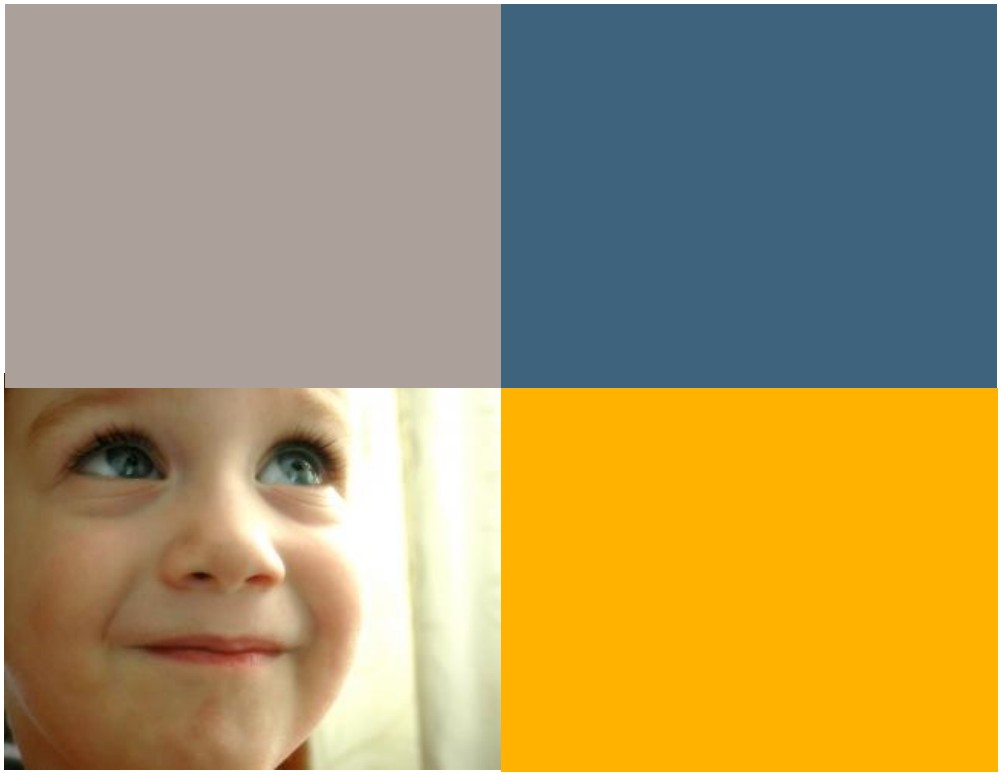

# London Middlesex Pediatric Continuity of Care Partnership

## The 2002 Pediatric Complex Care Course: Follow Up Evaluation

Prepared by: Integrated Strategic Alliances and Networks
A Partnership of London Health Sciences Centre and St. Joseph's Health Care, London
For: the Pediatric Continuity of Care Partnership

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# Executive Summary

Children with complex health care needs (pediatric complex care patients) who live at home risk a compromised quality of care due to overburdened caregivers, and a lack of pediatric nurses. In an effort to cope with shortages in human resources, the Pediatric Continuity of Care Partnership[1] determined that upgrading the skills of Registered Practical Nurses (RPN) might provide an opportunity to improve the quality of care being provided. Although the original intent of the course was to focus on RPNs, Registered Nurses (RNs) were also permitted to enroll. To date, two courses have been run (spring 2001 and spring 2002), both in partnership with Fanshawe College.

The evaluation assesses whether the second course, offered in 2002, was successful and whether the participants are using the skills they learned a year ago. The results obtained from surveying the 2002 class were compared to those reported in the evaluation of the 2001 pilot class, to determine if the findings were consistent.

The evaluation involved a telephone survey that used both quantitative and qualitative questions. Students answered nineteen questions on various topics relating to their employment, course content, format, and cost. Limitations of the evaluation include the potential for response and memory bias, concerns about the surveying technique and interpretation, potential issues with whether the sample was representative and issues with the comparability of results.

Similar to the 2001 pilot course, the results of the evaluation of the 2002 Pediatric Complex Care Course were positive. Nurses consistently spoke about their confidence in their technical and assessment skills and belief in their ability to offer quality care. Nurses learned new, transferable skills, and the potential exists to offer an update course.

An interesting point raised in this evaluation was that the number of students in the class who were working in community-based pediatrics decreased after the course. Similar to the last evaluation, most participants in the 2002 course were unable to increase the complexity of their caseloads, and there was minimal movement from part-time to full-time positions.

Suggestions for the future include increasing the practicum time and continued agency funding for students. It is recommended that future evaluations include a pre-test component, and more specific questions surrounding course instruction.

[1] The Pediatric Continuity of Care Partnership is a multi-agency coalition of agencies that provide hospital and community–based care to children with complex health needs. The partnership is jointly sponsored by the Children's Hospital of Western Ontario, a program of the London Health Sciences Centre and the Community Care Access Centre, London-Middlesex.

# Introduction

According to the literature, a substantial proportion of nurses find caring for children more difficult than caring for older patients (Oermann and Lukomski, 2001) and many studies have observed difficulties in ensuring there are enough well-educated pediatric nurses (Johnson and Copnell, 2002). Recent studies show that shortages in health and social care professionals, especially those specializing in pediatrics, are increasingly acute (Spalding et al, 2002). Due to a lack of pediatric nurses in particular, children with complex care needs may not receive the services they require (Value Proposition, 2001), or may receive care compromised by overburdened caregivers (Spalding et al, 2002).

In an effort to cope with shortages in human resources, the London, Ontario area Pediatric Continuity of Care Partnership (PCCP) determined that upgrading the skills of Registered Practical Nurses (RPN) might provide an opportunity to meet client needs[2]. The PCCP is made up of representatives from both hospital and community health care organizations that serve children with complex medical needs, and is co-chaired by a representative from the Children's Hospital of Western Ontario (CHWO) [3] and the London-Middlesex Community Care Access Centre's (CCAC) Strategic Alliances Department.

The course was implemented with the following goals:

- To develop a new curriculum to train or retrain nurses to care for complex care children with an emphasis on "patient assessment" skills
- To ensure that the appropriate care provider is matched to the care level required.
- To maintain high levels of patient and family satisfaction.
- To enable earlier and streamlined discharge to home and coordinated care across the continuum. (PCC Task Team, 2001).

Education and nursing literature identifies that the enhancement of professional knowledge and career progression are the main reasons for nurses to pursue educational opportunities (Johnson and Copnell, 2002). Combining both classroom and practical learning is important. While classroom teaching exposes the student to relevant theories and concepts, the practicum provides opportunities to apply knowledge to practice (Oermann and Lukomski, 2001). Research shows that students who have clinical experience in a practice setting develop confidence in caring for children, and that the more experiences they have, the better able they are to adapt to future clinical demands (Oermann and Lukomski, 2001).

Students in the post-graduate Pediatric Complex Care Course (PCC) needed Registered Practical Nurse (RPN) or Registered Nurse (RN) status to register in the course. The course took place once a week over a span of eight weeks, with classes lasting three hours. The length of the course and duration of the practicum were increased for the second (2002) course based on recommendations from the 2001 pilot course. A collaborative approach was used to deliver the curriculum (PCC Task Team, 2001) and included subjects relevant and applicable to the learning needs of the students. The classroom component of the course covered topics such as family-centered care, St. Joseph's Health Care, London's NICU, gastrointestinal issues, cardiac care,

[2] Although the course was intended to focus on RPNs, Registered Nurses (RNs) were also registered in both the 2001 and 2002 classes.
[3] CHWO is a program of the London Health Sciences Centre. http://www.chwo.org/

respiratory issues, neurological issues, pain, ethical and legal issues, and musculoskeletal problems.

Adult students learn best when their studies are self-directed (Hewitt-Taylor, 2002) and the PCC Course of 2002 used a model of self-directed learning. Students chose their own placements based on what they perceived as their personal learning needs after completing a Learning Needs Evaluation questionnaire (see Appendix A). Students were required to complete an 18-hour practicum working with actual cases, and to keep a placement journal for the three site placements they went on (see Appendix B). Field placements occurred in hospital clinics, the Thames Valley Children's Centre, with the Nurse Practitioner/Clinical Nurse Specialist at the Children's Hospital of Western Ontario, Kids Country Club, the Ashley Oaks School and in individual, private homes.

This report will present information collected through a retrospective evaluation of the Summer 2002 class of the Pediatric Complex Care Course offered at Fanshawe College, and will also serve as a follow-up to the immediate post-class survey. The goals of the evaluation were to assess whether the course was successful; for example, whether participants are using the skills they learned a year ago, and whether the information offered by the course is still applicable to their current work. Student's suggestions regarding the format of the course will assist in further revisions to the course structure if necessary. The results obtained from surveying the 2002 class will be compared with those reported in the evaluation of the Summer 2001 pilot class, to determine if the findings demonstrate consistency from year to year.

# Methodology

## Materials and Method

The Pediatric Complex Care Course pilot course (Summer 2001) was retrospectively evaluated in the fall of 2002. Based on the success of this evaluation, and a desire to compile further, comparative information on the course, the Pediatric Continuity of Care Partnership (PCCP) decided to evaluate the course offered in the summer of 2002. In an effort to allow for comparisons, the format of the pilot course evaluation was, for the most part, duplicated, although several revisions were made to the survey. Eight questions were added to broaden the scope of the evaluation following a review of the literature, a re-examination of the pilot evaluation, and email correspondence with the course coordinator, Wendy Blackwell. These additional questions are indicated by "*" in the Findings section.

A telephone survey was used to collect information and a combination of quantitative and qualitative methods was used: yes/no answers, rating scales (Excellent/Good/Fair/Not Comfortable, Too Short/Too Long/Appropriate Length, etc) and open-ended questions to obtain detailed feedback and find out why people were satisfied or dissatisfied (Myers, 1999). PCCP members were asked to provide feedback on a draft survey instrument. All responses received from the Partnership were incorporated into the survey (see Appendix C for a copy of the 2003 survey).

In the pilot evaluation (2001), the interviewer had difficulty obtaining contact information for course participants due to a policy of confidentiality at Fanshawe College. Fortunately for the 2003 evaluation of the 2002 course, a complete course contact list was obtained from the course

coordinator. An introductory letter was mailed to all participants, identifying the evaluator and informing students of the evaluation, and when they could expect to be contacted by phone (see Appendix D).

Information for this report was collected systematically. All interviews were conducted over the phone and the questions were asked in the same order they appeared on the written survey. A telephone format was selected in the hope that people would provide or could be probed for more detailed answers than if they had received a written survey in the mail. The contact time varied for participants, due to the nature of their employment (some participants worked nights, others worked days). Participants were contacted at their home phone numbers, and the investigator called from either work or home, depending on the contact time. The investigator recorded the responses on a paper copy of the survey. Participants were given ample time to respond, and were encouraged to indicate when they were prepared to answer the next question. Time to complete the survey was unlimited. The interviews lasted an average of fifteen minutes.

July 18th, 2003 was the last day for trying to contact participants for the survey. At this point, all survey responses (twelve) were compiled into a table similar to that used in the pilot evaluation to aid in analysis and comparisons of data. As outlined in the work by Hewitt-Taylor and Gould (2002), this evaluation used inductive data analysis.

## Population and Ethical Issues

All people surveyed were female nurses (either Registered Nurses, RN or Registered Practical Nurses, RPN) with a median age of 44. The majority of the nurses interviewed (8 of 12) were either part-time or casual employees, although several worked multiple part-time positions adding up to full-time hours.

All participants were informed that they could withdraw from the study at any time during the interview, without concern of repercussions or penalties. No one was pressured to participate, and all participants were informed of and understood the purpose of the survey. Employees were not contacted through their place of employment to avoid pressure to participate from their employers. Participants' employers were not informed of which of their employees were contacted for participation.

## Confidentiality

The investigator was the sole reviewer of the collected survey responses, and the only person outside of the course that had access to the contact information. Paper copies of the data were secured in the investigator's private files. Compiled information was kept separate from any participant identifiers. After completion of the report, the surveys were kept separate from the list of participants.

## Limitations

i. *Response and Memory Bias*

Research has shown that when participants in a class feel positively towards the instructor, they are more likely to give overall positive ratings to the class (Myers, 1999). Since in this case the comments about the instructor were unanimously positive, (i.e. "[The instructor] was amazing, great, very smart—every pediatric nurse should follow her around.") there is a concern that response bias may have skewed the results towards the positive end of the rating scale.

Memory bias may have been a problem, since a year had passed since the participants took the course. Retrospective reports are not considered to be highly credible (Myers, 1999).

ii. *Surveying Technique and Interpretation*

As in the pilot evaluation, information was gathered through a telephone survey. However, potential biases may result if the investigator does not conduct the interview exactly the same for each participant or asks leading questions that unconsciously direct the responses. In an attempt to control for this bias, the investigator read the survey verbatim, using it as a script, and tried not to embellish in any way. The investigator made every effort to remain consistent with regard to encouraging respondents to increase the length or detail of their answers. Finally, the investigator conducting this survey was the same one who facilitated the surveys in the pilot evaluation, and was therefore experienced.

Unlike the 2001 evaluation, all participants were reached at home. However, some nurses were contacted before beginning their shifts or after their shifts depending on whether they were day or night nurses. The difference in time of contact may have influenced how well the participants were able to concentrate, and how much time they were willing to put into their replies. Some participants had other concurrent activities going on in their home, which also may have affected their concentration and willingness to provide detailed answers.

iii. *Survey Returns and Representative Sample*

The course had 19 enrolled students who successfully completed the course requirements. Letters were sent to all 19 addresses, and contact was attempted through all available phone numbers with the following results: two letters were returned to the sender, and one other participant on the phone stated she did not receive the letter. Five participants had moved or changed their numbers, and were unable to be contacted. One participant refused to participate, and one was not home and did not return messages for the duration of the contact period, leaving twelve students who responded to the survey (12/19 or 63% response rate. When compared to the low participation rate in the pilot evaluation (six of sixteen, or 37.5%), this sample is fairly representative of the class and represents a reasonable response rate for a survey. Of the students who did complete the survey, one was an RN and eleven were RPNs; the course consisted of two RNs and sixteen RPNs, so students who were interviewed are representative of the total RPN/RN distribution.

Twelve students responded to the survey yielding a response rate of 63%.

iv. *Comparison of Results*

The comparison of findings from the evaluation of the 2001 pilot and the evaluation of the 2002 class is limited by the fact that the sample size in the pilot was much smaller and less representative of the class (6 of 16 rather than 12 of 19). Also, the proportion of RNs to RPNs was much closer in the pilot class (7 RNs to 9 RPNs) than in the 2002 class (2 RNs to 16 RPNs). However, having the same course instructor, and using the same investigator and evaluation format strengthened the comparability between evaluation results.

There was a balance of RNs and RPNs in 2001. In 2002, the majority were

# Findings

## Findings: From 2002 Class

Respondents answered a total of 19 questions, both qualitative and quantitative. Accepting the limitations outlined previously, the surveys revealed some constructive information for improving the course, as well as some positive and encouraging feedback.

### i. *Demographics**

The decision to collect more demographic data, specifically around the duration of pediatric training prior to taking the course, was influenced by the literature (Durojaiye and O'Meara, 2002; Hewitt-Taylor and Gould, 2002). The surveyed members of the 2002 class consisted of one RN, and 11 RPNs. All of the students were women, with a mean age of 44. Prior to taking the course, pediatric experience ranged from none to nine years (mean of three years).

### ii. *Community Based*

Survey data demonstrated that eleven respondents (11 of 12) were already involved in providing complex care to children when they began the course in 2002. A year later, only eight of the eleven nurses who were working in pediatric community care prior to the course were still working with this population. A potential limiting factor for pediatric-trained nurses working in the community may be a lack of opportunity to specialize in pediatrics; one nurse stated she is "working with an agency doing physical relief. [She has] no active pediatric cases at this point."

### iii. *Increased Complexity of Clients*

"You stay with the kids you're assigned to, it's not a personal choice."

Of the eight nurses who were still working in community-based pediatrics, two stated they are working with a more complex caseload (i.e. there are complications such as infections or vomiting). The reasons for not having a caseload with increased complexity included: a limiting schedule ("Lots of the pediatric cases are at night, and I don't work nights."), lack of opportunity ("You stay with the kids you're assigned to, it's not a personal choice.") and cases already at the highest complexity. None of the nurses stated they were averse to working with more complex cases should the opportunity arise.

### iv. *Assessment Skills*

The nurses' self-rating of their assessment skills tended towards the more negative end of the scale. Respondents rated their assessment skills as either fair (5 nurses) good (4), or excellent (3/12). Although the low self-rating might initially appear to be a cause of concern, several nurses qualified their responses by saying that this did not reflect poorly on the course. For example, one nurse stated her skills were fair because "I don't work with any children," and another stated she was "not using the skills, so not really a fair evaluation of the course."

### v. *Technical Skills*

"The course was really beneficial…Now, I'm not nervous, and I have even trained other people."

Nurses seemed to be more comfortable with their technical skills than their assessment skills [(excellent (4), good (5), fair (3)], and felt the course was beneficial in this area. "The course was really beneficial. When I first went into complex care, I didn't have basic knowledge. Now, I'm not nervous, and I have even trained other people." Some of the students who rated their skills as fair justified this assessment by saying, "Haven't done much work in pediatrics lately," or "Not using skills, so not really fair to the course." It

should be noted that one respondent "wish[ed] there was a continuation of the course," to increase her confidence.

vi. *Offer Quality Care*

All the nurses who participated in the survey stated they offer quality care to their pediatric clients, or would be able to offer quality care to any future clients. Relevant comments include "I felt I was able to offer quality care at the time that I was working with children," and "Definitely [I offer quality care]—I know how to find the answer, and I'm not afraid to ask."

vii. *New Knowledge/Skills**

In the literature, learning new knowledge or skills was used as an indicator of the course's benefit (Katz & Hendel, 1998). This question was included in the survey of the 2002 class to determine whether the students improved their current level of expertise. All twelve participants felt the course offered them new knowledge and skills.

viii. *Expectations**

Assessing student satisfaction is an important component of course evaluation. According to Hewitt-Taylor and Gould (2002). Whether a student is satisfied or not may influence the credibility of the course and is linked to whether other users will seek the same education. Based on these findings, a question regarding whether the course lived up to the students' expectations was added to the survey. The majority of students (11 of 12) felt the course lived up to their expectations in a limited way ("I guess it did—I didn't know what to expect so it's hard to say.") or completely ("More than I expected; the information in the book is my Bible."). One student felt that the course did not meet her expectations, because she "think[s] you have to work one to one with kids to pick up anything and the course was more technical, not one to one assessment." Overall, the course seemed to have been successful in terms of student satisfaction.

"You have to work one to one with kids to pick up anything and the course was more technical, not one to one assessment."

ix. *Theory and Skills Learned*

The majority of students in the class found the theoretical component applicable to their current work, as illustrated by the comments of one nurse, who was "using the skills almost every shift [she] works." Even if they were no longer involved in pediatric care, the nurses generally ranked the skills as useful; "A lot was review of things that could be used in the home for adults or children," and "good basic, all-round knowledge." A nurse who stated the theory and skills were no longer applicable qualified her comment with the statement that it was "because she changed jobs."

"A lot was review of things that could be used in the home for adults or children."

x. *Length of Classroom Component**

Based on the pilot course report and relevant literature (Johnson and Copnell, 2002), a question about the length of the classroom component was added assess the appropriateness of the course format. The majority of students (11 of 12) found the course to be an appropriate length in terms of classroom time, although one felt it was too short "because of all of the knowledge that [they] dealt with." Interestingly, some of the students used this question as an opportunity to make comments about the classroom content; these comments will be examined later in the paper.

xi. *Length of Practicum**

The majority of students (9 of 12) felt the practicum was too short. Referencing comments from students in the pilot evaluation this was the expected response (Parizeau, unpublished). Relevant comments included: "The practicum was enjoyable, and I would love more experience in different areas;" and "Maybe could have based [the practicum] over a longer period of time. In some situations, only one student could go, which made it difficult." The remaining students (3 of 12) felt that the practicum was an appropriate length:

"The practicum was enjoyable, and I would love more experience in different areas."

"Those few hours just give you a bird's-eye view, but it's a realistic length of time within the timeframe with students also working."

xii. *Placement Journal**

Both the pilot and Summer 2002 class included a placement journal exercise, so a question was included to determine whether the journal was perceived as a beneficial activity. The majority of the students found filling out a journal to be useful to some degree [very useful (2); useful (8); or slightly useful (1)]. Only one student felt it wasn't useful at all. Comments ranged from very enthusiastic ("A great idea, because [I] had to do research independently.") to slightly derogatory ("It was more useful in improving your literary skills.")

xiii. *Learning Needs Evaluation**

Students were asked to complete a written evaluation at the start of the course, to assess what they saw themselves needing to learn. A question regarding this learning needs evaluation was added to this report in order to determine the perceived benefit of the exercise. Again, the results were more positive than negative [very useful (2); useful (6); and slightly useful (3)] although several nurses required prompting on what this exercise consisted of and one participant abstained from answering. Participants found the evaluation useful because in their own words it's "good to evaluate yourself, good to identify your needs and weaknesses," and it "gave you a chance to see what you needed to learn." However, some students argued the exercise was "not personally useful," or "useful for the teacher [not the students]."

"Gave you a chance to see what you needed to learn."

xiv. *Change in Working Status*

Before the course, eight out of twelve nurses were working in part time positions, although some combined more than one position to achieve full time hours. After the course, two of the part time nurses started working full time, although it is not clear as to whether this switch was due to a change in employment away from pediatrics. Some nurses chose to remain part time.

xv. *Changes, Suggestions, Improvements*

Participants were given the opportunity to answer an open-ended question about any changes, suggestions, or improvements they would like to see made to the course. One comment involved the presence of a Community Care Access Centre (CCAC) staff person in the classroom. One participant felt that representatives from the CCAC were in the class just to recruit nurses, and that while this may be beneficial for a nurse just starting in community complex care, it was seen as unnecessary to more established nurses. Other constructive criticism surrounded the length of the practicum; nurses generally commented that hands-on learning was the best way to assimilate material.

"All of the instructors were very knowledgeable, and experts in their field."

The majority of the comments were very positive, especially with regard to the instructors. Nurses commented that: "the nurse practitioner who ran the class was excellent;" and that "all the instructors were very knowledgeable, and experts in their field." One nurse commented that she would have appreciated a certificate at the end of the course.

xvi. *Cost of the Course to Participants**
A question about the cost of the course was added based on the evaluation by Weatherly, McCallum and Young (1991) indicating that course cost can be a potential barrier to participation. The PCC Course was paid for by either the agency employing the nurses or the nurses themselves; the tuition cost covered the course and the resource binder. The majority of students who responded to this question stated that their work paid for the course (8 of 12), a similar situation to the pilot. One nurse commented that, if she had been asked to pay, that "it might have been a little prohibitive."

xvii. *Additional Skills, Experience, Training*
Participants were asked an open-ended question about additional skills, experience and training they would value. Nurses expressed interest in learning about dietary issues (perhaps with a dietician), assessments for heart problems and cardiac care, and catheterization of a small child. Students also requested more extensive exposure to ventilation, trauma nursing and intravenous therapy. Other suggestions included more detailed instruction in the physical assessment of new clients, information on drugs, and more knowledge about dialysis in pediatrics. Dialysis, cardiac issues, ventilation and assessment were the training topics that were mentioned the most frequently.

xviii. *Recommended Course to Others*
The vast majority of nurses had recommended the course to others (11 of 12); the one nurse who hadn't recommended the course stated it was because she hadn't had the opportunity. One nurse volunteered that she has "lent the course binder out to other nurses."

"[I] lent the course binder out to other nurses."

xix. *Interest in Update Course*
Most respondents seemed interested in taking an update course (10 of 12), although two qualified their comments, suggesting that the update course be shorter, and their interest depended on the focus of the course material.

## Findings: Comparing Results from 2001 and 2002

Consistency from year one to two was found in the responses to questions regarding increased complexity of clients, technical skills, offering quality care, theory and skills learned, working status, and recommending the course; in all cases, the responses continued to be positive.

When examining the responses with respect to assessment skills, a small difference was found. The 2002 class demonstrated a tendency towards more negative self-rating than the pilot class: five nurses out of twelve rated their assessment skills as "fair" in the most recent evaluation, while the lowest rating given in the pilot evaluation was "good." Although this finding is somewhat concerning, it may just reinforce the comment in the pilot evaluation that the nurses may have a higher confidence level than they feel comfortable stating (Parizeau, unpublished).

As in the pilot, students were forthcoming about suggesting changes to the course. Although many of the comments were similar and related to extending the practicum, the value of hands-on learning, and the benefits of exposure to complex cases, the involvement of CCAC in the classroom was only mentioned in the second course.

In terms of additional skills, experience, and training, ventilation and cardiac issues came up consistently as areas that students would like to study in more depth. However, the pilot course seemed to show a greater interest in intravenous skills, while the 2002 class showed an additional interest in dialysis and physical assessment. Also, a higher proportion of students in the 2002 class seemed interested in participating in an update course.

## Conclusions

Based on the available information, and similar to the pilot course, the 2002 Pediatric Complex Care course can be considered to have been a success. Class participants commented positively about the course, and in fact, the majority of participants went on to recommend the course to their associates. Nurses seemed confident in their technical skills, and fairly confident in their assessment skills. All felt they were able to offer quality care. The majority of the nurses found the course met their expectations and most were interested in taking a future course to update their skills. Students also consistently saw the theory and skills learned as being applicable to their current work and continued to recommend the course to others.

One concern is that the number of students in the class actively working in community-based pediatrics actually decreased over the year since the course was held. A further issue is that most nurses were unable to increase their caseload complexity, and in most cases, working status did not change after taking the course.

Based on recommendations stemming from the pilot class, the Pediatric Complex Care Course offered in 2002 was eight weeks long, (the 2001 course was six weeks), and practicum hours were increased from 12 to 18. Students indicated that the classroom time was adequate, although most felt the practicum was still too short. Comments from the students indicated that they were satisfied with the course content. Even those nurses who were no longer practicing in pediatrics felt that some of the information could be transferred to their current jobs and that they had learned new knowledge and skills.

The format of the course included two exercises: the placement journal and the learning needs evaluation. While results varied, most found these exercises to be useful, befitting their continued inclusion in the course.

A dominant theme in the comments section was appreciation and praise for the class instructors. The literature suggests that the preferred way of learning is being taught by knowledgeable, clinically competent experts (Hewitt-Taylor and Gould, 2002) and that the most important factor influencing student learning in clinical practice is the instructor (Oermann and Lukomski, 2001). The findings indicate that the course has been successful in providing excellent teaching staff to support the course.

At this point, the nursing agencies are funding the majority of the students. If in the future the nurses have to pay the majority of the course fees, the cost may become prohibitive. The

literature suggests that financial issues are the most common barriers to education (Johnson and Copnell, 2002).

An interesting demographic finding is that the 2002 class consisted of far more RPNs than RNs, whereas in the pilot class the two groups were more evenly represented. Since the original aim of the course was to upgrade the skills of RPNs, this finding may indicate that the second course was more successful in reaching the intended audience.

The 2002 class seemed less positive about their assessment skills than the 2001 group, and additional training requests were not the same from year to year. A greater proportion of nurses from the 2002 class were interested in participating in a future update course. The differences in training requests and interest in updates may be reflective of the differences in the class make-up. That is, there was a far higher proportion of RPNs in the second class, and more RNs in the 2001 pilot class.

Issues remaining consistent in both years were the inability of the majority of participants to increase the complexity of their caseloads, and a minimum of movement from part-time to full-time positions.

## Suggestions for Future Consideration

In order to accurately measure the outcomes of this course, it may be worthwhile to include a pre-course component in any subsequent evaluations, such as a survey administered during the first class (Durojaiye and O'Meara, 2002). Including a pre-test is important to determine if the course actually causes changes in the students' abilities. Also, while there was feedback regarding the instruction of the course, the teaching was not specifically evaluated. In the future, it may be beneficial to include more specific questions surrounding the course instruction (Durojaiye and O'Meara, 2002).

The response rate for the second evaluation was considerably higher then the first, so for subsequent evaluations an introductory letter should continue to be sent out, and the class contact list should be retained for the investigator.

In both the pilot and 2002 study, students indicated that they would prefer a longer, more intense practicum. Based on these consistent comments, it may be advantageous to consider increasing the hands-on component of the course. However, it is important to consider the time constraints of the nurses involved (Hewitt-Taylor and Gould, 2002) and the limitations with respect to availability of community clinical placements.

Suggestions relating to course format and content that should be addressed in the future include examining the intensity of the involvement and classroom presence of CCAC, possibly clarifying their involvement to participants, and offering greater detail on the subjects of dialysis, cardiac care, ventilation and physical assessment. As ventilation and cardiac care were mentioned in both classes as areas where more training would be appreciated, these may indicate topics of particular interest. If the course cannot be expanded to include more detailed coverage of these areas, it may be worthwhile to consider them as part of a future update or upgrade course. The learning needs evaluation and placement journal should continue to be part of the course, as most students recognized the value of these exercises.

One of the issues highlighted by both the pilot and subsequent evaluation is that few nurses were able to increase the complexity of their clients. It may be that the course is attracting those nurses already involved with clients of the highest possible complexity, in which case the course is missing part of their audience. Nurses with less experience in complex cases would likely find the course beneficial. However, in most cases it seems that the nurses do not have the opportunity to work with more complex cases, which is more of an issue for the agencies than the course itself.
Efforts should be made to encourage community nursing agencies to continue to fully fund or subsidize the course for the participants in order to reduce the possible barrier that tuition and materials might present.

# References


Campbell, T. (1998). Caring for the technology dependent child—A Case Study. *Nursing Praxis in New Zealand, 13*, 5-10.

Durojaiye, L. & O'Meara, M. (2002). Improvement in resuscitation knowledge after a one-day paediatric life-support course. *Journal of Paediatric Child Health, 38,* 241-145.

Hewitt-Taylor, J. (2002). Teachers' and students' views on self-directed learning. *Nursing Standard, 17,* 33-38.

Hewitt-Taylor, J. (1998). Paediatric intensive care nursing education by distance learning: an example from Canada. *Intensive and Critical Care Nursing, 14,* 137-143.

Hewitt-Taylor, J. & Gould, D. (2002). Learning preferences of paediatric intensive care nurses. *Journal of Advanced Nursing, 38,* 288-295.

Johnson, A. & Copnell, B. (2002). Benefits and barriers for registered nurses undertaking post-graduate diplomas in paediatric nursing. *Nurse Education Today, 22,* 118-127.

Katz, S. & Hendel, T. (1998). Integrating Ongoing Evaluation Process for International Pediatric Nursing Courses. *The Journal of Continuing Education in Nursing, 29,* 135-141.

Myers, A.M. (1999). *Program Evaluation for Exercise Leaders.* Human Kinetics: Windsor, ON.

Oermann, M.H. & Lukomski, A.P. (2001). Experiences of Students in Pediatric Nursing Clinical Courses. *JSPN, 6,* 65-72.

Parizeau, L. (unpublished, 2003 February). Pediatric Complex Care Course: Follow-Up Evaluation of the Summer 2001 Pilot Class.

Pediatric Complex Care Course Task Team (PCC Task Team). (2001 September 21). Final Report to the Pediatric Continuity of Care Committee, "*An Evaluation of the Pediatric Complex Care Course*."

Spalding, K.L., Hayes, V.E., Williams, A.P., & McKeever, P. (2002). Technical Report 5: Services for Children with Special Needs and Their Families. *Hollander Analytical Services Ltd.* Submitted to: Home Care and Pharmaceuticals Division, Health Policy and Communications Branch, Health Canada.

Value Proposition Information Tool. (2001 February 7). *Value Proposition*. Project: Enhancing Nursing Skills to Support the Provision of Complex Child Care. Submitted to: London Health Sciences Centre.

Weatherly, K.S., McCallum, A.W., & Young, S. (1991). Cost-effective Resuscitation Education. *Journal of Nursing Staff Development, 7,* 165-70.

# Appendix A: Learning Needs Evaluation

**Name:**_____ **Date:**_____

Please complete the following self-appraisal carefully. The goal of the self-appraisal is to evaluate how the "pediatric complex care course" and the clinical placements meet your learning needs.
For the following content areas, please rate your **present level** of skill/knowledge using the scale below.

| | |
|---|---|
| **Very comfortable** | **4** |
| **Comfortable** | **3** |
| **Not comfortable, need a review** | **2** |
| **No previous experience** | **1** |

Physical assessment of the following systems:

- **Neurological** ____
- **Respiratory** ____
- **Cardiac** ____
- **Gastrointestinal** ____
- **Genitourinary** ____
- **Psychosocial** ____

Giving Medications

- **Using IV infusion pumps** ____

Caring for Central Lines (e.g. assessment of, dressing changes)

- **PICC lines** ____
- **Hickman lines** ____
- **Porta caths** ____

Caring for a tracheostomy

- **Cleaning around the tracheostomy** ____
- **Changing tracheostomy ties/tube holder** ____
- **Changing tracheostomy tube** ____
- **Suctioning down a tracheostomy** ____
- **Use of an ambu bag** ____
- **Providing chest physiotherapy** ____

Use of monitoring devices and Oxygen therapy

- **Oxygen devices** ____
- **Oxygen saturation monitor** ____
- **Apnea monitor** ____

Feeding and the use of feeding tubes

- **Feeding a child with special needs** ____
- **Silastic tub/Silicone weighted and non-weighted** ____
  - **Inserting** ____
  - **Using** ____
  - **Removing** ____
- **G tubes** ____
  - **Using** ____
  - **Removing** ____
  - **Replacing** ____
- **Use of feeding pumps** ____
- **Giving medications via feeding/G tubes** ____

Providing ROM and positioning ____

Providing peritoneal Dialysis ____

Caring for and maintenance of VP shunts ____

Are you and **RN** or **RPN**? _____

Do you currently work with children who require complex care?
**YES**____ **NO**____

If you answered NO to the above question, now that you have completed the "Pediatric Complex Care Course," will you start to work with children who require complex care?
**YES**____ **NO**____

Do you currently work fulltime with children who require complex care?
**YES**____ **NO**____

If you answered NO to the above questions, now that you have completed the "Pediatric Complex Care Course," would you be willing to work fulltime with children who require complex care?
**YES**____ **NO**____

# Appendix B: Placement Journal

NURS508, Fanshawe College, Spring 2002

Name:_____
Date: _____
Placement Day #_____
Placement Agency_____
Number of Hours at Agency _____

1) What is your goal(s) for today?
2) What did you do to meet this goal(s)?
3) Signature and comments from agency resource
4) Describe what you have learned from your experience at this agency (e.g. interesting cases, learning experiences, etc.)

# Appendix C: 2003 Survey

**2002 Pediatric Complex Care Course**
**Follow-Up Evaluation**

**June 2003**

**Goals of the Course:**

1. To develop a new curriculum to train or retrain nurses to care for complex care children with an emphasis on 'patient assessment" skills.
2. To ensure that the appropriate care provider is matched to the care level required.
3. To maintain high levels of patient and family satisfaction.
4. To enable earlier and streamlined discharge to home and coordinated care across the continuum.

a. At the time you took the course (Summer 2002), were you involved in providing community-based complex care to children?

**Yes** **No**

If yes, have you continued to serve this population?

**Yes** **No**

b. If you did not work in pediatric complex care before taking this course, are you doing so now?

**Yes** **No**

If no, why not?

c. If you are working in pediatric complex care, has the complexity of your clients increased?

**Yes** **No**

If no, why not?

d. In the initial survey evaluating this course, 100% of the students agreed they felt more comfortable and confident with their assessment and technical skills. How would you evaluate your skills now that a year has passed?

**Assessment Skills:**

Excellent Good Fair Not Comfortable

**Technical Skills:**

Excellent Good Fair Not Comfortable

**Additional Comments:**

e. Do you feel you are able to offer quality care to your pediatric clients?

**Yes** **No**

If no, are there particular reasons why you feel this way? If so, please list those reasons.

**Yes** **No**

f. Did the course offer you new knowledge and skills?

**Yes** **No**

g. Did the course live up to your expectations?

**Yes** **No**

If no, why not?

h. After completing the course, all but one student said the theory and skills learned could be applicable to their jobs. After a year, do you find this to be the case?

**Theory →** **Still Applicable** **No Longer Applicable**

**Skills →** **Still Applicable** **No Longer Applicable**

**Please Explain:**

i. How did you find the length of the course, and duration of the practicum?

**Classroom →** **Too Short** **Too Long** **Appropriate**

**Practicum →** **Too Short** **Too Long** **Appropriate**

**Additional Comments:**

j. How useful did you find completing the placement journal?

**Not Useful** **Slightly Useful** **Useful** **Very Useful**

k. How useful did you find the Learning Needs Evaluation?

**Not Useful** **Slightly Useful** **Useful** **Very Useful**

l. Please indicate your working status prior to taking the course and your status now.

**Prior →** **Part time** **Full Time**

**Current →** **Part Time** **Full Time** **No longer in the field**

m. Now that you have been working for a year following your participation in this course, do you have any changes, suggestions or improvements with regard to the course content?

n. How did you feel about the expense of the course?

**Too Expensive** **Appropriate** **Would Pay More**

o. Please describe any additional skills, experience and training you would like to acquire.

p. All of the students who took the Summer 2002 course stated they would recommend this course to others. Have you recommended this course?

**Yes** **No**

**Additional Comments:**

q. Would you be interested in taking an update course, to refresh skills learned in the class?

**Yes** **No**

r. Demographic Questions:

RN/RPN:
Pediatric Experience prior to course (years and location):
Age:
Sex:

Thank you for taking the time to complete this survey. Your responses are invaluable and much appreciated.

# Appendix D: Introductory Letter

June 12, 2003

Ms. _____
_____
_____

Dear Ms. _____,

On behalf of the Pediatric Continuity of Care Committee partnership I would like to invite you to participate in a follow-up survey and evaluation to assess the impact of the RN/RPN Pediatric Complex Care accredited course you took at Fanshawe College in the Summer of 2002.

As you may know, the class you participated in was designed by the Children's Hospital of Western Ontario in collaboration with the Pediatric Continuity of Care Committee to expand the ability of community nurses to provide care to children with complex care needs. The goal of the course was to assist and support community and/or hospital nurses in managing complex children and their families. The Partnership is interested in performing an evaluation to further improve the course before it is offered again. Your comments would be instrumental in this process.

I will be contacting you in the month of June, to offer you the opportunity to participate in the telephone survey portion of this evaluation. You can choose not to participate, or withdraw from the survey at any time. All of your responses will remain confidential.

If you agree to participate, I will conduct the survey at your convenience. If you wish to contact me, with questions or to do the survey, my contact information appears below.

Thank you in advance for your assistance. Your participation will enable positive changes to this innovative course.

Sincerely,

Laura Parizeau
Administrative Resident
Integrated Strategic Alliances & Networks

**Phone:** 519-685-8500 ext. 77735
**Fax:** 519-439-7199
**Email:** Laura.Parizeau@lhsc.on.ca

**Pediatric Continuity of Care Partnership**
CCAC of London and Middlesex, Comcare, ParaMed, St. Joseph's Health Care London, Victorian Order of Nurses, Children's Hospital of Western Ontario, Child parent Resource Institute, London health Sciences Centre, Saint Elizabeth, Kids Country Club