

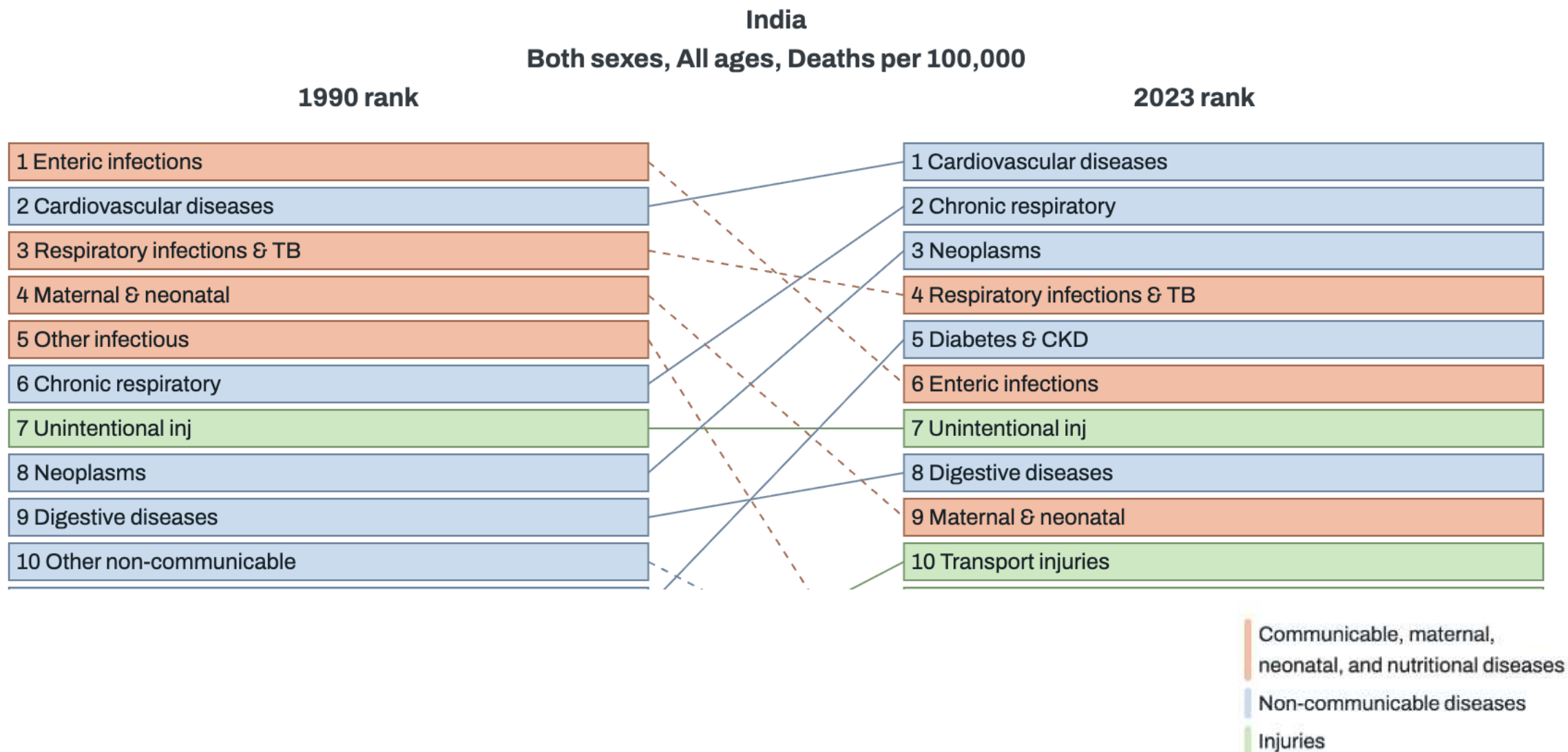
Strengthening Safe NCD Care through Quality Improvement (QI) : Closing gaps in missed follow-up and therapeutic inertia

Dr Archana Ramalingam

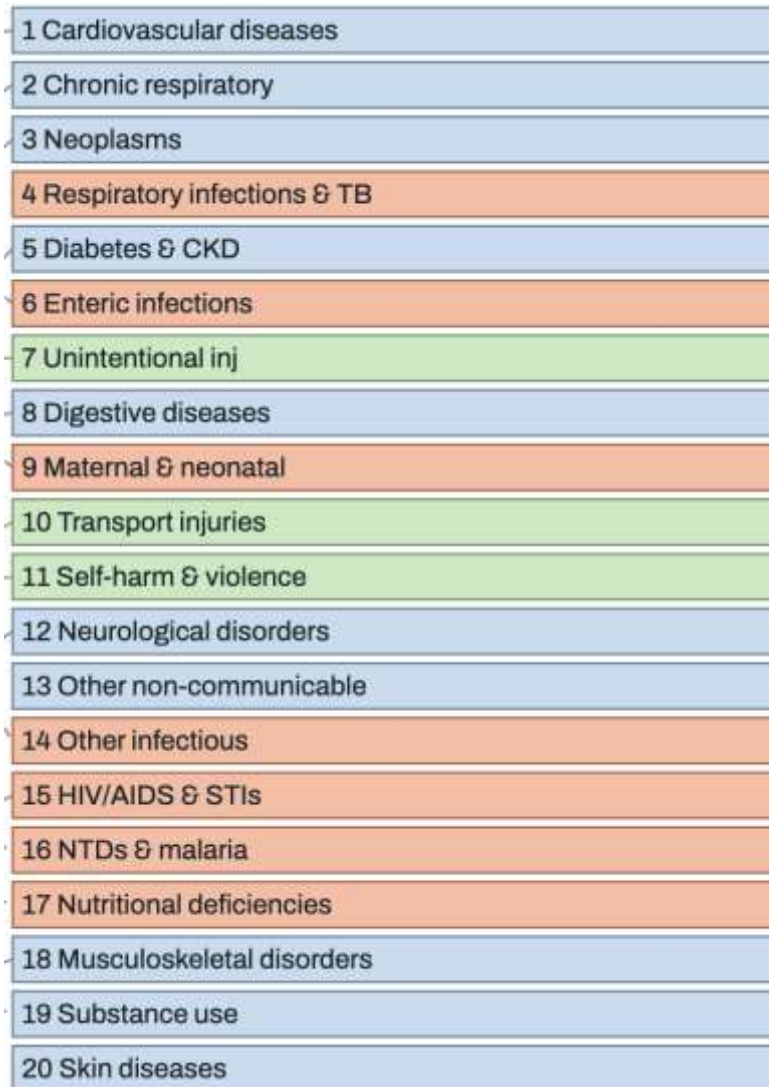
Scientist- F (Medical)

ICMR National Institute of Epidemiology,
Chennai

Cardiovascular Diseases are the #1 killer in the country



Nearly 1/3 of all deaths are due to CVDs



Cardiovascular Diseases:

31.7%

Chronic Respiratory Diseases:

12.7%

Neoplasms:

10.7%

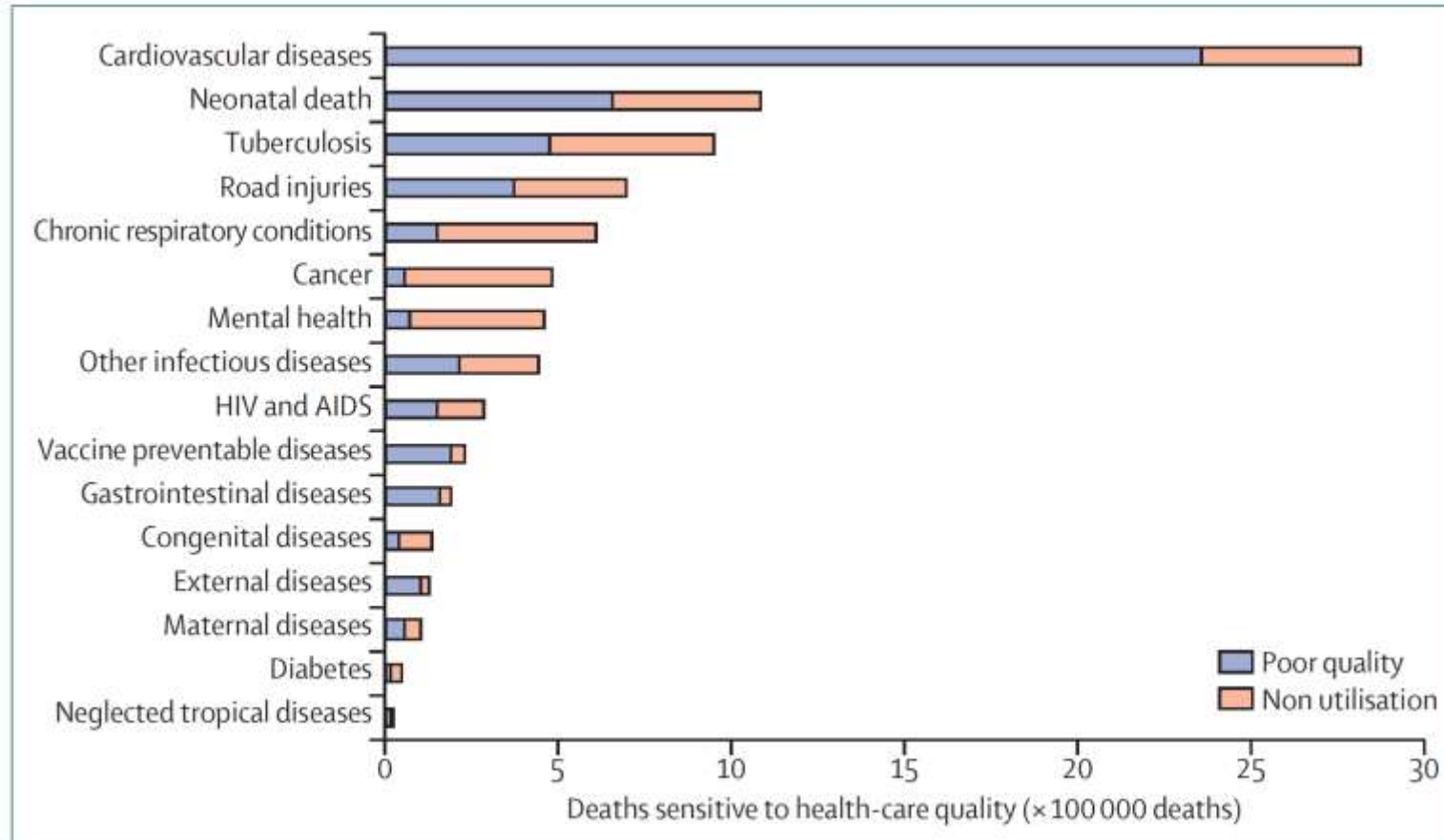
Diabetes and CKD:

7.3%

62.4% of all deaths are due to
4 major NCDs

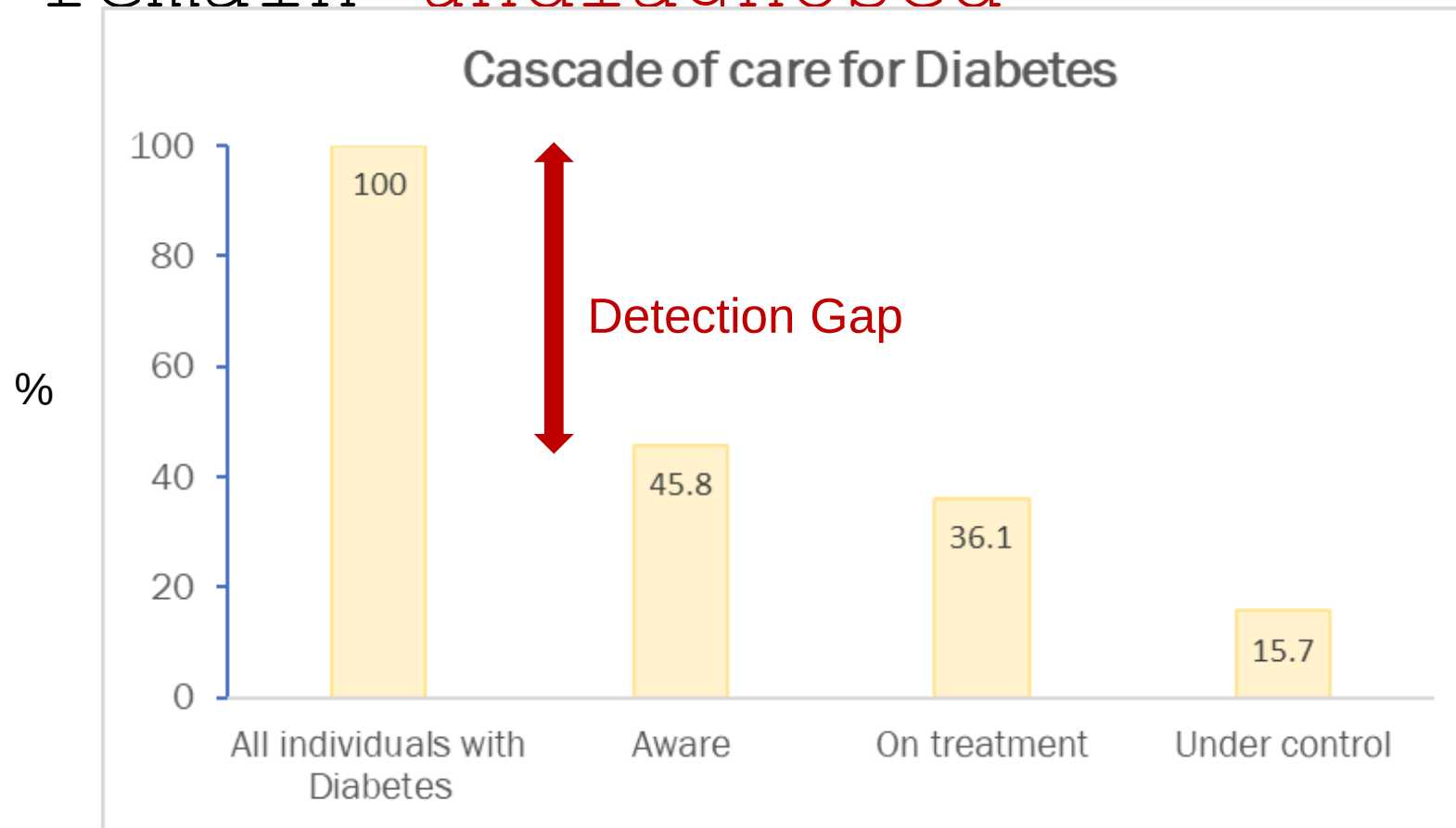
Communicable, maternal,
neonatal, and nutritional diseases
Non-communicable diseases
Injuries

>80% of the deaths due to cardiovascular diseases that are amenable to health care occur due to poor quality care in LMICs



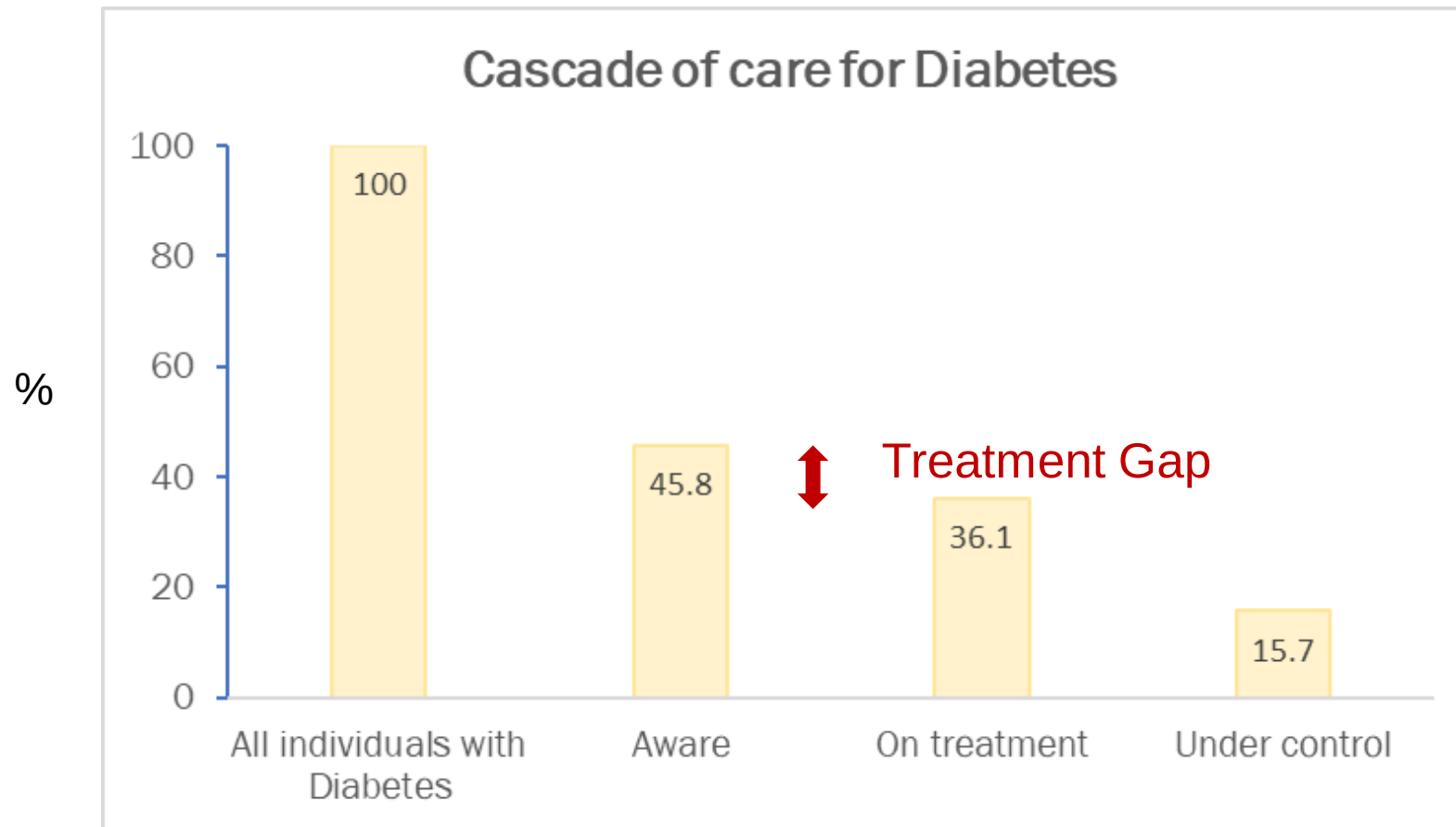
Lancet Glob Health. 2018 Nov;6(11):e1196-e1252

Among all people with Diabetes,
54.2%
remain **undiagnosed**



Among all people with diagnosed Diabetes,

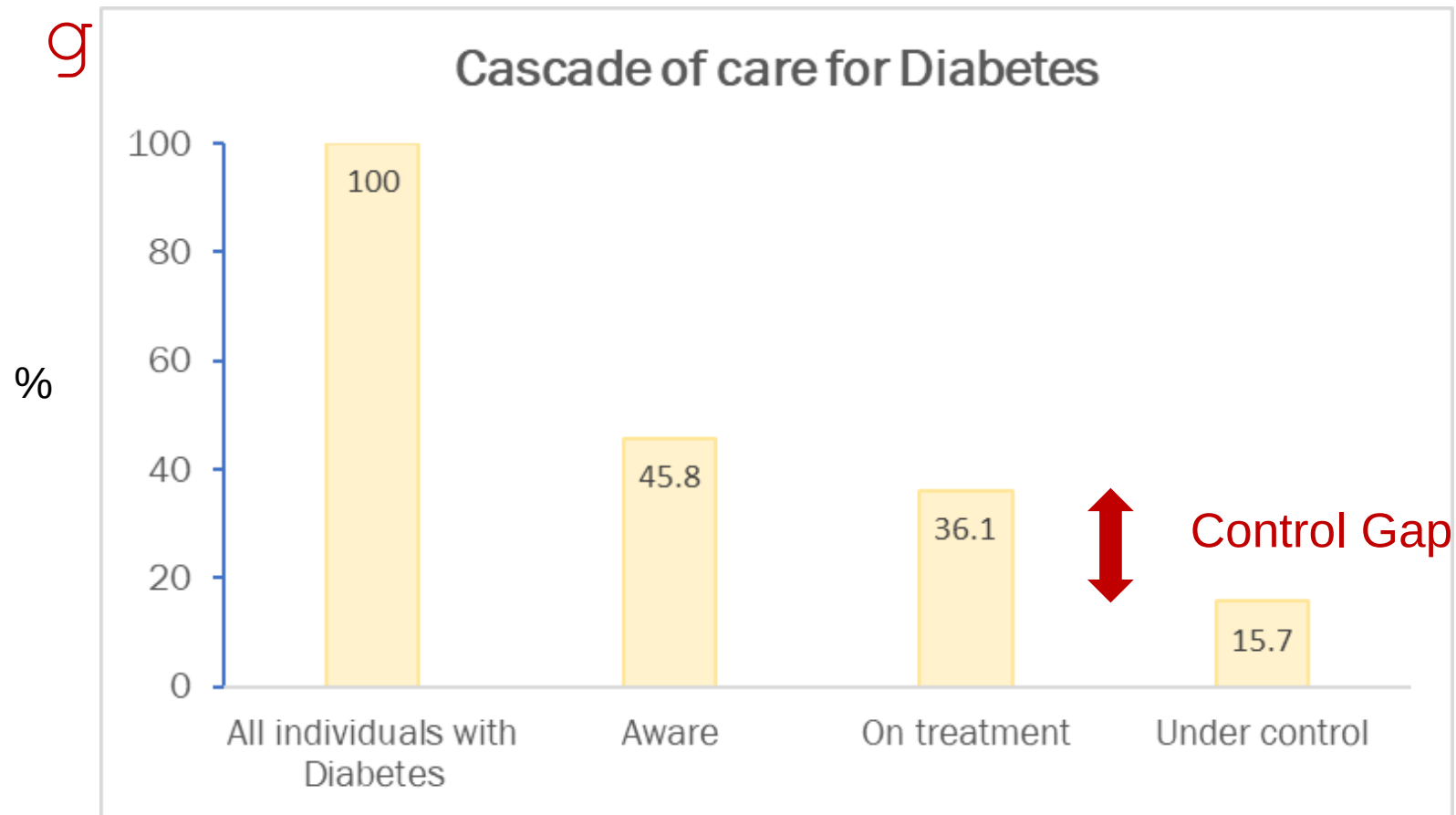
21.2% remain untreated

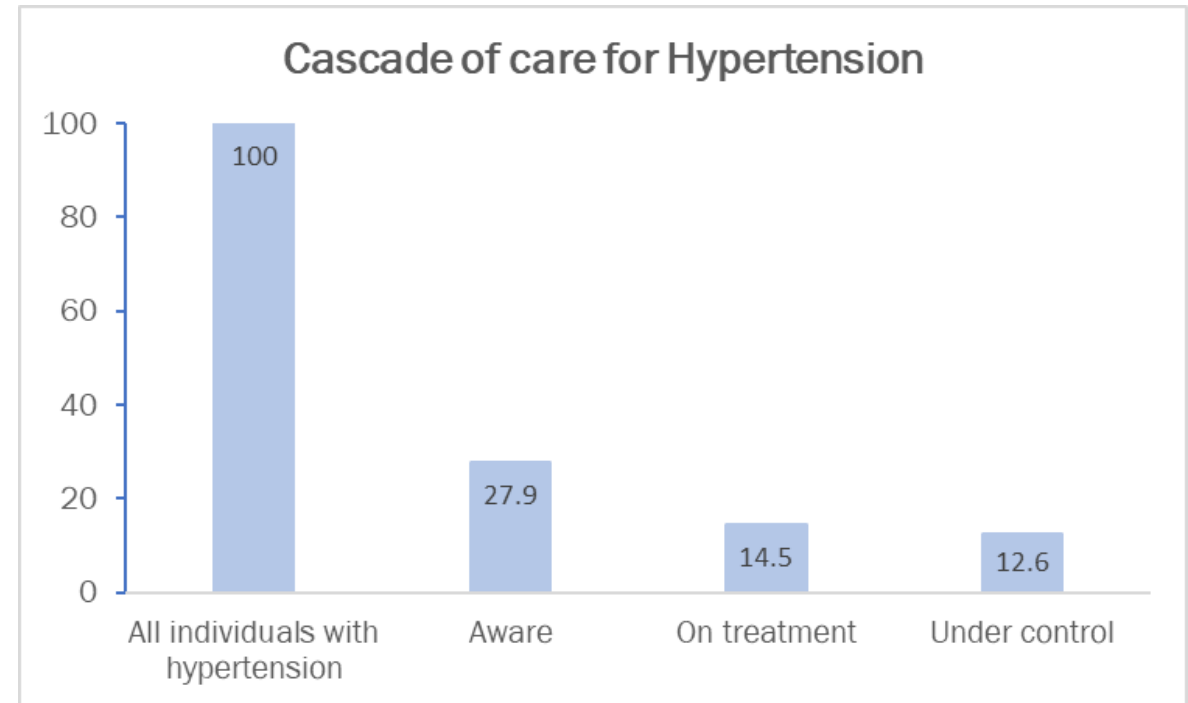
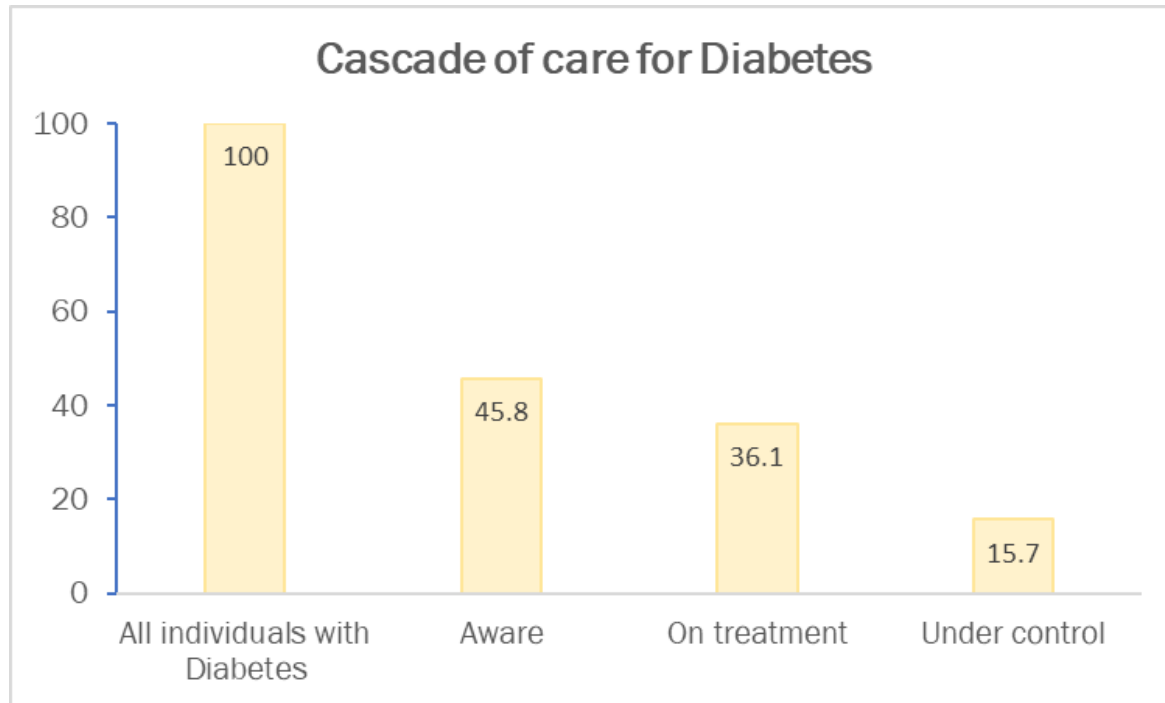


Among all people with Diabetes on treatment,

56.5% have uncontrolled blood

g





Detection gap:
Missed Diagnosis
Diagnostic inertia

Treatment gap:
Loss to Follow-up
Poor retention in care

Control gap
Therapeutic inertia
Poor medication adherence

Evidence for QI in Hypertension and Diabetes

- Cochrane review on Quality improvement:

- Case management
- Team changes
- Patient education
- Promotion of self-management

- Improved outcomes



Basic Philosophy behind Quality Improvement

- *“Most of the problems in health and health care are **not due to mistakes by** uninformed or lazy **people**, but, rather, can be traced to **problems with the systems** in which they have to operate”*

-IHI's former Chief Medical Officer, Dr. Don Goldmann

Basic Philosophy behind Quality Improvement

- Every system is designed to get the result it gets
- To change (improve) the outcomes,

You have to **design and execute better systems**

Missed Follow-ups

Seoni, District, MP

Methods



Quality improvement
using FOCUS PDSA model



NCD clinic, District
Hospital, Seoni, India



Jan-Sep 2022



Individuals with
HTN registered at
DH Seoni

FOCUS PDSA

Step	Activities
F -Finding opportunity	Poor monthly follow-up and high quarterly missed visits
O -Organising QI team	DH doctors, NCD staff, urban ASHA, pharmacist.
C -Clarify process	Process flow map
U -Understanding problem	Driver diagram
S -Selecting intervention	2*2 intervention matrix



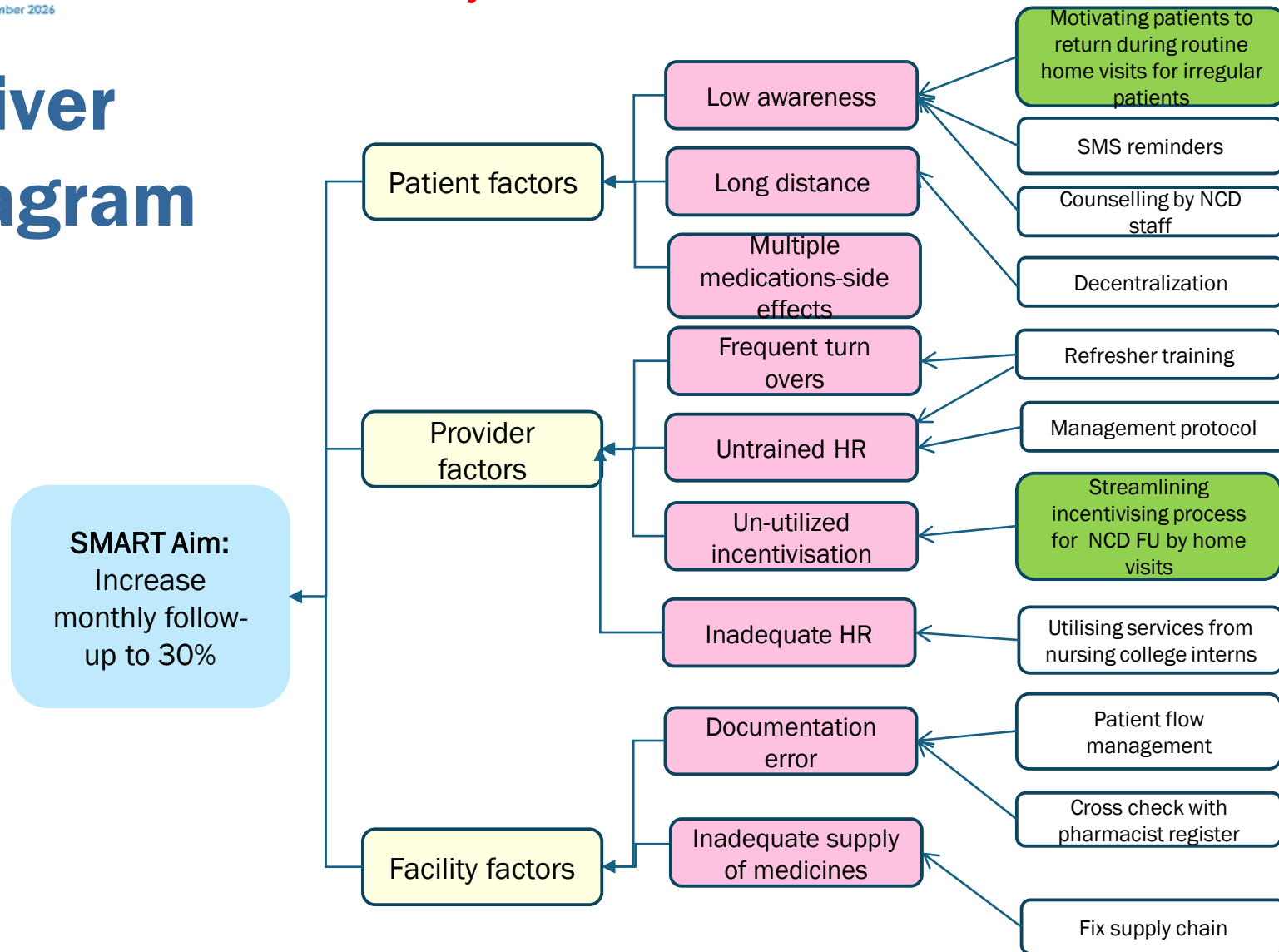


Finding the opportunity for improvement

- 1/5 in district Seoni, India → Hypertension
- **High Missed Follow-ups**
 - The average monthly follow-up was 20%
- Missed visits → Uncontrolled hypertension → Cardio-Vascular

Disease

Driver diagram



Priority Change Ideas

Impact: **High**, Implementation: **Easy**

Impact: **Medium**, Implementation: **Difficult**

Impact: **Low**, Implementation: **Easy**

Impact: **High**, Implementation: **Difficult**

Impact: **Medium**, Implementation: **Medium**

Impact: **High**, Implementation: **Easy**

Impact: **High**, Implementation: **Easy**

Impact: **Medium**, Implementation: **Difficult**

Impact: **Medium**, Implementation: **Difficult**

Impact: **High**, Implementation: **Medium**

Impact: **High**, Implementation: **Difficult**

PDSA cycle for change ideas

Change idea 1:

Training ASHA to motivate patients during home visits

PLAN

1. Digitalize line-list from register
2. Stratification of patients/ ASHA

DO

1. Distribution of line-list
2. Training ASHAs on counselling the patients for follow-up
3. Updating the new registration to the list monthly

STUDY

1. % trained
2. % HTN follow-up by month

Change idea 2:

Incentivising for home visits

PLAN

Streamlining the incentive process by documenting the records

DO

1. Maintain records of visits done
2. Notify the administrative section of the incentives eligible and submit the records
3. Document challenges, if any, and address

STUDY

Incentive distributed

The fidelity to QI was good.

Process Indicators, QI, District Hospital Seoni, Jan - Sep 22

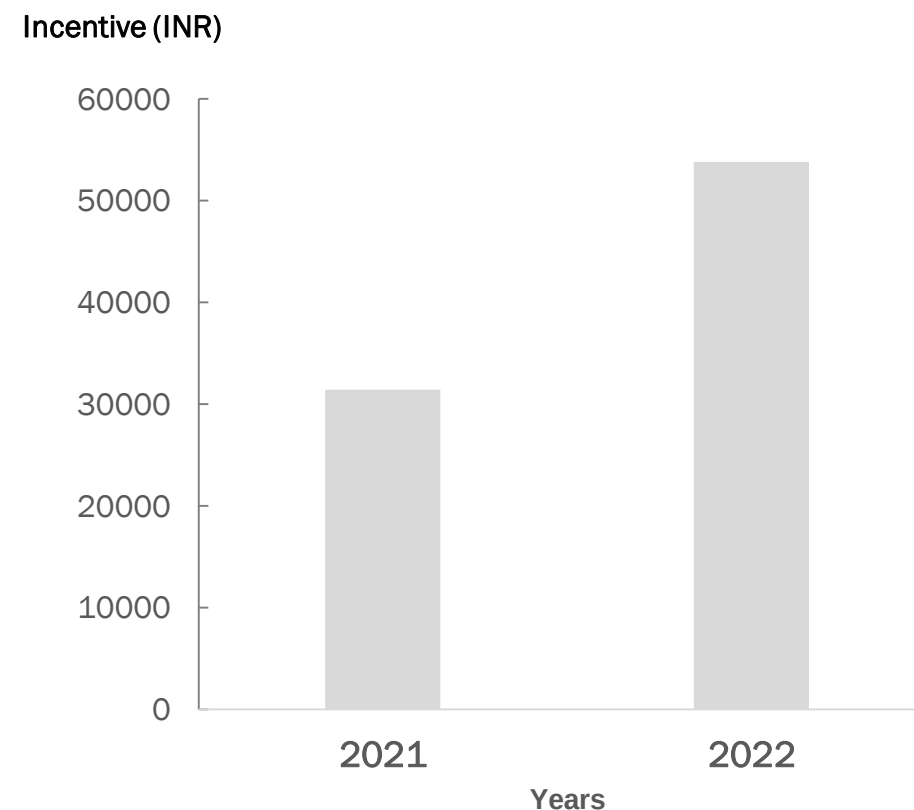


24 (100%) urban
ASHAs from 24
wards

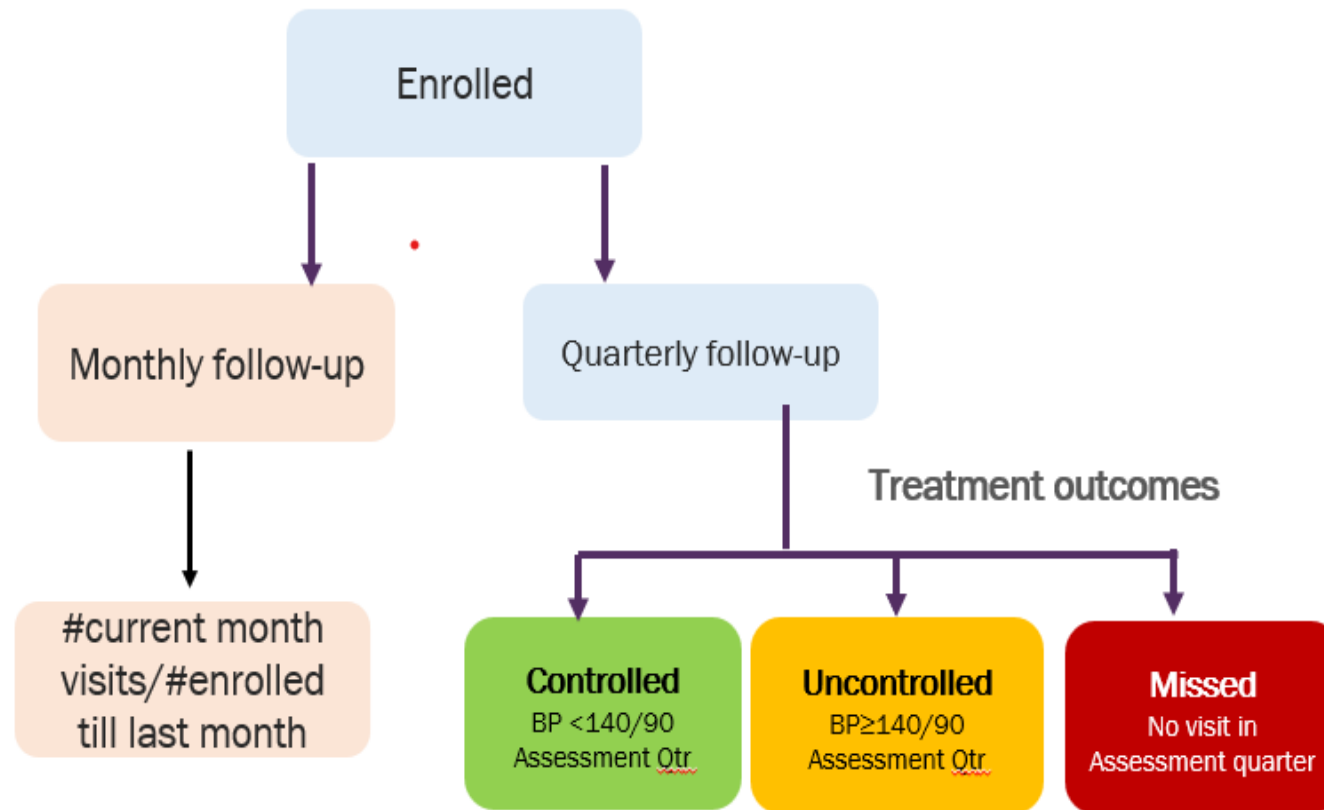


INR 53,450
(USD 644.04)

ASHA Incentive(Rs)

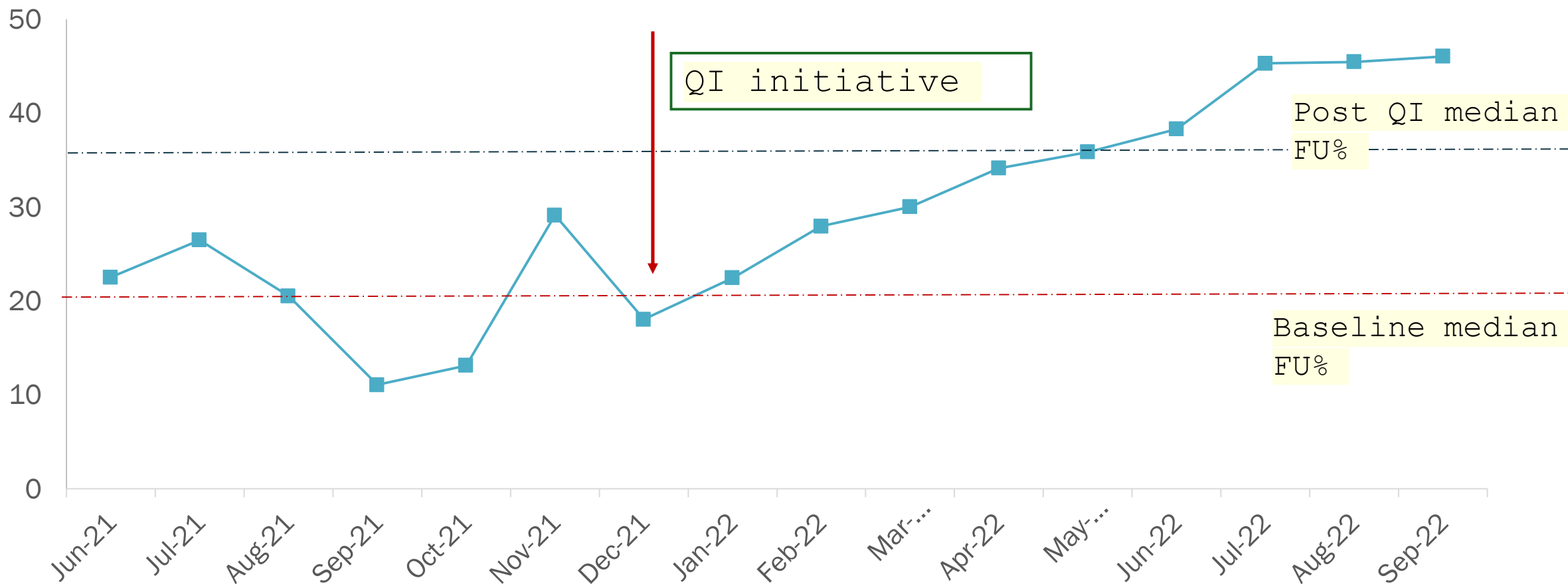


Operational definitions of outcomes



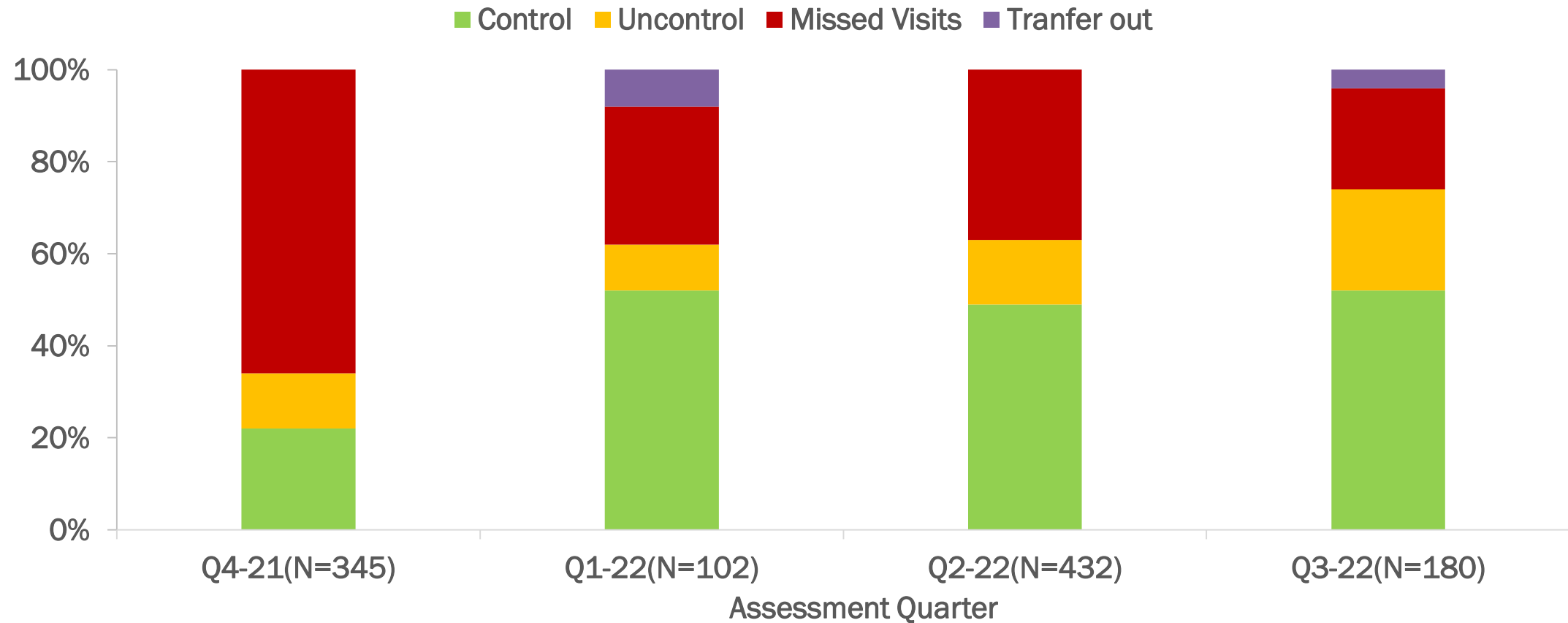
Median FU% increased from 20% baseline to 36% post QI

Output Indicators - QI, District Hospital Seoni, Jan - Sep 22



Missed visit % decreased from 66% in Q4, 2021 to 30% by Q3, 2022

Output Indicators - QI, District Hospital Seoni, Jan - Sep 22



Conclusion

- Counselling patients about the importance of monthly follow-up by ASHAs during home visits and incentivising ASHAs for the same:
 - Improves monthly follow-up and reduces missed visits

Open access

Quality improvement report

BMJ Open Quality

Improving follow-up visits among individuals with hypertension: Quality Improvement project in the District Hospital, Seoni, Madhya Pradesh, India, 2021–2022

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RB and MK are joint first authors.

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¹Non-Communicable Diseases Epidemiology Division,

ABSTRACT

Background In India, to achieve a 25% relative reduction in the prevalence of raised blood pressure (BP) by 2025, approximately 4.5 crore additional people with hypertension will need to have their BP effectively treated. We conducted a Quality Improvement (QI) Initiative to improve follow-up and reduce missed visits among individuals with hypertension registered under India Hypertension Control Initiative, District Hospital, Seoni, Madhya Pradesh, India, in 2022.

Methods We conducted a quasiexperimental study from January to September 2022 in the District Hospital in Seoni, Madhya Pradesh. Following the Ishikawa diagram, the major root causes for missed visits were identified, and countermeasures were developed. The packages under Plan-Do-Study-Act (PDSA) included (i) training urban Accredited Social Health Activists to conduct house visits for individuals with missed visits and (ii) triangulating the follow-up records from various information systems. The review meetings for QI initiatives were conducted fortnightly to follow-up PDSAs. We calculated the proportion of individuals who were followed-up monthly, and the proportion of missed visits among those registered quarterly.

Results Cumulatively, 2850 individuals were registered with hypertension till September 2022. Following the intervention, the monthly follow-up proportion increased

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Irregular follow-up for hypertension leads to uncontrolled blood pressure, a major risk factor for cardiovascular deaths. Reasons for this vary, however, there has been a gap in addressing and improving follow-up rates.

WHAT THIS STUDY ADDS

⇒ We documented an improvement in hypertension follow-up care, increasing from 18% to 54%, by implementing change ideas such as home visits through accredited social health activists (ASHAs) and improving accuracy of follow-up data through triangulation of data from the registers in the pharmacy using a quality improvement model.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Given the limited access to healthcare services in India and the widespread presence of ASHAs across the country, a viable approach to enhancing hypertension follow-up could involve leveraging the existing workforce.

Hospital (DH) in Seoni district, Madhya

Therapeutic Inertia

14 Districts of West Bengal

Ongoing work

Request: Not to share as we have not published yet

Finding an opportunity for improvement



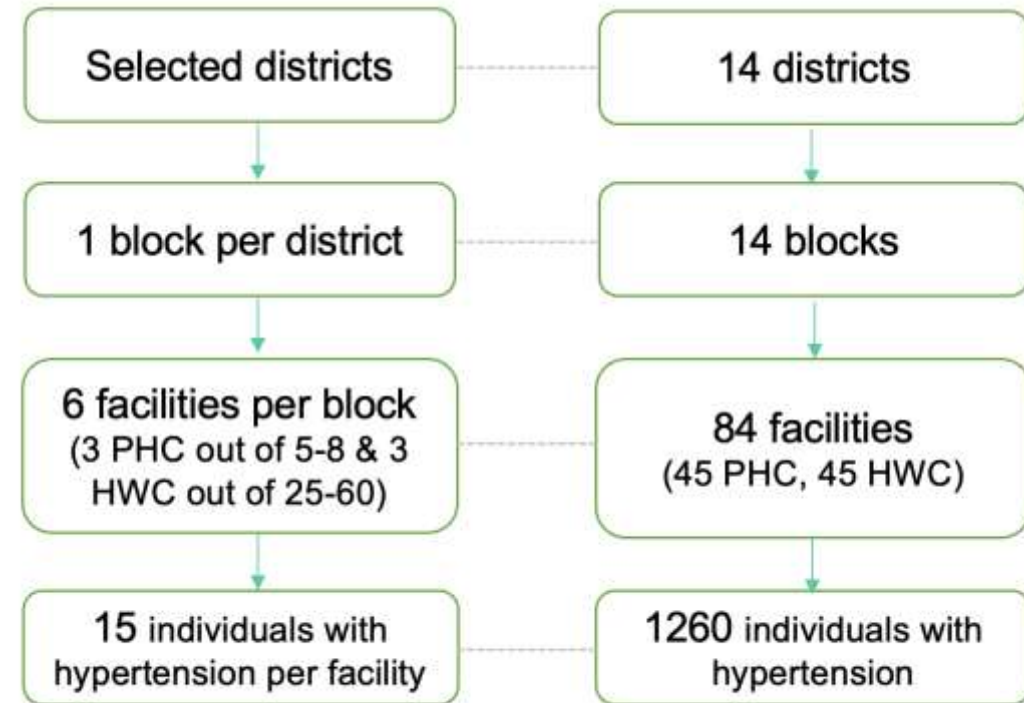
Facility-level Exit survey



Primary Health Centres,
Health Wellness Centres
(HWCs / AAMs)

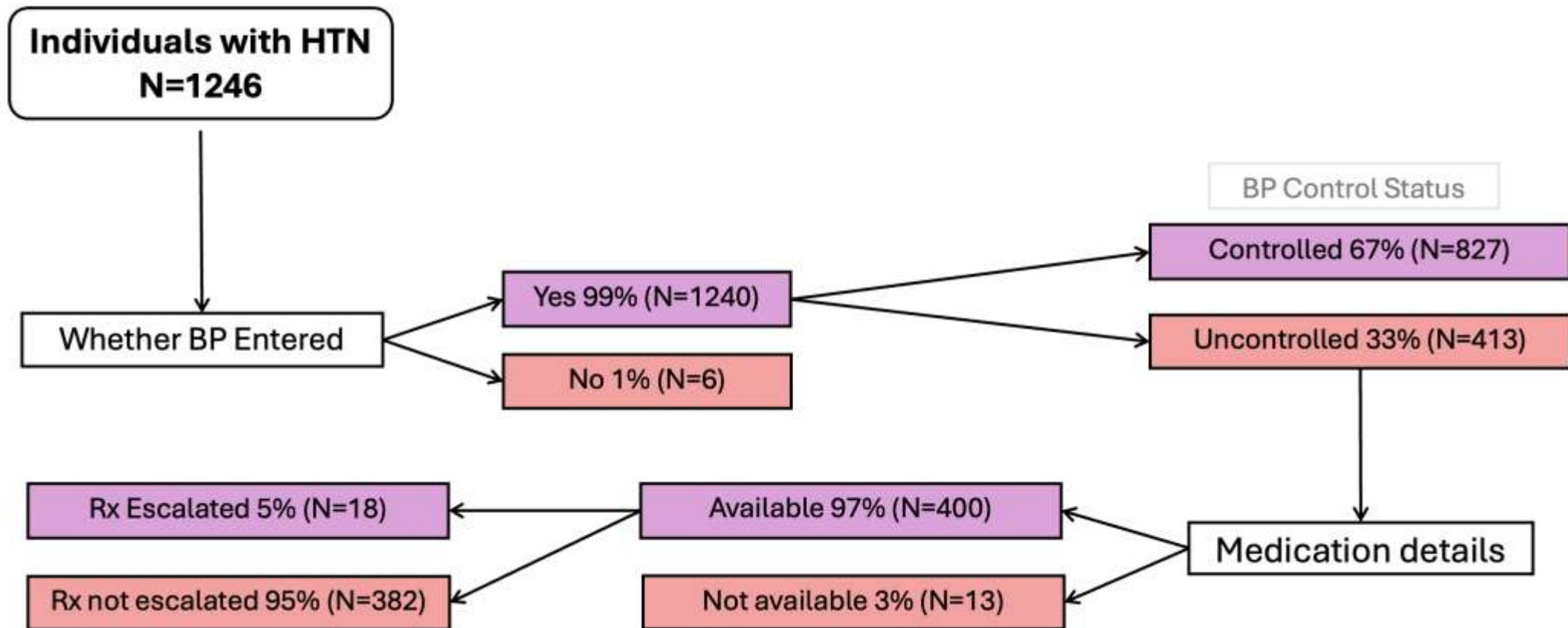


Individuals with
HTN registered at
selected health
facilities



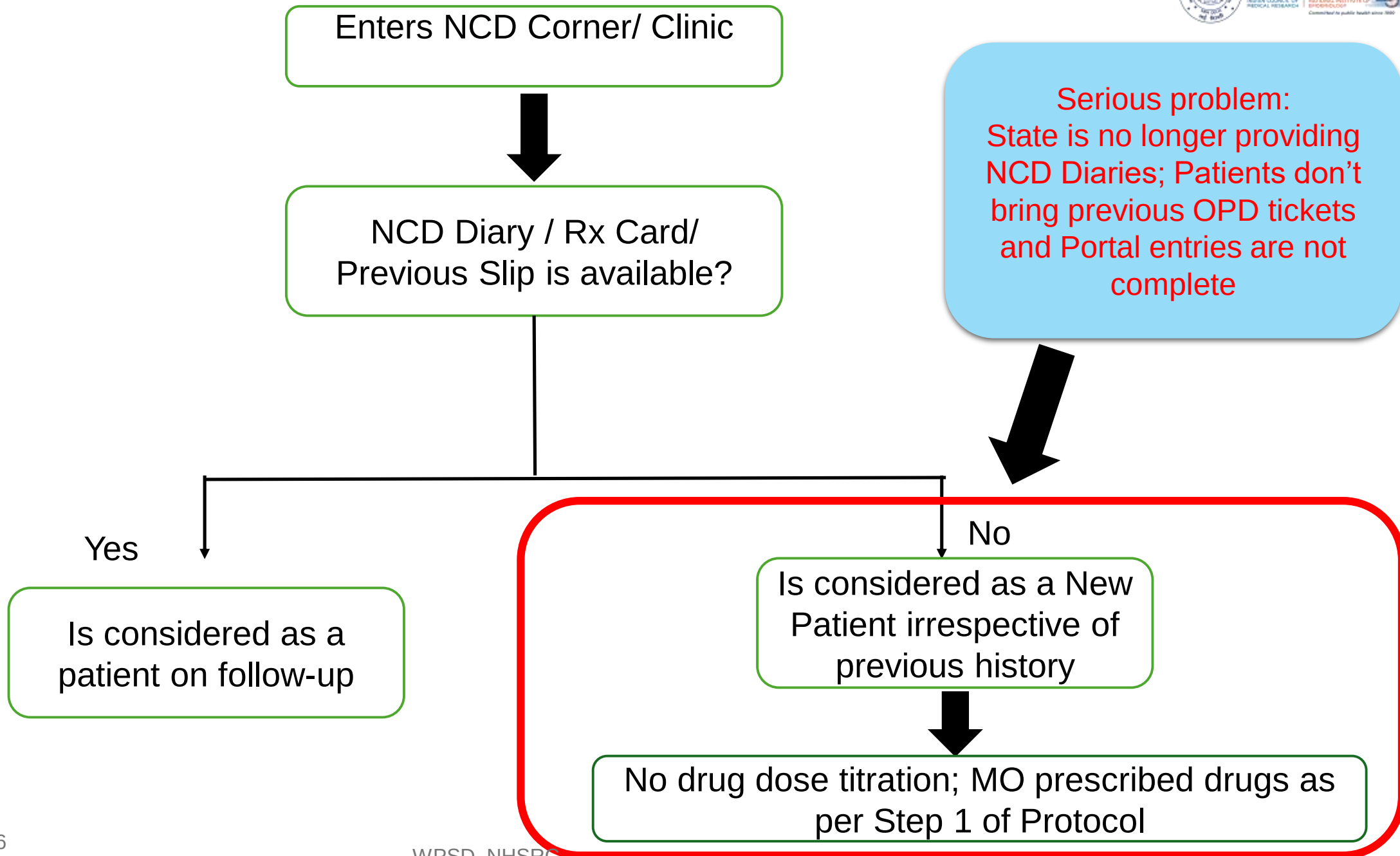
Finding an opportunity for improvement

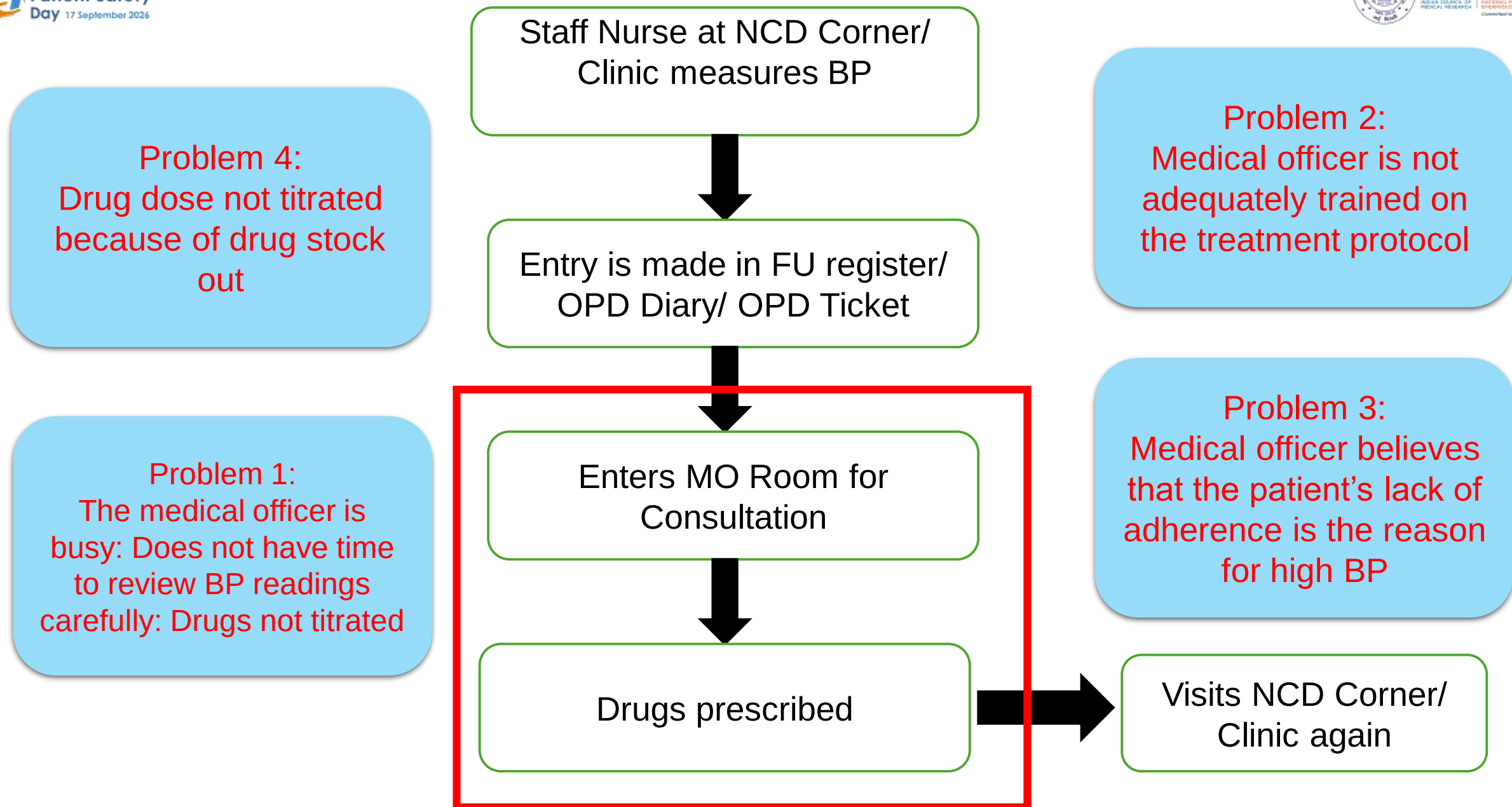
Exit survey (N=1246) - Q1, Selected 14 districts in West Bengal, 2026



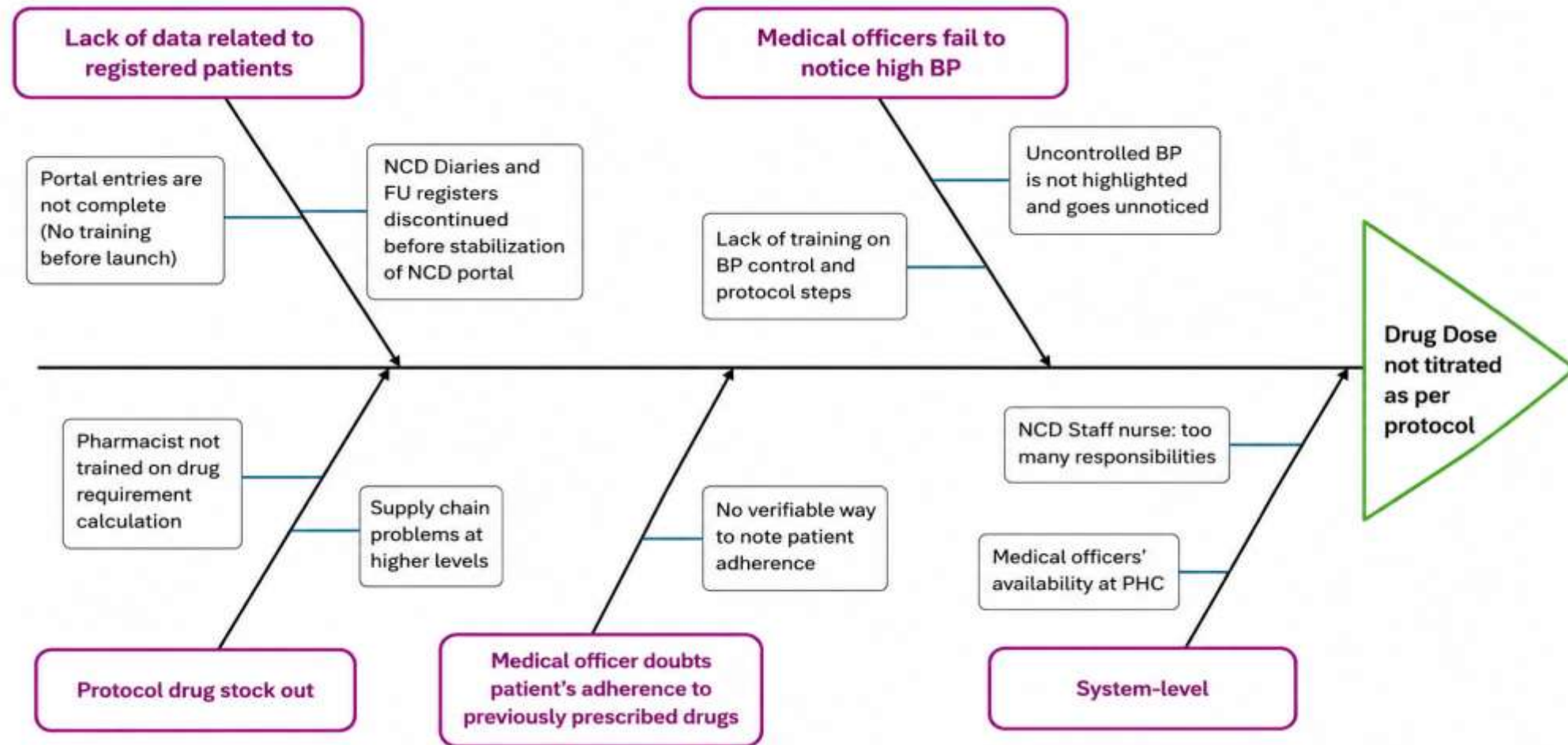
Aim of the Quality Improvement

- To improve the proportion of individuals with uncontrolled hypertension whose drug dose is appropriately titrated from 5% to 25% in the selected primary care facilities in 14 districts of West Bengal, by end of 2026





Understanding the root causes



Selecting Interventions

1. Provision of a Treatment Card
2. High BP reading → circled in red by Staff Nurse + Action taken by MO
3. Refresher training for MO+ Sticking of Protocol in the MO room

Initial results from supervisory visits



Initial results

- Implementation has begun in 39 facilities
- Early results from random treatment card reviews:
 - Treatment cards reviewed, N=493
 - Uncontrolled BP: 57% (n=276)
 - Red circle around BP reading by nurse: 81% (n=224)
 - Treatment cards eligible for assessment of Rx escalation: n=200
 - Rx escalated: 32% (n=65)

Summary

- Systems must be designed and executed better to improve outcomes
- Local systems at the health facility level
 - Can be improved by continuous quality improvement
 - Good quality data for identifying an opportunity for improvement
 - Existing processes need to be clarified
 - Root causes of problems to be identified
 - Selection of 'change ideas' based on impact and feasibility
 - Test change ideas, learn from them and repeat

Thank you!