Public Health Informatics Group Discussion
Inputs to Steering Committee

Presentation in
Steering Group meeting
Planning Commission,
Govt of India
References to Informatics

Key Inputs to the 12th Plan Process

1. Approach to the 12th Five year Plan, para 9.23, page 121. 9.41, pg.125
2. Background Paper for Steering Committee on Health for the 12th Five Year Plan- pg 3, para 4.7, pg 6, para V.2,.4, pg 9, and pages 18 to 20 paras 49 to 58., pg 21 para V.
3. HLEG Report on Universal Health Coverage: pg 38 para recommendation 3.6.3. pg 263 to 265, recommendation 5
4. Working Group on National Rural Health Mission in the 12th Five Year Plan pg. 36 para 5.14, Pg 83, para 9 to 11,
5. Working Group on Communicable diseases pg. 78 para 6. Pg 134,139,pg 209,
6. Working Group on Tertiary Care Institutions for the 12th Five year Plan. Pg 57 to 64, chapter 6, ICT in health care,
8. Working Group on Drugs and Food Regulation for the 12th Five Year Plan, Recommendation : Drugs A.12 & Food D.iv E-governance.
9. Working Group on AYUSH in the 12th Five Year Plan Pg 19, para 5m pg 34,
10. Working Group on Health Research in the 12th Five Year Plan Pg 21, para vii,
Vision statements in HLEG and Background notes

- Overarching goal is a health information network that links all service providers in public and private sector and also generates the aggregate figures for policy and management decision.
- A system based on universal registration and biometrics which is dynamic health record of every citizen, portable and accessible to service providers and patients.
- Generates the alerts for disease surveillance.

Immediate needs as Identified in working group papers

- Births and Deaths
- Service Delivery data from HMIS
- National Disease/Program Monitoring
- Disease Surveillance Epidemiology GIS
- Nutrition Surveillance
- Emergency Response Support
- HR and Financial Management
- Public Information
- Hospital Information Systems, EMR, PHR
- Medical Education and Research
- Regulatory Support
Expectations of a HMI S

- Improve Information flows and analysis to aid better public health management to achieve the 8 goals:
  - Reduced IMR, MMR, TFR, child malnutrition, anemia in women and girls, improved sex ratio, reduce burden of communicable and NCDs, Reduced OOPs. 
  - Disease surveillance needs.
  - Regulation needs
  - Knowledge generation-
  - Transparency

- Improve quality of care of the individual patient by providing referral linkages, portable, retrievable records

- Enable rights based perspective by increasing public access to Health information and increasing individual access to patient health records.

Use evaluation to show the link between any ICT deployment and the purpose it is expected to serve.
Looking Back-
15 years of ICT in health:

Past efforts have not yielded desired results: Need to identify causes in terms of people, process and technology,

**People**
- No culture of use of information for planning – information becomes an end in itself:
- Planning at district level not established
- Data analysis not geared to meeting needs of the Decentralised user – what’s in it for them?

**Process**
- Process Errors in information flow get accentuated in the IT system
- Duplication of systems raises confusion and fatigue
- Problems of integration between multiple systems: both extent & direction
- Technology introduction not matched to level of institutional capacity

**Technology**
- Information overload and lack of actionable information in system design
- Procurement insensitive to software lifecycle and technology obsolescence
- Lack of standards – technology architecture, data standards, interoperability standards

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Learn from Others

- "NHS UK has failed in building a fully integrated centralised electronic care records system.
- NHS has spent 6.4B out of 11.4B pounds in 9 years, but failed to meet its initial deadline and abandoned its original architecture”
- CHI Canada has learnt from mistakes done in UK and is successfully developing a fully integrated de-centralised electronic care records system
- Canada has published a standards based Healthcare-IT Architecture [blue print] and the financing to the states is subject to compliance with the blue print
- NEHTA Australia and MoH Singapore are learning from UK and Canada to improve the public health informatics model further
- India can learn from these successes and failures.

Source: https://www.infoway-inforoute.ca/lang-en/
12th Plan Commitments-
1. Setting Standards

- Centre to define standards for data and interoperability and appoint a Committee/Authority to ensure compliance
- Define Data policy – how long stored, in what form, back ups, rights to access, security, privacy
- Committee/Authority to develop/adopt software product lifecycle standards such as ISO, ISMS, CMMI, ITIL and PMBOK
- Technical Architecture – standards of interoperability, security standards, privacy, consistent with integration and future evolution needs
- Functional Architecture – user friendliness, processes of validation, confirmation, error correction (who does what, when and where)
- Financing of Health Information systems linked to compliance to standards
12th Plan Commitments: 2. Getting the architecture right

- Architecture provides a way of exchanging health information across systems such that the big picture can emerge e.g. Malnutrition data of a block in one system and the deaths and incidence of acute respiratory infection from another system.

- Dynamic Architecture: prefers open source software:

  - This allows states and regions to develop solutions which are appropriate to their level of health systems development, subjective readiness and technical feasibility.

  - Not a one size fits all solution - also allows multiple information flows, which can be used for triangulation, integration should respect information priorities of different users.
12th Plan commitments:

3. Integration within and across systems.

- Centre would specify its minimum information requirements- for policy, planning and monitoring:
  - State/District Health Systems built for local action, but feed the centre’s minimum information requirements. Same for vertical programmes- allow multiple systems but enforce integration.

- Integration: Less duplications, More use- : Staff shouldn’t have to enter same data into different systems; information in one system should be available to all systems through central repositories/portals.

- Ensure a multi-modal connectivity to ensure fail-safe connectivity down to the PHC, SC levels.

- M-health: speed up transmission of data and reduce burden of work in reporting , improve connectivity
12th Plan commitments:
4. ICT for quality of care:

- Computer with internet connectivity in every PHC and higher facility in this plan period, also extend to sub centres in those states which are ready.
- Based on readiness, introduce EMR at the point of care and roll-up the data for public health purposes.
- Begin with EMRs linked to Hospital Information systems in all medical colleges and district hospitals.
- Allow patient access to information on STPs and his/her own records as part of health rights framework.
- Connect the primary, secondary and tertiary care through HIS(hospitals), EMR and Telemedicine- all district hospitals in telemedicine link.
- Advantages to transparency of government processes are many and obvious and should be fully enforced.
12th Plan commitments:
5. Capacity Building

- Major part of public investment in IT for institutional capacity building for understanding and use of information.
- Generation of appropriate human resources for ICT in health.
- The use of ICT health education and health communication and b) in the generation of health knowledge. These two functions would be located in two/three appropriate national centres/portals-one dealing with public health and health promotion and the other with health research.
- Use good third party evaluations to learn from and improve and scale up systems.
Thanks:
THANKS!

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