



ABSTRACT

Introduction: The purpose of this project was to explore a) the value of an adapted version of the *Healthy Steps* program for Pediatric Nurse Practitioner (PNP) graduate students and b) the perceptions of PNP program directors regarding practice issues, educational preparation and the *Healthy Steps* program.

Method: A four-part workshop was offered to students in their final year of the program. Outcomes were measured through evaluations and a pre-test/post-test design. A survey was also mailed to 24 PNP program directors.

Results: More than 90% of the participating students rated this workshop as "good or excellent." All of the students recommended integration of *Healthy Steps* content into PNP graduate education. PNP program directors voiced concern about the effect of the managed care environment on PNP practice, acknowledged the importance of strengthening health supervision visits, and expressed interest in the *Healthy Steps* program.

Discussion: This project demonstrated that an adapted version of the *Healthy Steps* program enhanced the education of final year PNP students. PNP program directors expressed concern about practice issues, preparation for practice, and would consider potential adoption of portions of the *Healthy Steps* curriculum.

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Integrating Healthy Steps Into PNP Graduate Education



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At the beginning of this new millennium, children are faced with a myriad of social and environmental risks to their growth and development, and families are confronted with multiple stressors that impact parent and child health. In the United States 28% of children live in one parent households (U. S. Census Bureau, 2000) while 40% of children live in low income families and 17% of children under the age of six live in poverty (Child Poverty Fact Sheet, 2002). The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 significantly altered public support systems for families. Although many single mothers have joined the workforce as a result of this legislation, many have earnings well below the federal poverty line and are juggling the roles of parent and breadwinner (Meyers, Bowling, Waldfogel & Garfinkel, 2001). These newly recognized primary care morbidities—poverty, stress, as well as parental health issues, such as cigarette smoking and depression—threaten child health and development (Zuckerman & Parker, 1995).

Recognizing the changing needs of children and families, the *Bright Futures* initiative (Green, 1996), through the US Department of Health and Human Services Maternal Child Health Bureau, developed health supervision guidelines that included a comprehensive view of social relationships, emotional well being, intellectual development, and parent health all in the context of pediatric primary care. Furthermore, Young and colleagues (Young, Davis, Schoen & Parker, 1998) surveyed 2,000 parents of young children in the United States and explored their child-rearing concerns and the type of information they receive or would like to receive from their health care providers. This survey revealed that the needs of parents of young children were not being met by the current pediatric health care system. The survey showed that 54% of parents asked for more information on "how to encourage learning", 42% requested additional information on discipline, 41% wanted more information on toilet training and 30% on

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sleep issues. At the same time, only slightly more than half of these parents were satisfied with their pediatric providers guidance on child development and behavior issues. In addition, half of the parents surveyed requested pediatric services that would provide more developmentally focused information. The report did not specify the type of health professionals that provided care.

To address the gap between parents' needs and current practices, the *Healthy Steps* Program (Kaplan-Sanoff et al., 1999) was developed. As described by Lawrence, Magee and Bernard (2001), *Healthy Steps* emphasizes a close relationship between health care practitioners and parents to address children's physical, emotional and intellectual growth and development from birth to three years of age. The *Healthy Steps* program includes a curriculum emphasizing practical application of child development theory and family-centered care with extensive materials for health professionals engaged in pediatric primary care. In addition, this approach adds a new professional with expertise in child development to the traditional pediatric practice. The *Healthy Steps* Specialist might be a nurse, pediatric nurse practitioner, social worker, or early childhood educator. This individual brings not only another pair of hands to the traditional practice but contributes a unique professional perspective with the other members of the pediatric health care team. Working with the primary care provider, *Healthy Steps* Specialists focus a portion of the well child visit on the developmental and behavioral health of the family. This allows the primary care provider to attend to the family's agenda while knowing that important anticipatory guidance is not sacrificed because of time constraints. The Child and Adolescent Health Policy Center at the Department of Maternal and Child Health at Johns Hopkins University School of Medicine is currently studying child and family outcomes in the 15 evaluation sites and 6 affiliate sites that have implemented this model (The Commonwealth Fund, 1999).

For more than 30 years, Pediatric Nurse Practitioners (PNP) have been providing high quality, comprehensive pediatric primary care to children and adolescents (Nelms, 1995). Preparation to provide holistic, family-centered pri-

mary care is a cornerstone of PNP education. In a recent national survey of PNPs, Brady and Neal (2000) found that PNPs identified "evaluating developmental milestones" and "planning for anticipatory guidance" among their important and frequently-practiced weekly activities. However, PNPs with more than 15 years of experience reported more frequent health supervision counseling and believed it to be of greater importance than did less experienced PNPs. Brady and Neal urged educators to consider these findings in preparing graduates for practice. Furthermore, the authors, as educators, have observed that while students have theoretical knowledge of child development and family system issues, this knowledge is not consistently applied in the clinical setting.

The *Healthy Steps* program includes a curriculum emphasizing practical application of child development theory and family-centered care with extensive materials for health professionals engaged in pediatric primary care.

During the 2000-2001 academic year, The Commonwealth Fund awarded the Yale University School of Nursing (YSN) PNP Specialty Masters Program a grant to create an adapted version of the *Healthy Steps* curriculum in order to explore the value of the *Healthy Steps* curriculum in PNP graduate education. Although students were introduced to the concept of the *Healthy Steps* Specialist, that role was not the focus of this initiative. The pilot workshop was devel-

BOX *Healthy Steps* Workshop Topics

- Teachable Moments
- Building Relationships
- Neonatal Behavioral Assessment
- Ghosts in the Nursery
- Developmental Checkups
- Behavior Observations
- Temperament Attachment
- Family Risk Factors
- Making Referrals Work

oped and conducted by three YSN faculty members, one of whom was a contributing author and trainer of the *Healthy Steps* program. The Commonwealth Fund also requested that this project include a survey of PNP program directors to explore current issues in PNP graduate education and the potential value of the *Healthy Steps* program. The purpose of this paper is to report the results of a) the pilot program to integrate *Healthy Steps* into PNP graduate education and b) the survey of PNP program directors that explored perceptions of practice issues, educational preparation, and the *Healthy Steps* program.

METHOD

***Healthy Steps* Workshop**

Preparation. Preliminary work to develop the *Healthy Steps* pilot workshop for final year PNP graduate students took place in several stages. Information from the *Healthy Steps* trainings that Boston University conducted was compiled and compared with core PNP course content. In this workshop, the major topical areas of *Healthy Steps* (see **Box**) were emphasized rather than the role of the *Healthy Steps* Specialist. A syllabus for the workshop was developed with the goal of avoiding overlap between the two curricula while recognizing that, although students may have had previous exposure to content in their graduate courses, it may not have been sufficient for them to integrate the knowledge into practice. A draft outline of the curriculum was shared with Boston University faculty. The content was divided into four six-hour sessions. Specific teaching strategies, including

presentation, discussion, role-playing, videos, and cases studies were developed for each session. *Healthy Steps* audiovisual materials were included. Questionnaires to evaluate each session and the overall workshop were designed. Students' progress in assessing child and parent behavior and developing strategies to address parents' concerns was monitored through the use of a journal between sessions. Clinical experiences relevant to the workshop were included in the journal, shared at the beginning of each session and submitted to faculty. To document effects of the training on students' skills, a pre- and post-workshop test was designed. Overall planning for all the sessions was done initially; however, each session was further refined based on previous sessions. In order to accommodate the students' diverse schedules, the four, six-hour sessions were held on Saturdays over a four-month period during the first and second semesters of the final year. This non-credit workshop was reviewed and approved by the YSN Curriculum Committee.

Student Sample. All final year PNP students were invited to participate in this workshop at the beginning of the academic year. Nineteen students, 86% of the PNP class, enrolled in the workshop, and 84% of that sample, 16 students, completed it. The evaluation form for each session included information about student characteristics. Because the composition of the group varied slightly over the four sessions due to absences and attrition, the composition is reported in ranges. Between 66.7% and 76.5% of this sample were Graduate Entry Program in Nursing (GEPN) students. These students hold a minimum of a bachelor's degree in another discipline upon entry to YSN. They complete an accelerated undergraduate program before advancing to the PNP masters specialty. In this sample, between 15.8% and 20% reported that they held a bachelor's degree in nursing. More than half of this sample, between 52.9% and 68.4%, reported that they had experience in pediatric nursing. Although the majority of this sample was GEPN students, many of the students had worked part-time in pediatrics during their course of study. However, the amount of experience in pediatric nursing or the length of time working in nursing was

not collected. In addition, between 23.5% and 26.7% of this sample reported that they held a degree in Child Development or a related field.

Instruments. Faculty designed the student evaluation forms. Session evaluations identified to what extent students had been previously exposed to the content and to what degree the information would influence their practice. The course evaluation form explored the most valuable aspects of the workshop and the potential integration of the workshop into PNP graduate study.

The purpose of this paper is to report the results of a) the pilot program to integrate *Healthy Steps* into PNP graduate education and b) the survey of PNP program directors that explored perceptions of practice issues, educational preparation, and the *Healthy Steps* program.

As a means of assessing students' development during the course of this workshop, a pre-test/post-test was designed to measure their ability to observe child, parent, and provider behavior and interactions, and to develop immediate strategies and a plan based on their observations. The tool was not pre-tested nor was a pilot conducted due to limited time between planning and implementation. At the beginning of Session One and at the conclusion of Session Four the students viewed a segment from the *Healthy Steps* CD ROM,

which illustrates a parent, child, and provider interaction. They were then asked to describe, in writing, the following: a) observations of parent and child including the child's development and behavior, parental behavior, the parent/child interaction, and the parent/child/health care provider interaction, b) immediate strategies for Teachable Moments, and c) a follow-up plan. Before scoring the pre-tests, one of the faculty, a *Healthy Steps* trainer, developed an answer key and scoring system. All three instructors met and reviewed each pre-test at the end of Session One and each post-test at the end of Session Four. Scoring was done by consensus.

PNP Program Director Survey

Twenty-four directors of PNP masters programs were invited to participate in the survey. The schools of nursing were selected based on their reputation as leading institutions for PNP graduate education. The top ten PNP graduate programs, as reported by *US News and World Report, 2000 (Best Graduate Schools: Health Specialties: Nurse Practitioner-Pediatric)* were included. The additional 14 schools were recommended by faculty at Yale University School of Nursing and by a PNP nursing educator who served on The Commonwealth Fund Advisory Board.

The survey was developed by YSN faculty and reviewed by The Commonwealth Fund. The survey addressed perceptions of PNP preparation for practice, influence of managed care on PNP practice, curriculum content, and perceptions of the *Healthy Steps* program. In December 2000, the 24 PNP program directors were sent a brief email inviting them to participate in the survey. The survey was then mailed to the directors with a cover letter and materials describing the *Healthy Steps* program. After multiple reminders, including email messages and phone calls, and selected second mailings, 24 directors (100%) completed and returned the surveys by February 2001.

RESULTS

Healthy Steps Workshop

Session evaluations. The results of individual session evaluations (see [Table 1](#)) indicated that with the exception of the *Healthy Steps* model, stu-

TABLE 1 Students' Evaluation of Workshop Topics (N=16)

Topic	To what extent have you been previously exposed to this content?			Does this information influence your approach to practice?		
	Not at all	Somewhat	Yes, in depth	Not at all	Somewhat	Yes, in depth
<i>Healthy Steps</i> model	88.9	11.1	0	5.9	47.1	47.1
The Importance of the First Three Years	0	63.2	36.8	0	21.1	78.9
Teachable Moments	5.3	94.7	0	0	0	100
Breastfeeding (review)	0	26.3	73.7	0	15.8	84.2
Neonatal Behavioral Assessment Scale	0	75	25	0	17.6	82.4
Strategies for Change	6.3	87.5	6.3	0	0	100
Building Relationships/Interviewing Skills	0	29.4	70.6	0	23.5	76.5
Elements of Relationships/Ghosts in the Nursery	11.8	70.6	17.6	5.9	29.4	64.7
Risk Factors Overview/Cases	0	58.8	41.2	0	35.3	64.7
Making Referrals Work	25	62.5	12.5	0	41.2	58.8
Temperament and Attachment	0	66.7	33.3	0	20	80
Behavior Observations	0	86.7	33.3	0	13.3	86.7
Developmental Check-ups	0	53.3	46.7	0	33.3	66.7

dents had previously been exposed to most of the topics included in the workshop. However, with the exception of breastfeeding (73.7%) and building relationships/interviewing skills (70.6%), fewer than 50% of the students felt that the topics had been previously covered in sufficient depth. In addition, approximately 50% or more of the students reported that all the topics would influence their approach to practice.

Workshop evaluation. Overall, 53.3% of the students rated this workshop as "excellent," and 40% rated it as "good." Most of the students agreed or strongly agreed that the objectives, content, and requirements were appropriate. Furthermore, all of the students felt that this content should be integrated into PNP master's education; 53.3% "strongly agreed," and 46.7% "agreed." Sixty percent of the students stated that the content should be integrated into existing courses. One student stated, "It's already there, but pulling it all together is what is valuable." Three students did not support integration of the material into existing courses but felt that the content should be separate. As one student stated, "I am leaning more towards No, because I think it might get lost in the curriculum of certain courses...I actually think the course is best done in the second PNP year...Students haven't yet had enough time/experience in clinical to really absorb and appreciate this information." Students

offered a variety of ways that the material could be integrated into existing courses, such as use of videos, role playing, and more intensive use of interactive cases. When asked if clinical preceptors' participation in a *Healthy Steps* workshop would promote students' application of this information in clinical practice, 80% of the students either agreed or strongly agreed.

Lastly, the students offered many comments about what they found most valuable about this workshop. The following comments characterized their responses:

"The course gave students an opportunity to review information already learned in previous courses, practice new skills, and gain confidence."

"Teachable moments, video about maternal depression, lesson about attachment problems, role playing, learning exactly what words to use with a parent, many ideas for parent education and so many resources to use creatively; the open, stimulating, inspiring discussion in the group was a great bonus."

"The workshop helped bring together concepts we have learned in various courses throughout these past two years."

Pre-test/Post-test. There was a statistically significant difference in the students' responses to the domain "Plan"

($P < .05$); that is, students scored significantly higher on the post-test than the pre-test in their plans for follow up (see Table 2). Furthermore, statistical analysis revealed that all mean scores: total summative scores and scores within the three domains increased from pre-test to post-test with one exception, the observation of the child/parent/provider. In fact, the mean score of that one item decreased slightly from pre-test to post-test. The faculty speculate that social desirability may have influenced the students' responses, that is, they may have assumed that since the vignette was part of the *Healthy Steps* program, it represented best practice. The students' significant increase in the domain of Plan is consistent with their comments on the evaluation about gaining skills and confidence in managing complex child and family dyads. Limitations include the lack of reliability and validity of the measure and the absence of a control group. Furthermore, this assessment tool measured only a small portion of the total knowledge included in this workshop.

PNP Program Director Survey

The results presented include both quantitative data as well as qualitative comments. Two of the faculty conducted a content analysis of the qualitative data.

Strengthening health supervision visits. Most (87.5%) of the participants agreed with Brady and Neal's (2001)

TABLE 2 Pre-test/Post-test Results (N=16)

	Pre-test M (SD)	Post-test M (SD)	t score
Child behavior	7.80 (3.23)	8.13 (3.40)	-3.14
Parent behavior	4.60 (1.96)	6.47 (3.18)	-1.905
Parent/child interaction	4.00 (3.63)	5.67 (4.08)	-1.391
Parent/child/provider interaction	3.07 (3.45)	3.00 (3.57)	0.63
Immediate strategies	10.73 (7.67)	14.33 (8.84)	-1.033
Plan (follow-up)	7.87 (3.46)	13.67 (6.40)	-3.471*

*P<.05

recommendation to strengthen health supervision visits. Of the six directors who added comments, most mentioned the importance of health supervision counseling and the strength of their programs in addressing this need. One director supported this recommendation for FNP programs as well.

Providing comprehensive counseling. In regard to the question about the difficulty new graduates may have in providing comprehensive counseling, especially to those families with risk factors, approximately half (54.2%) of the PNP directors agreed and about a third (37.5%) felt that this was somewhat true. Eleven directors added comments. Of those, five felt that students with more nursing experience demonstrate greater ease in counseling. One director felt that students' interest in child development promoted this skill. Another commented that the process, like other skills, is developmental. One director added that there are too few role models, and others noted that constraints within practice settings reduce the counseling offered to families.

Influence of the managed care environment on PNP practice. Almost all (95.8%) of the sample were concerned about how managed care was limiting the amount of time that PNPs have to provide well child health supervision and counseling to families of young children. About half of the sample added comments. Most expressed their concern about the restraints in practice on providing sufficient counseling and several of them reiterated their concerns about the influence of managed care on practice. One director commented, "This is a huge problem and is eroding the unique role of the PNPs. Another stated, "Since this is what

PNPs do best...this dictates the impact we have...There would be no need for a 'New Professional' if RNs and PNPs were given the time and knowledge to do this. I think it is a waste of (money) to...create one more person for the family to...work with."

Overall, 53.3% of the students rated this workshop as "excellent," and 40% rated it as "good."

PNP graduate education: Content areas related to child development:

Child development and family risk factors, teachable moments, and linkages to community resources. All 24 of the directors provided evidence of including child development and family risk factors, teachable moments, and linkages to community resources in their curriculum. Child development theory was included as a single course or integrated into another course, such as Developmental Aspects of Health Promotion. Most directors also noted that child development is not only presented in a didactic course but is integrated into other courses, such as health promotion, physical assessment, and clinical courses. The content is taught through various methodologies: lecture, case presentations, and seminars.

As with child development theory,

the concept of teachable moments is integrated across the curriculum through a variety of courses, such as health promotion and physical assessment, and through various methodologies, such as case studies, seminar, didactic courses, and clinical practica. Some directors mentioned using specific tools, such as, Brazelton's Touchpoints materials, *Bright Futures*, and the Nursing Child Assessment Satellite Training (NCAST) program.

The directors provided extensive evidence of linkages to community resources. While all of the programs integrated this content into clinical experiences some also included it in didactic courses. Through a variety of rotations, such as homeless shelters, ambulatory clinics, schools and health departments, students learn about community resources, such as Head Start, Women Infants and Children (WIC), and Medicaid. In addition, most students are required to complete a community teaching project. Others participate in community assessments, health fairs, and parenting courses.

Developmental screening tools and written materials. All of the directors stated that mastery of developmental screening tools is included in core PNP graduate education. The most widely taught tool is the Denver Developmental Screening Test II. Several directors did not list all the screening tools but commented that developmental screening tools were covered "extensively." In addition, several directors mentioned the NCAST, the Brazelton Newborn Assessment, language screening and family assessment tools. One director mentioned several instruments including: Goodenough-Harris Draw-a-person, Rosenberg Self Esteem Scale, and the Denver Articulation Screening Exam.

As with community resources content, all the directors noted that development and utilization of written materials is integrated throughout PNP courses. Content includes critiquing materials and developing materials with attention to readability and cultural awareness. This requirement is often integrated into health promotion and clinical courses.

Parent groups, home visits, and an information line. Unlike the previous content, parent groups, home visits, and

participation in an information phone line service occurs less frequently in PNP graduate education. Although many directors commented on the lack of skill development in conducting parent groups, three noted that this was a requirement in their programs. Several directors recognized that this was a missing but important component. Some directors mentioned that this skill was available in selected courses but not required for all students.

Only two directors mentioned that home visits were part of the core experience for all PNP students. Several commented that this is a requirement of all undergraduate nursing students. A few directors said that home visits were integrated into some courses, such as those focused on special needs children. One program is considering integration of home visits into the curriculum and several thought it was a "good idea."

Two directors reported that creating an information line was discussed in a growth and development or health promotion course. Several mentioned that students were taught about telephone triage and community resources that provided a related service. Most directors commented that this was not part of the curriculum and students get little to no experience in telephone communication specific to child development issues with parents.

Interest in reimbursement mechanisms. PNP directors were very interested in learning more about how the *Healthy Steps* initiative was seeking reimbursement mechanisms to expand the amount of time PNPs can allot to health promotion, child development and family issues. Almost all (95.8%) expressed an interest in this question.

Six directors added comments. Two reiterated their concerns about the influence of managed care on practice. As one director stated, "As I read this material and think about all the PNPs who are in practice, the big complaint I hear is 'productivity' or 'numbers' rather than quality." Two expressed great interest in receiving more information and another director wondered to whom the reimbursement would go, "...the managed care provider, the student, the School?" One director thought that the *Healthy Steps* reimbursement mechanisms were "not the best use of scarce resources for children 0-3 years.

Parents learn from day care staff and neighbors more than [from] nurses and physicians."

Familiarity with the *Healthy Steps* Program. More than half (54.2%) of this sample was not familiar with the *Healthy Steps* program before receiving this survey. Of those who were aware of the program, about half added comments. A few had limited knowledge of the program, and three had contact with Boston University, one of the research sites, or the *Pediatrics in Review* CD ROM. This exposure created interest. One director said that she was "positive but worried about how it can be realistically implemented." Another director noted that "(*Healthy Steps* is an) ideal program. I work in a poor city without resources. The PNP clinic that I was a part of until 1997 was just closed by the hospital since the doctors wanted the over 1300 patients these PNPs provided care to. We did the kind of care that this program talks about."

Healthy Steps program into their curriculum. Some mentioned that they have used the videotapes and others have incorporated Brazelton's Touchpoints into the curriculum. *Healthy Steps* materials were also presented through case presentations, role-playing and discussions. For example, role-playing, was utilized to teach students how to address children's behavior problems.

When asked what the *Healthy Steps* curriculum may add to a PNP program, there was a range of responses. Three emphasized the importance of specific content, such as, teachable moments and addressing parents' needs, such as substance abuse. One director commented that, "(the) *Healthy Steps* professional addresses family needs in a more comprehensive way." Two directors felt that either the specific curriculum was less important, ("What is important is that PNP curriculum prepares students to actively engage parents on issues related to behavior and developmental management"), or that it should reinforce what is already included in PNP education, ("[*Healthy Steps*] reinforces content already in our program. I don't see it as new at all. Valuable but not new"). One director said, "I'm not sure what we would give up in order to include the *Healthy Steps* curriculum."

***Healthy Steps* materials as potential enhancement of PNP education/ continuing education.** Approximately two-thirds (66.7%) of the sample felt that the *Healthy Steps* materials could enhance PNP graduate education and continuing education. About one-third of the sample was uncertain. Ten directors added comments. Three directors questioned whether there was sufficient time within the curriculum to add this specific program. A few of the directors felt that some of this content was incorporated into existing programs. One director was uncertain about the goal, "to teach PNPs to be *Healthy Steps* Specialists, to work with *Healthy Steps* Specialists, or to learn some of the *Healthy Steps* materials." Two directors felt that this was a nursing role. One stated that the role of the *Healthy Steps* Specialist is a nursing role," and the other stated, "I think nurses and PNPs could do most of these things without the specific *Healthy Steps* curriculum. It amazes me that pediatricians would hire a 'special-

When asked if clinical preceptors' participation in a *Healthy Steps* workshop would promote students' application of this information in clinical practice, 80% of the students either agreed or strongly agreed.

Current integration of the *Healthy Steps* Program into PNP education. Of the 10 directors (41.7%) who reported that they were previously familiar with the *Healthy Steps* program, 7 (29.2%) stated that they have integrated some portion into their current curriculum.

A few of the directors described how they have integrated portions of the

ist' in development rather than increase RN/PNP time...Why then hire a PNP?" Another director valued the approach and added, "I wholeheartedly endorse this approach...I have carried that approach with me to each PNP program in which I have taught. Family-focused, teachable moments, client advocacy, etc are all (our) approach to care...but I think there still may be sizable gaps between what students are taught and how they are practicing several years later."

Interest in *Healthy Steps* program and integration into PNP education.

A majority (79.2%) of the sample was interested in learning more about the *Healthy Steps* program, and almost all (87.5%) of the directors said they would consider with their faculty potential integration of the *Healthy Steps* program into their curriculum. In addition, 83.3% were interested in the findings of this pilot program.

Several directors reiterated previous themes: the value of this content, the education and preparation of PNPs in relation to health promotion, and the role of the *Healthy Steps* specialist. As one director commented, "As a practicing PNP for more than 20 years, I have always valued health promotion and prevention...I don't think *Healthy Steps* is that different from what we PNPs have been advocating for years. It is more formalized and has funding but growth and development screening and comprehensive anticipatory guidance have been essentials of PNP practice." Another director commented, "I feel nervous when I read about *Healthy Steps* Specialists as a 'new type of professional.' If nursing gives up this part of the visit, we will make a serious mistake." To address this dilemma, one director suggested, "...it seems that in the 'ideal world' PNPs would incorporate the components of *Healthy Steps* into all of their well child visits and ongoing health care. An interesting research study would be assessing the cost effectiveness of expanding time for PNP visits versus adding *Healthy Steps* Specialists to the PNP team."

DISCUSSION

This initiative examined the value of integrating the *Healthy Steps* curriculum into PNP graduate education. The project had two major components: a)

adaptation, delivery, and evaluation of the *Healthy Steps* Program for final year PNP graduate students and b) a survey of 24 PNP directors to assess their attitudes about PNP education, practice issues, and interest in the *Healthy Steps* Program.

More than half of the sample of PNP directors were not previously familiar with the *Healthy Steps* Program; however, those who were had already integrated some portion of the program into their curriculum.

The *Healthy Steps* Program emphasizes the value of comprehensive care for children and families during the first three years. PNPs have been providing high quality, comprehensive primary care for more than 30 years. The philosophical underpinnings and required competencies of PNP graduate education underscore the importance of holistic care that addresses the optimal health and development of children and families. Health supervision and counseling is one of the essential elements of the PNP role, and in their recent study, Brady and Neal (2000) reiterated the importance of strengthening these skills within PNP graduate education.

The YSN final year PNP graduate students who participated in this workshop reported that while they learned some new information, more importantly, the information and methodology reinforced their knowledge base and skills. In essence, the workshop served as a capstone experience. It not only reiterated key elements of their core curriculum but allowed integra-

tion at a point in their development, final year, when they were ready to fully understand and appreciate the value of the content. They unanimously supported integration of the curriculum into PNP graduate education. A pre-test/post-test demonstrated some increase in knowledge.

It is important to note that approximately 70% of this sample were GEPN students. Therefore, their experience in nursing, particularly pediatric nursing, was limited. The *Healthy Steps* curriculum may be of particular benefit for this group of students. The extent to which this curriculum might influence the knowledge and practice of more experienced graduate students and clinicians requires further study.

The majority of the 24 PNP directors who participated in the survey expressed concern about the effect of the managed care environment on PNP practice and the delivery of holistic, comprehensive pediatric primary care. PNP directors provided ample evidence of the depth and breadth of PNP education in several areas addressed in the *Healthy Steps* Program including: child development, family risk factors, teachable moments, linkages to community resources, developmental screening tools, and written materials. Overall, these educators noted that the programs provided less preparation in conducting parent groups and home visits and managing an information line.

More than half of the sample of PNP directors were not previously familiar with the *Healthy Steps* Program; however, those who were had already integrated some portion of the program into their curriculum. In addition, approximately two-thirds of the sample felt that the *Healthy Steps* materials could enhance PNP graduate education and continuing education. In order to consider integration or the development of a continuing education offering, they requested more information, such as the time and resources required to include this content in current programs, the potential for interdisciplinary training of PNP graduate students and pediatric residents, and the availability of a web-based or distance learning format.

Despite their interest in the curriculum, several directors expressed concern about the role of the *Healthy Steps*

Specialist. They perceived the Specialist as assuming some of the essential elements of the PNP role. They underscored a preference for allowing PNPs the time required to conduct a comprehensive health supervision visit that would incorporate elements of the *Healthy Steps* Specialist role. Almost all of the directors were interested in reimbursement mechanisms that would expand the amount of time during pediatric visits that PNPs can devote to health promotion, child development, and family issues.

Overall, this project demonstrated that an adapted version of the *Healthy Steps* Program enhanced the education of final year PNP graduate students. PNP program directors expressed strong interest in the Program, would potentially integrate some of the content into their curriculum, and expressed concern about the role of the *Healthy Steps* Specialist vis a vis the role of the PNP.

For more information about the *Healthy Steps* program, materials, trainings, and PNP clinicians engaged in *Healthy Steps'* practices, check www.healthysteps.org.

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