Having that different opinion is often very handy. Having someone to bounce ideas back and forward with can be very useful.

Other initial challenges related to workflow and professional relationships, which resolved as the position evolved. When the HMO was on leave, their absence was noted.

P9 (Nursing): There were a few, sort of, teething problems at the start. Just working out exactly where [the HMO] fitted in in urgent care. Like do the nurses see the patient first or does he? It took, sort of, probably two months to really sort out a good flow. But eventually we got there. It was the same with some of the doctors accepting him. Once they did, they just really took him on board, and worked so well together.
P3 (Executive): Our urgent care staff were probably used to working fairly independently so to have someone there providing that oversight might have challenged a few of them initially. But that’s a good thing.

P4 (Nursing): I did find when [the HMO] was on leave, I was back in no man’s land again. Trying to contact duty doctors, trying to contact our [medical centre] representative for here. There were a few times when [the HMO] was on leave that it was a bit touch and go.

Respondents overall described an improvement in the quality of care.

P5 (GP): There is no doubt that the level of patient care has improved. We can do that little bit extra that sometimes we are really pushed for time for. That can be as simple as just liaising or ringing up social work or physio or OT. [The HMO] can give them a quick ring – he has the time to do it.

P3 (Executive): Better care, more timely care, improved assessment. From a clinical perspective, we are a lot stronger than before [the HMO] came.

P4 (Nursing): There just wasn’t the cover available to meet care needs. I think [the HMO] has part addressed this.

P9 (Nursing): I would say it’s been amazing. It has really changed the whole status of how we work. Patients are being seen sooner, so patient care has improved.

P11 (Pharmacy): It definitely made it safer, made it faster in terms of more streamlined that if there any issues they could be addressed immediately or as soon as possible. Life, speaking as a pharmacist, improves dramatically.

A powerful outcome in terms of workforce retention was described.

P9 (Nursing): He is keen to come back again. He is going to do obstetrics and then he is keen to come back as an obstetrician here and that is huge for us. That is such a benefit because the obstetricians we have got now, two are at an age where they’ll retire in the next 3-5 years. To get him back as an obstetrician, that’s amazing because that’s exactly what we need. That’s really very powerful for this hospital to get an obstetrician out of this.

Organisational performance

Organisational performance data (Table 2) indicated similar results in quality measures such as antimicrobial appropriateness or patient experience. Patients reported an increase in the accessibility to speak to doctors.

There was no statistically significant difference in readmissions of general medicine patients within 28 days of discharge (difference 2%, 95% CI -3.0% to 7.1%, p=0.43), and similar numbers of transfers of general medicine patients to another health service (difference 1.2%, 95% CI -4.1% to 6.4%, p=0.65). There was a significant increase in the proportion of patients presenting to the urgent care centre who were subsequently admitted (2.7%, 95% CI 0.5% to 4.9% p =0.02), and an increase in length of stay.
Inpatient unit WIES (Weighted Inlier Equivalent Separation) increased by 0.017 per overnight bed day (OBD), equating to an additional $90 per OBD. Based on the 2020 activity, this equates to $209,880 additional WIES income generated. CT scan numbers increased by approximately 20% (223) compared to the same time in 2019.

Discussion

Staff at a rural health service were highly satisfied with an innovative initiative to employ a salaried medical officer (HMO) to support VMO GPs. There was significant improvement in the ease of addressing patient care concerns, which resulted in an increase in the quality and timeliness of care. The VMO GPs reported that they spent less time on hospital patient tasks without affecting their connectedness with their patients. Mostly powerfully, there was optimism that the HMO would return to the community as a GP obstetrician.

The positive feedback towards the HMO position from the VMO GPs was pleasing, given that there was some initial hesitation, anticipating an increase in their workload through additional supervision. Other potential unintended consequences (reduction in GP income, reduced connectedness to patients) did not eventuate. The increased length of stay and increased admissions from the urgent care centre were unanticipated. It is possible that this finding was influenced by COVID-19, with presentations potentially occurring at a more severe stage of illness,\textsuperscript{11, 12} leading to more admissions from the urgent care centre and increased length of stay. An unexpected quantifiable financial benefit of the HMO position was the increased income generated by higher acuity and more imaging able to be performed due to the on-site presence of the HMO.

The increased level of support that nursing staff experienced and the perception that they were able to provide improved and timelier care to patients was a clear outcome of this evaluation, and a significant contribution to a collegial and supportive culture within the health service. The close supervisory and educational relationship between the HMO and VMO GPs also strengthens the relationship with the rural health service. Similarly, this relationship fostered a link for the HMO with the rural community of the health service.

Current research predominately focuses on recruitment and retention strategies for GPs in rural practice, workload and rural training pathways.\textsuperscript{13-17} However, surprisingly, there is limited literature on models for the delivery of medical care within these rural health services. An Australian study explored the effectiveness of the introduction of a trainee specialist physician into the workforce mix of a 60 bed-rural hospital in the Northern Territory.\textsuperscript{7} Similar to our study, the authors described positive change in the capacity of the hospital to care for unwell and complex patients. In contrast, they reported a significant reduction in length of stay and inter-hospital transfers. However, this hospital already had other salaried medical staff and 15 full-time equivalent doctors, which may not be reflective of the staffing at most small to medium sized rural hospitals in Australia.\textsuperscript{7} The model described in the current study therefore provides a feasible option for small to medium sized rural health services who operate using a VMO GP model. A publication from the USA described
employing an internal medicine specialist to undertake inpatient and outpatient duties at 10-bed rural facility, instead of a family physician (GP). The authors concluded that this internal medicine model reduced on-call duties for the GPs, increased access to specialist consultation and reduced costs. It was sustainable having been in operation for over 3 years. While different healthcare systems are utilised in the USA, the findings suggest a potential extension of the HMO position into local outpatient services. These types of publications are rare, especially in the Australian context, and there is limited description of the formative early career years of doctors wishing to explore rural practice. The findings of this study, therefore, begin to address a gap in the literature on different models for the delivery of medical care in VMO GP serviced rural health services.

A strength of this study was that it took a holistic approach to evaluation of the HMO position, collating data from various sources to determine the impact of the HMO position. Although employees of the health service undertook this research and there is potential for response bias or lack of objectivity (so called ‘insider research’) using multiple methods of data collection helped to mitigate this. The credibility and rapport of the health service researchers was beneficial to the research and an opportunity to build local research capacity. The point prevalence survey undertaken only reflects the opinion of the respondent at the time and no baseline measure is available. The low response rate to the nursing and allied health survey may suggest a response bias as well as identify a potential for improved multidisciplinary management. The organisational data was analysed in an uncontrolled (before and after) design. As routinely collected data was utilised for pragmatic reasons, potential confounders (such as patient burden of illness) were not collected. No assessment was made on the clinical appropriateness of any changes in service provision, such as the increase in CT scans. However, usual organisational clinical governance oversight remained unchanged. It is possible that the findings reflect the competence and confidence level of the incumbent HMO. Repeat evaluation of the HMO position over future years will determine if the results remain positive with different incumbents. Financial figures relating to the cost of the HMO and supervision payments to the VMO GPs are not provided for confidentiality reasons, and assessment of organisational performance was likely highly confounded by COVID-19.

Development of this HMO position was intended to support rural generalist training pathways. Few junior medical officers experience a VMO GP workforce model prior to committing to a rural generalist training pathway. The HMO position offers a pathway for candidates who have expressed an interest in a rural generalist career to work within the environment. This then supports a more informed decision about enrolling in the rural generalist training program. The return to the community of the inaugural HMO as a GP-Obstetrician secondary to their positive experience endorses the investment made in the HMO position by this health service. This in turn, strongly supports ongoing investment in further HMO positions in rural health services that have the capability and capacity to sustain this position as a mechanism to foster more doctors to undertake rural generalist training.

The noted dearth of literature relevant to models of medical care in rural health services and the current rural medical workforce shortages behoves further research into innovative, sustainable models for providing appropriately supervised and supported junior medical officers roles in rural health services.
health services. The opportunity to meaningfully contribute to and experience the provision of medical services to rural communities in order to make informed decisions about committing to a rural generalist training pathway and rural lifestyle is essential. Continued development, evaluation and sharing of such models is critical as a strategy help address critical rural medical workforce shortages and re-establish rural generalism as an aspirational career pathway.

Reference

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Table 1 Overall satisfaction and confidence with the HMO position

<table>
<thead>
<tr>
<th>Nursing and Allied Health</th>
<th>Scale</th>
<th>Mean Rating (sd)[range]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking all things into account, what is your overall satisfaction with the new HMO position? (n=40)</td>
<td>0 is very dissatisfied 5 is satisfied 10 is very satisfied</td>
<td>8.4 (2.15) [1-10]</td>
</tr>
<tr>
<td>How easy is it to address patient care concerns when the HMO IS working? (n=34)</td>
<td>0 is not easy 5 is easy 10 is very easy</td>
<td>8.4 (1.94) [4-10]</td>
</tr>
<tr>
<td>How easy is it to address patient care concerns when the HMO IS NOT working? (n=33)</td>
<td>10 is very easy</td>
<td>4.7 (2.56) [1-10]</td>
</tr>
<tr>
<td>How confident are you that the HMO seeks input from the admitting GP on difficult patient care decisions? (n=33)</td>
<td>0 is not confident at all 5 is confident 10 is very confident</td>
<td>7.0 (1.91) [2-9]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VMO GPs (n=6)</th>
<th>Scale</th>
<th>Mean Rating (sd)[range]</th>
</tr>
</thead>
<tbody>
<tr>
<td>How confident are you that the HMO seeks your input into difficult patient care decisions?</td>
<td>0 is not confident at all 5 is confident 10 is very confident</td>
<td>6.5 (2.43) [3-9]</td>
</tr>
<tr>
<td>What is the impact of the HMO position on the amount of time you spend on hospital patient specific tasks (e.g. writing medication charts, answering phone calls)?</td>
<td>0 major reduction in time 5 no change in time 10 major increase in time</td>
<td>3.1 (2.48) [1-8]</td>
</tr>
<tr>
<td>What is the impact of the HMO position on the connectedness you feel with a hospital patient? That is, the level of care, respect and trust you have with the patient?</td>
<td>0 major reduction in connectedness 5 no change in connectedness 10 major increase in connectedness</td>
<td>6.3 (1.86) [4-8]</td>
</tr>
<tr>
<td>What is the impact of the HMO position on the income you generate from hospital patient specific tasks?</td>
<td>0 major income reduction 5 no income change 10 major income increase</td>
<td>4.6 (0.52) [4-5]</td>
</tr>
</tbody>
</table>
Table 2 Organisational performance data (Mar-Aug 2019 & Mar-Aug 2020)

<table>
<thead>
<tr>
<th>Performance measure</th>
<th>2020</th>
<th>2019</th>
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<tbody>
<tr>
<td><strong>Quality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriateness of antibiotic prescribing (NAPS)</td>
<td>54.9% (n=51)</td>
<td>53.5% (n=45)</td>
</tr>
<tr>
<td>Proportion of patients who rated the care and treatment received from doctors as very good (VHES)</td>
<td>98.5% (n=51)</td>
<td>98.35% (n=106)</td>
</tr>
<tr>
<td>Proportion of patients who had confidence and trust in the doctors treating them (VHES)</td>
<td>97.0% (n=52)</td>
<td>94.57% (n=107)</td>
</tr>
<tr>
<td>Proportion of patients who, if needed to talk to a doctor, had the opportunity to do so? (VHES)</td>
<td>92.2% (n=50)</td>
<td>82.40% (n=106)</td>
</tr>
<tr>
<td>Clinical coding queries</td>
<td>86</td>
<td>111</td>
</tr>
<tr>
<td><strong>Activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average LOS (excluding same day) general medicine (n=296,307)</td>
<td>9.84</td>
<td>8.08</td>
</tr>
<tr>
<td>Inpatient unit (IPU) WIES</td>
<td>414.2117</td>
<td>418.8107</td>
</tr>
<tr>
<td>IPU WIES per overnight bed day†</td>
<td>0.178</td>
<td>0.161</td>
</tr>
<tr>
<td>Unplanned readmission to IPU within 28 days of discharge from IPU‡</td>
<td>35 (11.8%)</td>
<td>30 (9.8%)</td>
</tr>
<tr>
<td>Transfers to another health service† (gen med only)</td>
<td>34 (11.5%)</td>
<td>39 (12.7%)</td>
</tr>
<tr>
<td>Admissions from UCC§ (%)</td>
<td>237 (14.5%)</td>
<td>238 (11.8%)</td>
</tr>
<tr>
<td>CT scans performed</td>
<td>1,053</td>
<td>830</td>
</tr>
</tbody>
</table>

† Overnight beds days, inpatient unit (2020; 2332 and 2019; 2602)
‡ Overnight discharges general medicine (2020: 296 and 2019: 307)
§ UCC presentations excluding COVID-19 related presentations (2020:1634 and 2019:2025)
Author/s:
Bishop, JL; Ping, S

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