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Use of the Public Health Nursing Bag in the Academic Setting.

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Use of the Public Health Nursing Bag in the Academic Setting

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Abstract:

The nursing bag has been a vital tool for public and community health nurses since the early 1900s. However the practice of utilizing the nursing bag has declined. This study sought to determine if the practice of teaching students to use a public health nursing bag when making home visits should continue.

Deans and directors of all schools of nursing with baccalaureate programs listed on the Commission on Collegiate Nursing Education (CCNE) website (n=437) were e-mailed an exploratory, descriptive self-report survey. Although 32% of responding schools continued to utilize a standard public health bag during home visits, the majority did not. Lack of use of the bags was primarily related to cost and the lack of research demonstrating its efficiency in enhancing the home visit and its value in promoting infection control.

The researchers concluded that they would continue to teach the use of the public health nursing bag. It provides a receptacle for equipment and supplies, reinforces the need to be prepared for a variety of situations, and serves as a reminder that handwashing is a routine part of every client’s care, regardless of setting.

Key words: Public health nursing education, public health nursing bag, home health care
Introduction

The nursing bag is and has been a vital tool for public health and community health nurses since the early 1900s. The bag contains the fundamental content for a home visit. It includes supplies that promote a comprehensive assessment when an unexpected situation arises. The bag offers immediate access to infection control supplies such as those needed for handwashing and barrier protection. Throughout its history, the bag has also been noted for providing a means of recognizing the nurse in the community. However, the practice of utilizing a nursing bag has decreased. Should the practice of teaching students to use a public health nursing bag during home visits continue? Public health nursing faculties in baccalaureate nursing programs in the United States were asked whether or not they continue to utilize the nursing bag in their public health courses and the rationale for their action.
**Literature Review**

The nursing bag has been a tool used by visiting nurses in the United States since public health nursing’s inception as a field of practice in the early 1900s. Nurses at the Visiting Nurse Association of Chicago packed their bags before leaving for a day of home visits, tailoring the contents to the types of visits to be made. If a maternity client was to be seen, oakum pads to be used as sanitary pads were part of the supplies added to the bag (Moore, 1900). The Nurses’ Settlement in New York [Henry Street Settlement] “after much experimentation evolved a district nurses’ bag which seems quite complete” (Brewster, 1901, p. 769). Public health nurses, under the guidance of Lillian Wald and Mary Brewster, stocked their leather bags with towels, thermometers, and dressings, along with an array of medicines to be dispensed. Contents were spelled out in some detail: “One three-ounce bottle for alcohol; five one-ounce bottles containing respectively listerine, whiskey, glycerine, tincture of green soap and carbolic acid, ninety-five percent; one wide-mouthed bottle with a screw-top ...” (p. 769-770).

Outstanding students at Memorial Hospital Training School, Richmond, Virginia were given a nursing bag and outfit at graduation (Training School Notes, 1905). The bag became an integral part of the district nurses’ image as reflected in C. Keith’s remarks in 1905: “They come to know the nurse, they know her face, and the bag she carries.” (p 603). Use of the nursing bag became routine and was therefore featured in promotional literature. The Chicago case, made of the “best Morocco leather” was included in a 1918 surgical instruments and supply catalogue and could be purchased for $10 (Hitchcock, 1935). Many of the photographs of early public health nurses show the bag, either being carried by the nurse or open and in use in the home.

The *Manual of Public Health Nursing* provided public health nurses throughout the country with standardized lists of nursing bag supplies and information on suggested care and
use of the bag (The National Organization for Public Health Nursing, 1939). Items in the bag were modified over time but not without being carefully considered by agency personnel. The substitution of liquid pHisoDerm for bar soap and the addition of a hand brush were vigorously debated by one agency due to the additional weight these added to the bag (Bonney, 1955).

Contents in bags continued to change over the years. The proliferation of disposable items led the public health nurses at Allegheny County Health Department (Pennsylvania) to replace “the bulky, heavy, old bag” with a “smart, new nursing bag.” “We know, however, that periodically the [nursing bag] committee will have to be reactivated to evaluate its continuing efficiency and make changes as they are needed because of changing service responsibilities” (Everett, 1965, p. 95). Devlin (1984) asked district nurses in England what they carried in their bags and found that nurses were individually stocking a wide array of items to be used in their practice, including a screwdriver, colored pencils, and a ball of string, items not noted in other lists of bag contents.

Proper bag technique for infection control, introduced in a 1956 article by Smendik and Kurtagh, included distance of bag from client, use of newspaper as a barrier, and an emphasis on handwashing. In 1961, a public health nurse explaining how to provide more effective shigellosis control to families used the contents of her nursing bag to demonstrate handwashing and specimen management (Levin, 1961). A self-instructional unit, Nurse’s Bag Technique, was published by UCOM Educational, Inc. in Rochester, New York, in 1970 to allow public health nurses and student nurses to learn appropriate bag technique based on the principle of asepsis and to understand the use of the basic equipment in the nurse’s bag (Sullivan and Weber, 1970).

Noting that nursing literature in the mid 1960s “ceased to describe the bag lovingly and as a symbol of pride,” (p. 380) Shamansky and Hamilton (1980) raised the issue, “Is the Public
Health Nurse’s Bag an Anachronism?” (p. 379) and asked that nurses think carefully before abandoning the public health bag which has long been a symbol of this field of practice.

Having observed that agency use of the nursing bag appeared to be declining in both public health departments and homecare organizations, Posey, Aaltonen, DePalma, and Femae (1987) conducted a survey of baccalaureate public health nursing faculty to ascertain how many schools were teaching bag technique. They investigated the use of the standard nursing bag and the practice of asepsis for students making home visits at a time when a number of community agencies no longer encouraged the use of the nursing bag. Their study revealed that of 62 responding schools, 66% used a standard public health nursing bag during their community clinical experience. Furthermore, the survey revealed that 62% reported that the school faculty were responsible for teaching bag technique to the students with only 41% evaluating the students on the use of the bag. Faculty determined that the inclusion of use of the bag within the curriculum was not obsolete and the nursing bag provided students with an essential, organized reservoir for supplies as well as an effective tool to promote the practice of infection control.

As an outcome of the 1987 survey, Posey and her colleagues produced an instructional video, *The Nursing Bag*, that was marketed across the country to over 400 schools of nursing and homecare agencies in the mid-1980s with a second edition released in 1991. A viewing guide provided sample written procedures for nursing bag technique and the care of the bag along with a self-test to assure that viewers met the instructional objectives (Posey, Aaltonen, and DePalma, 1985). Similar to the UCOM self-instructional booklet published in 1970, the video allowed students and nurses to independently acquire necessary knowledge about use of the nursing bag. It emphasized the importance of the bag in providing necessary equipment to carry out a home visit and in carrying out the practice medical asepsis, including routine handwashing. A number
of agencies identified an increased focus on handwashing and infection control in accreditation standards as a motivation to purchase the video.

Homecare nurses’ use of handwashing, placement of a barrier to separate the nursing bag from the patient environment, and clean up of the area once the visit activities are completed are viewed as a means of protecting clients from infections (Scheet, 1995). While handwashing is viewed as the single most important factor in preventing the spread of organisms in hospitals, the importance in homecare is less clear related to a lack of data. Some data is available from Missouri Department of Health’s survey of 5,100 homecare patients. Sixteen percent (793) were reported to have infections. The Centers for Disease Control and Prevention (CDC) estimates, from this research, that 1.2 million patients receiving homecare each year have infections. Noting this, in 2001 the CDC called for the development and implementation of a homecare surveillance system (Manangan, Pearson, Tokars, Miller & Jarvis, 2002) that was targeted for web implementation in 2007 (National Nosocomial Infections Surveillance System, 2008). Draft definitions for surveillance of infections in homecare have been proposed for validation by the Association of Infection Control Practitioners for validation (Embry & Chinnes, 2000).

Davis and Madigan (1999) question how safe the nursing bag is when used as means for infection control. They indicate that multiple-drug resistant organisms (MDROs) such as vancomycin-resistant enterococcus (VRE) and methicillin resistant staphylococcus aureus (MRSA) are becoming more prevalent in the community setting. These organisms can be spread by a healthcare worker’s hands or equipment. Davis and Madigan (1999) suggest that bag technique policies and procedures should be modified to include precautions for those at risk for MDRO infections. These precautions would include leaving the nurse’s bag in the car when
visiting high-risk homecare patients and leaving disposable supplies such as thermometers, blood pressure cuffs, and stethoscopes at the patient’s residence.

In the absence of research, practices related to the use of the nursing bag continue to be questioned. Friedman (2000) and Ward (2002) noted the lack of scientific evidence to support the nursing bag’s use as an infection control tool. Others have questioned the customary use of a newspaper barrier placed beneath the nursing bag to provide a clean work surface and assist in infection control (Rhinehart & McGoldrick, 2006).

The Joint Commission’s 2008 Home Care National Patient Safety Goal 7 calls for a reduction in the risk of health care-associated infections among homecare patients and compliance with current CDC hand hygiene guidelines. The nursing bag has long been promoted as a tool for enhancing routine handwashing.
Methods

Protection of human subjects

This study was reviewed and approved by the University’s Committee on the Use of Human Research Subjects.

Survey instrument

The design of this study was exploratory and descriptive in nature. A self-report survey developed by the researchers was used to assess the use of the standard public health nursing bag in the academic setting. This survey was based on a previous survey by Posey et al., in the mid 1980s. The short survey instrument included 15 questions including Yes/No, multiple choice, and short answer questions. Two of the multiple choice questions asked for further details based on specific responses. Participants were not required to answer all of the survey questions.

Hosted Survey 5.2 of the Hostedware Corporation was the on-line survey tool used for data collection. A direct link to the survey was provided to each participant via e-mail.

Participant recruitment

An e-mail and survey link was sent to deans and directors of all schools of nursing with baccalaureate programs listed on the Commission on Collegiate Nursing Education (CCNE) website (n=437). The deans/directors were selected because their names were easier to identify than those of faculty. The CCNE website (www.aacn.nche.edu) lists all Bachelor of Science in Nursing (BSN) programs that are CCNE accredited and provides school addresses and websites. The e-mail text discussed the purpose of the survey, included the survey website link, and asked deans/directors to forward the e-mail directly to their public health/community health nursing faculty. Two schools were excluded due to school websites being in Spanish and 17 e-mails
were returned as “failed delivery.” The survey link was open for one month. A total of 54 survey responses were received (13%).

**Data analysis**

*Hosted Survey 5.2* was also used for data analysis. All survey results were anonymous. *Hosted Survey 5.2* provided an on-line report of the survey results. These results included quantity of each response along with percent of total participants and percent of total who answered each specific question.
Results

A clinical public health course is included in the curriculum for all 54 (100%) respondents of the survey and 44 (82%) schools complete home visits. Fourteen schools (32%) use a standard public health bag during home visits (Table 1). A majority of these schools of nursing supply bags for their students. The two most stated uses of the public health bag were: nursing bags contain the fundamental equipment needed for home visits (n=15) and they contain the supplies needed for infection control (n=13) (Table 1). Clinical agency policy and accrediting body standards were also noted (n=1). One written answer noted multi-purpose use of the bags both during community events and during the nursing lab experience. Another wrote “I want students to be prepared to do any assessment/intervention needed during the course of the visit so [I] want them to have supplies…”

Of the 40 respondents currently not utilizing bags, 25 (46%) used them in the past. With the ability to choose more than one response, the following factors were reported that led schools to stop using standard bags: cost (n=5), lack of evidenced-based research (n=3), obsolesce of the bag and technique (n=9), and other (n=26) (Table 1). Explanations for choosing obsolesce of the bag and other included:

- Home visits made jointly with agency personnel who had an agency bag
- School developed their own bags
- Students made their own bags
- Students took only needed supplies into the home
- Schools saved money by not using bags
- Supplies and bags went missing
- Role of PHN [public health nurse] less “hands on” than in past
- Program provided population-focused care
- Reasons unknown by current faculty
Bag technique is taught primarily by faculty (n=17) and agency personnel (n=3) through demonstration and discussion (Table 2). Of those who use the public health bag, only 30% (n=7) of the institutions evaluate students on bag technique (Table 2).

Institutions responding to the survey were both private (n=28) and public (n=24). Enrollment was between 100 and 299 for 54% (n=28) of the undergraduate nursing student classes. Fifteen percent (n=8) of the schools had a class size between 300 and 399. Ten percent (n=5) were greater than 600 per class while 11% (n=6) were less than 100.

Twenty-four states from eight of the ten Health and Human Services (HHS) regions were represented in the survey. Table 3 displays the survey responses from each of the HHS regions. (Insert Table 3 Here).
Discussion

Twenty years after the study *Use of the Public Health Nursing Bag Reexamined* by Posey et al. (1987), researchers at the same institution conducted a similar study. This group was again asking if the use of the public health nursing bag is obsolete. Is evidence-based practice being utilized? What is the primary purpose of the nursing bag? Does it enhance nurses’ practice of infection control? What place does it have in the education of baccalaureate-prepared nurses?

A review of the literature yields no current information on the dilemma of the role public health nursing faculty have in terms of the nursing bag or infection control. Is the inclusion of the nursing bag for students within the baccalaureate curriculum who make home visits affected by the current controversy that is being experienced by homecare agencies as to the continued use of the nursing bag? While much controversy exists within the home health environment about the use and procedure of the nursing bag, what is known for certain is that the prevalence of infections in the community are on the rise and of increasing severity. Baccalaureate nursing programs must address this concern as they prepare future nurses who will function within the home environment.

Utilizing suggestions from the Posey et al. (1987) article, the same questions were adapted for this 2007 survey. The 1987 survey received a 60% response rate (62 participants) from a random sample of mailed surveys to baccalaureate degree nursing programs. The 2007 survey was e-mailed to 100% of the baccalaureate degree nursing programs listed on the CCNE list (excepted as noted in the methods section) with a response rate of 13% (54 participants). Studies have shown that e-mail surveys usually obtain lower response rates than mail surveys (Couper, 2000). Although list-based samples, like this one, have higher response rates than the average e-mail rate, it is still lower than the mail response rate (Couper, 2000).
instructions asked that the questionnaire be directed to public health nursing faculty. However, it is possible that the deans did not forward the survey to the correct faculty or that the faculty never opened the e-mail survey. It is also possible that non-responders may have chosen not to respond because they thought the survey was unimportant, which might reflect their inexperience with the nursing bag and the practice of making home visits. A future survey should include the respondents’ past experience with public health nursing and prior use of the nursing bag.

All of the 2007 respondents included a clinical component in their public health curriculum and 82% involved home visits. The percentage of students using public health nursing bags among responding schools dropped from 66% in 1987 to 32% in 2007. One of the reasons noted for not using the bags in 2007 was the lack of evidenced-based research. Twenty-two percent of the 2007 survey listed use of nursing bags and technique as obsolete. The literature review on public health nursing bags demonstrated a lack of current research related to standards, utilization, infection control, and types of bags and supplies.

The changing role of nurses was identified in 1987 and again in 2007. The current survey found role of the public health nurse was less focused on home visits for direct care and thus the need for a nursing bag decreased. Meanwhile, the homecare nursing role expanded, but not necessarily the use of the nursing bag. Furthermore, accreditation bodies discuss infection control and the need to keep equipment clean but do not directly mention the use of a nursing bag.

Expense is a factor in the utilization of the nursing bags in 2007. Bags, including the leather Henry Street type, and equipment to fill those bags, are expensive and if lost, add to the cost. The average cost of a leather public health nursing bag and supplies can be $160 and up.
Some schools have developed their own bags which are less expensive and some require students to assemble bags for themselves.

The surveys of 1987 and 2007 both evaluated who taught and how nursing bag technique was taught to students. Both demonstrated that bag technique was taught primarily by faculty and to a lesser degree by community agency personnel. Demonstration and discussion were the most popular teaching strategies and students were evaluated on their use of the nursing bag.
Limitations

There are some limitations to this study which include the constraints of self-report and errors related to non-coverage and non-response. The low return rate may be attributed to the lack of direct access to public health nursing faculty. Surveys e-mailed to the nursing school department heads or deans may never have reached the faculty involved in public health nursing. In addition, the faculty who did receive the survey may not have responded due to lack of interest in the topic. It is possible that this topic was considered a non-issue within their curriculum. Follow up should include alternate means of contact with non-responders, such as e-mail reminders, to improve the quality of the sample. Limitations of the survey include that the researchers did not define what they viewed as a standard public health nursing bag. A definition such as: a black leather bag similar to the “Henry Street” bag may have minimized some confusion.
Conclusions

Based on the survey responses and past clinical experience, the researchers have emphasized two reasons why the public health nursing bags are utilized during the public health home visit:

1. Nursing bags contain the fundamental content for a home visit. Nurses in the home often need to adjust their plans to the unexpected and having additional supplies available promotes an efficient visit. The availability of supplies also facilitates a complete assessment.

2. Nursing bags hold material for infection control. Supplies for handwashing need to be readily available as the value of handwashing is well documented in the literature (Larson, 1997; Parker, 1995). With the growing concern of drug resistant organisms, nurses must be vigilant against cross-contamination. Additional research in this area is critical particularly as it pertains to nurses’ practice in the home.

Home visits continue to be an important clinical component in the majority of baccalaureate nursing programs surveyed. Lack of use of the nursing bag is primarily related to two factors: the cost of the bag and the lack of evidence-based research demonstrating its utility in enhancing home visit efficiency and effectiveness and in enhancing infection control practices.

Costs can be creatively addressed by schools of nursing, however more research is needed. The lack of research regarding the use of the public health nursing bag may be related to difficulties conducting research in the uncontrolled setting of the home environment. However, such research is necessary in order to clarify the use of the public health nursing bag.
In addition, teaching tools need to be developed, such as DVDs, to facilitate the use of the public health nursing bags in the academic setting.

Furthermore, there is a need for more research to examine the rationale and the evidence base of the infection control aspect of the nursing bag and the effectiveness of educating baccalaureate nursing students on the use of the nursing bag. Further areas to be researched include the level of knowledge about the nursing bag and the attitudes held by public health nursing faculty about the nursing bag either as a learning tool for students or as to its relevance within the realm of infection control. In addition, there is a need for further research regarding the changes in public health nursing education and practice that resulted in the movement away from the standard public health nursing bag.

Survey results yielded no definitive findings regarding continued use of the traditional nursing bag. While there is insufficient evidence to support continued use of the nursing bag, there is no evidence to suggest that the nursing bag should be abandoned. This unique symbol of nursing in the community should continue to represent public health nurses and their vital role in healthcare.
References


The National Organization for Public Health Nursing (1939). The home visit (pp. 105-124).


Table 1.

*Use of Nursing Bags*  
(n=54)

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do your students use a standard public health nursing bag when giving care to clients during community health experiences?</td>
<td>14(32%)</td>
</tr>
<tr>
<td>2. If nursing bags are used by your students, who supplies the bags?</td>
<td></td>
</tr>
<tr>
<td>a. Community Agency</td>
<td>1(3%)</td>
</tr>
<tr>
<td>b. School of Nursing</td>
<td>19(53%)</td>
</tr>
<tr>
<td>c. Other</td>
<td>1(3%)</td>
</tr>
<tr>
<td>3. Does at least one community health agency utilized by nursing students use a standard public health nursing bag?</td>
<td>18(33%)</td>
</tr>
<tr>
<td>4. If students are using a public health nursing bag, what is the reason for this?</td>
<td></td>
</tr>
<tr>
<td>a. Fundamental content for home visits</td>
<td>15(60%)</td>
</tr>
<tr>
<td>b. Clinical agency policy</td>
<td>6(24%)</td>
</tr>
<tr>
<td>c. Clinical agency accrediting body standard</td>
<td>1(4%)</td>
</tr>
<tr>
<td>d. Infection control standard</td>
<td>13(52%)</td>
</tr>
<tr>
<td>e. Other</td>
<td>4(16%)</td>
</tr>
<tr>
<td>5. Which of the following factors led your institution to stop using the nursing bag?</td>
<td></td>
</tr>
<tr>
<td>a. Cost</td>
<td>5(9%)</td>
</tr>
<tr>
<td>b. Lack of evidenced-based research</td>
<td>3(6%)</td>
</tr>
<tr>
<td>c. Bag and technique obsolete</td>
<td>9(17%)</td>
</tr>
<tr>
<td>d. Not Applicable</td>
<td>20(37%)</td>
</tr>
</tbody>
</table>
**Table 2.**

*Teaching Nursing Bag Techniques*  
(n=52)

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is bag technique taught at some time during student's nursing program?</td>
<td>18(35%)</td>
</tr>
<tr>
<td>2. Is bag technique taught by nursing school faculty or community agency?</td>
<td></td>
</tr>
<tr>
<td>a. Faculty</td>
<td>17(33%)</td>
</tr>
<tr>
<td>b. Agency personnel</td>
<td>3(6%)</td>
</tr>
<tr>
<td>c. Both faculty and agency personnel</td>
<td>2(4%)</td>
</tr>
<tr>
<td>d. Other</td>
<td>0</td>
</tr>
<tr>
<td>e. Not Applicable</td>
<td>29(54%)</td>
</tr>
<tr>
<td>3. How is bag technique taught to students in your school of nursing? (select all that apply)</td>
<td></td>
</tr>
<tr>
<td>a. Demonstration</td>
<td>17(33%)</td>
</tr>
<tr>
<td>b. Discussion</td>
<td>14(27%)</td>
</tr>
<tr>
<td>c. Video</td>
<td>4(8%)</td>
</tr>
<tr>
<td>d. Reading material</td>
<td>6(12%)</td>
</tr>
<tr>
<td>e. Other</td>
<td>1(2%)</td>
</tr>
<tr>
<td>f. Not Applicable</td>
<td>31(60%)</td>
</tr>
<tr>
<td>4. If public health nursing bags are used by students, are they evaluated, either formally or informally, on their use of the bag?</td>
<td>7(13%)</td>
</tr>
</tbody>
</table>
### Table 3.

*Health and Human Service Region Survey Representation*

<table>
<thead>
<tr>
<th>HHS Region</th>
<th>Total Respondents</th>
<th># Respondents by State</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>4</td>
<td>CT 2, ME 0, MA 2, NH 0, RI 0, VT 0</td>
</tr>
<tr>
<td>II</td>
<td>0</td>
<td>NJ 0, NY 0, PR 0, USVI 0</td>
</tr>
<tr>
<td>III</td>
<td>6</td>
<td>DE 0, DC 0, MD 1, PA 4, VA 1, WV 0</td>
</tr>
<tr>
<td>IV</td>
<td>8</td>
<td>AL 2, FL 1, GA 3, KY 0, MS 0, NC 1, SC 0, TN 1</td>
</tr>
<tr>
<td>V</td>
<td>18</td>
<td>IL 5, IN 5, MI 3, MN 4, OH 1, WI 0</td>
</tr>
<tr>
<td>VI</td>
<td>3</td>
<td>AR 0, LA 0, NM 0, OK 0, TX 3</td>
</tr>
<tr>
<td>VII</td>
<td>1</td>
<td>IA 1, KS 0, MO 0, NE 0</td>
</tr>
<tr>
<td>VIII</td>
<td>6</td>
<td>CO 1, MT 2, ND 2, SD 1, UT 0, WY 0</td>
</tr>
<tr>
<td>IX</td>
<td>5</td>
<td>AZ 1, CA 2, HI 0, NV 2</td>
</tr>
<tr>
<td>X</td>
<td>0</td>
<td>AK 0, ID 0, OR 0, WA 0</td>
</tr>
</tbody>
</table>