

## 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 12<sup>th</sup> 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,
- 7. Working Group on AIDS control in the 12th Five Year Plan, Pg 35- 36 para 4.7 Strategy 5.Strategic Information Management Systems
- 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,



# Bridging the Gap



## 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





# Expectations of a HMIS



- **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. **Also**
    - 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

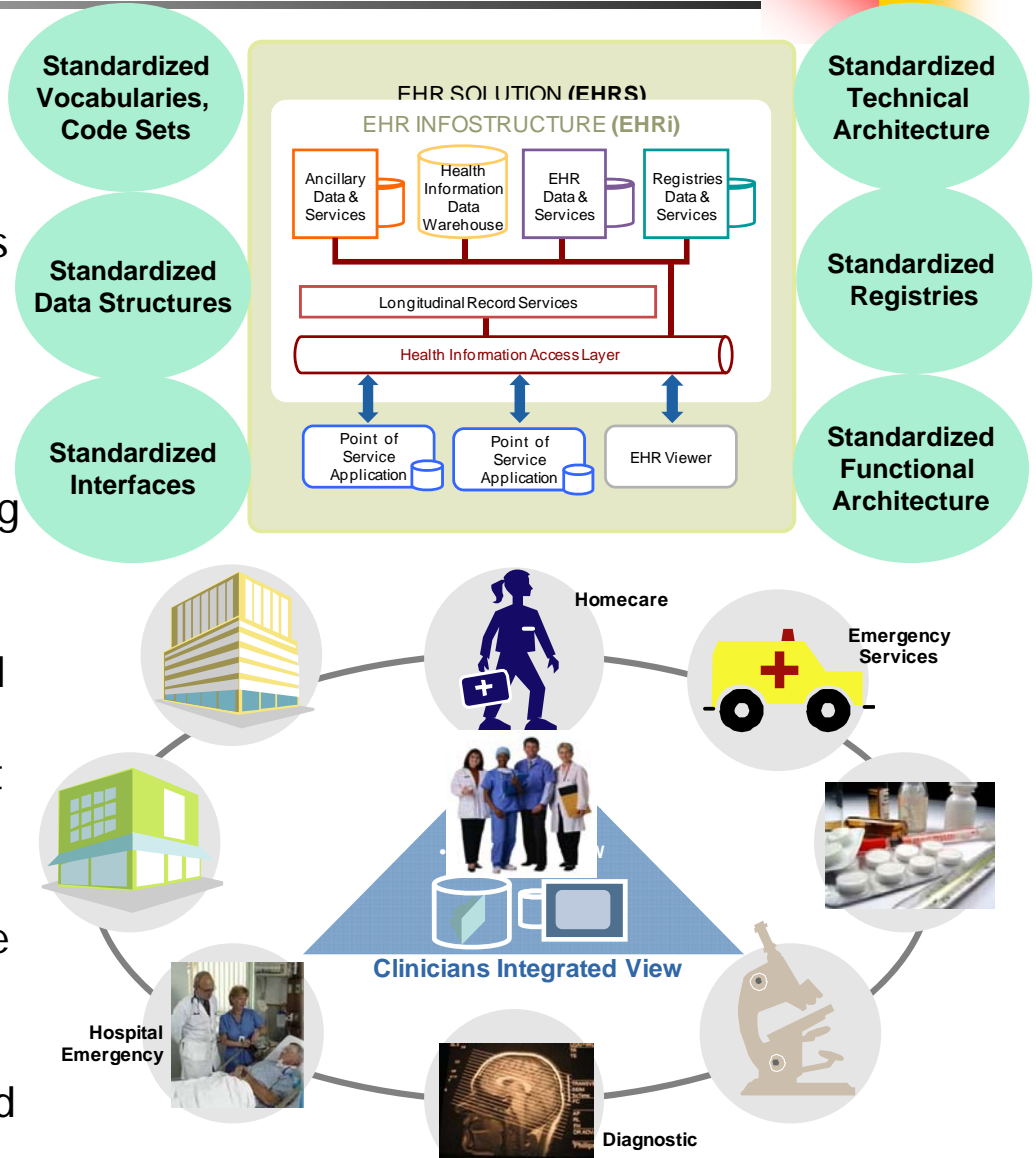
## Technology

- 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



# 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/>

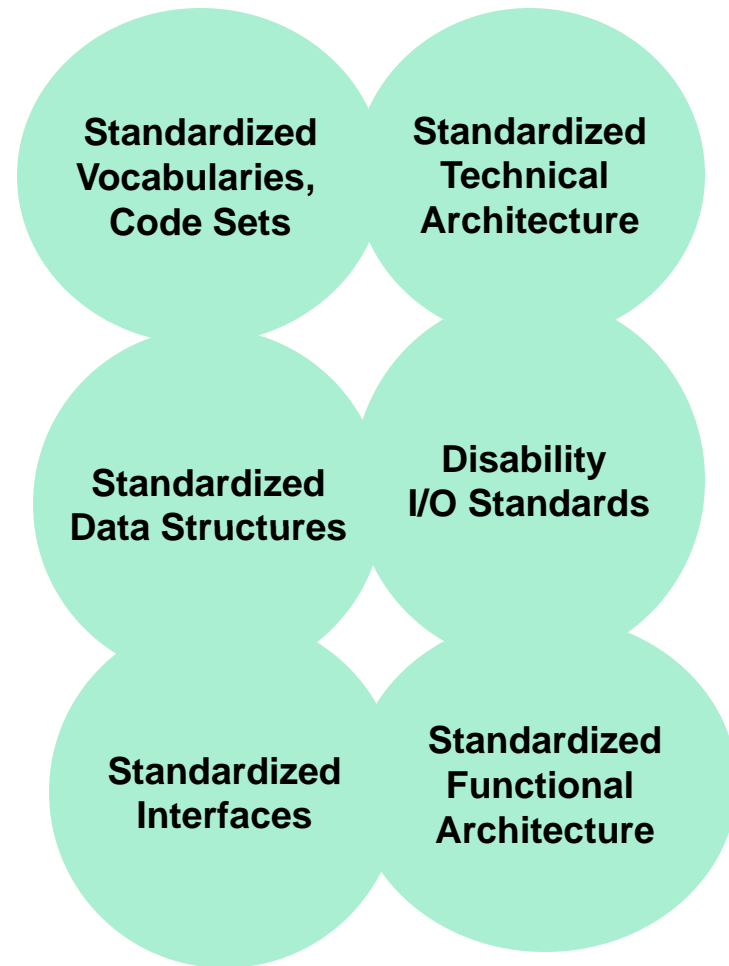


# 12<sup>th</sup> Plan Commitments-

## 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







# 12<sup>th</sup> 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.







# 12<sup>th</sup> 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



# 12<sup>th</sup> 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.



# 12<sup>th</sup> 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!**

Contact:  
Dr T Sundararaman  
Executive Director, NHSRC  
[sundararaman.t@gmail.com](mailto:sundararaman.t@gmail.com)

Contact:  
Dr Pankaj Gupta  
Independent Consultant, NHSRC.  
Member ICT Sub-Group of Healthcare SIC under PMO GOI.  
[Dr\\_pankajgupta@yahoo.com](mailto:Dr_pankajgupta@yahoo.com)  
[drgupta@taurusglocal.com](mailto:drgupta@taurusglocal.com)