

## 一次保健事業을 위한 情報시스템 開發

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### I. 緒 論

一次保健事業(Primary Health Care)은 地域社會의 保健問題를 해결하기 위하여 地域社會 住民의 스스로의 참여와 自助精神에 입각하여 가장 실질적이고 과학적인 방법으로 地域社會內的의 모든 個人과 家庭이 일차적으로 保健醫療 서비스에 쉽게 접근할 수 있도록 하는 制度이다. 따라서 1次保健事業은 地域社會의 종합적인 사회·경제개발의 하나로 추진할 것을 강조하고 있으며 국가의 醫療保健시스템의 중요한 한 부분이다.

우리나라 憲法에는 「모든 國民은 健康에 관하여 國家의 保護를 받는다」라고 규정하고 있으며 世界保健機構는 서기 2000년까지 모든 사람에게 健康을 보장하자고 주장하고 있다.

그러나 우리의 醫療現實은 醫療産業이 대부분 民間에 의존하여 自由市場 原則에 따라 成長하여 왔기 때문에 구매력이 있는 大都市 地域에 편중하고 있으며 所得水準의 差異라든가 地域間 差異를 떠나 모든 國民에게 골고루 醫療혜택을 保障하는 保健醫療의 均霑이라는 問題는 우리가 해결해야 할 중요한 課題의 하나이다.

醫療의 公益性을 높이고 國民醫療保障의 基盤造性을 위해서는 醫療制度의 改革과 함께 농어촌지역을 중심으로 한 1次保健醫療事業의 적극적인 추진이 요구된다고 보겠다.

지금 세계 각국은 그들 나름대로의 사회·경제적 개발수준과 국가보건정책에 따라 1次保健事業의 開發에 역점을 두고 있으며 1次保健事業의 效率的 推進을 위하여 保健情報시스템의 開發 역시 중요한 課題가 되고 있다.

本考에서는 1981年 10月 24일부터 11月 8일까지 世界保健機構(WHO)가 主擧했던 「1次保健事業의 情報시스템 開發」이라는 畧號에서 논의되었던 몇가지 問題들에 대하여 言及하고자 한다.

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## II. 地域社會 保健情報의 必要性

地域社會 保健情報은 地域 住民의 健康狀態, 地域社會에 투입되고 있는 保健서비스에 관한 情報이다. 地域 住民이 가지고 있는 기본적인 保健問題가 무엇이고 그들이 현재 어떤 상태에 있으며 현 상태를 개선하여 보다 바람직한 상태로 이끌어 가기 위해서는 무슨 事業이 얼마만큼 필요할 것인가? 등에 관한 지식은 地域社會 保健情報시스템을 통하여 파악되어야 한다. 그러나 保健情報시스템 자체는 問題의 해결책을 제공한다고 보다는 問題 해결을 위한 적절한 수단에 대한 선택을 가능케 할 따름이다.

地域社會·保健情報시스템의 開發에 있어 기본적으로 고려되어야 할 事項은 아래와 같다.

첫째, 地域社會內的 모든 個人과 家庭에 대하여 그들의 健康水準을 파악할 수 있는 資料가 開發되어야 한다.(例: 個別 家庭마다 健康記錄카드 作成)

둘째는 地域社會가 당면하고 있는 여러가지 保健問題가 무엇이고 우선 순위로 보아 무엇이 가장 중요한가를 파악할 수 있는 資料가 開發되어야 한다. 住民들이 가장 필요하다고 인식하고 있는 保健醫療서비스가 무엇인가를 파악하여야 한다.

셋째는, 地域社會가 필요로 하는 서비스를 計劃하고 計劃에 따라 적절한 사업개발 전략과 수단을 강구하는데 필요한 資料가 제공되어야 한다. 事業目標을 計量的으로 설정할 수 있도록 地域社會의 社會·經濟的 背景과 醫療保健事業의 人力과 施設 및 地域住民의 醫療需要가 파악되어야 한다.

넷째, 地域社會가 推進하고 있는 모든 1次保健事業들은 事業의 執行, 管理와 관련하여 모든 活動을 조정·통제할 수 있는 資料가 開發되어야 한다. 여기서 조정·통제라 함은 事業을 執行하고 事業의 內容과 方向을 決定하는 사람이 計劃된 目標과 성취된 實績間에 差異가 생겼을때 이를 해결하기 위하여 事業의 內容과 方向을 수정하여 새로운 入力を 투입하는 것을 말한다. 每 一定期間마다 모든 事業活動들에 대하여 기대했던 目標과 실제로 이룩된 實績值를 비교 한다든가, 만약 기대치와 실적치 간에 差異가 생겼다면 그 理由가 무엇이며 이를 해결할 수 있는 方案은 무엇인가 등을 찾아내는데 필요한 資料가 開發 되어야 한다.

다섯째, 事業의 評價는 단기적인 관점에서 事業計劃에 대한 進度 評價 뿐만아니라 事業의 궁극적인 效果를 측정할 수 있는 評價指標가 開發되어야 한다.

### Ⅲ. 情報體系는 어떻게 開發되어야 하는가?

1次保健事業을 效率적으로 推進하기 위하여 수립되어야 할 情報體系는 첫째, 計劃(Planning)과 具體적인 事業內容(Programming) 그리고 事業管理(Management)를 연결하는 情報流通의 「메카니즘」(Mechanism)이 확립되어야 한다. 各級 수준의 사업담당자들은 事業組織 體系 내에서 수직적인 情報流通은 물론 수평적인 情報流通이 가능해야 한다. 또한 情報體系의 開發은 組織의 指導活動(Supervision)을 보강할 수 있도록 되어야 한다. 指導活動이란 미리 定해진 業務指針대로 事業活動을 유도해 나가는 過程이며 일종의 職務訓練(In-service training)이고 기술적으로 상급위치에 있는 사람이 하급자의 업무를 개선시키기 위한 교육적인 활동이다. 따라서 1次保健事業의 추진과 함께 記錄管理, 報告 등 일련의 情報體系는 指導活動과 직결되어야 한다.

1次保健事業의 記錄管理制度와 報告制度는 1次保健事業의 組織體系에 따라 각각 다르겠지만 記錄과 報告制度는 資料를 利用하는 사람이 누구인가? 그리고 그들은 어떤일을 어떻게 決定해서 수행해야 하는가? 決定에는 어떤 資料가 필요한가? 그 資料는 누가 어떻게 記錄해야 하며 報告해야 하는가? 등을 검토하여야 한다.

다음으로 중요한 事項은 資料의 標準化, 用語의 定義, 分類와 관련된 問題이다. 1次保健事業은 때로는 훈련수준이 낮은 요원을 活用해야 되기 때문에 그들 수준에서 記錄을 作成하고 報告할 수 있는 記錄·報告의 標準화된 指針書가 作成되어야 한다.

마지막으로 강조되어야 할 點은 情報시스템에 있어서의 還流(Feed-back)問題이다. 還流되는 情報의 內容이 매우 중요하다. 필요없는 資料의 還流는 낭비에 불과하다. 그들이 당면한 問題, 決定해야 할 問題에 대하여 決定에 도움이 되고 活用될 수 있는 內容의 資料가 還流되어야 한다. 情報의 流通은 一方的이어서는 그 效果가 적으며 計劃과 執行이 서로 연결되며 組織의 上·下가 서로 연결되는 還流機能이 구축되어야 한다.

(Abstract)

## **Information System Development for Primary Health Care**

**Hyun Sang Moon\***

### **I. Introduction**

Following the Alma-Ata declaration on Health for All by year 2000, many developing countries have formulated policies for action to launch Primary Health Care program. Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.<sup>1)</sup>

Health is an essential element of socio-economic development policy in Korea. According to our constitution, it has stressed the importance of expanding the accessibility of health care services. However, the organization of health care delivery is noticeably underdeveloped in Korea.<sup>2)</sup> The current health care system is far from being an integrated system in which needs and allocation of resources are closely coordinated. The bulk of health services are supplied through the mechanism of the free market. The expansion of the health care delivery capacity in the past has relied almost entirely on increasing hospital beds in the private sector.

In order to strengthen the public medical services, the Ministry Plans to renovate

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1) WHO, "Health for All by the year 2000 - Global Strategy".

2) Chong Kee Park, "Financing Health Care Services in Korea".

facilities and equipment in city and provincial hospitals and health centers and sub-centers which play a central role in providing primary care.<sup>3)</sup>

The importance of health information system, in order to plan, implement, control and evaluate primary health program is nowadays accepted by all. Effort have been made in many countries to improve and adapt the existing health information to the needs.

## **II. Community Health Information System**

Relevant community health information comes from two parts, population and health services. The element derived from these two parts lead to the knowledge of existing situation, desired situation, needed interventions, performed activities. However, information system itself does not provide solutions for community health problem but it assist in their adequate selection of strategies.

Community health information system is useful for 1) monitoring individual and family care, 2) identifying and understanding the health problems of community, 3) planning and operating the necessary services, and 4) evaluating services and impact.

Development and implementation of primary health care activities must be preceded by a careful diagnosis of the problems and assessment of what is needed and what is fasible at the community level. Through the development of information system, it is necessary to know about the real and perceived health care needs. Health information system is needed for a clear formulation of development policies and strategies. To take into account the contribution of other sectors to attain the goals and to determine clear objectives within the context of primary health care policies, relevant information collection system should be developed.

It is essential to improve managing and operating of primary health care activities through periodical observation on selected activities and comparision of expected and observed values. Therefore, in order to design the primary health care component of any health care delivery system, at least four groups of activities have to be carried out:

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3) Ministry of Health and Social Affairs, "National Policy for Health, Social, Labor and Environment Affairs".

1) determination of areas of responsibility of each community health worker, 2) local programming of activities, 3) registration, processing and reporting of activities performed, and 4) supervision, monitoring and control.

Since supervision, monitoring and control function is feasible through the existence of an information system, the meaning assigned to each one of them is following: supervision is an activity of inservice training aimed at maintaining or improving the pre-established standards on selected actions. It is a teaching activity with direct and personal relationship between trainer and trainee, in which with a higher degree of knowledge reorient the actions of each member of health worker.

Monitoring is a process of periodical observation of selected activities, in which expected and observed values are compared in order to assure a smooth evolution of the project. If discrepancies of practical value are detected between programmed and performed activities, then it is necessary to identify the responsible causes in order to better orient the managerial decision making process of the program.

Control action is an activity performed by a decision-maker aimed at modifying the course of certain operations of the system or the magnitude and/or type of its inputs. Its objective is to assure that the observed values be equivalent to the programmed ones.

### **III. Factors Included in Information System Development**

Appropriate organization for selecting, recording, reporting, processing, and using the information for the health and related services are the most important element in the design of primary health care information system.

Mechanisms to coordinate the areas of planning, programming, management and other services should be established. Permanent enquiries by the community health workers and regular activities of health services, stimulation and motivation, contacts between health workers and health services at higher echelon are relevant factors for the improvement of the mechanisms of information system.

Another aspect of information system is process of accessing needs and deciding about content of information system. To be an effective information system the following problems should be reflected into the information system.

- 1) Basis for decision about information content
  - objectives, targets, milestones, activities ...
- 2) Dialogue between users and producers in order to determine the appropriateness on the feasibility in the procedure of accomplishing the content of the information system.
- 3) Data collected should be relevant.
- 4) Information collected at the local level should reflect the important tasks and activities undertaken or that level.
- 5) Information on the activities of other organizations at community level.

In primary health care, as it exists in many countries, it has been necessary to train lay persons to serve as providers of care. These persons are practically trained in disease recognition and care procedures. Nevertheless, they lack training in the systematic health and medical sciences and their range of competence in medical and health semantics is limited and the range of problems they treat is also limited. For the use of such persons, it may be desirable to develop an abridged or condensed version of a large classification, coding scheme for the development of a good functional health information system.

In primary health care information system, there are six principal sources of information:

- 1) Records
  - resulting from the community health worker's enquiries
  - resulting from the activities of health personnel and local health team and established according to their functions,
- 2) Home-based records (e.g. family sheets),
- 3) Reports on work formed,
- 4) Surveys (for community purposes),
- 5) Registers for primary health care activities, and
- 6) Ad-hoc reporting of emergency problems

For the processing and use of information, particularly the following topics should be considered:

- 1) To promote effective use of information by health workers and community at the

local level,

- 2) Use of records as a basis for the delivery of health services,
- 3) Processing of information to be used by next higher echelon of monitoring and supervision and information to be forwarded to higher echelons according to needs,
- 4) Analytical review — health status, health services delivered, main health problems detected, types and quantities of resources supplied and needed, work performed, manpower requirements,
- 5) Presentation of information in forms which are usable by decision, and
- 6) Decisions for the solution of the problems that can be dealt with locally.

Increasing effort has been devoted to management of record system. A first step in planning a record system is to document answers to the following questions.

- 1) Who are the users: For example, primary health worker (PHW), PHW supervisor.
- 2) What types of decisions need to be made and with what frequency? For example, the PHW should decide each time a child is seen whether growth and development are satisfactory, PHW supervisor may need to know on monthly basis if children are being followed as scheduled.
- 3) What data elements must be entered to produce the information? For example, weight, weight-age standard, visits programmed, visits accomplished.
- 4) What are the sources of the data and how are they to be collected?

Finally, feed-back is one of the most important element in the development of information system. Feed-back should reflect real progress and impact on problems in achieving local primary health care goals and it should be provided with adequate content in an appropriate form at proper time and level of decision.