Assessment of Use of UP Health Dashboard by District Officials in High Priority and Non-High Priority Districts of Uttar Pradesh

By

Gopal Swarup Bhatnagar

Dissertation submitted in partial fulfillment of the requirements of the degree

MBA Hospital and Health Management

Academic year, 2017-2019

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This is to certify that Gopal Swarup Bhatnagar, student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at IHAT from 04/02/2019 to 04/05/2019.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.
The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.

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In recognition of having successfully completed his Internship in the department of

Monitoring & Evaluation

And has successfully completed his Project on

ASSESSMENT OF USE OF UP HEALTH DASHBOARD BY DISTRICT OFFICIALS IN HIGH PRIORITY & NON HIGH PRIORITY DISTRICTS OF UTTAR PRADESH

4th Feb 2019 - 4th May 2019

At

India Health Action Trust

He comes across as a committed, sincere & diligent person who has a strong drive and zeal for learning

We wish him all the best for future endeavors

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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled 'Assessment of use of UP Health Dashboard by district officials in high priority and Non high priority districts of Uttar Pradesh' and submitted by Gopal Swarup Bhatnagar Enrollment No 568 under the supervision of Dr. Monika Choudhary for award of MBA in Hospital and Health Management of the University carried out during the period from 04/02/2019 to 04/05/2019 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.

Gopal VB

Signature

Acknowledgement

The success Of this report and final outcome of the project needed a lot of support, guidance and assistance from many people and I am extremely privileged to get this all in the completion of my project. All that I have done is only due to such guidance and assistance and I would not forget to thank them.

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Dr. Gopal Swarup Bhatnagar

(The IHMR University, Jaipur)

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Abbreviations

HPD – High Priority District

Non HPD – Non High Priority District

UP Health dashboard – Uttar Pradesh Health dashboard

ASHA -Accredited Social Health Care Activist

ANM – Auxiliary Mid Nurse

CMO-Chief Medical Officer

CHC- Community Health Center

HMIS – Health Management Information System

UPHMIS – Uttar Pradesh Health Management Information System

MCH- Maternal and Child Health

MOIC-Medical Officer In Charge

ARO – Assistant Research Officer

ACMO – Assistant Chief Medical Officer

DPM – District Program Manager

DMPA – Depot Medroxy Progesterone Acetate

HIV – Human Immunodeficiency Virus

BPM – Block Program Manager

MCTS Operator – Mother And Child Tracking System Operator

NGO- Non Governmental Organization

PHC - Primary Healthcare Center

RCH- Reproductive and Child Health

WHO- World Health Organization

India Health Action Trust

Vision

“Equity and quality in public health and development.”

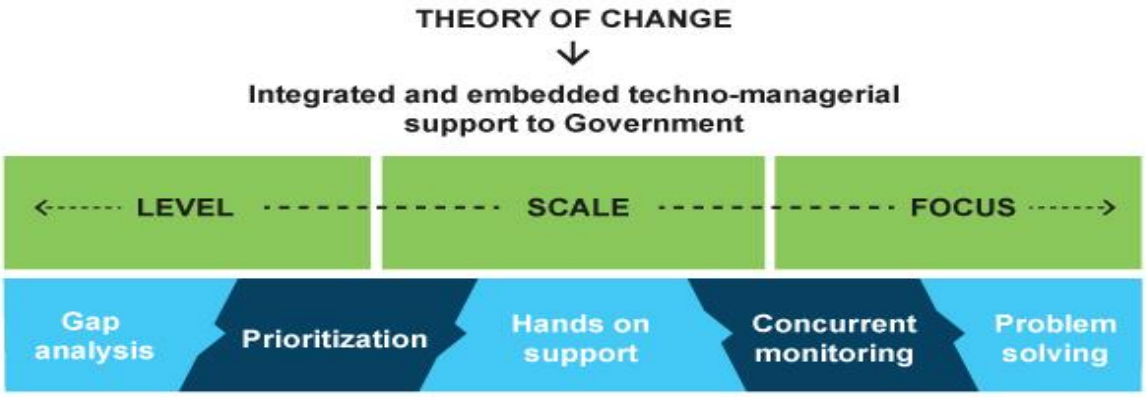
About IHAT (UPTSU)

India Health Action Trust (Uttar Pradesh Technical Support Unit) was constituted in 2003 by the trust deed for the wellbeing of deprive communities, their health status irrespective of caste, creed and religion. Ihat is a sister concern of University of Manitoba.

The mission is to improvise public health status and develop policies using evidence based decisions. The main Focus areas are RMNCH+A, HIV/AIDS, Family Planning, Nutrition, Pneumonia and Diarrhea.(1) The main focus areas are 25 High Priority Districts (HPD) which also include the aspirational districts of Uttar Pradesh.

Technical Support:

IHAT believes in Theory of Change to guide its support to Government for improvisation of health status. Assessment is done by reviewing the process of the program, its outputs and finally outcomes. A continuous monitoring of all strategies implemented and its evaluation at every step helps the health Program Managers to take quality decisions. This also helps in ruling out gaps and there analysis for further rectification.



UP Health DashBoard

Health information system is an important aspects which helps in making the health system run smoothly. The data collected helps in making evidence based decisions which thereby helps in improvisation of public health standards along with the tracking of the movement of strategies implemented (2). UP Health Dashboard data is about health service status to the beneficiaries and its outcomes in return. Health program Managers need to assess data to make new strategies and plans and thus to make decisions accordingly. The data use helps in priority setting, annual health planning and budgeting, health resource allocation and utilization, introducing or improving health services, etc.(3) Uttar Pradesh is one of the largest states in India which holds a poor status in terms of health indicators. Out of total 115 aspirational districts, 8 districts are from Uttar Pradesh. To prioritise the health status the districts in Uttar Pradesh are also segregated as High Priority Districts and Non High Priority Districts.

UP Health DashBoard is a tool Developed by IHAT (UPTSU) which gives analytical interpretation of various indicators using data from UPHMIS portal. It provides an insight about the performance of 75 district and also shows there ranking monthly ,quarterly and annually.
It provides us with the facility to compare the performance of a district with the best performing district of Uttar Pradesh. UP Health Dashboard also permits the comparison of data for a given district across two time periods.
Since it has been the part of Health system in Up so it is very necessary to support and increase the usage of health dashboard among all the 75 districts and also to rule out the reasons for poor usage of the portal if any so as to improvise and resolve the issues while using it.

Use Of UP Health Dash Board

1) Review of rank and composite Index:

Rank is measured using the composite index on the basis of 14 Ranking Indicators (12+2) in 80% weightage is given to outcome and20% weightage is given to data quality indicators. The composite Index depends on performance of other districts too and thus focus on every individual indicator is necessary.

2) Identification of low performing indicators:

Identification of low performing indicators is the primary focus and these indicators can be different for different districts(4). A district with good rank no necessarily be good in all the ranking indicators and similarly poorest ranking indicators might be good in some indicators too.

UP health Dashboard gives us the option of comparing our district performance with the best performing district over all as well as in each indicator too. It also shows the yearly performance of the district and even the blocks too. The color of the table signifies performance in comparison to best performing district which ranges from dark red (lowest range) to dark green (highest range). So, a darker shade of green is better than lighter shade of green or any shade of red and darker shade of red is poor than lighter shade of red or any shade of green.

Similarly all the blocks of facility might not be poor performing in the poor performing indicators. Prioritization of low performing blocks helps to improvise the focus and make action plans accordingly and thus improvement of focused block or facility will improve the ranking.

3) Track the trend of district and block over the period

Monitoring and tracking of progress of indicators over the months make understand the impact of intervention/action in the low performing indicator and low performing geography. New plan can develop for the indicators and geography which are not improving.

4) Gap Analysis:

The performance of the block is depending on several factors like, trained HR, resource availability (drug, infrastructure, equipment etc.), service quality etc. Different blocks can have a different reason for low performance. Gap analysis thus helps in finding the major loop holes which hinder the performance of give block/facility. Action plans are made accordingly as per the gaps identified which are only focused to improve the performance.

Literature Review

1) Effective role of public sector monitoring and evaluation in promoting good governance in Uganda : suggested that data use enhances the quality of decisions made ,their accountability, organizational learning and promotes good governance. Data use should be properly channelized and institunalized and hence should be used in planning and implementation process.

2) Study on Big data in Public health, telemedicine and health care suggests that big data use improves quality of treatment. It reduce the probability of adverse effects of policies made, less medical errors, cross-linkage of health care providers and professionals and intensification of research networks

3) The nature and use of Indicators by WHO suggested that the effect of decisions made as per the indicators depends upon the type of indicator it is. For example a negative or positive indicator have different effects on program's progress. So data gathered on it should be use collectively so as to make a prompt effect.

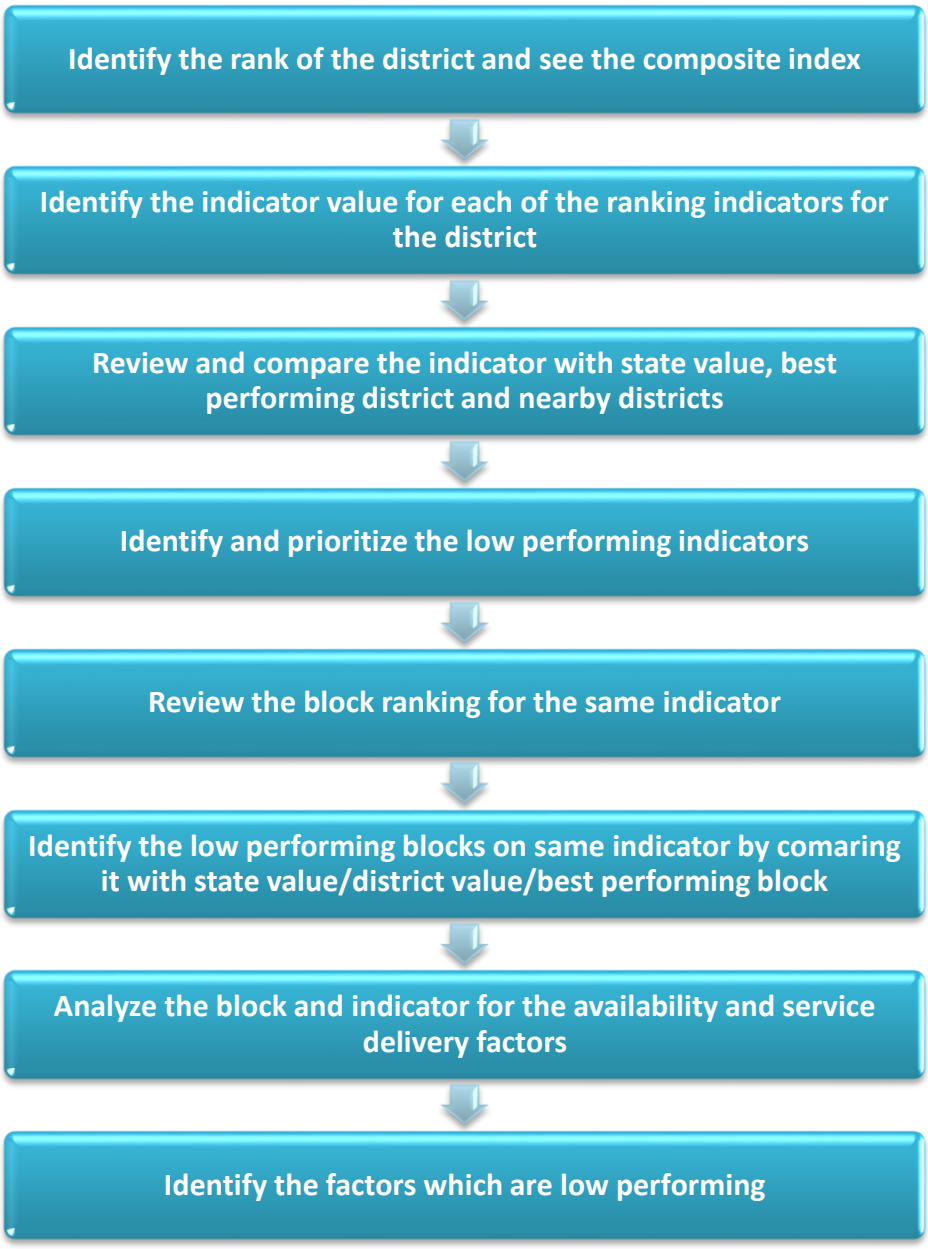
Rationale

Data quality is a major aspect which helps us to assess the output of health care delivery system qualitatively and quantitatively and is continuous process and hence the quality of data is to be maintained. Data has the potential to be very helpful in healthcare, it is not always organized or managed properly, making it difficult to understand required data management and analysis.Up Health Dashboard helps us to assess the performance of 75 districts of uttar Pradesh on the basis of health indicators. Proper use of dashboard is an important aspect because it not only tell about the current status but also helps in making quality decisions. The need of this study is to rule out the reasons behind inconsistency in the use of dashboard by some districts and also to assess the extent of understanding of dashboard by district health officials.

As per the need of the hour improvisations are also needed in the too which can also be ruled out with the assessment of the replies given respondents and this will help us to rectify the loop holes if any. Even after improvements in technological solutions facilitating the collection of data and improving data analytics and visualization, actual use of data remains limited in many settings, especially at lower levels such as the district or community. Hence as per their understanding assessment is need to be made to give them training to the officials.

UP Health Dashboard has been a strong pillar in the improvement of Uttar Pradesh in terms of health indicators. Hence its utility is to be realised at all level and the usage should improve the quality of decisions in terms all possible indicators.

Process of how to review District and Block ranking



District and Block ranking indicators shown on UP Health dashboard (Table 1)

Domain	Indicator	Level of ranking
Antenatal	**% of pregnant women received 4 or more ANC against estimated PW***	**Both**
Antenatal	**% of pregnant women tested for Hb for 4 or more times against estimated PW***	**Both**
Antenatal	**% of pregnant women received 4 or more ANC and tested for Hb against estimated PW***	**Both**
Delivery care	**% of pregnant women delivered in institution against estimated delivery***	**Both**
Delivery care	**% of C-section delivery against reported delivery (70% weightage to CHC and 30% to DH)**	**District ranking**
Delivery care	**Still birth ratio* per 1000 live birth**	**Both**
Post natal care	**% of women receiving postpartum check within 48 hour of home delivery against reported delivery (Home +institutional)***	**Both**
Immunization	**Ratio of Pentavalent 3 to BCG**	**Both**
Immunization	**% of children received full immunization (BCG, Penta 1, 2, 3, Measles)***	**Both**
Family planning	**% of eligible couple accepted limiting method (Minilap, Lap, PPS, PPAS, NSV)**	**Both**
Family planning	**% of eligible couple accepted spacing method (IUCD, PPIUCD, 4th dose DMPA)**	**both**

Communicable disease	**Total case notification rate of TB against expected TB cases**	**District ranking**
Communicable disease	**% of PW screened for HIV against estimated pregnancy**	**Both**
Fund utilization	**Per ASHA expenditure of ASHA incentive fund***	**Both**
Completeness	**% of units reported non blank value (including zero) for the identified indicators of ranking**	**Both**
Consistency	**% of units reported outlier for the identified indicators of ranking**	**Both**
Availability	**Availability of ASHA against total rural population**	**Block ranking**
Availability	**Availability of DP (L2+L3) against estimated delivery**	**Block ranking**
Availability	**Availability of SBA trained staff nurse and ANM against estimated del**	**Block ranking**

Assessment Of Use Of UP Health Dashboard By District Level Health Officers In High Priority Districts And Non High Priority Districts Of Uttar Pradesh

Research questions

i.) To what extent the UP Health Dashboard is used by district level health officers and its accountability in making decisions in HPD and Non HPD districts?

ii.) What are the lessons learnt to improve the data use by Health program managers?

Research Objectives

i.) To assess the use of UP Health Dashboard by District level health officers in making decisions in HPD and Non HPD districts.

ii.) To assess the utility of data needed by health program managers and lessons learnt from the analysis.

Research design

Study area: 18 Districts (9 HPD and (9Non HPD)

Study design: Cross- Sectional

Sample Size: 60 (Including both HPD and Non HPD)

Data collection method: Primary and Secondary

Questionnaire: Structure Closed ended questionnaire

Primary data: Interview was made with the help of a questionnaire consisting of close ended questions to assess the knowledge of health program managers about UP Health Dashboard, its utility to them and what steps should be taken to increase its use. Interview was conducted to 60 respondents (30 from HPD and 30 from Non HPD)

Secondary Data: Usage of UP health dashboard login frequency in 75 Districts of UP and thus selecting the HPD and Non HPD. Total 18 districts were selected together in HPD and Non HPD and

Selection of Districts on basis of their last 3 Months login frequency (Table 2)

District	Type of district	# of times districts used dashboard in a month			# of months districts doesn't use dashboard in last 3 months (Total time >1 min)	Classification
		Jan-19	Feb-19	Mar-19		
Amethi	Non HPD	7	12	8	0	Consistent User
Amroha	Non HPD	0	0	0	3	Poorest
Bahraich	HPD	6	11	6	0	Consistent User
Barabanki	HPD	10	10	5	0	Consistent User
Etah	HPD	2	3	0	1	Promosing
Etawah	Non HPD	0	0	0	3	Poorest
Fatehpur	Non HPD	2	7	1	0	Consistent User
Hathras	Non HPD	0	0	0	3	Poorest
Kanpur Dehat	Non HPD	0	0	0	3	Poorest
Kushinagar	Non HPD	0	0	0	3	Poorest
Lucknow	Non HPD	6	4	3	0	Consistent User
Pilibhit	HPD	0	0	5	2	Low in use
Rampur	HPD	1	2	4	0	Consistent User
Sant Kabir Nagar	HPD	0	0	1	2	Low in use
Shrawasti	HPD	2	10	10	0	Consistent User
Siddharth Nagar	HPD	0	1	1	1	Promosing
Sonbhadra	HPD	6	8	2	0	Consistent User
Varanasi	Non HPD	8	13	3	0	Consistent User

Findings

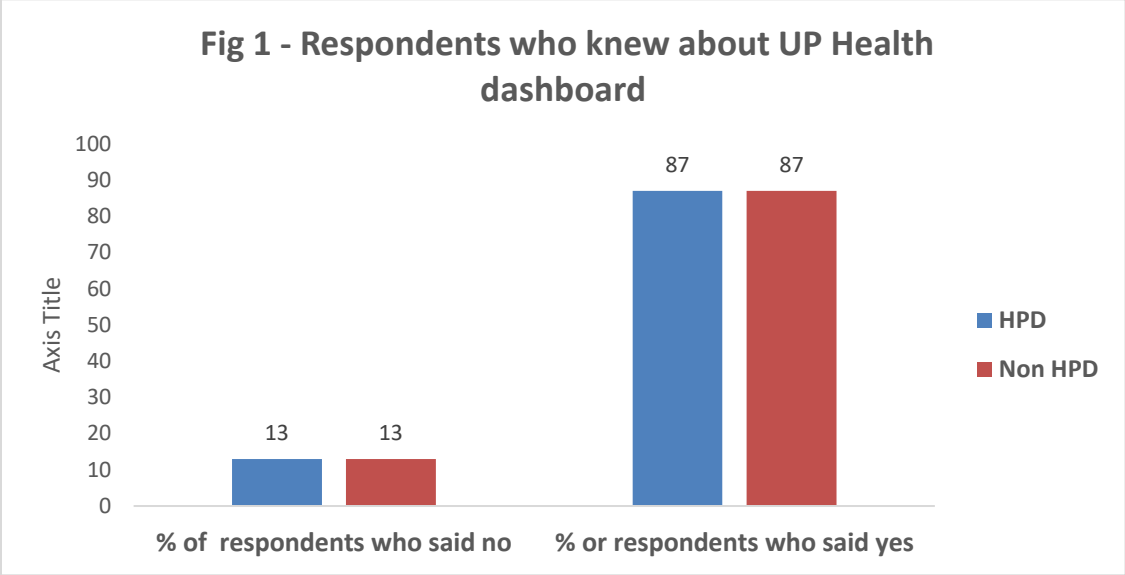


Figure 1

Figure 1 shows the comparison of respondents who have the knowledge about UP Health Dashboard between HPD and Non HPD Districts. In Both the cases the percentage of respondents who knew and who did not know was found same. Total 60 respondents were interviewed out of which 30 respondents were from HPD and Non HPD each. Hence according to Figure 1 out of 30 each in both the cases 87%(each) knew about UP Health Dashboard i.e. 26 respondents knew in HPD and Non HPD respectively.

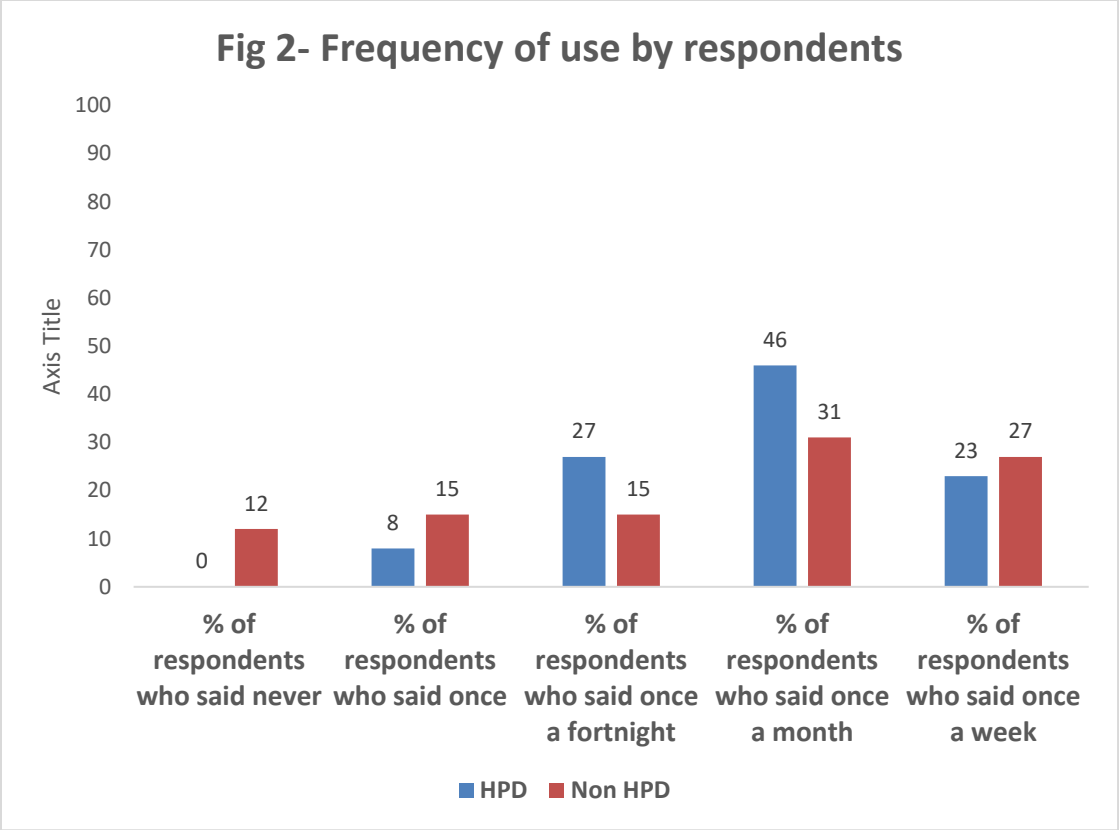


Figure 2

Figure 2 shows the comparison of frequency of use of UP Health Dashboard by respondents in HPD and Non HPD. The respondents who never used dashboard in case of Non HPD is 12% while that of HPD is zero. Usage is better in HPD.

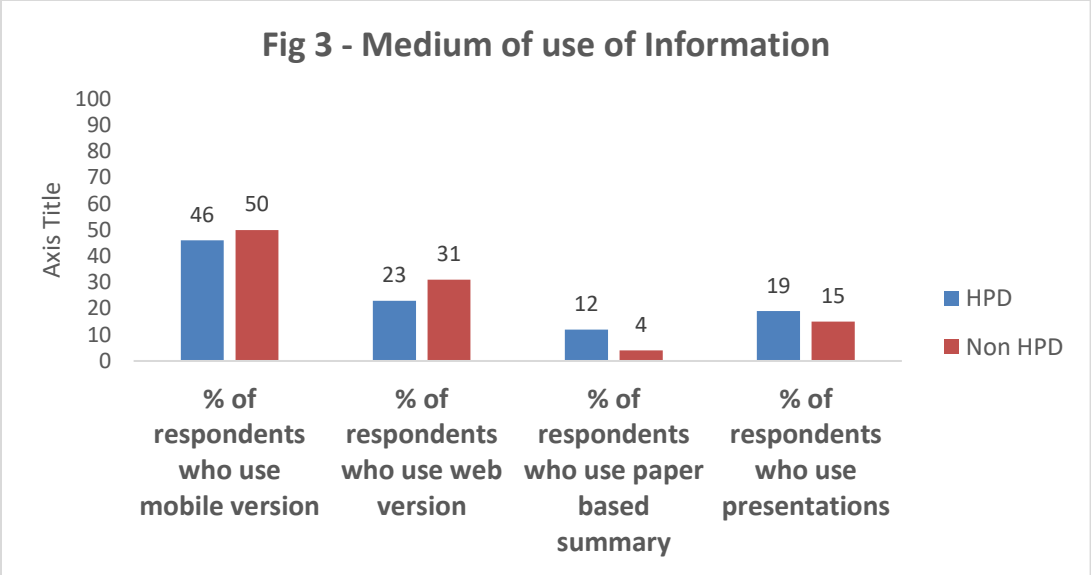


Figure 3

Figure 3 shows that the Mobile version and web based is used more in Non HPD while summary based and presentation based is used more in HPD.

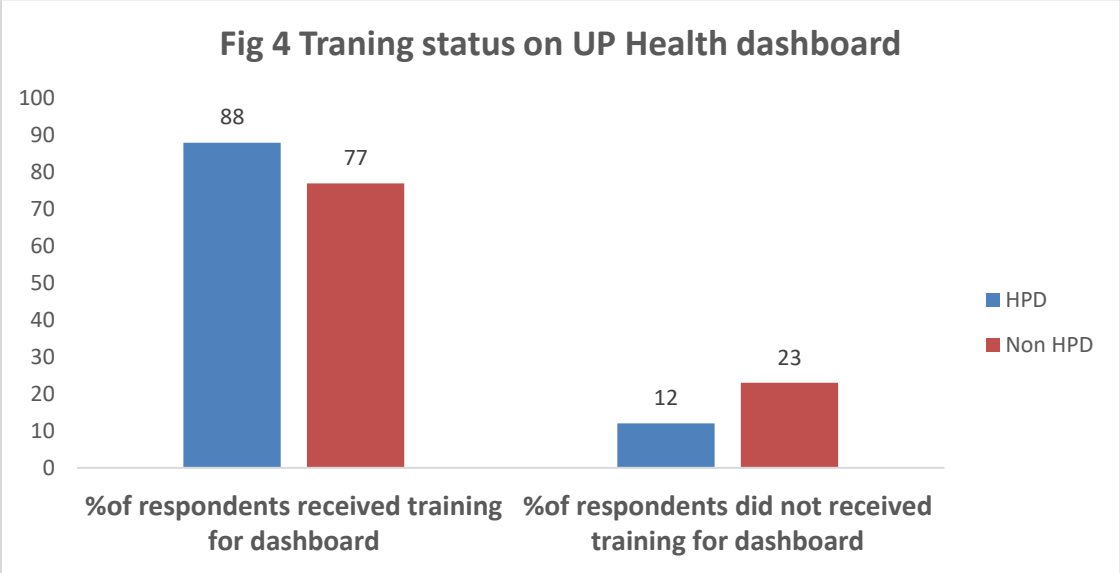


Figure 4

Figure 2 shows that the percentage of respondents who received training on UP Health Dashboard is more in HPD i.e 88% while that of Non HPD is 77%.

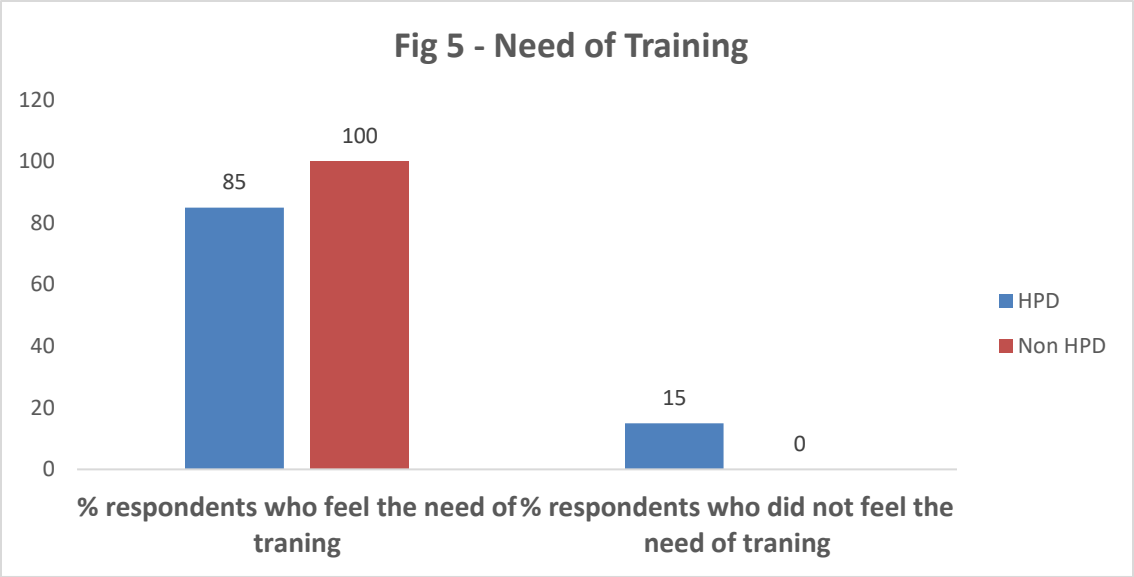


Figure 5

In Figure 5 since the training status is poor in Non HPD so 100% respondents agree that for the need of training on UP Health Dashboard as it will enhance their understanding about the portal better and they can utilize its in more effective and efficient manner.

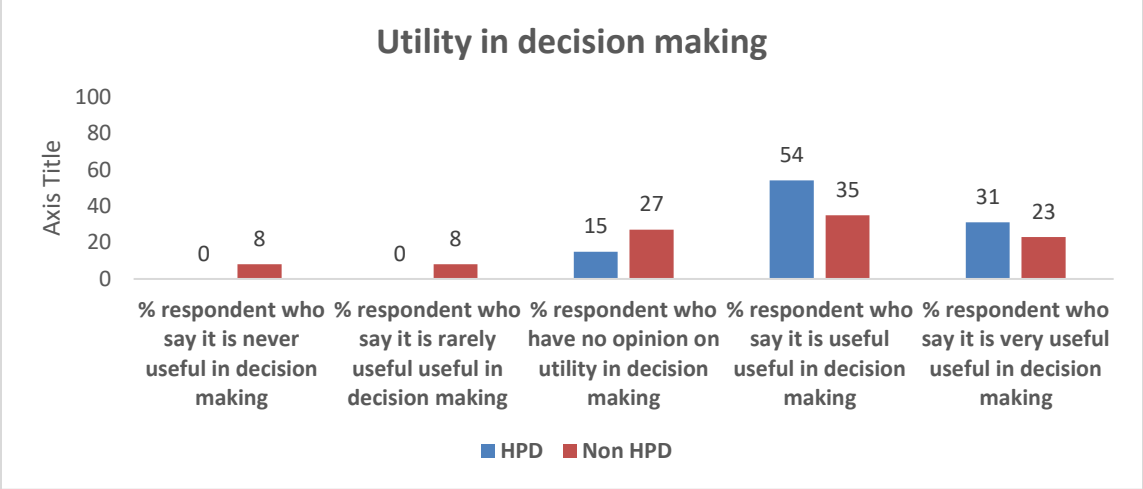


Figure 6

Figure 6 shows that HPD respondents have the opinion that UP Health dashboard is useful in making decisions while in Non HPD districts some officials say that the dashboard is of no utility in decision making.

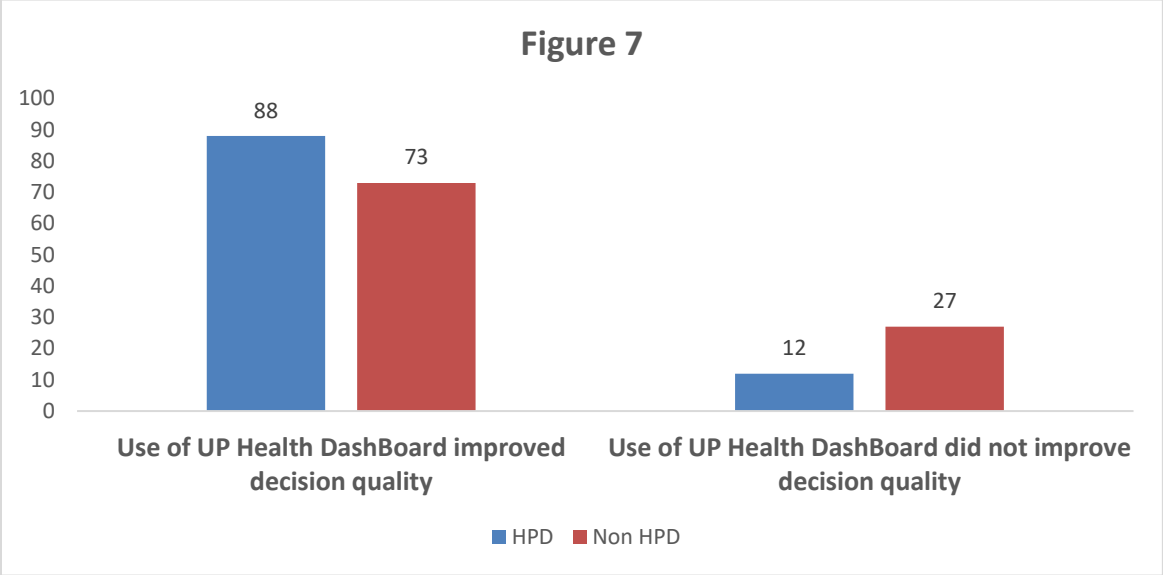


Figure 7

As the HPD respondents agree to the use of dashboard in decision making and so figure 7 also clearly shows that HPD officials accept that dashboard has helped in the improvement of decisions they make. 73% Non HPD officials did not agree that it has improved the quality of decisions made.

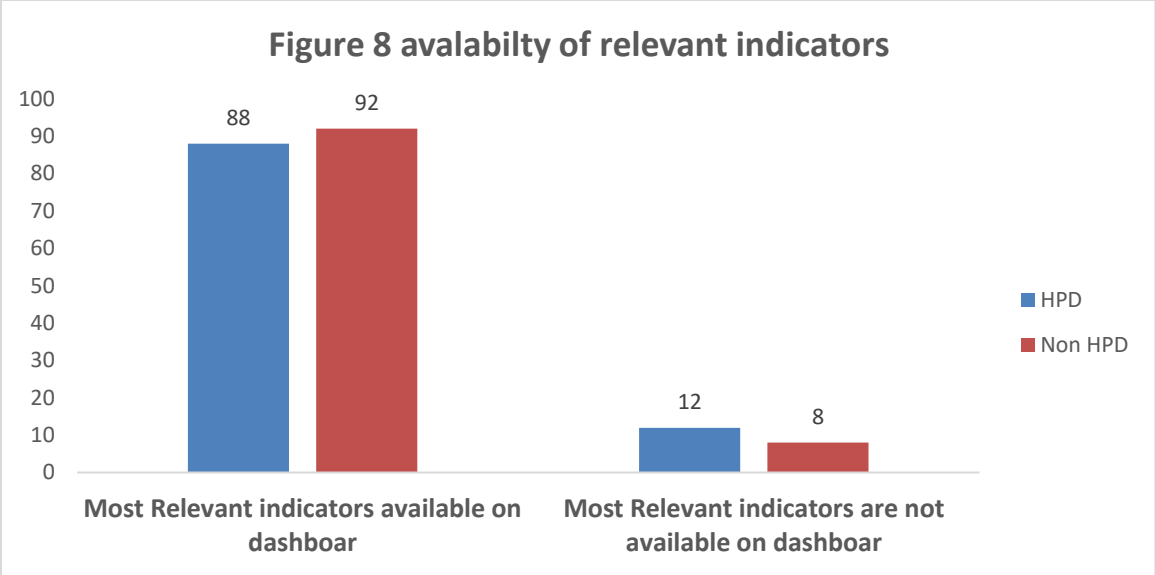


Figure 8

Figure 8 shows that Non HPD officials say that some more important indicators are missing on dashboard which are needed for decision making supporting figure 7 data too.

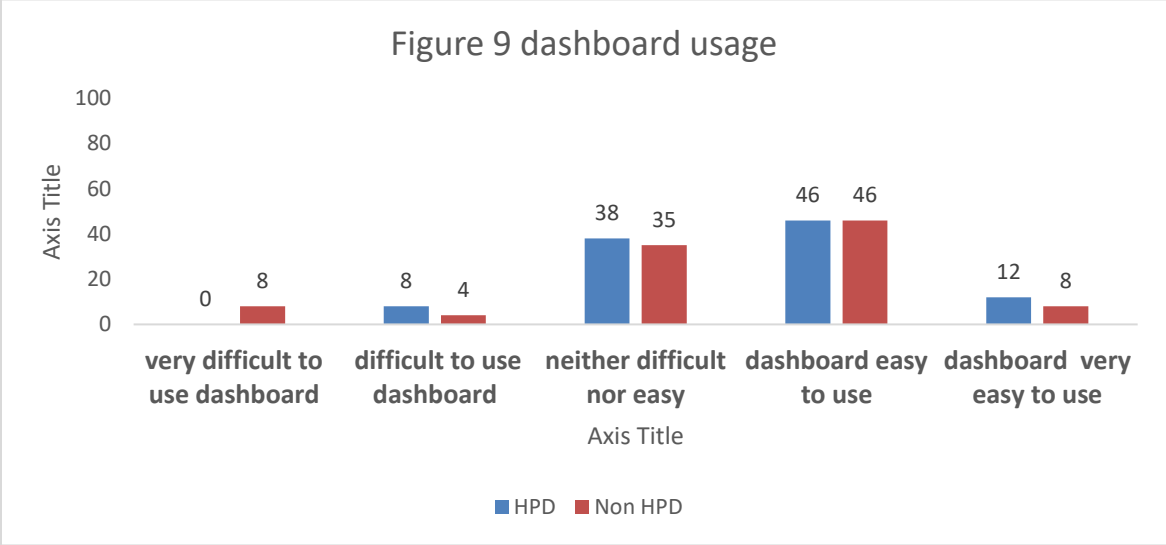


Figure 9

In figure 9 none of the respondents from HPD felt usage of UP Health dashboard to be very difficult in fact 12% felt it to be very easy which is 4% more than that of Non HPD. Non HPD officials find it easy to operate.

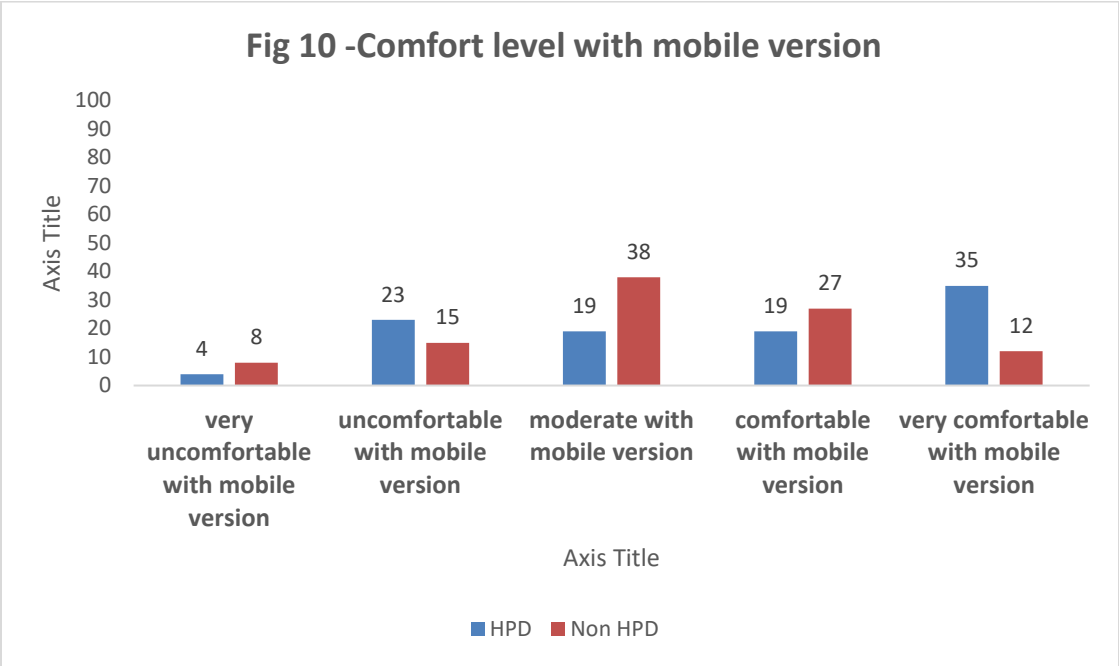


Figure 10

The above graph shows that the comfort level with mobile version is to be kept in focus as majority of respondents are not very user friendly to it in both HPD and Non HPD.

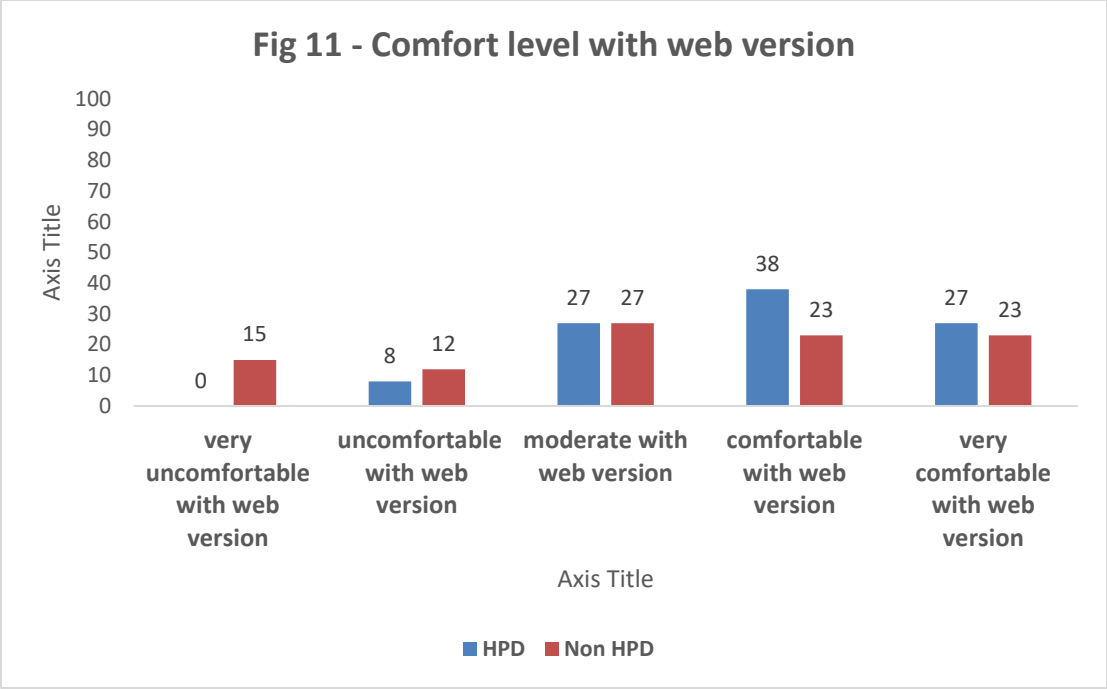
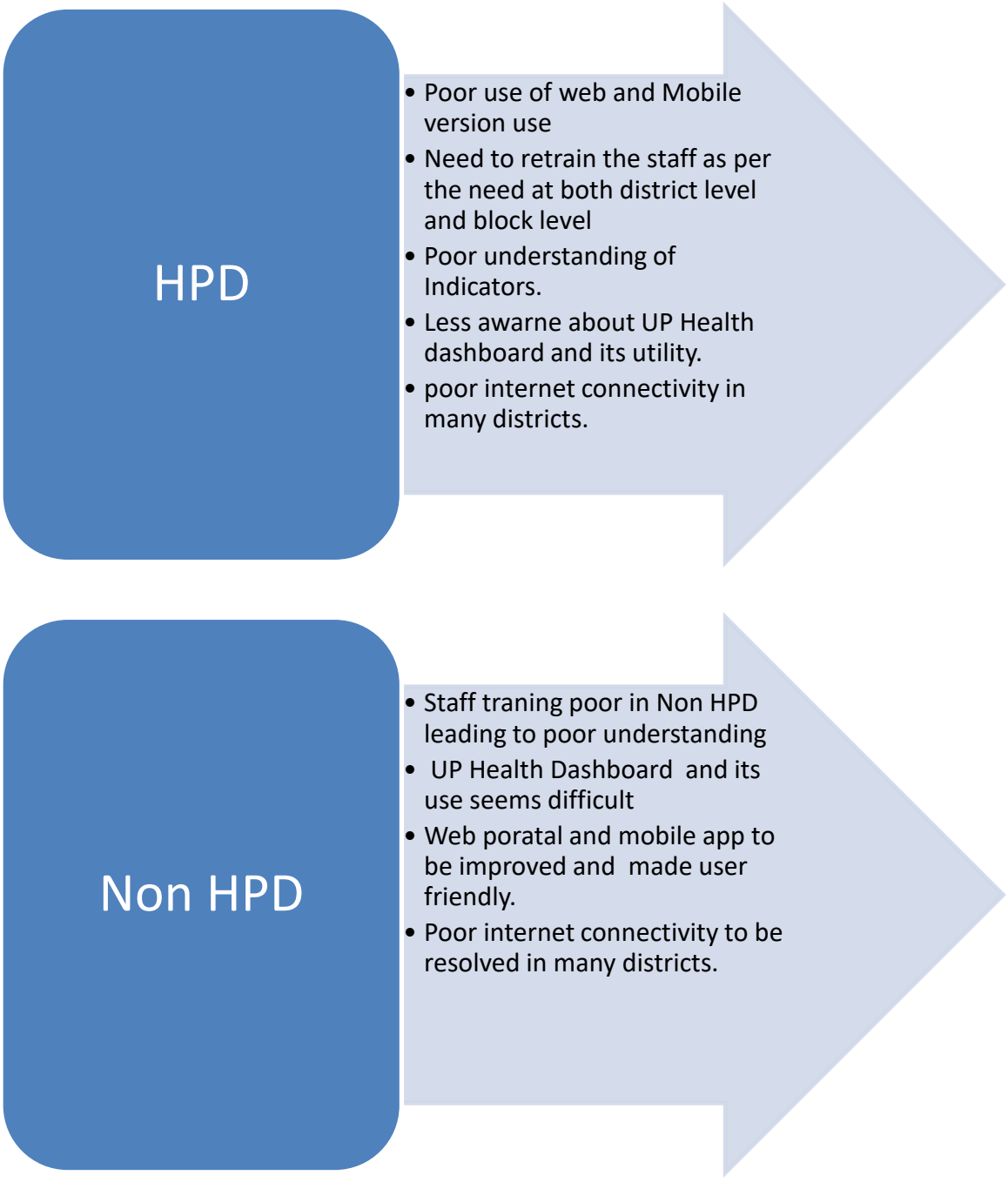


Figure 11

Web based user friendly people are more in HPD districts and very less in Non HPD. Infect 15 % respondents from Non HPD find it very difficult to work on the web version

Interpretation



Challenges

- Poor internet connectivity is one of the prominent reasons which hamper the use of UP Health Dashboard in many districts.
- Lack of understanding of data depicted on dashboard and how to interpret it to get productive outcome.
- Poor understanding of how composite score and other calculations are made.
- Lack of enough skilled staff who knows how to handle the portal and extract the data accordingly.
- Lack of training in many districts has been one of the prominent cause of declined use of portal.
- Poor or no involvement of ARO or ACMO influences the use negatively in many districts.
- In Non HPD districts poor knowledge about portal has made them negligent towards the

Suggestions

1) Web based and mobile applications to be updated so show correct results.

2) District and Block level officials should know what formulas are used and what calculations are made to show the data on dashboard.

3) Training of staff in all the districts focusing more on Non HPD to make them understand all the data shown on the portal and how to make use of it.

4) Involvement of all the officials especially ARO and ACMO so that proper follow ups can be made.

5) Dashboard to be updated in its features timely as per the need.

6) Encourage to use web based or mobile application rather than paper based summary.

Annexure- 1

Questionnaire:

Assessment Of Use Of UP Health Dashboard
By District Level Health Officials

General Details		
Name	Designation	CMO ....1 ACMO RCH .....2 DPM.....3 ARO 4
District	Date of joining on this position (dd/mmm/yyyy)	☐☐☐☐☐☐

S.no	Questions	Response	Skip
1	**Awareness and Use**		
1.1	Do you know about UP Health dashboard?	Yes No May be →	End
1.2	How frequently you use the UP health dashboard for insight, review or decision making?	Weekly.....1 Fortnightly .....2 Monthly .....3 Quarterly.....4 Once.....5 Never 6	Go to 2.1

S.no	Questions	Response	Skip
1.3	Which version of the UP health dashboard you are using more frequently ?	Mobile.....1 2 Web.....1 2 Paper based executive summary .....1 2 Presentation shared by team 1 2	
1.4	Does your district prepared an action plan based on UP health dashboard and UPHMIS/HMIS data in last 3 months?	Yes .....1 No 2	
2	**Capacity and Understanding**		
2.1	How comfortable are you in using android based applications on mobile phone?	Very uncomfortable.....1 Uncomfortable…….2 Neither comfortable nor uncomfortable……..3 Comfortable……..4 Very comfortable…….5	
2.2	How comfortable are you in using computer (laptop/desktop)?	Very uncomfortable.....1 Uncomfortable…….2 Neither comfortable nor uncomfortable……..3 Comfortable……..4 Very comfortable…….5	
2.3	Have you ever received training on UP health dashboard and its use?	Yes .....1 No 2	
2.4	Do you know, how many indicators are available in UP health dashboard? (Number)	Total number of Indicators	
2.5	Would you be able to name the indicators available in dashboard? (Write the number of indicators correctly named by the program manager)	Indicators named correctly	
2.6	Do you require any further training on process of dashboard use?	Yes 1	

S.no	Questions	Response	Skip
		No 2	
3	**Usefulness of Dashboard**		
3.1	How useful is UP Health Dashboard for you in making decisions about health programs?	Never Useful.....1 Rarely Useful.....2 Sometimes Useful.....3 Frequently Useful .....4 Always Useful 5	
3.2	Did the use of UP Health dashboard improve the quality of decisions made during review meeting?	Yes .....1 No 2	
3.3	Do you think most relevant indicators are available in dashboard?	Yes……1 No……..2	
3.4	Do you think all the features required for decision making and review are available in dashboard	Strongly disagree .....1 disagree .....2 Un-decided.....3 agree.....4 Strongly agree.....5	
3.5	Which version of dashboard is most user-friendly for data based decision making?	Mobile…….....1 Presentations……2 Web..... Paper based executive Summar……..3 others……4 Presentation developed based on dashboard.....4	
4	**Challenges and Suggestion**		
4.1	How difficult for you to use the current version of the dashboard for decision making?	Very difficult .....1 Somewhat difficult ....2 Moderate .....3 Easy 4	

S.no	Questions	Response	Skip
		Very easy 5	
4.2	What are the challenges you faced which are hindering you to use of dashboard?	Complex design .....1 2 Less relevant indicators .....1 2 Understanidng problem .....1 2 Internet issue.....1 2 Wrongly calculated indicator/ rank .....1 2 Less familiarity with mobile/ computer .....1 2 Not a priority .....1 2 Others ----------	

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