portant in looking at a whole delivery care system. We really have no hard data for planning. For example, with all the activity related to birthing centers and other forms of out-of-hospital deliveries, we have no hard figures on what out-of-hospital births really cost, let alone how predominant a practice these births are. We're considering this problem now in relation to additional research needs. We don't have hard data, but we know out-of-hospital births are a growing phenomenon.

ANS: It seems that the legal problems in terms of independent nursing practice in most states would be a real barrier to any feasible way of getting those data. If nurses can't legitimately be out in the community independently working with people who need direct nursing service, how do you get the data? The isolated efforts are not enough to get representative data.

KK: Legal questions are a considerable problem as are political issues. We know nurses have been reluctant very often to take a stand or to become involved. This needs to change. Nurses are a health professional group which could make a great difference in legislation as well as delivery of care.

Margie N. Johnson, R.N., Ph.D., Associate Professor, Psychiatric-Mental Health Nursing, Texas Woman's University, Dallas Center, Dallas, Texas:

MJ: I see several barriers to developing sound nursing research and to involving more nurses in research endeavors. One important barrier is that there is an extremely small number of nurses to act as role models in carrying out research

and even fewer who are doctorally prepared. Nurses, in order to function as colleagues with other researchers in the health care arena, must be prepared at the doctoral level and have competence in the research field. Data show that only slightly more than 30 percent of all doctoral-prepared nurses are involved in research. Between 1972 and 1977 about 100 nurses a year received their doctorates compared with a much smaller number a decade earlier. So although the number of prepared nurses is gradually increasing, the number of those actively involved in research is still very low. The fact that some professional nurses have questioned the need for a nursing research journal represents a negative attitude toward nursing research. We, as professional nurses, must realize that the only way to improve nursing practice is through the development of a theoretical base—an information reservoir, which is best attained through systematic research investigations.

Another barrier to getting nurses involved in research is that their interests and skills are often thwarted due to impositions of their employment situations, making it difficult if not impossible to study researchable questions. Further, the opportunity to replicate studies controlling for variables that possibly influence the reliability of the original research is blocked, and therefore the excitement and enthusiasm for research activities are lessened.

In order to conduct nursing research, we must obtain control over the practice of nursing. Although this is nearly an overused statement, it is especially pertinent to any real involvement in research that would potentially influence nursing practice. A particularly frustrating situation occurs when nurses have to obtain permission from physicians to

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conduct *nursing research*. Of course, permission from the Human Research Review Committee is appropriate and necessary; however, further scrutiny from the physician should be a concern to professional nurse researchers. What is considered research within the domain of nursing must be continually evaluated so that the problem of who does what with whom can be better understood by the entire health care team.

Research in nursing must be done within the framework of the human potential, skill, interest and talent of the researcher. Research should reflect researchers' past, present and future interests. For example, in master's programs, students must be encouraged to select problem areas in which their concerns have been persistent. Many, but not all, researchers make an effort to do something in the areas in which they have been involved. We must be careful to advise students in a direction where their interest will be maintained and where their commitment will stimulate them to continue their research efforts after graduation and hopefully into and through doctoral study.

Also, courses taken by students must show some relationship to the research they intend to develop. For instance, if students are going to carry out a sociologically based research study, they need some background in sociology and sociological methodology. Without this focus, potential researchers do not have the conceptual base to deal with their problems; they may become frustrated and "turned off" to future research attempts. It is difficult to challenge the reality that the quality of research is dependent upon the expertise (specialized knowledge base) of the researcher.

ANS: Are you saying that nursing education bears the major responsibility for developing science?

MJ: Not really. All nurses must share the responsibility for contributing to the science of nursing. Educators and practitioners must have equal responsibility and commitment. Some individuals have suggested that educators—that is, persons in various academic settingsshould take the leadership; but if research is truly going to give direction to theory and practice, practitioners also should be involved. It is well known, however, that nursing service administrators have critical problems obtaining support for conducting research; thus special attention must be given this area. Dual appointments between the service and educational agencies might be reviewed with a stronger emphasis on the research component.

One way possibly to facilitate and encourage nurse researchers is to have nurse representatives serve on the Human Research Review Committees of the research institutions. There should be more than one nurse on such committees, and they themselves should be active in research projects. Some nurses as well as physicians in clinical settings seem to relegate nursing research to a position of low priority. They either overscrutinize the study or show little or no interest at all. Student theses are often viewed as the completion of an assignment and not as having potential for improving nursing practice.

ANA: How do you think we might stimulate greater interest in research?

MJ: Probably only those faculty who are interested and skilled in research

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should direct theses and dissertations. Nursing might have as its goal that only those who have published research should direct formal research investigations. Certainly if faculty are not interested in research (and one would hope these are few), they should not be required to chair committees. It would seem that the present practice requiring total faculty interest and commitment to research leadership is self-defeating and undoubtedly does little for instilling motivation in students. Few demands or unreasonable demands made upon students by unqualified or uninterested faculty is a disservice to students. This is not to imply that those faculty who are not involved in directing research do not make important and significant contribu-

tions elsewhere—to the contrary, when faculty are recognized for competent leadership in their specific areas of interest, benefit to the curriculum and students is forthcoming.

Also, no university program should offer a doctoral degree unless that university has a research center. Recognizing the problems involved in establishing a bona fide center with all the necessary support services, we should nonetheless have this as our ultimate goal. Finally, if we can make the research experience worthwhile for all concerned—the student, the faculty and the nurse—in clinical settings, greater gains would be made in developing nursing science through research.