

NON-DEGREE CONTINUING NURSING EDUCATION NEEDS OF ALBERTA'S REGISTERED NURSES

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Universities in western Canadian provinces have, for the past decade, been major providers of continuing nursing education. For much of the programing provided by these institutions, content and format selection has been based on individual director's or co-ordinator's perceptions of "what was needed", plus "what was available" by way of instructional and venue resources. In Alberta, a recently completed province-wide survey of non-degree continuing nursing education needs of registered nurses will assist programers in providing offerings tailored to meet their clientele's needs.

The most recent province-wide educational needs assesment in Alberta focused on the province's registered nurses' perceptions of their needs for university nursing education and clinical courses (Andrews, 1978). The last formal educational needs assessment designed to identify preferences for content and different methods of delivering continuing nursing education, was conducted in 1971 by the Advisory Committee of the Continuing Nursing Education Program of the University of Alberta. The findings were never published. Since these surveys were conducted six and twelve years ago, respectively, their findings may be of limited relevance today, given the rapid expansion of knowledge and the extensive changes in nursing practice.

Purpose of the Study

The purpose of this study was to expand the data base available for planning non-degree continuing nursing education programs for Alberta's registered nurses. The specific questions addressed were:

1. What content areas do Alberta's registered nurses prefer for non-degree continuing nursing education?
2. What delivery formats do Alberta's registered nurses prefer for non-degree continuing nursing education?

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3. Are there differences among Alberta's registered nurses, categorized by selected personal and professional characteristics, in their preferences for content areas of non-degree continuing nursing education.?

4. Are there differences among Alberta's registered nurses, categorized by selected personal and professional characteristics, in their preferences for delivery format of non-degree continuing nursing education?

The term "non-degree continuing nursing education" was defined as educational programs for which no academic credit or certification is granted. These programs are designed to assist registered nurses to update and expand their knowledge and skills.

The study was only concerned with preferences or expressed needs of the respondents concerning continuing nursing education program content and format. No attempt was made to collect employers' perceptions of non-degree continuing nursing education preferences or needs of registered nurses. Similarly, needs based on competencies required of Alberta's registered nurses has not been a component of this study.

Assumptions

The basic assumption underlying the study were:

1. Participation in non-degree continuing nursing education assists Alberta's registered nurses to update and expand their nursing knowledge and skills.

2. Alberta's registered nurses voluntarily engage in non-degree continuing nursing education.

3. Alberta's registered nurses are more likely to engage in non-degree continuing nursing education which satisfies their preferences for content area and delivery format.

Methodology

A survey method employing a mailed questionnaire was selected as the most efficient method of collecting information about the preferences of Alberta's registered nurses for content and delivery format of non-degree continuing nursing education.

A questionnaire was developed by the investigators. The instrument was validated by a group of nurses employed in post-secondary educational planning for continuing nursing education. It was then pretested in a mailout to 30 Alberta registered nurses whose characteristics were similar to the study sample but who were not members of the sample. Content and format changes recommended

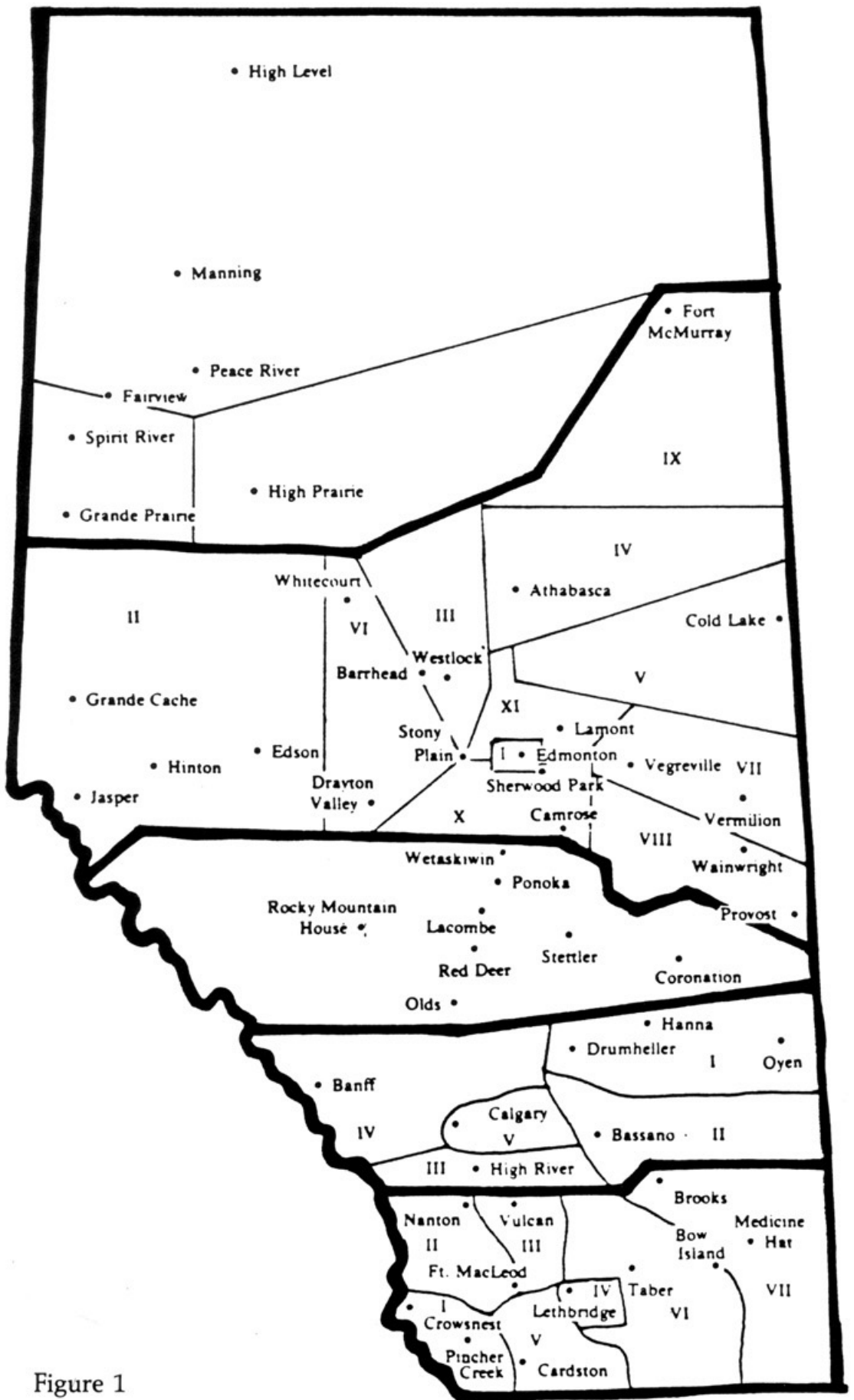


Figure 1

by these two groups were incorporated into the final draft of the questionnaire which was mailed to a 10% random sample of all actively registered nurses in Alberta, proportioned by A.A.R.N. District and stratified by employment setting (hospital or non-hospital). Figure 1 shows the boundaries of the A.A.R.N. Districts. The response rate by district and employment setting is shown in Table 1.

Table 1
Survey Response Rate by
District and Employment Setting

District	Number Delivered	Number Returned	Percentage Returned
<i>North:</i>			
Hospital	39	23	59%
Non-Hospital	13	8	62%
<i>North Central:</i>			
Hospital	552	281	51%
Non-Hospital	185	123	66%
<i>Central:</i>			
Hospital	100	45	45%
Non-Hospital	33	17	52%
<i>South Central:</i>			
Hospital	372	196	52%
Non-Hospital	124	71	57%
<i>South:</i>			
Hospital	106	61	58%
Non-Hospital	35	22	63%
Total	1,559	847	54%

The questionnaire consisted of four parts. Part I requested the following personal and professional characteristics of the respondent: AARN district; population of employment locale; employment status (full-time or part-time); employment setting (hospital, public health agency, physician's office, educational institution); size of employing hospital (if applicable); age; highest level of completed education; and years of nursing work experience. Part II allowed respondents to indicate their preferences for content of 64 provided non-degree continuing nursing education offerings, and to identify any additional content preferences. Part III requested respondents' preferences regarding format for non-degree continuing nursing education offerings. Part IV allowed respondents to make additional comments regarding non-degree continuing nursing education programming.

The characteristics of the respondents elicited in Part I of the questionnaire were summarized by frequency. Respondents' preferences for content and delivery format, obtained from Parts II and III of the questionnaire, were summarized using frequency counts. Because the level of measurement was ordinal, contingency and chi-square statistics were used to determine the existence of any statistically significant differences in content and format preferences among respondents categorized by selected personal and professional characteristics. Respondent comments obtained in Part IV of the questionnaire were categorized and summarized by frequency of occurrence.

Generalizability of Findings

Although an overall questionnaire response rate of 54% is considered good for this type of study, some caution must be exercised in generalizing the study findings to the total population of actively registered nurses in Alberta. For providers of non-degree continuing nursing education, however, the study results are of considerable value since it is reasonable to expect that the study respondents are the nurses most likely to engage voluntarily in non-degree continuing nursing education programming. Their content and format preferences are important to program planners attempting to meet expressed participant needs.

Almost two-thirds of the respondents reported that they worked in an urban centre with a population of 100,000 or more; that is, they worked in either Calgary or Edmonton. Fifteen and one-half percent of respondents were employed in a town or city with a population of 10,000 to 99,999; 13.8% worked in a town of 9,999 or fewer, and 4.7% reported employment in a rural area.

Two-thirds of respondents were employed full time and had achieved a nursing diploma as their highest level of completed education. Three-quarters of the respondents worked in a hospital, and, of these, almost half reported the size of the hospital as more than 500 beds. Seventy percent were 40 years of age or younger, and slightly more than half of the respondents had 10 or fewer years experience in nursing.

Content Preferences

On a four-point Likert scale, respondents rated their interest in participating in non-degree continuing nursing education which focused on 64 specific content areas. Possible responses ranged from 1, meaning "would never participate", through 2 and 3, meaning "possibly" and "probably" respectively, to 4, meaning "would definitely participate". Respondents were also provided an opportunity to indicate content for non-degree continuing nursing education which was not included in the 64 topics but in which they were interested.

Table 2 depicts the respondents' interest in participation in the 64 content areas ordered by the number of responses in the "would definitely participate" category.

One hundred and twenty-five respondents offered a total of 392 suggestions for additional content areas for non-degree continuing nursing education. An overwhelming majority — 84% — of all additional suggested topics were clinically oriented. Of these topics, more than half had already been provided in the questionnaire.

Format Preferences

Respondents were asked to rate their preference for nine delivery formats and to indicate the times of the day, days of the week, and months of the year during which they would be most likely to participate in non-degree continuing nursing education. Respondents were also requested to indicate how much advance notice of events they required and how soon before the event's scheduled date they required specific program details.

On a four-point Likert scale, respondents rated their interest in participating in non-degree continuing nursing education programming offered as a one-day workshop; two-day workshops; three-day workshops; once-daily sessions from 1 to 6 weeks; once-weekly sessions from 7 to 12 weeks; home-study packages; one-way T.V. programs (viewer receives instruction); interactive T.V. programs (viewer may "talk back" to instructor); and workshop followed by home study followed by workshop sequence. Possible responses rang-

Table 2
 Respondents' Content Preferences for Non-Degree
 Continuing Nursing Education Ordered by
 Absolute Frequencies in "Definitely" Category

Content Area	Absolute Frequency				
	Never	Possibly	Probably	Definitely	No Response
1. Managing Stress	58	202	233	344	10
2. Emergency Nursing of Multiple Trauma Patients	110	195	183	339	20
3. Preventing Burnout	85	200	230	321	11
4. Pharmacology Update	52	172	286	320	17
5. Legal & Ethical Issues	53	238	254	289	13
6. Drug Interactions	67	188	293	288	11
7. Diabetic Update	67	224	266	276	14
8. Assertiveness Training	112	234	244	244	13
9. Care of the Terminally Ill	123	227	235	242	20
10. Implications of Alcohol & Drug Abuse	88	224	289	229	17
11. Management of Pain	71	269	267	210	30
12. Health Assessment of Children	157	235	230	209	16
13. Introduction to Cardiac Arrhythmias	154	253	212	205	23
14. Interviewing Skills	115	287	229	199	17
15. Use of Teaching Methods	147	264	220	196	20
16. Care of Intravenous Infusions	195	226	215	196	15
17. Nursing of the Gerontologic Patient	171	276	191	194	15
18. Cardiac Arrhythmias - Advanced Concepts	148	275	191	192	41
19. Family Interviewing Skills	130	256	248	190	23
20. Health Assessment of Adults	115	258	260	190	24
21. Psychosocial Aspects of Aging	129	292	227	186	13
22. Staff Development for Nurse Managers	231	247	166	184	19
23. Principles of Patient Teaching	108	249	288	182	20
24. Meaningful Staff Performance Appraisals	227	247	177	177	19
25. Physiologic Aspects of Aging	131	292	236	176	12
26. The Nurse & Individual Counselling	149	262	241	176	19
27. Aspects of Total Parenteral Nutrition	165	258	235	173	16
28. Aspects of Intravenous Therapy	163	270	226	172	16
29. Family Crisis Intervention	131	267	261	167	21
30. Neurologic Nursing	198	279	183	166	21
31. Management of Burns	198	246	222	165	16
32. Community Skills	164	283	218	164	18
33. Oncology Update	135	319	217	153	23
34. Care of the Ill Neonate	295	232	151	151	18
35. Staff Motivation for Nurse Managers	274	249	152	150	22
36. Nursing Care During High-Risk Pregnancy	270	248	161	148	20
37. Management of Normal Labour	292	251	140	146	18
38. Care During Complicated Labour	340	228	120	142	17

Table 2 - concluded

Content Area	Never	Possibly	Probably	Definitely	No Response
39. Mental Health Nursing Update	191	303	196	138	19
40. Nursing Management of the Normal Neonate	280	250	164	138	15
41. Using Audiovisual Aids	198	303	180	129	37
42. Inservice Programing in Small Hospitals	342	249	115	126	15
43. Budgeting Skills for Nurses	300	262	141	121	23
44. Nursing as a Profession	226	310	169	119	23
45. Community Mental Health Nursing	256	301	156	119	15
46. Role of the Nurse Inservice Educator	314	240	146	118	29
47. Evaluating Learning	212	308	189	115	23
48. Political Awareness	235	301	184	109	18
49. Care of Patient with Ostomy	207	323	190	108	19
50. Recent Events in Nursing Research	212	315	195	108	17
51. Coping with Institutionalized Patients' Sexuality	226	309	185	107	20
52. Organizing the Nursing Inservice Department	363	231	125	103	25
53. Writing Skills	206	343	174	100	24
54. Nursing Implications of Problem-Oriented Records	209	344	172	98	24
55. The Nurse & Group Therapy	246	312	170	98	21
56. Introduction to Primary Care Nursing	204	351	168	97	27
57. Introduction to Research in Nursing	276	315	142	95	19
58. Designing Learning Modules	319	264	142	95	27
59. Quality Assurance in Nursing: Practice Standards	185	368	182	87	25
60. Quality Assurance: Use of Nursing Audit	253	308	176	84	26
61. Patient Classification Systems	267	322	158	78	22
62. Writing Learning Objectives	272	298	163	76	38
63. Introduction to Quality Assurance	187	374	185	73	28
64. Application of Nursing Models in Practice Settings	287	334	121	71	34

ed from 1 meaning "would never participate" through 2 and 3 meaning "possibly" and "probably" respectively, to 4, meaning "would definitely participate".

Respondents were also provided with the opportunity to indicate other formats for delivering non-degree continuing nursing education which were not included in the nine formats, but in which they would participate.

Considerable interest in one- and two-day workshops was expressed by respondents. Almost 69% indicated that they would "definitely" attend one-day workshops and 33.3% expressed "definite" interest in two-day workshops. Home-study packages and once-weekly sessions lasting 1 to 6 weeks were also popular, as evidenced by the 28.9% and 24.8% of respondents, respectively, who indicated "definite" interest. Once-weekly sessions lasting 7 to 12 weeks, one-way T.V. programs, and interactive T.V. programs were of considerably less interest to respondents, 21.0%, 20.3% and 18.3% of whom, respectively, indicated that they would "never" participate in these formats.

Very few, only 59, additional suggestions for delivery format were provided by respondents. Almost one-quarter of these were unrelated to format and the remainder either expanded or limited options provided on the questionnaire.

Slightly more than 40% of the respondents indicated that they would "definitely" attend a continuing education activity scheduled between the hours of 0830 and 1630, and slightly more than 25% reported that they would "definitely" participate from 1900 to 2100 hours. Expressed interest in programing scheduled during the late afternoon and late evening was limited, as evidenced by the large proportion of responses in the "never" category — 30.3% for 1500 to 1700 hours, 32% for 1700 to 1900 hours, 21.6% for 1800 to 2000 hours and 24.9% for 2000 to 2200 hours.

Monday through Friday were preferred days for scheduling non-degree continuing nursing education. Weekends were not popular with respondents; almost half indicated that they would "never" participate on a Sunday and 29% reported that they would "never" participate on a Saturday.

The months of July and August were the only months which were clearly not preferred by respondents for participation in non-degree continuing nursing education; December was the third least preferred month for programing.

Respondents indicated less advance notice and notice of specific program details than might have been expected. Slightly more than 75% of them reported that they required up to 2 months' advance notice, and 72.2% of all respondents reported that they required specific program details between 2 and 6 weeks in advance.

Differences in Content Preferences

There were statistically significant differences among respondents categorized by specific personal and professional characteristics in their expressed preferences for content of non-degree continuing nurs-

ing education. Respondents' employment setting, age, total number of years of experience in nursing, highest level of completed education, and employment status (full-time or part-time), had the most impact on expressed content preferences, while population of respondents' employment locale, size of employing hospital, if applicable, and A.A.R.N. District, had less impact.

Expressed interest in program content tended to reflect the nature of respondents' employment. Respondents employed in hospitals preferred content related to nursing care of ill individuals, while respondents employed in public health agencies preferred content focused on nursing assessment skills, particularly as these related to the assessment of families. Respondents employed in educational institutions preferred content related to patient, staff and student teaching. Respondents employed in "other" settings, the majority of whom were involved in occupational health and home care, preferred programming focusing on health-promotion and prevention of illness.

Respondents expressed particular interest in non-degree continuing nursing education content that dealt with events in the life cycle that approximated those characteristic of the respondents' age. Thus, expressed interest in maternal and neonatal nursing care was greatest among respondents 31 years of age and younger, and decreased as respondents age increased. Similarly, the level of expressed interest in physiologic and psycho-social aspects of aging and nursing care of the terminally ill increased as respondents' age increased, and was greatest among those 51 years and over.

Younger respondents tended to be interested in clinically oriented content, e.g., neurologic nursing and introduction to cardiac arrhythmias, whereas older respondents expressed interest in content focusing on the management and teaching aspects of nursing practice, e.g., meaningful staff performance appraisals, quality assurance and the role of the nursing inservice educator.

Expressed interest in the following content areas varied directly with number of years of experience in nursing; that is, interest increased as number of years of nursing work experience increased: the role of the nurse inservice educator; organizing the nursing inservice department; meaningful staff performance appraisals; staff motivation for nurse managers; quality assurance: nursing practice standards; evaluating learning; budgeting skills for nurses; legal and ethical issues for nurses; patient classification systems; and using audiovisual aids. Like respondents thirty years of age and younger, *respondents with 5 or fewer years of nursing work experience expressed the greatest interest in programing focused on childbearing, e.g., pregnancy, labour and delivery, and neonatal care, and on clinically*

oriented topics, e.g., nursing management of burns, pharmacology update and emergency nursing of trauma patients. The greater their number of years of experience in nursing, the more likely were respondents to prefer programing focused on managerial, teaching, and professional aspects of nursing practice, and on life cycle events associated with aging, e.g., nursing the gerontologic patient, psychosocial aspects of aging, and nursing the terminally ill.

As respondents' formal level of education increased, so did their expressed interest in professional aspects of nursing, e.g., quality assurance and nursing models in a practice setting. Expressed interest in the following topics varied indirectly with increasing level of education; that is, interest decreased as respondents' educational level increased: nursing aspects of intravenous therapy; nursing care of intravenous infusions; drug interactions; patient with ostomy; emergency nursing of multiple trauma patients, nursing care during complicated labour; and nursing management of pain. Respondents with a diploma as their highest level of completed education expressed greater interest in clinically oriented content than did respondents with either a post diploma certificate or respondents with a baccalaureate or higher degree.

Full-time employed respondents expressed greater interest in programing focusing on the professional, managerial and teaching aspects of the nurse's role, while part-time employed respondents expressed greater interest in programing focused on the clinical aspects.

Respondents employed in small (less than 9,999 population) and medium-sized towns (10,000 to 99,999 people) expressed interest in a greater variety of content than did respondents employed in cities of 100,000 or more (Calgary and Edmonton).

Expressed interest in the following content varied inversely with hospital size, that is, interest decreased as hospital size increased: normal neonate; oncology nursing update; nursing management of pain; diabetic update; the gerontologic patient; the ill neonate; management of normal labour; physiologic aspects of aging; psychosocial aspects of aging; care during high risk pregnancy; mental health nursing update; inservice programing in small hospitals; care during complicated labour; management of burns; care of the terminally ill; organizing the nursing inservice department; and coping with institutionalized patients' sexuality. Respondents employed both in hospitals of 1-100 beds and 101-500 beds expressed interest in a wider variety of content than did respondents employed in hospitals of 500 or more beds.

Most of the 15 statistically significant differences in programing content preferences among respondents, categorized by A.A.R.N. District, involved topics preferred by the predominantly rural districts

— North, Central, and, to a lesser extent, South. These topics focused on clinically oriented content, e.g., management of burns, management of the normal neonate. North District respondents expressed definite interest in programing focusing on care during high risk pregnancy, inservice programing in small hospitals, care during complicated labour, nursing implications of drug interactions, and staff development for nurse-managers.

Differences in Format Preferences

Respondents' personal and professional characteristics had less effect on expressed interest in various programing formats than on programing content. Age, population of employment locale, employment status (full-time or part-time), number of years of nursing work experience, size of employing hospital and respondents' highest level of completed education had the greatest impact on format preferences. Employment setting and respondents' A.A.R.N. District had the least impact on format preferences.

Expressed interest in participation in programing offered during the months of July, August, and December, and in programing offered as a two-day workshop, varied indirectly with age; that is, as respondents' age increase, their interest decreased. Overall interest in July and August programing was limited, however.

Respondents from cities of 100,000 or more population (Calgary and Edmonton) and towns of 10,000 to 99,999 population expressed greater interest in programming offered weekly for 1 to 6 weeks, than did respondents from small towns of 9,999 or fewer, and from rural areas. Non-urban respondents expressed more interest in both one-way and interactive TV programing than did urban respondents. Interest in the workshop followed by home study followed by a workshop sequence, in three-day workshops, in programing scheduled from 1800-2000 hours, in programing scheduled from 1900-2100 hours, and in programs offered either during January or September varied indirectly with population of employment locale; that is, interest decreased as population increased.

Respondents employed part-time expressed more interest in one-way TV programing, once-weekly sessions for 1 to 6 weeks, and programing scheduled from 2000-2200 hours, than did respondents employed full-time. Respondents employed part-time also requested less advance notice of non-degree continuing nursing education events. Respondents employed full-time were more in favour of three-day workshops and May, July, and August programing, although overall expressed interest in July or August scheduling was limited.

Expressed interest in programing offered during July or August tended to vary indirectly with years of nursing work experience; that is, interest decreased as experience in nursing increased.

Respondents with a post diploma certificate expressed greater interest in programing offered during the months of January and February, programing offered weekly for 7 to 12 weeks, and programing scheduled from 2000-2200 hours, than did either respondents with a diploma or respondents with a baccalaureate or higher degree as their highest level of completed education.

Respondents employed in hospitals of 1-100 beds expressed greater interest in one-day workshops, home study packages, one-way TV programs and the workshop - home study - workshop sequence than did either respondents employed in hospitals of 101-500 beds or more than 500 beds; however, they expressed less interest in programing scheduled during either September or October. Amount of advance notice of events required by respondents varied directly with size of employing hospital.

There were only three of a potential 47 statistically significant differences in format preferences among respondents categorized by employment setting.

Only two statistically significant differences in format preferences were demonstrated among respondents categorized by A.A.R.N. District.

Summary of Differences In Content and Format Preferences

There were more differences among respondents, categorized by selected personal and professional characteristics, in their expressed preferences for content of non-degree continuing nursing education, than in their expressed preferences for formats. Numerous of the respondents' personal and professional characteristics that were associated with differences in content preferences were less often associated with differences in format preferences, e.g. nature of employment, number of years of nursing work experience, highest level of completed education and employment status (full or part-time). Respondents' age was the only personal characteristic associated frequently with both differences in content and format preferences. Table 3 summarizes the frequency of statistically significant differences in content and format preferences among respondents categorized by selected personal and professional characteristics.

Table 3
Frequency of Statistically Significant Differences
in Content and Format Preferences Among Respondents
Categorized by Personal and Professional Characteristics

	Content Preferences		Format Preferences	
	Frequency		Frequency	
	Absolute (N = 64)	Percent	Absolute (N = 47)	Percent
Nature of Employment	44	68.75	3	6.38
Age	42	65.63	14	29.79
No. of Yrs. of Nursing Work Experience	39	60.94	9	19.15
Highest Level of Completed Education	36	56.25	8	17.02
Employment Status	31	48.44	9	19.15
Population of Employment Locale	27	42.19	11	23.40
Size of Employing Hospital	25	39.06	8	17.02
A.A.R.N. District	15	23.44	2	4.25

Respondents' Additional Comments

Approximately one-third of the 847 study respondents offered a total of 571 individual comments or suggestions. The large number of comments and substantial proportion of the respondents who offered comments were interpreted as indication of interest in the subject of non-degree continuing nursing education.

Slightly more than one-half of all comments related to respondents' perception of conditions that would facilitate or impede their participation in non-degree continuing nursing education. Locating programs, in or near the work place, paid educational leave, and financial assistance with registration fees and other participation expenses were identified as facilitators to participation. Barriers to participation were identified as: fatigue, shift-work, "burnout", lack of academic credit, family responsibilities, and insufficient advertising of events.

Slightly less than one-half of all comments related to suggested content for non-degree continuing nursing education, perception of the value of non-degree continuing nursing education and this study, suggestions for improvements in programming and miscellaneous topics, many of which were unrelated to non-degree continuing nursing education.

Conclusions

Based on the finding of this survey of non-degree continuing nursing education needs of Alberta's registered nurses, the following conclusions are presented:

1. The 54% response rate to the study, the respondents' interest in all content areas, and the large number of suggested topics offered by respondents was indicative of the respondents' interest in non-degree continuing nursing education. Sufficient interest was expressed in participating in non-degree continuing nursing education to warrant continued support for its delivery in Alberta.

2. The most preferred content areas were those related to the nurse's role as a clinician. For example, of 12 most preferred content areas, ordered by frequency of response in the "definitely" category, 8 were related to the clinician role. These were: emergency nursing of multiple trauma patients; pharmacology update; drug interactions; diabetic update; care of the terminally ill; implications of alcohol and drug abuse; management of pain; and health assessment of children.

3. Sufficient interest was expressed in all listed content areas to warrant the delivery of specific topics to certain segments of the nurse population in Alberta. For example, even for the least preferred content area, application of nursing models in practice settings, 71 of the 813 respondents to this item indicated that they would definitely attend and 121 indicated that they would probably attend.

4. The length of the non-degree continuing nursing education offering influences the commitment to participate. As the length of the program increases, the degree of interest in participation decreases.

5. Personal and professional characteristics of potential participants influence their content and format preferences for non-degree continuing nursing education. For example, respondents' age accounted for 42 of a potential 64 statistically significant differences in preference for content area and for 14 of a potential 47 statistically significant differences in format preferences.

6. Preferences for scheduling non-degree continuing nursing education parallel the months during which Alberta's post-secondary educational institutions offer courses; that is, fall and winter scheduling is preferred over spring and summer.

7. Limited interest exists in non-traditional scheduling, e.g., weekend, late afternoon, late evening, and in non-traditional format, e.g., one-way TV programs and interactive TV programs, for non-degree continuing nursing education.

8. A minimum of 2 months' advance notice and 6 weeks' specific programming notice is desirable for advertising non-degree continuing nursing education.

Implications

The findings of this study have implications for providers of non-degree continuing nursing education in Alberta, for employers of registered nurses and for further research.

Implications for providers

Sufficient interest in all 64 provided content areas for non-degree continuing nursing education was exhibited by respondents to warrant attention by providers. It was clear that even for topics in which the least interest was expressed there were certain categories of respondents who would participate. Providers need to identify clearly the categories of Alberta registered nurses for whom they program and should offer content preferred by those categories of nurses. Statements of program mission and philosophy will guide providers in identifying their clientele. Findings of this study related to differences in content preferences for non-degree continuing nursing education, among Alberta registered nurses, categorized by selected personal and professional characteristics, will assist providers in selecting program content relevant to their clientele's expressed needs.

Providers should pay particular attention to their clientele's employment setting when selecting content, and to the population of their clientele's employment locale when selecting delivery format. These characteristics most affected the respondents' expressed preferences for content and format of non-degree continuing nursing education offerings.

The findings indicated that the respondents were most interested in non-degree continuing nursing education content related to the clinical aspects of the nurse's role. Providers should plan and deliver programs focusing on the clinical practice of nursing and should increase the accessibility of these programs to all areas of the province of Alberta.

Additionally, a broad range of clinically oriented non-degree continuing nursing education should be offered, since respondents expressed interest in content related to almost all aspects of clinical nursing. Providers should consider prioritizing clinically oriented offerings to focus initially on content in which respondents indicated definite participation.

Content related to the professional, managerial, and teaching aspects of the nurse's role should also be addressed by providers of non-degree continuing nursing education. Priority should be given initially by providers to programing focusing on topics in which the most respondents would definitely participate.

In relation to the statistically significant differences which were revealed in preferences for the 64 content areas, nurses employed in small (1-100 bed) hospitals, rural areas, and the more rural A.A.R.N. districts expressed greater interest in a broader range of topics than respondents in larger hospitals and urban areas. Lack of accessibility to continuing nursing education, including in-service programing, could be reflected in this finding. If this is the case, providers could focus their efforts in two areas. There could be an increase in the provision of programs related to the respondents' expressed needs, using a variety of delivery formats, and a focus on preparing nurses in small hospitals and rural areas to plan and deliver their own programs.

Based upon study respondents' expressed preference for one- and two-day workshop methods of delivery, providers of non-degree continuing nursing education would do well continue using the format. Additionally, the workshop format could be employed throughout the province and with all categories of registered nurses.

Study respondents may have been especially familiar with workshop format delivery of non-degree continuing nursing education and may also have perceived it as readily accessible, since two-thirds of the respondents resided in Calgary and Edmonton where the majority of workshops are held. Therefore, providers should not ignore other continuing nursing education delivery formats.

Three-day workshops and TV programing are delivery methods that providers should employ with care. Older and rural respondents expressed greater interest in both one-way and interactive TV programing than did younger and urban study respondents. Providers with adequate technical and financial resources may wish to attempt some non-degree continuing nursing education programing, particularly for nurses in rural areas, using these delivery methods.

To encourage participation in non-degree continuing nursing education, providers should schedule programs from Monday to Friday, 0830 hours to 1600 hours, for two-hour sessions from 1900 to 2100 hours, and for two-hour sessions lasting 1 to 6 weeks. Programs may be scheduled every month of the year except July and August.

To facilitate participation in non-degree continuing nursing education, providers should advertise programs a minimum of 2 months in advance and provide up to 6 weeks' notice of specific program details.

Implications for employers

The 54% response rate to the study, the respondents' expressed interest in all content areas, and the large number of suggested topics offered by respondents were taken as indicative of the respondents' interest in non-degree continuing nursing education. Employers could encourage participation in continuing nursing education as a work incentive.

The finding that indicated that the respondents would be most likely to participate in non-degree continuing nursing education which focused on clinical topics has two major implications for employers related to cooperation with providers.

Employers could strengthen their cooperative efforts with post-secondary educational providers by examining the respondents' preferred content areas in light of the needs of their agencies for in-service education. Where the needs of the agency fit with the respondents' expressed needs, employers could support programs developed by post-secondary educational providers by encouraging their nurses to participate, rather than developing content through their own in-service programs. Additionally, the cost-effectiveness of these approaches could be examined and compared.

Cooperative efforts between the providers and employers in nursing practice settings could be strengthened in relation to developing clinical programs for non-degree continuing nursing education. The efforts could relate specifically to the sharing of clinical nursing expertise from practice settings with expertise in the development of teaching and learning strategies and program planning and delivery available in the major educational institutions which provide non-degree continuing nursing education.

Since nature of respondents' employment had considerable impact on content preferences, employers could reasonably expect participation of employees in non-degree continuing nursing education programing that related to the employees' area of expertise. For example, hospital-employed respondents tended to prefer content related to nursing care of ill individuals, while respondents employed in public health agencies preferred content focusing on nursing assessment skills, particularly as these related to families. Employers could attend to the differences in content preferences expressed by part-time and full-time employed nurses for non-degree continuing nursing education programing.

Overall preference for workshop activity and two-hour sessions from 1900-2100 hours have implications for work scheduling for employers who wish to encourage participation in non-degree conti-

ning nursing education. Within the constraints of collective agreements and delivering patient care, employers could allow for time-off for their nurse employees to participate.

Implications for research

Although this study has provided useful information concerning the need for non-degree continuing nursing education, further research would expand the existing data base.

1. Using their statements of mission and philosophy, providers of non-degree continuing nursing education may wish to focus on determining specific format and content preferences for non-degree continuing nursing education of discrete groups of their nurse-clientele, e.g., nurse educators, nurse administrators.

2. Further exploration and investigation to identify specific facilitators and barriers to participation by Alberta's registered nurses in non-degree continuing nursing education could be undertaken.

REFERENCES

- Advisory Committee of the Continuing Nursing Education Program of the University of Alberta. (Continuing education for Alberta nurses). Unpublished raw data, 1971.
- Andrews, H. *Educational needs of registered nurses: A report commissioned by the Alberta Association of Registered Nurses*. Edmonton, Alberta: Alberta Association of Registered Nurses, 1978.

NOTE

A complete survey report is available to readers, at cost, from the authors.

RÉSUMÉ

Formation infirmière continue ne menant pas à un grade: besoins des infirmières de l'Alberta

Un questionnaire de sondage visant à élargir la base de données disponibles pour la planification de la formation continue libre en sciences infirmières en Alberta est décrit. Un échantillon randomisé de 10% de toutes les infirmières exerçant leur profession en Alberta, réparti proportionnellement (district A.A.R.N.) et stratifié selon le milieu d'emploi, a été utilisé. Le taux de réponse a été de 54%.

Le questionnaire a servi à expliquer les données sur les caractéristiques professionnelles personnelles des répondantes ainsi que leurs préférences quant au contenu et au type de formation continue libre en sciences infirmières. Les caractéristiques des répondantes et leurs préférences quant au contenu et au type de cours ont été résumées en fonction de la fréquence des choix. Pour déterminer l'existence de différences significatives sur le plan statistique quant au contenu et au type de cours chez les répondantes classées par caractéristiques professionnelles spécifiques, on a utilisé l'analyse statistique au chi carré.

Le sondage a révélé un intérêt suffisant pour la formation continue libre en sciences infirmières pour justifier de lui apporter un appui suivi en Alberta. On a noté des différences significatives sur le plan statistique parmi les répondantes classées selon les caractéristiques professionnelles et personnelles quant aux préférences de contenu et de type de cours de formation continue libre en sciences infirmières. Les caractéristiques professionnelles et personnelles des répondantes ont eu davantage d'effets sur les préférences de contenu que sur les préférences de type de cours.