

THE TEACHING OF SYSTEMATIC PHYSICAL ASSESSMENT IN BACCALAUREATE NURSING PROGRAMMES IN CANADA

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In 1982 a survey was undertaken for the purpose of describing the direction that Canadian university nursing programmes are taking toward teaching physical assessment and health history skills.

Over the past decade in Canada there has been much emphasis on the expanded role of the nurse and on primary health care functions. The skills that are the focus of study in the physical assessment courses are fundamental to this area of practice.

Literature Review

Nurses have practiced in an expanded role in Northern Canada for many years. During the 1960's and early 1970's, in response to evidence that a great need existed for nurses' educated for roles in primary care, special programmes were designed and implemented (Witter DuGas, 1974). In 1972 the Boudreau Report gave even greater impetus to the educational movement by suggesting that basic nursing education be altered to reflect a broadened concept of nursing practice and, thus, to facilitate the preparation of nurses for primary care. Paralleling this change was a shift in emphasis from illness care to health care.

Many authors have considered the preparation and role of the nurse in primary care, and have made reference to the teaching of physical assessment and health history skills in basic programmes (Awtrey, 1974; Fagin & Goodwin, 1972; Jones & Parker, 1974; McGiven, 1974). Also noted in the literature are a number of Canadian schools which have incorporated these skills into their baccalaureate programmes (Logan, 1974; Roach, 1974; Witter DuGas, 1974). Research investigating the acceptance and use of these skills by nurses in traditional and expanded roles also has been conducted in Canada (Buckley-Poichuk, 1977).

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Little, however, has been written about the actual teaching of physical assessment and health history skills. Apart from some discussion concerning whether nurses should teach physical assessment or whether physicians should (Fagin & Goodwin, 1972; McGiven, 1974; Parker, 1977), only two articles have been found that consider other curriculum matters.

Hagopian and Kilpack (1974) discussed learning experiences, the ordering of content, faculty preparation, and concurrent course material. Quarto and Natapoff (1979) reported on a survey done in New York State that noted learning experiences, required equipment, hours allotted to the skills and the maintenance of faculty competence.

The survey that is the subject of this paper was conducted to provide a description of the situation in terms of Canadian baccalaureate nursing education.

Design Sample

A questionnaire was developed with a combination of closed and open-ended questions. It was sent to the dean or director of the eighteen English language generic baccalaureate nursing programmes across Canada. An accompanying letter requested that the questionnaire be forwarded to an appropriate person on faculty for completion. Eighty-nine percent of those completing the questionnaire were faculty members who actually taught the skills of physical assessment.

Each of the eighteen schools completed and returned the questionnaire, and consented to participate in the survey. Anonymity was assured to the participating schools.

To facilitate clarity, the following terms were defined: systematic physical assessment (SPA); a head-to-toe physical examination including the skills of inspection, palpation, auscultation, and percussion that is carried out in a systematic manner; skill, the aspect of judgment or assessment of findings as well as psychomotor abilities.

Limitations

There are three limitations to the study. The first is that French-speaking schools were not included. The second is that the questionnaires did not inquire into what physical assessment equipment the student was required to purchase, what equipment was provided by the schools for their use. The third limitation is that students themselves were not surveyed.

A pre-test was not carried out. However, face validity and the clarity of questions were addressed by colleagues who teach health history and physical assessment skills.

The Findings

Of the eighteen schools involved in the survey, fifteen (83%) teach systematic physical assessment. Of the three schools which do not, the programme of one is currently under revision and the faculty has yet to decide if SPA is a basic skill. A second school teaches physical assessment skills, but feels it is not providing SPA in the purest sense because of the organization of the course content. The third school teaches numerous screening tests, many of which are found within SPA; however, on the assumption that routine physical examinations are no longer recommended this third programme does not include SPA.

It should be noted that both the second and third schools mentioned in the preceeding description answered only those questions that related to their teaching of assessment skills. In addition three of the schools that teach SPA also teach additional physical assessment skills in their programmes.

Eight of the schools teaching SPA (fourteen respondents) stated that it is being taught in order that the nursing process be implemented, and six viewed teaching SPA as a trend in baccalaureate education for preparing nurses to function in primary care.

A great variety of subject material is taught concurrently with SPA. Such material includes therapeutic communication, maternal-child nursing, community nursing, acute care nursing, nursing process, and basic psychomotor skills.

Of the sixteen programmes teaching physical assessment skills, SPA seems to be taught most commonly in Year Two (eight schools), while four other schools present the material throughout the four years of the programme (see Table 1). Fifty percent of the schools teaching SPA in Year Two introduce first year students to some of the skills. Eight programmes also re-introduce SPA in later years for varied reasons; for example, for a focus on pathological findings, for greater depth, for orientation to specific clinical areas, and for review purposes.

In ninety-four percent of the schools SPA is focussed on identifying "normal" and "variations from normal" findings. Only one school includes pathological findings along with normal and variations from the normal. Each of the sixteen schools uses laboratory demonstration and supervised practice to teach physical assessment. Five of these schools also use independent study.

Eleven of the seventeen schools (65%) use written assignments to facilitate the learning of assessment skills. Eight of those eleven schools use a written report of the assessment findings with six of the eight schools also incorporating a health history. Nursing diagnosis assignments and nursing care plans are utilized in other programmes.

Only two schools employ a physician, in addition to a nurse educator, to teach SPA. As of 1983, one of these schools will discontinue the use of the medical doctor.

Fourteen of the seventeen respondents (76.5%) stated that faculty involved in teaching SPA regularly use these skills themselves.

Schools tend to teach SPA after the study of anatomy, concurrently with or after the study of physiology, and prior to the study of pathophysiology (see Table 1).

Table 1
The Teaching of SPA in Relation to
Anatomy, Physiology and Pathophysiology

		Year in Which SPA is Taught																			
		Yr. 1				Yr. 2				Yr.3				Yr.4				All 4 Yrs.			
SCHOOLS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
ANATOMY:																					
Prior to its study																					
Concurrent with its study		X								X				X X X X							
After its study		X X X X				X X X X				X X				X X							
PHYSIOLOGY:																					
Prior to its study		X																X			
Concurrent with its study		X		X		X		X X				X X X X									
After its study		X		X X		X		X X				X X		X X							
PATHOPHYSIOLOGY																					
Prior to its study		X X		X X		X X		X		X				X X							
Concurrent with its study										X X				X X							
After its study														X X							

The hours set aside for teaching SPA vary tremendously — anywhere from twenty-four to ninety hours. For some schools it is difficult to identify the specific hours used to teach health history, and thus these hours are included in the time used to teach SPA. Of the twelve schools reporting specific hours for teaching physical assessment, five schools allot between thirty and fifty hours and three schools between fifty-one and seventy-one hours. These twelve schools also reported varying periods of time for the teaching of health history. The range was from one to eighteen hours, with the most frequent answer (three schools) being four hours.

In an attempt to shed some light on the depth of assessment taught, schools noted whether or not students were expected to assess five particular areas as noted in Table 2.

Table 2
The Teaching of Funduscopic and Specific
Cardiovascular Assessments by Individual Schools

	Schools															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VISUAL ASSESSMENT																
Retinal Structures								X			X	X	X		X	X
CARDIOVASCULAR ASSESSMENT																
Physiological Split of S ₂		X		X	X				X		X	X	X	X	X	X
S ₃ sounds										X					X	X
S ₄ sounds										X					X	X
Murmurs				X	X				X		X	X		X	X	

These areas were chosen as they are finer aspects of assessment, that may be viewed as being more difficult to develop skill in.

Fifteen of sixteen schools teaching physical assessment have a required textbook. For the sixteenth school, a recommended text is optional. *A Guide to Physical Examination* by Barbara Bates is by far the

most popular text with eight of the fifteen schools using it. Two other programmes include Bates in a selection from which students may choose.

In three of the sixteen schools, 100% of the faculty who supervise students clinically have studied SPA. In the remaining thirteen schools the percentages vary widely from none (one school) to 71% (one school). The mode was 25% (two schools). At least 50% of the faculty who supervise students in clinical areas in eight schools are skilled in SPA.

Methods used to assess student skills are itemized in Table 3. Most schools assess each of these areas. Observation of clinical performance and the use of written examinations and testing practicums are the most common methods used for assessments.

Variation of from no time limit to twenty-four hours for a head-to-toe examination, and from fifteen minutes to two hours for a randomly chosen system were reported. Some responses were difficult to interpret because, in some instances, it appeared that an entire block of clinical experience was being referred to as a practicum.

Grading practices also vary tremendously, although each of the ten programmes reported that a particular grade is required to pass the practicum. Nine of the ten schools seem to have grading designations that would likely be viewed as requiring a pass level, i.e. pass/fail, C, 51, 60 and 65. The remaining school requires 90% on the demonstration of a head-to-toe examination with a two-hour time limit.

After SPA is taught, students from thirteen of the seventeen programmes, are expected to use the skills routinely. Three programmes require students to use only those skills that are relevant to their patient's problems. Fourteen of the seventeen programmes expect students to carry out health histories routinely after they have been taught. Five respondents state that a health history on an adult medical/surgical patient would be taken, another five that a nursing history relating to the presenting problem would be taken, and the remaining six require either a health or nursing history.

Four respondents state that a head-to-toe examination would be completed and twelve indicate a partial examination would be done to assess the person's presenting problem(s).

Thirteen of the sixteen respondents state that a student's skill in physical assessment is assessed in clinical performance subsequent to the teaching of SPA. For nine of these, clinical observation is the method of evaluation.

Table 3

Methods Used to Assess Student Skill in Health History taking
Knowledge of SPA and Skill in SPA

Methods	Schools															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Oral examination										x						x
2. Written examination	x	x	x	x		x*		x	x*		x		x		x*	x
3. Discussion												x				
4. Study questions													x			
5. Laboratory practice			*					x*	x*							
6. Observation of clinical performance	x*	x*	x*		*	x*		x*	x*			x*				
7. Recorded practice on lab. partner			x				+									
8. Simulation												x*				
9. Critique of taped interview															+	
10. Videotape of an interview																+
11. Nursing care plan				*												
12. Recorded history on a client		+	+					+	+	+	+					
13. Role playing					x*											
14. Clinical paper						+										
15. Assignment		+							x*							
16. Practicum: randomly chosen system		x*			*	x*				x*	*				x*	
head to toe examination							x*	x*				x*		x*		*

NOTE: Code — + - skill in health history x - knowledge in SPA
* - skill in SPA

Discussion of Findings

Although it is somewhat unusual to make reference to the significance of a survey in a report, it seems that the findings of this survey will be of particular interest to Canadian nurse-educators because every school in the sample consented to participate.

The findings from the survey form an interesting profile of the teaching of systematic physical assessment in the generic programmes across Canada.

The survey indicates that the knowledge and skills for systematic physical assessment and for health history are considered to be fundamental to the education of generic baccalaureate nurses. Forty-three percent of the schools state that nurses require these skills for roles in primary care, and fifty-seven percent assert that the skills are essential to the implementation of the nursing process.

Systematic physical assessment is taught concurrently with almost any conceivable nursing subject. In some programmes it is taught with other health oriented subjects such as community health and health promotion. In other programmes it is taught concurrently with acute care nursing where illness rather than health is the orientation. However, in the case of either orientations, 94% of the programmes focus on normal findings and variations from the normal. Laboratory demonstration and supervised practice are used by each school, and one-third also incorporate independent study.

It is difficult to draw any specific conclusions with regard to the depth to which assessment is taught. It would appear that most programmes place reduced emphasis on funduscopic examination, and the identification of S3 and S4 heart sounds. However, the identification of physiological splitting of S2 and the identification of heart murmurs are taught in about two of every three programmes.

The skills of systematic physical assessment and health history seem to be firmly in place in baccalaureate programmes. However, to what extent these skills are emphasized and applied clinically is unclear. One factor may relate to whether the skills in question are perceived to be basic to the assessment of any individual or specific to the assessment and screening of individuals of a particular group such as would be seen in primary care.

Ruth Zarnow (1977) described five levels of content related to the expanded role. These are: basic nursing, assessment, screening, management, and diagnostic. From the findings of this survey (indicating that students primarily carry out partial physical examination and histories relevant to the person's presenting problem), it would

seem that most students practice the skills at level two, the assessment level. Here more indepth assessments and more accurate descriptions of the person are encouraged. As Zarnow states, at this level the nurse is experiencing a change not in role, but in function.

This alteration in function would be more appropriate to the health needs of individuals. Perhaps faculty are caught in the transition from illness oriented to health oriented care. It is difficult to teach what is not generally practised and, likewise, it is difficult to acquire and maintain new skills. Conceptually, faculty might be assisted by considering Newman's (1979) assumptions underlying the concept of health where illness is seen to be part of health. Illness care then becomes only one part of health care; the latter being the focus of nursing. Certainly discussion and debate will continue on this matter.

For now, it appears that systematic physical assessment and health history skills are part of an inventory of competencies basic to the baccalaureate nurse in Canada.

REFERENCES

- Awtrey, J. S. (1974). Teaching the expanded role. *Nursing Outlook*, 22, 98-102.
- Canada. Department of Health and Welfare. (1972). Report of the committee on nurse practitioners (T. J. Boudreau). Ottawa: Department of National Health and Welfare.
- Fagin, C. M., & Goodwin, B. (1972). Baccalaureate preparation for primary care. *Nursing Outlook*, 20, 240-244.
- Hagopian, G., & Kilpack, V. (1974). Baccalaureate students learn assessment skills. *Nursing Outlook*, 22, 254-256.
- Jones, P. E., & Parker, N. (1974). Education for the nurse in primary health care. *Nursing Papers*, 6(2), 57-64.
- Logan, E. (1974). Expanding the role of the nurse. *Nursing Papers*, 6(2), 15-18.
- McGiven, D. (1974). Baccalaureate preparation of the nurse practitioner. *Nursing Outlook*, 22, 94-98.
- Newman, M. A. (1979). *Theory development in nursing*. Philadelphia: Davis.
- Parker, N. (1977). Faculty development of assessment skills. *Nursing Papers*, 9(2), 56-57.
- Quarto, J. M., & Natapoff, J. N. (1979). Health maintenance and physical assessment skills in baccalaureate programmes in New York State: A pilot study. *Journal of the New York State Nurses Association*, 10(3), 9-13.
- Roach, Sister M. S. (1974). The nursing role and the problem of implementation. *Nursing Papers*, 6(2), 28-29.
- Witter, DuGas, B. (1974) Nursing's expanded role in Canada. *The Nursing Clinics of North America*, 9, 523-533.
- Zarnow, R. (1977). A curriculum model for the expanded role. *Nursing Outlook*, 25, 43-46.

RÉSUMÉ

L'enseignement de l'évaluation physique systématique dans les programmes de baccalauréat en sciences infirmières au Canada

On a effectué une étude des programmes de baccalauréat en sciences infirmières au sein des universités anglophones du Canada afin d'obtenir des renseignements concernant l'enseignement des démarches d'évaluation physique systématique et d'anamnèse. L'étude à laquelle toutes les écoles ont participé a révélé que cette démarche était enseignée dans le cadre de 15 des 18 programmes. Bien que certains répondants aient noté au niveau de la formation du baccalauréat une tendance à enseigner aux infirmiers les démarches fondamentales de soins de base, un plus grand nombre ont cependant souligné la nécessité de maîtriser ces compétences afin de donner suite à la démarche infirmière.

On a noté des similitudes dans les programmes, notamment pour ce qui est de l'accent sur les observations normales, l'enseignement dispensé par les professeurs de nursing, l'utilisation obligatoire d'un manuel d'évaluation physique ainsi que l'obligation pour les étudiants d'effectuer des examens physiques partiels en rapport avec le problème que présente le malade. On a observé de très grandes différences au sein des programmes en termes d'heures consacrées à l'enseignement de ces compétences, au niveau de la formation des professeurs, au niveau des méthodes d'évaluation utilisées, des délais accordés pour effectuer les examens sous forme de travaux pratiques et les sujets de sciences infirmières enseignées concurremment. Bien qu'il existe des différences en termes d'apprentissage et de conditions, il semblerait que l'enseignement des aptitudes relatives à l'évaluation physique systématique et à l'anamnèse ait été généralement incorporée dans les programmes fondamentaux de baccalauréat en sciences infirmières au Canada.