PARALLEL CONSULTING

LITERATURE REVIEW OF PARALLEL CONSULTING METHODOLOGY AND EVALUATION OF RELEVANT RESEARCH TO DETERMINE THE EFFICACY OF PARALLEL CONSULTING

AND

GUIDELINES FOR PARALLEL CONSULTING
ADOPTED ACROSS M2M

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1. INTRODUCTION

Parallel consulting, also known as' wave', is the practice of having the general practitioner (GP) see a patient alone in parallel with the trainee (e.g. medical student, intern) who consults with a second patient in his/her own consulting room. When the GP finishes his/her initial consultation, he/she then joins the trainee and the second patient to conclude the precepting consultation.^a

Parallel consulting, by whatever name, is widely employed as an integral component of supervised general practice teaching. However, there appear to be no accepted guidelines for its implementation.

It is important in a program as complex as the one being embarked on in the Murray to the Mountains (M2M) project that there is an agreed understanding of 'parallel consulting' and that all the teaching sites work to the same set of guidelines.

With the introduction of the integrated care clinic at Cobram District Health, there is an opportunity to prepare appropriate guidelines and to test them in a clinic specifically designed to enable parallel consulting to occur.

The aim of this project is to undertake a literature review and develop a set of implementation guidelines, which are applicable across M2M and may also be applicable elsewhere across Victoria.

2. LITERATURE REVIEW

Medline and ERIC (Education Resources Information Center) databases were searched for the key terms 'parallel consulting', 'wave' plus 'consulting', 'schedule' or 'scheduling'. These searches produced only a small number of articles so the search was widened to include various combinations and permutation of the following terms:

- medical student or undergraduate or postgraduate or intern or medical teaching;
 and
- doctor or general practitioner or GP or clinician or physician or preceptor or supervisor or mentor;
- general practice or primary care or ambulatory care/setting or community medicine/setting.

The reference sections of identified articles were checked for any articles not picked up by previous searches. No time limits were imposed.

^a Based on definition used in Walters, L. *How and why rural general practitioners commit the time to precept medical students.* PhD Thesis, Flinders University, 2009.

In addition to the above specialised databases, the Internet was searched for the same key terms and combinations and permutations of more general terms, including using the 'wildcard' feature.^b

No articles evaluating parallel consulting *per se* were identified. This finding was raised in telephone conversations with Associate Professor Lucie Walters^c and Professor Dawn DeWitt Talbot.^d Neither knew of any such research but suggested looking at studies that investigated aspects of parallel consulting or parallel consulting within a wider teaching/supervision context. For example, Walters' research looked, *inter alia*, at whether consultations take more time when GPs are precepting medical students using a parallel consulting model. There might also be research into patients' views or the perception of trainees, and cost benefit analyses.

Most of the research identified involved medical students rather than prevocational doctors, possibly because medical students in Australia and overseas have at least some experience of general practice whereas a period of general practice experience tends to be optional for prevocational doctors. Research involving medical students was included since, in the case of parallel consulting, the process is essentially the same as for prevocational or other postgraduate doctors.

2.1 Consulting Time Using a Parallel Consulting Model

Walters et al¹ noted that general practitioners (GPs) consistently report that consultations take longer when supervising students. Walters' thesis^a aimed, *inter alia*, to investigate whether consultations do take longer as reported. Analyses of videotape recordings were used to quantify the effect of supervising medical students on consulting times. The results showed that consultation length does not increase when rural GPs supervise medical students using a parallel consulting model.

Reasons for the difference between these findings and reports that consultations take longer were considered including that consultations may take longer when other student teaching systems are used. A subsequent paper looked at what GPs do differently when consulting with a medical student² and reported that, for example, GPs tended to spend longer taking the patient's history but less time on examination, management and clerical activities.

That consultations using a parallel consulting model are essentially time neutral is useful when it comes to scheduling consultations. However, this finding should not be interpreted as indicating that supervising medical students or other trainees is time neutral overall as no account is taken of other supervisory activities such as orientation, providing feedback, debriefing or patient related teaching not involving parallel consulting.

Associate Professor Lucie Walters, Acting Co-Director, Flinders University Rural Clinical School, based in Mt Gambier, SA. See also footnote 1.

A wildcard is a character used in a search term to represent one or more other characters e.g. 'supervis*' would return supervisor, supervise, supervision.

Professor Dawn DeWitt Talbot, Chair, Rural Medical Education and Clinical Dean, University of Melbourne Rural Clinical School, Shepparton.

2.2 Patients' Views of Medical Trainees in General Practice

A number of studies were found that explored patients' reactions to the presence of trainees, predominantly medical students, in general practice consultations and these tended to show general support for the presence of trainees in general practitioners' surgeries. Many patients reported enjoying the extra attention they received from the trainee. Only a small proportion objected to the presence of trainees, or objected in specific situations, for example, if the presenting problem was regarded by the patient as particularly 'personal'.

However, the majority of articles gave no indication of the level of trainee involvement in consultations. A small number included phrases such as 'the presence of medical students during the consultation' or 'a student being present' suggesting that the students were observing the doctor during a consultation, not seeing the patient alone for even part of the time.

Only three studies were found where wording suggested that parallel consulting or some variant of the parallel consulting model was used. One stated: 'With patients' consent and with supervision by a general practitioner at the time or shortly afterwards, students may initiate consultations and perform medical interviews'. From this it can be inferred that some consultations, namely, those where there was supervision shortly afterwards, may have used the parallel consulting or a similar model. The study found that patient's satisfaction was unaffected by students' participation in consultations. However, there was no information about the proportion of consultations with students observing the doctor during a consultation or the doctor observing the student, and the proportion where there was supervision shortly afterwards (the inferred parallel consulting). Nevertheless, it seems reasonable to assume that patients' satisfaction was unaffected in any of the consultation scenarios.

The second study investigated three levels of student involvement in consultations to ascertain what level of involvement patients were prepared to accept – (a) student observing the doctor, (b) doctor observing the student and (c) student only with no doctor present part of the time.⁴ It can reasonably be inferred that parallel consulting or a similar model was used in (c).

Results showed that patients would accept students observing a doctor taking a history in 79 (89.7%) of consultations, during examinations in 62 (70.4%) and performing procedures in 58 (65.9%). Seventy-two patients (81.8%) would accept the student being observed by the doctor while taking a history, 55 (62.5%) examining, and 50 (56.8%) performing procedures. The student alone during the consultation would be accepted taking a history by 51 (57.0%) patients, examining alone by 31 (35.2%) patients, and performing procedures by 26 (29.5%) patients. There was no statistical analysis but patients seemed to find being seen by the student only for part of the time markedly less acceptable that the other two options. No explanation was offered for this finding but it was stated that patients were unaware that their consultation would include a medical student until arriving at the practice. If patients had known they would be seen by a student only for part of the time and it had been made clear that they would also be seen by the doctor prior to arriving at the practice, they may have found this situation more acceptable.

The third study set out specifically to determine patients' reactions to consultations conducted by a medical student alone prior to seeing their GP, although the term 'parallel consulting' or similar was not used. ⁵ Of 130 responders, 98% experienced no disadvantage in seeing the student, 35% considered that there were advantages in seeing the student and 98% said that they would be prepared to consult with a student again. The authors considered the results of their study to be very reassuring concerning the acceptability to patients of consulting with medical students and noted that they are more favourable than those reported for other studies of students being present in consultations by GPs. However, they offered no explanation for this difference in findings and there was nothing in the methodology, as described, to suggest a possible explanation.

2.3 Perception of Trainees

A small number of studies was found that focussed primarily on students' perceptions of effective teaching by doctors. Some studies referred to inpatient settings whereas others referred to, for example, general practice or ambulatory family medicine, but gave insufficient information to indicate under what circumstances students were seeing patients (e.g., student observing the doctor during a consultation, doctor observing the student, or student seeing the patient alone prior to seeing the doctor). Only one study included findings that could give some indication of whether trainees are likely to associate parallel consulting with high quality teaching.⁶

Torre and colleagues collected data on 1,839 patient encounters with respect to learning activities and teaching quality. Univariate analysis of eight teaching and learning activities associated with the perception of high-quality teaching showed that four of these were positively related to high-quality teaching – receiving high quality feedback, giving an oral case presentation, proposing a management plan and being on an inpatient rotation. In two instances, the association was statistically significant – receiving high quality feedback and proposing a management plan, which are two of the characteristics of parallel consulting. These findings suggest, albeit weakly, that trainees would associate parallel consulting with high-quality teaching.

2.4 Cost-Benefit Analysis

The two most commonly cited costs of teaching in a general practice/ambulatory family medicine setting are doctor time and lost income associated with seeing fewer patients. Most studies involved medical students and showed an increase in the time doctors work from 45 minutes to one hour per half-day teaching session. Loss of productivity/revenue varied from showing no loss, but working longer hours, to seeing one less patient in each half-day session with corresponding loss of income. For example, Vinson et al⁸ found that when a student was on placement at the practice, the amount of time doctors actually spent working increased by 52 minutes per day, and their patient-care productivity decreased from 3.9 to 3.3 patients per hour.

In contrast, Worley and Kitto⁹ found, in a study where students had already been actively involved in all aspects of the practice for at least five months, that students appeared to have a positive effect on GP productivity without any loss in patient satisfaction. The authors hypothesised that at some point between four weeks, when Vinson et al's data

were collected, ⁸ and five months when their data were collected, students ceased to be a financial burden on the practice and became a financial benefit.

Parallel consulting was used for two consultation sessions each week, with students involved in other activities for the remainder of the week. It is stated that the investigators were thus able to study contiguous consulting sessions by the same doctor, with and without a student. Results showed, *inter alia*, that the mean length of time spent by the general practitioner decreased from 14.4 minutes to 9.5 minutes when a student was present. The observed increase in GP productivity is not attributed to parallel consulting. However, it does seem that when students have extended attachments in a general practice, the use of parallel consulting at least contributes to their becoming a financial benefit.

A recent study looked at the financial costs and benefits associated with teaching in private general practice across three levels of training – undergraduate medical training, prevocational training and general practice vocational training – using data from a 2007 survey of general practitioners in South Australia.¹⁰

The net financial outcome of teaching varied across the training levels. Practices incurred a net financial cost from teaching medical students that was statistically significantly different from zero whereas there were small net financial benefits to practices in the case of prevocational training and general practice vocational training, although the mean estimates were not statistically significantly different from zero. The largest net financial benefit came from teaching interns (\$484 per week; 95% confidence interval \$536 to \$1026), although not statistically significantly different from zero.

In the case of interns, the parallel consulting model was used. Interns initially see patients by themselves and then are joined by their GP supervisor who reviews the case and then signs off on the patient. This allows the GP to then claim the Medicare fee-for-service – the 'income generated'. It could be argued that the GP might have seen the patient without the intern in the supervision time slot and generated the same income which is not, strictly speaking, generated by the intern. Whether the authors are justified in classifying this income as income generated by having an intern is a moot point.

2.5 Summary

No articles evaluating parallel consulting *per se* were identified. Therefore, studies that investigated aspects of parallel consulting or parallel consulting within a wider teaching/supervision context were examined.

Walters showed that consultation length does not increase when rural GPs supervise medical students using a parallel consulting model.¹

Only three studies were found that explored patients' reactions to the presence of trainees and where wording suggested that parallel consulting or some variant of the parallel consulting model was used. In one instance it seems reasonable to assume that patients' satisfaction was unaffected in any of the consultation scenarios including one that, it was

e Dr Caroline Laurence, personal communication, 9 December 2010

inferred, may have used the parallel consulting or a similar model.³ In the second, patients seemed to find being seen by the student only for part of the time – inferred to be parallel consulting or similar – markedly less acceptable than two other options.⁴ The third study did not use the term 'parallel consulting' but the description in the methodology strongly suggested this was the model employed.⁵ This study found a high level of acceptance on the part of patients (98%).

Studies that focussed primarily on students' perceptions of effective teaching by doctors were considered but none involving parallel consulting were identified. Only one included findings that suggest, albeit weakly, that trainees would associate parallel consulting with high-quality teaching.⁶

Teaching student or other trainees is generally regarded as a financial burden on general practices. However, Worley and Kitto's results suggest that when students have extended attachments in a general practice, the use of parallel consulting at least contributes to their becoming a financial benefit. Another study found that practices incurred a net financial cost from teaching medical students whereas there were small net financial benefits to practices in the case of prevocational training and general practice vocational training. The largest net financial benefit was said to come from teaching interns. However, whether the authors were justified in classifying the Medicare fee-for-service claimed by the supervising GP as income generated by having an intern is considered to be a moot point.

Despite the apparent lack of strong evidence demonstrating the efficacy of parallel consulting, this model is widely used for medical students, interns and other trainees. This acceptance of parallel consulting as a useful teaching strategy is considered below.

3. GUIDELINES FOR PARALLEL CONSULTING

The Internet search located numerous references to 'parallel consulting' or 'wave schedule' on, for example, university department of rural health and rural clinical school websites as well as websites for general practices that use this model for medical students and interns. This supports the perception that this model is widely used and generally accepted.

While some websites had detailed descriptions of parallel consulting, none provided formal, comprehensive guidelines. A small number of these organisations were contacted by telephone but none appeared to have developed formal guidelines. The following guidelines have therefore been developed on the basis of the documentation found and in consultation with Associate Professor Lucie Walters.

3.1 Accommodation

At least for the duration of sessions using parallel consulting, the intern must have his/her own consulting room to see patients independently, preferably close to the supervising GP's consulting room.

3.2 Informing Patients

Post notices about the intern's being at the practice at the front desk and in the waiting area. Some practices also prepare a short biography of the intern, including a photograph, and post that in the waiting area. Examples are provided in Appendix 1.

3.3 Reception/Office Staff

Explain parallel consulting to reception/office staff. Stress that for parallel consulting sessions they should only book in patients who require appointments of the same (preagreed) length and that it is particularly important not to 'double book' patients.

When patients make an appointment by phone or in person, ask them if they are willing to be seen by the intern before seeing their GP, making clear they are free to refuse, for example:

We have a medical intern, Caitlin Ferguson, on placement in our practice. She is learning about medicine in a community setting. Dr X would like her to see some of his patients before he sees them himself so could you come one appointment slot before your appointment with Dr X because you'll have a 'double appointment'.

You don't have to see Caitlin but it would assist in her training. If at any point you feel uncomfortable about agreeing to see Caitlin, you can change your mind. Would you be happy to do this?

Vary the wording if there are to be any sessions where the intern is sitting in to observe the GP or the GP is observing the intern rather than seeing the patient independently.

Be prepared to explain what stage of training an intern is at, if the patient asks.

See also section on patient scheduling below.

3.4 Patient Consent

Some US papers on teaching 'in the office' mention getting patients' written consent but that is not the usual practice in Australia. Verbal consent along the lines indicated above is considered sufficient.

Associate Professor Walters was not aware of any general practices where written consent was obtained. She considered that the level of documentation of consent required should be commensurate with the invasiveness and risk of the clinical encounter. Consulting with a junior doctor before being joined by the supervising GP is a minimally invasive, minimal risk variation to normal consulting and, as such, verbal consent by a patient at the time of booking the appointment, attending the waiting room and finally on meeting the intern is considered appropriate in this current medico-legal climate.

3.5 Before Starting Parallel Consulting Sessions

Before interns see patients independently, the GP supervisor will want some indication of how much consulting experience they have had. Assuming they have completed their medical, surgical and/or emergency medicine rotation/s, ask about what they did during those rotations. Have they had experience taking a history, examining a patient, formulating a diagnosis and developing a management plan? Did they do this independently and then present the patient to their supervisor or was this undertaken with the supervisor observing and 'assisting' with the consultation when indicated?

If interns have had limited consultation experience, schedule one or more sessions with the intern observing the GP supervisor undertaking a consultation, with some intern involvement. The GP might ask the intern to:

- question the patient about the presenting condition or past history;
- undertake part of the examination (e.g. with a diabetic patient, the intern might be asked to examine the patient's feet and afterwards asked why this was done);
- · comment on whether any investigations were required and if so, what;
- write down the diagnosis and discuss this later. If the intern's diagnosis differs from that of the GP, talk about the basis for the two diagnoses.

When both supervisor and intern feel the intern is ready to do so, have the intern undertake a consultation with the supervisor observing. Initially select patients with good communication skills and typical presentations of common illnesses. The supervisor may discretely guide the intern with prompts to do or ask something or, preferably, wait until the intern has finished the consultation when the supervisor should clarify any issues and finalise the management plan.

Even if an intern seems to have had sufficient consultation experience, it may be useful for the supervisor to observe one or two consultations to gauge his/her proficiency.

Again, when both supervisor and intern feel the intern is ready to do so, start parallel consulting sessions.

3.6 Patient Selection

To an extent, patients self-select when they do or do not agree to be seen by the intern.

The aim of parallel consulting, as far as possible, is for instruction and learning to move from simple to complex patient interactions. Consequently, when the first two patients arrive, the supervisor should choose the patient with good communication skills and typical presentation of a common illness for the intern to see.

If both patients have multiple medical problems, consider giving the intern a short overview of one patient's history, suggest the intern focus on a particular complaint and set guidelines for the physical examination (see 'priming' and 'framing below).

In the first few sessions, avoid having the intern see new patients as they are always something of an 'unknown quantity'. If this is not possible, employ strategies such as priming and framing.

Over time, as the intern's consultation skills develop, he/she should be seeing a random selection of patients with conditions of varying complexity and less differentiated clinical problems, learning to practice in a setting that closely reflects the realities of general practice.

3.7 Scheduling Patients

Parallel consulting models are designed to address two problems. Trainees are not able to work as quickly as experienced GPs and under the Australian system a GP must see a patient if a fee is to be charged.

The parallel consulting model allows interns to see patients under supervision while providing opportunities for them to practice to the limits of their capability. Further, this model allows the GP to see the same number of patients and charge the same fees. Two consulting schedules are commonly cited. The first, termed 'wave schedule', is as follows.

Schedule 1. Wave schedule (using 15 minute visits)

Appointment Time	GP Supervisor Schedule	Intern Schedule
9.00 am	See patient 1	Review patient 3's record
9.15 am	See patient 2	See patient 3
9.30 am	See patient 3 with intern	Present patient 3 to GP
9.45 am	See patient 4	Write up notes for patient 3
10.00 am	Repeat cycle	

Adapted from DeWitt, D.E.¹¹

Under this schedule, the supervisor sees four patients in an hour, including the one patient seen by the intern.

Schedule 2. Parallel Consulting (using 15 minute visits)

Appointment Time	GP Consulting Room	Intern Consulting Room
9.00 am	Patient 1 Parallel consultation	Patient 2
9.15 am		GP joins intern and patient 2 Precepting consultation
9.30 am	Patient 3 Parallel consultation	Patient 4
9.45 am		GP joins intern and patient 4 Precepting consultation
10.00 am	Continue above cycle	

Adapted from Walters, L et al¹

Under this schedule, the supervisor sees four patients, including the two patients seen by the intern in an hour.

Both schedules are based on 15-minute appointments but are easily adapted to any appointment length, provided the appointment slots are of equal length.

As the intern becomes more experienced, there should be a shift from Schedule 1 to Schedule 2. An interim schedule might be the following.

Schedule 3. Interim schedule (using 15 minute visits)

Appointment Time	GP Supervisor Schedule	Intern Schedule
9.00 am	See patient 1	See patient 2
9.15 am	See patient 2 with intern	Present patient 2 to GP
9.30 am	See patient 3	Write up notes for patient 2
9.45 am	See patient 4	See patient 5
10.00 am	See patient 5 with intern	Present patient 5 to GP
10.15 am	See patient 6	Write up notes for patient 5
10.30 am	Continue above cycle	

3.8 The Consultation Process

Patients will know that they have been booked to see the intern before seeing the supervising GP, having been told this at the time they made their appointment and from signs at the front desk and in the waiting room. Nevertheless, interns should clarify the patient's understanding of the process when they introduce themselves.

The intern then proceeds to take a history and perform an examination as indicated. He/she should seek to determine the patient's agenda, identify other health needs, and formulate diagnoses, problem lists and a management plan, making appropriate notes in the patient's clinical record. (If necessary, the intern should amend or expand the notes after the joint consultation.) When the intern is ready, or when assistance is needed, he/she should

contact the supervising GP. The supervising GP will usually join the intern when he/she has completed the consultation but can do so at any time during the consultation.

When the supervising GP arrives, the intern should outline the consultation and his/her formulation. The supervising GP should have alerted the intern that any potentially anxiety-provoking conditions, sensitive aspects in the patient's history, or tentative diagnoses that may be premature to discuss in front of the patient (e.g. the possibility of serious illness such as cancer) should be discussed outside the consultation room.

The supervising GP may seek further information from the patient before approving, modifying or altering the intern's management plan as considered appropriate. This should be done in a manner which is supportive to the intern but meets the best interests of the patient.

When the supervising GP and the intern are seeing the patient together, the GP combines consultation and teaching roles. Clearly the consultation takes precedence over the teaching and the GP may need to focus on a small number of learning points. Further consideration of the consultation may be raised at the end of the session or in a weekly tutorial.

The patient is billed in the name of the supervising GP, who should also make notes in the patient's record, with particular regard to areas of differing opinion and to learning points.

Patients seen by the intern are regarded as part of the supervising GP's workload for the session. While the supervising GP will be consulting his/her own patients, gaps will have been left in the appointment schedule to allow the time to see the intern's patients with him/her. The supervising GP's workload will therefore not increase.

3.8.1 Feedback

Feedback is a fundamental part of helping interns to improve. It is based on first-hand assessment of the intern's knowledge, attitude and skills. Feedback describes appropriate or inappropriate actions or behaviours, providing information (feedback) about current performance to guide future performance. The three main feedback components delivered in the following order are:⁷

- What was done right or well,
- What was done wrong or poorly,
- How to do better next time.

Ideally, feedback should be given every time the GP supervisor interacts with the intern but realistically this is not always possible.

Feedback is most effective when given as close as possible to the incident concerned and when it is specific. Parallel consulting provides the opportunity for immediate feedback but has the disadvantage of limited time. An example of handling a situation where more detailed feedback is desirable might be when the GP supervisor changes the dose of the drug prescribed by the intern: 'Drug A is a good drug to start Mrs Smith on for her diabetes but we might start her on an even lower dose. Read up on oral antihyperglycaemics and we can discuss this in our next tutorial'.

Such feedback is likely to be more effective, and more appreciated by the intern, than something like: 'That starting dose was way too high. Just as well I picked it up. Be more careful in future.', even if said in private.

Aim for brief feedback in the course of parallel consulting sessions as the need or opportunity arises and planned feedback sessions at regular intervals during the rotation.

3.8.2 Priming

Two useful strategies to focus the visit and make the most efficient use of the time available in parallel consulting sessions are 'priming' and 'framing'. Priming is described as follows:

Priming involves providing the learner with pertinent, patient-specific background information just before seeing the patient and directing the [intern] to perform specific tasks of patient care. For example, if a learner is about to see a patient with chest pain, you might briefly (for 1-2 minutes) review with the learner the most common causes of chest pain and aspects of the history and physical examination that would be helpful in differentiating between causes. Remember that asking the learner is better than 'telling' because you learn about their level of function while priming them (e.g., 'What are the causes of chest pain you should consider in a 35-year old athletic woman?'). For patients with chronic medical problems, priming might involve reviewing health maintenance or disease screening needs just before the visit. Priming can be used when seeing complex patients with multiple medical problems by having the learner review what might be the most important outcome of the visit.

A brief discussion before the visit that includes the strategy of priming will [prevent] the learner performing a complete history and physical examination by focusing on the appropriate examination for the problem at hand in the allotted time. (pp. 47-48)

3.8.3 Framing

The second strategy, framing, sets expectations and time limits for what the GP supervisor wants the intern to achieve during his/her time with the patient and is described as follows:

Framing is setting parameters for the visit such that the learner will accomplish a focused task. For example, learners can be given specific instructions on what to accomplish during the visit: 'I want you to take a history of the patient's chest pain, do a focused examination, and report back to me in 15 minutes'. (p. 48)

Not all interns need to be 'primed' or have the visit 'framed'. However, most will benefit when these strategies are employed in the early weeks of the rotation.

APPENDIX 1

Example Notice for Patients Regarding Intern at the Practice

To be posted at reception and in the waiting area.

To our patients

Our practice is pleased to be involved in training medical interns and we currently have an intern, Caitlin Ferguson, on placement with us. Interns have completed their medical course and spend their first postgraduate year in a hospital developing the knowledge and skills they gained as a student by caring for patients under the supervision of an experienced doctor. Some interns spend part of their first year in general practice.

It is important for new medical graduates to have an understanding of general practice and your support is valued as it will help us to train the next generation of doctors.

If you would prefer the intern not to be involved in your care, please tell reception.

Example Notice for Patients - Biography of Intern

To be posted in the waiting area.

About Caitlin Ferguson, our current intern

I grew up in Ballarat, Victoria. After I finished HSC, I took a gap year. I'd been accepted as a volunteer with Youth Challenge Australia so I spent the first five months seeking sponsorships and donations from various companies and organizations, and gathering a wide range of necessary products, ranging from tropical strength mosquito repellent to gum boots.

I spent two and a half months, along with nine other volunteers and our two group leaders, working on two projects aimed at fostering and developing ecotourism. The first was at Esperanza Verde, a nature reserve in Nicaragua, and the second on the north of Costa Rica, at a small community named Juanilama, which has a nature reserve. Both these projects have the potential to be a source of income for the local community. Our work included working with Nicaraguan biologists monitoring migratory birds, painting the interior and exterior of a new visitors centre, and creating new hiking trails through the forests as well as maintaining existing trails.

After living with the same group of people 24/7 for two and a half months and having so much fun, it was hard to say good-bye. The whole project was an amazing and educational experience and I felt I'd really been 'stretched'. I surprised myself how well I coped with limited electricity and no running water. Entertainment revolved around sporting activities, shared meals with friends and colleagues, occasional local festivals and reading those books I'd always meant to read. I just didn't have time to miss things I'd taken for granted like DVDs, nightclubs and the latest films - perhaps because at the end of each day I was just too tired!

My parents and older brother met me in San José, capital of Costa Rica, and we had six weeks travelling in other parts of Central America. Then it was back to Australia and 'reality'. I'm really glad I took that gap year instead of going straight from high school to university

I'm a graduate of the University of Melbourne and I'm now living in Melbourne though I don't plan to stay there long term. I'm interested in working in general practice or paediatrics. My interests include travelling, cooking, water skiing and horse riding.

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