

Health Management Information System utilization in Pakistan: Challenges, pitfalls and the way forward

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Summary

Use of data generated through the Health Management Information System (HMIS) in decision making has been facing various challenges ever since its inception in Pakistan. This descriptive qualitative study attempts to explore the perceptions of health managers to identify the status and issues in use of HMIS. Overall 26 managers (all men, ages ranging from 26 to 49 years; selected from federal level (2), provincial (4) and seven selected districts (20) from all four provinces) were interviewed face to face. The respondents identified a number of hurdles resulting in non-use, misuse and disuse of data. These included limited scope of HMIS, dubious data quality, political motives behind demand of data and an element of corruption in data reporting *etc.* A great deal of political and administrative will is required to institutionalize transparency in decision making in health management and HMIS is an important tool for doing so. Appropriate legislation and regulations are needed to create a conducive policy environment that would help in changing the existing decision making culture. The effective use of information requires that besides capacity development of district health managers in understanding and use of data, the higher level decision makers are provided with relevant data timely and in an easily understandable form along with the recommended actions pertinent to this data.

Keywords: Health Management Information System (HMIS), use of information, health managers' perceptions, Pakistan

1. Introduction

A Health Management Information System (HMIS) is meant to provide reliable information to managers at various levels of the health system in a timely manner. It supports decision making in the areas of policy, planning, management, monitoring and evaluation of health systems including its programs and services.

There could be several barriers contributing to underutilization of data. For instance, inappropriateness of collected data, data gatherers' inability to analyze, interpret and present data/information to decision

makers and decision makers' uncertainty on how best to utilize the available data, credibility of information, 'information overload', *etc.* (1-3).

A number of non-informational factors can influence the information-based decision making process. These factors might include political views, peers' advice, budget constraints, donors' involvement, unions, community, religious groups, media, special interest groups, *etc.* (4).

Use of information for decision making has remained a challenge throughout the evolution of health information systems in Pakistan. Initially due to its inadequacy, the information generated through National HMIS was not helpful either to health managers for system planning or management, or for the health workers for facility or patient management (5). The national feedback reports of National HMIS indicated that more emphasis was laid on information collection for the sake of doing it instead of "information for action" (6-8). Instead of being utilized at the level

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of generation, data is usually transmitted straight to provincial or National HMIS Units without even being checked (9). The reports recommend improving the pertinence and quality of information and timely analyses and quick feedback to the system to ensure timely action. Research pointed out that being irrelevant, unreliable, incomplete and untimely, the data was not helpful for decision-makers. It was pointed out that driving forces behind data or information generation were the donor agencies (10). Ministry of Health (MOH) remarked that within a culture of non-evidence-based decision making, planning and management decisions are mostly taken without relevant information and 'making use of information for decision making is discretely practiced' (3).

The district health system conceived under devolution reforms, enacted in 2001 in Pakistan, posed another challenge. The literature suggests that the decision-making culture of district government can be based around informal, political information rather than formal, rational information (11) and there can be conflict of interest between political and administrative leadership when it comes to information based decision making (12). In 2007 a study reported that use of information for management decision making remained uncommon due to limited capacity of managers to understand and utilize data and the lack of accountability and therefore motivation to improve results (13).

Since overlooking stakeholders' perceptions is an important reason for information systems failure (3), taking stock of the views of health managers is important. Given this backdrop this study was carried out to explore health managers' perspectives about the reasons into and seek their suggestions for an improved use of National HMIS.

2. Materials and Methods

For the purpose of exploring the perceptions of health managers, a descriptive qualitative design was adopted because a qualitative study allows getting close to the people and situations being studied (14). Data collection was accomplished through long interviews, therefore data collection tools comprised of in-depth, face to face and semi structured interviews. For this purpose an interview guide was developed to provide an outline on a set of issues which was used as a checklist to capture some of the aspects that might have been eluded otherwise. The questions in the interview guide were not taken in any particular order. Primary data collection was done during September 2004. Overall 26 managers (5 from federal level, 7 from provincial, 8 from selected districts and 6 from health facility levels) were interviewed. The manager was defined as a person with a basic pay scale (BPS) 17 and above, involved in HMIS activities. All respondents were male

and were 26 to 49 years old. The respondents included federal level HMIS and vertical program managers, provincial HMIS managers, district health officers, district level HMIS focal persons and health facility charges involved in data management and decision making. In order to collect data, the first author visited the capital Islamabad and six districts from all four provinces (Hyderabad, Lahore, Sheikhpura, Peshawar, Quetta and Mastung). The selection of the districts was based on convenience for the first author in terms of proximity and easy accessibility (15). The authors had no power relations with the respondents as they came from independent non government institutions.

Prior to visiting, the respondents were contacted and briefed about the background and purpose of the study and its methodology. After getting consent from the respondents, open-ended questions along with probes were asked during these face-to-face interviews.

It was planned to record the interviews on cassettes, with permission of the respondent and then to transcribe the answers. But in reality only few of the respondents allowed for recording of their interviews. It was also noticed that among the respondents who were interviewed, some had a totally different tone and expression to their normal selves during the tape recording of interviews. This was confirmed by the fact that after the interviews, when the tape recorder was turned off, for example during tea break or before departure, these respondents really spoke out in a drastically different and friendly manner. On enquiring, some of them shared a fear of any potential threat to their position or of being victimized in case the recorded cassette was accessed by some authority against whose performance the respondent had commented freely. Another reason given by a respondent was that he was giving a false picture of HMIS because it was not, in his opinion, a forum to criticize his bosses, the higher management.

So the first author had to change the strategy for recording the responses and took manual notes which had the limitation of interruption during the process of interviewing (16).

Data was managed through immediate transcription of responses subsequently after interviews. Analysis was done through categorization of verbatim notes into themes and a general description of the experience that emerged out of statements (3,17).

As had been expected, most of the responses were mixed, in Urdu and English. The responses were transcribed in Roman Urdu in a MS Word version. All twenty-six interviews were coded with English alphabet letters (each interview was assigned one alphabet letter) and the page numbers were designated through the same alphabet letter and Arabic numbers. Afterwards line by line analysis was done. Roman numerals were used to indicate the important points in the statement. For example G3-IV meant that on the third page of

the interview assigned alphabet letter G, point number IV is being referred to. Two Filip charts were used on which major themes (drawn from the objectives of the study) and sub themes that emerged out from the responses were noted. At the end the major themes and sub themes of the responses were documented in a long description.

Since data was collected through multiple sources (from various levels of hierarchy as well as from people currently within the program and those key informants, who are currently out of the program), it gave an opportunity to triangulate the findings as well as the contrasts. This type of triangulation is called environmental triangulation because it involves the use of different locations, settings and other key factors related to the environment (18).

In addition to this, another form of triangulation was done through peer review by health systems and qualitative research specialists with health sector background.

To be aware of the biases at all stages of inquiry the first author articulated his biases in writing. This bracketing exercise helped to identify and segregate the first author's own perceptions from those of the respondents. Bracketing was employed at each stage of inquiry, from data collection to manuscript writing. A self reflective journal was maintained concomitantly to keep track of day to day events encountered during the research process and record of the feelings, emotions and perceptions of the first author that emerged during the course of recording the interviews. The first author stated his perceptions about the phenomenon being studied before data analysis. This helped as well in understanding the phenomenon from the perceptions of the respondents without a minimum muddling of influence over the data analysis.

Since these were qualitative interviews for which a whole narration was required hence there was a necessity for recording the whole interview. Nevertheless it was anticipated that certain government officials may be either reluctant to have the interview taped or refuse to participate or otherwise may conceal their true perceptions. Given their busy day to day schedule, as was apprehended, some managers were not available or were at outstation at the time of the visit of the first author. Last but not least, given the time and finance constraints, rapport building and gaining confidence of the respondents had become rather difficult.

Before commencement of the interview the first author shared the consent form with the respondent. Through this form the participants were apprised of aims and objectives of the study and the right to refuse to participate at all as well as the right to withdraw during the interview. They were informed that their responses would be recorded on tape (subject to their

consent) as well as through note taking. They were given assurance of the confidentiality in the consent form. A written consent was requested but in case a respondent was not comfortable with it, it was not insisted upon. As expected the government employees were reluctant to give anything in writing while they shared their personal experiences and impressions regarding current HMIS to facilitate the communication process. The verbal consent was found to be a more appropriate alternative. A copy of the consent form was retained by both parties and contacts were exchanged for future correspondence. Individual information was kept strictly confidential and the actual responses are quoted without indication of the name of the respondent. It was made clear to the respondents that they might not benefit directly from their participation in the study, as this is neither the objective nor the scope of this study.

3. Results

The following themes emerged from the responses:

3.1. Potential venues for HMIS utilization

The respondents enumerated a number of potential uses of information generated by HMIS, ranging from developing a vision and policy formulation to short and long term planning, needs assessment, better targeting and managing day to day affairs. Categorically mentioned areas were assessment of staff performance, quality and utilization of services, measures of diseases and their patterns, budgeting and financing, program monitoring, and comparison of health facilities. It was iterated that HMIS could be used as a check to corruption/pilferage, as a tool for prevention (*e.g.* early warning of epidemics), as a means to justified demand for resources, resources distribution/redistribution/allocation as per principles of equality, equity, or as per disease patterns.

'HMIS can give a clue of many visible and hidden aspects of the health sector and can be used for research purposes.' (Provincial level manager)

3.2. Perceptions on current utilization of information

3.2.1. Policies, planning and management

Respondents deemed policy making in Pakistan a '*haphazard process*' with little spade work in its formulation. They mentioned '*ad hoc policy formulation*' and presence of '*unsubscribed policies*' as an acceptable norm in the culture, as opposed to an evidence-based policy. Likewise they perceived that while planning, situational analysis is hardly ever undertaken and HMIS generated data is not given consideration.

'If a planner at a higher level wants to establish a twenty-bed hospital, he asks the DHO [District Health Officer] to make a feasibility study [report] within two days.' (Provincial level manager)

Occurrences of emergencies were cited in the context of planning.

'We plan the day when we learn that, say, an outbreak of gastroenteritis has taken a large toll; we then immediately send a team to respond to the situation and in the end we report [that] the situation is under control.' (Provincial level manager)

Higher management can also demand data only occasionally:

'If tomorrow is a meeting then DG [Director General of Health services] will ask today about the number of TB patients. Otherwise he is least bothered for data.' (Provincial level manager)

3.2.2. Motives behind demand for human resources related data

If by any chance the data is demanded, it is for personal motives.

'The minister enquired about vacancies in a certain area. We realized later that he intended to get some of his people appointed.' (Provincial level manager)

A personnel related record is a much sought after entity from the Health Department. However,

'The motive is rarely to assess the human resource status of health facilities, so as to take corrective measures e.g. transfer staff from an underutilized facility to one experiencing a high patient load owing to staff shortage.' (District level manager)

3.2.3. HMIS reports: A supply without a demand

Equating HMIS with a 'data warehouse' and 'junkyard' for the 'dumping' of reports, respondents perceived that the purpose of the data generation activity is nothing but to serve the purpose of printing a report.

'They just publish a book [annual HMIS report] ... no one does the follow up of the report ... there is no use for this report, even when the report is published, as the time lag is too large.' (Provincial level manager)

3.2.4. Non use of HMIS results in incongruous resource distribution

Referring to inappropriate distribution of resources, a district level health manager submitted:

'Under certain donor supported projects, various

equipment such as four anesthesia machines got dumped due to un-informed management and the donor agencies. The distressing part of the story is that there was no trained operator available in the same facility while in a nearby district there was a trained operator who had no machine with him. All this was the result of non use of HMIS.' (District level manager)

3.2.5. One way traffic: Yearn for feedback and compliance

Health facilities reported a chronic problem with the supply of medicine which is provided on a push system basis (i.e., a fixed package is delivered regularly) for each facility. They reported and demanded a certain type and quantity of medicines based on the data of their facility but in response the same package of medicine is delivered always.

'No evidence-based adjustments are done for sending required medicines on our monthly reports.' (District level manager)

'Since resource allocation is not appropriate and need based, it is likely that at one facility there would be permanent shortage of a certain medicine and at the other there will be loads of the same medicines expiring on account of no need.' (Health facility manager)

3.2.6. Culture of decision-making

Respondents indicated that at the federal level certain 'directives' exist under which policy formulation related strategic decisions are made. The lower tiers of management at provincial levels are essentially implementers and planners.

The term "ad hocism" was frequently iterated while describing the culture of decision making. Ad hocism was equated with shortsightedness, patchy solutions and being *not bothered by the future*.

'During twenty years of my service, I noticed health managers' short sightedness; they think of 'today' only, future planning is rarely done. No thought of the coming fifty years. This is the ad hocism.' (Provincial level manager)

3.3. Perceived hurdles in use of HMIS data in decision making

3.3.1. Limited scope of HMIS limits its potential usefulness

HMIS is providing outpatient department (OPD) based data and not catering to a number of other important functions being performed and services being delivered by the health department. Owing to this fact that HMIS communicates information for only a very small portion of the health care sector in the country, it has minimal

utility for policy makers.

A number of public sector First Level health Care Facilities (FLCFs) are underutilized as the majority of patients bypass these and get direct access to the secondary and tertiary level public sector health care facilities.

'The major load (of patients) is at the level of Tehsil Head Quarter Hospital (THQ), District Head Quarter Hospital (DHQ), and at teaching hospitals but (the) HMIS does not cover these (institutions).' (Federal level manager)

In addition, a number of facilities are not functional and even those that are functional do not regularly report (National Feed Back Report 2006, National Health Management Information System 2006 indicates that out of 11,732 FLCFs, the number of functional FLCFs was 9,351 and out of these approximately 8,000 were sending reports.).

Furthermore, while the majority of the patient load is towards the private sector (According to Pakistan Social and Living Standards Measurement Survey (PSLM) 2008-09, the use of the private sector for outpatient consultations has risen from 69 percent in the late nineties to 79 percent in 2006-2007.), HMIS is not capturing this majority.

Hence the information generated through HMIS does not reflect the actual health status of the masses and therefore has limited utility for policy makers (Figure 1).

District level managers felt a dearth of information on in-patients, financial management, vacancies' status, training status and needs of various cadres in the health sector in HMIS.

In certain districts, refugees from Afghanistan are major beneficiaries and account for a considerable patient load at public sector health facilities yet HMIS does not speak on this.

Other areas not addressed in HMIS include medico legal type cases (including gender based violence) and quality of care. A few respondents reflected that HMIS lacks disaggregated information on asymmetries such as cause specific mortality and morbidity among various socio economic strata that may indicate the disparities between gender, poor and rich and hence does not offer support for minimization of urban bias.

'HMIS is silent about the health problems of various classes and ethnic groups, their deprivation and poverty status.' (Federal level manager)

3.3.2. Vertical programs: Parallel reporting

As the HMIS depicted picture is not in tune with 'Burden of Disease' (BOD) estimates, considered a more reliable measure, separate, vertical information systems were introduced for rapid information transmission for each of these vertical programs. The failure of HMIS

to provide the necessary information channel for these vertical programs resulted in generation of two reports pertaining to the same activity. One report is sent to the district health office and the other is sent to the concerned program manager who sends that directly to federal authorities. These two reports show different figures which creates confusion.

At the district level managers felt overburdened by producing multiple reports since each vertical program demands its own report. This indicates the lack of coordination between various information systems, duplication of efforts and resource wastage.

3.3.3. Reliability of data creates hesitancy among potential users

Some of the issues surrounding the questionable quality of data, as narrated by the respondents, are summarized in Figure 2 which indicates that right from the health facility level poor data entry leads to inconsistencies up to the top level.

At provincial HMIS cells the respondents complained that other concerned provincial departments never demand data nor valued it. Apparently the Planning Cell doesn't need it or has doubts about the reliability and timeliness of data.

At the facility level, non-use of data was correlated to lack of staff's capacity to use the information. It was said that they can't understand simple graphical data displays and cannot perform simple calculations. Besides this some other reasons perceived from non-use of information at various levels are summarized in Figure 3.

Some respondents asserted that being fictitious, it was of no use to utilize data or these reports. They revealed, for instance, that during visits they could judge that inaccuracies due to careless data entry were evident from the total number of certain cases given treatment that did not tally with "days out of stock" status of the relevant medicine.

3.3.4. Bogus reporting and "data creation"

According to a provincial manager:

'The FLCF has no direct contact with the community, as the Lady Health Worker (LHW) has, so how is it possible for FLCF to report on IMR, when the infant death has occurred, say, four miles away in the community... Similarly doubts about reliability of the reports arose when it was noticed that some districts kept on reporting cases of guinea worm that was long been eradicated.' (Provincial level manager)

A health facility level manager admitted:

'Whatever we are doing is not fair... At the time of closing of the monthly register, looking at the

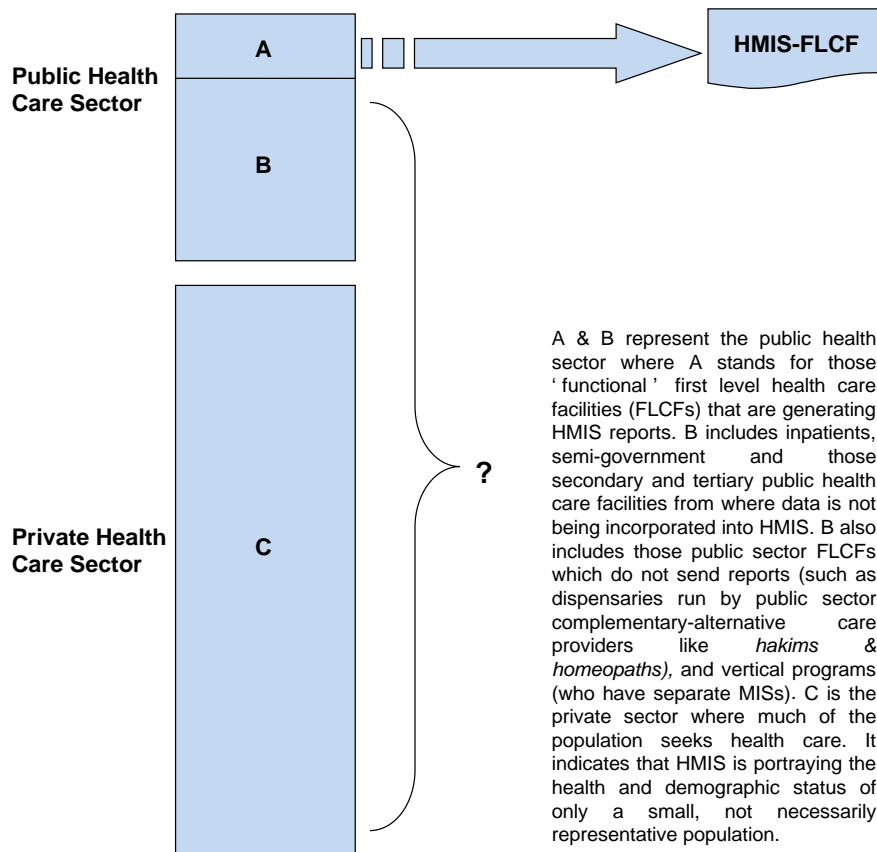


Figure 1. What HMIS Actually Portrays.

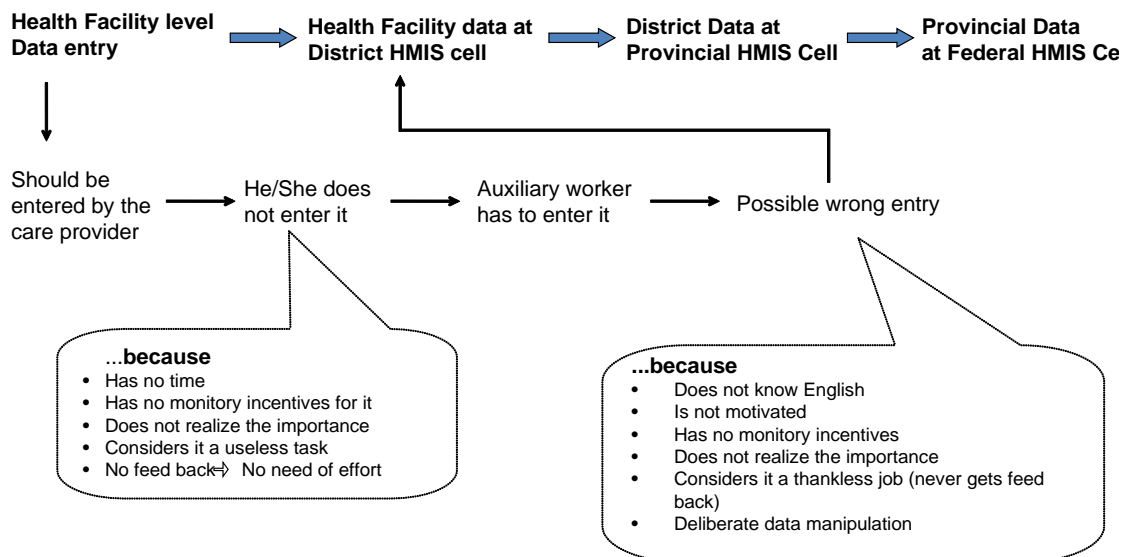


Figure 2. How data quality deteriorates.

gender distribution, considering the seasonal patterns and keeping priority diseases in front, an abstract is written down. If there is summer we report diarrhea and if winter more acute respiratory infections (ARI) cases... So no one will inquire.' (Health facility level manager)

Respondents at MOH maintained that it was indeed

the busy routine administrative life of the managers that doesn't allow them to spare sometime "for any technical issue such as Disease Early Warning System (DEWS), the disease profile, epidemic management, coverage plan, some kind of calculations, etc." To others, unavailability of support staff could be another reason:

'Getting entangled in numbers and figures is a

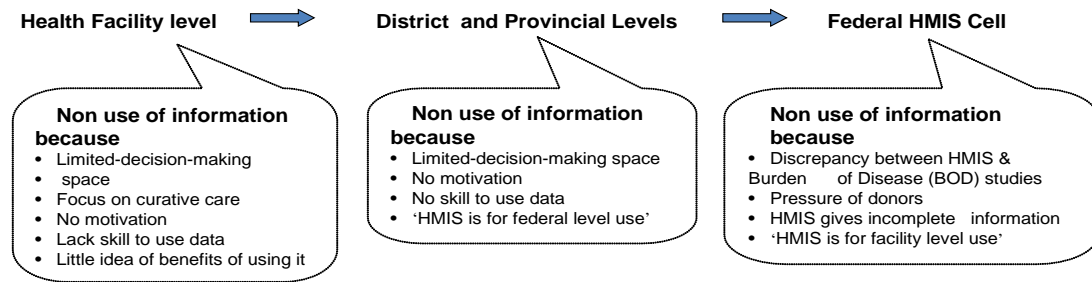


Figure 3. Why information is not being used at various levels.

difficult task, particularly if you don't have staff to support you in this.' (Facility level manager)

3.3.5. Data manipulation

Besides calling careless data entry an act of "just doing away with routine work", it was reflected that data is manipulated for some ulterior motives as well. For example referring to the polio campaign it was said that some area supervisors will indicate a falsely increased targeted population to get more and more funds. The deliberate data manipulation could be categorized under two headings. First is data manipulation for personal motives, and second for material gains. As in the words of a respondent:

'The basic health unit is an earning spot. If two rupees per chit is charged per patient, then there would be 2,000 rupees collected from 1,000 patients. But if only 500 patients are entered in the record, 1,000 rupees can be kept in the pocket... Similarly a patient can get [a whole course of] tablets by paying 5 rupees extra otherwise he or she may be given a single injection and would not be attended further.' (District level manager)

This was the artificial regression of patient turnover. The second category of data manipulation could be artificially inflating patient turnover. This could further be due to two reasons. Either there is strictness from the concerned authority that there must be more patients than a certain number, or be seen, at the health facility otherwise that facility might be considered underutilized or inefficient (in certain areas it was shared that health facilities where the patient turnover was less than five hundred, in punishment, their salary was withheld). Or the purpose of artificially inflating could be to ensure that medicines could be obtained as per quota or even more than the quota. Certain facilities are given a quota for one quarter Rs. 3,000 (1 USD = 85 Pak. Rs) to 5,000 worth of medicine. This comes to be around fifteen hundred rupees worth of medicine per month. And if 50 rupees worth of medicine is given to each patient, only 20 to 30 patients per month can be entertained while the patient load is usually much more than that. Thus the facility managers show more patients than they actually

see so that if not more, then at least as per quota the medicine can be obtained because if they show the correct number of patients attended, they fear that they will be given medicine below the fixed quota.

4. How can HMIS utilization be improved

Despite aforementioned reservations about HMIS utilization the managers also shared their suggestions for the improved utilization of HMIS. (Parenthesis indicate the number of respondents suggestions came from)

- At the policy level the leadership commitment could play a very important role in the use of information generated through HMIS (9). If policy makers start demanding data and information, there would be a trickledown effect. It is necessary to utilize the present HMIS as it is as, for, *'the more there is demand for the data the more it becomes refined over time'*.
- HMIS data transmission should be brisk and the feedback should be forwarded to the highest level of management (24) (including *'secretary of health and director of health services'*).
- Regular and timely feedback to facilities may encourage managers to utilize the information at local levels as well as build capacity of the local managers and provide them some incentive (such as further training) which may help improve quality of services (19).
- Introducing an environment of competition among health managers of different districts could be a beginning of use of data. If in a monthly meeting the managers of various facilities are joined and the trends and patterns of disease are compared and contrasted, this may generate a competitive environment for the display of data and an urge to take practical measures to solve problems and improve indicators (8).
- Use of HMIS at the Community level is of vital importance. Community based LHWs can play an important role, as they have good rapport with the women groups, health committees and functional CBOs in the area. LHW can

disseminate important and pertinent information about certain health care matters and also important health indicators such as IMR (13).

- vi) Vertical information systems should be integrated into one central HMIS system, in order to reduce duplication of work and the ambiguity it creates among users of health information (16).
- vii) The scope of HMIS should be increased. If more information such as in-patient related data, private sector coverage, financial management, *etc.* is added to the current HMIS, it would become more useable (6).

5. Discussion

Be the use of information on managerial grounds or from politico economic perspectives or even on ethical and rights based concepts, it is important to consider the context or intention under which information is collected and the context in which the collected information is analyzed.

Respondents spoke of corruption in its various forms. They mentioned it in terms of non use, abuse and misuse of data and information. They suggest one solution for the problem was enhancing monitoring and supervision and others opined that transparency and accountability could be a way out of the problem. Most considered corruption to be preoccupying the whole system from top to bottom.

Respondents indicated multiple constraints in decision making at their levels including limited choices, scarcity of resources, pressure from top management and coercion by the outside agencies (local political and donor agencies).

Political interference is by far the strongest factor that interferes with the well-functioning of the system and rational use of information. Under the devolution reforms this appears to be a very challenging job. The political leadership is perceived to come with a different agenda or ulterior motive that may not necessarily build on the information system as a requirement. Advocacy channels might be required to create a culture of use of information in decision making.

Expectations from the system also need clarity as these are directly related to ownership of the system. One needs to be educated to get a clear idea about what HMIS can do and what it can't. On the one hand there is an expectation of such a comprehensive system that encompasses each and every aspect directly or indirectly related to health. On the other hand there is the system that is being run for the sake of running it; where its movers and shakers perceive it as a task being performed for someone else. Despite the very idea of HMIS being a tool primarily meant to be used by the managers at the facility and district level, an idea promulgated since the very beginning of the system by the MOH, the perceptions at various levels persist that

HMIS is meant for the higher or the lower levels. The use of HMIS needs to be demonstrated at various levels at least in some model that can be shared with the other stakeholders.

A great hurdle has been seen in the integration of HMIS with the vertical programs. Literature suggests that this problem even exists in the developed world as well where the donor driven vertical system, manpower and management hierarchy, distinguished from the line management, makes routine information systems chaotic (4). Some of our respondents suggested coordination as a solution to this problem. But the experts recommend a uniform system and not "better coordination" as a solution to duplication and waste problems seen in parallel health information systems.

Data entry was not considered an important task and fudged data has reportedly been entered just to generate the report *per se*. Creating demand for data might be brought in through a transparent system where the decision makers are asked about the way they decide about certain managerial functions. If a decision maker is answerable to some learned people with a given protocol of decision making then it might be possible to incorporate the evidence base in making decisions.

In this study only one type of stakeholders has been covered. Under the devolution reforms the number of decision makers at the district level has increased. We recommend exploring the views of such potential users/stakeholders for the information generated through HMIS.

6. Conclusions

Improved decision making requires institutionalization of a dialogue between data generators and the decision makers and those who influence the decision makers. Timely dissemination of relevant data to decision makers in an easily understood form along with the recommended actions based on this data is a prerequisite for effective use of information. A great deal of political and administrative will is required to institutionalize transparency in decision making and HMIS is one of the means towards that. For development of systems for the collection, collation, communication, and use of health information from the un-captured areas of public and private health care sectors, government is required to create a conducive policy environment through legislation and regulation.

District managers need to have the basic skills for day to day decision-making using information generated through HMIS. They need to build their skills for creating a supportive environment for the improvement of data quality and the use of evidence-based management.

Instead of being limited to the mere description of health problems, it would be of great value for decision-makers to receive interpretation of raw data

and evidence-based recommendations with appropriate actions and alternative solutions for alleviating and phasing out problems. Furthermore, to ensure quality and transparency, it would be necessary to incorporate elements to evaluate health interventions and public health programs based on a well operating HMIS.

7. Interview Guide

The interview was guided as follows:

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- What in your opinion is the importance of HMIS?
 - What are the weaknesses/limitations in the current HMIS?
 - Why do these exist?
 - How would you suggest bringing improvements in these?
 - What do you know about evidence based decision making (decisions based on some valid information)?
 - What is the role of HMIS in evidence based decision making?
 - What type of information do you need (in your managerial capacity)?
 - How would you comment whether the same information you mentioned is provided to you by the HMIS or not?
 - Please suggest how these needs can be fulfilled.
 - Are there any hurdles in the use of information generated by HMIS?
 - How can these be overcome?
 - What in your opinion is the role of HMIS in new decentralized system/under post devolution reforms?
 - Are there any hurdles in use of HMIS under decentralized system?
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8. Postscript

This is the first study ever specifically focusing on the use of HMIS generated information in Pakistan. It documents some of the very "unspoken" and "untouched issues" in the health systems literature. The significance of this qualitative enquiry remains for those who are interested in studying the impact of devolution on the culture of decision making.

On 1st July 2011, the Federal Ministry of Health of Pakistan was completely devolved in compliance with the 18th Constitutional Amendment. The National HMIS developed in the 1990s became defunct. Prior to the 18th amendment, planning and implementation of health programs rested with the provinces whereas the federal government had a stewardship role to play to improve the health status of the general population. In order to fulfill its stewardship role the Federal Ministry of Health remained responsible for formulating and setting national policy guidelines. Before the devolution of the Federal Ministry of Health (2011) the last draft National Health Policy of Pakistan that appeared in 2009 clearly indicated that monitoring remains weak at all levels due to an absence of a result based culture. It stated that although HMIS was functional but due to compromised data, quality use of information for decision making was discretely being

practiced.

The Harvard study (2007) commissioned in some districts of Pakistan showed that improvements can be achieved in a decentralized system characterized by a broader scope for decision making, better capacity, and greater accountability of officials to local authority (19). The devolution can take stock of similar evidence at this crossroad as the provinces are now fully empowered under a democratic government to devise their province specific policy and strategic framework and make policy decisions. This paper makes a case for the provinces to fulfill the legal requirement of employing evidence-based decision making. This is a high time for the provinces to inculcate a culture of transparency and evidence-based decision making. The lessons learned at the Federal level can be utilized at the Provincial level at this very early stage offer new development.

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