

Department of Health Research



Knowledge Management policy for Health - Service, Education and Research

(Final Draft Document)

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Preamble

Knowledge Management (KM) envisages capturing, creating, sharing and managing knowledge. KM comprises of three components (i) people who create, share and use knowledge as part of their daily work and help shape a knowledge sharing organizational culture (ii) Processes which include methods to acquire, create, organize, share and transfer knowledge to fit different situations and (iii) The technology including the mechanisms to store and provide access to data, information, and knowledge that must be integrated with the way people work, and address their real needs.

The implementation of any KM policy in Health sector will have essential ingredients and processes for improving the health of people by imparting benefits of various health programs to the targeted communities and improving the quality of education and research which will lead to evidence based policy. However, KM in health sector faces three major challenges:

- Unsatisfactory quality of data

With good quality data better policies can be framed, better decisions can be made thus improving the implementation of Health care programs and quality of medical research.

- Non- availability of data for knowledge generation

Most of the data being captured may not be available in a suitable form for creating databases. Availability of digitized data in unified format helps in improving data quality and developing standards for knowledge generation.

Health professionals should take advantage of the data, experience, and expertise available in their own and other organizations to create and share their own knowledge with others

The policy would catalyze creation of knowledge and translation of that knowledge specially use of indigenous technical knowledge from research settings to real world application in order to improve the health of common man.

- Inadequate dissemination of knowledge

There is inadequate dissemination of information and knowledge to end-users which include health professionals, researchers, patients and students. Dissemination of quality information and knowledge should be ensured through appropriate agencies like DAVP and media such as Internet, Information Kiosks at designated places which can provide relevant information to the end-users from all sections of society

The focus of this policy would be creating an environment for connecting knowledge related activities in health into a coherent action plan covering all systems of medicine.

The focus should be on spreading general awareness regarding health and hygiene, preventive measure and importance of health insurance.

Overall, this policy aims to change the focus from the people who manage knowledge to those whose health is managed.

In this context, what Mahatma Gandhiji, the Father of Nation, said becomes relevant: “ Think of the poorest you have ever seen and ask if your next act will be of any use to him”.

Mission

To develop an efficient Health Knowledge Management System for collection, dissemination and utilization of knowledge for improving the quality of Health Services, Education and Research

Objectives

- To make authentic information about health knowledge services available to health professionals, planners, managers, policy makers and common man.
- To promote sharing of health resources in health services delivery, education and research.
- To manage health aspects of disasters effectively using knowledge management tools.
- To enable access to high quality health and medical education.
- To contribute towards development of an efficient health research system.
- To ensure health equity across the different social sections of the community.

Policies

Service delivery

In order to create harmony among various health service providers and to impart their knowledge and services to the public at all times, the following essential components are proposed:

- **Empowering end user for better access to Health Service by**
 1. Sensitizing people for maintaining good health through dissemination of health information using resources like TV, mobiles, internet etc.
 2. Making available updated information about the service infrastructure in public and private/voluntary/Self Help Groups sector (for all approved systems of medicine) such as manpower, equipment, medicines *etc.* available at different levels *e.g.* sub-centre, Primary Health Centre, Community Health Centre, District Hospital, Zonal Hospital, medical college and other tertiary care hospital *etc.* *In doing so special emphasis to be given to marginalized and deprived sections of society*

3. Providing online information about functional status of the infrastructure *i.e.* availability of doctors, medical supplies including drugs and banned drugs, devices, vacant beds, surgical/ medical/ diagnostics facilities *etc.* at a given time
 4. Providing information about geographical locations and other logistics of various health service providers
 5. Promoting overall user awareness about available information sources by training of end users
 6. Promoting access to financial resources including insurance
 7. Ensuring safeguards for access of health resources to all sections of the society.
- **Enriching health professionals with knowledge** about available resources around them by standardizing and linking functional, infrastructural and logistic information available with different healthcare service providers in Government and private sectors.
 - **Increasing accountability of healthcare professionals and services towards human life by**
 1. Developing a well defined referral system for efficient utilization of resources between Central, state and other public/private healthcare providing institutes.
 2. Creating a mandatory forward and back referral pathway over a period of 5-10 years. Responsibilities of every individual in the pathway to be enforced to ensure perfect accountability involving human life.
 - **Connecting remote areas and difficult terrains by effective use of telemedicine.** Expert opinions of specialists need to be ensured on a structured fixed time interval basis as well as on emergency basis by adopting the recommended standards of telemedicine. The existing satellite connection and the optical-fibre-based National Knowledge Network (NKN) would be valuable in this context.
 - **Efficiently handling health aspects of disasters (natural as well as man made)** by using Data Mining and Business Intelligence tools on available data for quickly finding information about available resources around disaster site and mobilizing these resources.
 - **Establishing a user friendly but informative electronic medical record system.** This record system should be in a standardized, internationally inter-operable and compatible format (s).

Education

In order to improve the quality of medical education for all systems of medicine uniformly across the country with help of knowledge network, following policy guidelines are proposed:

- **Sharing knowledge by**
 1. Establishing an efficient physical network, connecting all medical/dental/ nursing/ other health related professional colleges
 2. Creating tele-education portal to house resources which can be accessed online
 3. Creating and networking digital / resource libraries for educational materials such as lectures, slides, video clippings *etc.* which can be accessed online as well as offline
 4. Organizing prescheduled interactive lectures and practical sessions by prominent teachers through tele -education through national and international networks.
- Developing unified high quality standards in health education across the country
- Updating knowledge of health professionals by conducting online continued medical education/ special training programmes.
- Evaluating quality of in-service health personnel by conducting online examinations
- Training in-service health personnel by organizing localized interactive training courses for both health professionals and workers
- Enforcing regulations for tele-education applications by following existing guidelines of regulatory bodies like Medical Council of India, Medical Universities, Dental Council of India, Nursing Council , Pharmacy Council, various councils for alternate medical systems, other relevant bodies for Physiotherapy and other paramedical disciplines.

Research

Knowledge is both a key input for and output of health research. For increasing use of knowledge in medical research, both clinical research and basic research, following measures are proposed:

- Creating information culture by adopting recent advances in Information and Communication Technologies
- Improving interaction among National and International researchers and stakeholders working in different subject areas by developing collaborative networks and alliances
- Creating an information system to facilitate Indian medical researchers abroad to return and join Indian medical research institutions.
- Enhancing research to policy through collaborations with institutions of high learning including social sciences, and exchange of information between researchers and health professionals ; between researchers and other stake holders involved in policy making (political leadership, planners and civil servants etc)
- Enhancing public-private partnership in health
- Preparing national information system of research funding by different funding agencies
- Developing database of research resources such as manpower, equipment *etc.* available with different laboratories/medical / dental colleges/ universities *etc.*
- Developing disease database including clinical, epidemiological, genetic, biological and social parameters
- Achieving high impact of research by effectively communicating research outcomes
- Balancing between responsibility to share information for betterment of health of people and protecting intellectual property generated through research
- Empowering health research institutions to use tools of Knowledge Management for improving quality research as per the guidelines of Medical Council/ Dental Council of India, other councils and regulatory bodies.
- Providing access to research data to other scientists and students for secondary analysis by taking care of ethical , copyright and IPR issues

- Managing research priorities based on periodical in-depth analysis of existing research data
- Creating a National Health Knowledge Repository for free access to all researchers.
- Encouraging the use of knowledge management for creation of different application groups and development of various disciplines like biomedical engineering.

Strategy for implementing Knowledge Management Policy

All stakeholders including Govt. agencies (central and states), regulatory bodies (councils, associations etc.) would be assigned different roles by formulating committees/ sub-committees for implementation of the policy.

Broad strategy for implementing knowledge management policy for health is given below:

- There will be four important components/ tiers: policy framing, strategy planning, implementation and monitoring.
- An expert advisory group should be constituted under the chairmanship of the Secretary, Department of Health Research with following mandate:
 1. To examine the policy document and modify it if necessary
 2. To decide the priority areas
 3. To classify the priority areas into short term, midterm and long term goals for implementation
 4. To constitute three technical sub committees in the areas Service Delivery, Education and Research to manage knowledge network for the following:
 - To assist in preparation and approval of proposals to carry out feasibility study/ studies , pilot study/ studies, model projects.
 - To define parameters to be included in feasibility study (ies)

- To liaison between the study group and other stakeholders of the proposed knowledge network to facilitate preparation of feasibility report
- To examine the feasibility study report and present it to the Secretary, Department of Health Research
- To devise a strategy for implementation along with other stakeholders
- Monitor implementation of work

Funding of the different components of Knowledge Management Network

- i. The responsibility of different stakeholders in providing infrastructure, manpower and other resources needs to be defined by consultative process among centre, state, other public and private stakeholders.
 - ii. While the network connectivity may be provided by central systems, Department of Information Technology, UGC etc, the local supplementary support could be provided by State systems.
 - iii. A dedicated system will be required for keeping it functional all the times. For this IT connectivity will have to be ensured along with funds allocated for this purpose.
 - iv. A strategic plan for providing financial support for development of modules, appropriate softwares, professionals for data analysis on specific areas, mechanisms of review will have to be drawn for estimating the financial inputs.
- **Establishment of an Appropriate Authority for Knowledge Management :** For developing and implementing a comprehensive plan for utilization of knowledge network for health service delivery, medical education and research, an Appropriate Authority under the Department of Health Research in the Ministry of Health and Family Welfare, Govt. Of India may be desirable. Such an authority will be responsible for strategic planning, for implementation and review of the progress from time to time. This authority/cell may establish units in the states for action at the local level. Creation of a corpus fund dedicated to this activity is necessary.