REPORT

Vertical Integration

WAGPET
Education and Training for General Practitioners

CONDUCTED BY:

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FROM THE BOARD

I am pleased to present the following report on Vertical Integration. The report was commissioned by the WAGPET Board and conducted by an independent consultancy firm, PDT Consultancy, under the leadership of PDT Director, Faye Harris.

As a state-wide organization, WAGPET is keenly aware of pressure the increase in medical students and graduates expected over the next 5 years will place on those providing medical education and training. While some of this increase may be accommodated within teaching hospitals, a significant proportion is likely to be accommodated by general practices in the community. General Practice has continued to show that it can successfully teach learners at all levels but it is well recognized that the increasing numbers will stretch the capacity of General Practitioners and training practices available to train and supervise.

The vertical integration of medical education and training is seen as one strategy that may result in a more coordinated and collaborative approach to addressing this issue. This project looks to build upon the information delivered in the Rockingham Kwinana Outer Urban Clinical School Pilot program "Registrars as Teachers" undertaken in 2008 and to develop a potential model for vertically-integrated training in general practice by exploring general practitioner and GP registrar views of its potential.

Towards the end of the project process, WAGPET engaged Adelaide to Outback GP Training Program to undertake a separate and extensive research project on Sustainable Teaching in Community General Practice in Western Australia – investigating teaching capacity, teaching cost analysis and models of teaching (report available from www.wagpet.com.au). It was felt that the findings of this research could also inform models for vertically-integrated training.

WAGPET would like to thank those individuals and organisations that took part in this project and to express particular thanks to the three general practices, Pioneer Health, Ocean Keys Family Practice and Lockridge Medical Centre, who have provided us with invaluable information.

I look forward to your response to the study and your involvement in future consultation in this area.

Dr Peter F Wallace OAM

Chair

C O N T E N T S

A DEFINITION OF VERTICAL INTEGRATION OF GP EDUCATION AND TRAINING

In 2004, General Practice Education and Training (GPET) developed a framework for vertical integration in GP education and training for use by regional training providers (RTPs) in their facilitation of initiatives in relation to vocational training delivery. GPET defines vertical integration of GP education and training as:

…the coordinated, purposeful, planned system of linkages and activities in the delivery of education and training throughout the continuum of the learner's stages of medical education.(The stages of medical education include medical school, prevocational hospital training, vocational training and continuing professional development). Organisational linkages can occur at various points in the GP education & training system e.g. curriculum, teachers, training posts, training programs, funding, resource sharing.

A visual presentation of this definition for the learner is represented as:

GPET's policy document also identified several key areas in which vertical integration could be evident. These were:

1. Integrated learner centred system
2. Integrated teaching delivery system
3. Integrated teaching roles
4. Integrated teaching posts
5. Integrated governance structures
6. Integrated funding
7. Integrated approach to quality management.

Vertical integration, therefore, will have different interpretations depending on the context from which it is viewed. The implied simplicity of a linear model suggested by the term "vertical integration" does not necessarily accurately reflect the multidimensional realities of learning within a general practice setting.

The point of integration explored in greatest detail in this project was related to the **integrated teaching post** and the draft model developed from the process of consultation, therefore, reflects this emphasis. The focus on learners included medical **students, prevocational doctors and registrars**. It did not explore General Practictioners (GPs) / supervisors as a specific group, although the supervisors interviewed all indicated that they saw learning as a two-way street and that they had all learned from the range of learners attached to their practices.

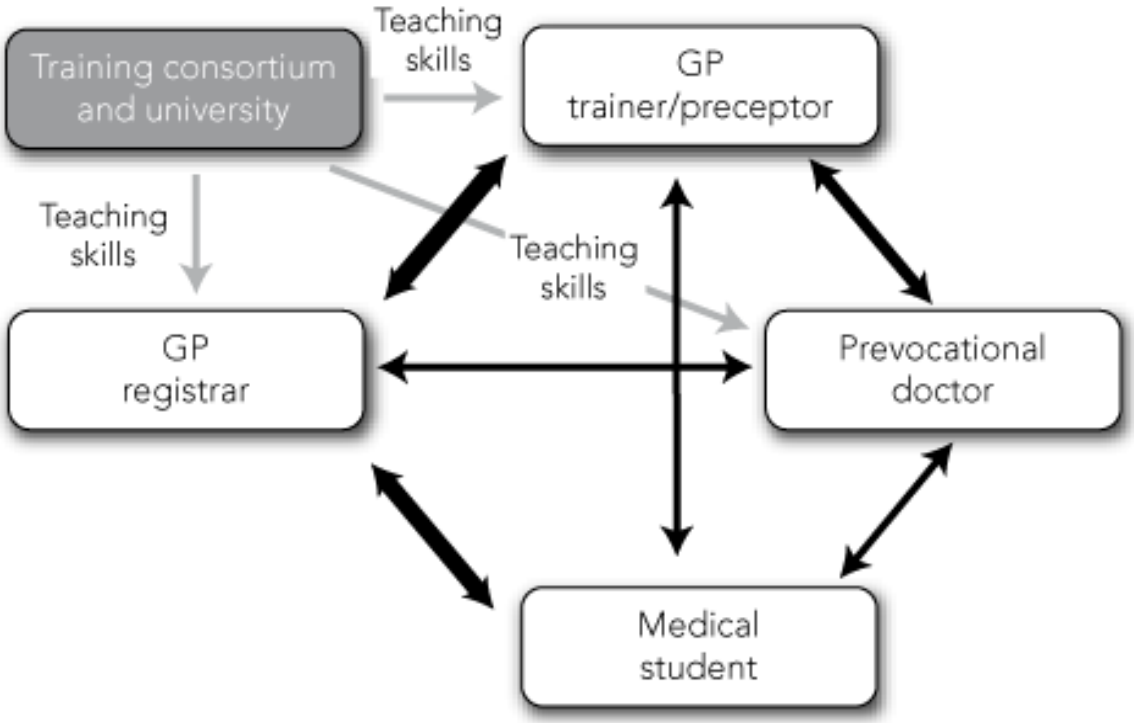
In 2009, a Discussion Paper "The Future General Practice Education and Training System" was prepared jointly by the Australian College of Rural and Remote Medicine (ACRRM), General Practice Registrars Association (GPRA), the Royal Australian College of General Prcaticioners (RACGP) and GPET to inform the range of health system reform processes currently underway. In that document, the aim of a vertically integrated system was described as "…providing a seamless, efficient and effective pathway of training for the GP learner from medical school through to vocationally trained practice."

TOWARDS A MODEL OF VERTICALLY INTEGRATED TRAINING IN GENERAL PRACTICE

It is important to note that there was not one static model that represented vertically integrated training in the practices that formed part of this project. Each of the practices explored through this project had variations that had developed due to their own contextual needs and strengths.

As a result of the feedback from project participants and further investigation of the relevant literature, the VITAL (Vertical Integration in Teaching and Learning) in General Practice Model developed by Dick et al seemed to hold most promise to capture the range of variables that were context-specific.

The VITAL (Vertical Integration in Teaching and Learning) in General Practice Model



Reference: Dick, M et al Vertical Integration in Teaching and Learning (VITAL): An Approach to Medical Education in General Practice MJA, 2007

The VITAL Model is based around the concept that the registrar is a critical link to the various stages of learning within a general practice. It does not reflect an apprentice or cascade-style model, but indicates sharing of the teaching load across all the learner stages. The thickness of the arrow represents the degree of teaching load and the bi-directional arrows indicate that in any interaction, learning is a TWO-way process and occurs for both parties.

This more interactive and organic model seems to capture the views of the interviewees and feedback from members of WAGPET Regional Advisory Committees.

The potential issues of the model were identified as:

- Not all are naturally good teachers – training may be needed.
- Medico-legal - what if they teach something that is wrong?
- Time away from patients.
- Patient concerns.
- Infrastructure support needed – eg space/ technology.
- Remuneration.
- Voluntary?
- What about solo practice?
- Variable commitment to teaching and learning.
- How to ensure no-one misses out on quality or quantity.

The potential benefits of the model were identified as:

- Less pressure on the supervisor to be “the one”.
- Building a culture of continuous improvement / learning for all.
- Positive impact on team morale/collegiality.
- Positive role models for general practice – attraction into profession.
- Better patient care and increased reputation.
- More learners can be accommodated in a clinical setting.
- Training at relevant level – close to learner’s level – greater credibility.
- Builds teaching skills.
- Can incorporate others in the practice – eg practice managers.

CHARACTERISTICS OF AN EFFECTIVE GENERAL PRACTICE VERTICALLY INTEGRATED TRAINING SITE

There is a recognised current shortage of general practitioners, particularly in outer metropolitan and rural and remote areas, and a concurrent increase in the numbers of medical students, prevocational doctors and general practice registrars. This is placing an increasing demand for teaching in general practice. It is anticipated that this will present challenges until at least 2012. Expanding the teaching roles for general practice registrars is one of the strategies being explored to deal with this issue. In investigating a model for vertically integrated training, all of the interviewees indicated how important it was not to dismiss the needs for maintenance of quality education and training in dealing with the workforce demands of the current situation.

As a result, the model has, as major considerations, the following:

- quality
- commitment to a learning culture
- appropriate structures and infrastructure to support the learning and teaching
- support and acknowledgement.

All of these were considered by interviewees to play a critical part in making a vertically-integrated model work. Whilst there was some variance on areas of emphasis and in some of the associated detail, every attempt has been made by the consultant to reflect as accurately as possible the key themes and issues identified.

Table 3.1 on the following page describes the characteristics of an effective General Practice vertically integrated training site as outlined by participants in this project and the research literature.

Table 3.2 outlines how participants in this research, and the research literature, describe the variances required of an effective General Practice vertically integrated training site for each of the groups in the study.

It must be emphasized that the following information is not definitive of a model of vertically integrated training; rather, it is a reflection of participant input to the project.

3.1 CHARACTERISTICS OF AN EFFECTIVE GENERAL PRACTICE VERTICALLY INTEGRATED TRAINING SITE

Quality	Commitment to a Learning Culture	Structures / Infrastructure	Support/Acknowledgement
• Not taking on more than can be done well in relation to teaching and supervising capacity. • Genuine belief that everyone has something to learn. • Continuously striving for best practice in patient care. • Learning opportunities provided are many and varied – formal to informal. • A positive experience is crucial for attraction and retention but training needs to be productive and not just about increasing quotas. • High standards of teaching and learning expected in all interactions – preparation, time commitment etc and need to reflect adult learning principles. • Tutorial presentations by all expected to be of a high standard and to add to the knowledge of the practice. • Flexibility for practices to adapt / adopt processes that suit individual strengths, needs and contexts. • The GP learning actively for their whole career in order to maintain standards of patient care. • Quality and excellence is a good investment as good service to patients builds the practice.	• Whole practice needs to commit to supporting all learners at a range of levels and in a variety of ways. Sharing the teaching load is vital. • Commitment needs to be reflected in Business Plans and resource allocation. • Whole practice needs to be involved in decisions as to which model would work for them. • Those involved need to be volunteers – not everyone wants to or can teach others. • Not being driven by remuneration, but by promoting and growing the profession. There is a potential danger that increased remuneration will be attractive to some groups without the commitment to quality. • Time needs to be set aside for protected teaching and not just squeezed in at lunch or after hours. • A supportive environment where anyone can say or ask anything. • A culture of learning for all. • All groups being open to scrutiny and challenge. • A principle that knowledge gained should change practice – eg development of protocols. • Involvement of other health professionals eg nurse practitioners, allied health, pharmacists. • Provision of a vocational pathway into general practice, particularly in rural areas.	• Physical space required for learners, especially for prevocational doctors and registrars – their own consulting room, but also benefits to 5th year students. The provision of a consulting room is an added infrastructure cost but doesn't create income. • Equipment and access to technology. • Access to on-line resources / information. • Practice library. • System for calling for assistance / advice eg panic button / linked computers to ask others to consult. • Active involvement of practice managers to coordinate schedules / appointments and required paperwork – this is not currently adequately remunerated. • Identification of patients who are willing to be involved and explanation of processes and rationale. • An academic structure to formal teaching • Careful planning and organisation to ensure no learner group's needs are overlooked, especially in a larger practice. • Accommodation provision.	• Teaching takes time to undertake and impacts on time away from patients – needs to be compensated appropriately. There are various views as to what level is appropriate. • Clear guidelines / learning objectives to be provided by universities as to what should be taught to students, as well as the level of supervision required for medical students to provide indemnity for supervisors. Suggested guidelines and examples of timetables would also be useful for practices to have when students are in the practice. • The universities need to provide training to those doctors involved in teaching, coaching and supervising students. • WAGPET currently provides ongoing training for supervisors and this needs to be maintained. • WAGPET needs to support those practices where Vertical Integration is happening successfully and invest in those practices in terms of infrastructure and remuneration and in promoting those practices as positive models. • Supervisors and practices need to be given professional recognition for their contributions and efforts by universities and WAGPET. • Leadership from the top levels is required – ie hospitals, WAGPET, the practice.

3.2 VARIANCES REQUIRED OF AN EFFECTIVE GENERAL PRACTICE VERTICALLY INTEGRATED TRAINING SITE

Medical Students	Prevocational Doctors	Registrars	Supervisors
Key Considerations: • Potential medico-legal issues need to be identified and clarified. If students are given a degree of freedom then this requires adequate direct supervision. • Can take a lot of organisation to schedule. • Students can slow down the consultation. • Frequency of contact needs to be measured against other commitments of registrars (eg exam preparation). • Having a few students at the same time is beneficial for the students and provides peer support. • First Wave Scholarship is a worthwhile program. • Current remuneration of $25 per hour to supervise a student is not adequate – potential quality compromised. • Some value in having 1st and 2nd year students visit the practice throughout the year. • The university needs to provide a contact person to assist students if issues arise • Using registrars to work with students reduces teaching load on supervisors.	*Key Considerations:* • Relatively short placement (10 weeks) has implications for continuity of care and the time needed to get them familiar with complex systems and can be a disincentive for some practices. If it could be a longer term (eg 6 months) it would be more useful. This would require more provision and more funding in addition to current funding for registrar placements. • Growing complexity of practices (IT systems, processes etc) requires more than 3 hours of orientation currently funded. • Opportunities for Junior Doctors to meet together as a group to discuss topics can be useful.	*Key Considerations:* • There is a need for formal orientation and training in how to teach others, particularly at GPT1 and GPT2 levels. • GPT1 level may need some time to come to grips with their own learning before being required to teach others. This will vary according to skills, knowledge and confidence of individuals. • Registrars are often at their best (knowledgeable, fresh, open to new ideas and keen to share) immediately after completion of their Fellowship exams and would make excellent supervisors but current requirement of 5 years experience prevents this. If they go into a sole practice, they are not able to be involved and this is a lost opportunity. • Current innovation being trialled in East Metro Region of Reverse Direct Observation where registrars sit in with supervisors and vice versa holds some promise.	*Key Considerations:* • A practice needs at least two supervisors; it is hard to take leave even with two, due to picking up each other's patient load as well as the teaching and supervising load. • Sometimes the supervisor has to lead from the front to avoid incorrect information being passed from one member of the team to the less experienced. • Practice viability in the short and longer term is supported by an investment in best practice and demonstration of excellence in general practice. There is a need to demonstrate this to all others as a positive role model.

Table 3.2 continued:

Medical Students	Prevocational Doctors	Registrars	Supervisors
Learning Processes / Opportunities • Weekly practice clinical meetings with all other staff from the practice with exploration of relevant case studies. • Fifth year students take histories and present back to supervisor (separate room required). • Discussion after presentation critical to draw out teaching points and engage the student. • Registrars have medical students sitting in with them on a rostered basis. • Each Doctor takes them for some sessions to increase exposure to different styles and strengths. • Rostered time with Practice Nurses and Chronic Disease to observe and ask questions. • Visits from other health providers. • Visits to the practice when in first or second year in order to familiarise themselves with the GP environment, life as a GP and to get a taste of clinical skills – half day visits. • Formal discussions with supervisor on case studies supplied by the university.	*Learning Processes / Opportunities* • Weekly practice clinical meetings with all other staff from the practice with exploration of relevant case studies and taking a turn at presenting to all others. • Individual tutorial once a week. • Visits from other health providers. • Computer messaging system that was linked in the practice to ask for advice or help. • Individual teaching. • Advice from registrars and supervisors. • Quick conversations in the corridor for more complex cases – "Teaching on the Run". • The use of a room and a list of assigned patients. • Opportunities to watch others and how they did things / procedures. • Access to online resources and information re: local links. • Formal orientation (half day) with no patients. • Rural practice requires handover and continuity of care for patients of the practice – intern takes summary of each patient and provides partial care. Supervision is provided by a roster of senior staff. • Video links to hospital.	*Learning Processes / Opportunities* • Weekly practice clinical meetings with all other staff from the practice with exploration of relevant case studies and taking a turn at presenting to all others. • Visits from other health providers. • Rural Intern Model provides opportunity for varied experiences and continuity of care. • Support of other registrars for exam preparation by asking questions etc. • Aids reflection on own knowledge and practice. • Learning from others • Tutorial preparation assists with learning. • Cements own knowledge. • Improves confidence.	*Learning Processes / Opportunities* • Weekly practice clinical meetings with all other staff from the practice with exploration of relevant case studies and taking a turn at presenting to all others. • Visits from other health providers • Provides an opportunity to promote general practice as a profession. • The ability to learn something from everyone and to reflect on own practice and continually grow professionally. • Seeing others develop. • Being able to undertake home visits, due to a registrar at GPT3 level being able to look after the students. • Reading the registrar's exam preparation notes promotes learning and currency of knowledge. • A link with other practices involved in supervision. • In order to teach something, you have to know it really well. This sharpens practice. • Patients often see teaching practice as being at a higher standard.

In summary, the information contained in this report is based on:

- A literature search
- Feedback from the Supervisors Advisory Group (SAG)
- Interviews with supervisors, registrars and prevocational doctors
- Regional Advisory Committee (RAC) input (Appendix 1)
- Case studies of three WAGPET Training Practices (Appendix 2).

PROCESS ADOPTED FOR THE PROJECT

An independent consultancy firm (PDT Consultancy) was contracted by WAGPET in July 2009 to undertake a research project to develop a possible model for vertically-integrated training in general practices.

This project was intended to build on an earlier pilot program undertaken in 2008 to explore the feasibility of establishing an outer urban metropolitan clinical school in the Rockingham Kwinana district.

Original Brief

The original brief for the consultant was to facilitate a number of focus groups with key stakeholders; the first being with those directly involved in the earlier pilot project. This was anticipated to explore their experiences within the pilot and from this to develop a model of vertical integration that they believed would work in general practices. This draft model was then to be exposed to a broader base of consultation across the state with those who are believed to have vertically-integrated models of training already in place and the model to be further refined based on their experiences.

At the same time, a literature search was to be undertaken to investigate from the broader research field what models were most likely to succeed.

The final step in the process was to receive feedback on the model from Registrar and Supervisor Advisory Groups before presenting the model to the WAGPET Board for approval in December 2009.

Revised Brief (Stage One)

There was some difficulty gaining access to information re: students involved in the pilot program and in having other practice staff being unable to commit to the initial forum due to work commitments. It was therefore decided by WAGPET that the model of consultation would be changed to conducting a series of one-on-one interviews with those individuals identified as having information that would be most relevant. This included two of the registrars who had been involved in the pilot program.

Semi-structured interviews were conducted with nine individuals who were identified by WAGPET. The interviewees included practice owners / supervisors, registrars and prevocational doctors. No medical students were able to be interviewed, as there was no response to invitations to those students who had been involved in the pilot program.

The interviews were conducted face-to-face at a time and location identified by the interviewees, or by phone. Most interviews occurred over a one-hour time-frame, although there were some that went a little longer and included follow-up emails from interviewees.

From the information gathered through this process as well as the literature research, the consultant was then charged with the task of bringing the information together into a draft model for consideration and feedback. The feedback was initially to come from the Medical Educators group from WAGPET who in turn would seek feedback through their Registrar and Supervisor Advisory Groups.

This combined feedback was then used to further refine the model.

Revised Brief (Stage Two)

In December 2009, it was identified that given the project being undertaken on behalf of WAGPET from February 2010 to investigate the ongoing sustainability of training GP registrars and residents in practices, it would be useful to create case studies on the three practices where interviews were conducted.

Subsequently, the interviews from the three practices (Pioneer Health, Ocean Keys and Lockridge Medical Centre) were written up as case studies in March 2010 and interviewees were given the opportunity to check the details for accuracy. This was considered to be a critical step given the length of time since interviews had been conducted.

FEEDBACK FROM REGIONAL ADVISORY COMMITTEES

Feedback from members of Regional Advisory Committees (RAC) was sought at their regular meetings during September and October 2009 in relation to the following questions and the results are as follows:

Kimberley RAC (October 2009)

What does the term "vertical integration" mean to you?

- Doctors at different stages of their career working and learning in one place
- Includes registrars teaching students and prevocational doctors, and prevocational doctors teaching med students. This includes presentations, and on -the-job teaching
- One member said that they use 5th and 6th year students to teach and mentor 1st – 3rd year students, as they speak the same language and are closer to the younger students in terms of the learning.

What is your experience (preferably in the region) of vertically-integrated training?

- Broome Regional Aboriginal Medical Service and Kimberley Aboriginal Medical Services Council (KAMSC) include this form of training into all of their training experiences. They include students from the Rural Clinical School, prevocational doctors and registrars.

What are the benefits and barriers of this/these models?

- Students get the teaching that they need (as more people available to teach)
- It provides an opportunity to get to know people within the clinic better through the teaching experience
- Vertically integrated training provides a two-way flow of learning and information – it also helps more experienced doctors keep up to date
- Encourages team work and an understanding about the roles of others
- Registrars sometimes say that they don't like teaching and don't feel that this is part of their role
- Some registrars have said that they don't like students in their workshops as it tends to bring down the level of the contents.

What would need to be in place for an effective vertically integrated training model?

- Good communication, so that all learners/teachers understood what they are doing and why
- All teachers/learners located in the same place
- Commitment by the organisation, top-down
- Needs a structure in place to ensure it actually happens
- Small numbers work best
- One doctor referred to a publication called "Teaching on the Run" but said she didn't think this was helpful. She said you need to be able to show registrars that they can teach in different, non-threatening ways, instead of didactic teaching
- It needs an enthusiastic person to champion it
- Remuneration for registrars who teach.

Pilbara RAC (September 2009)

- At Nickol Bay there is vertical education but not 'integration'
- There is a segment of the WACHS contract that includes 25% teaching time

Cautionary tales:

- Question the ability of individual registrars to teach
- Teaching is an 'art' – not everyone can do it – need to make individual assessment of registrar's ability
- Needs to be a defined process eg need to hear things three times to understand it - knowledge is dynamic
- People are time-poor (working and studying hard) so additional responsibilities to training someone else can be onerous
- Practicalities – when are teacher/trainee together? Easier in metro institutions than rural ones because of fragmented timetables.

Benefits of Exposure:

- When working well it is a two-way education process – everyone works as a team
- Spontaneous/corridor teaching works exceptionally well in rural areas.

Other:

- Nickol Bay would struggle to make 'vertical integration' happen, but could work in the new Primary Care Facility being planned for Nickol Bay because it will have a more structured environment
- Registrars are taken aback when they are expected to teach – need to question why this is so as the term "Doctor" means teacher. Teaching is a fundamental trait of the profession and doctors have an obligation to the communities they serve to teach.

Strategies for Nickol Bay education include:

- Offer monthly Grand Rounds at the hospital. Nickol Bay is not just a health institution but an educational institution
- Always expect registrars and residents and students to bring case studies to education so that they are more actively involved.

South-West RAC (September 2009)

- "Horizontal" training must be an integral part of training in practices – not just 'vertical'
- The Cascade model of training is an obsolete model! Must be a two-way learning process that reflect practices as learning organisations.

Cautionary tales:

- Could be seen as 'buck-passing' absolving supervisors of responsibility to teach
- Registrars don't know what they don't know – could be passing on wrong info; gaps in own learning
- Registrars who teach must have quality supervision to moderate/examine what they are teaching
- Some sort of quality assurance that practice is doing this right is required.

Benefits of Exposure:

- "You learn when you teach"
- Students get to see a different group of patients with registrars compared with GPs
- It has always occurred in the tertiary hospital setting
- Feel like able to ask 'stupid' questions
- Exposure to more current information
- Registrars can still remember what others need to pass exam.

Other:

- More resources and support needed in practices for this to work
- Staff need to be paid
- Need facilities/equipment to help registrars/residents/students look up information.

Individual Responses (2) (October 2009)

There were two individuals who responded to the issues. Their responses are as follows:

What does the term "vertical integration" mean to you?

- Essentially registrars formally training medical students under GP supervision
- Training that is linked seamlessly or with unifying threads year to year, through different contexts from undergraduate to postgraduate placements.

What is your experience (preferably in the region) of vertically-integrated training?

- Registrars have helped out student training over the years and presented educational topics to the practice including students at the time
- Working in a general practice that teaches RCS 5th and 6th years, interns, PGPPP, registrars and general practitioners all on the same day.

What are the benefits and barriers of this/these models?

- Builds practice morale and culture , however it all impacts on the GP supervisor's commitments
- Benefits – participants see clear pathways, develop relationships with rural towns, practices and GPs. Barriers – Nothing that can't be overcome – teaching hospitals may limit access to junior doctors, funding for 6th year placements and PGPPP is limited, also complexity for practices to support training.

What would need to be in place for an effective vertically integrated training model?

- It would need to become a formal part of the registrar's role and they would require training along those lines. The additional impact on GP supervisors would need to be considered. NB The New SuperClinic Model is supposed to be education-focussed but I doubt it will attract the type of GPs interested in education, let alone vertical integration!
- Infrastructure – accommodation, admin support, well-planned placements that are stimulating and safe, clear mentorship from experienced GPs with a financial incentive.

CASE STUDIES

The following are the case studies for three practices, based on a number of interviews that were conducted in July and August 2009:

- Pioneer Health, Albany
- Ocean Keys Family Practice, Clarkson
- Lockridge Medical Centre, Lockridge.

Many thanks go to the people involved who gave their time so generously for the initial interviews.

Each of the practices was sent a copy of the draft write-up of the relevant interview / case-study in order to give them an opportunity to check the document for accuracy. All of them responded and where necessary clarification was provided to ensure there were no factual errors. The following case studies are the results of those consultations.

CASE STUDY ONE – PIONEER HEALTH

Pioneer Health is a general practice in Albany. It currently has eight GPs, two GP registrars, five practice nurses and eight administrative staff. The practice has a large, new, purpose-designed building which is co-located with a pathology collection centre, pharmacy and counselling service. It provides a broad range of services, including all aspects of general practice, minor surgery, paediatrics, antenatal care, preventive medicine and mental health care. GPs have admitting rights at the Albany Regional Hospital, and there is the opportunity to provide inpatient care, emergency department cover, anaesthetics and obstetric care.

It has been a training practice since 1998 and accepts the training terms for GPT1, GPT2, GPT3 and GP extended skills registrars, as well as the Community Residency and Prevocational General Practice Placement Programs (PGPPP). At the time of the interviews (July 2009) there were four supervisors in the practice. One of these was also a lecturer at the Rural Clinical School (RCS), which was identified as having a positive impact in that many of the fifth year students were electing to come back as interns.

At the time of interviewing there were three Junior Doctor levels being trained. It was reported that at any given time, there could be up to five postgraduate doctors in the practice. Fifth year students from the Rural Clinical School and pharmacy students from next door, as well as scholarship students (one from Melbourne and one from the RCS) were also involved in this horizontally and vertically integrated training practice.

Interviewees:

- Dr David Tadj (Supervisor)
- Dr Sara Booker (Registrar – Extended Skills Program)
- Dr Emily Toster (Prevocational placement at PGY2).

Why commit to a teaching / learning approach across your practice?

Dr Tadj indicated that it was a practice-wide decision to commit to being a teaching practice and to take on teaching as a major part of the workload and to ensure it was resourced appropriately. This decision was largely due to a commitment to train the next generation of rural GPs. Practice viability in both the short and long term, with intergenerational sustainability as a business goal was a significant driver. Vertical integration was described as "…being more than just a reference to teaching registrars, but about providing a vocational pathway and in our case, a rural vocational pathway into general practice." Linking the hospital placement as an intern in the local context and being able to provide an opportunity for a second year placement, followed by a third year as a registrar at GPT1 level with procedural skills at the hospital has meant that more students are returning to work

as interns and registrars in the regional setting. Some of the GP registrars have chosen to stay on a more permanent basis.

Another consideration was to demonstrate excellence in general practice and to improve both the profession's and community's perceptions of the worth of general practice. The need to expose trainees to excellence and to promote it as a viable, attractive career choice was identified as "an investment in best practice". It was also identified as good business, in that a teaching practice has an advantage in ensuring quality due to the best practice involved in teaching and learning. At the time of the interview, the practice was extending its building to accommodate 14 rooms.

What are the critical success factors?

Commitment and appropriate resourcing

An ongoing commitment by all involved was highlighted by Dr Tadj, along with the "persistence necessary to work though the red tape" and leadership from key decision-makers. This commitment requires that the teaching and learning is adequately resourced. Within this practice, this has meant that to commit the necessary time to teaching there has been a decision to reduce patient load. Whilst there is currently a shortfall in payment made by WAGPET for teaching ($100 per hour compared with $300 per hour for clinical sessions) remuneration was not seen as the most critical aspect. He indicated that as a practice they had made the decision to commit to teaching, "knowing that it will affect the bottom line, but looking at the long term and the downstream effect of having well-trained professionals."

This commitment has also translated into physical infrastructure such as consulting rooms (provided for medical students as well as registrars) and a practice library, computerized records, high speed broadband and on-line resources.

There has also been a financial commitment by the practice to provide subsidised housing of a high quality in order to ensure that registrars have a positive experience.

The provision of support from practice managers was another resource commitment made by the practice.

Dr Tadj suggested that if a practice isn't committed to providing the appropriate resources to ensure a quality experience, then it would be better if it was not involved.

A culture of teaching and learning

A recurring theme in the interviews related to this practice was how critical it was to have a culture of learning across the entire practice. The many and varied opportunities for both informal and formal learning typically involved many if not most of the practice, with an acknowledgement that all have something to learn and to teach and because general practice is such a broad field "we are learning the rest of our lives." Students and registrars were described as coming with the latest advances and that this benefited the entire practice. Experienced doctors in the practice make it clear that learning is a "two-way street." The valuing of all members of the team and what their different experiences and perspectives offered was a common theme and was supported by providing both formal and informal opportunities for this sharing to occur.

The culture that supports learning at Pioneer includes leading by example, a dedicated team where the teaching load is shared across the practice, an expectation that all doctors in the practice attend a weekly Practice meeting where input is encouraged by everybody and the whole practice being involved at a weekly lunch meeting for a formal clinical presentation.

Doctors who are keen and committed to teaching were identified as crucial to establishing and maintaining a learning culture.

The learning culture approach is written into the Business Plan and is part of the vision / mission statement. As Dr Tadj indicated "It doesn't happen by accident…we need to continue to work on it; it is a journey, not a destination."

Dr Booker described the practice as being one "where people are happy to knock on someone's door and ask a question, which sometimes results in three people in the room…the patient feels supported and likes that." Approachability and openness to learning and questions were also important elements in this learning culture, according to both Dr Booker and Dr Toster. This

"open door policy" is actively encouraged within the practice, where all doctors, regardless of experience level, feel comfortable asking each other for their professional opinion.

A critical mass

The fact that the practice has a wide range of levels involved in training was identified by both the registrar interviewed and the prevocational doctor as an important factor. They also indicated that these levels need to be clearly defined and job descriptions clearly articulated.

It appears that a critical mass allows for greater integration of the training (both formal and informal) and for the development of a learning culture, with regular opportunities for people to interact and form bonds through regular teaching and learning together. Having sufficient doctors within the practice to support junior doctors to the required level was another factor highlighted by the registrar who was interviewed.

How does the teaching and learning occur?

The model used at this practice has evolved over a number of years in order to best meet the needs of those involved.

Both formal and informal opportunities for learning are provided within the practice.

Formal teaching involves the following:

- A regular time set aside for a weekly Practice/Admin meeting, where all of the doctors, one of the practice managers and a nursing team member meet. The teaching that occurs in these sessions does not just cover the clinical dimensions, but also includes other aspects such as business/ medico-legal and communication within the team. Input is encouraged from everyone. The Chair is rotated and junior doctors "get a feel for running semi-formal meetings, with a Chair, an agenda and minutes." Everyone has the opportunity to put up a topic for discussion to the practice manager via email. An example of a topic in one of these meetings was where a critical incident in the practice involving a violent patient was discussed and lessons learned from the experience were identified and consequently resulted in a review of protocols and procedures to be followed. The issue was explored from various perspectives and all were involved in identifying needed changes. Panic buttons were installed for dealing with violent/threatening patients in the practice as a result of discussions held over several Tuesday morning practice meetings. Sometimes scenarios are discussed and possible solutions identified, such as how the various teams would work together in the case of a severe allergic reaction. The results of these discussions are then captured and developed into "Practice Guidelines"
- A formal clinical session is held once a week during lunch, when the whole practice comes together for a formal clinical presentation. All doctors are rostered to present on a specified topic. This is a clinical session accredited by the RACGP, based around small group learning. Attendees are required to create a one page reflection / learning diary entry. The commitment to ongoing learning within the practice is perhaps best captured by Dr Tadj's comment: "Even if the registrars were not around, the doctors would come together for this presentation, as it keeps our skills sharp." As a registrar, Dr Booker found it to be a "non-threatening environment with all involved being very approachable". She indicated that she was not asked to do her first talk until after her sixth week at the practice and that she had enjoyed the teaching experience as it "cemented some of the learning …and improved her confidence."
- Registrars present at the clinical meetings and tutorials and those at GPT2 and GPT3 levels also work specifically with medical students. The presence and support of the registrars was also appreciated by Dr Toster (PGY2), who indicated that this made her feel "not so alone" and that the discussions with registrars and other prevocational doctors promoted a sense of learning together and sharing their insights. This was echoed by Dr Booker who noted how having other junior doctors and registrars provides an environment where not only social support is available, but having an integrated system where there is always someone to ask
- A weekly handover re: hospital patients, where the intern is required to take a small summary of each patient (both in-patient and those discharged), email this to all doctors and nursing staff in the practice and provide a verbal handover

with the outgoing and ingoing GP. This practice has approximately 25 – 30 % of its work in the hospital and "the whole practice likes to listen to this handover."

- Structured teaching through WAGPET (3-hour tutorials every six months)
- After-hours visiting specialist presentations are open to all doctors
- Interns have videolinks to Fremantle Hospital on specific topics.

Informal teaching and learning included:

- One hour per week is dedicated to one-on-one sessions with junior staff (interns and GPT1 registrars). Although GPT2 level registrars are not technically required to be involved, they also attend. During this session, junior doctors are invited to bring along any specific questions they may have and there is usually a planned topic for discussion as a back-up. Although Dr Tadj leads this session, he also encourages others to present topics. The value of learning for the presenter is acknowledged – "explaining something is the ultimate form of learning". These informal sharing sessions were acknowledged by Dr Toster as especially valuable, as "we could bring up any issues or questions." Dr Booker appreciated the opportunity to learn from others' questions and the sharing that resulted amongst the learners
- Corridor teaching, which was identified as a critical aspect and a large component of the teaching and learning at the practice. The value for learners is the "clinical problem being in front of them and on the spot."

A form of horizontal learning also occurs, whereby pharmacy students sit in on some sessions with patients, and this is reciprocated when medical students spend some time in the pharmacy.

What would add even more value?

Compulsory education on teaching being provided for GPT1 and GPT2 registrars was recommended by Dr Booker and was seen as potentially useful by Dr Tadj.

CASE STUDY TWO – OCEAN KEYS FAMILY PRACTICE

Ocean Keys Family Practice has been a training practice since 2008. It currently has four GPs and accepts GPT1, GPT2, Community Residency participants, PGPPP and GPT3 terms.

Interviewees:

- Dr Tim Koh (Supervisor)
- Dr Keith Ananda (Registrar)
- Dr Heather Brand (Prevocational Doctor – Community Residency).

Why commit to a teaching / learning approach across your practice?

It was seen as a way of promoting general practice as a profession, which was identified as the biggest reward.

It was also viewed as an opportunity to gain from others' knowledge, right across the practice. The value of reflecting on your own knowledge when teaching others was highlighted by interviewees.

The need to get past the paradigm of passive medical education, which tends to turn medical students off general practice, was highlighted.

Due to the nature of general practice in its breadth of experience, it was identified as important that the GP is learning actively for their whole career in order to maintain standards.

What are the critical success factors?

A culture of teaching and learning

The prevocational doctor interviewed described the learning experience in this practice as an excellent placement, as "everyone was really lovely, especially in comparison to my experience in hospitals… everyone was learning and it was a very supportive learning environment. I realised this was fairly unique and I didn't take it for granted. We got 'protected teaching' and it was done without fuss and was not hit or miss."

As described by Dr Koh "We work on the principle that whatever knowledge you find or have you should use it to change practice, such as developing protocols. Everyone's practice is open for improvement and scrutiny…this requires a high level of trust." The approach taken in tutorials is that "anyone can say anything; you don't feel a fool."

Availability and willingness for teachers to be involved was a crucial part of the experience for the doctor undertaking a community residency as evidenced by this comment: "They made it clear from the very outset that we were to grab them and that they were there to help. We were told we were expected to ask for help, not only encouraged...in contrast with the experience in hospitals, where the registrars hated being bothered and when you were made to feel a burden."

Investment in infrastructure and resourcing and maintaining quality

The practice has made a commitment to providing adequate physical space to ensure a "productive student experience"

The whole practice is involved in supporting the learning; across all three tiers.

Maintaining the quality of training was identified as one of the key factors for success, and keeping the emphasis on this rather than on just increasing quotas. This was seen as a challenge when working with medical students – at the time of interview, there were none involved in the practice. It was felt that the current remuneration for supervision of a student ($25 per hour) discouraged the provision of quality training and even though remuneration was not the reason people involve themselves in teaching; it could impact on the quality of the experience due to "spreading themselves too thin." There was also a concern expressed that increasing the remuneration may attract corporate general practices that may be more motivated by money than by quality.

How does the teaching and learning occur?

Both formal and informal opportunities for learning are provided within the practice.

Formal teaching involves the following:

- A tutorial is held once a week, with everyone present. It typically takes the form of a discussion rather than a lecture. A specific aspect of clinical practice is the focus, usually with the intention of "going beyond niche knowledge" It is overseen by two supervisors, but responsibility for presenting is rotated and everyone takes a turn, including residents. A high standard of presentation is expected during these sessions
- A 45 minute tutorial conducted by one of the more senior GPs held on a weekly basis
- Specialist presentations
- Individual teaching
- Working together during a consultation was an approach that was highly valued by the prevocational doctor interviewed. The chance to observe different approaches to clinical tasks and to be able to ask someone else's opinion, rather than be in a passive observation mode, was highlighted. "As a student, observing the GP was awful and I thought I'd never be a GP, but as a Junior Doctor, with the use of my own room it changed the flavour; it was my patient and I was asking someone else's opinion, not watching someone else.".

Informal teaching

- Corridor teaching on an "as needs" basis, for more complex cases
- A computer messaging system to request help or advice in order to support the learner
- Registrars being available to assist prevocational doctors with any queries
- Teaming up medical students for peer support.

What would add even more value?

There were some concerns expressed re: the medico-legal issues in using a cascade model of vertically integrated training, whereby supervisors need to be reassured they have some legal indemnity, particularly where registrars are directly involved in training medical students. There would also need to be some guidelines on the level of supervision required and what is and is not acceptable.

The need to provide formal training for registrars in teaching and to capitalise on their enthusiasm for teaching whilst they are in the early stages of their career was highlighted.

A strong recommendation was for WAGPET to identify models where vertical integration is happening successfully and to share these models with other practices. It was also felt that WAGPET should invest in these models and support them with infrastructure and remuneration.

CASE STUDY THREE – LOCKRIDGE MEDICAL CENTRE

Lockridge Medical Centre has been involved with the training of registrars and medical students since 1978. It was originally set up by UWA as a teaching practice and then became a private practice. It has been a WAGPET Training Practice since 2003 but has been involved in teaching since its inception. The teaching occurs across both the undergraduate and post-graduate level and registrars are involved in the training of others.

There are six GPs servicing the needs of a diverse patient mix from within the community, including babies to very elderly, a broad ethnic mix, people with intellectual disabilities, Aboriginal patients and nursing home patients. There is one practice manager and a team of six nurses on staff.

At the time of interview (September 2009) medical students and registrars were being trained at the Centre. They had registrars at all levels and students from first, second and third years a few times a year and fifth years for 8-week blocks over the academic year. They have also taken First Wave Scholarship students. They had not been involved in the training of prevocational doctors, which was a decision taken due to a number of factors, such as their teaching capacity and load (five registrars in the practice at the time), concerns about continuity of care and the time required to adequately orient prevocational doctors to practice systems for a relatively short placement.

Interviewee:

- Dr Nadine Perlen (Supervisor)

Why commit to a teaching / learning approach across your practice?

It reflects the ethos of the practice and it attracts people who want to work in this type of environment.

It provides a link with other practices who are also involved in supervision and it keeps practice fresh, through continuously needing to think about and share practice.

There is a sense of pleasure in seeing registrars develop and in passing on what we have been given by others.

It is viewed as a positive by patients in that a standard of good practice is being maintained.

How does the teaching and learning occur?

It involves a lot of organisation on the part of the practice manager and assistant practice manager. They have to make up rosters, paperwork, provider numbers and this is not adequately covered by payments.

Medical students

- The more junior medical students are allocated to one doctor and visit 3-4 times a year depending on their course requirements. They contact the practice and get scheduled to sit in with their allocated doctor. We can't clash a 5th year with a 2nd year for the same doctor's session.
- Fifth year students sit in with us, or if there is a spare room they are encouraged to see patients on their own. They take histories and present back to us. The fifth years are rostered with different doctors each session so they get exposure to different clinical styles and patient groups. They have some time sitting in and on their own. They also have rostered time with the Practice Nurses and with the Chronic Disease Nurse. This strategy shares the load across the practice. There is an effort to stop it being boring and to give them variety
- The students and registrars all come to a weekly Practice Clinical meeting that includes all doctors and Practice Nurses. The supervisor coordinates this and Registrars are required to prepare a presentation towards the end of their semester which is usually case based but may be related to an area of their own special interest
- Coordinated visits from other health providers in areas such as allied health and Divisional Program people (chronic disease, mental health) and other services (eg Drug and alcohol)
- Group case discussion sessions on evidence-based teaching are held.
- Registrars conduct some sessions and carry out teaching. One of the registrars works p/time at Sexual Assault and has been persuaded to do a session for other GPs. An hour (Friday lunchtime) and the drug reps come only once / month. They are not allowed to come at other times
- Registrars have medical students sitting in with them based on a rostered system (although not GPT1 initially unless confident and willing, as they are under pressure themselves). They are involved because they can teach, have knowledge and it gives them good experience of that aspect of the profession and shares the load
- Registrars don't have students knocking on the door, as they are not treating patients.

Registrars

The type and amount of formal training varies according to the level

- GPT1 registrars have three hours face-to-face; one hour tutorial with supervisor; one hour at a Clinical Practice meeting and the rest (more than an hour) is incidental teaching as they request advice or assistance
- GPT2 level registrars have 1.5 hours of formal training (30 mins face-to-face and the Clinical Practice meeting)
- The more senior registrars sometimes discuss cases and issues in an informal way with the more Junior doctors
- At the time of interview, the practice was piloting a GPStart Program with the GPT1 registrar which has a set of teaching modules.

What would add even more value?

- There needs to be PD offered to registrars involved in relation to teaching and coaching. There should be some sort of induction for registrars where they know what they can do with the students. WAGPET provides ongoing training for a supervisor that is very good, with wonderful weekends at times
- The proposed trial in East Metropolitan of Reverse Direct Observation that provides more time for registrars to sit in with supervisors and supervisors to sit in with registrars sounds promising, as there is currently not enough of this happening.
- Increased funding for orientation to the practice. We currently get funded for three hours, even though we spend a whole day and a half. Registrars in our practice see fewer patients per hour than fully qualified doctors. They usually start with two per hour
- Training of students currently takes up a consulting room, but doesn't bring in income and practice infrastructure costs remain fixed
- If prevocational could be a longer term (eg 6 months). It would be a good way of exposing junior doctors to general practice and the practice to the junior doctors. This is likely to happen anyway given the increasing numbers and shortages of places, but there would need to be more provision / funding for face-to-face teaching and direct observation over and above what happens now with registrars
- The practice needs to be involved in any discussions re: the model used for training. The supervisors need to be involved. The doctors / practices have to balance the need to see patients and taking doctors out of the practice. Direct observation would help, but it still takes time if it is to be done well.

2010

Vertical Integraiton Report

WAGPET

Education and Training for General Practitioners