

ASSESSMENT OF DISCREPANCIES OF DELIVERY DATA IN HMIS AND KPI AT LAKHIMPUR DISTRICT OF UTTAR PRADESH

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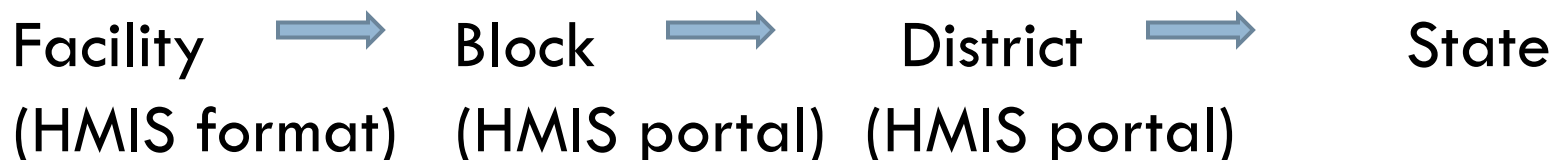
Introduction

Managers require a good quality data for evidence based decision making and future planning.

Health Management Information System

- HMIS is web based system which generate predetermined indicators across different level of facilities based on a set of registers and other source documents at facilities.
- Thus it captures the data of all the delivery points and non delivery points.

Flow of data



Key Performance Indicator (KPI)

- Generate predefined indicators across different facilities which are designated as delivery points based on different registers and document which determine the performance of facility.
- Thus it captures the data of all the delivery points.

Flow of data

Facility → Block → District → State

(KPI format)

NORMS

Population*
10 Lakh

L3 - 2

Expected Normal
Deliveries each facility
per month - 270
C-Section- 67

L2 - 18

Expected Normal
Deliveries each facility per
month- 30

L1 -30

Expected Normal delivery
each facility per month -5

ACTUAL SCENARIO

Population#
42,40,537

L3 - 2

Average Normal Deliveries
per month - 465
Average C-Section (DH) -77

L2 - 47

Average Normal deliveries
each facility per month - 67

L1 - 59

Average Normal Delivery
each facility per month - 13

- 
- Shows the need of new facility and strengthening of existing delivery points.
 - To identify the potential facilities for upgradation mapping has to be done which requires quality data is required.
 - Number of deliveries conducted in the facility shows the performance level of the delivery point.

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- HMIS can be good source of data as all the facilities are covered in it.
 - But Literature review reflected that there is low level of accuracy and completeness of data in HMIS.
 - Hence the need of assessment of data quality of deliveries in HMIS was felt.

Research Question

- Whether and to what extent there is difference in the delivery data of HMIS and KPI ?
- If there are discrepancies what may be the probable reasons?

Hypothesis

- Since KPI reports data of delivery points and HMIS report data of all facilities both should have no discrepancies.

- 1) HMIS should include all the delivery points listed in KPI.
- 2) Total number of deliveries reported in HMIS $\geq$ Total number of deliveries reported in KPI
- 3) Delivery points matched, both in HMIS and KPI should have same number of deliveries.

Objectives

- ❑ To map delivery points of Lakhimpur district according to KPI and HMIS
- ❑ To analyse the deliveries in facilities reported in HMIS and KPI from period April 2014 to March 2015 of Lakhimpur district.
- ❑ To validate the deliveries of delivery points of HMIS, KPI with Physical records.

Methodology

Study Type : Retrospective Quantitative Study

Data Source:

- Secondary data- HMIS and KPI (Period April 14 to March 15)
- Primary data- Facility delivery Register

Data collection Technique:

- Desk Review- KPI monthly report was collected from all the facilities through mail from Block Program Manager and analyzed.
HMIS data was extracted from the portal.

- Field Survey: Primary data of delivery was collected from the delivery registers of the selected facility from period April 2014 to March 2015 through a Validation proforma.

Sampling Technique and Sample Size

- Purposive sampling was done for the selection of facilities. 10 delivery points in the district were visited and data was collected.

Data Analysis

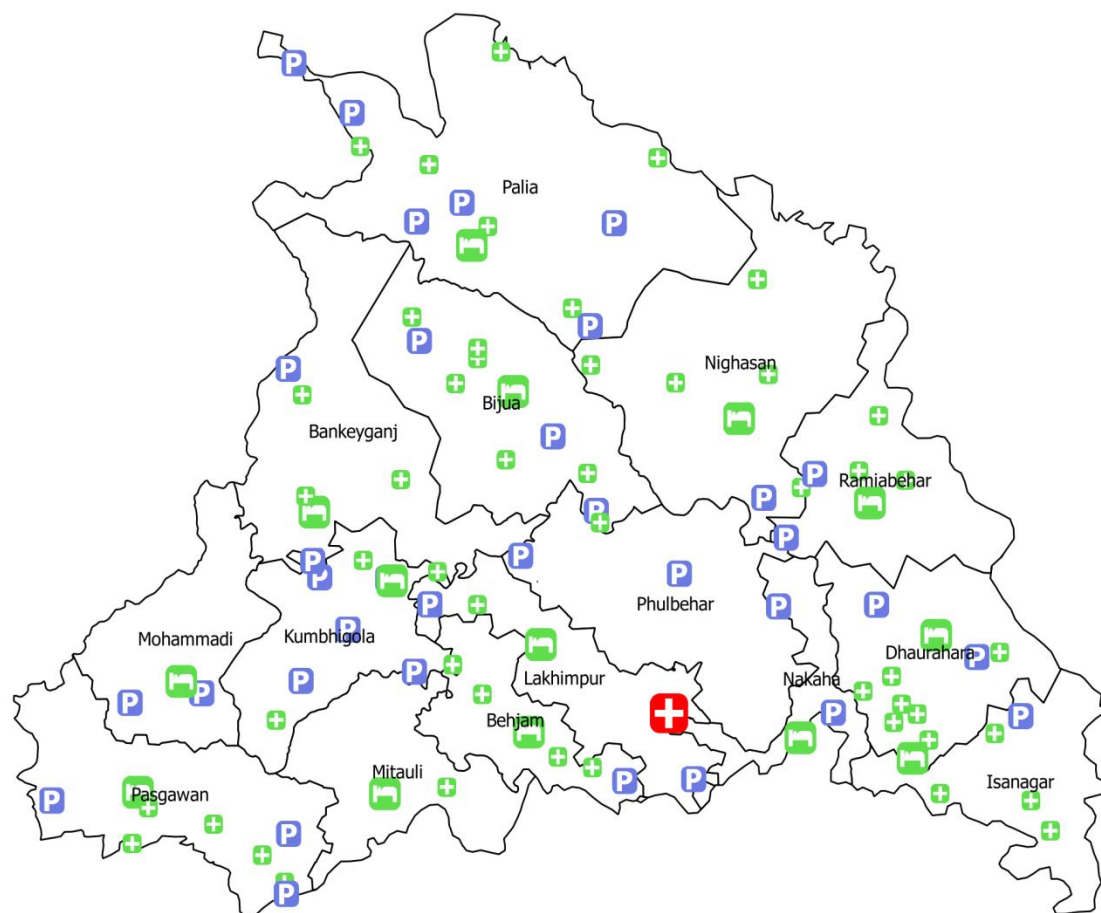
- The data collected was analyzed using Advance MS Excel

Findings

Delivery points listed in HMIS and KPI

Month	Total number of DP(KPI)	Delivery Points matched in HMIS and KPI
April 14	104	104
May 14	104	104
June 14	105	105
July 14	105	105
August 14	106	106
September 14	106	106
October 14	106	106
November 14	107	107
December 14	107	107
January 15	108	108
February 15	108	108
March 15	109	109

DELIVERY POINTS IN LAKHIMPUR DISTRICT



Legend

Delivery point town

○ default

CHC

DH

PHC

Delivery point

● default

CHC

PHC

SC

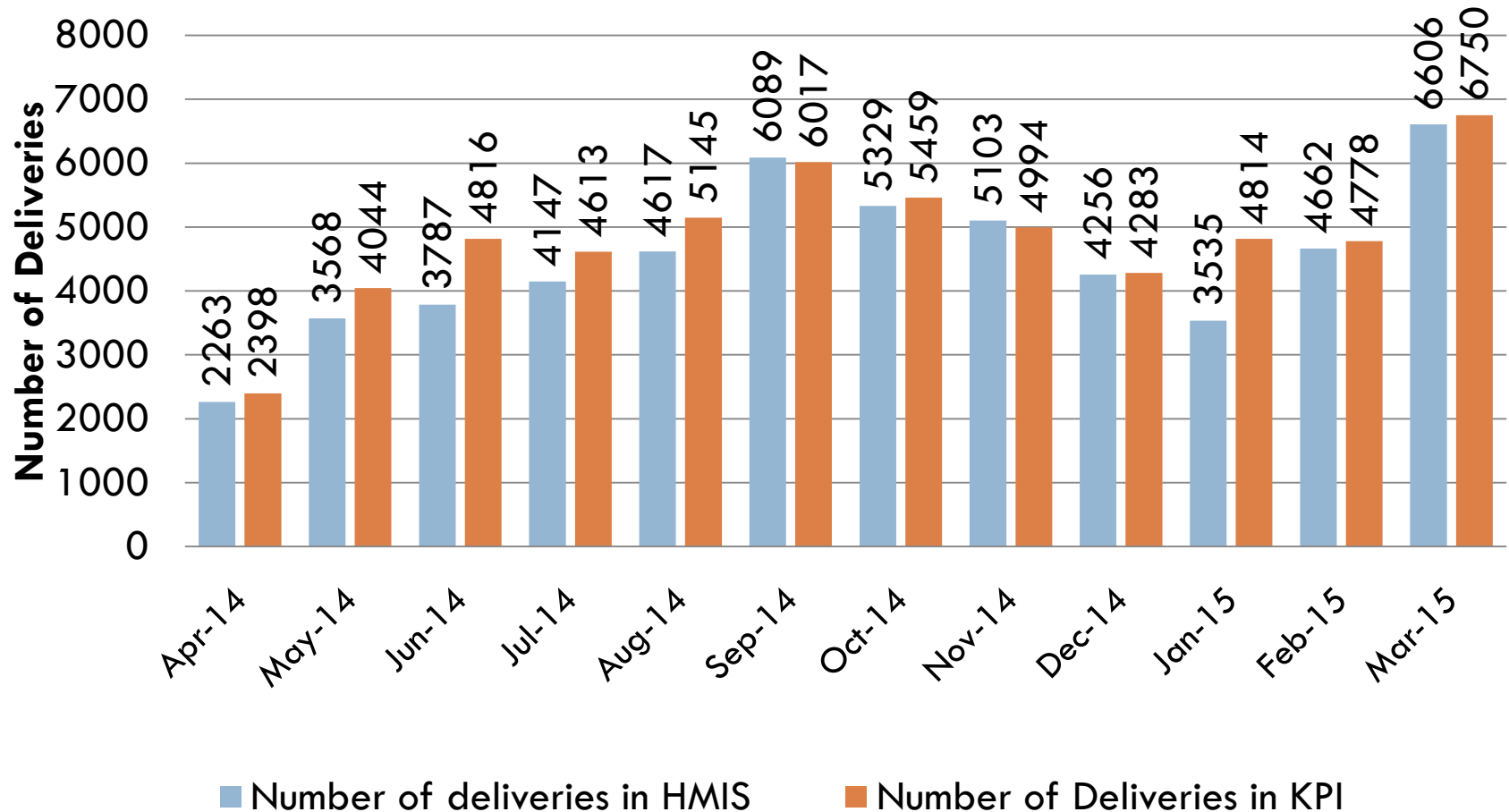
block_region



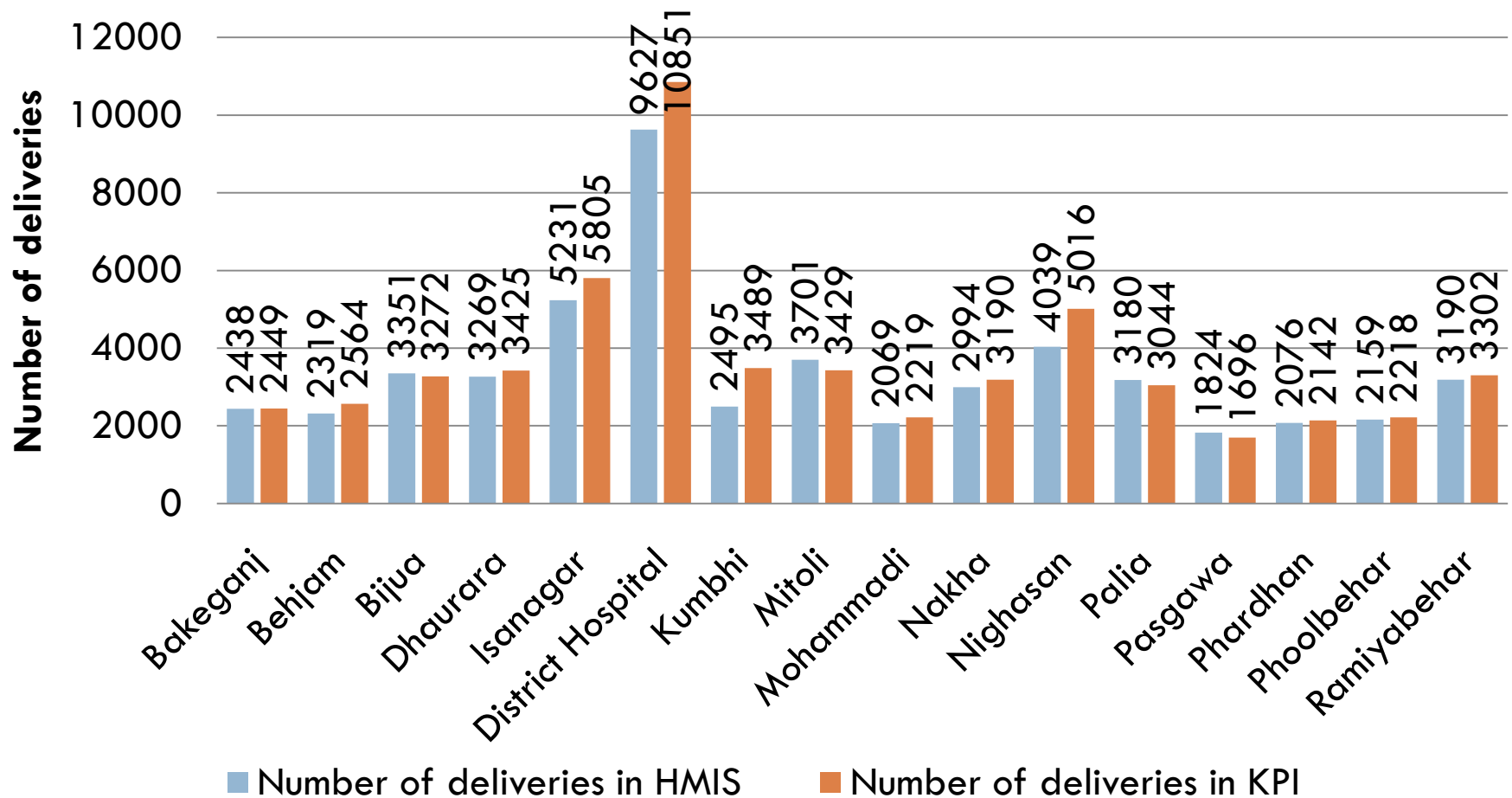
Number of deliveries in HMIS and KPI

(HMIS should be $\geq$ KPI)

Monthwise comparison of deliveries reported in HMIS and KPI



Block wise comparison of deliveries reported in HMIS and KPI

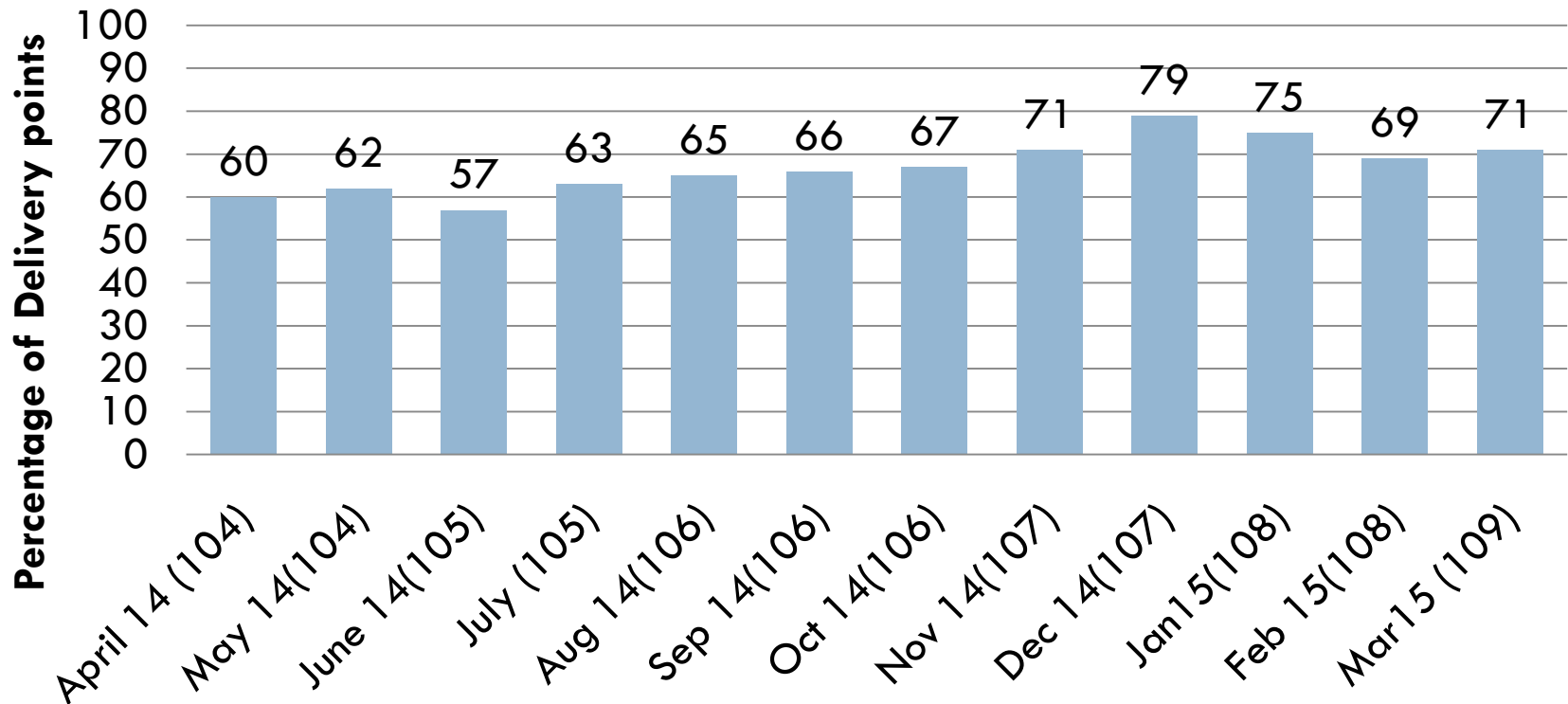


From both the graphs it is evident that :
Deliveries reported in HMIS is less than deliveries reported in KPI

Number of deliveries in HMIS and KPI among common delivery points

(Delivery points matched in HMIS and KPI should have no data discrepancies)

Percentage of DPs whose delivery data are similar in HMIS and KPI

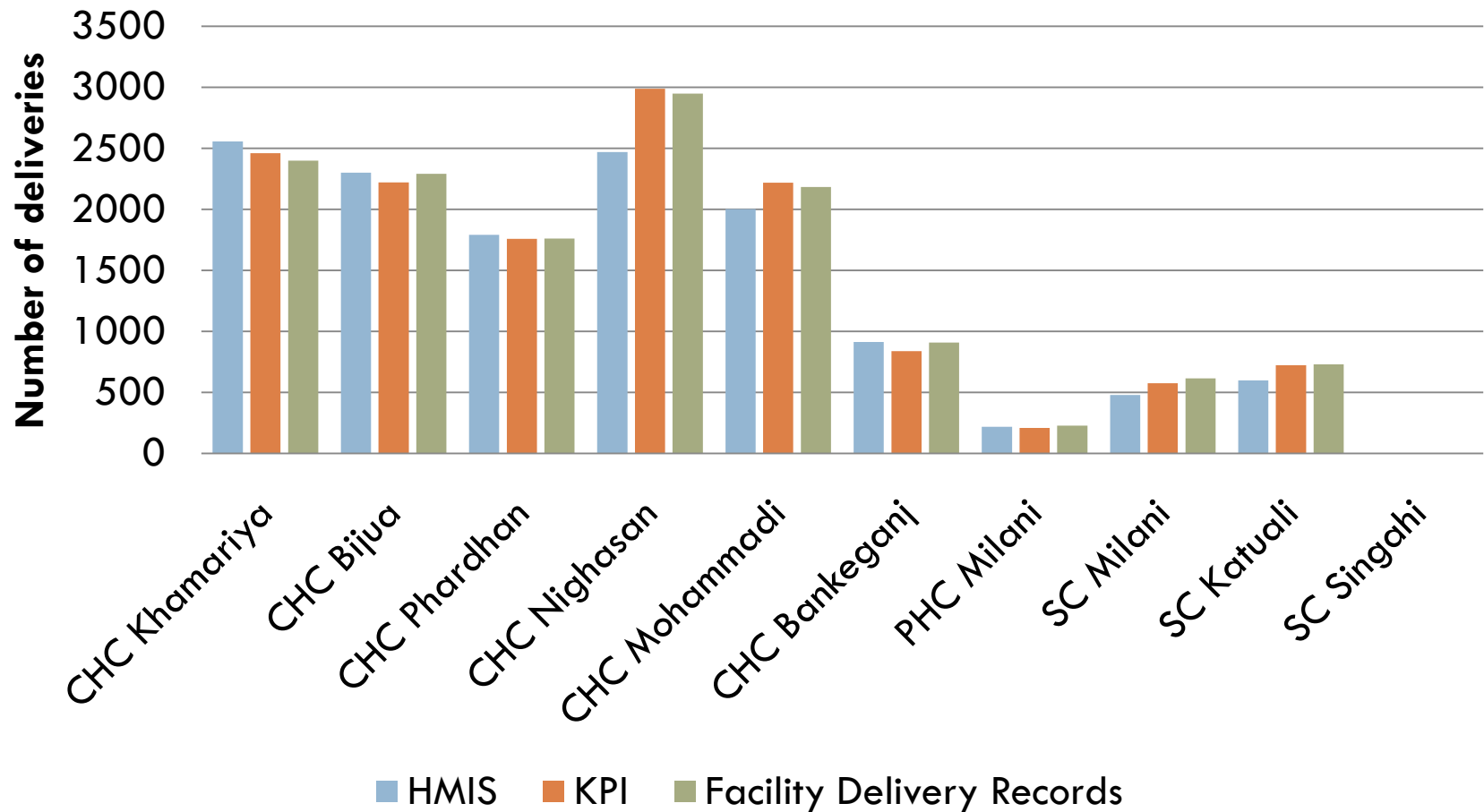


Comparison of deliveries of the delivery points common in HMIS and KPI				
Month	Total no. of deliveries in matched DP in HMIS (a)	Total no. of Deliveries as per KPI (b)	Difference (c=b-a)	% of difference (c/a%)
April 14	1797	2398	601	33
May 14	3130	4044	914	29
June 14	3171	4816	1645	52
July 14	3682	4613	931	25
August 14	3986	5145	1159	29
September 14	5395	6017	622	12
October 14	4438	5459	1021	23
November 14	4528	4994	466	10
December 14	3789	4283	494	13
January 15	3138	4814	1676	53
February 15	4202	4778	576	13
March 15	5917	6750	833	14
April 15	15456	20444	4988	32

Checking the reliability of data of the sources

- To validate the reliability of delivery data of HMIS and KPI, they were verified with facility delivery data.

Annual number of deliveries according to HMIS, KPI and Facility data



Observations

During the analysis of data some issues were observed which caused discrepancy of data

- **Missing data-** In HMIS many facility did not report the delivery data in particular month leading to difference in data. This issue was also identified in KPI but the frequency was less.

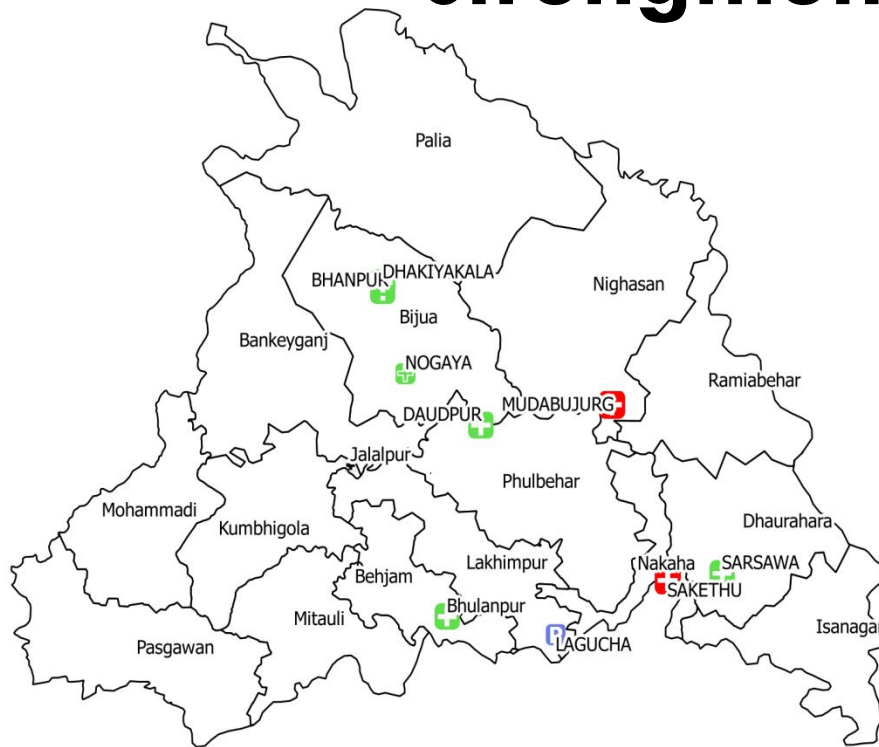
- **Under reporting and Over reporting of data-**

Under reporting in HMIS was observed due to faulty reporting from the facility whereas over reporting is due to manipulation of data by block officials to achieve the target.

- In HMIS the delivery data was compiled in a Non Delivery point where as in KPI it was compiled in Delivery point of similar names and confusion persists as both the facilities situated in same premises.

Application of the Study

Delivery Points which has to be strengthened



Legend

DP strength1

• default

⛶ PHC(0)

P PHC(1)

⛶ SC(0)

⛶ SC(1)

* SC(2)

block_region



Limitation of Study

- Due to lack of time, only 10 facilities were included for validation

Recommendation

- A validation committee should be formed which will include all the block officials at block level who will check the accuracy of data of all the reports.
- Similarly, a validation committee should be formed on district level also which including district officials who will validate the data of the blocks and will do back checks to validate the data of the reports.



Thank you