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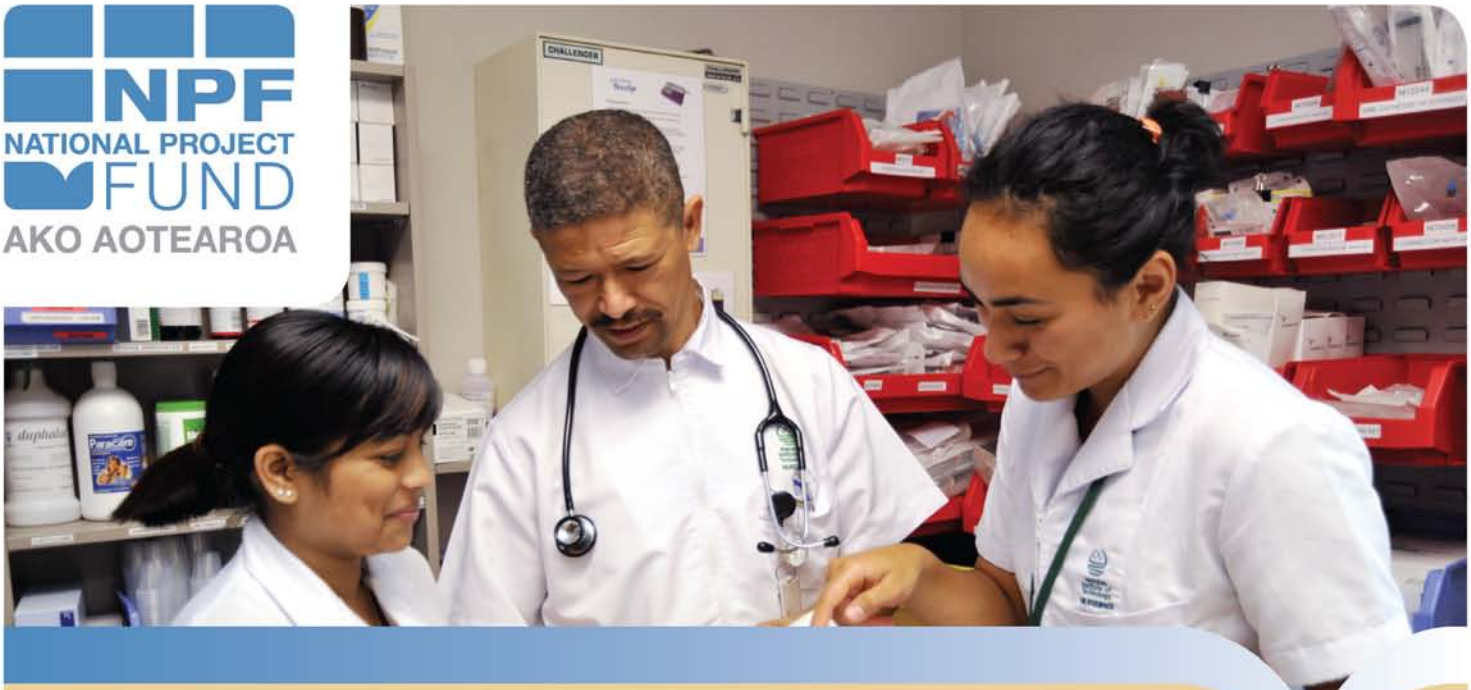

Research Report

Enhancing Nursing Education through Dedicated Education Units

Willem Fourie and Beverley McClelland

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NATIONAL CENTRE FOR TERTIARY TEACHING EXCELLENCE

COUNTIES MANUKAU DISTRICT HEALTH BOARD
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COLLABORATIVE NURSING
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We would like to express our appreciation to the participating Bachelor of Nursing students for taking the time to complete questionnaires and for participating in the focus groups – your views and experience were very useful. We wish to express our sincere appreciation to the staff of both DEUs and to the Action Group, not only for participating in the research but also for making the implementation of the first and second cycle a great success. We would like to thank Rose Whittle, Christchurch Polytechnic Institute of Technology, for her expertise and input into this project. Finally, we would like to thank the respective nurse leaders of the two organisations, Denise Kivell and Debbie Penlington, for their continued support and encouragement to this project. This project was supported through the Ako Aotearoa National Project Fund.

Foreword

Clinical practice is a key component of Bachelor of Nursing education and is where students learn about nursing by having clinical experiences in different areas of practice.

The Dedicated Education Unit is a model of clinical teaching and learning that requires collaboration between staff from both education and practice to support student learning, more so than in the commonly used Preceptorship model. Dedicated Education Units have been used to educate nurses in parts of Australia for more than 10 years. In New Zealand the DEU model was first introduced by the School of Nursing at Christchurch Polytechnic Institute of Technology and the Canterbury District Health Board in 2007, and more recently by Manukau Institute of Technology in partnership with Counties Manukau District Health Board.

Manukau Institute of Technology and Counties Manukau District Health Board have successfully piloted the Dedicated Education Unit model in medical and rehabilitation areas at Middlemore Hospital, as well as in the community in a joint venture with a Primary Health Organisation. The pilot is the focus of this report.

The report describes the research process and findings, and identifies contextual differences from previous work. The multicultural environment in South Auckland is reflected in the range of ethnicities of staff, students, patients and their families, thus providing a unique and culturally diverse learning context for students. Another difference from earlier work is the supernumerary status of the key Clinical Liaison Nurse (CLN) role on the days when students are present, hence enabling the CLN to focus on student teaching and learning without the added responsibility of patient care. Peer teaching between and across year groups was also encouraged and enabled by having students from each of the three years of the Bachelor of Nursing in the same Dedicated Education Unit, which differed from the Canterbury experience. In addition, Manukau Institute of Technology and Counties Manukau District Health Board researchers share the lessons learned in their report and also discuss recommendations for future developments.

This successful pilot project supports the Dedicated Education Unit as an effective model for providing quality clinical education for nursing students. I am pleased to have been involved with this project and congratulate the team on the positive outcome.

Rose Whittle (RN, MEd(Dist), BA)
Clinical Manager, School of Nursing, Christchurch Polytechnic Institute of Technology

Member of the Christchurch Polytechnic Institute of Technology/Canterbury District Heath Board DEU Working and Governance Groups and Independent Evaluator of the Manukau Institute of Technology/Counties Manukau District Health Board Dedicated Education Unit Action Research Project.

Contents

Executive summary

In 2008, Manukau Institute of Technology (MIT) and Counties Manukau District Health Board (CMDHB), through their Collaborative Nursing Development Unit, decided to pilot two Dedicated Education Units (DEU)s at Middlemore Hospital in South Auckland in 2009. A DEU is a collaborative initiative between educational and clinical providers to create an environment focused on teaching and learning that differs from the preceptor model, which is primarily a one-to-one relationship between preceptor and student. Wards 6 and 24 at Middlemore Hospital were selected as DEUs based on their capacity and commitment to support the clinical learning of nursing students. Ward 6 is a general medical ward and Ward 24 is an Assessment, Treatment, and Rehabilitation Unit. Midway through the project a community DEU was established in collaboration with ProCare. The community DEU is reported separately in this document. Using action research, MIT and CMDHB therefore embarked on an implementation project with the following objectives:

- Evaluate the model's potential ability to support undergraduate nursing students within CMDHB
- Make recommendations to the Collaborative Nursing Development Unit on completion of the project as to the model's suitability for use as an ongoing undergraduate nursing clinical education
- Build research capacity through team research between MIT and CMDHB
- Document the process of implementing the DEUs

This report integrates the findings of both qualitative and quantitative data emerging from the two cycles using the following sources:

- *Focus Groups*: Over the two cycles, 10 focus groups were conducted. These consisted of 5 focus groups with students; 2 focus groups with staff; 2 focus groups with the action group; and 1 focus group with the Charge Nurse Managers of the respective DEUs. Participants in the focus groups varied from 2 to 12 per group.
- *Reflective Journals*: Five Action Group members kept reflective journals during each cycle of the research, which resulted in 10 journals for analysis. Journals were independently and thematically analysed by both researchers.
- *Minutes*: Minutes of the Action Group (fortnightly) and Governance Group meetings (monthly) were independently and thematically analysed by both researchers.
- *Questionnaires*: Two sets of questionnaires were distributed to students in the DEUs, one at the midway point and the second on completion of the placement. A total of 53 questionnaires (first second and third-year students) were returned at the midway point and 16 at the end of the semester (which excluded first-year students). The population for the second round excluded Bachelor of Nursing semester two students as they spent only two weeks in the DEUs and could not meaningfully contribute to the data required for the second questionnaire.

Themes from the two cycles were closely examined and collated into the following six final themes:

- *Orientation and Planning*: We were interested in exploring the effectiveness of the planning, welcome and orientation because this influences the quality of students' learning experience.

- *Roles within the DEU*: The results of this research revealed that roles played a major part in the success of the DEUs. The roles identified were that of the Clinical Liaison Nurse, the Academic Liaison Nurse, and Charge Nurse Managers.
- *Teamwork*: Teamwork is necessary to ensure clinical learning opportunities are maximised for the benefit of the students. We were interested in students' experiences of being involved in the health care team, as DEUs are renowned for creating a sense of belonging.
- *Support:* One of the outstanding features of this study is the peer support that occurred between students and staff of different disciplines. Support also occurred between staff members, e.g., Clinical Liaison Nurse and Academic Liaison Nurse
- *Students learning needs and feedback:* The main focus of a DEU is to provide an environment where students' learning needs are met through enhanced teaching and learning opportunities. To gauge how the DEU was meeting their learning needs, a series of questions were put to students, such as the time set aside to discuss learning outcomes, and whether students felt their learning needs were being met.

The following recommendations for the future development of DEUs are derived from the overall results of the action research:

- The current Action Group and Governance Group structure remains with representation from both CMDHB and MIT, so that the collaborative approach that is integral to the success of this model, is not lost. This will add to the overall teaching and learning of students as action group members come from different DEUs and are in a position to share best practice.
- Consideration is given to further engagement of the multi-disciplinary team. Where students had the opportunity to engage with members of the multi-disciplinary team, they have reported these encounters as contributing to their learning and understanding of the team roles.
- Further educational strategies should be considered to support reflection and critical analysis by students. This will provide valuable insights into learning in the work environment. A more structured approach for first-year students to be supported by third-year students is needed. Embedded in these strategies is peer teaching and support; the learning environment should also be further extended to equip senior students for their roles in peer teaching and support.
- Further research to explore feedback within the DEU; the impact on patient outcomes, student success and progression and staff retention.

The success of this pilot study strongly indicates that future DEUs between CMDHB and MIT should be embedded in clinical education and practice to ensure optimal learning opportunities are provided for undergraduate students.

Introduction and background

With the exception of overseas qualified nurses, entry into the profession of nursing in New Zealand requires students to obtain a bachelor's degree and successfully complete the State Examination. The Nursing Council of New Zealand (2010) requires a minimum of 1100 hours of clinical experiential learning per student over a period of 3–5 years. At MIT the Bachelor of Nursing programme's clinical experiences range between 1220 and 1500 hours and make up almost half of the education of a registered nurse over a 3-year degree programme.

The preceptor model is commonly used in undergraduate nursing education in New Zealand, which Rogan (2009) describes as a one-to-one relationship between an experienced nurse and a student. According to Happell (2009) the preceptor model has numerous limitations, one major issue being that clinical teachers were not familiar with the clinical environment. Smedley, Morey and Race (2010) reported that students added to the workload of a preceptor who is usually very busy with a heavy case load. At MIT, feedback from student and staff evaluations suggested that the current preceptor model, linked with the rapid turnover of staff and patients and flexible working hours, does not always ensure quality clinical learning and teaching opportunities for nursing students and preceptors. Smedley et al. (2010) found that the workplace mix and the part-time nature of the workplace provided little continuity for students to work with the same preceptor and to build meaningful relationships. Anecdotal evidence from our own experience suggested that the preceptor model is often disjointed and interrupted, and varies according to the environment, students' experience, and motivation of preceptors.

What is a Dedicated Education Unit?

There has been much debate in the literature about models and roles that best support nursing student placements. A white paper for the US Department of Labour offered pioneering solutions that included, among others, the development of Dedicated Education Units (Joynt & Kimball, 2008). DEUs have been pioneered in Australia and have been the primary model for clinical nursing experience in Adelaide since 1999 (Edgecombe, Wotton, Gonda & Mason, 1999). The KPMG (2001) report on undergraduate nursing education in New Zealand identified that *"DEUs are a good example of a model in which students work shifts alongside registered nurses but do so in a collaborative and supportive environment in which clinicians and educators work together"* (p. 88). A DEU therefore is a collaborative initiative between educational and clinical providers to create an environment focused on teaching and learning that differs from the preceptor model, which is primarily a one-to-one relationship between preceptor and student.

DEUs have been introduced in response to the success factors identified for quality clinical learning and have proved to be sustainable through their placement of a greater number of students at any one time in a clinical learning context dedicated to excellence (Henderson, Twentyman, Heel, & Lloyd, 2006). A DEU provides an optimal teaching and learning environment for clinical practice through the collaboration of the educational institution and

the associated clinical provider. All staff in a DEU are strongly focused on teaching and learning and both staff and students are assisted and supported by an appointed Clinical Liaison Nurse (CLN) and Academic Liaison Nurse (ALN). The CLN is appointed by the clinical provider and is usually an experienced and respected registered nurse who knows the unit and its staff. Miller (2005) described this person as the interface with academia. The ALN is an experienced lecturer appointed by the educational institutions to provide consistent support to the students during their clinical placement in conjunction with the Clinical Coordinator, CLN, Charge Nurse Manager, and DEU staff. The CLN therefore brings a strong clinical perspective, while the ALN provides sound academic input to the DEU. Miller (2005) reported that the academic nurse is a resource to the unit's staff. These roles complement one another and ensure a solid foundation for teaching and learning.

The literature shows that staff familiarity with the clinical unit and the academic programme increases student learning (Ranse & Grealish, 2007). Students in DEUs have reported feeling supported by a clinical facilitator who is dedicated to them and their learning needs (Nehls, Rather & Guyette, 1997). The use of staff within a unit who are clinically current and familiar with the environment impacts greatly on the students experience (Baird et al. 1994) The nurses in a DEU reported feelings of personal and professional satisfaction by being given time to support students (Henderson et al. 2006). Melander and Roberts (1994) stated that improvements were reported in the teaching and preceptor skills of the facilitator, evidence of their professional development. Miller (2005) described both students and faculty as being redefined as an asset rather than a nuisance or cost to the practice environment.

Teaching and learning are interactive components of the educational activities in a DEU as students are actively engaged in real life learning while staff constantly extend and improve their practice through their interactions with active nursing students. For these reasons it was decided to implement a DEU at Counties Manukau District Health Board.

Dedicated Education Units in New Zealand

The first DEUs were introduced in New Zealand in 2007 as a pilot by Christchurch Polytechnic Institute of Technology and Canterbury District Health Board. According to Casey et al. (2008), Christchurch Polytechnic Institute of Technology became the first New Zealand Nursing School to establish a DEU, illustrating benefits that included better quality placements and an increase in clinical placements, as well as better alignment between theory and practice. Institute staff enjoyed more work satisfaction and a closer relationship with their student nurses; and students reported better communication, better access to staff, and more consistent assessment practices (Jamieson et al. 2008). Christchurch Polytechnic Institute of Technology and Canterbury District Heath Board have since introduced more than 12 DEUs and they are currently the biggest users of this model in New Zealand.

In 2008, MIT and CMDHB, through their Collaborative Nursing Development Unit, explored various models to support students' clinical learning. This included a staff member from each organisation visiting both Flinders University in Adelaide, Australia, and the New Zealand project in Christchurch. On the basis of this investigation it was decided to pilot two DEUs at Middlemore Hospital in South Auckland in 2009. While DEUs are very similar in nature and structure, contextual differences exist and each DEU must be adapted to its own context.

The unique features of the implemented Dedicated Education Unit

Cultural diversity of region

The first unique feature is the cultural diversity and population growth in South Auckland and at Middlemore Hospital. The DEU project was implemented in a multicultural environment in a region that has the fastest growing population in New Zealand, particularly youth and elderly populations. At the Health Board, 52% of staff (69 ethnicities) have been trained overseas, which adds to the complexity of nursing education. CMDHB serves a diverse range of clients making up 11% (464,700) of the New Zealand population. According to the Counties Manukau District Health Board 2010/2011 District Annual Plan (2010) it is essential to meet the needs of local communities, and develop a workforce that reflects the population instead of relying solely on overseas-trained health professionals. This diversity presents unique challenges in relation to student education, for example, cultural safety, effective communication, and the application of theory and practice. Not only is CMDHB one of the largest in the country, but the population growth in its region is unique, as reflected in Figure 1 below.

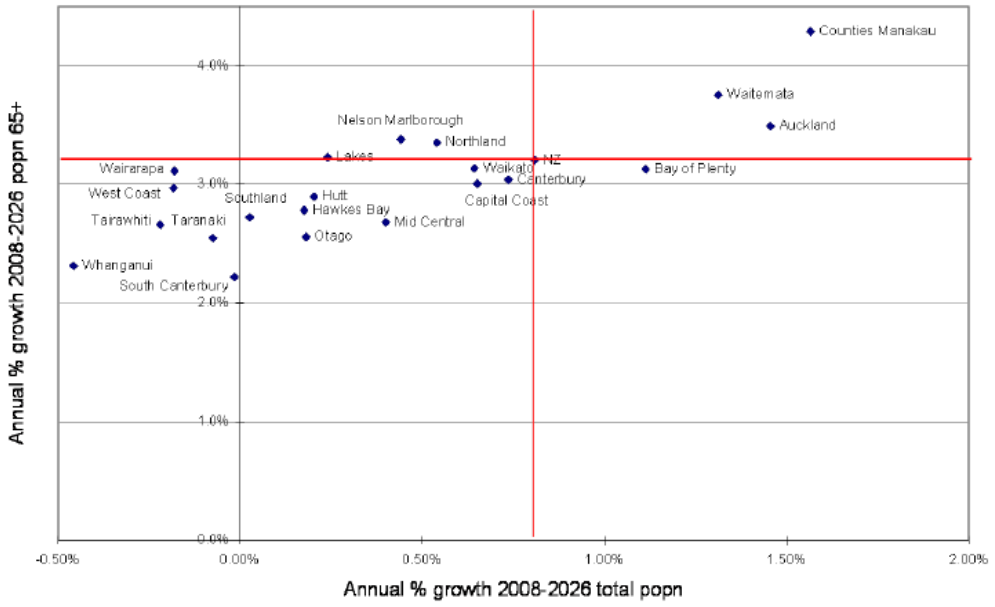


Figure 1: Population Growth (Source: McKernan, 2008, p. 20)

Supernumerary status of the Clinical Liaison Nurse and the Academic Liaison Nurse

The second feature is the supernumerary status of the CLN and ALN on the days that students are undertaking their clinical experience. By being supernumerary, the time (approximately 8 hours per day) without taking a case load was useful for guiding student learning and familiarisation of the academic requirements of the programme. In comparison, Christchurch Polytechnic Institute of Technology allows 1.5 hours per student for formative assessment, 1 hour per student for summative assessment, and 0.5 hours daily for CLN

activities (Jamieson et al. 2008, p. 15). While MIT/ District Health Board approach is unique in New Zealand, the School of Nursing at the University of Portland, Oregon, in collaboration with their clinical partners, employs CLNs and ALNs in a similar manner: they were solely responsible for the education of students during their placements (Moscato et al. 2006).

Diverse levels of learners

The third feature was placing students from all three levels (first, second and third year) of study in the unit at the same time. In New Zealand the predominant approach is to place only one level of students in a particular placement at a time. The researchers were interested in exploring whether placing first, second- and third-year students at the same time would result in peer support and peer learning, given that Miller (2005) reported the Flinders University DEU model was successfully placing three levels of undergraduate nursing students at the same time.

Community Dedicated Education Unit

A fourth feature was the introduction of a Community DEU in July 2009 (see p. 33). Community placements are very different from inpatient settings as students are distributed over a large geographical area within primary healthcare providers. Embarking on a community setting was therefore a unique opportunity for MIT and CMDHB.

Use of action research as an evaluative method

The final feature was the use of the Action Group as part of the Action Research. The Action Group in this research functioned operationally, addressing issues such as clarifying the scope of practice for different groups of students. The Action Group facilitated by MIT Clinical Coordinator met every second week; the major advantage of this was that key staff from different DEUs had the chance to exchange ideas and to discuss issues of common interest while driving the day-to-day operation of the DEUs. No literature evidence using databases such as the Cumulative Index to Nursing and Allied Health Literature, EBSCOhost and ProQuest could be found that supported the use of an action group in DEUs in this manner.

The DEU project is seen as a mechanism to bring about a culture change that is more inclusive of the learning environment, more collegial, and has a stronger sense of belonging. This is possible when everyone is focused on the integration of theory and practice in a supportive environment where educators and clinicians share in the students' learning.

MIT and CMDHB therefore embarked on an implementation project with the following objectives:

- Evaluate the DEUs effectiveness to support undergraduate nursing students within CMDHB
- Make recommendations to the Collaborative Nursing Development Unit on completion of the project as to the model's suitability for use as an ongoing undergraduate nursing clinical education
- Build research capacity through team research between MIT and CMDHB
- Document the process of implementing the DEUs.

Methodology

Wards 6 and 24 at Middlemore Hospital were selected as DEUs based on their capacity and commitment to support the clinical learning of nursing students. Ward 6 is a general medical ward and Ward 24 is an Assessment, Treatment, and Rehabilitation Unit. Students' placements varied according to their year of study, for example, first-year students spent 2 weeks in the DEUs, while second- and third-year students spent 11 and 13 weeks respectively. During these weeks, second-year students spent 3 days per week, while third-year students spent 5 days per week in these DEUs. Students were randomly allocated to the two DEUs. The number of students in each cycle of the implementation project is reflected in Table 1 below.

Table 1

Number of students per DEU

Year of study	Ward 6	Ward 24
	Cycle 1	
First Year	8	8
Second Year	8	6
Third Year	2	1
Total	**18**	**15**
	Cycle 2	
First Year	8	6
Second Year	6	8
Third Year	2	0
Total	**16**	**14**

Structures used to develop, oversee, and manage the project

Collaborative Nursing Development Unit Governance Group

The project was overseen by a governance group consisting of key Institute and District Health Board personnel. The role of the Governance Group was to develop roles/processes/ evaluation criteria, oversee day-to-day implementation, and report to the Collaborative Nursing Development Unit.

Action Group

The Action Group facilitated by MIT Clinical Coordinator met every second week and was primarily concerned with:

- coordinating day-to-day operational issues within the two DEUs
- monitoring student/staff satisfaction
- facilitating staff communication
- providing feedback and support to pilot areas
- participating in the action research

Research Management Team

A Research Management Team was formed to oversee the action research and its various cycles by liaising closely with the Action Group, the Governance Group, and Rose Whittle, from Christchurch Polytechnic Institute of Technology, who carried out ongoing external evaluation of the project.

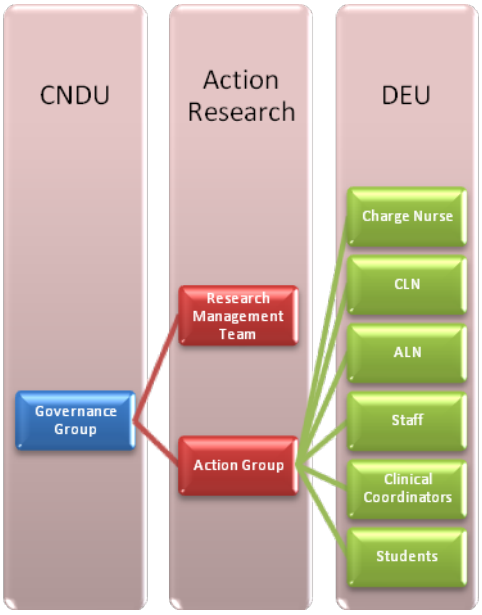


Figure 2: Conceptual Model

Action Research Model

After consultation with Christchurch Polytechnic Institute of Technology and consideration of the project objectives, it was decided to use action research to plan, implement, and evaluate the project. Action research is an appropriate method for the establishment of the DEUs as it is a systematic inquiry to effect positive educational changes in the clinical learning environment. According to Kemmis and McTaggart (1988) it is a collective and collaborative research process that in this case lends itself to the collaborative working of MIT and CMDHB on an initiative that would be beneficial to both organisations. Action research enhances the lives of learners as well as the lives of teachers – it encourages continuous learning and reflection, which are critical for the practice of nursing. More specifically, practical action research emphasises the 'how to' approach necessary for this project (Mills, 2003).

Stephen Kemmis's model of action research was used, which involved a series of cycles as a basis for further planning (Kemmis & McTaggart, 1988). The essential characteristics of this model include reconnaissance, planning, action, reflection, monitoring, and evaluation (Mills, 2003). Reconnaissance is aimed at exploring opportunities and possibilities about an area of interest through a process of discussion and negotiations. It includes finding out what is happening and what is known about the area of interest so that a general plan of action can be developed. This plan is then put through the first action step, where monitoring and evaluation take place through rethinking, reflecting, and learning. The plan is revised, and a second cycle commences as illustrated in Table 2.

Table 2

Action Research Cycles

Action Research Cycle 1	Action Research Cycle 2
Phase 1 (July – November 2008). Reconnaissance	**Phase 1** (June – July 2009). Second Action Plan
Phase 2 (November 2008 – February 2009). First Action Plan	**Phase 2** (July – November 2009). Implementation of Plan
Phase 3 (February – May 2009). Implementation of Plan	**Phase 3** (July – December 2009). Reflection, Monitoring & Evaluation
Phase 4 (February – June 2009). Reflection, Monitoring & Evaluation	**Phase 4** (December 2009). Final Report

Data collection methods and analytical approach

Triangulation strengthens the external validity of research by using a number of different data collection methods (Bowling, 2009). Triangulation or the use of multiple methods was appropriate for this study because it assisted with credibility through the combination of quantitative and qualitative research methods. These research methods included questionnaire and focus group interviews. Focus group interviews included various groups of participants such as students, staff, action group members, Charge Nurse Managers, CLNs, and ALNs, which allowed for the research to capture data from multiple perspectives. Further triangulation of data included analysis of meeting minutes and reflective journals. External evaluation of the project by Rose Whittle from Christchurch Polytechnic Institute of Technology throughout the two cycles informed the implementation of the DEUs and identified areas for improvement. Rose made five site visits during 2009 and all recommendations from the subsequent reports were adopted.

This report integrates the findings of both qualitative and quantitative data emerging from the two cycles in Wards 6 and 24 using the following sources:

- *Focus Groups:* Over the two cycles 10 focus groups were conducted. These consisted of 5 focus groups with students, 2 focus groups with staff, 2 focus groups

with the Action Group, and 1 focus group with the Charge Nurse Managers of the respective DEUs. Participants in focus groups varied from 2 to 12 per group. Interviews were digitally recorded and transcribed by an independent transcriber. The interview transcripts were sent to all participants for checking and correction. Given that thematic analysis attempts to weave the thematic pieces together into an integrated whole (Polit & Hungler, 1999), the researchers met, reviewed, and discussed their thematic analysis to identify commonalities and explore points of difference. A matrix was developed to group data and emerging themes in a logical manner. The matrix also served to identify effective practice and areas for review.

- *Reflective Journals:* Five Action Group members kept reflective journals during each cycle of the research, which resulted in 10 journals for analysis. Action Group members were provided with guidelines on journal keeping; some preferred to keep a daily journal, others made entries whenever they felt this was appropriate. Journals were thematically analysed, independently, by both researchers.
- *Minutes:* Minutes of the Action Group (fortnightly) and Governance Group meetings (monthly) were thematically analysed independently, by both researchers.
- *Questionnaires:* Two sets of questionnaires were distributed to students in the DEUs; one at the midway point, the second on completion of the placement. The purpose of the second questionnaire was to measure any change that might have occurred on completion of the placement. The first set of questionnaires consisted of 21 questions using both Likert scales and open-ended questions. Using the same format, the second set of questionnaires consisted of 16 questions. A total of 53 questionnaires (first, second and third-year students) were returned at the midway point, and 16 at the end of the semester (which excluded first-year students). The population for the second round excluded Bachelor of Nursing semester-two students as they spent only two weeks in the DEUs and could not meaningfully contribute to the data required for the second questionnaire. Responses to closed-ended questions were captured on an Excel spreadsheet and descriptively analysed and presented as bar graphs. The open-ended questions were captured verbatim and grouped under each relevant question using a Word document. These verbatim responses were thematically analysed.

Results and discussion

This section will focus on both quantitative and qualitative data collected from Ward 6 and Ward 24 in relation to the final themes. Themes from the two cycles were closely examined and collated into the six following final themes considered to be important to teaching and learning:

- Orientation and Planning
- Roles within the DEU
- Teamwork
- Support
- Students learning needs and feedback
- Confidence

Orientation and planning

Data were collected from the questionnaires and interviews to establish the effectiveness of orientation and planning for a DEU. Student feedback before the implementation of the DEUs suggested that orientation to a placement was often not well planned. We were interested in exploring the effectiveness of the planning, welcome and orientation because this influences the quality of students' learning experience. The researchers anticipated a difference in the findings between cycle 1 and cycle 2 as evident in Figures 3, 4, and 5, which follow.

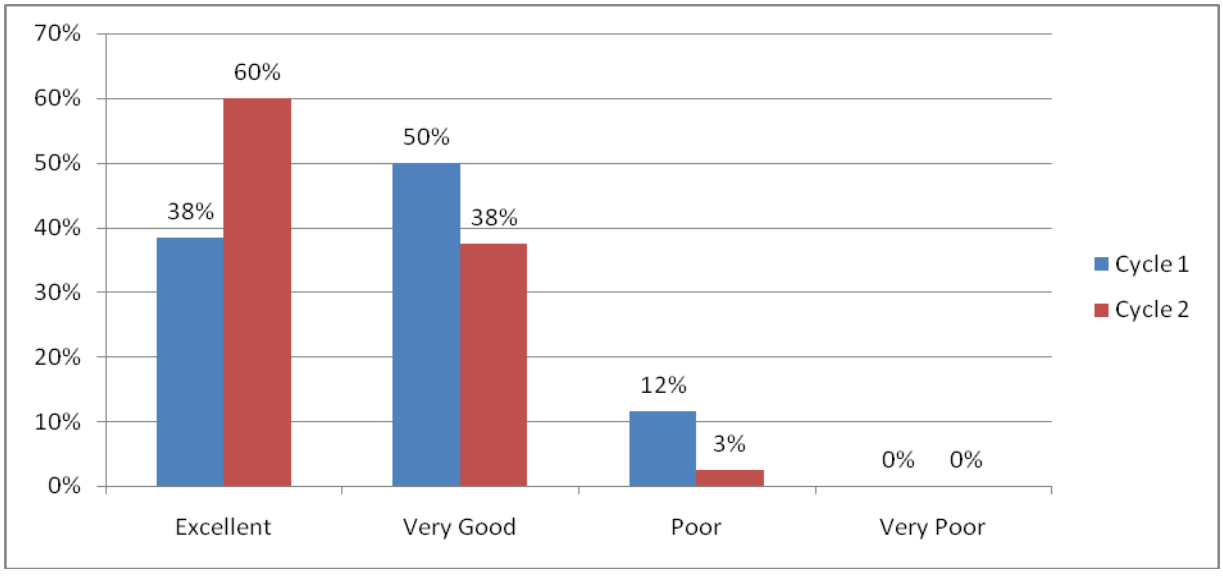


Figure 3: How do you rate your orientation to the area?

Both cycles rated the orientation to the area as very good or excellent with an increase in cycle 2 where 98% of students rated their orientation as either excellent (60%) or very good (38%). From the open-ended questions it is clear that the orientation was well received as reflected in the following statement: *"Fantastic – we had a lot of small orientations to help us*

learn the layout in small time frames, so we weren't overwhelmed" and *"I knew the ward well within a short period of time."*

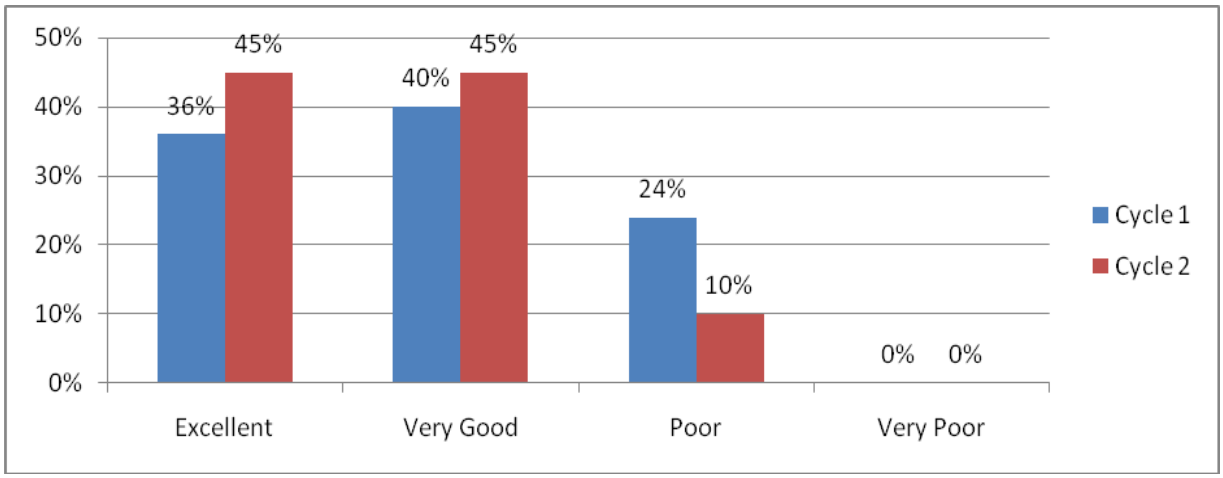


Figure 4: How do you rate your welcome to the area?

Both cycles reflected that students rated their welcome as excellent or very good. In cycle 1, 24% of all students rated their welcome as poor compared with 10% in cycle 2. None felt that it was very poor. From the open-ended questions, students reported, *"most nurses were friendly and welcoming making me feel at ease."* In contrast, in both cycles semester two students reported feeling less welcome compared with others: *"Did not really get welcomed on my first day. Just went with my preceptor."* The difference in the experience of semester two students compared with others could be attributed to the short duration (2 weeks) spent in the DEU.

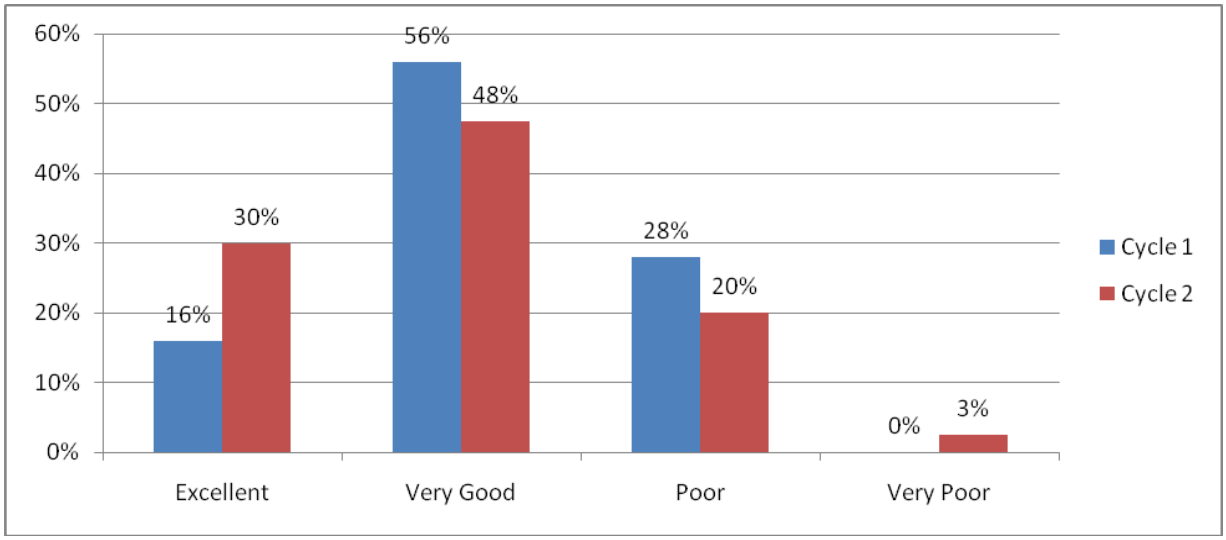


Figure 5: How do you rate the preparation of ward staff for the DEU?

We were interested in how students perceived the preparation of ward staff for the DEU. From the open-ended questions in cycle 1, students stated that “staff were prepared, but perhaps not for the quantity of students arriving” and that “some may not have been informed of what was happening with DEU students.” In cycle 1, 28% of the students rated the preparation of ward staff for the DEU as poor. In comparison, preparation of ward staff was considered excellent, and increased by 14%, in cycle 2.

The data from focus groups, questionnaire, journals, and minutes revealed that the planning stage is significant in the establishment of a DEU and that considerable time and effort must go into this to ensure success. Good orientation to the different roles in a DEU is supported in the literature (Mulready-Shick, Kafel, Banister, & Mylott, 2009). Careful and timely planning ensures people are informed, promotes understanding, and prepares everyone for the implementation of the DEU. This starts with the selection of a ward or unit and the appointment of key staff who will play a role in the DEU. It is also a great opportunity for teaching staff from the educational institution and clinical staff from the selected wards to come together and get to know one another. Building rapport is important and was achieved through workshops and planning days. Due to the nature of the work rosters in the wards, more than one workshop and planning day was required to ensure everyone in the ward had an opportunity to attend. The workshops were aimed at making sure everyone involved understood the concept and expectations, while the planning days were more specifically focused on explaining how to run the DEU. Thus, workshops were attended by all staff while the planning days were specifically aimed at getting the CLN, ALN, Clinical Coordinators, Nurse Educators and Charge Nurse Managers to explore the different roles and expectations, and to develop a plan of action. The planning stage should ideally start 2 months or more before starting a DEU so that rosters, annual leave, and staffing can be considered, as participants suggested in the following comment: *“All in all I thought the preparations; the commencement for it was [sic] too fast. I would have liked to have a little bit more time.”*

The orientation day for each DEU was seen as an essential event to make students feel accepted and expected, and they valued the fact that staff were prepared for them and that they were welcoming. The orientation day provided an excellent opportunity for students to ask questions in a safe environment, conducive to communication. Students reported that it allayed their anxiety about the clinical placement. Orientation allowed both students and staff to clarify expectations. The orientation is jointly planned by the ALN and CLN and involved key staff, such as the Charge Nurse Manager, Nurse Educators, health care team, and ward staff: *“They were expecting us and prepared for us. They said they are looking forward to seeing us and things like that. That was really welcoming and I think they were well prepared for us.”*

Workshops for this project took place at a neutral venue, while orientation days took place at Middlemore Hospital. This is in contrast to the orientation workshops of the University of Portland, which always took place on the university campus (Moscato *et al*. 2006). The

orientation days were well structured, with a programme that included a physical tour of the DEU, and all students (first, second and third-years) were expected to attend. The findings from both cycles revealed that all participants in the orientation day should be well briefed about the DEU before the orientation day, so that participants can focus on the orientation itself rather than on learning what a DEU is. Students valued the orientation for the physical environment, becoming familiar with people and getting to know the ward routine: "*Having that day where you could just find out simple things like where the toilet is, where I put my bag, routine of the ward and all that sort of stuff was just so helpful."*

In the second cycle of the research, with the exception of the Community DEU which ran for the first time, everyone felt more prepared and ready: "*We were more prepared than what we were for the first one, a lot more prepared."* The same person went on to state that they had implemented a few changes as a result of the first cycle and that *"things went a lot smoother."* Students were also more aware of the roles of other members of the health care team, which is evident in the following comments: *"PUP scoring session was excellent as well as a feedback session from an infection control audit"* and *"They had all the different teams come in, the PUP team came in and told us what they did, they had a lot of specialists come in, I suppose [to] tell us what they all did."*

The orientation and planning phase concluded one week after students started on the DEUs. We found that the initial days on the DEU were important and played a crucial role in students settling down and becoming part of the unit. For example, our focus group data showed that thoughtful gestures gave students a sense of belonging *"I think the notice board with our names, welcoming us was also quite nice. The handover room had another board with our names welcoming us to the ward. That was quite nice as well."* Another student participant said, *"It makes you feel part of the team, makes you feel welcome and acknowledged. It is just nice to see that ok, you are part of something."*

Orientation and planning ensures a collaborative approach between education and practice and provides a solid platform for teaching and learning where relationships are established, expectation are clarified, and students learning needs are identified. Preparation for a DEU is seen as important to ensure a shared vision and to embed the DEU concept (Moscato et al. 2006).

Moscato et al. (2006) found that orientation workshops provided the opportunity for nurses, managers, and academics to work collaboratively in establishing an optimal learning environment. The preceding section shows that orientation and planning are key components of establishing a DEU. Good orientation and planning are important both to staff and students and it is therefore recommended that:

- Orientation should at all times be well planned, highly structured, and carried out in partnership between education and the service provider.
- Ongoing support and contact with all participants within a DEU is paramount, including the orientation of new staff.

Roles within the Dedicated Education Unit

The results of this research revealed that roles played a major part in the teaching and learning of students. The following section describes these roles and illustrates how they contributed to the success of the DEU.

Clinical Liaison Nurse (CLN)

The supernumerary CLN is funded by CMDHB and is the key contact for students. This role was internally advertised and a robust recruitment process was followed. This approach is similar to that taken by Moscato et al. (2006), who advertised for clinically experienced nurses to take up the role of liaising with the associated university. The CLN takes responsibility for the coordination of the student experience, orientation, assessment, and staff support in partnership with the ALN. The CLN acts as a liaison person:

- between unit staff, Charge Nurse Manager, students and ALN
- with unit staff regarding the student's role, function and progress within the DEU
- with the ALN in relation to student progress and completing clinical assessments
- between education and service provider to assist with the integration of the theoretical and clinical component of the Bachelor of Nursing programme
- monitoring student attendance
- organising student experiences to meet their learning outcomes by being responsible for:
    - providing a structured on-site orientation for students in conjunction with the ALN
    - organising student day to day experiences
    - allocating students to RNs, student peers and patients/clients
    - arranging student rosters and liaising with the Clinical Coordinator and ALN
    - anticipating and organising extra experiences for students in relation to their patients/clients and learning outcomes
    - collaborating with RNs and Allied Health Professionals in other associated areas such as endoscopy clinic, theatre, radiology, plaster room, rehabilitation unit, and other clinical areas
    - student's access, when assigned to a patient to gain experience and understanding of the interventions and diagnostics that are part of the patient's episode of care
    - working with students on a one-to-one basis as required
    - encouraging unit staff to participate in student teaching and take direct responsibility for the supervision and delegation of students as required
    - ensuring the competency of students in certain skills as required by the healthcare agency and in conjunction with the ALN

- The CLN undertakes student assessments by:
    - providing ongoing feedback to students throughout the placement

- completing student assessments working in partnership with the ALN and unit staff
- working with the ALN to develop action plans to assist students to meet competencies.

Preparation for the role of CLN is paramount to the success of the DEU. Moscato et al. (2006) described the preparation of clinical instructors through collaborative staff development activities with the associated university as a special feature of their DEU.

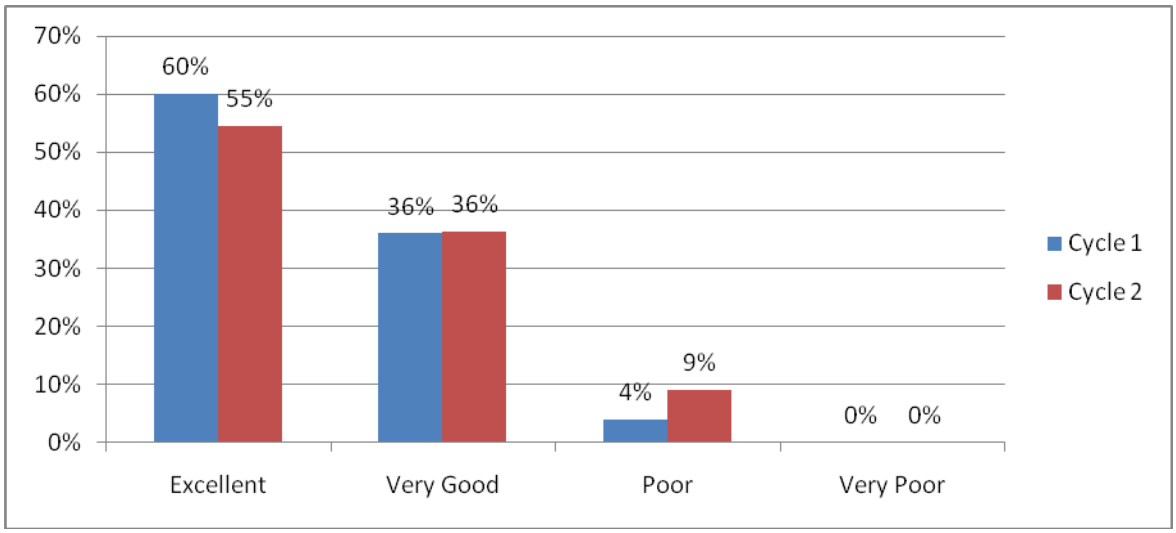


Figure 6: How do you rate the preparation of the Clinical Liaison Nurse for the DEU?

In cycle 1, 96% of students rated the preparation of the CLN as either excellent or very good, with similar results for cycle 2. However, 9% in cycle 2 felt it was poor, which may be a new CLN was appointed for one DEU who had not yet become familiar with the role. Students thought *"the CLN was prepared for the role and was also very supportive"*, and they saw her as *"helpful, punctual, dedicated, hardworking in planning education seminars/teaching sessions for us, which have been very helpful and much appreciated to help understand."*

The results show that it is important to formalize the role of the CLN before the start of the DEU. The inability to access funds for the community DEU presented participants with a challenge: *"The funding for the CLN position had not been confirmed by CMDHB, making planning very difficult."*

Ranse and Grealish (2007) described the independent (to the clinical team) use of a CLN as essential to workplace learning and student support. This research showed that a CLN who was adequately prepared, consistent over semesters, and had credibility within the ward/unit, contributed to the success of the DEU *"at the end of the day you want somebody that the team actually want as well and knows that they are going to do a good job."*

A CLN who had been in the role for two semesters appeared to be more organised and students stated that, *"I think she is more organised just comparing first cycle to second cycle."*

Another important issue raised was the value of sound relationships between the CLN and fellow DEU team members. A Charge Nurse Manager stated, *"it is peace of mind for me to have that CLN there and know that I am not depleting other resources from the ward."*

In summary the unique role of the CLN has been a key component in the success of the DEUs at CMDHB.

The Academic Liaison Nurse (ALN)

The ALN funded by MIT works in partnership with the DEU team. The data from both action research cycles suggest that if there is a positive and collaborative relationship between the ALN and CLN the DEU is more likely to succeed. Moscato et al. (2006) described the use of academic expertise as important to support the development of the CLN. As with the CLN, the ALN has a clearly defined role and should work well within the team to support students to achieve their goals. The ALN understands the academic programme of the students and organises student experiences to meet their learning outcomes by being responsible for:

- consultation with the CLN, Charge Nurse Manager and DEU staff before, during and after clinical placements
- maintaining a presence in the DEU
- providing a structured orientation for students in conjunction with the CLN
- assisting students in the transference of knowledge and skills from theory to practice
- development of student communication and clinical reasoning
- assisting students to recognise and discuss the complexity of interacting factors inherent in clinical decision making
- working with students on a one-to-one basis as required
- providing ongoing feedback to students throughout the placement
- completing student assessments and working in partnership with the CLN and unit staff
- working with the CLN to develop action plans to help students meet competencies
- providing support to the CLN
- supporting unit staff to participate in student teaching and take direct responsibility for the supervision and delegation of students as required
- implementing strategies for effective problem-solving in collaboration with the CLN and Charge Nurse Manager in relation to student learning experiences

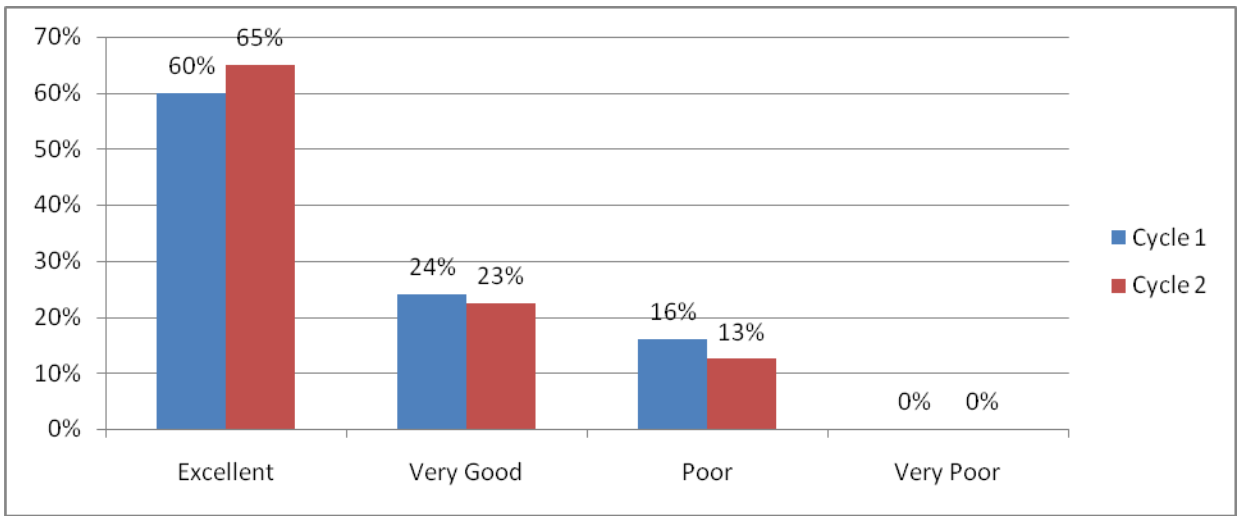


Figure 7: How do you rate the preparation of the Academic Liaison Nurse for the DEU?

There was a marginal increase from cycle 1 to cycle 2 in how students rated the preparation of the ALN, possibly due to the fact that the ALNs remained stable and could build on their roles the second time around.

Most students reported that the ALN was well prepared as reflected in the following statement: *"Very well prepared. Always there to support our clinical experience with academic knowledge."* However, some BN Semester two students felt, *"I did not feel there was any preparation, she visited us ad hoc and this was not productive as we could not plan or be prepared for her visits."* This perceived lack of preparation of the ALN by BN Semester two participants appeared to be in relation to their understanding of the role and the fact that the ALN was also supervising students in other wards. This suggests expectations about roles should be set early in the orientation and should be reinforced during the students' placements.

The ALN's availability within the DEU is viewed as positive, and both the staff and students valued this. The ALN supported the students to link theory to practice. Students reported, *"The ALN was always there to support our clinical experience with academic knowledge."* The ALN described how a sense of belonging was fundamental in building rapport and relationships with the team members. They spoke of the ward becoming *"my workplace, somewhere where I belong and somewhere that I do a job worthwhile."* Miller (2005) stated that the manner in which lecturing staff are recognized by clinical agencies impacts on their retention and morale. This is evidence of the culture change within the DEU.

Charge Nurse Manager – Role

Students valued the support from the Charge Nurse Manager at orientation. The Charge Nurse Manager is a key player in the success of the DEU and her approach and attitude towards the DEU made a big difference to both students and staff. The Charge Nurse Manager was vital in creating a sense of belonging; an ALN described how a Charge Nurse Manager had said "it's your ward now, which was just a little phrase, but very reassuring."

The Charge Nurse Manager's leadership encouraged and ensured the entire team was engaged and kept well informed on the process and progress of the DEU. A staff participant in this study stated, *"The positive support from the CNM [Charge Nurse Managers] during the pilot has had a huge impact on the success of the project from my point of view".* The Charge Nurse Manager was vital in supporting the successful teamwork reflected in the data: *"We were very warmly welcomed by the Charge Nurse who really set the tone for the day. She has a real presence and leadership skills. She is strongly supportive of the programme and is helping to raise the profile of the DEU in the hospital generally."*

From the above findings it is recommended that:

- appointed CLNs are both experienced and credible clinicians. Consider the involvement of staff in selecting appropriate candidates for the CLN role.
- the supernumerary status of the CLNs and ALNs is maintained while students are present on the units.

Teamwork

The third theme found throughout this research was teamwork, which is an important aspect of a DEU. Teamwork is necessary to ensure that clinical learning opportunities are maximised for the benefit of the students. Moscato et al. (2006) found that students in a DEU are significantly more likely to report feeling part of the team than those involved in traditional clinical instruction (Preceptor model). We were interested in students' experiences of being involved in the health care team, as DEUs are renowned for creating a sense of belonging.

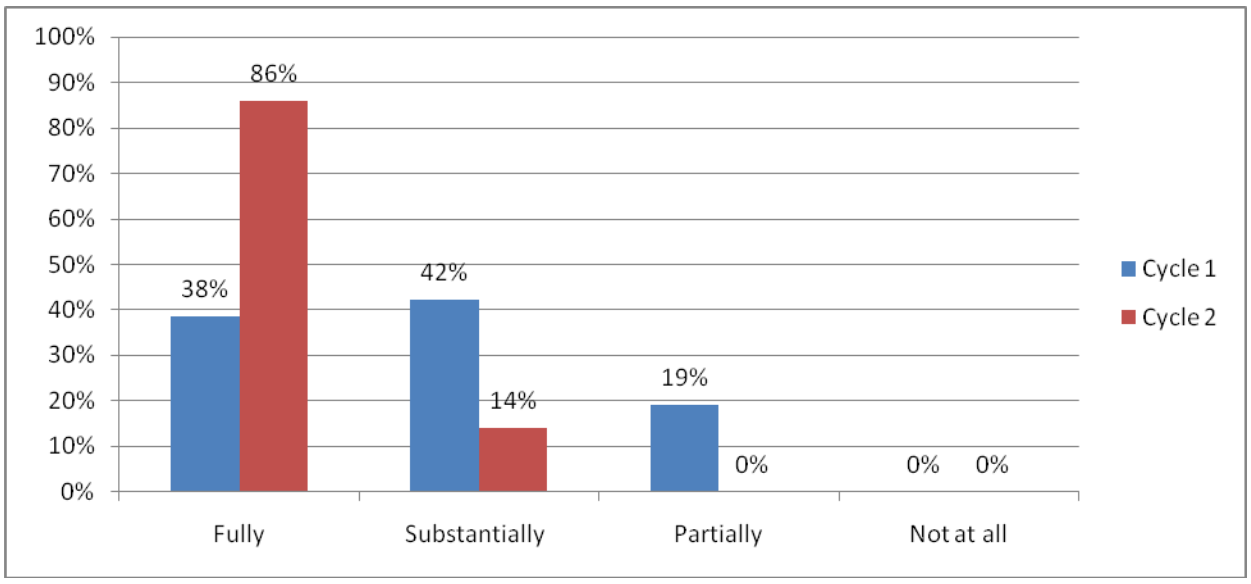


Figure 8: To what extent did the organisation of care enable you to function as a member of the health care team?

Eighty six per cent of the students reported that they functioned fully as a member of the health care team in cycle 2 compared with 38% of students in cycle 1. None of the students reported that they only functioned partially or not at all as part of the health care team during cycle 2. Students stated, *"The team worked well; especially being a part of the multidisciplinary team was a wonderful experience."* This suggested that cycle two was more successful in teamwork as the staff of the DEUs have become more familiar with the concept second time round.

Students reported that they contributed to the team and were able to support staff in return: *"The fact that I can actually help and not just be there and get their support, but I can actually support them back in some ways was good."* Being part of the team was seen as everyone getting something positive out of the situation: *"It's a knock-on effect as well because you get something from the nurses and you give something to someone else. Everyone gets something out of the situation."* Staff reported that students were very much a part of the team: *"You could actually see the students actually blending in, becoming part of the team like they actually belong there."* Mulready-Shick et al. (2009) in a study on DEUs, found that students felt a greater responsibility to coordinate patient care as part of the health care team and that they felt less like an outsider.

Students noted that staff said, *"we are going to really miss these students as a member of the team; this had changed completely to what it was"*. Furthermore, staff stated, *"it's nice to have a group of little sponges with us. That's what they are – they just suck up everything and take it on board, it's all new."* This is evidence of the shift in culture that took place within the DEUs, given that student evaluations of placements before the DEUs often suggested they did not feel really part of the wards.

There was evidence that the CLN, ALN, Associate Charge Nurse Manager, and the Charge Nurse Manager were a strong team and worked well together. The role of the Charge Nurse Manager in promoting teamwork is not to be underestimated and results reflect an enthusiastic Charge Nurse Manager who checked in with the CLN on a regular basis. This enhanced the quality of the students' placements, as the Charge Nurse Managers were also able to determine that preceptors were appropriate. Equally, the students commented that the Associate Charge Nurse Manager was supportive due to her *"wealth of experience."*

These data reveal that the entire team was committed and also demonstrated responsibility for supporting students to achieve their goals. Miller (2005) reported that staff satisfaction on a DEU was higher compared with other ward staff and that patient and family complaints had reduced.

From the above findings it is recommended that:

- The multidisciplinary team become more involved in the teaching of students by including students in their activities and by offering to teach on the programme.
- New staff members be inducted into the DEU concept so that they fully appreciate the importance of team work in teaching and learning within a DEU.

Support

Moscato et al. (2006, p. 34) described the DEU as a 'supportive village' where the nurses want to be and want to help, compared with the traditional model (Preceptor model). One of the outstanding features of this study is the peer support that occurred between students and staff of different disciplines. This part of the report describes specifically the findings on peer support, which is a unique feature of the DEUs established as part of this project.

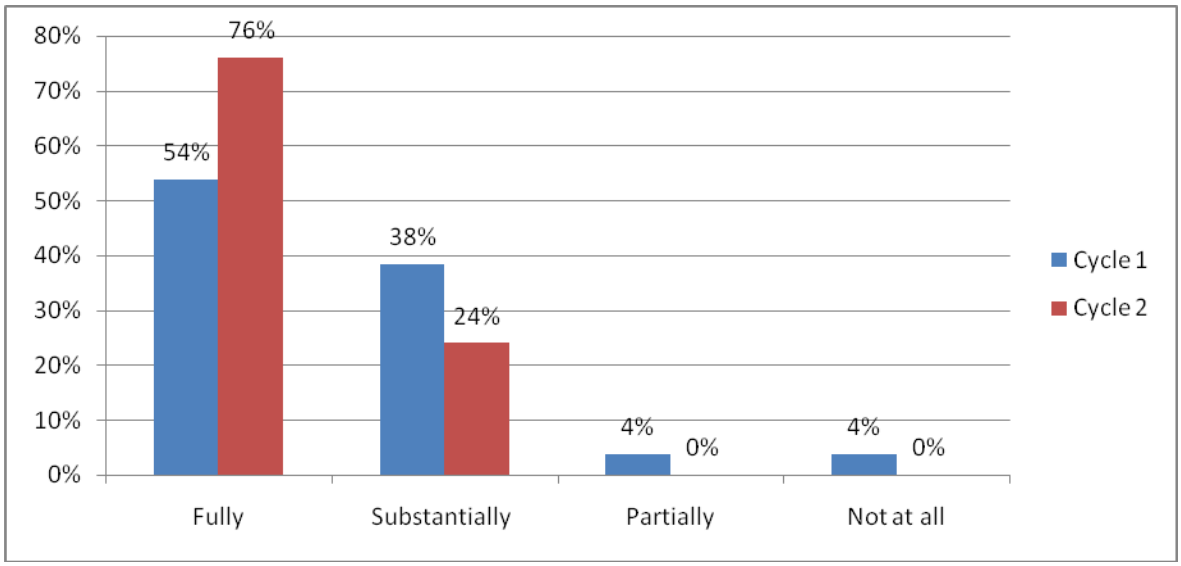


Figure 9: To what extent did you make use of the opportunity for peer learning and support from other students?

During cycle 1, 92% of students made either full (54%) or substantial (38%) use of peer and student support during cycle 1. In contrast, 100% of the students felt they made either full (76%) or substantial (24%) use of peer learning and support by students. Students felt the tutorials were very useful as reflected in the following statement: *"Attended tutorials where students were able to talk about their experiences and share info. Very good and beneficial sessions."* They went on to say, *"there was a huge support given by senior students especially those in BN 6."* While tutorials are not a new concept, they were unique in that students of different years attended them and could learn from one another.

The data suggested that students found value in working alongside a registrar, and student doctors. The results showed how all staff working within the ward were supportive of the students' learning, which is the very essence of a DEU, and thought that *"Everyone in the Ward is willing to teach. I like that atmosphere about it, which is cool and helps heaps."* The questionnaires highlighted that a student felt that the DEU was *"amazing!!.... but you can only get out of it what you put into it!!"*

While Miller (2005) acknowledged the effectiveness of placing students from different levels in a programme in the same DEU, placing students at different levels at the same time is not common practice in New Zealand and therefore unique to this project. Students working at different levels said that they *"learnt from each other."*

This research provided examples of how students worked alongside one another and described the experience as being "*enlightening.*" The researchers found that there was potential for staff to learn from the students, as one student commented: "*Like, one of them said to me you know you are so enthusiastic and it's really good for me that you are asking questions, because I learn as well."*

Overall it is clear that there is peer and positive support from all DEU staff members, which students embrace, which results in the students reflecting on positive learning experiences: *"From the nurses to health-care assistants, everyone in the ward, I think, the fact they knew we were students I think the support was really good."*

From these findings it is recommended that:

- The placement of students from different levels of the programme should continue as this fosters peer learning and support.
- A more structured approach for first-year students should be designed to ensure they are supported by third-year students.

Students' learning needs and feedback

The main focus of a DEU is to provide an environment where students' learning needs are met through enhanced teaching and learning opportunities. A series of questions were put to students to gauge how the DEU was meeting their learning needs, for example, the time set aside to discuss learning outcomes, and whether students felt their learning needs were being met.

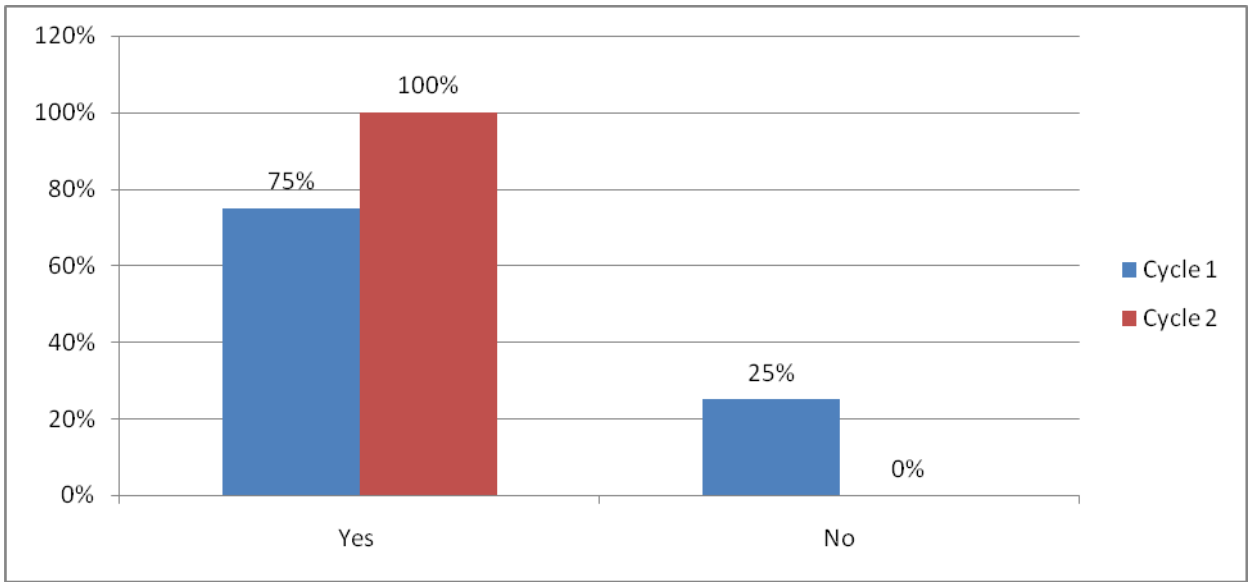


Figure 10: Was time set aside to discuss your individual learning outcomes and responsibilities with the ALN?

In cycle 2 all students felt that the ALN set time aside to discuss their learning outcomes, while 25% in cycle 1 felt this was not the case. This improvement may well be because the

ALNs had time to grow into their new roles during the first cycle and could therefore have become more aware and focused on student learning needs by the second cycle.

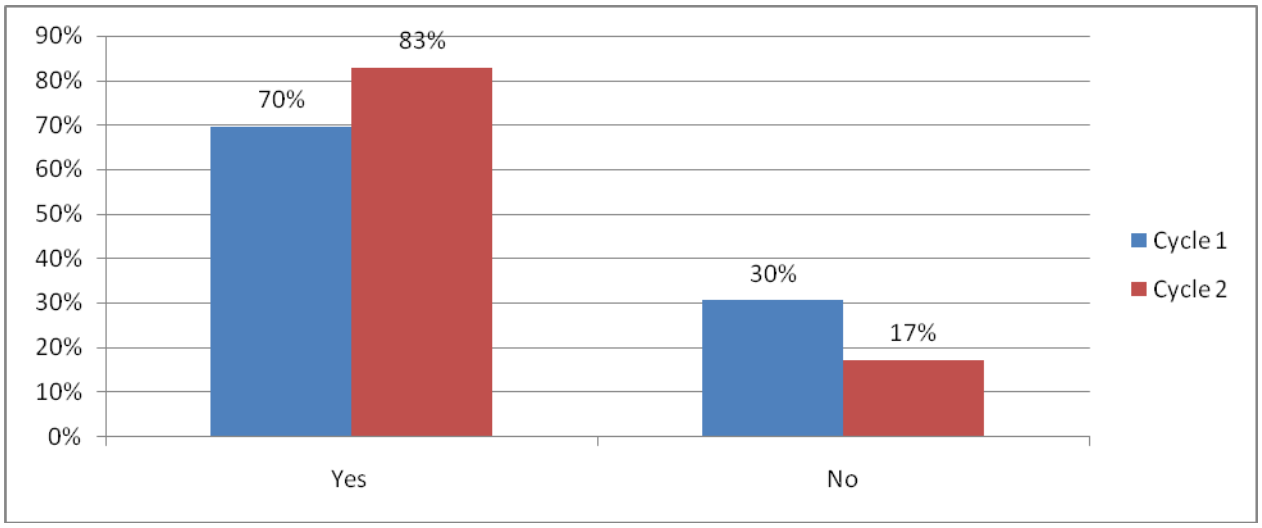


Figure 11: Was time set aside to discuss your individual learning outcomes and responsibilities with the CLN?

In cycle 1, 30% of the students felt not enough time had been set aside to discuss their learning needs with the CLN; this reduced to 17% in cycle 2. This improvement, which is less compared with that of the ALN, is possibly due to the fact that the one CLN had time to grow into her new role, while the other was new to the role due to staff changes in one of the DEUs. One student reported, *"Both ALN and CLN were dedicated and helpful and ensure my learning progress goes well".* While this appears to be working well, some students reported that there was "*not enough time set for both."*

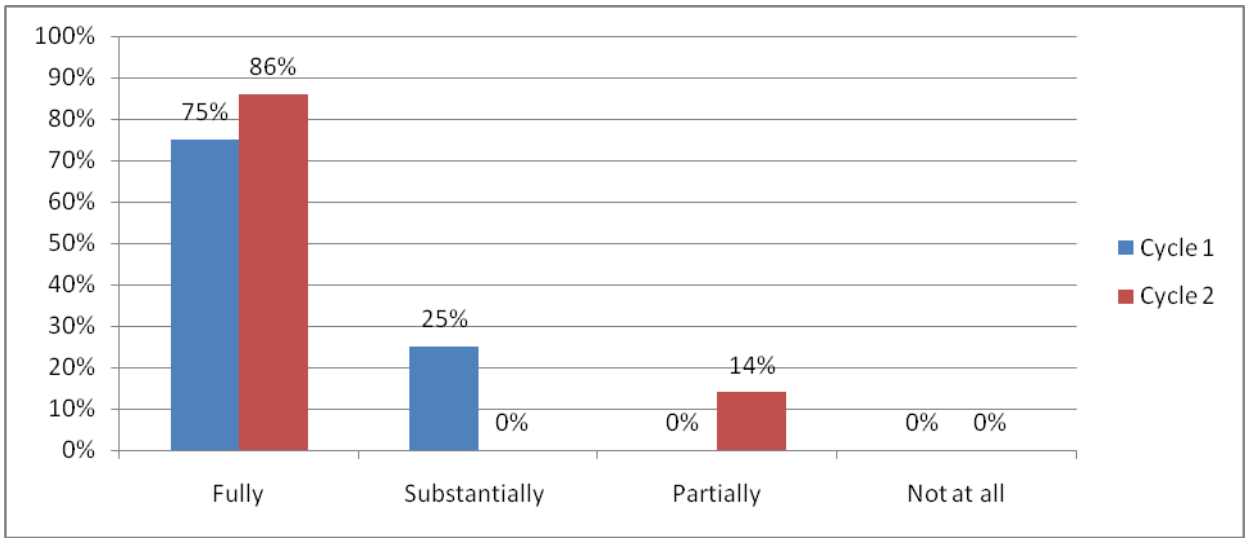


Figure 12: To what extent did this clinical experience enable you to achieve your learning outcomes?

In cycle 1, 75% of students indicated that the clinical experience enabled them to achieve their learning outcomes fully, and 25% felt it did so substantially. In cycle 2, 86% of students felt the clinical experience was fully achieved, while 14% felt it was only partially achieved. Students who felt their learning needs were only partially achieved were first-year students and this finding could be related to the short duration of their placement.

The DEUs were very successful in meeting student learning needs as students grew in confidence and started taking on responsibility for their own learning. In agreement with Moscato et al.'s (2006) finding that students gained in confidence and accountability in assessment and communication skills, students certainly became more committed to learning: *"Everyone is so focused on teaching you, so you are more interested in making your own learning. I think it has been really good and one of the best experiences I have had on the ward."*

Meeting the student learning needs required good planning on the part of the ALNs and CLNs for the education sessions with multi-disciplinary team members such as dieticians, occupational therapists, and infection control nurses. Good communication between the CLN and ALN is essential to coordinate, share information, and organise students so that they can meet their learning needs. Students reported that the CLN and ALN had many meetings (formal and informal) and that they would catch up for 10 minutes here and there or at a planned meeting: *"I have never for one moment thought that 'Oh gosh I wish they would talk to one another'. They always seem to be on the same page."*

Learning needs were further met by the CLN working at a pace with which students could cope: *"We are not rushed by the nurses, because they don't have time for us, because we have the CLN that is there for us and she would take her time and she will talk us through it."* Having more time to work with students resulted in the CLN identifying struggling students at an early stage, which meant that additional support could be provided for these students. As a staff participant commented, *"When she is getting feedback from us and she knows which student who is behind, needs help and she can spend more time with that student."*

Feedback is essential in meeting students' learning needs and ongoing feedback on performance is necessary for students to gain the clinical knowledge, skills, and judgement needed as a nurse (Moscato, et al. 2006). The DEUs resulted in better feedback because, having worked so closely with the students in a supernumerary manner, the CLN was able to provide clinical examples of students' progress. One ALN reported, *"The CLN role has helped me immensely with giving me clinical examples of students' progress."* However, student learning was at times influenced by inconsistency in feedback and some preceptors were not as confident as others in providing feedback:

> *"Sometimes you work with a nurse and you just go and do your thing and there is no feedback or communication, and sometimes… you have got someone else who takes the time to say, "This is what you have done and can you give me the rationale, and this is what you can do to improve". That is more helpful, so you find you would rather be with this person and you feel short changed*

when with the other nurse. I think it should be consistent throughout, so there should be a way at looking at it so nurses operate in a uniform manner."

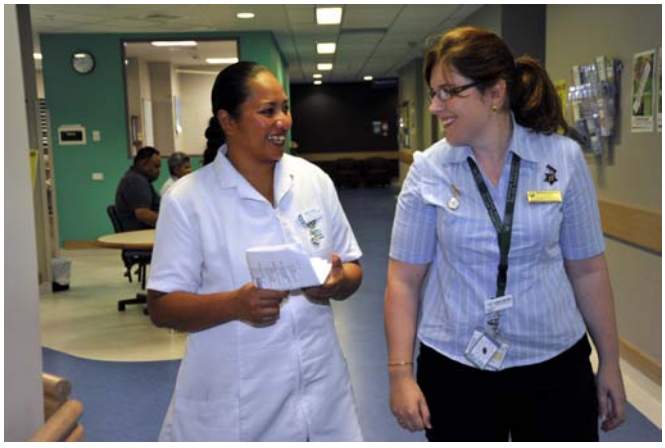
Another participant stated, *"We are coming to our last two weeks now and I have looked at some of our ongoing assessments and we need constructive criticism."*

Student learning needs were further met by other DEU staff. In their study of a functioning DEU, Mulready-Shick et al. (2009) reported that staff made significant strides to improve their own practice and to be positive role models. Our data suggested that non-preceptoring staff supported students and that students perceived them as interested in their learning, which is not in agreement with the preceptorship model, *"But sometimes, even though they are not our preceptors the other nurses are willing to help."* This is a significant finding as it supports the change in culture that occurred in the DEU. There were also reports that the multi-disciplinary team members included students in learning opportunities: *"They actually went out of their way sometimes if they were doing something and there were some students around. They took us with them and showed us what they were doing."*

The CLN developed a deeper and more thorough understanding of the curriculum and of student learning needs. The more experienced CLN became more academically focused, with a higher level of integration of theory and practice:

"She didn't really just help us on the practical. If we had assignments or something coming up, she would be happy to give a little of bit help and feedback as well, like how about you go this way. Giving you other options and things; and I don't know about anybody else but I found it really helpful. You just like having someone that can relate the practice to the theory as well and not just the theory to the practice."

While student learning needs were satisfactorily met, some issues impacted on this. For example, data from both staff and students suggested that there were too many students at certain times, which resulted in too many bodies for the physical space and for the available equipment. This was particularly the case during the early afternoons when morning and afternoon shifts overlapped and when all three levels of students were allocated to the DEUs: *"I think sometimes for the staff we are just too much for them. For us it is about six on the morning and sometimes six in the afternoon."* A staff member suggested, *"We don't find it as stressful as before, even though we are having two or three students to one nurse, it is not as stressful as how we used to look at it before the DEU started."* This issue was addressed in the second cycle by running tutorials at these busy times.



From the data it was clear that BN semester two students needed more CLN and ALN contact and a more structured approach to their learning within the DEU. The expectations of BN semester two students were not always clear:

"There would be some kind of plan of action for our [BN semester two] *education while we were there. I will be honest with you* [CLN] *has never*

stopped and said, "how's it going, have you done this yet, have you done that, have you done an assessment?"

There was also a general need for more clarification of student scopes of practice and tasks:

"There was this whole grey area over administration of medicine through an IV line, and they kept pulling up information of the Counties Manukau District Health Board website and saying, "Look you can, it's right here." We can't, we are not allowed to."

From the above findings in this section it is recommended that:

- more work should be done by the educational provider to clarify the student scopes of practice and tasks, particularly as students from different levels of the programme are in the units at the same time.
- CMDHB and MIT should develop further education on constructive and timely feedback for staff and students.

Confidence

A number of questions explored students' contribution to patient assessment, care, and evaluation, which reflect their confidence in meeting these competencies. Mulready-Shick et al. (2009) found that due to the smaller student–teacher ratio in a DEU, students made less medication errors and gained more knowledge, suggesting that when students feel safer they are more confident in their practice.

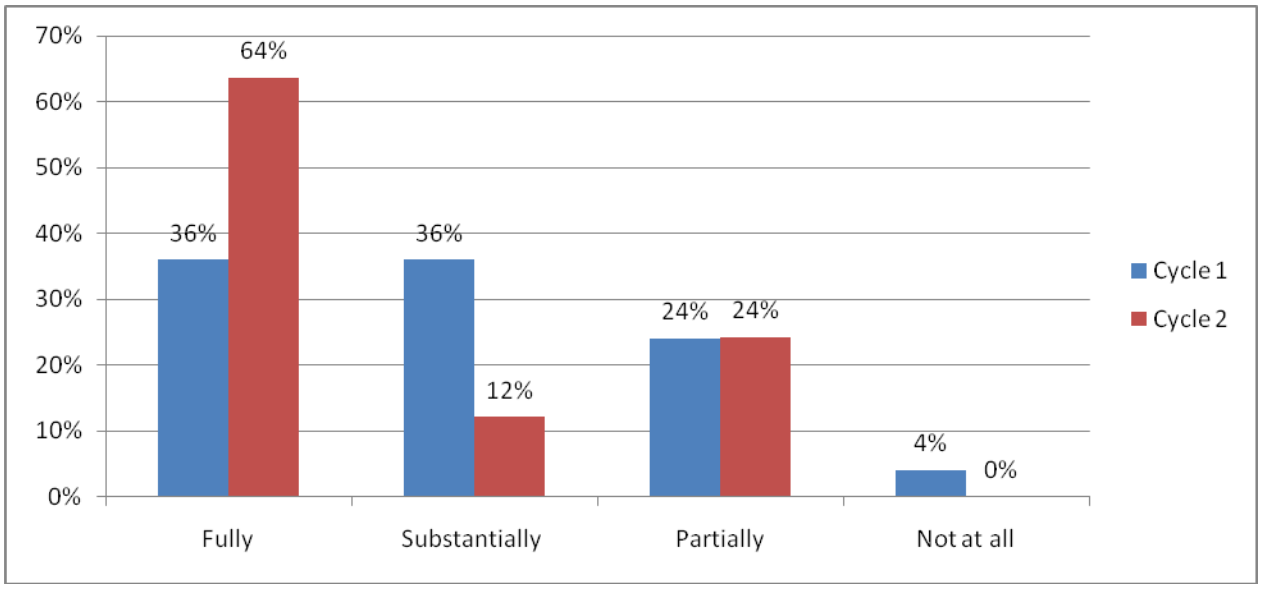


Figure 13: To what extent did staff enable you to contribute to patient assessments?

In cycle 2, 64% of students reported that they fully contributed to patient assessment compared with 36% in cycle 1. Twenty four per cent of the students reported in both cycles that they only contributed partially to patient assessment, which suggests there is room for improvement in engaging students in patient assessments.

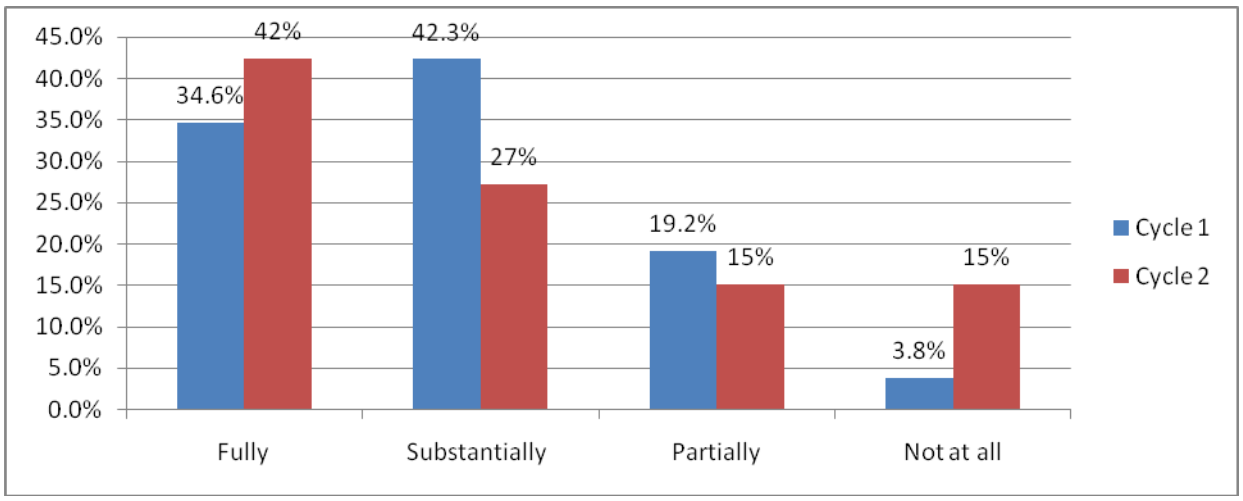


Figure 14: To what extent did staff enable you to contribute to care plans?

Forty two per cent of students in cycle 2 felt that staff enabled them to contribute fully to writing care plans compared to 34.6% in cycle 1. Fifteen per cent of students in cycle 2 felt that they did not at all contribute to care plans. This may be as a result of the fact that a new CLN in ward started in cycle 2 and needed to adjust to the role. This finding compares well with that of Mulready-Shick et al. (2009) who found that the Dedicated Education Unit model afforded students greater responsibility to coordinate patient care.

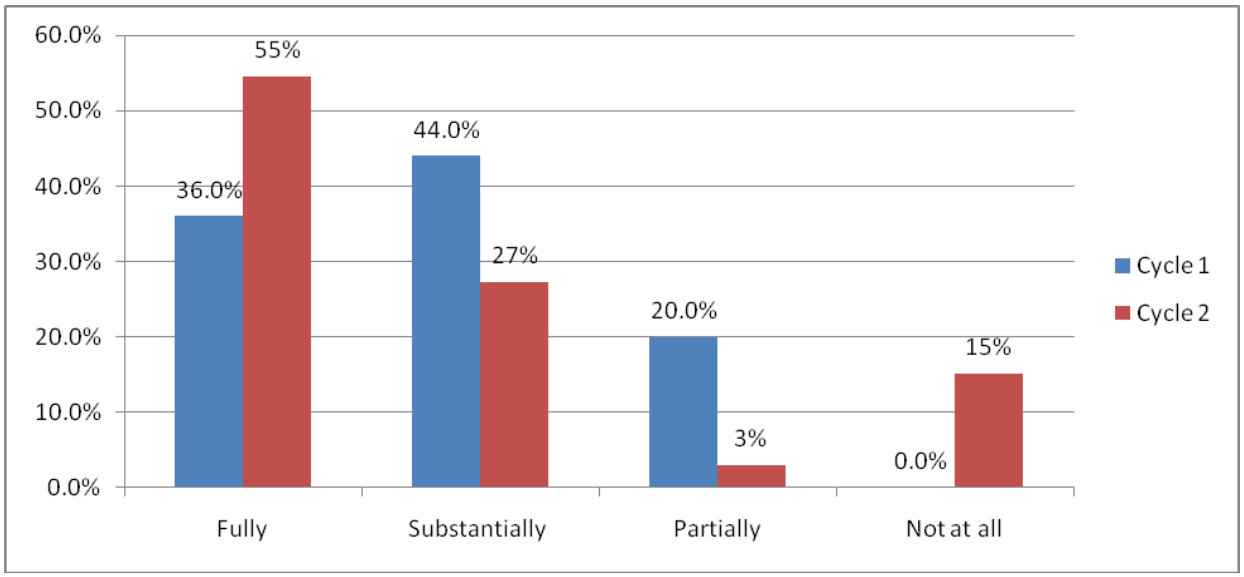


Figure 15: To what extent did staff enable you to contribute to nursing interventions?

In cycle 2, 72% of students felt staff enabled them to contribute fully to implementing nursing intervention, compared with 80% of students in cycle 1. Fifteen per cent of students in cycle 2 felt they did not contribute at all to nursing interventions may be as a result of a new CLN starting on the ward in cycle 2 and needing to adjust to the role.

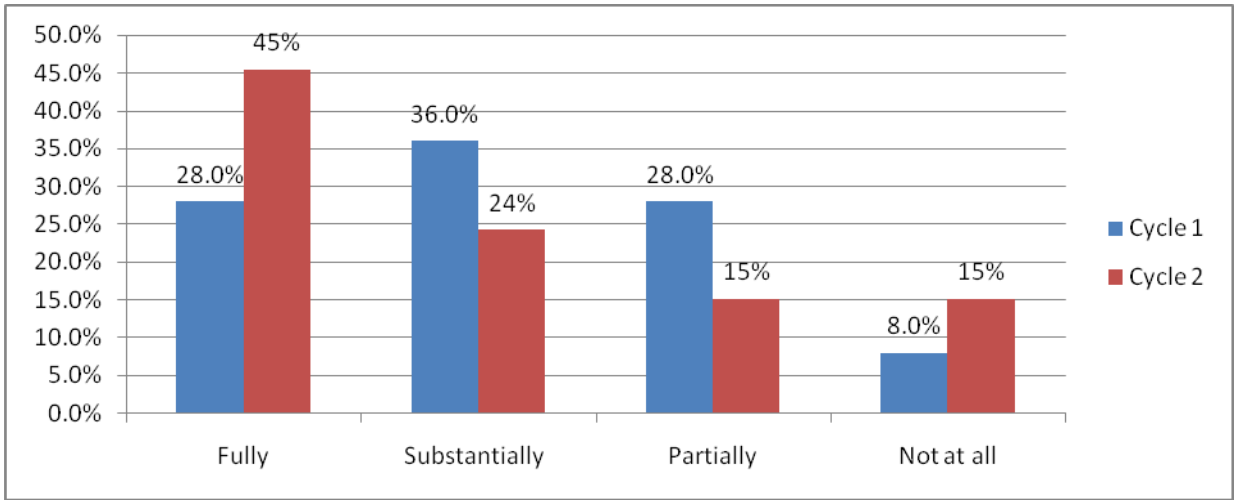


Figure 16: To what extent did staff enable you to contribute to the evaluation of care?

In cycle 2, 45% of students felt staff enabled them to contribute fully to the evaluation of care compared with 58% in cycle 1. For both cycles a substantial number (36% and 30% respectively) felt they only contributed partially or not at all to the evaluation of care. However, given that the evaluation of care is a high level of practice and requires years of experience, it is not surprising that students felt that they only partially contributed to it.

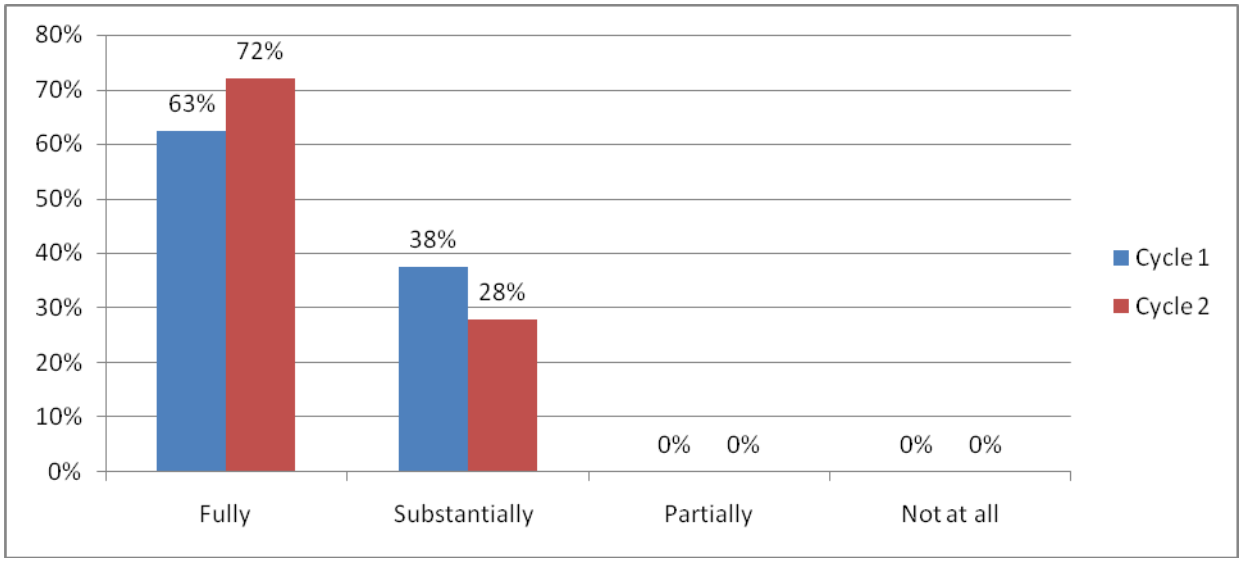


Figure 17: To what extent did this clinical experience enable you to achieve the prescribed competencies?

A prescribed set of competencies form part of the course work for each level of student. These competencies have been designed to meet the competencies for registered nurses as prescribed by the Nursing Council of New Zealand (2009). In cycle 2, 72% of students felt that clinical experience enabled them fully to achieve their prescribed competencies compared with 63% of students in cycle 1. None of the students felt it was only contributed

partially or not at all. This is significant as it suggests the DEU model is successful in meeting students learning outcomes.

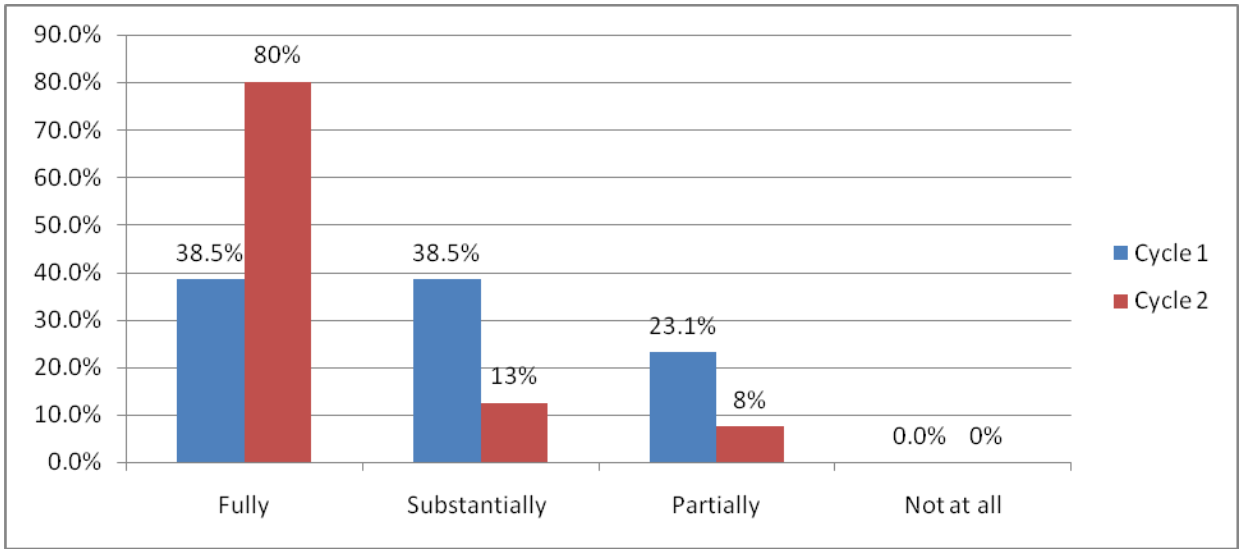


Figure 18: To what extent did the DEU environment enable you to practise in a culturally safe manner?

In cycle 2, 80% of students felt that they could fully practise in a culturally safe manner compared with 38.5% students in cycle 1. None of the students reported that it was not done at all. *"That's really important, for me that's really important coming from an Indian perspective. Our privacy means a lot to us."*

The questionnaires provided students with the opportunity to comment on how the DEU compared with their previous experiences in the preceptor model. A student explained the difference: "*The DEU model is more supportive and meeting learning outcomes is easier and it also helps us relate theory to practice."*

The questionnaires also explored things that were most valuable to the students' learning needs. Numerous students reported positively about their DEU experience, as reflected in the following comments:

> *"The support from CLN and ALN was great; they were always there when we had any questions to be addressed. Some preceptors really motivated us by teaching us the practical/nursing intervention at the patient bedside and discussion after the procedure."*

A well-functioning DEU promoted confidence in students, which in turn led to better learning outcomes. Over the two cycles there was significant evidence that the supporting environment and the focus on teaching and learning helped students develop confidence. Building confidence started at the time of orientation when students interacted with the people with whom they were going to work. Having expectations clarified and some familiarity with staff and the physical environment even before the first shift started made a big difference:

"People made you feel welcome in the first place. People made you feel like you could communicate back to them and you wouldn't be dismissed. You have that open feeling of ok well I can just ask anyone."

Because of the supportive environment students grew in confidence to a point where they were prepared to extend themselves by taking on more and more complex tasks. As a result staff began to develop more and more trust in students. *"I think it gives them more confidence, like trusting them to make a phone call to the doctor."* This finding is similar to that of Ranse and Grealish (2007) who found that students were trusted by clinicians to complete tasks. There was evidence that students took responsibility for their own learning as they formed their own support groups, discussed clinical issues at tutorials, and developed their own learning objectives while in the DEUs. A staff member remarked *"They had their own small timetable set so at this hour I am doing this, at this [sic] hour I am doing this [sic]. That actually worked quite well."*

The building of confidence was not restricted to students – the DEU also caused staff to gain confidence. This corresponds with the research, which found that CLNs were reported to develop in their roles as clinical teachers and gain confidence in evaluation and monitoring (Moscato et al. 2006). Working with students could be an intimidating experience as it places the nurses' own practice under the spotlight:

"Generally the preceptors coped really well. I think they were a bit better informed than usual about what were the expectations of our BN2, BN3 and BN6 students. They were a bit more aware of the different levels. They seemed to have more understanding of the students' assignments, because they have to do care studies."

With students included in the team, the level of staff commitment to student learning increased, as reflected in the following quotation:

"Before this programme [DEU] *for me personally I don't care whether I get the students or whatever, because I am so busy. I don't have a student, "oh that is my blessing". But now it is different, that is my role and I have to fulfil it."*

Both the CLN and ALN grew in confidence, particularly during the second cycle when they became more established in their roles and gained a deeper and more thorough understanding of clinical learning opportunities, the curriculum, and the student learning needs. The more experienced CLN became more academically focused, with a higher level of integration of theory and practice.

"She didn't really just help us on the practical. If we had assignments or something coming up, she would be happy to give a little of bit help and feedback as well, like how about you go this way. Giving you other options and things and I don't know about anybody else but I found it really helpful. You just like having someone that can relate the practice to the theory as well and not just the theory to the practice."

Confidence among DEU staff and students grew when the CLN was an experienced and credible clinician. Staff and students quickly identified when a CLN lacked experience and credibility and this could undermine their confidence in the person:

> *"I don't think she is very confident in teaching and I don't know whether she has any skills or done anything in that way. I seem to do most, I think the students are not confident to ask her things. I think they have asked her things and they weren't confident with her answers and they will always come and bounce it off senior nurses."*

It is very important for participants in the DEU to have confidence in the ALN as this person is from the education institution and not a regular staff member of the ward. Miller (2005) reported that the greatest strength of the DEU was the impact of the reputation of the ALN on the unit and health care system; with this both students and faculty were redefined as an asset rather than a nuisance. Despite the academic expertise of the appointed ALNs they had to gain the confidence and trust of the staff in the DEU, which required deliberate effort on their part: *"To ensure that I am accepted as one of the team I answer phones, wipe discharge beds, check IV a/b's + help an RN."* During the second cycle the ALNs had established rapport with the DEU staff and were perceived as part of the wards staff:

> *"She can actually split herself, she is part of the ward, but I know she feels that responsibility to us as well. That was good because it was really hard thinking can I talk to this person because she is still part of that ward. You know how it is going to affect me if I tell her something, but no she was fine about things."*

As the ALNs' confidence in their roles grew, they were able to link theory and practice at a higher level by becoming more clinically focused: *"She would come in and be with you through difficult patients and show you how she deals with certain situations so you just learn of her like that."*

From the above findings it is recommended that a strategy should be developed to ensure students become more involved in the delivery and evaluation of care.

Community Dedicated Education Unit

At the end of the first cycle an opportunity arose to establish a community DEU. Ako Aotearoa supported developing a community DEU, which began in July 2009. The community DEU was not part of the initial research project and therefore is discussed as a separate section in this report. The section below includes the key components required of a community DEU.

A community DEU, in contrast to a ward/unit setting, is generally spread over a broad geographic area. The community DEU consists of numerous private practices that are within a common Primary Health Organisation. Thus the students in a Primary Health Organisation are widely spread, which presents with difficulties and challenges, for example, for students to meet their learning outcomes, study activities are planned in clusters to limit student travel.

The community DEU had 8 students during 2009. The same data collection methods were used for the community DEU as for Wards 6 and 24. However, the data were managed separately to avoid influencing the data from the other two DEUs as they were already in cycle 2 and were very different in nature to the community DEU. While the quantitative data from the community DEU questionnaires were too few to provide any conclusions, the qualitative data were very helpful in understanding the community DEU and to plan ahead.

Planning

The period of planning for the community DEU was limited due to timing of available funding and the start of the second semester. As with all DEUs, planning is an essential stage of the project. Community DEU participants felt that:

> *"It all seemed a bit rushed to me. Some days we didn't know what we were doing and they didn't have all our placements done. We weren't sure where we were even going, half of us, until the last day. It made it hard to prepare for."*

The problems associated with the geographical spread of a community DEU compared with a hospital-based DEU are reflected in the following comment by a participant: " *Ten or twelve students spread over a vast area, is logistically difficult, but at the moment small numbers and a large geographical area has been slightly problematic."*

Other noted challenges and issues in relation to the vast networks were information technology difficulties and financial implications. *"Moreover everybody was placed very far from their places, like, the travelling was expensive as a student." "Another thing [ALN] said about not texting me, but in reality that is the easiest way for us to communicate a lot of time."* A suggestion to rotate the placement was offered as a solution to the geographical challenges *"we could have done one week at Waiuku, Tuakau, and one at Pukekohe so we were all sharing the travelling and that could have been a way we could have learnt." "When I am at the practice I don't have access to email, it's just more convenient, everyone has their phones, and everybody can take 5 mins to send a text."*

Support

Ongoing support and contact with all participants within a DEU are paramount. Students were excited and enthusiastic to be allocated to the DEU. *"We are up and running and it feels good to be a part of this exciting development, largely thanks to the passion and commitment of [name removed]." "Value of CPIT experience Rose Whittles' visit was worthwhile, and it is heartening to speak with someone who can articulate her ideas so clearly about similar issues she has faced in her role".*

Teamwork in the community

It is noted that there was a very positive approach from the general practices towards students. In other words, students' experiences were quite different from previous clinical experiences in the community. There appeared to have been a change in the culture and attitudes of staff towards students and this is reflected in the following verbatim data: Staff stated that, "*we are going to really miss these students as a member of the team."* In addition, students said, *"It had changed completely to what it was. They were bona fide members of the general practice team by the time they had finished their placement… that is quite different."*

Multi-disciplinary forum and sharing knowledge

> *"The feedback from the practices ... a couple of outstanding presentations… one that I attended where the doctors and nurses were all together and the doctors …said, "Oh can I have a copy of that?" I thought, wow, that validated that experience for the nurse, which encourages. I thought that was really good learning for her to see the impact of what she was sharing and the importance of that*."

> *"I think the DEU concept in the community actually raised the profile of the students with the doctors …ongoing dialogue with the practice actually raised the awareness and the profile of the students there."*

Early identification of issues and intervention

The community DEU encouraged and supported a struggling student to address communication issues and this has resulted in early intervention and a good outcome: *"One of our practices – the student was struggling with communicating with patients – and the practice actually challenged it. The preceptor and doctors and that and they actually worked through that with the student and the result was really good".*

Māori Primary Health Organisations (PHO)

An important consideration for future DEUs is to consult further with Māori Primary Healthcare Organisations. In doing so, students will be placed within these PHOs, which has the potential to widen students' knowledge in relation to health promotion and vulnerable populations.

"The Māori PHOs are working collaboratively with them for placements, so that we can broaden their exposure and experience, particularly when it is a health promotion focus and they are looking at vulnerable populations and things. …so there is potential for rotating them."

The community data that were captured and analysed illustrate that the DEU model has been successful despite the difficulties with funding during the planning and introduction stages. Important to the success of a DEU are the ongoing dialogue and support that have been available from action group members and the multi-disciplinary teams within the practices.

Funding

The community DEU was funded by ProCare, a Primary Healthcare Organisation. A delay in the appointment of the CLN created early challenges for the establishment of the DEU. Participants in this study felt strongly that funding should be available before the start of a DEU. The current study shows that lack of funding initially resulted in the expectation that the CLN role would be undertaken by someone who was already functioning in a role but would be expected to support students in the DEU. This proved to be difficult at times: *"I think for me sometimes it overlapped, it felt like we were doing a double role. Sometimes if I was talking to [name removed] then I would find I was doing similar sorts of things." "The funding for the CLN position has not been confirmed by CMDHB, making planning very difficult. Procare are not able to advertise for this position, which means that …. is going to have to 'do' that role initially."*

It is therefore recommended that:

- Funding is sought in a timely manner so that all appointments are in place before the commencement of the DEU.
- The geographical location of a community DEU should be carefully considered from the onset and that a plan is in place to ensure that all students are well serviced by CLNs and ALNs.

Lessons learned

This section outlines some of the key lessons learned over the duration of the project against the backdrop of the project objectives. In relation to the effectiveness of the DEU to support undergraduate nursing students at CMDHB and the DEU as a suitable model for use in undergraduate nursing education, the following should be considered.

Consideration in appointing CLN and ALN

It is critical to appoint the correct CLN and ALN in order to ensure success of a DEU. The research revealed that when the CLN and ALN work well together, DEU processes are more efficient. Not only is the credibility of these staff members important but the CLN and ALN also work in partnership and this relationship strengthens every time the DEU runs – should either one of them have to be replaced for whatever reason, e.g., resignation, this will result in the relationship having to be rebuilt.

Funding sought before the commencement of the Dedicated Education Unit

Acquiring adequate funding before the commencement of a DEU is essential, as it allows for a more structured approach to appointment of DEU roles and establishes an environment where students can receive the support they deserve. There may be a time delay between approving funding and actually having it available, this should be factored into the planning of a DEU.

Action Group

The Action Group members were catalysts in providing continuity and support to all who contributed to the DEU. Their unstinting commitment to planning, the reviewing process, and making the important adjustments, was an essential part of the positive outcome of the DEU. This group was so successful that they have decided to continue meeting once the Action Research has been completed.

Workload of the Undergraduate Coordinator and Clinical Coordinator

During the pilot study the Undergraduate Coordinator and Clinical Coordinator worked hard to provide important support at the time of role selection and DEU development. They were responsible for the planning and setting up of new DEUs, which added to their already busy workloads. As the DEU concept is further developed it will be important to consider a dedicated DEU coordinator role, as has been successfully implemented in Christchurch.

Keeping the momentum going

The CNM's leadership and the contribution of the Action Group are instrumental in making certain that the momentum is maintained within the DEU model. Team members strongly influence the outcome of the students' clinical experience and require support to promote their contribution within a DEU. Staff in a DEU may lose the focus and purpose of a DEU when there is rapid turnover of staff and new staff are not fully informed or may not identify with the philosophy behind the DEUs.

It was mutually agreed that the DEU in ward 24 was not planned for a semester. The reason for this was so that adequate time could be given both to strengthening the support and to reviewing what was required to continue successfully. This decision was made when the CLN resigned from her role.

Celebrating success

It is important to acknowledge the successes that have been achieved within a DEU. This is fundamental to sustain the DEU within a ward or unit – success could be celebrated in many ways, e.g., a gift to the unit or a morning tea. It is also important to make the DEU visible through signs, posters and name badges.

Fair opportunities for all students to be part of a Dedicated Education Unit

In the current study student selection worked well and the process ensured that a fair course of action was followed. It is elemental both to select students randomly and to provide them with the opportunity to request a DEU. Future research is planned to capture data that reflects the percentage of students who have requested to remain in a DEU once they have completed their undergraduate placements.

Integrating two models in a teaching team

The most important factor when planning DEUs is to review areas where an expression of interest has been made within the context of the organisation. Both the DEU and the preceptor model have their merit and should be viewed as suitable within the overall planning of ongoing student support. Good practice is often transferable from one model to another.

In relation to the building of research capacity through team research and the documentation of the process of implementing the DEUs the following should be considered.

Research

The project went a long way in developing research capacity among staff from both CMDHB and MIT as action research uses an inclusive process where participants are also

researchers. The principal researchers in this project have developed a strong working relationship and presented the findings of this project to numerous conferences and organisations. A strong team approach to research has been established with a view to doing more collaborative research.

Documentation and record keeping

Funding provided the opportunity to undertake a pilot study that enabled closer examination of students' experiences. Data were important to measure the success of students' abilities to meet their objectives. The recommendations from this research have provided a platform for advancement, for students' learning within a clinical setting.

Recommendations

The Action Research project evaluated the DEUs effectiveness to support undergraduate nursing students within CMDHB and the following recommendations are specific to teaching and learning:

- The current Action Group and Governance Group structure remains with representation from both CMDHB and MIT, so that the collaborative approach that is integral to the success of this model is not lost. This will add to the overall teaching and learning for students as Action Group members come from different DEUs and are in a position to share best practice.
- Consideration is given to further engagement of the multi-disciplinary team. Where students have had the opportunity to engage with members of the multi-disciplinary team, they have reported these encounters as contributing to their learning and understanding of the team roles.
- Further educational strategies should be considered to support reflection and critical analysis by students. This will provide valuable insights into learning in the work environment. A more structured approach is needed so that first-year students are supported by third year students. Peer teaching and support should be embedded in these strategies, and the learning environment should be further extended to equip senior students for their roles in peer teaching and support.
- Further research is needed to explore feedback within the DEU, the impact on patient outcomes, student success and progression, and staff retention.

Conclusion

The pilot project has demonstrated both the ability of the DEU model to support undergraduate nursing students within CMDHB and its suitability for use as an ongoing undergraduate nursing clinical education model. As a result of this study three new DEUs have been established in 2010, and two more are planned for the start of 2011. The success of this pilot study strongly indicates that future DEUs between CMDHB and MIT should be embedded in clinical education and practice to ensure optimal learning opportunities are provided for undergraduate students.

References

Baird, S. C., Bopp, A., Kruckenberg, K. K., Langenberg, A. S., & Matheis-Kraft, C. (1994). An innovative model for clinical teaching. *Nurse Educator, 19(*30), 23–25.

Bowling, A. (2009). *Research methods in health: Investigating health and health services* (3rd ed.). Maidenhead, England: Open University Press.

Casey, M., Hale, J., Jamieson, I., Sims, D., Whittle, R., & Kilkenny, T. (2008). Dedicated Education Units – a new way of supporting clinical learning. *Kai Tiaki Nursing New Zealand*, *14*(11), 24–25.

Counties Manukau District Health Board. (2010). *Counties Manukau District Health Board 2010/11 district annual plan.* Manukau City, New Zealand: Author.

Edgecombe, K., Wotton, K., Gonda, J., & Mason, P. (1999). Dedicated Education Units: A new concept for clinical teaching and learning. *Contemporary Nurse, 9*(4), 166–171.

Happell, B. (2009). A model of preceptorship in nursing: Reflecting the complex functions of the role*. Nursing Education Perspectives*,*30*(6), 372.

Henderson, A., Twentyman, M., Heel, A., & Lloyd, B. (2006). Student's perceptions of the psycho-social clinical learning environment: An evaluation of placement models. *Nurse Education Today, 26*(7), 564–571.

Jamieson, I., Hale, J., Sims, D., Casey, M., Whittle, R., & Kilkenny, T. (2008). *Establishing Dedicated Education Units for undergraduate nursing students: Pilot project summation report.* Christchurch, New Zealand: Canterbury District Health Board and Christchurch Polytechnic Institute of Technology.

Joynt, J., & Kimball, B. (2008). *Blowing open the bottleneck: Designing new approaches to increase nurse education capacity* [White paper]. Portland, OR: Oregon Healthcare Workforce Institute.

Kemmis, S., & McTaggart, R. (1988). *The action research planner*. (3rd ed.). Geelong, Australia: Deakin University.

KPMG Consulting. (2001). *Strategic review of undergraduate nursing education: Report to Nursing Council of New Zealand.* Wellington, New Zealand: Author.

McKernan, S. (2008, August). *Shaping our future health system*. Paper presented at the Counties Manukau District Health Board Conference: Building tomorrow's health services. Manukau City, New Zealand.

Melander, S., & Roberts, C. (1994). Clinical teaching associate model: Creating effective BSN student/faculty/staff nurse triad. *Journal of Nursing Education, 33*(9), 411–416.

Miller, T. W. (2005). The Dedicated Education Unit. *Nursing Leadership Forum 9*(4), 169–173.

Mills, G. E. (2003). *Action research: A guide for the teacher researcher* (2nd ed.). Upper Saddle River, NJ: Merrill Prentice Hall.

Moscato, S. R., Miller, J., Logsdon, K., Weinberg, S., & Chorpenning, L. (2006). Dedicated Education Unit: An innovative clinical partner education model. *Nursing Outlook, 55*(1), 31–37.

Mulready-Shick, J., Kafel, K. W., Banister, G., & Mylott, L. (2009). Enhancing quality and safety competency development at the unit level: An initial evaluation of student learning and clinical teaching on Dedicated Education Units. *Journal of Nursing Education*, *48*(12), 716–719.

Nehls, N., Rather, M., & Guyette, M. (1997). The preceptor model of clinical instruction: The lived experiences of students, preceptors and faculty-of-record. *Journal of Nursing Education, 36*(5), 220–227.

Nursing Council of New Zealand. (2009). *Competencies for registered nurses*. Wellington, New Zealand: Author.

Nursing Council of New Zealand. (2010). *Education programme standards for the registered nurse scope of practice.* Wellington, New Zealand: Author.

Polit, D. F., & Hungler, B. P. (1999). *Nursing research: Principles and methods* (6th ed.). New York: Lippincott.

Ranse, K., & Grelish, L. (2007). Nursing students' perceptions of learning in the clinical setting of the Dedicated Education Unit. *Journal of Advanced Nursing, 58*(2), 171–179.

Rogan, E. (2009). Preparation of nurses who precept baccalaureate nursing students: a descriptive study. *The Journal of Continuing Education in Nursing 40*(12), 565–570.

Smedley, A., Morey, P., & Race, P. (2010). Enhancing the knowledge, attitudes and skills of preceptors: An Australian perspective. *The Journal of Continuing Education in Nursing 41*(10), 451–461.

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