



Integrated Disease Surveillance Programme to Integrated Health Information Platform: A look through Measles Surveillance

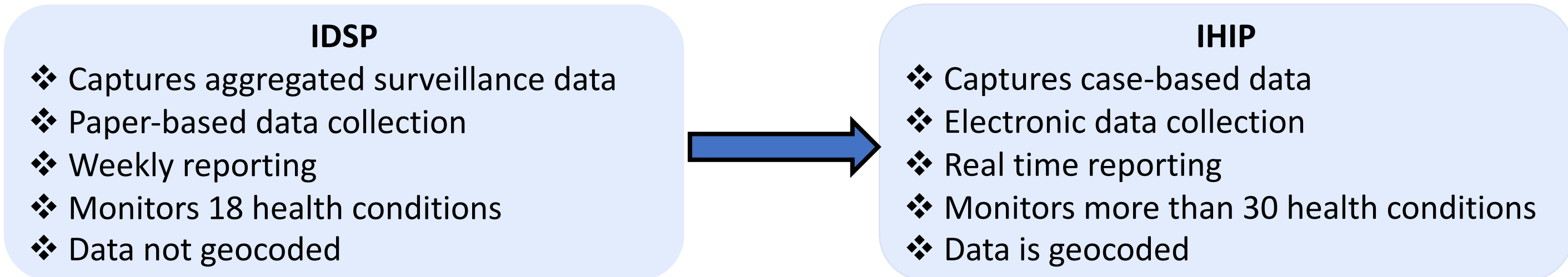
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Digital reporting better than paper-based reporting for capturing real-time measles data

Background

- Surveillance in India is implemented through Integrated Disease Surveillance program (IDSP)
- In 2018 IDSP initiated transition to Integrated Health Information Platform (IHIP)



- India resolved to eliminate measles by 2023
- Measles surveillance is carried out through IHIP and Vaccine Preventable Disease (VPD) surveillance by WHO
- Our objective was to describe IDSP-IHIP measles surveillance in context of transition and evaluate it on the selected attributes

Methodology

Study Design: Cross-sectional (Evaluation was based on updated CDC-MMWR guidelines)

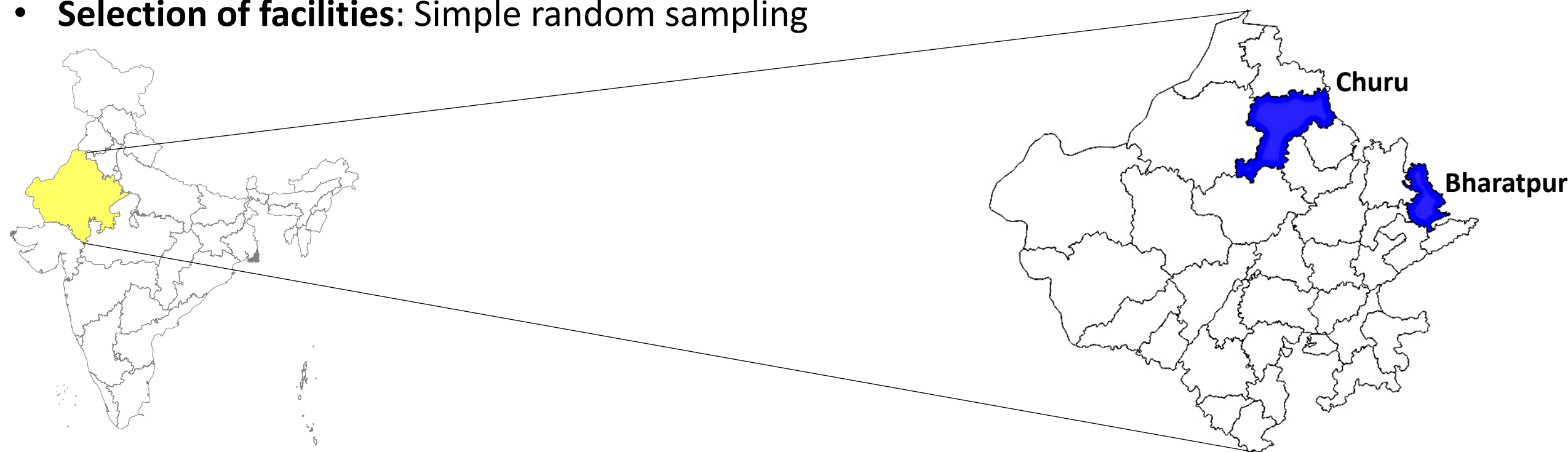
Study Setting: IDSP-IHIP surveillance units of the state (Rajasthan)

Study Period: January to June 2022

Reference Period: January to March 2022*

Sampling Method

- Selection of districts:** Purposive sampling (high and low reporting districts on IHIP)
- Selection of facilities:** Simple random sampling



Data collection:

- Interview of stakeholders (medical officers, nurses, epidemiologists, data managers) at facility, district and state level
- Review of data from IDSP portal
- Digital line list of measles cases from VPD surveillance

Results

Fig1: Flow of Data in IDSP before transition in 2018

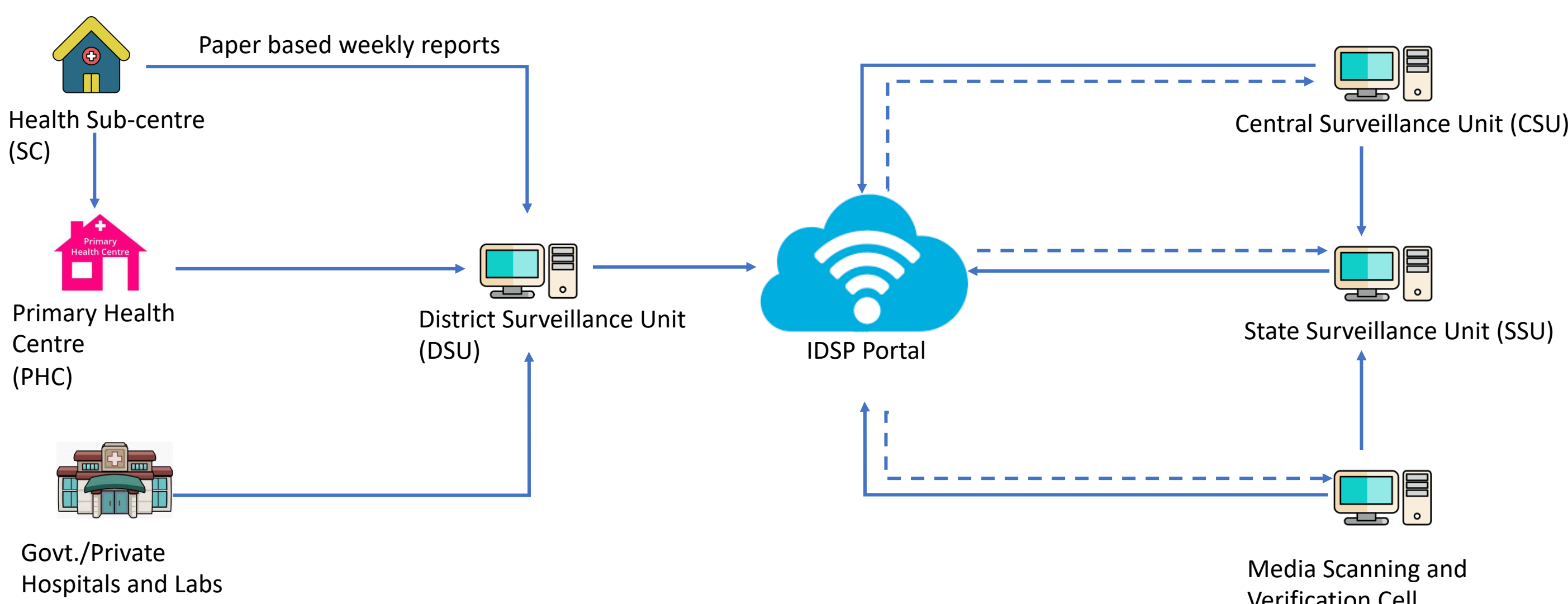


Fig 2: Flow of Data in IHIP after 2018

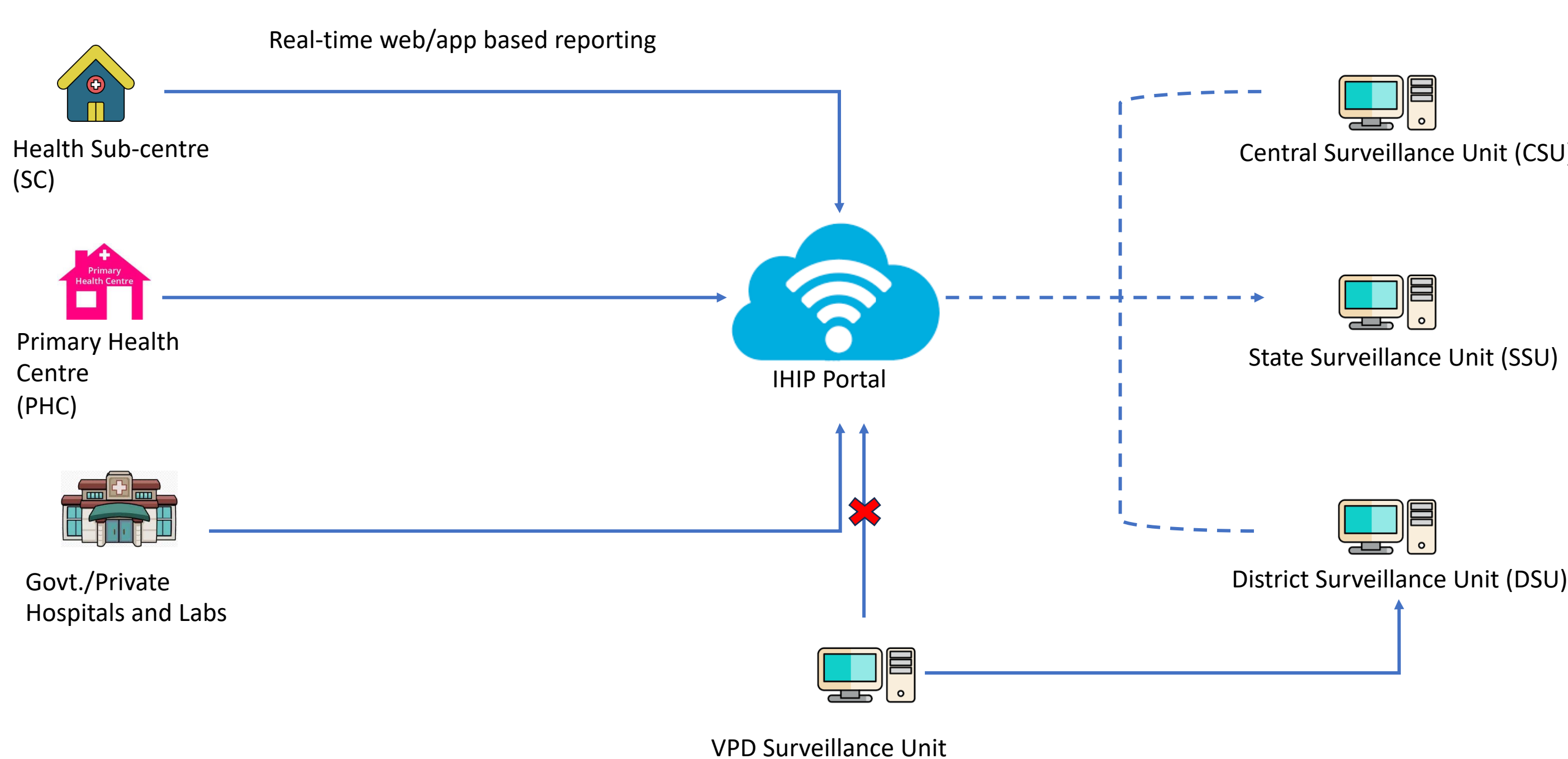


Fig 3: Overall attribute scores

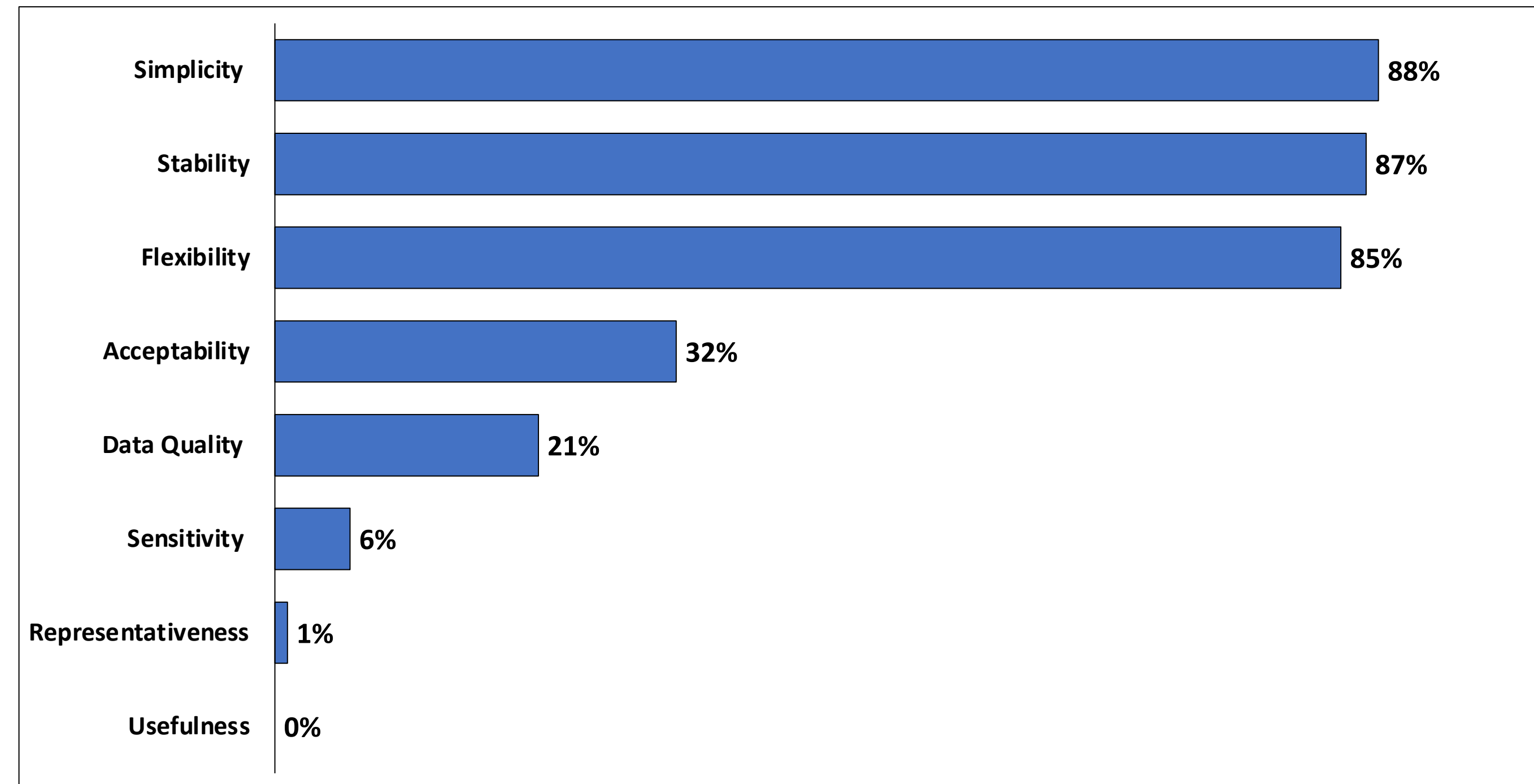


Table 1: Key indicators at district level

Attribute	Key Indicator	Churu	Bharatpur
Acceptability	Proportion of nurses who had IHIP app. installed on their phone	100%	0%
Flexibility	Number of months taken to reach the previous level of reporting	11	24
Data Quality	Reporting percentage of appropriate case forms on IHIP	52%	0%
Sensitivity	Proportion of measles cases reported in IHIP against VPD surveillance	0/2	0/3

Table 2: Key indicators at state level

Attribute	Key Indicator	Score
Simplicity	Proportions of stakeholders who agreed that IHIP is better than IDSP for measles reporting	97% (34/35)
Acceptability	Proportion of stakeholders who agreed that IDSP to IHIP transition was easy	83% (29/35)
Stability	Stakeholders not finding any issues (data syncing or malfunction) with IHIP	71% (25/35)
Representativeness	Private hospitals registered in IHIP against total facilities reporting	1% (18/1255)
Usefulness	Proportion of measles outbreaks reported on IHIP as against VPD surveillance	0% (0/36)

Conclusion

- Stakeholders preferred electronic IHIP reporting over paper based IDSP reporting
- Reporting was higher when **android based mobile app** was used
- Representativeness** of private facilities on IHIP was **poor**
- Overall **stability** was **good** but there were some issues with portal
- Sensitivity** is **poor** as new measles cases are not reported on the portal
- System** is **not useful** in detecting measles outbreaks
- No direct link between IHIP and VPD surveillance is present

Recommendations

- Establishment of clear linkage between VPD and IHIP surveillance system
- ANMs should be trained to report through IHIP app. on mobile than web based reporting
- Representativeness of private facilities should be increased by their registration on the portal

Public health action

ANMs in districts were trained in reporting of data through IHIP mobile application resulting in an increase in the reporting percentage of the low performing district

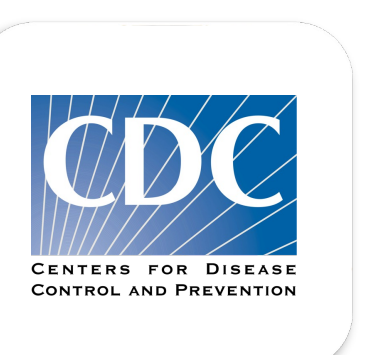


Have any questions ?

Go ahead, scan me



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Broken line indicates data access and downloading rights
Solid line indicates data feeding and entry

*For flexibility reference period: January 2021 to June 2022