Prevocational Integrated Extended Rural Clinical Experience

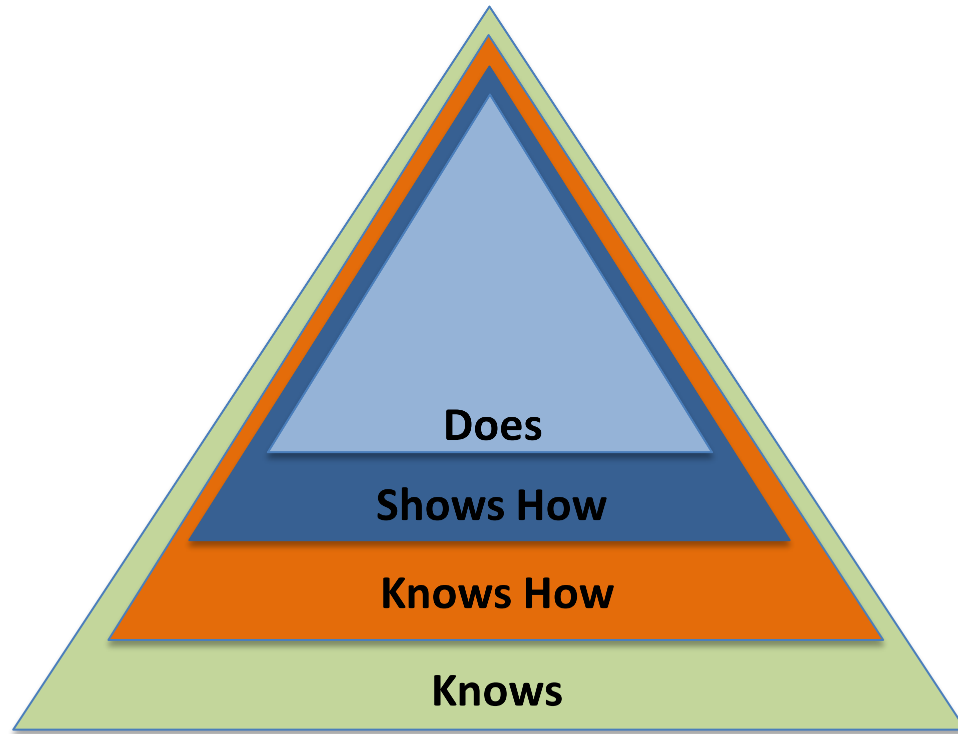
Cutting a path through the barriers to rural training

Associate Professor Dale Hanson
Director of Rural Generalist Training

The Generalist Pathway

find your calling

What are we trying to achieve?



Miller's Pyramid

Working to learn

Learning to work

What are we trying to achieve?

This study identified three core domains of learning:

1. **Concrete Tasks**
2. **Project Management**
3. **Identity Formation**

Becoming a practitioner: Workplace learning during the junior doctor's first year

Dale Sheehan
Tim Wilkinson
Emily Bowie

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Becoming a practitioner: Workplace learning during the junior doctor's first year

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Abstract

Background: Newly qualified doctors (interns) report that they learn a great deal in the first year of practice, but exactly what is learnt is not well understood.
Aims: To document the reflections and perceptions of first year junior doctors in order to reveal and chronicle their informal and often tacit learning in the workplace within a practice methodology framework.
Methods: New Zealand interns, from three sites, participated in group interviews modelled on a conversation and joint enquiry style.
Results: We found that learning in the first year after graduation falls into three broad themes: (1) concrete tasks, (2) project management and (3) identity formation. Identity formation appeared the most challenging and included getting used to being seen by others as a doctor.
Conclusion: All themes have implications for curriculum development and clinical supervision in both undergraduate programmes and during internship. The third theme (identify formation) is the most complex. We draw on a model from management literature, to describe intern education as a process of becoming: as an unfolding and as a transformation of the self over time. We argue that reconfiguring internship as a period of identity formation, and as a self-determined, active process of 'becoming a doctor' provides a wider perspective than enculturation or socialisation theories to understand this significant transition.

Introduction

The first year after graduating from medical school can be a time of stress but also of much learning. This probationary period recognises that competence in medicine requires sustained exposure to practice, with increasing responsibility for patient care under the supervision of an experienced practitioner. It is the time when junior doctors gain knowledge located in practice by providing patient care and by reflecting on their own practice and the practice of other clinicians (Sheehan et al. 2005; Sheehan & Wilkinson 2010; Sheehan 2011).

While newly qualified doctors often report that they learn a great deal in that year, exactly what is learnt is not well understood. Some of the learning may relate to content that should have been learnt in medical school, but much may be content that can only be learnt on the job. Billett (2001) refers to this as the curriculum of the workplace. As experience grows, the intern gains knowledge that emerges from and is situated in practice, and this practice is conducted as part of a team delivering patient care. This investigation sits within practical knowledge traditions, which emphasise the concept of practice as a purposeful, variable engagement with the world (Lave & Wenger 1991; Schatzki 1996; Billett 2001; Sheehan et al. 2005; Kemmis 2009). It acknowledges the 'practice turn' (Schatzki 1996) that places the investigation of practice firmly within social theory, and recognises that practice is shaped by meaning, knowledge, power, social institutions and 'timespace' (Schatzki 2010). So within this theoretical context, we sought to identify the curriculum of the junior doctor's workplace (Billett 2001) and discover how successful interns (Postgraduate, Year 1, probationary registration) perceive their role and common duties to be within this complex inter-professional community; what they perceived was learnt in this foundation year; and what skills and competencies they believed determined successful performance.

Because this study is grounded in social learning and workplace learning theory, a key assumption is that learning in internship is influenced by the sociocultural and socioemotional contexts in which it occurs (Lave & Wenger 1991;

Practice points

- Skills learnt in the first year after becoming a doctor include project management and identity formation.
- Identity formation develops through interaction with others in the workplace.
- Inter-professional conflict may be precipitated if self-perceived identify differs from identity as judged by other health professionals.
- Much of what may be termed paper work includes skills in project management.

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The Generalist Pathway

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What are we trying to achieve?

The recent emphasis on professional identity formation suggests a 5th level for Millers Pyramid

"Is"

Amending Miller's Pyramid to Include Professional Identity Formation

Richard Cruess
Sylvia Cruess
Yvonne Steinert

Academic Medicine, 2016

Amending Miller's Pyramid to Include Professional Identity Formation

Richard L. Cruess, MD, Sylvia R. Cruess, MD, and Yvonne Steinert, PhD

Abstract

In 1990, George Miller published an article entitled "The Assessment of Clinical Skills/Competence/Performance" that had an immediate and lasting impact on medical education. In his classic article, he stated that no single method of assessment could encompass the intricacies and complexities of medical practice. To provide a structured approach to the assessment of medical competence, he proposed a pyramidal structure with four levels, each of which required specific methods of assessment. As is well known, the layers are "Knows," "Knows How," "Shows How," and "Does." Miller's pyramid has guided assessment since its introduction; it has also been used to assist in the assessment of professionalism.

The recent emphasis on professional identity formation has raised questions about the appropriateness of "Does" as the highest level of aspiration. It is believed that a more reliable indicator of professional behavior is the incorporation of the values and attitudes of the professional into the identity of the aspiring physician. It is therefore proposed that a fifth level be added at the apex of the pyramid. This level, reflecting the presence of a professional identity, should be "Is," and methods of assessing progress toward a professional identity and the nature of the identity in formation should be guided by currently available methods.

Editor's Note: A Commentary by F.W. Hafferty, B. Michalec, M.A. Martimianakis, and J.C. Tilbert will appear in the same issue with this article.

In 1990, George Miller[1] published an article entitled "The Assessment of Clinical Skills/Competence/Performance." Its impact was immediate. Although no review article on its use or impact has since been published, a recent search of the literature using Scopus revealed 1,094 references to it in journal articles representing multiple countries and languages. Since its publication, Miller's article has had a constant presence in works devoted to undergraduate and postgraduate medicine, continuing professional development, other health care disciplines, and domains far removed from health care. Interest in the article appears to have grown with interest in assessment. Citations per year grew from single digits in the 1990s, passing 100 in 2010, and remaining between 100 and 140 per year since then.

In the original article, Miller[1] stated that "no single assessment method can provide all the data required for judgment of anything so complex as the delivery of professional services by a successful physician." He then proposed a four-part pyramidal structure as a framework within which the multiple levels of mastery over the art and science of medicine could be assessed. Recognizing the necessary integration of teaching and assessment, Miller stated that "faculties should seek both instructional methods and evaluation procedures that fall in the upper reaches of this triangle."[1] Moreover, acknowledging the power of assessment to drive learning, Miller correctly predicted that if his proposed structure was adopted, patterns of learning would be altered. We have nothing but admiration for Miller's contribution, believing that the pyramid with four levels of achievement was entirely consistent with the state of knowledge of professional formation and assessment at the time. However, we believe that the growing understanding of the importance of professional identity formation in medical education[2–4] suggests that the composition of the pyramid should be reexamined.

As is well known, Miller's pyramid, or triangle as he also called it (Figure 1), has knowledge as its base. Miller recognized the foundational importance of knowledge, that an individual "Knows" what is required to carry out the functions of a professional. Moreover, he understood that merely knowing was insufficient for the practice of medicine, and stated that assessing knowledge was relatively easy. The next layer was based on the fact that graduates must "Know How" to use their knowledge as an indicator of "competence," and he reviewed methods of assessing the analysis, interpretation, synthesis, and application of knowledge. The third level, "Shows How" was related to "performance," referring to the necessity for learners to demonstrate, through performance, that they are capable of using their knowledge while being supervised and observed. Miller described the then emerging methods designed to assess this level of accomplishment. Finally, the apex of the pyramid was occupied by the verb "Does," representing an attempt to determine whether learners are capable of functioning independently in clinical situations. Miller[1] stated that "this action component of professional behavior is clearly the most difficult to measure accurately and reliably," an observation that is still accurate.

The pyramid that Miller created has been used extensively as a template for

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What are we trying to achieve?

Human beings

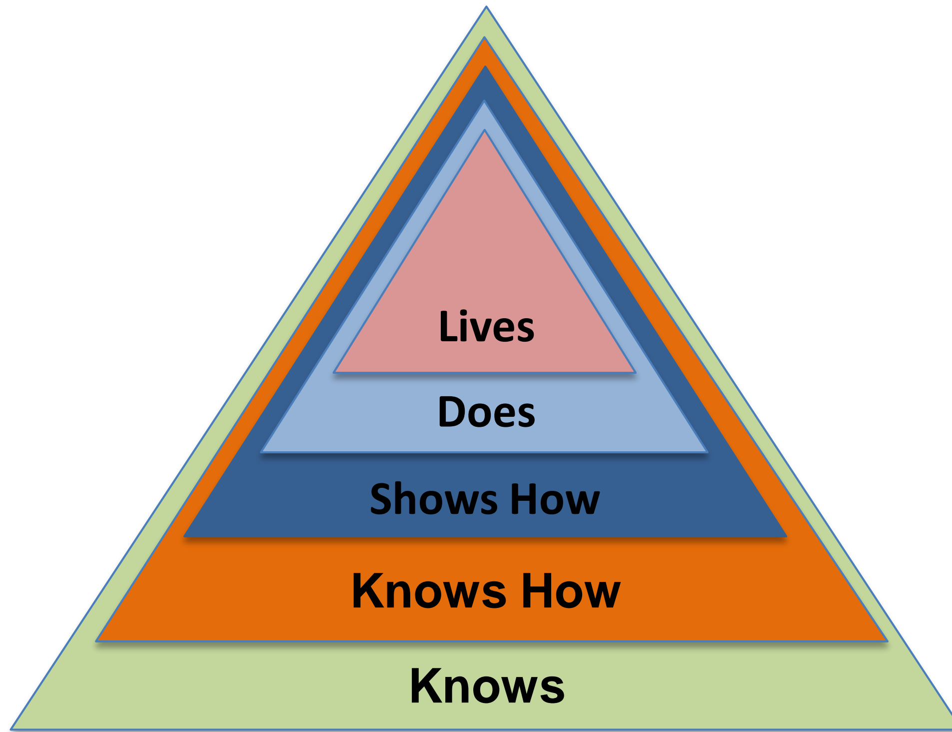
or

Human doings?

Ronald Barnett

The Limits of Competence: Knowledge, Higher Education and Society, 1999

What are we trying to achieve?



Miller's Pyramid

Living to become

Working to learn

Learning to work

It's time to get real!

Real work in the real world with the real people
who live the real life

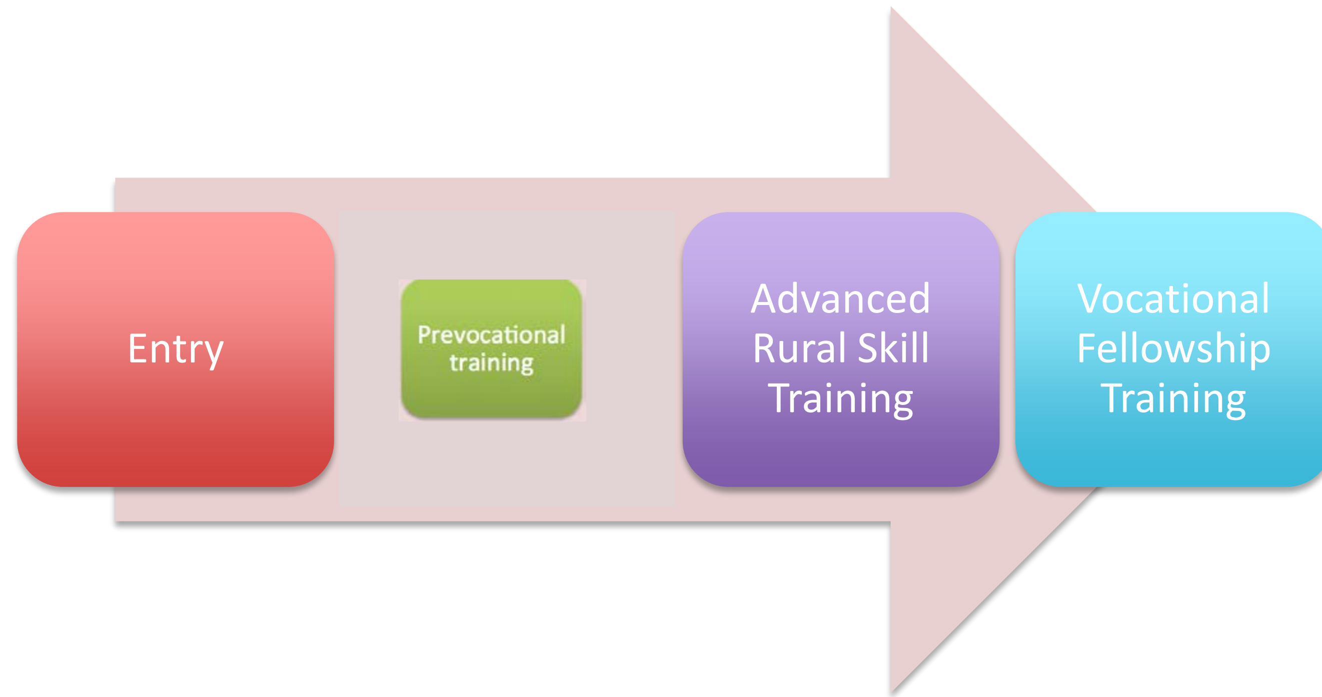
Situated Learning

Knowledge is acquired by *legitimate participation* through progressive involvement in a *community of practice*

Brown J.S., Collins A., Duguid P., Situated Cognition and the culture of learning, *Educational Researcher*, 1989, 18(1), 32-42

The Queensland Rural Generalist Pathway

A pathway to the bush



Queensland's Rural Generalist Pathway

Could Rural Hospitals provide a clinically authentic training opportunity for prevocational RGP trainees in Anaesthetics, O&G and Paediatrics?

The Pilot

Mareeba Hospital

Proserpine Hospital

Stanthorpe Hospital

Study Design

Semi-structured qualitative interviews

- **RGP Trainees** - 18
- **Supervisors** - 6

Comparison

- **RGP trainees undertaking** PIERCE - 9
- **RGP trainees undertaking Traditional Block Rotations (TBR)** - 9

Overall Impression

Overall Impression – PIERCE

*“**I loved it**, I thought it was a really good program. I thought that the exposure I had was greater than I potentially would have had regionally. …. definitely the best decision I made this year was to do that placement”*

*“**I had a really great experience**, I got to get involved in the community and I felt a part of the team in the hospital.”*

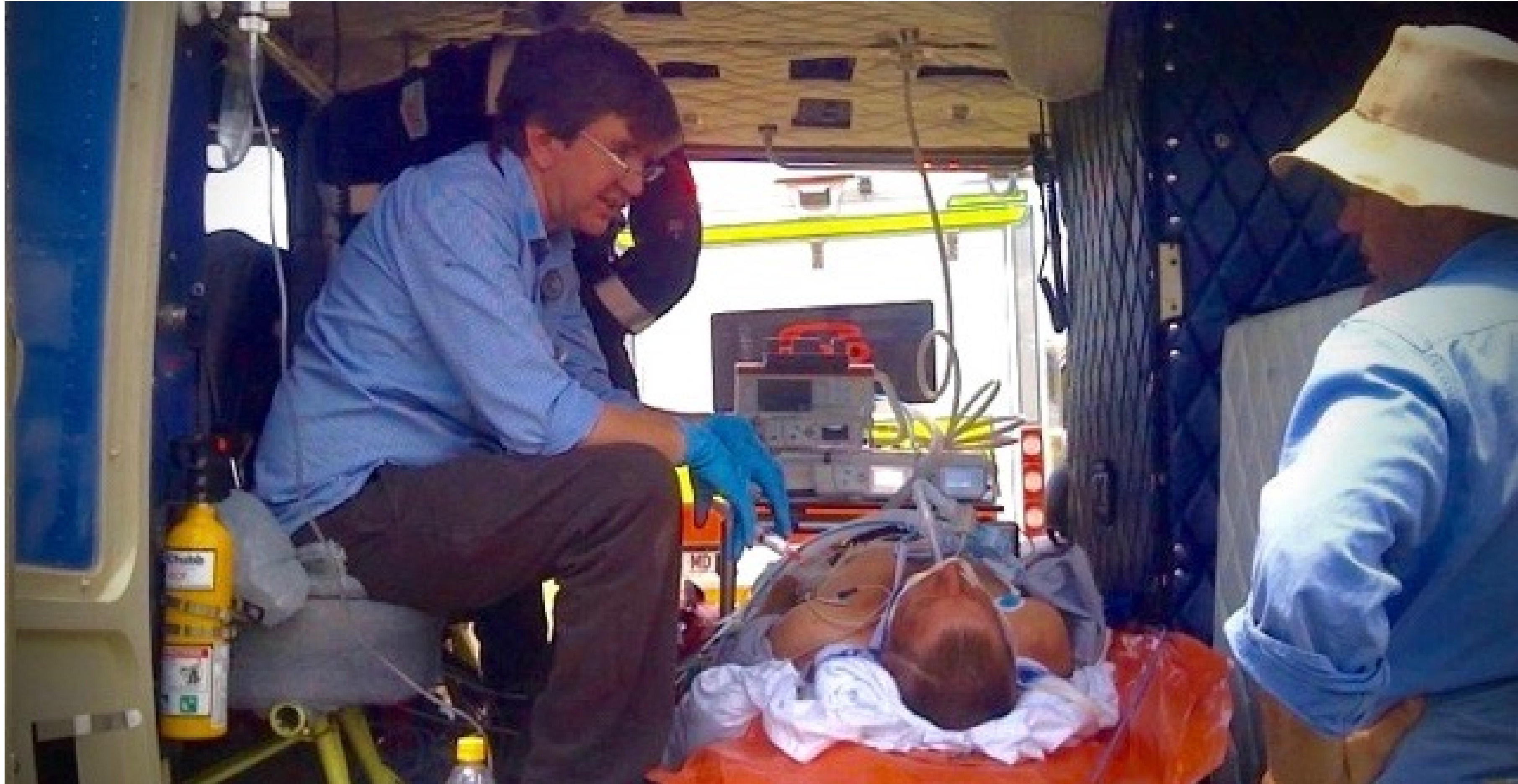
“Don’t tell anyone else because it’s my little secret.”

Overall Impression – Block Rotation

*“**It was OK.** … I think it’s a good term. I think it’s good to get those base line skills and understanding of how an anaesthetic department runs”*

*“**I had quite a good time in O&G** … it was quite practical in that I do have all of that clinical experience, like standard gynae presentations to ED, and GP type presentations for gynae procedures.”*

*“**It was pretty good.** … particularly for the neo-natal side of stuff, baby checks and resuscitation. … reviewing kids in ED and making a decision as to whether they need admission and then also seeing when they decide to step up to tertiary care.”*



Rural Medicine

Situated Learning – PIERCE

"You're seeing people that are living the job and seeing them enjoying the job, you're being immersed in the community where you're living like it will be."

"There's no experience like real experience. You can read it all in a text books if you want. Being in XXXX (Regional Hospital) is not anything like being in a rural hospital"

"Because it was in a rural setting, it's more realistic to what I will actually be practising.

Career Affirmation – PIERCE

*“**What they have now is what I see for my future**. Their family life, having a property with land. … The future that my husband and I want for ourselves.”*

*“**I came away knowing absolutely that Rural Generalist is what I wanna be**.”*

*“**It was good for me for me to work in XXXX hospital and be in rural centre for that amount of time**. I’m not from a rural background and never particularly lived in a rural area for that prolonged period.”*

Community Based Medicine - PIERCE

"It was fantastic in building doctor patient relationships. I'd never been in a setting where I saw the same group of patients on a regular basis."

"It teaches you how to build relationships with clients. You get to know the patients really well and their family members and definitely create a good bond with the community."

"Becoming a part of the community, picking up your own regular patients of your own. … Seeing them regularly, following them up, referring them to XXXX (Regional Hospital) and then seeing them when they come back for step down care."

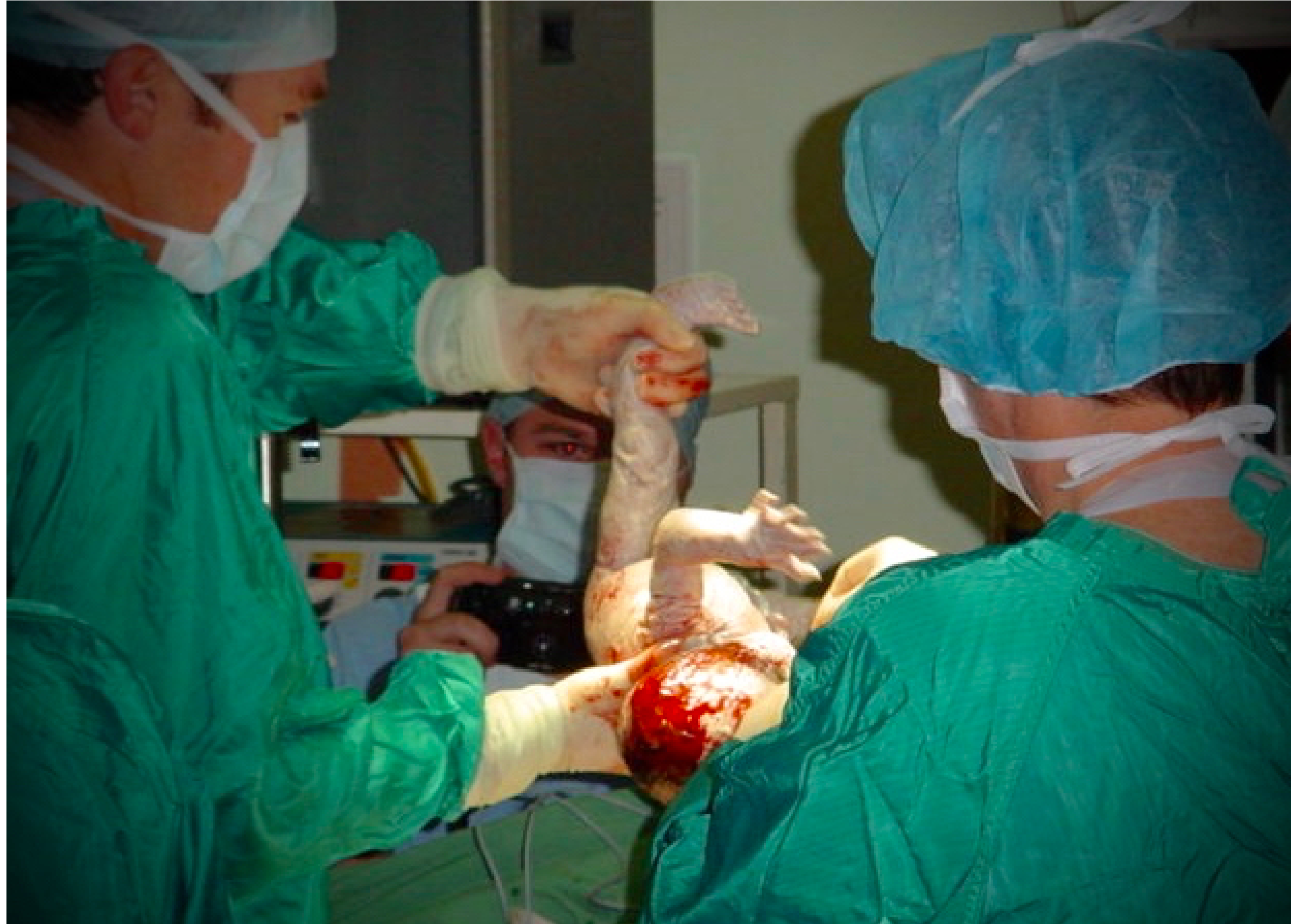
Traditional Block Rotations

Trainees undertaking block rotations

I don't know if it's particularly good for rural medicine. It's not exactly the sort of stuff I will be encountering in my career in the future.

I don't think it prepared me that well. It strengthened skills that I could potentially use rurally but I don't think it strengthened my rural aspirations.

I got the impression from about half of the consultants are against people doing anaesthetics as an advanced skill. They feel their specialty is too specialised for a Rural Generalist. With time and reflection I thought I couldn't do anaesthetics by itself. It's not who I am, or what I'd like to do.



Can ACRRM Core Clinical Training be provided in Rural Hospitals?

Adequacy of training

*"I enjoyed my time in XXXX (PIERCE Hospital) but **I didn't think it was comparable to the block rotations.**"*

***"I don't think you'd be able to replace the experience you get in a bigger hospital such as XXXX** (Regional Hospital)."*

*"In XXXX (Regional Hospital) you would do five weeks of paeds, five weeks of O&G, five weeks of anaesthetics, so **that's pure stuff, it's giving you pure experience**."*

And Yet!

Many PIERCE trainees described impressive experience?

"I learnt far more anaesthetics from my time just being around rural generalists anaesthetic skilled people in XXXX (rural hospital) than I did in 5 weeks in an anaesthetics department."

*"**I probably delivered 10 babies, and did some perineal repairs** and that's something that my colleagues didn't get to do on their O&G rotation."*

*"**I think we had a count of nine obstetric deliveries SVD's for each of us. We both did at least 2 Caesarean sections where we were the first assist.** I wouldn't have seen those if I'd been at a regional hospital."*

Trainees rejected the idea of substitution

PIERCE and Block Rotations are complimentary experiences

"I loved it, I thought it was a really good program. … but you'd still need to do some time regionally."

"**The learning opportunities are really different**. You learn a wide variety of things there (rural hospital), but here (regional hospital) when you're in a speciality you're more in depth with that specialty which is important as well … **I definitely think both sides are important**

"I do recommend PIERCE but you can't do it instead of, you have to do both."

Trainees rejected the idea of substitution

Five-week block rotations

*"**I don't like half terms**. It takes about five weeks to get into the stride of it."*

*"**I think a bit longer would be beneficial**. Five-weeks means you only just start to understand how things work, who the people are. … after that you're nearly done."*

*"**I would have preferred much longer to be honest**. At least a full term … I got seven weeks. It was only in the last two weeks that I really felt comfortable with what I was doing, and I was allowed to work independently and use the skills that I had learnt. If I had another three weeks or longer, I would have learnt exponentially more."*

The real point is that

Trainees value all types of learning

PIERCE - Broad experience & hands on learning

*“**You could just be a lot more hands on** with deliveries, hernias, sutures other things like that, that you wouldn’t necessarily get to do in a bigger centre.”*

*“**If you are someone who stands back and expects to get through experiences you are not going to get anything out of it**, but I really tried to push to be involved.”*

*“**We worked quite long hours but we did it because we knew we wanted to have the exposure**. … we obviously had a ACRRM log book … we got 66% of the critical care skills in that 15 weeks and you’re aiming 50% over 2 years … I think we got 44% of the entire logbook signed off while we were. Procedurally nothing can compare to that”*

Block Rotation - Caseload experience / formal learning

*"It's been very useful for getting airway skills. … I don't think you can have any alternative to actually doing intubations on difficult people, **getting to spend large amounts of time in theatre**."*

*"**It was quite practical in that I had all of that clinical experience**, like standard gynae presentations to ED, and GP type presentations for gynae procedures. … **I saw a lot more patients that way**."*

*"**I did do a lot of neonatal cannulation, and baby checks and all that**. It was a good exposure to general paediatrics."*

*"**There was a lot more teaching and you got more time to ask questions**. … you get to spend a lot of one on one time with your senior colleagues and you learn a lot from them."*

A spectrum of learning experiences

Core Term PGY1	*"You absorb things peripherally. You don't really get to do them."* *"you just learn from watching the Registrars do something"*	Learning to Work
Block rotation PGY1	*"I felt like a … student again. Sitting on the side lines watching."*	Working to learn
Block rotation PGY2	*"It was quite practical in that I had all of that clinical experience."*	
PIERCE	*"You could just be a lot more hands on with deliveries, hernias, sutures other things like that"* *"You're seeing people that are living the job and seeing them enjoying the job, you're being immersed in the community where you're living like it will be."*	Living to become

I came away knowing absolutely that a Rural Generalist is what I want be."

It's time to get real!

Real work in the real world with the real people who live the real life

Any Questions?