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QUALITY DEVELOPMENT  
IN NURSING CARE:  
FROM PRACTICE TO SCIENCE

Report on a WHO meeting

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## ABSTRACT

The meeting was convened with the aim of linking nursing practice with its scientific base, and with nursing education and management, to provide a common ground for the development of quality care. The four themes of the meeting covered the practice of nursing, management of nursing services, health promotion and disease prevention, and ethical concerns in nursing. The main recommendations cover the following areas: the need for nurses to be educated to appreciate science, use research findings, conduct research and evaluate the results; the need for well educated nurse managers; the building of local, national and international networks to improve communication among practitioners, educators and managers; the need for support for scientific forums at all levels; the education and national and international roles of leaders in nursing; and the funding of research.

### *Keywords*

NURSING CARE - trends  
QUALITY ASSURANCE, HEALTH CARE

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## Introduction

A WHO meeting concentrating on nursing practice and nursing science was held in Tromsø, Norway, during an international meeting, attended by some 165 participants, from 28 to 31 May 1991. The WHO meeting was attended by 15 temporary advisers from 6 countries (see Annex 2).

As part of its overall programme, the WHO Regional Office for Europe has, over a period of years, explored and promoted the idea of quality assurance in nursing practice. This has been done in collaboration with nurses from various Member States. Moving from standards of nursing care towards the broader aspects of quality assurance has brought the interface of nursing practice and the science underlying nursing into focus. Also, the dialogue among nurses, nurse educators, researchers, and managers has become more and more important.

The meeting was a working session with interaction and discussion among all participants interested in the development of quality nursing care. There were 14 working papers, which formed the basis for discussion (see Annex 1).

Throughout, the aim was to link nursing practice with its scientific base, and with nursing education and management, in order to establish a common ground for the development of quality care. Changes in health care systems and the rights and responsibilities of people in science and the professions were emphasized.

## Clinical Practice and Nursing Care

The first theme of the meeting was present challenges and future demands in practice and science. Using standards to improve the quality of care was also discussed. The patient populations of special interest included the elderly at home and the institutionalized demented.

### Challenges and demands

National economies in recession, the increased demand for high quality but affordable health care, and aging populations where people are

suffering from an array of chronic illnesses, are major problems in need of solutions. People who are ill, especially with chronic disease, would like to share their knowledge and experience with nurses to a greater extent. They want to be more involved in planning and providing for their health in new, improved systems where individual rights, autonomy and personal responsibility are valued.

Questions are being raised by the public and by providers about how to ensure a higher degree of community participation in health for all activities. Population-based and epidemiological approaches are needed in nursing practice, education and management that begin with valid information about health needs in communities and include an understanding of human and material resources -- their costs, uses and benefits -- in terms of health results.

Nurses who can provide leadership in health needs assessment, health teaching and health systems management, to ensure achievement of a reasonable level of quality care, are in short supply. This shortage is due, in part, to the fact that nursing is primarily a women's field and the demands on women at home and at work are heavy. Moreover, salaries are comparatively low and the image of nursing is less than ideal.

The shortage is also related to problems with the organization and management of health systems and the uneven national regulations for nursing education. The International Council of Nurses (ICN) has addressed the governmental regulation of nursing. Both ICN and WHO are paying attention to leadership and management by nurses.

### **Science and standards**

These problems are being addressed, but serious nursing research is largely a recent activity of the last decade. The Workgroup of European Nurse Researchers and WHO have provided direction, and there is now a clearer understanding about how to educate nurses to value science, actively seek new knowledge, conduct meritorious research, and then disseminate findings so as to improve the quality of care.

Nursing is a professional discipline, and there is therefore a commitment to balancing practice and science. Nurses are examining problems that reflect a variety of health care needs. Questions

important to nursing and to other disciplines are being asked pertaining to health status, quality of life and the provision of care. New scientific techniques are being used and theoretical understanding is expanding. Nurse scientists are accepting more and more responsibility for proposing coherent national health care agendas. A wide array of philosophical perspectives from medicine and the natural and social sciences are being examined, to provide the underlying foundations of nursing science and to guide selection of the most significant questions and the most creative techniques to improve quality of care. The development of standards for nursing practice is one noteworthy initiative.

Standards are agreed-on levels of professional performance formulated as criteria, derived from experts or through general consensus, that can be used to judge the value and suitability of practice. Standards are informed by science, but scientific progress is also hastened by conceiving standards as testable hypotheses and for using these criteria to estimate probabilities.

Expert authority determines standards, but so does the experience of patients and practitioners. It is essential when setting standards to recognize their subjective nature. Standards are as much a reflection of the values of those who created them as are scientific endeavours in general. Standards are also related to availability of resources. Moreover, whether developed by national panels of experts to provide a broad framework, or formulated locally to guide daily activities, standards vary and change depending on the society and people involved. Standards legalize organizational and national priorities at a given point in time but, as times change, so do standards of practice. They are dynamic, based on scientific and intuitive knowledge, and used to judge the suitability of nursing care. In addition, standards contribute to the discovery of new knowledge when subjected to empirical testing.

### **Care of the elderly and demented**

Standards of nursing practice can be reflected in a variety of forms. One such form is the assessment instruments used by nurses to measure people's level of functioning. To ensure validity and reliability

requires identifying the most critical indicators, subjecting these to internal and external review, formating the content of assessment forms appropriately, and then testing the transferability and format in a variety of settings. Useful indicators that generate valid results are specific, measurable and realistic, yet challenging.

Developing standards for assessing the health status of the elderly is a high priority. Those aged 80 and over form one of the fastest growing groups in the European population. It is also a group with many health problems. Using criteria to judge the ability of elderly patients to care for themselves - with respect to physical, mental and social functioning - can provide systematic data on which to base decisions about types of interventions and their costs and benefits.

The development of standards is also especially necessary for the institutionalized demented. Observational studies of this group show a highly solitary existence. Care is often restricted to providing physical comfort and ensuring safety; there are few social or therapeutic exchanges with nurses.

## Nursing Management, Organization and Science

Managing nursing services was the second theme of the meeting. The organization, production and distribution of nursing and health care have been closely scrutinized throughout much of the world, and with good reason. If people are not healthy, if disease is prevalent, or if the cost of care outstrips its quality, a country's social and economic fabric can quickly unravel.

The high cost of modern health services and the public's expectation that they, not the providers, should become central to the system are some of the main factors changing the nursing services. Today, in some countries, hospitals are becoming fewer and more care, of a higher quality, is provided at home. Governments are struggling to find the right mix of private and public services, to control costs, and to make health systems effective and equitable. There is also widespread concern about the inappropriate use of services and administrative inefficiencies.

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Some of these problems are outside the purview of nursing, but many are not. Nurses are needed who can assess health care needs, calculate the costs and benefits of resource usage, design and manage more efficient yet humane organizations where nurses' caring capabilities are fostered, and measure the results.

Strong educational programmes are needed to train nurses for leadership and management. Higher education for nursing administration can be provided in university schools of nursing, in colleges of management, or in health services management programmes associated with schools of medicine and public health. New models of education are needed for nursing practice and management.

Wherever nurse managers are educated, it is essential that future practitioners understand how to blend nursing and management science. For the welfare of the people served, it is essential that nurses do not lose sight of their knowledge of nursing. Nurses bring to management a unique perspective because of their emphasis on health promotion and their historical concern, since Florence Nightingale, with measuring quality of care.

To structure education and research in nursing management, it is useful to conceive of the field as: organizing, producing, distributing and evaluating health and nursing services; and using standards of economy, efficiency and equity as criteria to judge the services, which are provided to individuals and communities by practitioners, organizations and nations. Empirical studies of nurse managers suggest that their skill to plan, evaluate and use information systems may be weak. Therefore, to enhance nurses' effectiveness, planning and evaluation techniques should be part of every programme of study, together with information management.

A model of the health system infrastructure for future inquiry may prove especially useful. It can serve as a guide for analysing and evaluating the most essential nursing management activities. For example, the input to a health system is health needs; health care needs, therefore, are the starting point for collecting information to plan and evaluate. The central elements in the system are resources, management, economic support and service delivery. These, then, are the next factors about which information should be sought. And the output of the system is health results, which should be evaluated as

outcomes, using indicators of cost and quality such as levels of functioning, patient understanding, satisfaction and community involvement.

It is recommended that curriculum content for nursing management include knowledge of the following: nursing, health, epidemiology, national health systems, intersectoral links, organizational behaviour, financial management, information technology, personnel administration, and methods of social analysis such as health needs assessment, planning techniques, programme evaluation, cost-benefit analysis and vulnerability analysis. To expand nursing's caring capability throughout a programme of study, the ethical and spiritual dimensions of care and patient advocacy should also be emphasized. And to improve leadership skills, content is recommended pertaining to policy formulation and implementation.

## Health Promotion/Disease Prevention and Nursing Science

The third theme was primary health care. Provider-teams and new nursing roles were discussed, as were critical indicators and information technology.

### **Teamwork for primary health care**

Teamwork is essential to prevent disease and promote health. Teams are needed to improve communication among physicians, nurses, psychologists and others. Experience has shown, however, that the more diverse the make-up of a team, the harder the members have to work to understand and be understood by one another. People with different backgrounds and perspectives must first learn to understand the special language, beliefs and theories of others before they can communicate with ease and be fully productive. Some of the greatest diversity of opinion in health teams pertains to the issues of centralization or participation, prevention or cure, paternalism or self-reliance, large or small institutions, and equitable or inequitable distribution of services.

The effectiveness of the health care team in defining the roles of its members, in setting goals, in implementing plans and in evaluating outcomes depends heavily on widespread personal and institutional commitment, but also on information technology. Computerized and paper-based technologies that gather the right information, in the right form, at the right time are needed to support the decision-making of all team members, including those who are the recipients of health care services.

Model teams have been developed that can serve as a future guide to others. In one Danish municipality, for example, the health and social services for the elderly were reorganized by increasing people's participation in decisions about their care. Working in teams has shown how many boundaries exist and how strong these are for each profession and specialty. But even so, before-and-after study comparisons using a variety of indicators have demonstrated cost-effectiveness.

In Sweden, diabetes care has been provided to people in some rural communities for 10 years by a team consisting of a nurse, a dietitian and physicians. Two indicators of quality have shown that lower-leg amputations decreased by 80% and the number of hospital days fell dramatically.

### **Indicators for health**

Indicators provide evidence or show what exists. In health care, indicators direct attention to levels of quality and costs. It is important to note that indicators are not the same as standards. Standards are targets or norms to be achieved, whereas indicators are measures of the extent to which a standard has been reached.

According to the World Health Organization, there are two categories of indicator: those that measure health status and quality of life, and those that measure the provision of care. Infant mortality rates and life expectancy are two examples of basic health status indicators. Others related to the quality of life are indicators of growth and nutritional status. Provision of care indicators monitor the extent to which health system standards have been achieved. Two examples are the numbers of nurses available to care for the elderly at home.

and the cost of using auxiliary nursing personnel. Quality of care indicators should reflect local conditions, and they should match the resources available for collecting and processing data. Cost and feasibility considerations are as important when selecting indicators as they are for any scientific initiative.

Indicators are developed based on experience and scientific findings. They are also based on hunches and intuition when the supporting science does not exist. Therefore, although scientific knowledge is basic to health promotion, sensitivity to the salience of people's feelings is necessary too. The reasons for unhealthy behaviour can defy rationality. To promote health, personal approaches are required to gain an understanding of people's feelings, to enhance their self-esteem, and to expand the social support they receive.

## Ethics and Nursing Science

Ethics was the fourth and final theme of the meeting. Experts who have developed frameworks for health ethics research draw on concepts from philosophy, theology, the social sciences, management and nursing. Health ethics seems to lie at the crossroad where abstractions intersect with concrete measurement tools.

Problems with social analyses, when measurement tools are used, arise in all fields but nowhere more so than in the health sciences. The basic questions are what should be measured, what can be measured, and how should the phenomena of interest be measured. With respect to ethics research, questions arise about which criterion should be used to admit or reject concepts to a research agenda, and whether to focus on the conduct or the content of health ethics.

Equity in health care and quality of life are two of the more prominent concepts that call for contemplation of what should and what can be measured in practice. Obviously, methods are needed to understand changes in the quality of life, not only in level of function; there is general agreement that measures should be used to assess both health status and the quality of life. However, many qualities can be measured and so that next question is what indicators will measure the quality of life factors for which health providers are responsible? And the question after that is how will the validity of the measures be ascertained?

It is not clear whether, or to what extent, the techniques currently in use measure what should be measured or what they allege to measure. For example, the existing activities-of-daily-living scales are extremely crude and may yield little more than intuitive judgments. It is therefore important that nurses recognize the basic values and assumptions held by the authors of existing measurement tools, and subject the tools to fairly rigorous validity testing in order to understand their limitations.

An assumption made by some nurses is that nursing ethics and medical ethics are separate entities. There are those in nursing who suggest that physicians should give priority to action ethics – reflecting on how to fulfil a social role. Philosophers outside nursing, however, argue that nurses and doctors have to both act and engage in care relationships. Therefore, nursing ethics should not be developed in opposition to medical ethics. Ethical reasoning by nurses, however, may demonstrate how ethical principles are ranked differently by the two provider groups.

An ethics research agenda is needed in nursing and the health sciences. Concepts and theoretical frames are needed for future research and for ethical behaviour. In practice, questions abound about confidentiality, mandatory testing, the right to know, consent and so forth. Among scientists, forums are needed to develop and test ethics theories that are clearly interdisciplinary and contribute to quality of care outcomes.

## Conclusions

1. Nursing is a professional practice discipline. Nursing practice and science are intertwined. The problems in practice are the basis for advancing nursing science and professional nursing practice is informed by scientific progress. A high level of problem-solving, up-to-date knowledge of scientific discoveries, accountability, and a keen sensitivity to ethics are essential for the development of quality nursing care and nursing science.
2. The goal of science is to produce understanding through exploration, systematic analysis and theory development. The goal of nursing

is to give the highest quality of care, to the most vulnerable people, at the right time, using the most appropriate methods, and at a cost society is willing to bear. The goal of nursing science is to use the methods of discovery that are appropriate to nursing's scientific stage, in order to find solutions that will improve health and contribute to national and international understanding of health needs, services and outcomes.

## Recommendations

1. To promote quality in practice, nurses should be educated to appreciate science, use research findings, conduct research and evaluate the results. Financial resources are needed in Europe to support nurses' education for research and should be sought from public and private agencies. Sensitive, well educated nurses are needed who can develop useful outcome indicators to assess health status, quality of life and the provision of care. Indicators should be realistic yet challenging: they should be valid, objective, sensitive and specific. Useful indicators are also recommended that provide information to nurse managers about costs and benefits. Scientific merit is one criterion when setting research priorities, but cost is another.

2. Well educated nurse managers are needed who can promote quality in practice by facilitating research studies, using a variety of methodologies derived from a variety of philosophical perspectives. Health needs assessment and programme evaluation are highly recommended for nursing management. Team building and health programme evaluation should be viewed as fundamental and as contributing significantly to improvements in quality of care and its measurement.

3. To improve communication among practitioners, educators and managers, new ways should be found to build teams and networks locally, nationally and internationally. Networks are individuals and groups who provide the resources needed to accomplish goals. Team leaders forge large, strong networks of people from a variety of

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backgrounds, who provide a wide array of resources for quality development in the form of information, materials, personnel and funds. They build networks through friendships, by negotiation, and by setting goals that others understand and can agree are important.

4. Strong networks and teams composed of nurses in practice, nurse managers and educators should be built to clarify the most appropriate philosophical perspectives for nursing science. Clarifying values and assumptions in the natural, medical and social sciences, as well as in the humanities, is fundamental. Deliberations about philosophical views and scientific priorities should take place in local, national and international forums specifically designed for the purpose. It is recommended that such forums be intra- and interdisciplinary. Teamwork is as essential for scientific progress as it is for improving the quality of practice. Collaboration among professionals with a rich variety of ideas can forge appreciation and new ways of understanding people's health, nursing care and delivery systems.

5. It is recommended that support for scientific forums be sought from local, national and international agencies such as the World Health Organization, and private sources including professional nurses' associations. In the forums, nurses should take the responsibility for proposing a coherent nursing science agenda that is also practical and financially realistic. To set an agenda, standards for scientific merit and social benefit should be delineated, as should those to evaluate feasibility and cost. The priority research for health for all set out by the WHO Regional Office for Europe should be considered a basic text.

6. Well informed nurses face important decisions in developing a science agenda that reflects their concern not only with health care outcomes but also with education, the environment and defence. To foster broad, outward-looking, rational action, it is recommended that leaders in nursing be educated in Europe's finest universities and play a key role in national governments and the European Community. Nurses are urged to take advantage of opportunities which foster international exchange.

7. It is recommended that resources be sought to fund research, to create large databases for use in clinical studies, and to provide the expertise necessary to publish the findings from nurses' research. There are several sources of funds for nursing science in Europe, but many more are needed to hasten scientific progress. A great strength of leadership is needed to communicate to the scientific communities in European countries that nurses with university education are capable of meritorious work, that they are responsible and therefore willing to subject their science to scrutiny and that, through nurses' practice and science, higher quality health and health care can be achieved and accurately measured.

*Annex 1***LIST OF WORKING PAPERS<sup>a</sup>**

- The role of the nurse in the future, by Martha Quivey, Norway
- From standards to science, by Alison Kitson, United Kingdom
- Strategies of self-care management for the elderly at home, by Margarethe Lorensen, Norway
- Disruptive behaviour in institutionalized demented patients in relation to care provided, by Ingalil Rahn Hallberg, Sweden
- Nursing administration in Norway - Evaluation, by Beverly Henry, United States
- Nurses' caring capability - an important factor for nursing, by Kerstin Segesten, Sweden
- The importance of teamwork in health care, by Ritu Sadana, Denmark
- Primary health care in Denmark - a proposed model in prevention and care, by Lis Wagner, Denmark
- Feelings and knowledge as health promotion factors, by Iselin Krogerus-Therman, Finland
- The role of the nurse educator in diabetes care, Birgitta Hellstrand, Sweden
- The concept of "quality of life": some philosophical problems, by Reidar Lie, Norway
- The role of caring in nursing ethics, by Anders Lindseth, Norway
- Ethical reasoning in registered nurses, by Astrid Norberg, Sweden
- Ethics and professional secrecy, by Liv Wergeland Sorbye, Norway

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