Health & Population Think Tank - Round Table Conference
Health Information Systems: Data Quality & Integration
Summary & Recommendations
26th Sep 2018

BRIEF BACKGROUND AND PROCEEDINGS OF THE MEETING

A Round Table Conference (RTC) was organized by the Health and Population Think Tank on the 26th of Sep 2018 at the Health Services Academy, Islamabad.

The meeting was chaired by the honorable Minister of Health, Mr Aamer Mehmood Kiani, while both national and international subject specialists, academicians and practitioners, provincial & area governments representatives joined the meeting along with representation from WHO, UNICEF, NADRA, USAID, JSI. (list of participants attached)

Health Information Systems (HIS) of Pakistan was discussed at length in the meeting. HIS is a key building block of any health system; it helps capture, store, manage or transmit information related to the health of individuals/populations and the activities of organizations/programs that work within the health sector. This encompasses the data sources from the district level routine information systems, disease surveillance systems, and includes but not limited to laboratory information systems, hospital patient administration systems and human resource management information systems. Furthermore, a well-functioning health information system should also include data from civil registration and vital statistics (CRVS) systems, which provides indispensable sources of health information data for program and performance monitoring, quality of care, planning and policy making. Several key challenges pertaining to the HIS of Pakistan were identified; which are as follows;

i. Overlapping and duplicating information as multiple information systems are operational.
ii. Poor Data quality.
iii. Lack of analytical capacity at all levels to use facility and community-based information to develop responsive and appropriate service delivery strategies and community-based interventions.
iv. Lack of regulatory authority to ensure standardized data systems across provinces.
v. Lack of centralized data repository.
vi. Private sector is not captured in the existing systems.

While following were the key strategic questions explored;

i. Is there a genuine need for integration for all MISs, and will it lead to improved decision making?
ii. What should be the arrangement at the federal and provincial levels for effective use of data, analysis & evidence-based decision-making?
iii. What innovation should be introduced for inclusive recording and reporting from public and private sector to improve timeliness, accuracy and quality of data? The scope of introducing DHIS 2.
iv. Strategy and steps needed to move towards a One Health Survey to help inform HIS and integrate SDGs indicators?

The speakers/presenters included **Dr Assad Hafeez**, who shared the overall vision of the think tank, its origins and history. He also outlined the objectives of this specific meeting along with the desired outcomes.

The other presentations were made by **Dr Arash Rashidain**, *Director of Information Evidence & Research WHO EMRO*. He discussed (through a recorded presentation) the recently conducted assessment of Pakistan's HIS and the potential roadmap of priority areas for HIS.

Dr Arshad Mehmood, *Director M&E JSI*, followed next with providing an overview of JSI/USIAD's Sindh experience of strengthening and supporting the HIS of Sindh. He presented the integrated HIS with multiple data sources from vertical program MISs like LHWs, CMWs etc. All of the Sindh HIS is digitized and currently online. He also discussed the monitoring and supervision systems for this HIS.

The last presentation (recorded) was made by **Mr Ola Hodne**, *DHIS-2 Implementation, WHO; Oslo University, Norway* who provided a very succinct over view of what DHIS-2 is and how many countries are already moving on to this platform. And how this platform provides the opportunity to integrate and help different data sets communicate with each other.

Following the presentations, remarks from the **Health Minister and Health Secretary** were made and all participants made comments, suggestions and the potential challenges pertaining to the set of strategic questions put forth to them. The **Mr Aamer Mehmood Kiani, Minister of Health** ensured that resources will be provided and reiterated the resolve of the government to uplift the health of Pakistanis; HIS is the key to making informed descions and moving ahead, so strengthening the HIS should be a priority. He added that there is an urgent need to have a National or Central HIS of Pakistan which has integrated information from across the provinces. He also remarked, since Islamabad Capital Territory (ICT) presents an opportunity, now being part of the M/o NHSRC, to pilot HIS strategies eg DHIS-2, digitizing LHWs routine data collection (with the support of Universal Services Fund) or piloting a one health survey. The Islamabad's health system can be inspirational for a National approach and provinces and area governments could adopt similar model.

Dr Nima Abid, WHO WR commented that integration of different sources of information especially from the Program MIS is needed. However, the vertical programs need to have their own information separate as well. Similarly, **Director General Health Khyber Pakhtoonkhowa** added that at the moment the program MIS is segregated, and the data entry personnel and quality is not up-to the standards. Dr Haroon Khan President E-Health Association reiterated that the capacity of data entry personnel needs attention and supervision. The **MIS Officer from the DHIS Baluchistan** voiced the same concerns and added that we should not be yet again creating different approaches and systems in different provinces – there are already too many different systems in place. We should have one uniform system for all provinces and the country.

The discussion was then steered towards the application of DHIS-2. The participants raised caution in terms of applying DHIS-2 without thinking about its feasibility. The example of moving from DHIMS to DHIS was raised and the issues it entailed and how HIS overall struggled. **Dr Sameen Siddiqui Chair CHS, Aga Khan University** suggested that if digitization has to be done it should start at the facility level. **Dr Arshad Mehmood, JSI** pointed out that the system in Sindh is functioning similarly on the lines of DHIS-2 but is indigenous and is customized to the needs of Sindh. **Mr Mata-ur-Rehman Consultant PACE Technologies Ltd** added to the reservations of using DHIS-2 and explained that this will entail unifying all the current MISs and databases into one DHIS – which is an extremely long process to having an integrated system. **Mr Ali Habib, CEO Indus Network** said that rather than unifying databases – fetching the data is what all the digitized systems like DHIS-2 do. And we should also use open source systems rather than licensed ones which are expense to sustain. He added that we need to develop user friendly applications for personnel to use. **Dr Mursalin, Admin CRVS** reiterated that strengthening the existing systems is needed only then DHIS-2 or similar systems to be used as "add-ons" rather than seen as replacements. He suggested that if there are issues at the data entry level at the grass root level, ToTs and overall HIS capacity should be enhanced. **Dr Sameen Siddiqui Chair CHS, Aga Khan University**

recommended having the DHIS-2 first piloted at a complete district level, with the private sector and the tertiary care hospitals included in sharing their data and only then scaled up. While **Dr M. Isa, Senior Technical Advisor, USAID** added that before getting DHIS-2 rolled out, the indicators should be decided across the board. He added that 30+ indicators are there related to SDG goal 3 that need integration into our existing systems. **Dr Tahira Reza, University of Manitoba, Canada** reiterated that quality issues at the DHIS level and common set of indicators need to be finalized before moving to DHIS-2 or similar digital platforms. **Dr Ayub Rose, DG Health Khyber Pakhtoonkhwa** supported going on to DHIS-2 without disrupting the existing DHIS systems and pointed to the need of supervision and monitoring to be in place. **Dr Assad Hafeez, DH Health MoNHSRC** added and reiterated that having a phased approach to DHIS-2 is needed and not to disrupt the existing entry side of DHIS.

The missing information from the large private sector and the non-representation of this in the current HIS of Pakistan came under discussion and was raised as a key area to integrate. **Dr Masood Ahmad Bokhari, DoH, AJK** remarked that private sector data can only be integrate only through legislation process. The participants showed the resolve and raised the urgency of getting the tertiary care hospitals and the private sector integrated into HIS. **Dr Abdul Bari Khan, CEO Indus Network** added that one ID system should be in place to help record and trace individuals how get treatment from the private sector (as in the PM Insurance Card). NADRA CNIC with chips can be the way forward. He also added that to help maintain quality of this system good governance and accountability is needed. **Dr Waqar Mahmood DoH Sindh** suggested that this will need enhancing the HR including IT and Data Managers. **Mr Imran, Advisor from the MoHS Punjab** raised the need for private hospitals report on given set of indicators mandatory. **Mr Tahir Ramzan Bhatti, Project Manager NADRA** added that a centralized system could be in place if there is policy to do so. **Mr Adeel Alvi, CONTECH** reiterated that same. While **Mr Anjum Masood, Head Digital Project, Universal Service Fund** added that the forums like Health Commissions could be used to advocate for the necessary legislation needed. Dr Assad Hafeez added that the other approach is through the expansion of PM Insurance Scheme – which has the data and info on approximately 3.2 million families across 30+ districts, that can access health services from the private hospitals. Similarly, **Dr Sameen Siddiqi, CHS, Aga Khan University** and **Dr Haroon E-Health Association** highlighted that the information from tertiary care hospitals is missing from the Health Information System – this should be incorporated and the practice of coding disorders using International Classification of Diseases 10th revision should be restarted – since this was abandoned.

There was some discussion around the different ways to increase the “demand” side of HIS and need to develop the capacity to generate data for descions making. **Dr Arshad Mehmood, Director M&E JSI** added that when in Sindh regularly data was being viewed it generated the “demand” automatically. Thus, he reiterated the need to regularly view incoming data. **Ms Lubna Yakoob, HPSSIU, MoNHSRC** added that monitoring and supervision is needed, and different donors need different indicators, thus capacity is of paramount importance.

The need to having quality surveys as part of the HIS was also discussed. The need to having a One Health Survey every 3 years was discussed and highlighted by **Dr Masood Ahmad Bokhari, DoH, AJK.** This was reiterated by **Dr Ahsan Maqbool, Epidemiologist and Consultant MoNHSRC**. Dr Assad Hafeez added that this survey should be informed by indicators for SDGs. Representatives from Sindh, Baluchistan and AJK added that this One Health Survey should have the same set if indicators when repeated – this will help track indicators, thus the same set of indicators should be used in every wave was highlighted

In the end Dr Assad Hafeez summarized the discussions and emphasized that a committee should be organized to help review the Health Information Systems of Pakistan Assessment Survey conducted by the WHO and the Ministry of National Health Survey. This should be done as soon as possible and should be informed by today's deliberations of this HPTT meeting.

Following are the key recommendations that came out of the meeting;

Recommendations and way forward for the Health Information Systems of Pakistan

- An integrated approach to collate the sources of data from multiple systems should be used to inform the Health Information System Pakistan. This integration should have flexibility at the Programmatic MISs level. The integration should be uniform and consistent across all provinces and area governments.

- DHIS-2 is one of the ways of achieving an integrated health information system. Existing ongoing DHIS should not be disrupted/scrapped. Layer of the new innovative DHIS-2 should be added on the reporting side of the system rather than the data collection side of the system. Ensuring that the previous DHIS system is not made redundant. This layering and staggered introduction of DHIS-2 should be a phased introduction over the next two years.

- Legislation to incorporate the private sector into the Health Information Systems is needed urgently. Use of insurance system for the private healthcare sector through health commissions or other existing forums should also be used to incorporate the private sector into the information system of HIS of Pakistan over the next two years.

- Strategies to increase the demand and capacity to generate data for descions making is needed; strengthening the monitoring and supervision system is also needed.

- One Health Survey every 3 years is needed and agreeing on the indicators for SDGs collected in the survey, is the way forward. Furthermore, same set of indicators should be used in every wave. This should be finalized and piloted in the next one year.

- Information from tertiary care hospitals is missing from the Health Information System – this should be incorporated and the practice of coding disorders using International Classification of Diseases 10th revision should be restarted over the next two years.

- Establishing a committee to review the Health Information Systems of Pakistan Assessment Survey conducted by the WHO and the Ministry of National Health Survey should immediately be formed and deliberations of this HPTT meeting should also be taken into consideration by the recommendations of the committee. This should be done in by end of Jan 2019

List of Participants: 26th Sep 2018 RTC HPTT

S.No	Name of Participants	Designation	Organization
1.	Dr. Safi Malik	Director of Programs	MoNHSRC
2.	Saadia Razzaq	Research Manager	Population Council
3.	Dr. Shagufta Parveen	Senior Instructor	Aga Khan university, Karachi
4.	Arjanne Rietsema	Health Manager	UNICEF
5.	Dr. Nadeem Hassan	National Coordinator	JSI
6.	Lubna Yaqoob	Manager MIS	HPSIU MoNHSRC
7.	Dr. Jamal Nasher	Health Systems Coordinator	WHO Country Office
8.	Dr. Ali Sajid Imami	Director Technology	CDT
9.	Dr. Tahira Raza	Director	University of Manitoba
10.	Imran	Advisor	MoHS Punjab
11.	Waqas Ashraf Khan	Assistant Manager Digital Strategy	USF- MOITT
12.	Arshad	IT	HAS
13.	Haroon Roadad Khan	President	E- Health Association, Pakistan
14.	M. Adeel Alvi	Consultant	CONTECH International
15.	Anjum masood	Head of Digital Project	Universal Service Fund
16.	Dr. Nasir Sarfraz	Health advisor	DFID
17.	Dr. M. Ahmed Isa	Senior Technical Advisor	USAID
18.	Nima Saeed Abid	WHO representative	WHO
19.	Dr. M. Zaeem	Director DHIS	Govt. of GB
20.	Akhtar Muhammad	MIS Officer	DHIS Baluchistan
21.	Saflain Haider	DG	PITB
22.	Dr. Murtaza Haider	Assistant Chief Health	M/o Planning Development & Reforms
23.	Prof. Abdul Bari Khan	CEO	Indus Health Network
24.	Dr. Mirza Amir Baig	Dir to Minister	MoNHSRC
25.	Dr. Fazli Hakim Khattak	Advisor(HPTT)	HSA
26.	Dr. Siham Sikandar	AP/ Fellow	HSA
27.	Dr. Saqlain Gillani	NPM	EPI
28.	Dr. Prof. sameen Siddiqui	Chair, CHS	AKU
29.	Brig. Ammer Ikram	ED	NIH
30.	Dr. Ayub Rose	DG(H)	KP
31.	Dr. Masood Ahmad Bukhari	DHS (CDC)	DoH, AJ&K
32.	Dr. Waqar Mahmood	Add. Director (PH)	DoH, Govt. of Sindh
33.	Tahir Ramzan Bhatti	Project Manager	NADRA
34.	Gulzar Ali	Dy. Director	PMNHP
35.	Dr. Khuwaja Laeeq Ahmad	National TB Consultant	WHO, Pakistan
36.	Dr. M. Tahir	DHO, Islamabad	Health ICT, Islamabad
37.	Dr. Mursalin	Admin CRVS	M/o Planning &

			Development
38.	Arshad Mahmood	Director M&E	JSI/
39.	Ali Habib	CEO	Indus Network
40.	Gul Majeed Awan	DHIS Coordinator	AJK Muzafarabad
41.	Dr. Nadeem ur Rehman	Focal Person FELTP	Health AJK
42.	M. Ehtisham Siddiqui	DBA	DGHS KP
43.	Mata ur Rehman	Consultant	PACE Tech
44.	Dr. Ali Jan M Ahmad	Advisor HPSIU	MoNHSRC
45.	Dr. Raja Ayub	M&E Specialist	NTP
46.	Nadeem Sajjad	Dy. Director Admin	HSA
47.	Dr. Assad Hafeez	DG(H)	MoNHSRC
48.	Capt. (R) Zahid Saeed	Secretary	MoNHSRC
49.	Mr Aamer Mehmood Kiani	Minister (H)	MoNHSRC