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Development and Testing of a Practicum Matching Program  
for Baccalaureate Nursing Education and a Local Public Health Unit

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#### ABSTRACT

This article describes a novel approach to nursing education, designed to improve the experience of both students in public health nursing, and the local public health unit where they affiliate. Students, faculty, and public health department staff developed a method for matching programs and needs of the local public health unit to the skills and learning needs of nursing students. We describe our experience articulating student competencies, program-specific functions, and an approach to matching student interests and learning opportunities to agency needs. Students, faculty, and staff rated the program moderately to very high in feasibility, satisfaction, and acceptability. Data suggest the novel program served to improve the quality of the practicum affiliation, to the satisfaction of both the school and agency, while contributing to a robust public health learning experience for emerging professional nurses.

Key words: undergraduate nursing education, public health nursing education, community health nursing

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Baccalaureate nursing education in an accredited US program includes a practicum in community or public health (American Association of Colleges of Nursing, 2008). This experiential learning activity commonly involves an affiliation with a local public health unit. Faculty and local health unit staff are both challenged to provide high-quality learning experiences for students, as factors in each nursing education program and public health unit create complexities for learners, agency preceptors, and faculty (Schaffer, M.A.; Schoon, P.M.; Brueshoff, 2017). Kolb and colleagues have described experiential learning as an educational approach designed for the adult learner; compared to other learning activities, it is more relevant, meaningful and engaging for participants and facilitators (Kolb, A. Y., & Kolb, 2008). The successful matching of nursing students to public health programs has the potential to contribute to a mutually beneficial relationship in which students learn valuable skills, and concurrently augment the capacity of the local public health unit (Davis, R.A.; Gustafson, 2015). Furthermore, students who have an enriching practicum experience in public health are more likely to garner an interest in the field and consider a future career in public health nursing (Escobar, J.; Bazini-Barakat, N.; Dickow, M.; Steffy, M.; Greiner, 2017). The purpose of this article is to describe a method for matching services and needs of the local public health unit to the skills and learning needs of pre-licensure baccalaureate nursing students.

## **Introduction**

Baccalaureate nursing education in an accredited US program includes a practicum in community or public health. This experiential learning activity commonly involves an affiliation with a local public health unit. Faculty and local health unit staff are both challenged to provide high-quality learning experiences for students, as factors in each nursing education program and public health unit create complexities for learners, agency preceptors, and faculty. The successful matching of nursing students to public health programs has the potential to contribute to a mutually beneficial relationship in which students learn valuable skills, and concurrently augment the capacity of the local public health unit. Furthermore, students who have an enriching practicum experience in public health may be more likely to garner an interest in the field and consider a future career in public health nursing. The purpose of this article is to describe a method for matching services and needs of the local public health unit to the skills and learning needs of pre-licensure baccalaureate nursing students.

## Background

Nursing education programs have received criticism for excessive focus on an acute care model, at the expense of development of skills and experiences that prepare them to participate in wholesale 21st-century healthcare system reform (Institute of Medicine, 2011). Placement of baccalaureate nursing students in a local public health unit offers potential advantages to students as well as agency personnel and clients. Nursing students are afforded collaboration with skilled public health nurse role models, and exposure to previously unfamiliar programs and services that include nursing roles. Furthermore, student placements may augment the work of agency staff in a climate where financial support for services is increasingly threatened, and ongoing shortages threaten the ability of local units to meet the health needs of communities (American Public Health Association, 2013). However, these benefits are balanced by a number of challenges presented by both the educational program and the agency.

*College factors.* Baccalaureate nursing education programs design learning experiences to include practice in population-focused care (Callen et al., 2009; American Public Health Association, 2013; Cravetz, Krothe, Reyes, & Swider, 2011). While the practicum in public health relates to many elements of these professional standards, including emphasis on health promotion and disease prevention, provision of care to the population as client, and commitment to the health of vulnerable populations, these guidelines can be operationalized in many different ways. Traditionally, nursing education programs overall have been acute-care focused, limiting the community/public health experience to the junior or senior year. Student assignments to the agency are time-limited, generally one semester, and multiple nursing education programs may use the agency for practica, concurrently or in rotation, involving a variety of teaching faculty that may change from semester to semester. Small groups of students from a single program cohort may be assigned to several different public health units.

*Public Health Unit Factors.* Local public health units affiliating with nursing education programs can be challenged in several ways. First, the unit may affiliate with multiple nursing education programs, each with a different degree program, curriculum, expectations, learning objectives, learning activities, and course requirements. In smaller local public health units, agency capacity within any single program or service may be limited to one or two students.

*The Assignment Process.* These factors contribute to challenges in designing community and public health learning experiences that are well-matched to the learning needs and interests of students. There is no standard method for assigning students to the multiple

potential programs and services offered through the local public health unit. Students may rotate through several services, or may be assigned (by self-selection or other method) to a single program or service for the duration of the practice experience. The assignment process represents an underutilized opportunity to match student knowledge and skills with agency needs. Attending to this assignment process may improve both the quality of the student learning experience as well as augment the capacity of the unit to meet population health needs. Thus, developing a system for matching students to unit programs and services may be mutually beneficial to the nursing education program as well as the public health unit. The purpose of this report is to describe the authors' experience with the development and initial testing of a novel method of assigning baccalaureate nursing students to learning activities in the local public health unit, to the benefit of students, faculty, agency staff, and public health clients.

### **Methods**

We initiated a matching program for students and agency staff using a quantitative non-experimental descriptive design. The local public health agency participating was a Midwestern agency serving a county with a population of 160,000. The participating school of nursing was housed in a major Midwestern public university. We invited both students and staff to describe what they bring to the public health practicum. Students composed a profile of themselves as a group, describing their program of study, current progress in the program, and competencies (knowledge and skills) that may be relevant to their experience in the public health unit (Figure 1). Concurrently, agency staff described various programs and services (Figure 2). Faculty served as interpreter, coaching both groups in refining their descriptions to meet the needs of the other. The matching process was followed by a satisfaction survey, where participation was voluntary, and no incentives were given.

The resulting document included the necessary elements for matching nursing student interests and competencies with public health agency needs and opportunities (Figure 1). The student profile includes a brief description of the education program as a whole, students' rank in the program, the practicum course (i.e., its learning objectives and relevant assignments), student clinical skills and previous practice experience, and a list of any skills not permitted for student performance (e.g., blood draws, taking physician verbal orders). Concurrently, the public health unit created a profile of programs and services, describing client characteristics, program services, specific practice activities appropriate for students, and the number of students each program or service can accommodate.

Agency personnel and nursing education program faculty collaboratively implemented the innovative matching process in winter, 2020. The matching process began with public health program personnel creating a document describing each of the agency programs available for student assignment (e.g., environmental health, health education/health promotion, and personal/preventive health services), description of clients, and anticipated student activities. Similarly, nursing program students collectively created a document describing the group's current practicum course, previous clinical placements, and clinical skills relevant to the public health experience. Once verified, copies of the documents were exchanged between education and service organizations as part of student orientation to the agency. Next, students reviewed the agency profiles, using the information to inform their program selection. Students "bid" for an available program/service placement, listing their preferences (in order). Faculty used student preferences to make program assignments.

Following implementation, participants (students, faculty, and agency staff) were invited to respond to a questionnaire querying about the feasibility and acceptability of the innovative program. The survey was developed by the investigators for use in the study, and included 12 multiple-choice items, with fields for adding comments. The survey was administered anonymously online. We analyzed survey results using descriptive methods.

#### Ethical Consideration

The project protocol (HUM00175588) was reviewed by the affiliating university IRB, and was deemed exempt and not and regulated.

#### **Results**

A description of participants is summarized in Table 1. Most participants were White, non-Hispanic women. There was more diversity in the student-faculty group than the agency staff group.

Results of the post-intervention survey of feasibility and acceptability, administered at the end of the practicum, are summarized in Table 2. Response rates were very high (100%) in the student/faculty group, but much lower (40%) in the agency staff group. Measures of feasibility and acceptability were high in both student/faculty and agency staff groups. The most favorable responses were in regard to time requirements of the matching process (i.e., preparation, implementation, and maintenance), with nearly all respondents indicating time was well-justified. The least favorable response was regarding improved expectations for the experience, with half of respondents indicating that use of the matching process resulted in them being more able to accurately set their expectations.

## Discussion

The innovative matching process accomplished several goals. First and foremost, it engaged the public health department and nursing education program in a collaboration that did not previously exist. This collaboration featured a dialogue between students, faculty, and agency staff to articulate what both parties offered to the relationship, and the respective needs of both groups. The resulting collaboration is of potential benefit to students, faculty, agency staff, and clients. In addition, the process challenged nursing students to reflect on and articulate their summative nursing competencies and learning needs for use by public health nursing staff in planning experiences for students that are well-suited to their level of professional development to date. Furthermore, students found that the agency description of programs was explicit in articulating specifics of agency programs and services, enhancing the orientation experience and expediting the transition from orientation to practice.

(Kolb, A. Y., & Kolb, 2008). While the authors recognize the benefits of extending the test to a larger sample, given the limitations to both education and public health agencies imposed by the sudden and unexpected COVID-19 pandemic, the prospects of expanding sample size are remote. Although the current case study is specific to one nursing education program, it can serve as a template for future development of similar matching programs for other nursing education programs in the same (or other) agencies, including but not limited to public health.

We anticipate that the program would be easily adapted to different education programs, changes in curriculum, and agencies, and would offer benefits similar to those seen in this case. The matching program assisted in communicating mutual expectations of both the educational institution and public health unit for future development of the practicum affiliation. Multiple experts have called for improved collaborations between public health agencies and schools of nursing, including the Quad Council of Public Health Nursing Organizations (Swider, S.M.; Krothe, J.; Reyes, 2013). The profile documents and related matching experiences were deemed useful for planning learning activities that are complementary to the student's competency and curriculum, and expediting the student role in applying their learning to practice. Students perceived advantages to the clear articulation of expectations for each program and service, resulting in lower student concerns about meeting agency expectations. Consistent with learning theory (Kolb, A. Y., & Kolb, 2008), and as part of the experience, students engaged in reflection about their professional development, the relevance of their skills to practice, and articulating their potential role to nurses and other disciplines in the agency.



Students also valued the opportunity that the matching experience offered in learning about the unique functions of the various agency programs and services, particularly those services that were not selected for their assignment, enhancing their understanding of the public health agency.

### Conclusion

Providing future nurses with practice opportunities in public health will remain essential in helping them apply didactic learning in real world settings. The collaborative learning effort described here gave the local public health unit an improved structure to communicate the multiple and diverse needs of their constituent population. It has also enabled the public health unit staff to learn from the student's perspective what will help them be successful in their practicum placement. This collaboration is expected to allow future students a more detailed preview of programs and services so they can choose a practicum experience that is well suited to their needs and interests. We anticipate that a continued collaborative relationship between students and the local public health unit will continue to provide unique experiences based on having developed a well-defined, goal orientated plan for student objectives and outcomes.

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Table 1. Participant Demographics

	Students & Faculty (n=17)	Agency Staff (n=2)
Race (%)		
White	15 (88)	2 (100)
Non-white	2 (12)	0 (0)
Ethnicity Hispanic (%)	1 (6)	2 (100)

Gender (%)		
Man	3 (18)	0 (0)
Woman	13 (77)	2 (100)
Non-binary	1 (6)	0 (0)

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Table 2. Feasibility and Acceptability Ratings

Feasibility	Frequencies
1. Time for training	
was too much	0
somewhat too much	1
was well-justified	16
2. Complexity of tool	
had too many parts	3
was about right	17
not detailed enough	0
3. Time to prepare tool was well-justified	
was too much	0
was about right	2
not enough	17
4. Time to implement was	
more than it's worth	0
somewhat more than it's worth	3
well-justified	10
5. Time to maintain tool is	
more than it's worth	0

somewhat more than it's worth	1
well-justified	18
6. Tool enhances student engagement with staff	
significantly	5
somewhat	11
does not appreciably enhance	5
7. Tool increases student application of learning in public health	
significantly	6
somewhat	9
does not appreciably enhance.	3
<b>Acceptability</b>	
1. I would recommend matching tool for future student groups	
definitely, perhaps with minimal changes	13
with significant revision	5
would not use again	1
2. With use of the matching tool I...	
more accurately set expectations	9
did not change expectations	8
set expectations too high	1
set expectations too low	1

Students assigned to this practicum site are enrolled in NURS 456 Community Health Nursing Professional Nursing Education Section 410. This 1-semester, 6-credit course is designed to help students learn and apply the different functions of the public health department to the nursing field, work one-on-one with public health agency staff to provide services to the public, and understand the role of a health department in the realm of public health. Small groups of students are assigned to supervised practice. A copy of the course syllabus (including learning objectives) is provided separately.

**Program rank:** Undergraduate, senior level

**Clinical skill competencies:** Administering medications (oral, IV, injection, etc.); head-to-toe assessments including vital signs; comprehensive planning of care based on client needs; body system- specific assessments (neuro checks, etc.); health history collection; client interviewing (for health history, mental health interviews, mental status exams); interprofessional practice and working on a team; assist with ADLs; individual and group health education on a variety of topics; principles and selected methods of health screening; administration of immunizations & medications (with faculty pre-approval and supervision); nutrition history collection and assessments (for pregnant women, postpartum women, infants and children ages 1-5); weighing and measuring infants, children, pregnant and postpartum women; growth assessments for infants and children ages 1-5; pregnancy weight gain assessments; comprehension and interpretation of rapid lab test results (lead, hemoglobin, etc.); individual/family counseling for basic nutrition and general health concerns; referral to community agencies for medical, social, and emotional needs.

**Not permitted:** blood draws, take physician verbal orders

**Previous clinical experience and competencies:** Acute care (medical-surgical [3 semesters], pediatrics, obstetrics, psychiatric/mental health)

### **Course objectives**

1. Utilize appropriate methods for interacting sensitively, effectively, and professionally with individuals and groups from diverse cultures, socioeconomic, educational, racial, and ethnic backgrounds and persons of varying age groups and lifestyle preferences when providing community nursing services that promote, maintain, and restore health.
2. Integrate appropriate concepts, theories, data, and knowledge from nursing and public health sciences to make clinical judgments about health care delivery issues and potential solutions to community and environmental health issues and potential solutions.
3. Demonstrate family, aggregate, community, and environmental health assessment skills that integrate nursing and public health sciences.
4. Mobilize agency and community resources and partnerships in providing community health nursing care.
5. Demonstrate responsibility and accountability in independent practice in home and community settings.
6. Understand the roles of public health professionals and community members in the delivery of community care and demonstrate skill in multidisciplinary service provision.
7. Advocate for persons and groups needing health and health-related care

**Learning activities (assignments)**

1. Nursing Care of an Aggregate. In pairs or small groups, students use their public health nursing skills to promote the health of a selected group or population. Must be planned, implemented, and evaluated within the 6-week assignment to the agency.
2. Community Assessment. Students work as a group to holistically assess the community's health needs and strengths.

Figure 1: Sample Course Description and Student Profile

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Program, Preceptor & Location	Description of Clients and Services	Opportunities for Student Contributions
<p>Program name: Sexual Health</p> <p>Preceptor: Jennifer Mecomber</p> <p>Location: JCHD Room 028</p>	<p>Clients include high school &amp; college students, sexually active adults from wide SES and diverse sexual identities; uninsured &amp; underinsured; anyone seeking HIV or other STI testing</p>	<p>*Use electronic screening tool (i.e., Jackson Care Hub) to screen sexual health clinic and other clients for needs (e.g., substance abuse &amp; mental health treatment, housing, food) and facilitate referrals to a variety of local social services.</p> <p>*Assist with disease and health event case investigations (e.g., outbreak, contact tracing), e.g., for TB, Campylobacter, chicken pox, foodborne (excluding STDs); Participate in planning and implementing increased monitoring around community special events (e.g., festivals, fairs), which are associated with increased risk of communicable disease transmission.</p> <p>*Assist with STD case investigations</p> <p>*Collect pathology specimens (e.g., vaginal swabs, urine); use lab equipment (e.g., blood centrifuge, microscope) to process specimens (e.g., pg tests) &amp; prepare wet mount slides.</p> <p>*Administer immunizations via various routes (IM, SQ, ID)</p> <p>*Assist in implementation of antiviral therapy to eligible clients for use with sexual partners (i.e., Expedited Partners Therapy).</p> <p>*Evaluate vaccine records for completeness; screen clients; make recommendations for immunizations and tuberculin skin testing using CDC best practices guidelines for timing, spacing, contraindications, precautions, storage and handling of immunobiologics; administer &amp; record vaccines; teach clients re: post-immunization self-care; identify high-risk &amp; underserved populations &amp; use non-judgemental collaboration to provide immunization and other resources.</p> <p>Maximum number of students accommodated: 2</p>

Figure 2. Sample Agency Program Profile