



The Financial Impact of a Clinical Academic Practice Partnership

EXECUTIVE SUMMARY

- ▶ New strategies to provide clinical experiences for nursing students have caused nursing schools and hospitals to evaluate program costs.
- ▶ A Microsoft Excel model, which captures costs and associated benefits, was developed and is described here.
- ▶ The financial analysis shows that the Clinical Academic Practice Program framework for nursing clinical education, often preferred by students, can offer financial advantages to participating hospitals and schools of nursing.
- ▶ The model is potentially a tool for schools of nursing to enlist hospitals and to help manage expenses of clinical education.
- ▶ Hospitals may also use the Hospital Nursing Unit Staffing and Expense Worksheet in planning staffing when students are assigned to units and the cost/benefit findings to enlist management support.



Mary Ann Greene

THE DEVELOPMENT OF THE Clinical Academic Practice Program (CAPP) at the Johns Hopkins School of Nursing was led by a team of faculty in 2009. Based on the Dedicated Education Unit (DEU) model developed at the University of Portland, CAPP provides a rich practice environment for nursing students to gain clinical experiences in their clinical coursework.

During their hospital CAPP assignments on hospital units, one or two nursing students are paired with staff nurse preceptors. The preceptors instruct, supervise, and monitor the students' practice in the clinical settings. The CAPP clinical teaching model was welcomed by students who perceived it to be a way to learn how to be a "real nurse."

With CAPP, the traditional role of faculty in directly managing up to eight students in the hospital setting is changed. Clinical nursing faculty "precept preceptors" while direct clinical instruction is conducted by clinical staff nurses whose roles as precep-

tors is in addition to their regular patient responsibilities on the hospital units. The final clinical evaluation of student performance is conducted by the faculty with major input from the preceptors.

Nursing leadership at potential partnering hospitals was eager to participate in the new model for nursing education, but was very concerned about the financial impact. If additional staff were needed to supplement patient care while nurse preceptors worked with the nursing students, the hospital nursing leadership believed they might not be able to participate.

Fortunately, despite concerns, the Johns Hopkins School of Nursing enlisted a core group of four hospitals, including three hospitals affiliated with the Johns Hopkins Health System and one independent hospital. To address the cost issue and potential benefits, a team consisting of financial and nursing leadership at Johns Hopkins was organized.

Of note, the University of Portland School of Nursing found their existing DEUs did not require additional staff and were considered budget neutral. Furthermore, benefits in nurse satisfaction, retention, recruiting, professional development, and control of practice were demonstrated. Randles Moscato, Miller, Logsdon, Weinberg, and Chorpenning (2007) cite significant intangible benefits of increased teamwork, open communication, critical conversations, interdisciplinary collaboration, and safety.

The Advisory Board Company (2008) estimates the total annual cost of running the DEU at the Providence Portland Medical Center in Portland, Oregon was \$24,000 per year, primarily due to the costs of a mandatory education day for the nurse preceptors (and the associated backfill) as well as a differential paid to each of the front-line nurse instructors during the hours of nursing student preceptorship.

The University of Portland School of Nursing anticipated the CAPP program would allow greater enrollment of student nurses due to an increased faculty capacity for managing clinical education.

Methodology, Assumptions, and Findings

A literature search was conducted using multidisciplinary databases including the Education Resources Information Center, the Cumulative Index to Nursing and Allied Health Literature, and Google. Key words and phrases included *preceptorship*, *practicum costs*, *practicum cost analysis*, and *health facility costs of nursing students*. No literature relating

MARY ANN GREENE, DNP, RN, NEA-BC, now retired, was Director of Education and Practice at Johns Hopkins Bayview Medical Center, Baltimore, MD. During her career, she held many positions in nursing, including positions in academic and practice settings.

JAMES TURNER, MBA, is a Senior Financial Manager, Johns Hopkins Health System, Baltimore, MD.

to a comprehensive cost/benefit study of a CAPP unit was found. Without guiding precedent, our team began by interviewing nurse managers involved with the Johns Hopkins program, including every nurse manager who had hosted CAPP students. School of nursing faculty were also interviewed to determine potential effects of CAPP on the school. Nine managers of the units with CAPP students from four different hospitals were interviewed. Questions included:

1. What was the impact on staffing when CAPP nursing students were assigned to nurses on your unit?
2. What is the usual nurse-to-patient ratio on the unit?
3. What benefits are anticipated from participation in the CAPP nursing education project?
4. What expenses were incurred for the CAPP preceptors' education and other programs associated with the CAPP project?

The goal was to build a model in an Excel format that would reflect cost savings and expense to the school of nursing and to the participating hospitals. With input from hospitals and nursing school leadership, the financial staff built an Excel model to provide a flexible means for all CAPP units and the school of nursing to estimate program costs and benefits. If, for example, a nursing unit evidenced some benefit from reduced attrition of newly hired graduate nurses, values could be set in the Excel program to reflect that benefit. Values such as unit-specific nurse staffing levels, patient census, and nurses' salaries are entered on the Hospital Nursing Unit Staffing and Expense sheets of the CAPP financial model. The number of students assigned to given units for the academic terms (spring, summer, and fall) are also entered, and values are input on several other schedules. The model calculates the resulting costs and benefits to the hospitals and the school of nursing, and a summary sheet displays the calculated results.

Hospital Savings, Benefits, and Expense

Savings and benefits. Hospital savings and benefits were identified based on some findings in the literature (Blum, 2009) and actual experience. Improved productivity of new-graduate CAPP nurses is anticipated to potentially result from better-prepared nurses who tend to orient to the hospital more quickly and become more productive sooner than nurses who do not participate in CAPP. The Excel model allows the user to indicate a period of greater productivity for newly hired students who benefit from CAPP. The model also allows for a reduction in attrition rates and resulting savings for nurses who are starting their careers on the basis that CAPP education can better prepare students.

Expense. As noted, the calculations were based on several factors, including the number of students assigned to each unit, the normal patient load per nurse, the reduction (if any) of patients that would be assigned to nurses while in the role of preceptor, and the capacity of other nurses to pick up additional patients. If that capacity were exceeded, then it would be necessary to augment the nursing staff during the shift.

Experience has shown that after 1 or 2 weeks of students being assigned to units, the impact on operations diminishes because the staff and students adjust. We found no instance where it was necessary to augment staff. This was somewhat surprising because that was one of the early causes for concern about CAPP.

Other factors affected hospital costs, specifically, compensating preceptor nurses when they were being oriented to the CAPP program, course-specific training, and compensating nurses when they took part in an annual appreciation workshop. While it was possible to vary assumptions for each hospital, for purposes of the study we assumed every preceptor nurse would receive initial role training for which she or he were paid. They would also be compensated for 2 hours of course-specific training, and for an 8-hour annual appreciation workshop.

Net benefit: Savings and benefits less expenses. The Program Savings and Benefits Summary shows each participating hospital's "Hospital Savings and Benefits" and "Hospital Expense" for the categories discussed (see Figure 1). In the attached example, Hospital A's anticipated financial gain from productivity improvement of hired graduate nurses who participated in CAPP was estimated to be \$8,237. The savings from reduced attrition of hired graduate nurses who participated in CAPP was \$13,000 for total savings and benefits of \$21,237. The user of the model can set parameters to increase the estimates or eliminate them entirely. For all four participating hospitals, the combined financial savings and benefits from all sources was \$52,437.

"Hospital Expense," again for Hospital A, is zero for "Hospital Unit Staffing and Expense" because there was no need to hire supplemental nurses while CAPP students were on the units. Other categories of expense for Hospital A were associated with preceptor training and appreciation, which consisted of compensating preceptors while they attended training and appreciation sessions. Those expenses were \$3,200 for training new preceptors, \$1,440 for course-specific preceptor training, and \$2,880 for preceptor appreciation workshops, for a total of \$7,520. The total estimated expense associated with CAPP for all hospitals combined was \$18,080.

The difference between the savings and benefits for all hospitals of \$52,437 and the total expenses of \$18,080 is \$34,357, which represents the net financial benefit of CAPP to the participating hospitals.

Figure 1.
Johns Hopkins School of Nursing
Clinical Academic Partnership Program
Program Savings, Benefits, and Expense Summary

Hospitals	Hospital A	Hospital B	Hospital C	Hospital D	Combined
<i>Hospital Savings and Benefits</i>					
I. Productivity Benefits of Hired Graduate Nurses	\$8,237	\$3,900	\$3,900	\$3,900	\$19,937
II. Reduced Attrition of Hired Graduated Nurses	13,000	6,500	6,500	6,500	32,500
Total Savings and Benefits	\$21,237	\$10,400	\$10,400	\$10,400	\$52,437
<i>Hospital Expense</i>					
I. Hospital Unit Staffing and Expense					
II. Preceptor Training and Appreciation					
a. New preceptors requiring initial training	3,200	1,280	2,304	512	7,296
b. Course-specific training	1,440	960	1,024	384	3,808
c. Preceptor appreciation workshop	2,880	1,280	2,048	768	6,976
Subtotal	7,520	3,520	\$5,376	1,664	18,080
Total Expense	\$7,520	\$3,520	\$5,376	\$1,664	\$18,080
Net Savings and Benefits (Less Expense)	\$13,717	\$6,880	\$5,024	\$8,736	\$34,357
School of Nursing	Hospital A	Hospital B	Hospital C	Hospital D	Combined
<i>School of Nursing Savings and Benefits</i>					
I. Cost Avoided for Supplemental Faculty	\$1,219	\$5,484	\$3,250	\$3,656	\$13,609
<i>School of Nursing Expense</i>					
I. Preceptor Training Expense % ¹	38%	19%	35%	8%	100%
a. Allocated preceptor training expense	155	78	140	31	404
II. Preceptor Appreciation Workshop Expense % ²	36%	20%	32%	12%	100%
	540	300	480	180	1,500
Total Expense	\$695	\$378	\$620	\$211	\$1,905
Net Savings and Benefits (Less Expense)	\$524	\$5,106	\$2,630	\$3,445	\$11,704
Hospitals and School of Nursing Combined	Hospital	Hospital	Hospital	Hospital	Combine
Hospital Net Savings and Benefits (Less Expense)	\$13,717	\$6,880	\$5,024	\$8,736	\$34,357
School of Nursing Net Savings and Benefits (Less Expense)	524	5,106	2,630	3,445	11,704
Net Savings and Benefits (Less Expense)	\$14,241	\$11,986	\$7,654	\$12,181	\$46,061

NOTES:

¹ Percent of new preceptors needed (requiring initial training)

² Percent of preceptors needed

The School of Nursing: Savings, Benefits, and Expenses

Savings and benefits. The increased capacity of faculty to manage nursing students when assigned to nursing units during their coursework was considered to be the most important savings of CAPP. In the traditional teaching arrangement, faculty supervise up to eight students in clinical settings. This limits the time they can devote to each student. Students are required to wait for faculty to manage nursing activi-

ties, including medication administration, treatments, and documentation. With the CAPP model, faculty precept the nurse preceptors on each of the units, and the preceptors work directly with the students. The CAPP faculty manage as many as eight preceptors who in turn may manage two students each. Thus, through this arrangement, a faculty member can indirectly manage 16 students instead of managing eight directly.

While the increased productivity of faculty frees up faculty time for activities such as research or evidence-based practice, the financial benefit to the school of nursing for purposes of the financial model was assumed to derive from the reduced requirement and expense of hiring supplemental clinical faculty.

The school of nursing expense savings associated with Hospital A was \$1,219, and for all hospitals combined was \$13,609.

Expense. School of nursing expenses for the CAPP program included the resources required for orienting and educating preceptors for their role in the program and for providing course-specific training. (In-person facilitated CAPP preceptor education has been used to date, although more on-line education is anticipated.) In addition, an appreciation workshop is held annually at the school of nursing as thanks to CAPP preceptors for participating in the program.

CAPP preceptor education focuses on strategies of adult learning, the specific content of CAPP courses, and evaluation of clinical performance. At the appreciation workshop, items of interest to the preceptors are presented. Recent topics have included communication skills, time management skills, managing challenging students, and the use of simulation for clinical experience. At both the orientation and appreciation sessions, nurse preceptors hear presentations from expert speakers and are provided a meal. The school of nursing assumes the costs. With refer-

ence again to Hospital A, the school of nursing expenses for preceptor training and appreciation was \$695. For all four hospitals the expense was \$1,905.

Net benefit: Savings and benefits less expenses. The Excel spreadsheet calculated the savings from avoiding the employment of supplemental faculty. The savings more than offset the school's cost of educating preceptors and offering the appreciation workshops.

Savings for the school of nursing were estimated at \$13,609. The total expense for orientation and training of preceptors and providing appreciation workshops was estimated to be \$1,905 (a low cost because, except for providing refreshments and course materials, the school of nursing uses existing resources and faculty). The net financial benefit of CAPP to the school of nursing, based on savings of \$13,609 and expense of \$1,905, was \$11,704.

Recently, the school of nursing has offered participating CAPP preceptor nurses credit courses at the Johns Hopkins University upon completion of a specified number of clinical hours. This cost was not considered and preceptors have not yet used the free credit courses.

The Hospitals and School of Nursing Combined

The program "Savings, Benefits, and Expenses" summary in the model (see Figure 1) presents the findings for each of the participating hospitals and the school of nursing. It also rolls up the system-wide experience. From the nine nursing units among four hospitals that were included in the study and from the school of nursing, the net financial result for CAPP was \$34,357 favorable for the hospitals and \$11,704 favorable for the school of nursing, for an overall net favorable result of \$46,061 in 2011.

Conclusion

The financial analysis shows the CAPP framework for nursing clinical education, often preferred by students, can offer financial advantages to participating hospitals and schools of nursing. The model is potentially a tool for schools of nursing to enlist hospitals and to help manage expenses of clinical education. Hospitals may also use the Hospital Nursing Unit Staffing and Expense Worksheet in planning staffing when students are assigned to units and the cost/benefit findings to enlist management support. **\$**

REFERENCES

- Blum, C. (2009). Development of a clinical preceptor model. *Nurse Educator*, 34, 29-33.
- Randles Moscato, S., Miller, J., Logsdon, K., Weinberg, S., & Chorprenning, L. (2007). Dedicated education unit: An innovative clinical partner education model. *Nursing Outlook*, 55(1), 31-37.
- The Advisory Board. (2008). *Bridging the preparation practice gap*. Washington, DC: Author.
- University of Portland. (n.d.). *University of Portland School of Nursing DEU symposium questions and answers*. Retrieved from <http://nursing.up.edu/showimage/show.aspx?file=9617>