

PRIMARY HEALTH CARE MONITORING AND EVALUATION SYSTEM -
AN INTEGRATED DATA MANAGEMENT MODEL IN INDIAN ENVIRONMENT

By

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CENTRE FOR MANAGEMENT STUDIES
INDIAN INSTITUTE OF TECHNOLOGY
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KANWAL DEV BANOTA

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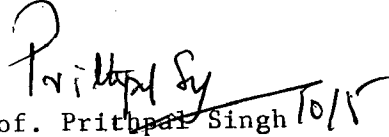
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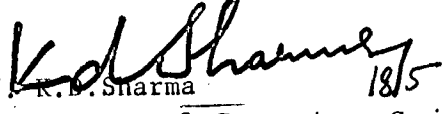
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CERTIFICATE

This is to certify that the thesis entitled "Primary Health Care Monitoring and Evaluation System - An Integrated Data Management Model in Indian Environment", submitted by Mr Kanwal Dev Banota to the Indian Institute of Technology, Delhi, for the award of Doctor of Philosophy, is a bonafide piece of research carried out by him under our guidance and supervision. The quality of his thesis fulfils all requirements of the regulations relating to the said degree.

The results contained in this thesis have not been submitted in part or full to any other University or Institution for the award of any Degree or Diploma.


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A B S T R A C T

The review of the existing approaches for the management of Primary Health Care System as also the subsequent literature reveals the need for the design and implementation of an Integrated Data Management Model. The effectiveness of the present Data Management System (DMS) in fostering the proper management and delivering of health programmes and services is limited by a number of factors, some of which are: (i) an absence of a conceptual design clearly defining the key components of DMS and the relationships between them, (ii) lack of relevance of statistical services as their effectiveness in providing relevant and sensitive information is greatly hampered by their uneven coverage of the areas which are least well-served by the health services, and (iii) inadequate communication between users and producers of data and information to provide sufficient guidance about what data and information need to be collected and how they should be presented. The current practice of survey methodology for obtaining information has serious limitations which constrict its utility for dynamic policy formulations and decision processes.

The basic intention of the hypothesis of the study is that the new model which satisfies certain characteristics will be functionally more productive in terms of management of primary health care programmes. It is in this context that a model has been designed and presented as a part of this research study.

The proposed model has been designed keeping in view the potentialities of the multi-purpose health services approach as envisaged in terms of manpower, functions, facilities, data generation ability and information requirements for planning, monitoring and evaluation of the comprehensive primary health care programmes to the community at large. The model is population based and provides means required for identifying the individuals, the actual and potential users, and also the providers of the primary health care programmes. All information pertaining to individuals is linked. The system employs functional and operational terms and the data relate primarily to individual, functional status and events. The system provides facilities for the validation of data. The reporting system can provide quick feedback of information of any kind needed at various levels of health system.

The design of the model involved: (i) Designing Data Collection Forms, (ii) Developing Third Normal Form Relations, (iii) Developing a Conceptual Model of Data Management System, (iv) Drawing a Logical Data Model from the Conceptual Model, and (v) Designing a Physical Model. As no commercial DBMS package was available on ICL 2960, the version of physical model is an adaptable one. It is composed of Nine files which are defined independently. Logical arrangements of files exist

(ii)

and the relationships are based on common fields that exist in various files. These relationships support Hierarchical and Relational views. The physical records are stored in physical sequential order. The access method is also sequential. To access a particular record, the help of EDITOR is taken and any modification, deletion or addition is done. Three program packages, namely Data Validation Program, File Organization Program and the Program for Compilation/Tabulation of Reports have been written in COBOL and are functional on ICL 2960 computer system.

The model has been actually implemented in the real life situation, in rural hilly areas of Solan distt. of Himachal Pradesh with the full participation of the State Government Health Services Department and has been well received by the Health Services. The study has received a substantial support from the analysis and interpretation of field data, thereby establishing the validity and relevance of the model and also its scope for development of effective indicators for monitoring and evaluation of the comprehensive primary health care programmes.

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