



Walking in consumers' shoes: Reshaping the pharmacy student placement curriculum via mystery shopping with feedback

Final report 2016

The University of Sydney

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Executive Summary

Project context

The need for change: The primary pathway for registration as a pharmacist in Australia consists of a four year undergraduate bachelor level degree followed by a year of supervised practice in a pharmacy environment (internship). An essential requirement of a pharmacy schools' accreditation is a clinical placement curriculum. However, it has been suggested that the current placement curriculum for undergraduate pharmacy students may not be adequately preparing them for the challenges they face in practice¹. At The University of Sydney the clinical placement curriculum consists of a hybrid of weekly and block placements over the third and fourth years of the curriculum. In the third year placements consist of weekly two-hour observation sessions at a community pharmacy for 20 weeks of the academic year and a single one-week block placement in either a community or hospital pharmacy. Traditional clinical placements usually involve passive observation rather than active engagement and students have reported dissatisfaction with placements. For example:

“The clinical placements are repetitive and lack direction (we have been required to complete the same portfolio three times).” [SCEQ 2012]

“I feel that I have not learnt much from the placement weeks and it felt more of a burden.”[CEQ 2012]

Non-prescription medicine advice: Community pharmacies in Australia are a frequent destination for patients seeking healthcare advice and medicine supply. A National Health Survey revealed that 59 per cent of the population had taken medicine within the preceding two weeks². Owing to the accessibility of non-prescription medicines, they are often considered safer than prescription medicines³; however, to truly be safe, they need to be used judiciously and appropriately. It is therefore important that pharmacy staff provide appropriate advice when handling non-prescription requests. If students do not obtain sufficient competency development opportunities during their clinical placements, entry level pharmacists may not have the skills and experience to adequately perform their role. A recent study by Mak and colleagues⁴, which surveyed entry level pharmacists in South Australia determined that half of the respondents did not feel adequately prepared to handle consumer requests for non-prescription medicines⁴. In a follow-up survey of the same cohort, their perception of preparedness in this area did not change, even after their year of supervised practice. These low levels of perceived preparedness to handle non-prescription medicines may be due to a lack of structured learning opportunities.

Aims of the project

We conceived a novel approach to the pharmacy student placement curriculum that required students to be active participants in work-integrated learning rather than passive observers. That is, pharmacy students assumed the role of the consumer and requested non-prescription medicines, allowing them to reflect on what it was like to be a consumer. They also acted as peer educators by providing feedback to pharmacy staff after the encounter.

The aim of this trial was to determine whether learning outcomes, research engagement and clinical competence achieved by pharmacy students participating in mystery shopping with feedback placements (over one semester), improved and were comparable to the

achievement of students that undertook traditional pharmacy clinical placements only. The specific objectives were to:

- Measure the impact of this trial on pharmacy student learning, research engagement and clinical competence.
- Investigate the feasibility and acceptability of pharmacy students acting as mystery shoppers and providers of feedback to pharmacy staff.
- Determine the effect of pharmacy student feedback on staff performance over time.

Project approach

Ethics: The protocol for this trial was approved by The University of Sydney Human Research and Ethics Committee (Ref no. 2014/186).

Recruitment and cohort allocation: Pharmacy students were recruited to the project via announcements on the learning management system. Thirty, third-year students participated in semester one and an additional 29 third-year students participated in semester two. Pharmacies were recruited by students in semester one (n=30). In semester two, the majority of pharmacies were willing to continue their participation, and students recruited five additional pharmacies. In total 35 pharmacies in metropolitan Sydney participated in the program.

In either semester, students visited a different pharmacy each week for nine weeks. Students undertook traditional placements in their non-allocated semester.

Pharmacy Student Training: All students were trained in how to perform mystery shopping and the delivery of feedback to pharmacy staff for 10 non-prescription medicine requests (scenarios) prior to commencing visits. Scenario topics covered common non-prescription medication requests.

Pharmacy Student Evaluation

Knowledge: Mystery shopping (MS) students completed a knowledge-based, 20-item multiple choice quiz on the management of common ailments and over the counter medicines prior to and after participating in the mystery shopping program.

Skills: Student Objective Structured Clinical Examination (OSCE) marks were compared with those that were involved in the trial versus the standard cohort.

Attitudes: Two questionnaires were administered to students undertaking mystery shopping and traditional placements at the beginning and end of the year. Questionnaire 1 measured students' perceived clinical competency using Miller's levels of competency, mapped to the National Competency Standards Framework for Pharmacists in Australia. Questionnaire 2 measured students' attitudes towards pharmacy practice research. Analysis of variance was used to detect changes in scores within and between groups for both questionnaires.

In addition, student focus groups to investigate feasibility of the trial, perceived changes in professional identity and barriers and facilitators to implementation occurred at the end of each semester. An additional focus group with non-mystery shopping students was also conducted. Focus groups were transcribed verbatim and content analysed for recurring themes.

Pharmacy Evaluation

Skills: Performance of pharmacy staff was scored via a scenario-specific assessment sheet at each visit. Key clinical and communication aspects were recorded. A self-assessment form was also used during feedback provision, in order for staff involved in the visit to reflect on their own performance. Scores were compared to track improvements over time.

Attitudes: In order to ascertain acceptance and feasibility of this type of clinical placement, one to one semi-structured interviews with pharmacy staff members were conducted. These interviews explored perceptions regarding the quality of the program as well as benefits and barriers and their willingness to participate in the future.

Project outputs

Pharmacy Student Evaluation

Knowledge: Although base-line quiz scores regarding minor ailment management were high (18/20), there was a statistically significant improvement in student knowledge after participation in the Mystery Shopping project with the mean score after intervention being 19.5/20 ($p=0.02$).

Skills: Students that participated in the Mystery Shopping intervention had significantly higher overall OSCE scores compared to students that undertook traditional placements only. The station that had the greatest difference was where students were required to talk to a patient and put their communication skills into practice. The mean percent score at this station for standard students and mystery shopping students were 70 and 78 respectively ($p=0.007$).

Attitudes: Students' self-perceived clinical competency scores were compared with standard cohorts prior to and after the placement year. Significant improvements in self-perceived competency scores were apparent for the cohort participating in the intervention in contrast to students undertaking standard placements for which self-perceived clinical competency declined.

Students' attitudes towards pharmacy practice research scores were higher for students participating in this project although there was no significant change over time.

Focus groups revealed that students very much enjoyed participating in this type of placement and commented that they had gained valuable knowledge and skills to assist them in becoming a better pharmacist. They noted that there were different benefits from this type of placement versus traditional placements but felt that both placement types should be experienced. That is, they felt that this type of placement was an excellent complement to traditional placements. In particular, they believed their knowledge and communication skills had improved after the process, which was triangulated with the aforementioned measures. In addition, students also reported other improvements in affective attributes as a result of participating in this program such as gains in Professional Identity and development of Empathy.

Pharmacy Evaluation

Skills: Pharmacy staff performance scores and the overall appropriateness improved over time. In particular scores were significantly improved in the children's fever; adult cough/cold; adult pain; and Asthma scenarios.

Attitudes: Pharmacists were overwhelmingly positive about participating in this kind of clinical placement. They saw mutual benefits for their staff and the participating students. This was further evidenced by the number of pharmacies that chose to participate over both semesters ($n=25$). Furthermore, every pharmacist interviewed agreed that they would be willing to participate in future placements and research of this type.

Impact of the project

This trial has enabled us to compare the traditional placement curriculum with a new method of student exposure to their profession. The methods employed allowed students to act as change agents and gave them the ability to improve current practice. At the same

time these students gained valuable competencies such as improved communication skills and research engagement. Students have also reported that they have gained an enhanced professional identity and empathy. Future evaluation of these affective attributes across a larger non self-selected cohort of students is necessary. As a result of this project the Faculty of Pharmacy has expressed interest in continuing this form of placement as part of the clinical placement curriculum.

Key findings and recommendations

1. Pharmacists and students believe mystery shopping is an acceptable and feasible form of clinical placement that can complement traditional placements.
2. Students benefited from MS placements and had significantly superior knowledge after MS, and performed significantly better in the OSCE than the standard cohort.
3. Students act as change agents to improve the profession, as significant improvements in pharmacy scores were seen over time as a result of the students' enacted scenarios and feedback provision.
4. Students develop affective attributes including empathy and professional identity
5. Future research with other non-self-selected cohorts of pharmacy students need to confirm the findings of this feasibility study
6. This type of placement where students walk in the shoes of the consumer could be applied to other disciplines

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List of acronyms used

ALTC	Australian Learning and Teaching Council
BPharm	Bachelor of Pharmacy Degree
CEQ	Course Experience Questionnaire
FG	Focus Group
GORD	Gastro-Oesophageal Reflux Disease
IMPEL	Impact Planning and Evaluation Ladder
MCQ	Multiple Choice Questionnaire
MS	Mystery Shopping
NRT	Nicotine Replacement Therapy
OLT	Office for Learning and Teaching
OSCE	Objective Structured Clinical Examination
OTC	Over the counter
PhD	Doctor of Philosophy
PPR	Pharmacy Practice Research
SCEQ	Student Course Experience Questionnaire
USE	Unit of Study Evaluation
USS	Unit of Study Survey
WICS	Walking in Consumers' Shoes

Table of contents

Acknowledgements.....	7
Table of contents	8
Tables	9
1. Project Overview.....	10
1.1 Project Context	10
1.2 Project Approach	10
1.2.1 Participants and Setting.....	10
1.2.2 Materials	11
1.2.3 Training	11
1.2.4 Intervention	11
1.2.5 Data Collection.....	12
2. Project Outputs and Findings.....	15
2.1 Student Learning.....	15
2.2 Feasibility and Acceptability	21
2.3 Pharmacy Performance	26
3. Project Impact, Dissemination and Evaluation.....	29
3.1 Project Impact.....	29
3.2 Dissemination	30
3.3 Evaluation	30
4. References	31
5. Appendices.....	32
Appendix A.....	32
Appendix B	33
Appendix C	37
Appendix D.....	38

Tables

Table One: MCQ Exam Results	15
Table Two: OSCE Results	15
Table Three: Student perceptions of Competency	17
Table Four: Student attitudes towards pharmacy practice research (PPR).....	18
Table Five: Results of follow-up interviews with participating pharmacies.....	24
Table Six: Pharmacy Performance – All Scenarios.....	27
Table Seven: Significance of change in appropriate advice score over time.....	27
Table Eight: Significance of change in WHAT-STOP-GO assessment score over time.....	28
Table Nine: Impact mapped to IMPEL framework.....	29

1. Project Overview

1.1 Project Context

This pilot-study was a novel approach to the third-year pharmacy student placement curriculum. It required students to be active participants in work-integrated learning rather than passive observers.

That is, pharmacy students assumed the role of the consumer and requested non-prescription medicines from participating pharmacies, allowing them to reflect on what it is like to be a consumer. They also acted as peer educators by providing feedback to pharmacy staff.

The aim of this study was to determine whether learning outcomes, research engagement, and clinical competence achieved by pharmacy students participating in mystery shopping (MS) with feedback placements, was superior to the achievement of students undertaking the traditional pharmacy clinical placement curriculum.

The specific objectives were to:

- Measure the impact of this intervention on pharmacy student learning, research engagement and clinical competence.
- Investigate the feasibility and acceptability of pharmacy students acting as mystery shoppers and providers of feedback to pharmacy staff.
- Determine the effect of pharmacy student feedback on staff performance over time.

1.2 Project Approach

This study was conducted between March and October, 2015. It was granted ethics approval by The University of Sydney Human Research Ethics Committee (approval number 2014/186).

1.2.1 Participants and Setting

Between March and October, 2015, 59 third year Bachelor of Pharmacy (BPharm) students, and two fourth year honours students from The University of Sydney, Australia, used assigned scenarios to act as mystery shoppers (MS) and to provide feedback in 35 community pharmacies in the Sydney metropolitan region. Thirty students participated in semester one, 31 (29 BPharm students and 2 fourth year honours students) students in semester two. Over the two semesters, 540 MS visits were conducted in total.

MS students participated in the study in lieu of one semester of their regular clinical placement program. In the regular clinical placement program, third year students visit the same pharmacy for two hours each week for ten weeks each semester, complete a prescribed set of activities, and keep a reflective journal.

MS Students in semester one each recruited a community pharmacy in the Sydney metropolitan region to take part in the study (n=30). MS Students in semester two were either allocated an existing pharmacy (n=25) or recruited a new pharmacy (n=5). This resulted in a total of 35 individual pharmacies taking part in the study.

All students acting as MS, as well as staff in participating pharmacies were required to sign an informed consent form prior to taking part in the study.

1.2.2 Materials

Ten scenarios (Appendix B) were developed for use during the project - each based on a different therapeutic area. All scenarios involved the student entering the pharmacy making a direct product-request to a pharmacist or pharmacy staff member for a non-prescription, pharmacy or pharmacist-only medicine (known as Schedule 2 or 3 respectively (S2 or S3)). Appendix C exemplifies a scenario outline for each of the ten scenarios.

Each student was provided with an Opal Card for travel and an EFTPOS card to make purchases within the pharmacy.

1.2.3 Training

Students completed two days of training at the beginning of the semester-long project (running from March to June or from August to October 2015). The training program included extensive role-plays, both as the mystery shopper and as providers of feedback to staff, and practice in filling in data collection sheets. Students were trained in ten scenarios involving a direct product request to a pharmacy staff member for a non-prescription medicine; for example, “Can I get some Somac® [pantoprazole] please?”

A clinical psychologist, with extensive experience in mystery shopping, conducted the theoretical training. Together with staff from the Faculty of Pharmacy, he also observed and provided feedback to students during the practical portion of the training.

1.2.4 Intervention

Visit Protocol

Students conducted the visits by entering the community pharmacy and requesting the product directly either from a pharmacist or a non-pharmacist staff member. Each visit was audio recorded (where consent had been granted). At the conclusion of the interaction the student purchased any products recommended to them by the staff member then exited the pharmacy.

The student then took the time to listen to the audio recording, reflect on the visit, and complete a data collection sheet (Appendix D). They then re-entered the pharmacy to provide feedback to the staff member involved. Feedback included asking the staff member to complete a self-reflection (using a new copy of the same data collection sheet). The feedback interaction was also audio-recorded. Any purchased products were returned without being refunded.

Schedule

For nine weeks of each semester:

- The student visited a different pharmacy every week using a new scenario each time.
- The pharmacy had the same scenario every week but was visited by a different student.

To minimise the chance of the pharmacy recognising the student as a mystery shopper, each week, certain scenario variables were altered, e.g. brand requested, patient demographics, and signs/symptoms.

Communication and Logistics

Communication with students regarding logistics and visit progress was via a private Facebook group. Each week the appropriate scenarios were posted on Facebook and students were asked to re-familiarise themselves with the scenario and the therapeutic area they would be covering that week (they had practiced all ten scenarios in training). Students were also able to communicate with the project coordinator and with each other using this Facebook group.

1.2.5 Data Collection

Data were collected in three topic areas related to the study objectives:

- **Student Learning:** measuring the impact of this intervention on pharmacy student learning, research engagement and clinical competence. Specifically focus groups, questionnaires, and end of year examination (OSCE) marks.
- **Feasibility:** investigating the feasibility and acceptability of pharmacy students acting as mystery shoppers and providers of feedback to pharmacy staff. Specifically, Interviews with pharmacists and student focus groups
- **Pharmacy Performance:** determine the effect of pharmacy student feedback on staff performance over time. Specifically, feedback on pharmacy performance during the mystery shop.

1.2.5.a Student Learning

In order to ascertain the impact of the intervention on student learning, measurements were undertaken in alignment with Miller's stages of competency⁷. Miller's stages of competency is an approach

Clinical Knowledge Multiple Choice Questionnaire

To ascertain the impact of the intervention on clinical knowledge, student performance was compared pre and post intervention. Measurement of clinical knowledge was performed using a multiple choice questionnaire (MCQ). The question material was developed with reference to the intervention scenario areas. The purpose of this measurement was to determine impact at the Knows level of competency.

OSCE Exam Results

Student OSCE marks were retrieved for those that were involved in the trial and compared with pooled results from the standard cohort. The OSCE is the Objective Structured Clinical Examination that assesses students' application of knowledge and communication skills at the end of the third year. The purpose of this measurement was to determine impact at the Shows How level of competency.

Student Questionnaires

To assess outcomes of student learning, all pharmacy students in third year were requested to complete two voluntary questionnaires.

- Questionnaire 1. CLINICAL COMPETENCY measured students' perceived clinical competency using Miller's levels of competency, mapped to the National Competency Standards Framework for Pharmacists in Australia⁵. This questionnaire has been designed with reference to the Pharmacy Experiential Placements Tool developed in the ALTC Experiential Placements in Pharmacy Project, 2010⁶.
- Questionnaire 2. ATTITUDES TOWARDS RESEARCH measured students' attitudes towards pharmacy practice research as this trial engaged students in research enriched learning and teaching.

Student Focus Groups

Following the conclusion of all pharmacy visits, participating third-year students (n=59) were divided into six groups (FG1-6) and asked to attend a voice recorded focus group session. Each session ran for 45-60 minutes and a list of questions was used to prompt the students to discuss their thoughts of the experience. Focus groups 4-6 were run in semester two and were able to obtain thoughts from students that had participated in both traditional (semester one) and the MS placement type (semester two). An additional focus group [FG7] was conducted involving students who did not participate in MS in either semester to understand their views about the program and participation in traditional placement. The aim of the focus group was to explore pharmacy student perceptions of the value of mystery-shopping pharmacy staff, with immediate feedback as part of clinical placements. Specifically, learning gained as a result of participating in the intervention as well as barriers and facilitators to participation.

Unit of Study Evaluation

It was planned that a Unit of Study Evaluation (USE) would be conducted for the clinical experiential placements as part of this project. However, during 2015, The University of Sydney changed from conducting USEs every three years to conducting a shorter Unit of Study Survey (USS) every year for every unit of study. It was therefore logistically difficult to have a unit of study survey performed, as the clinical placements do not form a discrete Unit in the pharmacy curriculum. Furthermore, with the university-wide changes, students were effectively asked to triple the number of surveys being conducted and we were already asking all students to complete the aforementioned clinical competency survey and perceptions of research survey at various time-points throughout the year. For these reasons we were concerned that survey fatigue may occur so in lieu of this evaluation, students that did not take part of the intervention group were invited to take part in the student focus groups detailed above in order to gain an understanding of issues surrounding placements.

1.2.5.b Feasibility and Acceptability

Pharmacy Evaluation

A semi-structured follow-up phone interview with the pharmacy manager at the end of each semester assessed the pharmacy manager's thoughts on the feasibility of students providing mystery shopping visits, the quality of the feedback provided by students and strategies for improvement. The pharmacists' perceptions of the benefits and barriers of rolling out mystery shopping visits to a larger cohort of students, in lieu of student clinical placements, was also explored.

1.2.5.c Pharmacy Performance

Mystery Shopping

Data collection sheets were used to record the outcomes of each mystery shop. Each visit resulted in two forms: one completed by the student and one by the pharmacist. The forms used in this project were based on the WHAT-STOP-GO protocol, part of the Pharmaceutical Society of Australia's Standards for the Provision of Pharmacy Medicines and Pharmacist Only Medicines in Community Pharmacy⁸.

2. Project Outputs and Findings

2.1 Student Learning

2.1.a Clinical Knowledge Multiple Choice Questionnaire

The MCQ was disseminated to both intervention cohorts pre- and post-intervention. A total of 59 questionnaires were returned for the pre-intervention baseline. However, only a total of 32 pre- and post-intervention paired questionnaires were returned for analysis. Comparison was via paired sample T-test with results presented in Table One.

Table One: MCQ exam results

Descriptive Statistics				
	Mean	N	Std. Deviation	p-value
Pre	18.34	32	3.288	0.020*
Post	19.59	32	2.917	

The results confirm that there was a significant improvement in scores of clinical knowledge. As the content area for the intervention was taught a year prior (second year of the BPharm curriculum), the improvement noted demonstrates the benefit of the intervention at the Knows level of competency according to Miller's stages of competency⁷.

2.1.b OSCE Exam Results

Student OSCE marks were retrieved and comparisons made between those that were involved in the trial and the standard cohort. The OSCE is the Objective Structured Clinical Examination that assesses students' application of knowledge and communication skills at the end of the third year. The assessment requires an application of skills in a simulated environment which equates to a demonstration of competency at the Shows How level of Miller's stages of competency⁷. There are three stations that involve an interaction with a simulated doctor, pharmacist and patient respectively. The patient scenario focuses on effective communication skills whereas the doctor and pharmacist scenario have marks more heavily weighted towards the demonstration of knowledge. The results of the two cohorts are presented in Table Two. An independent sample t-test was used to determine significance.

Table Two: OSCE results

	Intervention N=59	Control N=157	p-value
Doctor Scenario	70.59±19.01	64.78±21.76	0.057
Pharmacist Scenario	75.59±15.23	71.43±17.18	0.087
Patient Scenario	78.14±17.39	70.25±22.40	0.007*

*significant at <0.05 level

The results show that students involved in the trial performed more successfully in the OSCE as compared to the control group. However, as participation was voluntary, a degree of selection bias may exist. Without a pre-test to adjust for selection bias, it is not possible to provide a firm conclusion regarding the cause of the increased scores in the intervention group. Although, it is important to note that the greatest difference, which was significant, was seen in the Patient station for which communication skills contribute the majority of the station mark. The result suggests that any effect due to participation in the mystery shopping with feedback trial is greatest for communication skills.

Key Finding: Students benefited from MS placements and had significantly superior knowledge after MS, and performed significantly better in the OSCE than the standard cohort.

2.1.c Student Questionnaires

2.1.c.i Questionnaire 1. CLINICAL COMPETENCY

Five domains of the National Competency Standards Framework for Pharmacists in Australia were selected for measurement following consultation with pharmacy academics and practitioners to ensure content validity. These competencies are required for registered pharmacists so are an effective criteria to measure work-readiness for graduates of the BPharm degree. The stages of clinical competency were converted to numerical values (Knows = 1, Knows How = 2, Shows How = 3, Does = 4). All blank or 'Unsure' responses were not included in the analysis. A total of 186 returned surveys were eligible for analysis. Due to difficulty in obtaining a paired sample in the control cohort for pre and post time points, an independent sample t-test was used to determine significance between pre and post time points. Baseline differences were also tested for significance using an independent sample t-test. The results are presented in Table Three.

It is apparent that student perceptions of competence increased across all domains for students in the intervention group, obtaining significance for Domains 6, 7 and 8. In contrast, for students that only participated in standard clinical placements, perceived competency *declined* for all measured competency domains, achieving significance for domains 1 and 2. This may correspond to students in the control group becoming concerned at being ready for practice. This concern regarding work-readiness has been previously measured in graduate pharmacists⁴. Interestingly, the intervention participants also had lower scores in Domains 6 and 7 at baseline compared to the standard cohort. Possibly, students that volunteered to participate in the intervention had a more acute perception that they were ill-prepared for practice. This perception may have increased their willingness to participate in the trial. It may be concluded that participation in a mystery shopping with feedback clinical placement was superior to standard clinical placements for developing self-perceived competence and work-readiness although this would need to be confirmed with a trial across the entire year group of students.

Table Three: Student perceptions of Competency

	Intervention			Control			Baseline sig.
	Pre N=58	Post N=43	<i>p</i> -value	Pre N=51	Post N=33	<i>p</i> -value	
Domain 1: Professional and Ethical Practice	2.83±0.78	3.07±0.66	0.092	2.81±0.95	2.34±0.98	0.035*	0.913
Domain 2: Communication, Collaboration and Self-management	2.72±0.80	2.84±0.71	0.439	2.81±0.82	2.37±0.85	0.022*	0.592
Domain 6: Deliver Primary and Preventative Health Care	2.41±0.72	2.81±0.71	0.007*	2.76±0.84	2.50±0.81	0.153	0.023*
Domain 7: Promote and Contribute to Optimal Use of Medicines	2.15±0.75	2.53±0.72	0.012*	2.55±1.03	2.33±0.79	0.270	0.023*
Domain 8: Critical Analysis, Research and Education	2.40±0.81	2.79±0.76	0.019*	2.69±1.02	2.37±0.85	0.131	0.119

*significant at <0.05 level

2.1.c.ii Questionnaire 2. ATTITUDES TOWARDS RESEARCH

A previously validated scale was used to measure students' attitudes towards pharmacy practice research⁹. All blank or 'Unsure' responses were not included in the analysis. A total of 198 returned surveys were eligible for analysis. Due to difficulty in obtaining a paired sample in the control cohort for pre and post time points, an independent sample t-test was used to determine significance between pre and post time points. Baseline differences were also tested for significance using an independent sample t-test. The results are presented in Table Four.

Table Four: Student attitudes towards pharmacy practice research (PPR)

	Intervention			Control			Baseline sig.
	Pre N=52	Post N=40	p- value	Pre N=66	Post N=40	p- value	
Factor1: inclusion of PPR in the curriculum	2.87±0.59	2.99±0.54	0.298	2.72±0.70	2.88±0.60	0.229	0.208
Factor 2: engaging with PPR activities	2.47±0.62	2.64±0.60	0.182	2.12±0.87	2.44±0.94	0.079	0.012*
Factor 3: confidence in ability to do PPR	2.17±0.80	2.43±0.78	0.127	2.03±0.83	2.17±0.95	0.454	0.347
Factor 4: faculty involvement of students in PPR	2.44±0.61	2.59±0.66	0.279	2.44±0.78	2.66±0.71	0.141	0.982
Factor 5: role of PPR in the profession	3.13±0.63	3.34±0.56	0.108	2.84±0.93	2.76±0.88	0.664	0.044*

*significant at <0.05 level

Improvement in attitudes towards research was noted for both the intervention and control groups apart from a decline in the control group in their attitude towards the role of research in the profession. All pre and post time differences in attitudes however did not reach significance. A comparison of baseline scores between groups determined that the intervention group had a significantly more positive attitude towards engaging in research activities and the role of research in the profession at baseline. This difference is most likely due to the students being self-selected, as students with a positive attitude in these two factors are probably more likely to participate in research. As this research was designed as a feasibility study, it is important to follow-up with a trial involving all students at the relevant stage in their degree programme.

2.1.d Student Focus Groups

This research was undertaken as part of an honour's thesis submitted by Renee Faraj (4th Year Pharmacy Student in 2015). The abstract and condensed findings are presented below.

ABSTRACT

Objective: To explore pharmacy student perceptions of the value of mystery-shopping pharmacy staff, with immediate feedback as part of clinical placements.

Methods: Seven focus groups of third year pharmacy students that either participated in a pilot mystery-shopping with feedback program, traditional clinical placements, or a combination were undertaken and thematically analysed.

Results: Students participating in the pilot program felt that it improved their competency in counselling, fostering their ability to empathise with patients and developed their professional identity. They also felt that pharmacy staff benefited by participating. Students expressed that mystery-shopping should augment their traditional clinical placements.

Those who completed the traditional placements, either alone or in addition to mystery-shopping, had mixed attitudes towards this type of placement.

Conclusions: Mystery-shopping pharmacy staff, with immediate feedback is perceived by pharmacy students as a valuable experiential learning activity and develops both cognitive and affective attributes.

Further excerpts from Renee's thesis:

Knowledge

The majority of the students felt that they had gained significant knowledge from participating in this program, especially as a result of being engaged participants in preparing prior to their visit:

"I think the biggest thing I've learnt is being proactive... with NRT (nicotine replacement therapy) I had no knowledge about it, I had to read up on it and then I can be a better consumer".

They also expressed that reciprocal learning took place when the staff member would make a mistake and both parties would learn from it:

"I think I actually learnt most from negative experiences... what I can improve on that".

Skills

Most students agreed that they became more confident over time and developed their verbal communication skills. Focus group participants who did not mystery-shop anticipated this outcome should they have partaken in the program:

"The fact that you have to... basically counsel a pharmacist on how to counsel... made me feel more confident in the way I actually can professionally go about that.. [and] improve my communication skills".

Students discussed that they had varying degrees of confidence to provide feedback; however, they perceived that they developed the skill and gained confidence over time.

Students gained an awareness of empathy that was described as a skill beneficial to their future interactions as pharmacists:

"I learnt how I want to...be spoken to if I was a customer. I'm taking on board what I would want to say to my patients... It's really important to communicate well, with respect and be nice".

Students perceived that they learnt clinical and practical skills applicable to their chosen profession. They mentioned they have already started putting these skills into practice in their current extracurricular employment:

"I think I actually changed some of my practices as a result of mystery-shopping".

Attitudes

Students became aware that there was a variation in practice between pharmacists and consequently resolved to model their future practice on pharmacists that they perceived as

having greater competence. Their resolution was reinforced when they saw a contrast in their encounters with pharmacists they perceived as having poor competence:

“There were pharmacists I [was] inspired to be like and some of them gave me some really good advice...”

During the focus groups, students emphasised that skills were gained via both MS and feedback elements and that MS was a more active activity as compared to traditional placements.

The positive advances of knowledge that students expressed from learning and understanding the weekly scenarios prior to their shop can be explained by the cognitive domain of Bloom’s Taxonomy^{10,11}. They progressively expand their thinking when they are able to *understand* and *apply* their knowledge by becoming mystery shoppers. The provision of feedback to pharmacy staff allows students the opportunity to *analyse* the information they had exchanged in their encounter, ultimately making their way to the pinnacle concepts of *synthesis* and *evaluation* of the knowledge gained^{10,11}, further demonstrating the value of MS by actively involving students in their learning process.

The students expressed that variation in pharmacy staff attitude and perceived competency were both facilitators and barriers to their learning. Uninterested or experience-limited pharmacy staff were perceived to detract from the students’ learning opportunities, while those seen as more proficient enhanced the perceived value of the interaction. Students, however, stated they learnt from both appropriate and inappropriate practice by pharmacy staff.

Participants indicated that they intend to role model staff providing quality care and they could see the value by the contrast provided by those providing poor care to consumers. This ability to compare appropriate and inappropriate practice is missing from traditional placements due to extended placement with one preceptor. The aspirations students develop to be like staff they perceive as more competent is a realisation of professional identity, which was clearly evident when students pointed out that they have already changed their practice in their extra-curricular employment in pharmacies, highlighting the importance of experiential education to the learning of students.

We concluded that students acting as mystery shoppers participate in a richer and more engaging learning experience than traditional placements where they act mostly as observers rather than actively engaged student-pharmacists. Consequently, students’ competency is improved by allowing them a chance to walk in consumers’ shoes. Mystery shopping with feedback develops student skills, confidence and professional identity, providing a valuable addition to traditional placements, reinforcing the need to optimise current curricula to improve student learning and patient care.

Key Finding: Students develop affective attributes including empathy and professional identity.

2.2 Feasibility and Acceptability

2.2.a Pharmacy Student Evaluation

As part of the student focus groups detailed in 3.3.1 d, students were asked to comment on their perceptions of the feasibility and acceptability of the mystery shopping programme. The following themes were elicited.

Logistics

Project awareness

A factor that delayed or hindered enrolment in the mystery shopping programme was awareness of the programme, with those not participating saying that they had not been aware of the opportunity despite announcements in lectures, tutorials and on the electronic learning system.

Students also said that *“some pharmacy [staff] ... didn’t know about the study, so when you came back to asking for feedback... they hadn’t digested what the whole project was about”*.

Time commitment

Time commitment was a concern among students, especially given the busy nature of the third-year course. However, most participating students enjoyed the idea of completing the visits at a time of their choosing each week, stating that *“the visit time is really flexible”*. On a related note, students perceived that individual pharmacies that were far from their home or place of study resulted in travel time that was onerous. However, students concluded that the travel time did not greatly impact on their overall experience of the program, and that the majority of visits were convenient.

Students agreed that the timing of their visit impacted their experience and the learning of both parties involved. They preferred the less busy times, generally the morning or afternoon, avoiding lunchtime.

Also, while some thought 9 visits were too long, others stated that this is appropriate. All students did agree however that at least 5 visits would be ideal:

“...I think to do five pharmacies close to where you live”

Project administration

Students generally agreed that the frequency and extent of communication through Facebook was appropriate, however they did suggest that having a separate account on Drop Box, for example, would be handy so they can access all the files for the semester:

“We actually knew what was expected... and it was set out nicely and we had a place to refer to constantly”.

The form used to guide the feedback process was discussed. Some students found it helpful *“as it avoided direct conflict”* while others found it disheartened the staff member if they did not do as well as expected. Some said it distracted from the conversation being had between the two parties, especially when the staff member was perceived to be intimidated

by the content in the form. However, most thought the process of staff self-assessment was an easier way to provide feedback, especially when performance was poor:

“When they were really bad, [I would just say] ‘oh could you please fill in this form’. It’s a tool for them to self-reflect really”.

Some students suggested doing 10 visits for the sake of completeness while others felt that they were competent after 3-4 visits and by visits 6-7 they were tired.

Scenario topics

Students stated they enjoyed the clinical topics for the scenarios and gained more knowledge from those involving pharmacist only (S3) rather than pharmacy (S2) medications because they got more feedback from the pharmacist, however both were valuable.

“I think it was good that we actually got to do S2s (pharmacy medicines) because... this year we’re basically doing mostly S3s (pharmacist only medicines) and its nice to revisit that”

Students found some cases to be more difficult than others such as NRT and allergic rhinitis.

Several students asked for more variety in scenarios and to include topics not yet covered in curriculum such as the *“morning after pill”*. Many voiced a desire to do a mix of symptom-based rather than product-based requests so they could learn further from those experiences.

Those who only undertook traditional placements said they *“get more exposure to dispensing”* in contrast to those undertaking the mystery shopping programme, which focussed on non-prescription medication supply.

Staff-student interaction

Most students enjoyed the idea of being able to provide feedback to the pharmacist/pharmacy staff at the conclusion of the shop.

Students were divided over whether they were picked out as a mystery shopper. Some believed that it got easier over time not to be recognised due to personal improvement in acting as a consumer, while others felt like the staff became familiar with the case over several visits and as a result the staff member made a conscious effort to perform better, *“they knew exactly what to say, what to ask”*.

While the majority said that pharmacists were better in terms of asking the right questions, some preferred interaction with the pharmacy assistant as they were able to spend more time with the student.

Generally, students preferred smaller pharmacies as staff were better trained and it was easier to conduct the MS due to staff being more willing to approach consumers. One student commented that *“...the bigger the pharmacy size, the less educated the assistants...”*.

Preparation

Training

The training sessions provided prior to the commencement of the project were perceived as beneficial. The overall aim, which intended to improve both student and pharmacy staff learning, was unclear to some students. Several suggestions were made including provision of written material to familiarise the students with each case or a debrief session following the visits.

Pre-visit

Students agreed that the level of personal preparation, which varied from student to student, affected their learning at each MS encounter. Increased preparation time equated to a more authentic experience. Students felt they improved their acting as a consumer and optimised their feedback as they were better equipped to provide appropriate advice to pharmacy staff.

Sustainability

Those who did not participate in the MS program felt they learnt more from doing traditional placements *“as there’s exposure to dispensing”*, whereas those who experienced both said that MS was more enjoyable and that both types of placement were valuable.

“I feel like there’s strength in both”

Some students compared their traditional placements to unpaid work and said there was a lack of a teaching role from their preceptor.

“My previous semester’s [traditional] placement I just go in and I’d do the same thing every week. I’m not exposed to different medications”.

Summary

All students agreed that mystery shopping should not completely replace traditional experiential placements. The preferred option was for participation in one semester of mystery shopping and one semester of traditional placements. Students without extracurricular employment in community pharmacies could hence gain sufficient exposure to the pharmacist role, being the main emphasis of traditional placements.

Student perceptions of the mystery-shopping programme were positive, indicating the potential of long-term implementation into the placement curriculum. Students provided several suggestions to refine the programme. While some students preferred to complete nine weeks of visits, some students stated that the placement was too long, preferring approximately five visits, with the optimal number to be decided based on more extensive research. It should be considered that repetition is needed to aid in reinforcing the information and skills learnt by students, and to accommodate the time variation of such student developments.

A balance needs to be struck between providing opportunity for reinforcement to develop skills and variety to maintain student and staff interest. Traditional externships also expose

students to the handling of prescription medications which is of value, especially to those who don't have previous community pharmacy exposure.

Key Finding: Pharmacists and students believe mystery shopping is an acceptable and feasible form of clinical placement that can complement traditional placements.

2.2.b Pharmacy Evaluation

A semi-structured follow-up phone interview with the pharmacy manager at the end of each semester was conducted with a 93 per cent response rate (56/60). Two pharmacies were unavailable for comment due to the manager being overseas for an extended period, and two pharmacies were too busy to participate in the interview (each pharmacy was phoned a maximum of three times).

Pharmacists were asked about their overall experience, and about the mystery shop portion and the feedback portion separately. They were also asked if they were well prepared to participate, if it was a good way to train their staff, and how the program compared to the usual externship approach. Ideas for improving the program were also gathered.

Results from the interviews were overwhelmingly positive (Table Five) with all pharmacies reporting that they were keen to participate in the program again.

Table Five: Results of follow-up interviews with participating pharmacies (n=56)

	Positive Experience	Neutral	Negative Experience	
How was the program overall?	93% (52)	7% (4)	0	
How was the 'Mystery Shop'?	90% (50)	9% (5)	2% (1)	
How was the 'Feedback Session'?	86% (48)	12% (7)	2% (1)	
	Yes	No		
Were you well prepared?	100% (56)	0	0	
Was it useful for staff training?	96% (54)	4% (2)	0	
Would you do it again?	100% (56)	0	0	
	More Effective	Less Effective	Same	Mix of both is best
How does it compare to usual externship?	4% (2)	4% (2)	2% (1)	91% (51)

Overall the program was very well received, 93 per cent rated it as a positive experience and 7 per cent as neutral. Pharmacists' comments included *"It was informative and relevant to our practice"*, *"Very good actually"* and *"Helpful to remind me to ask about stuff I should ask. I found myself doing it to people who weren't mystery shoppers"*.

The majority of pharmacies (90 per cent) rated the mystery shop portion positively. Comments included *"Couldn't usually pick them, they were pretty good"* and *"Students were very keen and active... good interaction and they seemed to be enjoying it"*. One pharmacy rated the mystery shop experience negatively, but on further questioning it was based on one particular shop where *"the student was not well prepared and made it difficult – they were really shy"*. Overall this pharmacy felt that the experience was positive and would participate again.

The majority of pharmacies rated the feedback session after the shop positively *"good and reflective, great for self-reflection"*. Some pharmacists would have liked even more feedback *"I would have liked, was expecting more criticism"*. One pharmacy rated the feedback negatively, *"It was a bit confronting. As a pharmacist, you are a generalist, I didn't like getting criticism."* However, overall this pharmacy felt that the experience was positive and would participate again.

Most pharmacies saw this as a valuable teaching tool for staff and a number also commented that they enjoyed being able to teach and help the students *"It was good...teaches people well, both students and staff"*, *"It's a two way street and we both learn something"* and *"I liked being able to help the students"*.

When asked about possible improvements to the program, a common theme related to the scenario that was used. Many pharmacists requested regular changes to the scenario and would like the opportunity to respond to a symptom-based request (rather than a direct product request).

It was commonly noted that some students were better than others, and it was suggested that acting lessons could be useful for some students.

Many pharmacies commented that it was a good way for pharmacy students to experience real-life situations and understand how pharmacists work on a daily basis *"it was good for students to see real world techniques"*, *"Valuable for students to see customer's point of view. It will help them when they graduate"*.

Key Finding: Pharmacists and students believe mystery shopping is an acceptable and feasible form of clinical placement that can complement traditional placements.

2.2.c Factors critical for success

The success of this programme is reliant on multiple factors. First, a number of professional staff willing to participate in innovative methods to engage with students is a fundamental requirement. Second, the findings detailed in 3.3.2 a and 3.3.2 b confirm that logistical consideration, student training and faculty support via ongoing communication throughout the placements was required. Importantly, all participant views were positive, both student and staff. Therefore, the positive experience provided by this type placement may overcome initial reluctance to participate. Lastly, engaged students willing to participate in this experience is required. It is yet to be determined whether this experience can be provided to all students.

Key Finding: Future research with other non-self-selected cohorts of pharmacy students need to confirm the findings of this feasibility study.

2.2.d Potential for implementation in other disciplines

The development of empathy and professional identity are positive professional attributes applicable to all health disciplines. Thus, students from all health disciplines would stand to benefit from viewing interactions with health professionals from the perspective of the consumer. Enacting the role of the teacher and providing feedback is also pertinent to all health professions. The key issues would be to develop scenarios that are suitable for this form of placement and to ensure the authenticity of the experience. Scenarios that are suitable would likely involve initial contact with the health professional e.g. primary care. Additionally, they cannot require the mystery shopper to exhibit any physiological signs requiring treatment as such signs would be difficult to simulate. Lastly, the visit is ideally covert in order to provide an authentic learning experience for both professional and student.

Key Finding: This type of placement where students walk in the shoes of the consumer could be applied to other disciplines

2.3 Pharmacy Performance

2.3.a Mystery Shopping

With a change in how experiential placements are conducted, it is essential to evaluate the impact of the placement on the placement site. In addition to acceptability and satisfaction, the effect on practice was also measured as part of the evaluation of the intervention.

Each mystery shopper visit and feedback encounter conducted by a student was audio recorded and documented using a data collection form. Each visit was then rated via two scales. First, whether the advice provided to the student mystery shopper was appropriate and by scoring with reference to the WHAT-STOP-GO protocol, endorsed by the Pharmaceutical Society of Australia for supply of non-prescription medicines via community pharmacy. The results are presented in Tables Six to Eight.

N.B. Where a visit scored a partial 'appropriate' score the score was defaulted to 'not appropriate'

Table Six: Pharmacy Performance - All Scenarios
(Total of 540 visits; 523 valid visits; 17 visits missing):

Visit	Not Appropriate	Appropriate	Missing
1	31 (52%)	29 (48%)	Nil
2	35 (59%)	24 (41%)	1
3	30 (52%)	28 (48%)	2
4	33 (55%)	27 (45%)	Nil
5	23 (43%)	31 (57%)	6
6	31 (52%)	29 (48%)	Nil
7	26 (46%)	30 (53%)	4
8	28 (48%)	30 (52%)	2
9	19 (33%)	39 (67%)	2
Overall	254 (49%)	269 (51%)	17

Table Seven: Significance of change in appropriate advice score over time

Scenario	p-value
Children's fever	0.207
Children's cough and cold	0.394
Adult cough and cold	0.006 ⁺
NRT	0.468
Allergic rhinitis	0.973
GORD	0.970
Adult pain	0.851
Insomnia	0.034*
Diarrhoea	0.653
Asthma	0.606
All scenarios	0.032*

*=significant at <0.05 level

⁺=significant at <0.01 level

It may be concluded that there is an improvement in both appropriate provision of advice and adherence to the WHAT-STOP-GO protocol for supply over time. Therefore it may be concluded that pharmacy staff improve their practice as a result of engaging with pharmacy students in the mystery shopping with feedback experiential placement. It should also be noted that there was variability between scenarios with respect to improvement. Further work is required to determine which factors are pertinent to the variation seen.

Table Eight: Significance of change in WHAT-STOP-GO assessment score over time

Scenario	p-value
Children's Fever	0.003 ⁺
Children's Cough/Cold	0.463
Adult Cough/Cold	0.026*
NRT	0.361
Allergic Rhinitis	0.688
GORD	0.696
Adult Pain	0.037*
Insomnia	0.153
Diarrhoea	0.853
Asthma	0.033*
All scenarios	0.000⁺

*=significant at <0.05 level

⁺=significant at <0.01 level

The pharmacy data provided an opportunity for student research and the honour's thesis submitted by Jack Collins (4th Year Pharmacy Student in 2015) is presented in Appendix F. Jack Collins analysed data from three of the ten scenarios for his thesis and was awarded the University Medal for his research. Data from the remaining seven scenarios will form the basis for his PhD studies commencing in Semester Two 2016.

Key Finding: Students act as change agents to improve the profession, as significant improvements in pharmacy scores were seen over time as a result of the students' enacted scenarios and feedback provision.

3. Project Impact, Dissemination and Evaluation

3.1 Project Impact

As this project is a feasibility study the primary intention was to impact directly on trial participants and the stakeholders responsible for the BPharm curriculum. The following impact has been generated to date:

Table Nine: Impact mapped to IMPEL framework

1. Team members	<ul style="list-style-type: none"> • Recognition of project participants' contributions to learning and teaching through promotion and awards • Undergraduate honours students gain research skills
2. Immediate participants	<ul style="list-style-type: none"> • Students gain competence, empathy and confidence • Students develop their professional identity • Students provided an opportunity to present research • Preceptors and pharmacy staff gain competence via student-led training
3. Spreading the word	<ul style="list-style-type: none"> • 6 months: Workshop on student mystery shopping at an International Social Pharmacy conference • 6 months: Presentations at national and international conferences • 12 months: publication of research papers
4. Narrow opportunistic adoption	<ul style="list-style-type: none"> • Discussion to extend to other professions within University • 12 months: trial in another discipline
5. Narrow systemic adoption	<ul style="list-style-type: none"> • 12 months: Faculty of Pharmacy to continue trial • 24 months: Faculty of Pharmacy to adopt in curriculum
6. Broad opportunistic adoption	<ul style="list-style-type: none"> • Establishment of an international Australia-Brazil initiative to introduce student mystery shopping to Brazil • 24 months: Trial across multiple Schools of Pharmacy
7. Broad systemic adoption	<ul style="list-style-type: none"> • 36 months: additional Schools of Pharmacy to adopt in curriculum

3.2 Dissemination

The material developed to deliver the mystery shopping project are available on request. Please contact either Dr Carl Schneider (carl.schneider@sydney.edu.au) or Dr Rebekah Moles (rebekah.moles@sydney.edu.au).

In the short time frame of 15 months from the start of the trial until the time of this report the following dissemination activities have been undertaken or organised:

1. Poster presented by a pharmacy student trial participant (awarded best poster prize).

Soon E, Moles RJ, Schneider CR. Walking In Consumers' Shoes: Reshaping pharmacy student placement curriculum via mystery shopping with feedback. Australasian Undergraduate Research Conference. Perth, Australia. 2015

2. Invited presentation

Moles RJ. Education through Simulation. Applied Sciences University. Second International Medical Conference. Amman Jordan. 2016

3. Invited Workshop on process of student mystery shopping and feedback

Moles RJ, Schneider CR. The Art of Providing Feedback to Pharmacists and their Staff on their performance: - A Workshop. 18th International Social Pharmacy Workshop. Aberdeen, Scotland. 2016

4. Oral presentation based on work by Honours student

Collins JC, Schneider CR, Wilson F, Faraj R, de Almeida Neto AC, Moles RJ. Management of Common Ailments Requiring Referral in the Pharmacy - A Mystery Shopping Intervention Study. 18th International Social Pharmacy Workshop. Aberdeen, Scotland. 2016

5. Oral presentation based on work by Honours student

Faraj R, Collins JC, Wilson F, Moles RJ, Schneider CR. Student perceptions of mystery-shopping and peer teaching through feedback: reshaping the pharmacy placement curriculum. 18th International Social Pharmacy Workshop. Aberdeen, Scotland. 2016

3.3 Evaluation

As this project was designed as a pilot study, a comprehensive evaluation plan was developed and conducted. Evaluation of feasibility, student acceptability, learning outcomes, as well as pharmacy staff acceptability and learning outcomes were measured. The results of the evaluation plan are presented in the findings section above. Based on the findings, evaluation of future research will focus on measurement of student affective learning outcomes. The development of a professional identity and empathy require validated scales to measure benefit of mystery shopping with feedback as compared to traditional clinical placements. Evaluation of implementation across the entire cohort of mystery shopping with feedback is also required.

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5. Appendices

Appendix A

Certification by Deputy Vice-Chancellor (or equivalent)

I certify that all parts of the final report for this OLT grant/fellowship (remove as appropriate) provide an accurate representation of the implementation, impact and findings of the project, and that the report is of publishable quality.

Name:

Professor Pip Pattison, DVC Education



Monday 29 February 2016

Appendix B

WICS: SCENARIO SUMMARY								
Scenario No	TOPIC AREA	PRODUCTS REQUESTED	Pharmacy Medicine (PM)/ Pharmacist Only Medicine (POM)	For Self or for other person?	Used it before?	Scenario Angle	Weekly Variations	References
1	Fever kids / pain	1. Nurofen kids 2. Children's Panadol	PM	Other: child under 6	No	Correct dose (by weight)	Age / gender / weight / relationship to shopper / specific symptoms	tga.gov.au
2	Cough cold (child under 6)	1. Demazin 2. Benadryl 3. Robitussin 4. Bisolvon	PM	Other: child under 6	Yes	Communication (guidelines for under sixes)	Age / gender / weight / relationship to shopper / specific symptoms	APF 22 pg 500 - 503

3	Adult cough cold	1. Robitussin 2. Benadryl 3. Duro-tuss 4. Codral cold and flu	PM	Other: Adult	No	Ask about other medications with cough and cold	Change concomitant medication: DXM interaction SSRI / Asthma not infection / ACE induced cough	
4	Smoking Cessation	1. Nicotinell patches 2. Nicabate patches 3. Nicorette quickmist 4. Nicorette Gum 5. Quit Patches X	PM	Self	Yes	Risk of non-compliance due to SE's - [**drug interaction]	Change product request / number per day / years smoking etc [**caffeine]	
5	Allergic rhinitis	1. Claratyne 2. Telfast 3. Zyrtec 4. Aerius 5. Sudafed Sinus	PM	Self	Yes	Optimising Therapy	Nasal corticosteroid. Change: more than 4 days per week / 4 weeks at a time / impact (school/work etc)	MJA (Vol 182, No 1)

Walking in consumers' shoes:

Reshaping the pharmacy student placement curriculum via mystery shopping with feedback

6	GIT referral	1. Zantac 2. Suvacid 3. Somac 4. Zantac 5. RANITIDINE (Chemist brand)	PM/POM	Varies	Varies	Trigger point for referral: [**]	Change: age / gender / self / other [**Daily symptoms / Long term NSAID / Prolonged use / Less than 18 years / Over 55 recent onset]	APF 22 pg 570
7	Analgesic	1. Nurofen Plus 2. Panafen Plus 3. Mersyndol	POM	Other: adult	Varies	Appropriate use? [**]	Change: age / gender / [**Duplication of therapy / persistent pain / overuse (suspected addictive behaviour) / >50 recent onset pain unclear underlying cause]	APF 22 pg 555
8	Insomnia	1. Dozile 2. Mersyndol 3. Restavit	POM	Self	No	Counselling (Sleep Hygiene)	Change: Sleep patterns / additional info	

9	Diarrhoea	1. Lomotil 2. Gastrostop	POM	Self	Yes	Trigger point for referral: Diarrhoea [**]	Change: age / gender / [** Persistent > 3 weeks / recent overseas travel / alternating with constipation / diabetes / blood or mucous in stools / severe abdominal pain / occurring intermittently	APF 22 pg 505
10	Asthma control	1. Ventolin 2. Asmol	POM	Self	Yes	Trigger point for referral: [**]	Change: age / gender / **Poorly controlled asthma (overuse of reliever, night-time cough, no preventer) / No asthma management plan / Last medical review > 6 months)	APF 22 pg 577

Appendix C

WALKING IN CONSUMERS SHOES: SEM 2 DATA COLLECTION FORM

SCENARIO ONE	VERSION NINE
[Product requested]:	Children's Nurofen
[Who is the patient?]	Five year old girl
How long	Last night.
[Actual Symptoms – what are they?]	Fever 38.0 measured this morning.No cough, diarrhoea or vomiting. No rash. Normal appetite. Weighs about 25kg (she is very tall and big for her age)
Treatment for this or any other conditions?	No.
[Additional Info]	She is your little sister / daughter or nieceYou think that other kids at school have been sick. Is drinking a bit of water, not much appetite.
Have you used it before?	Yes.
SCENARIO ANGLE	Correct dose (by weight).

PHARMACY NAME AND ID	
STUDENT NAME AND ID	
VISIT DATE	
VISIT TIME	

WHO SERVED THE CUSTOMER?		
Pharmacy assistant?	Y	N
Pharmacist	Y	N
Did the assistant ask the pharmacist for advice?	Y	N
Did the assistant refer the customer to the pharmacist?	Y	N
Note		

Appendix D

FEEDBACK (SCENARIO ONE)

WHAT: DID YOU FIND OUT?			
W: Who the medicine was for?			
Child [5yrs]	Y	N	Part N/A
Weighs [25kg]	Y	N	Part N/A
H: How long they'd had the symptoms?			
Since last night.	Y	N	Part N/A
A: About the actual symptoms?			
Fever [38.0]	Y	N	Part N/A
No rash	Y	N	Part N/A
Normal appetite	Y	N	Part N/A
T: About treatment for this or any other condition?			
What treatment they'd already tried? (Nothing)	Y	N	Part N/A
If they take any other medication? (No)	Y	N	Part N/A
If they have any other medical conditions? (No)	Y	N	Part N/A
STOP: DID YOU STOP AND?			
Consider the issue? (Correct dose for a child – by weight not age)	Y	N	Part N/A
GO: DID YOU?			
Address the issue?	Y	N	Part N/A
Correct dosage for child – by weight	Y	N	Part N/A
Other? (please record here)			
Recommend/provide any products ?	Y	N	Part N/A
Record Product Name/s and Strength:			
For each product you provided, did you:			
Recommend an appropriate dose and dosage interval?	Y	N	Part N/A

Recommend how long to use the product for?	Y	N	Part N/A
Provide relevant verbal advice on managing a childhood fever	Y	N	Part N/A
Record type of Verbal Advice (e.g. measuring temperature, fluids, neck stiffness, rash)			
Provide relevant written advice? (please attach to this form)	Y	N	Part N/A
Provide appropriate follow-on advice? (either immediate or if symptoms do not improve or worsen)			
Refer the customer to the doctor for the presenting symptoms?	Y	N	Part N/A
Tell the customer when to return to you?	Y	N	Part N/A
Tell the customer when to visit the doctor (e.g. if it persists or worsens)?	Y	N	Part N/A
Record any specific Follow-on advice (i.e. advice on WHAT to do next and WHEN)			
OVERALL			
Do you think the visit had an appropriate outcome?	Y	N	Part N/A
Do you think you established a good rapport with the customer?	Y	N	Part N/A
How would you rate the information you provided?	Good	Adequate	Not Adequate
Do you have any comments?			