NURSING data: purposes

The NURSING data project proposes a comprehensive nursing care information-collecting system, in order to include nursing data within the Swiss Health statistics system. This system should be compatible with the existing medical statistics system (ICD-10, CH-OP). On the other hand, The NURSING data project wishes to apprehend the care needs (e.g. "the problems or phenomena of care") as well as the care services.

The two major issues of this project are the choice of an information system and the generation of a consensus around it. The main challenge will be the development of a communication system between health professionals, which will be clearly future oriented but has to take in account the past experiences, in order to overcome historical burdens.

We expect that the results of such a project will have consequences for nursing practice in Switzerland. The acceptance process of the NURSING data project will use confrontation with the reality at the point of care and will systematically inform all partners.

One of the key elements of its acceptance will be the acknowledgement, by the professionals, of the nursing information system rationale within their own care setting as well as within the Swiss health information system. This set of arguments has been established in reference at the objectives defined by the Swiss Commission for Health Statistics for its general conception of health care setting statistics. Our objectives are reinforced by international and national nursing literature findings and they also meet those promoted by authors of nursing information systems.

1. Give an overview, at national level, of the care provision, the services and the financial data of the health care institutions.

Nursing is a health service that applies in a specific way to a wide range of health activity centres (according to the definition of the ICN). Its contribution to the health care system is hardly perceptible and insufficiently evaluated. Nursing has often been considered as naturally issued from the medical and/or family care.

Considering the above, the coherent and exhaustive description of the health care services offer has to take in account, at their right value, nursing care services. The latter represent a large part of the effective healthcare work, of the consumed resources and of the triggered costs and incomes. Actually, nursing services do have a cost that should henceforth be evaluated and understood. For instance, it is estimated that the average expenditure for nursing staff in Switzerland represents:

- 30 % of the total hospital expenditures (without investments)
- 50 % for a nursing home
- 90 % for a home care agency.

What do nursing professionals do? To what needs, problems or prescriptions do their services respond? Questions are numerous and attempts at explanations go in every direction. Health care systems management relies heavily on information about structures, processes and outcomes. Furthermore, the WHO has made the elaboration of suitable information systems in healthcare one of the European Health Policy Aims (Aim 20).

Over the last years, important tools for health statistics have been conceived and developed in Switzerland. However, these tools mainly concern the hospital settings (hospitals) and the medical care provision (hospital statistics, medical statistics of hospitals, statistics of non-hospital health care

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1 Werley, Delaney, Goossen, Closon, etc.
settings).

The major part of health care provision in Switzerland is not monitored through statistics and it still remains in the shade. At a national level, there are no common and general data-sets that inform about:

- What IS nursing care (services, interventions, and so on), and
- What is the PURPOSE of nursing (nursing diagnosis, care phenomena, required care, …).

Considering the importance of this domain of care, a systematic collection of nursing data is essential. The reason is not only because of its contribution to the coverage of care needs but also because of the involvement of large resources in nursing care and the number of employed staff concerned.

2. **Monitor disease frequency and surgical interventions rate of the Swiss population at an epidemiological level.**

Quantitative data-analysis research about the nursing activities gained a certain importance in the domain related to the Diagnostic Related Groups (DRG). Work done in USA\(^2\) and Belgium\(^3\) showed that there is no direct link between DRG and nursing care consumption. Other factors must be taken into account such as age, stage and severity of disease, care protocols and degree of dependency. These studies prompt us to identify separate sets of «medical» and «care» factors to evaluate consumption of health care resources\(^4\).

Medical data obtained in elderly homes or in community care have not been proven very representative of health care resource consumption. They are too complex to use especially because of co-morbidities or of ageing phenomena. It is now essential to find health services consumption descriptors that palliate the absence of satisfactory medical data.

Care provision linked or not to handicap scales or to DRG has already proven to be usable for those purposes. They can be summarised in a compact format such as «discharge summary », minimum data set, nursing care index, classifications or required care time.

3. **Observe the timely evolution of the care provision, of the services and of the financial data.**

Nursing care professionals provide an essential part of the health care services. It can be expected that this contribution eventually will increase in the industrialised countries. The main reasons are the ageing of the population and the growing number of chronic diseases. This tendency is accompanied by a shift in the care provision from the acute care centre to the ambulatory and community care. Proportionally compared to medical care, the amount of nursing time to take care of the chronically ill patient is substantially longer.

Data assessment and statistical analysis tools should help to meet these new demands.

4. **Prepare the basis of cantonal and federal collaboration to plan for a health**

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\(^2\) **Bostrom, J., Mitchell, M.**, Relationship of Direct Nursing Care Hours to DRG and Severity of Illness, in : Nursing Economics, March-April 1991, Vol. 9, No 2, pp. 105-111

\(^3\) **Ministère de la santé publique et de l’environnement - Administration des établissements de soins**, Le Résumé Infirmier Minimum en Belgique, Instrument de base pour la gestion de santé de demain, Centrum voor Ziekenhuiswetenschap, Université Catholique de Louvain, 1994

\(^4\) **Desrosiers, G.**, La durée d’hospitalisation et l’allocation de ressources : les DRG sont insuffisants, in : Artère, Cahier spécial
care coverage that answers the population needs.

Today's health care systems lean towards networking among institutions and care providers. It is seen as the most appropriate solution to maintain quality of care while controlling the exponential growth of costs. Within this context many problems pertain: e.g. the issue of the care of the chronically ill patient has not yet been solved. Nurses, by their polyvalent nature, will assume a prominent role interfacing the different care systems. They will require key information to accomplish their new tasks (e.g.: case management, patient orientation within the network).

At present, the new Swiss federal law on health care insurance (LAMal) requires a certain amount of data collecting. These data help to analyse costs, to fix prices, to certify quality of services and to prove cost effectiveness, efficiency and appropriateness of care. This process forces to define the comparable elements. It has to determine the population needs not only within a prospect of disease treatment but also with that of a «salutogenetic» (wellness) point of view (e.g. health promotion, maintenance, and restoration).

Today's healthcare professionals collect and have access to a large amount of data related to the patient everyday-life problems that may influence health management and disease progression. These data are little or poorly used.

Adequate use of nursing databases would largely contribute to the development of piloting tools to be placed at the disposal of the health care system management, on a quantitative as well as on a qualitative level. The information hence available will support the decision making processes in health care policy, education and resource management.

5. Put data at disposal of other information systems.

Due to LAMal and to economical pressures, resources allocation methods and pricing system are now under revision. It is essential to take into account all the cost contributing items. Nursing care is an important part of it. Its impact on cost has henceforth to be analysed and understood.

«Benchmarking», «Managed Care» and other new health care management methods cannot exist without nursing data for they would then rely on incomplete information. This would make outcome analysis unreliable.

The performances of health care institutions depend mainly on the righteous management of their nursing services. This requires a adequate nursing information system. Quality of information will be increasingly warranted by the automation of the data collection and processing.

A unique opportunity is offered to introduce information technology for information. The value of the overall obtained information should exceed the single sum of many separate data items. It should result in an information synergy specific to the multi-disciplinary management of patient care.

There is not a simple common standard for health care information systems data-exchange. Most systems remain incompatible with each other. Objectives and quality standards are strongly divergent and overall maintenance cost remains very high.

6. Prepare data for scientific research, international comparison and public record.

Nursing has a long-standing tradition of participating in medical research. Data assessment by nurses is often uses for scientific surveys and investigations. Nursing as a young discipline has its own research domain and methods. This research will expand rapidly in Switzerland in the coming years under the impulse of newly created Higher Schools of Nursing and Academic education programs.

Nursing research should focus two main priorities that fit in the nursing data context:
• Development of evidence based practice within a multi-professional environment, in order to create a true know-how validated by outcomes analysis and by reproducible care models, ...

• Improving quality and the effectiveness of the care services to chronically ill patients

It is urgent that nursing care, as a discipline, identifies data which is essential to nursing practice. Systematic data collecting should be simplified through the development of state of the art assessment tools, which answer the constraints of the everyday practice. Good ergonomics should contribute to good-quality data and condition data to fit in the national databases\(^5\). The information extracted from the repositories should be usable in the clinical environment, in management and for statistical purposes.

NURSING data
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