SMCH/HCDS/06: Innovations For Provision Of Health Care In India

Quadrant-I

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Description of Module

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<td>To understand major interventions for provision of healthcare.</td>
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Introduction

Traditionally innovations have centered around new products and technology – however increasingly the focus is on new processes, business systems and management methods – all of which have an important impact on productivity and hence growth. There have been various innovations for provision of health care in recent times which can greatly help in realizing the goal of universal health coverage.

Learning Outcomes

Upon completion of this module, the reader should be able to:

- Define innovation.
- Enumerate major innovations for provision of health care in India.
- Give a brief description of the following:
  - Telemedicine
  - HMIS
  - Social Insurance Scheme
  - Public Private Partnership

Main Text

1. Innovation

It is often defined as the introduction and application of ideas, products, services, processes or technologies, which are either new or are improvements of the current system, that benefit individuals, a group or the society as a whole. The National Knowledge Commission defines Innovation as “a process to achieve measurable value enhancement in any commercial activity through introduction of new or improved goods, services, operational and organizational processes”.

2. Major innovations for provision of health care in India

The following diagram presents in a comprehensive way various innovations presently applied in the provision of health care in India.

3. Brief description of major innovations for promotion of health care in India.

3.1 Tele-medicine

Telemedicine can be defined as the use of telecommunications technologies that provide and support health care when distance separates the participants.


Piramal Foundation’s Swasthya project HMRI is working in collaboration with the Government of Karnataka to provide Health Information Help Line Services in the state
through **104 BSNL** telephone number. This service is being named as “**Arogya Vani**”. This is in addition to the Health Information Helpline services operated successfully by HMRI in Maharashtra, Rajasthan and Assam.

2) **Piramal Swasthya** has partnered with State Governments & philanthropic organizations to run several telemedicine initiatives and have reached 15254 beneficiaries through **44 telehealth centres** across India. Integrated with Piramal Swasthya software, **Dox-in-Box®** digitally captures stores and transmits eight vital signs. It emphasizes general physician functionality and is easy to use. This reduces the need for highly skilled health workers where they are scarce. By virtually connecting doctor and patient, Dox-in-Box® bridges gaps in distance and time. Piramal Swasthya extensively uses Dox-in-Box® through a diabetes management program in Assam.

3) **Apollo M.I.N.D Line**: Apollo M.I.N.D. Line is a psychological telecounselling helpline to support individuals who are dealing with complications faced in everyday life.

4) **Sehat Saathi**, a rural telemedicine system is being developed at Media Lab Asia research hub at IIT Kanpur. It can be used to extend medical care to patients in the remote parts of the country. The model provides for front-end contact through a suitably trained non-medical professional; back end support from doctors, pathologists and other health professionals for diagnosis and treatment; use of digital technology to achieve objects; and dissemination of information on health and disease through digital means. **(source: Murthy MV Ramana. Mobile based Primary Health Care System for Rural India. Available at: http://www.w3.org/2008/02/MS4D_WS/papers/cdac-mobile-healthcare-paper.pdf accessed on 08.09.2015)**

**3.2 Health Management Information System (HMIS)**

HMIS is an information system that has been specially designed to assist health departments, at all levels, in managing and planning health programmes. HMIS is defined as:

“A tool which helps in gathering, aggregating, analyzing and then using the information generated for taking actions to improve performance of health systems.”
Below are some examples of innovative HMIS-

1) **e-Mamta**: (source: http://msbcindia.org/e-mamta-mother-child-tracking-system-mcts/)

Reduction of Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR) are the important public health challenges for India. Tracking of Pregnant mothers and children has been recognized as a priority area for providing effective Healthcare services to this group. This in turn can have a large impact on reducing IMR and MMR.

As a major initiative in this regard, the Health and Family Welfare Department of the Government of Gujarat, has introduced a Mother & Child name based tracking Information management system called “E-Mamta” in collaboration with National Informatics Centre (NIC) Gujarat. This kind of system has been conceptualized and developed by Gujarat first time and the Government of India has adopted the system for replication in all the other States of India.

The system covers the entire population of Gujarat with special emphasis on rural, urban slum and slum like population. Health details of about 85 lakh families in the entire State comprising about 4.30 crore individuals covering more than 80 percent of the population have thus been entered so far in the software’s database and system generated unique Health Ids have been provided to all.

The system aims at registering individual pregnant mothers, individual children in the age group 0-6 and adolescents along with their full details to ensure delivery of various services.
E-Mamta mother & child tracking web based application [http://e-mamta.gujarat.gov.in](http://e-mamta.gujarat.gov.in) is uniquely designed management tool being executed in Govt. health facility across Gujarat to accommodate for gaps in ensuring comprehensive maternal and child health services in rural as well urban areas.

Rural health challenges such as high dropout rates, high left out rates, quality of services, inability to track beneficiary pregnant women and children leading to high MMR and IMR are targeted through the E-Mamta. Tracking of pregnant woman and children were made possible with 8 search criterion (location, name, ration card number, mobile number, health id, family id, BPL, RSBY no., child date of birth). This process thus gives each Sub centre, Primary Health centre, Post-partum units correct denominator and an accurate list of left outs and drop outs.

Daily around 100 auto generated SMS are sent to pregnant woman and families of children to remind for due services. SMS facility for intradepartmental coordination through E-Mamta is such that the Chief district medical officer, block health officer and medical officer can communicate through SMS service to the field workers.

Customized SMS for each beneficiary according to their due dates of services is a new paradigm. Bilingual (Gujarati and English) SMS on uptake of ANC services, anaemia services, immunization, delivery, family planning, PNC are sent to target beneficiary or their families/relatives in each group before their due dates.

Finally, the services are aggregated to generate reports that are reliable and valid.

The URL for MCH Tracking system is ….. [http://e-mamta.xxx.nic.in](http://e-mamta.xxx.nic.in)

### 3.3 Mobile Health services

Many areas in India, specially rural and tribal areas, are cut-off from the mainland due to geographical limitations (flood, rough terrain etc.) and are inaccessible or accessible with great difficulty even for provision of health care. Use of medical mobile units to increase reach of medical care in such remote areas is also part of innovations.

1) **The ‘Akha Boat’ initiative in Assam** - When the great Brahmaputra River floods each year, millions of residents living on its roughly 3,000 riverine islands are cut off from the rest of India. Even without the annual floods, poverty and isolation often prevent many islanders from seeking medical assistance on the mainland.
Hitherto unreached people in remote riverine islands were covered through the mobile boat services- the 'Akha' – also known as 'the boat of hope' – a fully equipped medical ship with a 10-member team on board, including a lab technician and a pharmacist.

The Akha is operated by the Centre for North East Studies and Policy Research (C-NES, and is supported by UNICEF and the National Rural Health Mission in India.


HMRI also provides Village Health Outreach Programme in Karnataka, Assam, Rajasthan and Orissa in Public Private Partnership with respective state governments, offering free or low-cost services thereby improving access to emergency medical services across states.

3.4. Social Insurance Schemes
Community health insurance is one of the models for providing health security for the people Below Poverty Line (BPL) and removing out-of-pocket-expenses. Various community health schemes prevalent in India at national and state level are as below-

1) **Rashtriya Swasthaya Bima Yojna (RSBY)**  (ref: [http://rsby.in/](http://rsby.in/))

RSBY is a Central Government Scheme launched on October 1, 2007. It is a new health insurance scheme for the Below Poverty Line (BPL) families in the unorganized sector. The objective of RSBY is to provide the insurance cover to below poverty line (BPL) households from major health shocks that involve hospitalization.

BPL families are entitled to more than 700 in-patient medical procedures with a cost of up to 30,000 rupees per annum for a nominal registration fee of 30 rupees. Pre-existing medical conditions are covered and there is no age limit. Coverage extends to the head of household, spouse and up to three dependents.

The use of Smart Card has not only made the scheme truly cashless, it has also provided interoperability to facilitate use by migrant labour. Only for the first time, contribution of 30/- rupees would be sought by way of Registration fee, from the BPL beneficiary with a view to inculcating a sense of ownership in them. Transportation cost of Rs. 100/- per visit with an overall limit of Rs. 1,000/- per annum is also admissible under the scheme.

2) **Rajiv Arogya Community Health Insurance Scheme (RACHI)**


Introduced in April 2007, by the Government of Andhra Pradesh

The State to provide medical assistance to families living below poverty line for the treatment of serious ailments such as cancer, kidney failure, heart and neurosurgical diseases etc., requiring hospitalization and surgery/therapy. Available network of government hospitals do not have the requisite equipment or the facility or the specialist pool of doctors to meet the state wide requirement for the treatment of such diseases. Large proportions of people, especially below poverty line borrow money or sell assets to pay for hospitalization. Presently many people suffering from such diseases are approaching the Government to provide financial assistance to meet hospitalization expenses for surgical procedures. Financial assistance to a tune of Rs.
168.52 crores has been provided from Chief Minister Relief Fund. The beneficiaries of the scheme are the members of below poverty line families as enumerated and photographed on the Rajiv Aarogyasri Health Card/ below poverty line Ration Card. The benefit on family is on floater basis i.e. the total reimbursement of Rs.1.50 lakhs can be availed of individually or collectively by members of the family. An additional sum of Rs 50,000 is provided as buffer to take care of expenses if it exceeds the original sum i.e. Rs 1.50 lakhs per Individual/family. Cost for cochlear Implant Surgery with Auditory Verbal Therapy is reimbursed by the Trust up to a maximum of Rs.6.50 lakhs for each case.

3.5. Public-Private Partnership (PPP)

To address the inefficiency and inequity in the health system, many state governments have undertaken health sector reforms. One of these reforms has been to collaborate with the private sector through Public/Private Partnership (PPP). State governments in India are experimenting with partnerships with the private sector to reach the poor and underserved sections of the population. Public private partnership is increasingly being viewed as a much needed solution to achieve the shared goal of universal health coverage.

1) The Chiranjeevi Yojana (CY)

Maternal mortality is an important public-health issue in India, specifically in Gujarat. Contributing factors are the Government's inability to operationalize the First Referral Units and to provide an adequate level of skilled birth attendants, especially to the poor. In response, the Gujarat state has developed a scheme based on the public-private partnership (PPP) model in which a poor woman can go to empanelled private nursing homes for delivery, the cost to be borne by the state government. Moreover, eligible women are also entitled to receive Rs 200 towards transport cost and Rs 50 for the accompanying person. Thus, CY aims to remove financial barriers for the poor in accessing qualified private providers. This yojana has been introduced to reduce the child and mother’s mortality rate in the state. All the beneficiaries belonging to the BPL family, APL family or who are not paying income tax and residing in rural area, residing in rural area, municipal area, municipal corporation area and notified area are benefited with this scheme.
2) **Urban Slum Health Care Project** in Andhra Pradesh and Orissa: While the UHCs were established by the State, their day-to-day management has been contracted out to local service providers (NGOs, for profit and not for profit entities). The UHCs are located within the slum to ensure easy access for the target population.

(source: healthmarketinnovations.org/program/andhra-pradesh-urban-slum-health-care-project-apushcp, accessed on 08.09.2015)

**Summary**

Innovation is often defined as the introduction and application of ideas, products, services, processes or technologies, which are either new or are improvements of the current system, that benefit individuals, a group or the society as a whole. It comprises of tele-medicine, HMIS, social insurance schemes and various public private partnership reforms, mobile health services etc. that aims to improve the health of the population.

**References:**


