

**Health Workers
in
Arizona and New Mexico Indian Country:
Their Interests and Needs for Career
Advancement.**

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Index

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BACKGROUND and SIGNIFICANCE.....	1
PURPOSE.....	2
AIMS.....	2
METHOD.....	2
• Samples.....	2
• Data Collection.....	2
• Data Analysis.....	3
RESULTS.....	3
• Questionnaire Results.....	4
• Interview Results.....	4
FINDINGS.....	5
• Questionnaire Findings.....	5
- Barriers.....	6
- Helpful Factors for Choosing to Continue Education.....	8
- Helpful community supports to enable continuing education...	8
• Interview Findings.....	9
- Experiences returning to school.....	9
- “Baby-Steps on the Path”.....	10
- Roots of interest in career advancement.....	10
- Obstacles to career advancement.....	11
- Worries and hardest aspects.....	13
- Views about what would help your advancement.....	13
- Views about difficulties for rural students.....	14
- Web-based education	15
DISCUSSION and IMPLICATIONS.....	17
• What influences how people pursue career paths.....	17
• Disconnect between ways of finding and providing information....	18
• What they said they need.....	18
RECOMMENDATIONS.....	19
• The Education Sector.....	19
• The Health Services Sector.....	19
• The Community Sector.....	20
Appendices	
• A-Questionnaire and Interview Questions.....	21-23
• B-Current Occupations of Respondents.....	24
• C-Health Career Interests.....	25

Assessment of Interest and Needs of Potential Health Professions Students

Background and Significance

Rural areas face chronic shortages and difficulty retaining health professionals. The “grow your own” approach has been championed by the national Partnerships for Training project. This hypothesis is founded on the position that members of rural and underserved communities who are educated within the community are most likely to remain there to practice. The knowledge of community social, economic, and cultural influences on health, coupled with the long-term commitment and relationship that residents of a community bring to their practice, make these home-grown health-care providers invaluable as potential health sector leaders.

New Mexico and Arizona Indian Country face this challenge as they try to provide clinical services and community health services to improve the health status of the rural, majority American Indian populations. Despite ongoing efforts at retention and recruitment and the highly developed public Indian Health Service (IHS), recruiting and retaining health professionals for this area are difficult. The professional work force in this predominantly American Indian enclave, where 61% of households speak their native language in the home, remains primarily Anglo.

At the national level, Healthy People 2010 (U.S. Department of Health and Human Services. [2000, November]. *Healthy People 2010: Understanding and Improving Health* [2nd Ed.]. Washington, DC: U.S. Government Printing Office) calls for efforts to both increase access to health services in rural, minority communities and alter the composition of the health professional work force to be more reflective and representative of the populations it serves. Simultaneously, health professions education programs face challenges to recruit and retain students from minority backgrounds into their programs. In 1999, the New Mexico Partnerships for Training project was unsuccessful at recruiting individuals to participate in a community-based primary care provider education project based in Gallup. The failure of that model gave birth to the present project. The intention was to more fully understand and give voice to the interests and needs related to career advancement in this area.

The present study is unique in that it was designed to gather information leading to the understanding of local health workers’ interests, dreams, experiences, and barriers related to health career advancement in two survey formats. The majority of participants were American Indian and intended to remain within the community. The study was interdisciplinary, addressing all health careers, not just one discipline.

The survey gives voice to a tremendous human resource potential for advancement of human health in an area with significant health needs. The stories shared bear witness to commitment to the community and decisions about career advancement that involve tremendous personal and family costs. The findings have implications for health services, health professions education institutions, and communities. The development of this important regional human resource for health care must involve partnerships of all three sectors to build supports and reduce obstacles to health career advancement.

Purpose

The purpose of the survey was to identify interest in and barriers to advancement in health care careers among health workers in western New Mexico and eastern Arizona. This very rural area includes the Pueblo of Zuni and portions of the Navajo reservation. The majority of residents and those using area health services are American Indian.

Aims

The specific aims of the survey were to:

- Identify information and supports reported as helpful in deciding about further education in health care careers.
- Identify factors reported as barriers to advancing in health care careers.

Methods

A two-stage survey method was used in this study. A questionnaire was followed by an open-ended interview of a subsample. The written questionnaire was made available to health workers in 11 health-care workplaces in eastern Arizona and western New Mexico. Participation was voluntary.

Samples

A convenience sample was chosen from a health-care setting in the geographic area surrounding Gallup, New Mexico. Questionnaires were distributed to 11 participating health-care institutions by mail or hand. Six of the participating institutions were Indian IHS sites, 3 were private not-for-profit organizations, and 2 were Navajo Nation Division of Health facilities. Six of the sites were combined inpatient and outpatient facilities, 2 were outpatient facilities only, and 2 were community health service organizations. Two facilities were located in Gallup, the largest town in the area studied, with a population of 20,209.

A subsample of questionnaire respondents was selected for interview. A purposive, proportional sample was drawn of 10% (25) of the 245 questionnaire respondents who agreed to be interviewed. This purposive sample was selected to ensure a distribution comparable to survey respondents in work site, health occupation, cultural affiliation, and gender. Gender was determined based on the names provided by respondents agreeing to be interviewed.

Data Collection

Questionnaires were internally distributed in each participating institution. In the hospital sites, the Chief Executive Officer designated an individual to distribute the questionnaires. Within the community health services facilities, the coordinator of health programs distributed them. The internal institutional system of mail delivery was used to provide the survey to all health workers. A letter explaining the questionnaire and the consent form approved by the UNM Health Sciences Center Human Research Review Committee, combined Albuquerque Area and National Indian Health Service Institutional Review Board, and Navajo Nation Human Research Review board (NNHRRB) accompanied the questionnaire. Questionnaires and consent forms were returned by mail using the stamped addressed envelope provided.

The questionnaire was constructed for use in this project. It had five major stem questions concerning interests and needs related to career advancement (Appendix A). Questions were drawn from the literature and informed by New Mexico Partnerships for

Training experience with rural community-based health professions students. The questionnaire was reviewed by the Partnerships for Training team and viewed for cultural acceptability by the Navajo investigator and the three research review boards. It was revised based on input from the NNHRRB to include a question on supports. The questions were a combination of forced-choice and Likert-type scale items, with opportunities to write in alternative responses. The survey captured respondents' views on personal career interests and barriers as well as needs related to career advancement.

Interviews followed a semistructured schedule of six open-ended and two closed-ended questions (Appendix A). All interviewees were asked the same questions. Interviewers prompted subjects to elaborate and asked clarifying questions, as needed.

Participants were contacted by phone and email to schedule interviews. Contact information and instructions provided by participants on the returned questionnaires were used. Two investigators (BO and LP) interviewed the subjects; the duration of the interviews was between 30 and 60 minutes. Twenty-two of the 25 completed interviews were jointly conducted. Three interviews were conducted by one investigator and took place after half of the interviews had been completed jointly.

Both investigators took notes independently during the interview. Essential content entered into the final interview notes used for analysis was determined by agreement after joint review of both sets of notes. Determination of final notes and computer entry using a word processing program occurred within 3 hours of every interview.

Data Analysis

Questionnaire data were entered into SPSS data files and analyzed using SPSS-PC. Analyses included frequencies and cross tabulations to describe the interests and barriers to study in the respondent group. No hypotheses were tested; therefore, statistical tests of significance were not used.

Identification of barriers to advancing in the health professions was solicited in the questionnaire by asking respondents to select from a list of six common barriers for rural students. Respondents could select more than one and write in other barriers.

Likert-type items were used in two sections of the questionnaire. Respondents were asked to rate the relative helpfulness of educational or institutional supports and supports to enable continuation in education from 1 (not helpful) to 4 (most helpful). The scale for these items was collapsed into a dichotomous variable. The proportion of respondents finding the item helpful or most helpful was reported as "very helpful."

QRS Nudist software was used to sort interview responses by question and compile all responses to each question. Interview data were analyzed using a constant comparative method to extract key themes. Themes within each question and across questions were identified by extensive and repeated review of the text jointly by the investigators. Review and discussion of themes and preliminary findings were reviewed and input was obtained from the third investigator.

Results

Questionnaire Results

Three hundred thirty-six completed questionnaires were received and entered into the survey database between July and December 2002. Of the 336 returns, 254 provided

demographic information and 245 respondents consented to be contacted for follow-up interview. Not all respondents answered all questions.

Questionnaires were received from 10 work settings. The proportion of respondents from each work site is shown in Table 1. Seventy-seven percent of respondents were American Indian, and 62% worked in rural work settings within or adjacent to the Navajo Nation. Rural is defined in this report as being located outside Gallup, New Mexico, the largest town in the area. The demographic profile of respondents, including age, cultural identity, and occupational category, are shown in Table 1. A complete list of the occupations of the respondents is shown in Appendix B. Table 1

Characteristics of Respondents (N=336)

Characteristic	n	%
Participating Health Work Sites (n=328)		
Gallup Indian Medical Center	71	22
Chinle Comprehensive Health Center	65	20
Rehoboth McKinley Hospital	51	15
Navajo Dept of Health: Health Educators & CHRs	45	14
Navajo Area Public Health Nursing	29	9
Sage Memorial	28	8
Fort Defiance Hospital	26	8
Pine Hill	8	2
Western NM Med. Group (Thoreau, NM)	3	1
Pueblo of Zuni	2	1
Age at time of survey (years) (n=256)		
20 or less	3	1
21-30	36	14
31-40	86	34
41-50	86	34
Over 50	45	17
Ethnicity (self-identification) (n=259)		
American Indian	199	77
Anglo	50	19
Hispanic	7	3
Other	3	1
Occupation at time of survey (n=273)		
Administration	26	10
Community/Education	52	19
Health Techs/Allied Health	74	27
Emergency	4	1
Nurses	87	32
Advanced Practice	5	2
Nurse Assistants	25	9

Interview Results

Twenty-five personal interviews were conducted between February and April 2003 (Table 2). Interviewees were selected from the pool of questionnaire respondents who consented to interview by returning the interview consent form with their questionnaire. The sample was purposively selected to be representative of the occupational background, work sites, age, and cultural identity of respondents. Interviews were conducted in community locations at times convenient for the subjects.

Table 2

Characteristics of Interviewees (n=25)

Characteristic	n	%
Age at time of interview (years)		
21-30	7	28
31-40	10	40
41-50	8	32
Gender		
Women	20	80
Men	5	20
Ethnicity		
American Indian	20	80
Anglo	4	16
Hispanic	1	4
Occupation at time of interview		
Nurse	8	32
Community Health: Ed & CHRs (Community Health Representatives)	6	24
Health Tech/Allied Health	6	24
Administrative	2	8
Nurse Assistant	2	8
EMT/Advanced Degree	1	4
Stage of change		
Contemplation	4	16
Preparation	13	52
Action	7	28
Maintenance	1	4

Findings

Questionnaire Findings

The health workers that returned the study questionnaires were interested in education for career advancement. Eighty-one percent of respondents indicated they were interested in advancing their education in the health professions, 8% were undecided, and 8% were not interested in education for career advancement. Eighty percent of those interested in career advancement were American Indian, and 62% worked in rural workplaces within or adjacent to the Navajo reservation.

Interests

The career that generated the most interest was nursing. For this questionnaire item, respondents were not limited to one area of interest and could select more than one. See Figures 1 and 2 and Appendix C for details concerning the career interests of respondents.

Figure 1. Career interests of respondents.

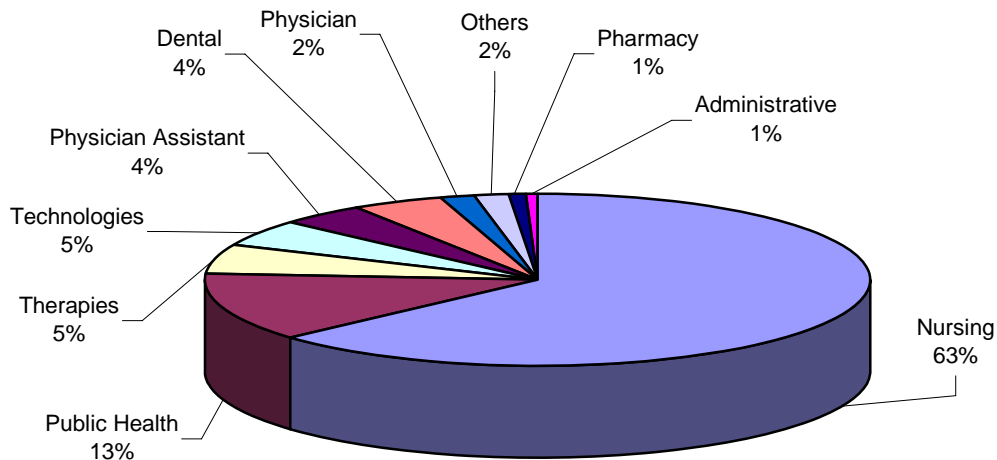
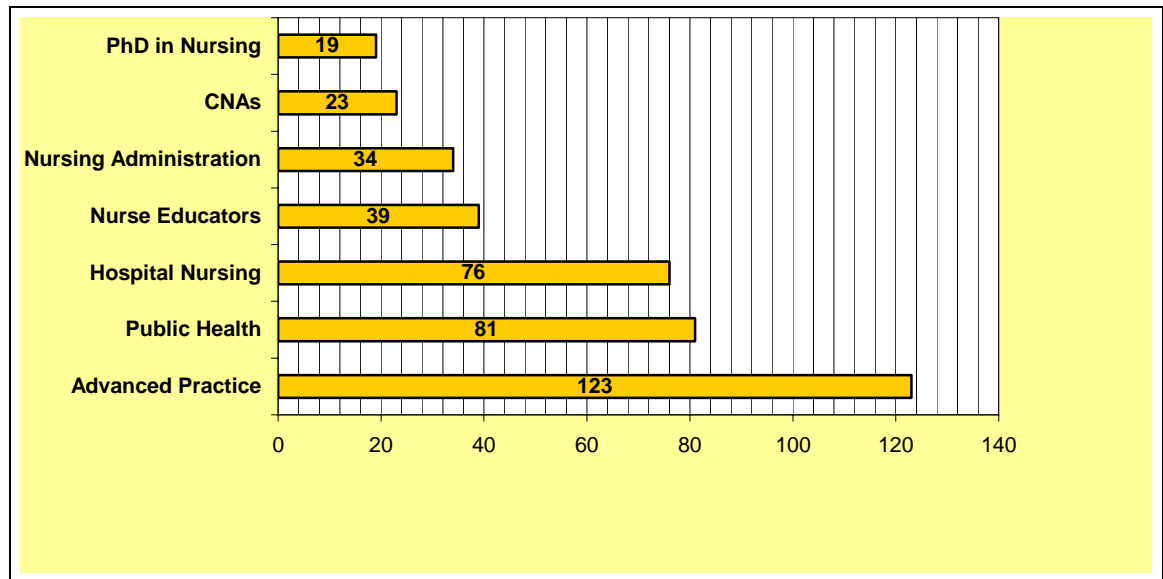


Figure 2. Numbers of responses showing nursing interest.



Barriers

The frequency of barriers among questionnaire respondents is shown in Table 3. Sixty-eight percent of respondents interested in career advancement had more than three barriers to study. Rural and American Indian respondents reported distinct patterns of barriers. For rural workers interested in career advancement, distance, full-time study, and having more than three barriers was more common. American Indian respondents more commonly experienced distance and personal and family responsibilities as barriers to advancement compared with non-Indian respondents (Table 4). Barriers written in as “other” by respondents were life-event–related, such as retirement and starting a family, and job-related, such as work schedule incompatible, no support at work, and working full time.

Table 3

Responses to Survey Question “What Things Keep You from Advancing in the Health Professions? (Check All That Apply)”

Response	<u>All Respondents</u>	<u>Only Respondents Interested in Advancement</u>
	N=336 % of Responses	n=272 % of Responses
Programs are too far away from home	62	69
Too busy with my work	41	41
Programs are too expensive	63	66
Too many family responsibilities	36	37
Cannot do a full-time education program	53	54
I see no need because I like my work now	7	2

Table 4

Distinguishing Factors for Rural^a and American Indian Respondents

Group	Barriers Most Common	Educational Sector Most Common	Community Supports Most Common
American Indian	-Distance -Responsibilities	-Financial aid info -Computer training -Study skills -Provided computer -Talking with teachers	-Study support group -Moral support from family -Child care
Rural Worker	-Distance -Full-time study -More than three barriers	-Mentor -Provided computer -Mailed information -Talking with teachers	

^aRural is defined as working outside of Gallup, New Mexico.

Helpful Factors for Choosing to Continue Education

Respondents interested in career advancement generally indicated that supports would be helpful in their decision-making concerning return to school for career advancement. Of the items listed in Table 5, close-to-home courses, financial aid information, guaranteed job in the home community, and Web courses were rated highest (*most helpful*) by over half of questionnaire respondents. Table 5 provides summary information on each response.

Table 5

Responses to Question “How Helpful Would Each of These Be in Making a Choice to Continue Your Education? (Please Circle Your Answer for Each of the Following.)”

Responses	% of Responses Very Helpful ^a
Financial aid information. ^b	86
Talking to teachers in the schools from the programs I am interested in.	74
Receiving information about the professions in the mail.	75
Having a <u>mentor</u> from the profession I am interested in (<i>a practicing health care provider who counsels potential students in a new career path</i>).	78
Coaching or tutoring in study skills available in the program.	74
Coaching or tutoring in using computers-available in the program.	76
A computer is provided for me to use by the program.	74
Courses available on the Web (internet) for me to complete at home. ^b	76
Courses offered close to my home. ^b	93
A guaranteed job in my community. ^b	86

^a*Helpful and most helpful* Likert items were collapsed to indicate *very helpful*.

^bThese items were rated highest by over half of all questionnaire respondents.

Helpful Community Supports to Enable Continuing Education

Ninety-eight percent of respondents reported that continued salary during study was the most helpful support to enable education for career advancement. Moral support and study groups were also important to the majority. Child care was important for more than half of the respondents (56%). Given that 48% of respondents were over 41 years old, 56% is a high proportion. Table 6 provides summary information on each response.

Table 6

Responses to Question: “Which of the Following Kinds of Supports Would Be of Most Help to Enable You to Continue Education in the Health Professions. (Please Circle Your Choice for Each of the Following.)”

Response	%
Continued salary earnings during study	98
Child care provided during study and clinical rotations	56
Moral support from family	79
Other students from my area to form study and support groups	80
An advisor or counselor to talk to in the school I attend	82

Financial aid information and personal supports were seen as very helpful by a higher proportion of American Indian questionnaire respondents than among other respondents. Mentorship opportunities and receiving information in the mail were seen as very helpful by a higher proportion of rural workers.

Interview Findings

Experiences Returning to School

Health workers who shared their stories of pursuing career advancement experienced frequent missteps, false starts, and derailments. In responding to a question about the steps taken “to go back to school,” respondents reported taking wrong prerequisites, enrolling in courses only to find out they were not eligible while in progress, or taking many courses, assuming this would help them achieve their goals but finding out later that it was not true. Some respondents even found themselves in the situation of having too many credits to qualify for financial assistance. Missteps occurred even with respondents who had never stopped going to school.

Information-gathering was almost a universal topic in the stories of steps to return to school. Informal networks in the community and workplace were the most common sources of information. Word-of-mouth networks were the first and most common sources of information for most interviewees. Nurses considering advanced practice in nursing were more likely to use the Web, to use published materials from programs of study, or to successfully connect with an advisor than others. Current or former students in the community or workplace were frequently information sources. Formal networks and supervisors from the workplace were mentioned as information sources in only two of the interviews. Advisors from higher education institutions were often mentioned in respondents’ stories in the context of problem-solving a false start, receiving conflicting information, or information obtained after having a problem. Interviewees’ information from informal sources was frequently not validated, resulting in participants’ acting on information that might be dated or false.

Interruptions and “failed attempts” were often themes in the subjects’ stories. Paths were interrupted by both personal life events and events related to the academic setting, which became linked when life events interfered with meeting academic expectations. Among interviewees, there was a seemingly high prevalence of accidents and health crises, causing interruption of studies. This fact bears witness to the background data typical of this rural, culturally unique area, which includes high rates of accidents and illnesses. These accidents and personal or family-member health crises often led to interruption and discontinuation of studies. Events led to physical relocation (back to the reservation) to be closer to family for their own support or for the support of others, as in the case of an ill parent.

False academic starts occurred frequently among our respondents as well. Starting a course or course of study, only to find out that the student was not enrolled or could not be enrolled because of failure to have a prerequisite, was not uncommon. Confusing and intimidating learning environments were a common experience for the group. One interviewee “just left” a very large course because she could not make sense of it and did not know how to get help. Prerequisite courses that did not demonstrate practical application, were attended by a majority of traditional adolescent students and not sensitive to adult learners resulted in withdrawal by some of the interviewees. Stories of

study and tutorial sessions with large numbers of people that were hard to access because of time and location are examples of factors within the educational setting that led to “false starts.”

“Baby-Steps on the Path”

Throughout the interviews, a pattern emerged of very small incremental educational and career “steps” toward the personal career goal of health professional. For example, when the goal was to become a nurse, it was not unusual to find that the participant first became a nurse’s aide and then a medical assistant, with plans to finally become a practical nurse. This is contrasted with directly enrolling in a registered nurse educational program. Several interviewees were in the process of considering another “lateral” degree (a second associate’s degree) because they verbalized it might help them understand things better or help in advancement. Although steps were small, each educational step usually required an investment of time, travel, and extensive family logistics and sacrifice. The “baby-step career ladder” (investigators’ words) through technical ranks for the interviewees was an underlying assumption.

The result is very small increments of pay increase at each step, despite considerable time investment. This type of pathway ultimately results in additional time to achieve the final goal and possibly the likelihood that a person would “stop out,” remaining in a pre-professional job. The baby steps in education may be related to training to better themselves within their current job, with the assumption that this training somehow gets one closer to the goal of nurse.

Roots of Interest in Career Advancement

Participants conveyed a wide variety of reasons for interest in health career advancement. Motivations included both the desire to make a greater impact as well as to make changes for personal reasons. Knowing other health workers pursuing career advancement or being involved with a family health-care crisis were two common catalysts found in the roots of career advancement motivation.

The desire to make more of an impact through advancement was the most common theme in the responses of the interviewees. Making more of an impact ranged from acquiring more clinical skills to do more of the necessary tasks in a hospital unit, making more of a clinical contribution as an advanced practice nurse, or becoming an educator to prepare more nurses. Advocacy for native clients was another way of making an impact. Desire for advancement ranged from the need to acquire skills to solve problems and perform better within current jobs to targeting different, more advanced jobs.

A desire to help people was cited by many interviewees as the reason for wanting to pursue advancement. Respondents’ belief in their ability to help was often linked with both their ability to be effective because they could communicate in the native language and understand the sociocultural context in patient care. These interviewees largely intended to practice in their home area.

Personal, self-focused reasons for interest in advancement included preventing stagnation, advancing in their careers (including making more money), or making changes consistent with the aging process. Advancing on the career ladder within nursing was accepted and taken for granted among the group of interviewees who were nurses.

Obstacles to Career Advancement

Subjects were asked directly about barriers encountered while considering advancing their health careers or while making attempts to do so. All the respondents encountered barriers to career advancement. Many had previously pursued education and answered with first-hand experience. Their responses also reflected personal knowledge of others' experiences in the workplace or in family circles. Socioeconomic circumstances, educational institution interfaces, and workplace factors were the primary barriers.

Making ends meet during career advancement. The biggest barrier to career advancement was the pressure to make ends meet. Financial and time demands formed a circular set of circumstances that was the essential barrier for these health workers. Because few educational programs are local, both the cost and time required to attend are high in lives already financially strained and without enough hours in the day. Providing for self and family makes the earned income from working universally necessary. The need to maintain the income level by working full time heightens time pressure. The majority of the interviewees were the sole income support for their families; therefore, it was very difficult for them to forego or reduce income. Many were single parents or provided for extended families that included parents or children of siblings. To attain the necessary education, students must work and go to school simultaneously.

When education is located outside the home community, the added time needed to work and go to school full time is extensive. The cost of commuting (including fuel and wear and tear on vehicles) adds to the financial burden. If programs are very distant or require full-time study demands, students face the need to either relocate their families or obtain a second residence for student use with intermittent commuting.

Parents commonly resort to leaving their families for weeks at a time, returning home intermittently during their education. Several subjects had done this in the past and were trying to avoid it for the next steps in their careers. Personal costs of foregoing involvement in day-to-day family life and participating in activities with growing children were a cost that interviewees weighed heavily, especially if they had previous experience with this difficulty.

Added housing and accompanying expenses necessitated by studying are very costly. Housing costs may be minimized on the reservation. When living in a family homestead, no rent or mortgage payments may be required. Adding the cost of housing to the budget is a strain that students did not fully appreciate in advance and seemed to lead to a breaking point. Some interviewees reported costs of housing and other unanticipated costs led to leaving a program and discontinuation of studies.

Finances as a barrier encompasses present monthly bills, debt, and other financial commitments students have, as well as the new responsibility to pay for the education they are preparing to take on. It became clear as interviews progressed that when a respondent mentioned finances or bills, the concern was about the management of current obligation in the context of taking on a new commitment. Even though many knew that some financial aid for tuition was likely, the concern lay elsewhere. Many interviewees mentioned their own bills including educational costs for their children, either to send to schools that they felt were better than those on the reservation or for post-secondary education.

Applying for scholarships was perceived as a cumbersome process that the participants felt they were not likely to be successful with. The perception that the few available scholarships are reserved for the academically exceptional or that selections are politically determined in both the Navajo Nation and IHS is widespread. The real monetary costs of education for these students are not just tuition and fees, but also the costs of travel, housing, and relocation, if necessary. A substantial portion of this financial barrier is covering current bills and debt. The most common type of debt mentioned was the car loan, which of course is essential and exacerbated by travel demands.

Dealing with the educational system. A second set of barriers involves interacting with educational institutions and applying for programs. Extensive complicated paperwork, requirements for computer-completed applications, receiving misinformation, receiving information too late, and extensive “red tape” characterize the process of getting started on career advancement as seen by the interviewees. One health worker succinctly stated that “misinformation resulting in cost and delay” and was the biggest barrier to career advancement.

Characteristics of educational programs themselves were experienced as barriers. Prerequisite courses to professional studies and experiences within classes, both with faculty and the educational bureaucracy, created obstacles. Obtaining clear information about the correct prerequisites was a problem for the interviewees. Misinformation and taking unnecessary courses was frequently reported. Prerequisite courses changed for education programs, making clarity about them difficult. When one interviewee returned to study after a hiatus, she found that prerequisite changes left her with courses that no longer “counted,” forcing her to take different ones. Problems accessing necessary prerequisite courses were frequently mentioned. Prerequisites available infrequently, scheduled at times difficult for a working schedule, and lack of space in the course were all barriers experienced by the participants. The courses were often not popular, described by interviewees as “dreadful,” difficult, and irrelevant.

Difficulty obtaining assistance while taking a course was a common concern. In one instance, an interviewee reported that there was one tutor available for all math and science courses at the institution. This tutor gave one tutor session a week that served students of all ages and levels. The tutor had seven or eight students to help within a scheduled hour, and the student had been unable to get her questions answered, despite traveling in for the session. This experience led to dropping a course and discontinuing study. Difficulty contacting faculty was also reported. One student reported making a long trip to campus, only to find that the faculty member was not in the office.

The work setting. Inflexibility in the work setting to accommodate school schedule demands was also mentioned as a barrier to advancement. Difficulty getting a clear picture of consequences and permissibility of reducing work hours was common. Uncertainty about being able to retain a current position and employment benefits if work hours were reduced to accommodate school was a barrier to advancement as well. Being unsure of having a job in the home community following completion of an education program was repeatedly mentioned as a barrier, as these workers wanted to remain in their own communities.

Worries and Hardest Aspects

When asked directly what worried them most as they considered career advancement, the majority of participants reported finances. Being able to juggle time to meet demands of family life while going to school was the second most common worry for the interviewees; this included care for children in their absence coupled with their ability to maintain relationships and parenting in the face of school and work demands. Respondents also worried about academic skills and success, most often in relation to time management. Having enough time to study and to master computer skills was a real concern.

The same themes emerged when respondents were directly asked what they thought would be hardest about returning to school to advance their careers. Again, finances, time juggling, and academic success were key. Taking the first step, getting going, and “doing it” were mentioned as the hardest parts of career advancement, conveying awareness that adopting the change of return to school is difficult.

When participants were asked what would be the easiest part of returning to school for career advancement, the overwhelming answer was being there and “doing it,” referring to the actual process of obtaining an education. Themes that also emerged were that it would be easiest if expenses were paid, classes were local, and it was not necessary to work while attending school.

Views About What Would Help Your Advancement

Interviewers asked the health workers what would help them right now to advance. Although a couple of the respondents said nothing would help because it would not get easier, financial assistance topped the list for almost all those interviewed.

“Being sure the bills are paid” was the financial element required to move on. The ideal situation is one in which education is paid for and students can go to school full time. Even though this was the most desired, none of the interviewees had a specific plan that allowed them to do this.

Several themes about reducing the uncertainty that figured in the decisional balance for these potential students emerged when interviewees identified factors that would be most helpful to their advancement. In the personal sphere, knowing that children would not be disadvantaged by their mother’s decision to pursue career advancement was a strong underlying theme. The potential to disadvantage children was seen as present on both sides of the choice of whether or not to pursue education for career advancement. Knowing that children would be cared for and provided for in the mother’s absence was essential. Weighing the advantages and disadvantages of relocating children with the mother was always in the background. Knowing that money spent for maternal education would not take away from money necessary for the children’s education or other opportunities for the children’s development was woven into interviewees discussions of “what would help.” One woman said that “knowing that my kids are not suffering because I’m going to do this” is what would help. At the same time, “the kids” and wanting children to have a better life than they did were voiced as underlying motivators for maternal advancement.

Being sure of the worth of education in the work world would help respondents take necessary steps to advance their careers. Knowing that a job would be available in their home community after graduation was important. The respondents were embedded

community members. Assurance that advancement and higher earnings would accompany educational completion would reduce uncertainty and encourage education continuation. Reassurance that the education would provide graduates the necessary knowledge and skills to succeed on licensure and certification examinations was important as well. Participants stated that having assurance that they were getting correct information would also help.

Reducing uncertainty about income sources and finances was important to move ahead. Assurance from the workplace that the needed accommodation in the work schedule was possible to permit simultaneous work and school was important. Certainty about job security in the face of requests for schedule accommodation was also necessary. Some interviewees were afraid to discuss the subject with employers for fear they might lose their jobs. To move ahead, respondents voiced a need for clarity about retaining benefits as well.

The interviewees commonly used the words *aid* and *assistance*; they used the word *scholarship* rarely. Interviewees had knowledge that scholarships were available from both the IHS and Navajo Nation. Most seemed to hold the view that there were very few scholarships available, one had to be specially chosen either by merit or politics to receive one, and scholarships were unlikely to be available to them personally. “Red tape” and confusing application processes were specifically referenced by one interviewee based on a past experience, and she had decided it was so much trouble that it was not worth applying again.

Having access to education locally so that distance was not a barrier was desirable to all respondents. Being able to arrange to do full-time study and attending classes locally were most desired and seen as what was most likely to help.

“Making the decision” was identified by the majority of the respondents as key to what would have to happen for them to advance in their careers. They definitively and resolutely stated that once the decision was made, it would happen. Despite the barriers, committing to the personal path to advancement was what would actually make it happen. This sentiment was tied to the subtheme that keeping in touch with motivating factors would keep them on the path.

Views about Difficulties for Rural Students

Two thirds of interviewees said that it was more difficult for rural students to advance their careers than for students in the city. However, a quarter of respondents were ambivalent, stating that difficulties exist in both settings. One respondent summarized that rural doesn’t have to be a problem, it depends on personal priorities. Being rural often meant a need to relocate, at least temporarily, or to travel extensively. Although the rural area carried the barriers of distance and travel made worse by weather at certain times of year, the city was seen to pose its own challenges. Cities possess the advantage of having many educational programs; however, more money is needed to cover greater expenses..

For rural people, the difficulties in relocating to the city included greater expenses, particularly related to housing; not knowing how to get along; being able to find help and make ends meet; and being alone and isolated. Some respondents reported being frightened by the environment itself, the financial demands, and the loss of family support and help that can be counted on at home for child care and assistance.

Distractions of the city were cited as an aspect that made attending school there more difficult. The high cost of housing was a factor frequently mentioned. Without adequate monetary and social support and someone to show you the way, living in the city was often seen as harder. According to one participant, “For me, I didn’t have these things [education and money] and had to figure it all out and do it all myself.”

Travel and transportation are key aspects that make career advancement for rural people more difficult. Travel is time-consuming, expensive, and can be difficult to accomplish during certain weather conditions because of rain and snow on dirt roads. To travel, one needs to have or to be able to share a transportation vehicle. This is seen as a particular barrier for young people. Sharing travel for schooling may be difficult because of different schedules, and there is no public transportation to help with this.

Access to courses is a problem. Many interviewees stated that “only the basics” are available in or near their communities. In a regional center such as Gallup, the courses needed may not be available each semester and there is little choice and flexibility in scheduling. Some participants reported that it was not clear to them how to get information on courses or that the information was difficult to find.

Many participants mentioned responsibilities to extended family associated with life-style on the reservation as a difficulty for rural students. Responsibilities may include hauling provisions of water, wood, and fuel. One interviewee stated that an advantage to relocation to an urban area was that you could get away from the frequent and persistent demands of extended family.

Some respondents voiced concern that job availability in rural hospitals is limited. “If that particular hospital or community does not need what you want to be, you are out of luck; they are the ‘only game in town.’” Rural hospitals are presently seen as high-pressured for nurses because of staffing problems, and getting time off to pursue education can be hard or impossible.

Interviewees were aware that many city hospitals provide tuition reimbursement as a benefit of employment, which was not true in their institution or area. This was contrasted with a process seen as arduous for IHS scholarship application that ultimately would go to very few.

The quality of foundational education in rural areas makes career advancement harder. One respondent stated flatly, “My school did not prepare me for college and I was lost when I got there [to a city]; if you are not prepared, it doesn’t matter if you are rural or city.” Another said that education on the reservation is “a lot lower”; as a result, people from the reservation end up having to start out with low-level courses and they become disinterested in school.

Web-Based Education

The interview included a section regarding interviewees’ views about online education for career advancement. The interviewer made a statement that a new trend in education is to offer courses over the Web using the computer. Interviewees were asked to discuss what they saw as the “pros” and “cons” of this approach for people like themselves.

One fourth of the interviewees did not know that courses could be taken on the computer until the topic was introduced at the time of the interview. Generally, there was some knowledge of the “Net” but not of courses and certainly not of complete degree

programs on the Web. Therefore, some respondents had never thought about it before the actual interview when it was explained.

Having the computers in the community for access was voiced as a “pro” of computer-based education. All the respondents knew that there was a computer in each Chapter House. One interviewee stated that she thinks people would be open to computer learning because there was a very positive response to workshops offered in the community to train people in computer and Internet use. On the positive side, interviewees indicated that Web classes were a “good idea.” Participants felt that the ability to work on classes at home reduced travel to attend classes and that Web-based education “reaches out” more than other methods and works for rural people. Getting the Internet and a computer in the home was seen as a “pro.” One respondent commented, “Learning the computer is good for kids.”

On the “con” side, the issues of access, expense, and concerns about quality and suitability emerged. “You need a computer” was often the first reply; participants either needed to have access to one or to own one. Computers in the workplace were not available for schoolwork use, and community-based computers in the Chapter Houses were limited by the amount of time each person could spend on them, as well as the hours of access (only during the day during work hours). Even access on campuses was limited to computer lab hours. “A lot of people don’t have access to phone lines or computers” was a common response. Comments were replete with horror stories about failure of the infrastructure necessary to sustain and provide access. One interviewee said, “The computer in the Chapter House has been ‘down’ for 5 months.” Another respondent’s personal phone line had been disconnected for repairs for 3 months and, at the time of the interview; service still had not been reestablished. There was plenty of awareness among the interviewees about computer problems and technical “glitches” causing interrupted access. In some cases, these interviewees talked about the necessity to have someone available locally to troubleshoot problems and to help with specific computer course work.

The expenses of computer purchase as well as the Internet connection were a primary concern of the interviewees. One interviewee reported that Internet service providers in the area were “very expensive; a phone bill for Internet access can be around \$300 per month.”

Concern for quality and suitability was a very strong theme among the interviewees. Several interviewees shared that they did not like the idea of computer courses or “did not think they would like it.” Many had concerns about the absence of face-to-face interaction with faculty and other students. Participants preferred to have feedback to verify understanding at the time content is being “taken in.” The opportunity to have questions answered and meet after class with teachers was important to this group. One respondent expressed a general concern about suitability and “fit” for native students. She said “Native American students benefit from an educational model that has resources around them and opportunities for interaction to validate understanding and problem-solve when they do not understand.” This statement was validated by the responses of others.

Some respondents questioned whether the preparation provided in an online course would be as good as an “on the ground” course. Some of these respondents had the experience of being around others involved in Web-based courses. Others with no

experience wondered aloud whether online courses would prepare people with the necessary tools to be successful.

A few respondents raised a concern about time management. The ability to “self-discipline” and make time to do the work online in the face of distractions at home and time pressure was seen as perhaps more difficult than going to class at a designated time.

Discussion and Implications

The large voluntary response to the workplace questionnaire and interviews attests to significant interest among current health workers in career advancement. The return of 336 surveys, wherein 81% were interested in career advancement and another 8% were undecided, shows interest among community members from the area. Interviewees were willing, dynamic, and candid in sharing their constraints and hopes. Concurrently, many barriers to study and advancement exist; in fact, more than two thirds of study respondents identified more than three barriers to study.

It is essential for the educational institutions, health services sector, and community organizations to reflect carefully on the structural factors that can be modified and the assumptions that may be operating to prevent career advancement in this group. The same factors that prevent career advancement prevent the attainment of a culturally competent, stable health work force. Community member and American Indian leadership in health care is important as area health services move toward self-determination. Working together across sectors to determine how to help these health workers advance in their careers has the potential to simultaneously improve the community’s health and economic status.

What Influences How People Pursue Career Paths?

The overall pattern revealed by many interviewees in answer the question, “What steps have you taken to advance your career?” was dubbed by the investigators as “baby steps on the path.” This pattern was striking to the interviewers, who were outsiders. In this group of largely American Indian community residents, the pattern of taking small, role-oriented steps contrasts sharply with a middle-class–dominant cultural pattern of pursuing a long-term goal directly through higher education. Although this research did not delve into the “whys,” possible explanations should be examined to help understand how to encourage health careers of community-based people. One possible reason for this pattern is that people do what is most accessible and affordable under the economic pressures to earn a living on the way. A second is that native students may be counseled in a manner that encourages and presumes that direct entry into the work force or technical education should precede other post-secondary education, despite long-term goals. A third possibility is that secondary schools in the area may not be preparing students to directly enter professional higher education. All of these hypotheses likely have some truth and all need to be considered to forge solutions.

The structure of health services in the area influences career paths. The long-standing provision of health professionals to provide services through the IHS has ensured a supply of professional health workers to the area work force. However, the technical and pre-professional jobs have historically provided the locals’ jobs. This context and history create a market expectation in the population that this niche of jobs is

available to them. Therefore, these jobs have become the places to begin, rather than planning to directly become a professional.

Training for sequential technical roles once in the system may be seen as the path to become a professional. This way of thinking about advancement creates many hours and years of training with little gain in responsibility and authority or economic reward. Although career ladders are presently in vogue in the health professions education literature, the ladder from technical worker to health professional is often a very long, interrupted one with missing rungs.

Importing professional expertise to the area, while meeting the immediate need, reduces the pressure to create professionals locally. One result is that people who want to become health professionals leave home communities to attain education and, very often, never return. These dynamics at the same time may have reduced the local necessity and demand for education in the health professions. One example is that residents from the study area need to travel at least 3 hours to directly enter a bachelor's program in nursing.

Disconnect Between Ways of Finding and Providing Information

Interviewees' methods of gathering information included informal networks often made up of people in workplace circles who had gone back to school. Much information about returning to school and career progression was obtained by "word of mouth." This method of e

decision” to get going. What they said “would help” them take this step is: being sure bills are paid, knowing that their children would not be disadvantaged if they did, being sure of a job in their community when they finish, job security while in school, and being sure that education would be worth the effort in terms of actual advancement. These key elements paint a picture of the decision-making process related to education for career advancement for these health workers. Addressing their needs will require partnerships and multisector cooperation.

Recommendations

The Education Sector

Bringing courses into communities by multiple means, traditionally as well as virtually, should be a goal because it will reduce the time and money strain exacerbated by travel. Prerequisite courses to professional programs should be targeted for analysis. These courses should support the development of academic and learning skills. To be useful to this population, courses should be adult-oriented and teach and use technologies liberally to reduce the barriers to electronic study. Studying the feasibility of bringing advanced preparation directly to communities and getting information about advanced preparation not just to the “next rung on the career ladder” but also into workplace networks is important to help people to progress.

Interfaces between educational institutions and community members should be human, welcoming, and directed at problem-solving. Procedures and prerequisites should not be barriers, rather, avenues and doors. Careful attention to comfort and preferences of community members as interface offices are staffed and developed is important.

Courses should be designed, piloted, and evaluated in relation to learning style and preferences of students. This is especially true of computer-based courses. Participation of potential students in activities to help design interfaces, preferred types of learning activities, and feedback loops would go a long way to increasing successful access. The Web effort will, without doubt, require human presence in communities.

Financial aid should be demystified. Informing students of financial aid awards after enrollment leaves too much uncertainty in planning for the needs of midlife and mid-career students. This prevalent practice makes it almost impossible for students and families to plan and accentuates financial barriers.

The Health Services Sector

Clear, publicized supports available for educational advancement should be present in every community workplace. Policies concerning reduction in time for employees should be open and available. Consideration should be given to financial reimbursement and salary supports for time spent in school. Minimally, tuition reimbursement should be in place. Employment benefits should remain in place for employees enrolled in formal educational programs for career advancement. Repayment policies, such as obtaining a commitment to work following education for a number of years in the setting to repay the maintained salary during study, is an example of a type of policy that might be considered.

Given the costs of “traveling” professionals used extensively to fulfill staffing needs and the benefits of a stable, culturally competent work force, health-care

institutions should consider adopting a more person-focused and less position-focused approach to staffing. Building institutions around the human resources of the local community as they advance in health careers requires flexibility but provides the job security that community members need to take the risk and incur the cost of education. Providing jobs to local community member health professionals should become a high priority overriding other considerations.

The Community Sector

The looming barrier of finances requires cooperation from financial institutions and interests in the community. The participants in this study stated that to help them advance in health careers, they would need to be assured that their bills would get paid. A program that would allow for debt consolidation and perhaps payment deferment until completion of education would go a long way to free people to advance educationally and professionally. Communication between the educational, health services, and financial sectors so that information about these programs is disseminated would be very important.

It is important to honor the significance of family and community to health workers' success. Moral support from families and study groups in the community was found to be a very important factor in the success of these health workers. When relocation was necessary, interviewees reported that the loss of family and community for support often contributed to their discontinuing study. It is important to nurture groups within the community and facilitate their development whenever possible. At the same time, family responsibilities are sometimes viewed as a barrier and certainly figured into delays and interruptions in study for some students.

Parents need to be sure that children will not be disadvantaged by parent decisions to return to school for career advancement. The interest in child care shown by the questionnaire results points to the need for quality provisions for child care in communities, families, and educational settings. Scholarships for children of students in campus-based schools may be a way to support these young families. This need is particularly acute for those who must relocate and choose to take their children.

Continued investment in and development of partnerships for community infrastructure will facilitate access to Web-based means of education. Cable and broadband services and possibly the support of wireless networks will increase the capacity of these communities to benefit from advanced Internet-based education.

Appendix A

Educational Interests and Needs Survey

“Assessment of Interest and Needs of Potential Health Professions Students”

There is an ever-increasing need for health professionals with advanced academic learning and up-to-date health experience. Please fill out even if you do not feel ready to go to school now.

1. Are you interested in advancing your education in the health professions? (Please check one)
 - Yes
 - No
 - Undecided

2. What things keep you from advancing in the health professions? (Check all that apply)

Programs are too far away from my home.	<input type="checkbox"/>
Too busy with my work.	<input type="checkbox"/>
Programs are too expensive.	<input type="checkbox"/>
Too many family responsibilities.	<input type="checkbox"/>
Cannot do a full-time education program.	<input type="checkbox"/>
I see no need because I like my work now.	<input type="checkbox"/>

Other _____

3. Which of the following careers interest you? (Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Public Health Nurse | <input type="checkbox"/> Dental Hygienist |
| <input type="checkbox"/> Hospital Nursing | <input type="checkbox"/> Dentist |
| <input type="checkbox"/> Nurse Administrator | <input type="checkbox"/> Occupational Therapist |
| <input type="checkbox"/> Nurse-Midwife | <input type="checkbox"/> Physical Therapist |
| <input type="checkbox"/> Nurse Practitioner | <input type="checkbox"/> Doctor (MD) |
| <input type="checkbox"/> Nurse Educator | <input type="checkbox"/> X-ray Technologist |
| <input type="checkbox"/> Clinical Specialist Nurse | <input type="checkbox"/> Physician Assistant |
| <input type="checkbox"/> Health Educator | <input type="checkbox"/> Public Health Administration |
| <input type="checkbox"/> Doctorate in Nursing | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Certified Nursing Assistant | |

Continue on back

4. How helpful would each of these be in making a choice to continue your education?
 (Please circle your answer for each of the following.)

	Not helpful	Mildly helpful	Helpful	Most helpful
Financial aid information.	1	2	3	4
Talking to teachers in the schools from the programs I am interested in.	1	2	3	4
Receiving information about the professions in the mail.	1	2	3	4
Having a <u>mentor</u> from the profession I am interested in (<i>a practicing health-care provider who counsels potential students in a new career path</i>).	1	2	3	4
Coaching or tutoring in study skills available in the program.	1	2	3	4
Coaching or tutoring in using computers-available in the program.	1	2	3	4
A computer is provided for me to use by the program.	1	2	3	4
Courses available on the Web (Internet) for me to complete at home.	1	2	3	4
Courses offered close to my home.	1	2	3	4
A guaranteed job in my community.	1	2	3	4

5. Which of the following kinds of supports would be of most help to enable you to continue education in the health professions. (Please circle your choice for each of the following.)

	Not helpful	Mildly helpful	Helpful	Most helpful
Continued salary earnings during study.	1	2	3	4
Child care provided during study and clinical rotations.	1	2	3	4
Moral support from family.	1	2	3	4
Other students from my area to form study and support groups.	1	2	3	4
An advisor or counselor to talk to in the school I attend	1	2	3	3

6. May we contact you in the future?

- Yes
- No (Declined)

Thank you for filling out the above information and returning the survey.¹

If you want additional information or give permission for us to contact you please fill out the attached forms.

¹In accordance with rules of the Navajo Nation about conduct of research, the Navajo Nation will keep the completed survey forms without name and identifying information.

Appendix A

Personal Interview

Interviewer will say the following:

“Thank you for agreeing to talk personally with me. I am from the University of New Mexico Health Sciences Center and we are trying to understand the interests and needs of rural people in health occupations related to advancing their health professions education.

Any information you provide in this interview will not be reported to supervisors or administration. Only grouped statistics and general lessons learned will be shared with anyone. You will not be identified by name in the reporting of this information.

I have a few questions that I will start with. Please elaborate. I will be writing down your answers as you speak.”

1. You indicated on your questionnaire that you are interested in advancing in the health professions. Please tell me, how did you become interested in this career advancement?

2. Have you taken any steps toward going back to school in the health professions?
 - If yes...
 - What have you done?
 - Did you experience any barriers or roadblocks?
 - If yes...what were they?

 - If no...
 - Can you talk about what things are standing in the way of taking steps to further your education?

3. When you think about going back to school
 - a. What worries you most?
 - b. What do you think will be easiest?
 - c. What do you think will be hardest?

4. Do you think it is harder for rural people to advance their careers than for city people? If yes, what things make it harder for rural people?

5. Computer access to education by way of the World Wide Web has increased. What are the pros and cons of this for rural people in your area wanting to advance their education?

6. What would help you realize your goal of advancing the health professions?

Appendix B

Current Occupations of Respondents	Categorization of Current Occupations
<ul style="list-style-type: none"> A. Administration B. Clerical C. Social Work/Therapy D. Community Health Rep/Worker (CHR) E. Hospital Technician F. Health Education G. Allied: PT, OT, RT H. Home Health I. Interpreter J. Laboratory/Medical Technician K. Dieticians/Nutrition L. Dentistry M. Diagnostic Radiological Technologist N. CNA, Nursing Assistant O. Nurse-Midwife P. EMT Q. Physician (MD) R. Clinical Psychologist S. Nurse T. Public Health Nurse U. Pharmacy V. Miscellaneous 	<ul style="list-style-type: none"> Administration <ul style="list-style-type: none"> • Administrator • Billing Specialist • Transcriber • Secretary, Clerk Community & Education <ul style="list-style-type: none"> • Health Educator • CHR • Home Health • Interpreter • Social Work/Case Mgr, Counselor • Nutrition/Dietician Health Technician/Allied Health <ul style="list-style-type: none"> • Pharmacy • Clinical Aide • Health Technician • Laboratory/Medical Technician • Radiology Technician • Dental Technician/Assistance • PT/OT/RT Emergency <ul style="list-style-type: none"> • EMT Nurse <ul style="list-style-type: none"> • Nurse • Public Health Nurse Advanced Practice <ul style="list-style-type: none"> • Nurse-Midwife • MD • Clinical Psychologist Nurse Assistant <ul style="list-style-type: none"> • CNA

PT = physical therapy; OT = occupational therapy; RT = respiratory therapy; CNA = certified nurse aide; EMT = emergency medical technician.

Appendix C

Health Career of Interest (could check more than one)	Checks	% of all Checks
Public Health Nurse	81	12.86
Hospital Nursing	76	12.06
Nurse Administrator	32	5.08
Nurse-Midwife	32	5.08
Nurse Practitioner (includes 3 Nurse Anesthetists)	51	8.10
Nurse Educator	39	6.20
Clinical Specialist Nurse	38	6.03
Health Educator	45	7.30
Doctorate in Nursing	19	3.02
Certified Nursing Assistant	23	3.65
Dental Hygienist	18	2.85
Dentist	7	1.11
Occupational Therapist	12	1.90
Physical Therapist	18	1.90
Doctor (MD)	11	1.75
X-Ray Technologist	27	4.28
Physician Assistant	26	4.13
Public Health Administration	34	5.4
Other: Behavioral Health/Counseling	6	0.9
Medical/Clinical Laboratory	5	0.7
Pharmacist	3	0.4
Paramedic or Emergency Assistant	3	0.4
Respiratory Therapy	3	0.4
MBA	3	0.4
Social Work	3	0.4
Optometry	2	0.3
Nutrition	2	0.3
Medical Coding	2	0.3
Legal Issues in Nursing/Health Law	2	0.3
Dental Assistant	1	0.15
Pharmacy Tech	1	0.15
Orthodontics	1	0.15
Nurse Informatics	1	0.15
Specialty Eutustonal Care	1	0.15
Speech Pathology	1	0.15