



विश्वारोग्यं हि धर्मो नः

HOSPITAL INFECTION CONTROL TEAM



**World Health
Organization**

Patient Safety

A World Alliance for Safer Health Care

SAVE LIVES

Clean Your Hands

Health Care-Associated Infection (HAI) and Hand Hygiene

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Definition

Health Care-associated Infection (HAI)

- Also referred to as “nosocomial” or “hospital” infection

“An infection occurring in a patient during the process of care in a hospital or other health-care facility which was not present or incubating at the time of admission. This includes infections acquired in the health-care facility but appearing after discharge, and also occupational infections among health-care workers of the facility”

The impact of HAI

HAI can cause:

- more serious illness
- prolongation of stay in a health-care facility
- long-term disability
- Increase mortality
- high additional financial burden
- high personal costs on patients and their families



Most frequent sites of infection and their risk factors

URINARY TRACT INFECTIONS
34%
Urinary catheter
Urinary invasive procedures

13%
LOWER RESPIRATORY TRACT INFECTIONS
Mechanical ventilation
Aspiration
Nasogastric tube

Most common sites of health care-associated infection and the risk factors underlying the occurrence of infections

SURGICAL SITE INFECTIONS
Inadequate antibiotic prophylaxis
Incorrect surgical skin preparation
Inappropriate wound care

17%

BLOOD INFECTIONS
Vascular catheter
Neonatal age
Critical care

14%

Prevention of HAI

- Validated and standardized prevention strategies have been shown to reduce HAI
- At least **50%** of HAI could be prevented
- Most solutions are simple and not resource-demanding and can be implemented in developed, as well as in transitional and developing countries



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Hand transmission

- Hands are the most common vehicle to transmit health care-associated pathogens
- Transmission of health care-associated pathogens from one patient to another via health-care workers' hands requires **5 sequential steps**



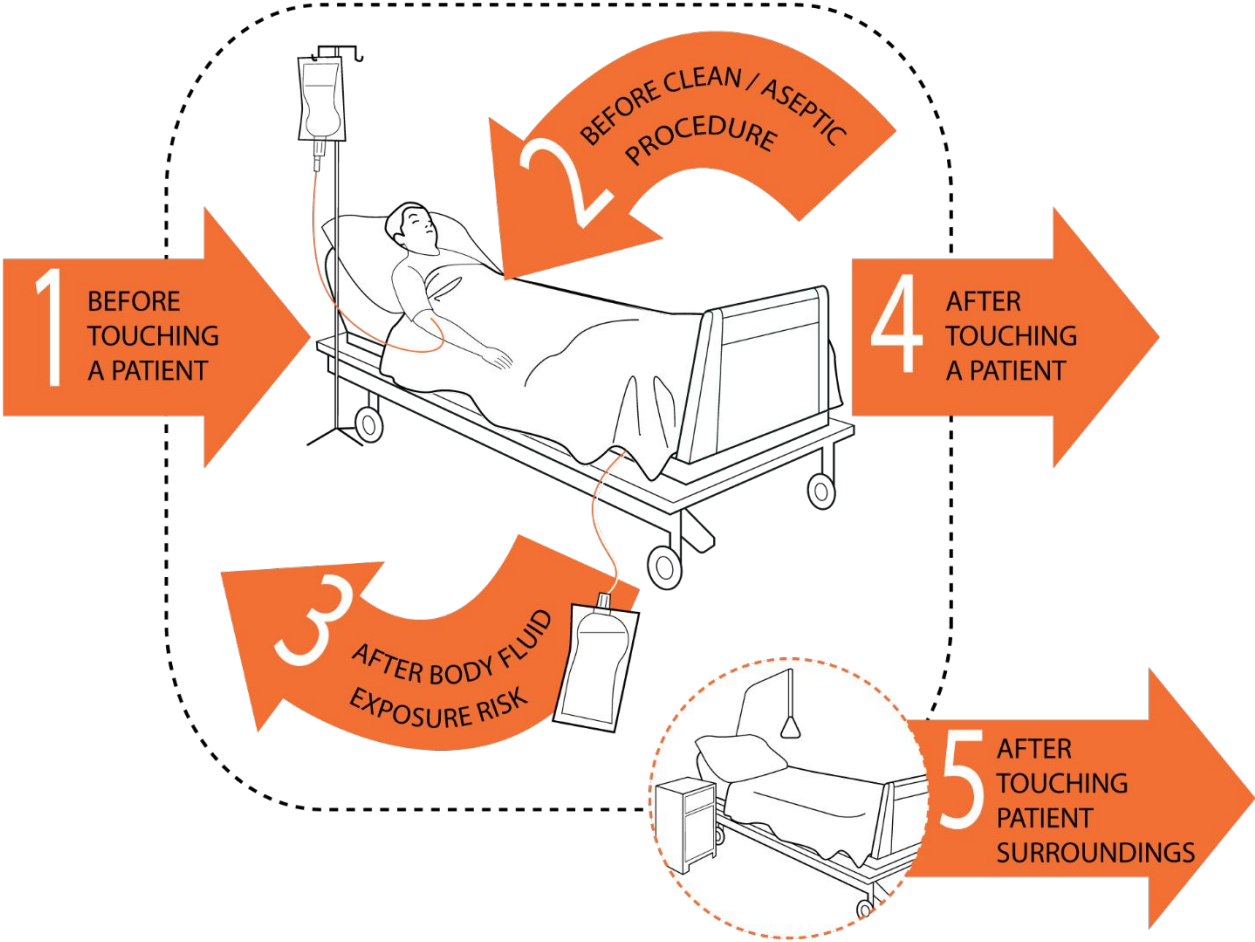
5 stages of hand transmission

one	two	three	four	five
Germs present on patient skin and immediate environment surfaces	Germ transfer onto health-care worker's hands	Germs survive on hands for several minutes	Suboptimal or omitted hand cleansing results in hands remaining contaminated	Contaminated hands transmit germs via direct contact with patient or patient's immediate environment

Why should you clean your hands?

- Any health-care worker, caregiver or person involved in patient care needs to be concerned about hand hygiene
- Therefore hand hygiene concerns **you!**
- **You** must perform hand hygiene to:
 - **protect the patient** against harmful germs carried on **your** hands or present on his/her own skin
 - **protect yourself** and the health-care environment from harmful germs

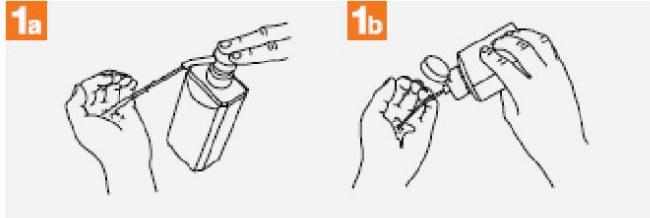
The “My 5 Moments for Hand Hygiene” approach



How to clean your hands

- Handrubbing with **alcohol-based handrub** is the preferred routine method of hand hygiene if hands are not visibly soiled
- Handwashing with **soap and water** – essential when when hands are visibly dirty or visibly soiled (following visible exposure to body fluids)

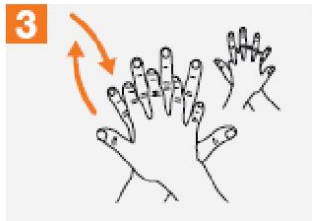
How to handrub



Apply a palmful of the product in a cupped hand, covering all surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



Palm to palm with fingers interlaced;



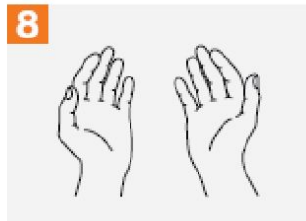
Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



Once dry, your hands are safe.

To effectively reduce the growth of germs on hands, **handrubbing** must be performed by following all of the illustrated steps.

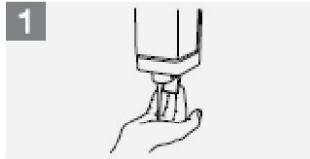
This takes only 20–30 seconds!

6 STEPS

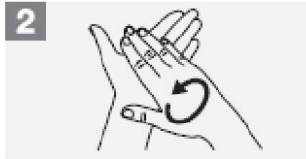
How to handwash



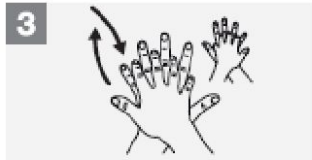
Wet hands with water;



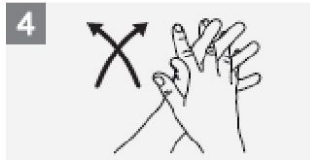
Apply enough soap to cover all hand surfaces;



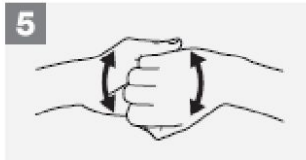
Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



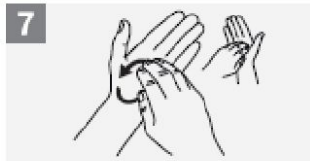
Palm to palm with fingers interlaced;



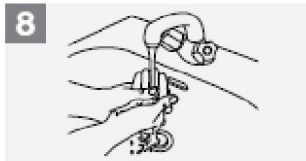
Backs of fingers to opposing palms with fingers interlocked;



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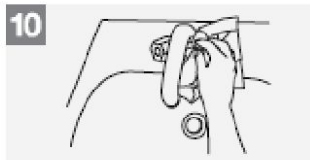
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



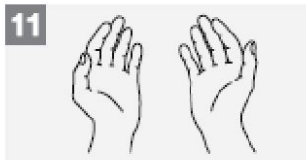
Rinse hands with water;



Dry hands thoroughly with a single use towel;



Use towel to turn off faucet;



Your hands are now safe.

To effectively reduce the growth of germs on hands, **handwashing must last 40–60 seconds** and should be performed by following all of the illustrated steps.

6 STEPS

Hand hygiene and glove use

- The use of gloves does **not replace** the need to clean your hands!
- You should **remove gloves to perform hand hygiene**, when an indication occurs while wearing gloves
- You should **wear gloves only when indicated** (see the Pyramid in the Hand Hygiene Why, How and When Brochure and in the Glove Use Information Leaflet) – otherwise they become a major risk for germ transmission

Time constraint = major obstacle for hand hygiene



Adequate handwashing with
water and soap requires
40–60 seconds

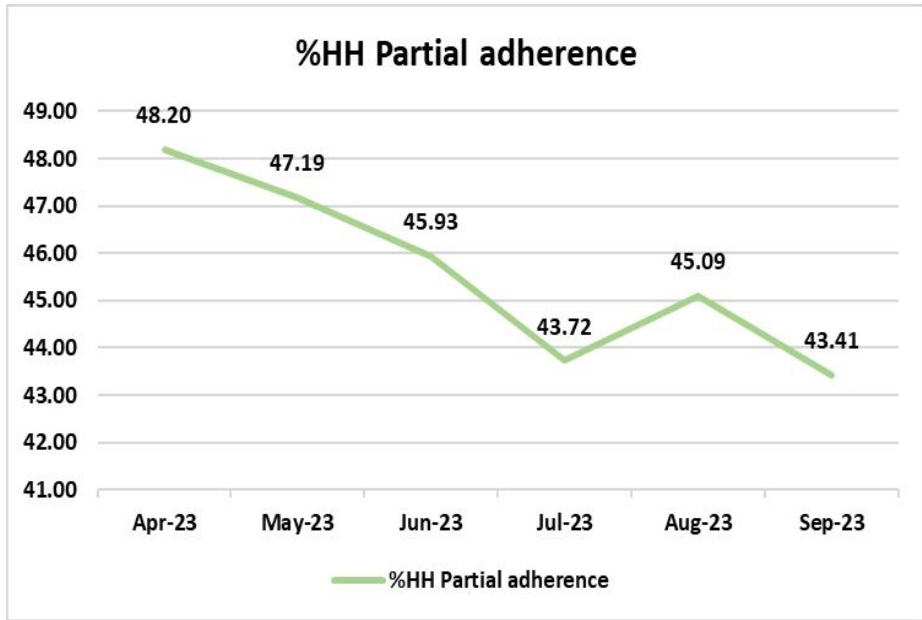
Average time usually adopted
by health-care workers:
<10 seconds

Alcohol-based
handrubbing: **20–30 seconds**

Hand Hygiene Partial compliance rate (% Partially Done)

Formula: $\frac{\text{Total number of hygiene opportunities done partially}}{\text{Total number of hand hygiene opportunities}} \times 100$

	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sept-23
Total No. of HH Opportunities	2363	2439	2841	2996	2879	3218
HH Partially done	1139	1151	1305	1310	1298	1397
% HH Partial adherence	48.20	47.19	45.93	43.72	45.09	43.41

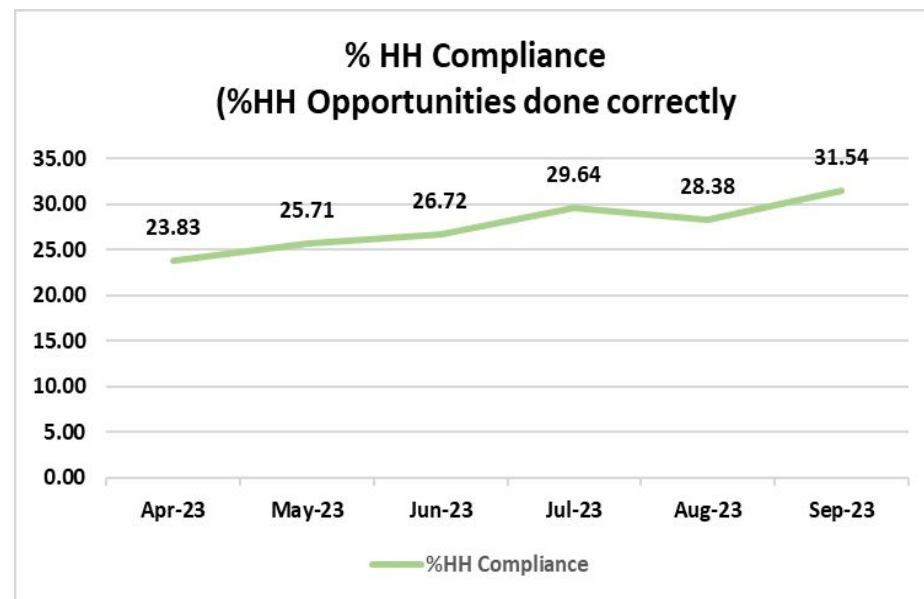


Hand Hygiene compliance rate (% Done correctly)

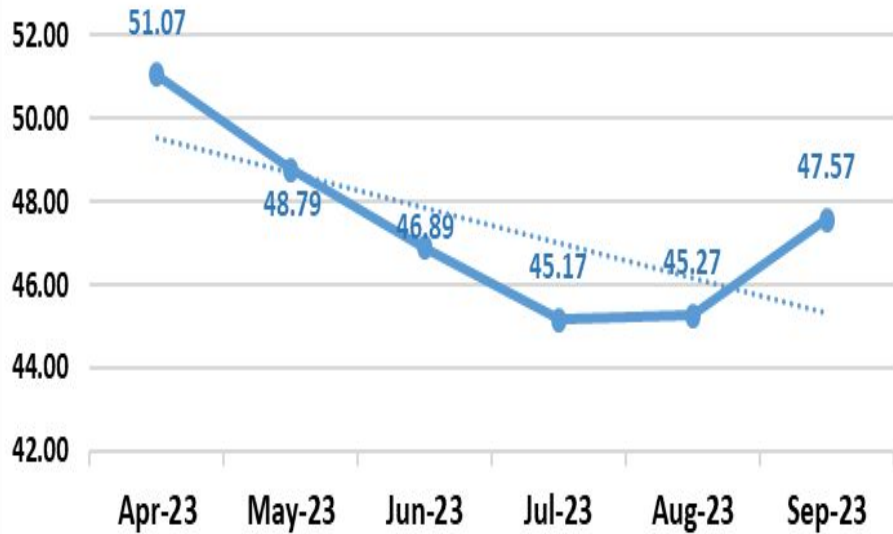
Formula: $\frac{\text{Total number of hygiene opportunities done correctly}}{\text{Total number of hand hygiene opportunities}} \times 100$

Proposed Target : 100%

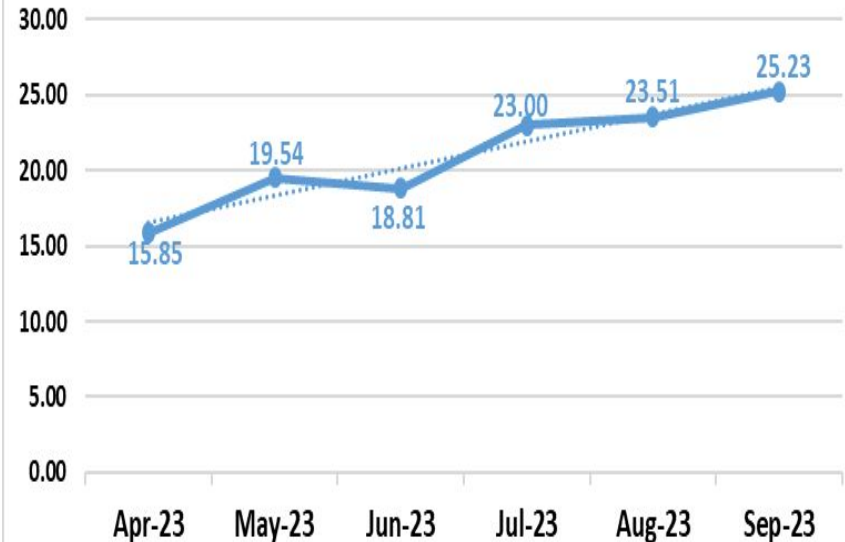
	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sept-23
Total No. of HH Opportunities	2363	2439	2841	2996	2879	3218
Total opportunities done correctly	563	627	759	888	817	1015
%Total opportunities done correctly	23.83	25.71	26.72	29.64	28.38	31.54



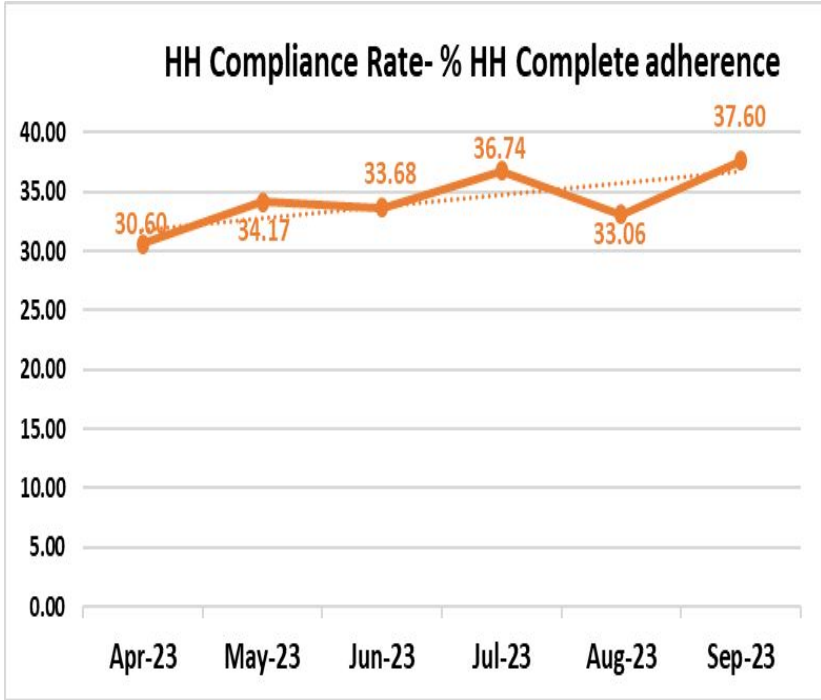
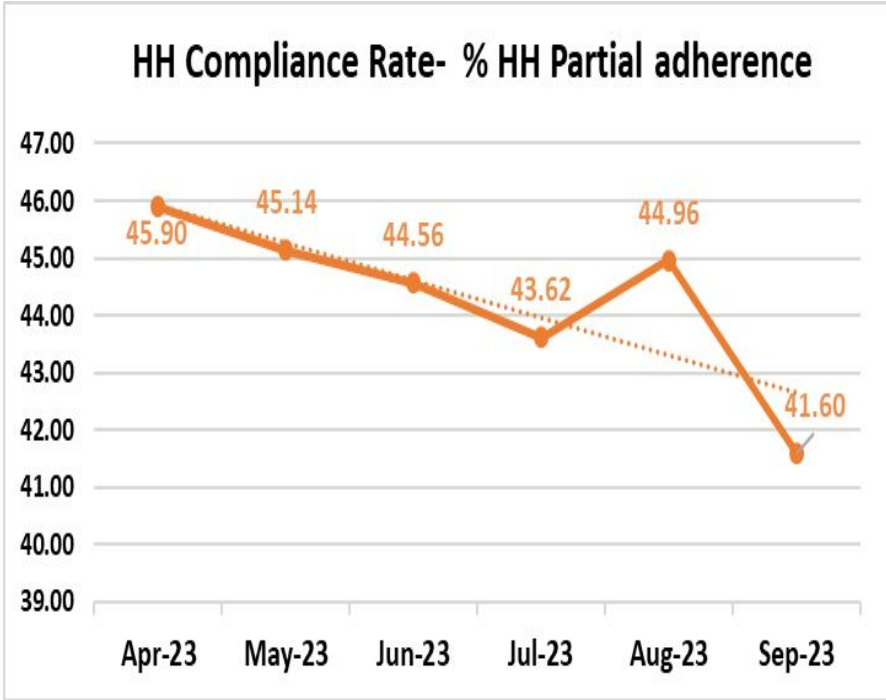
HH Compliance Rate- % HH Partial adherence



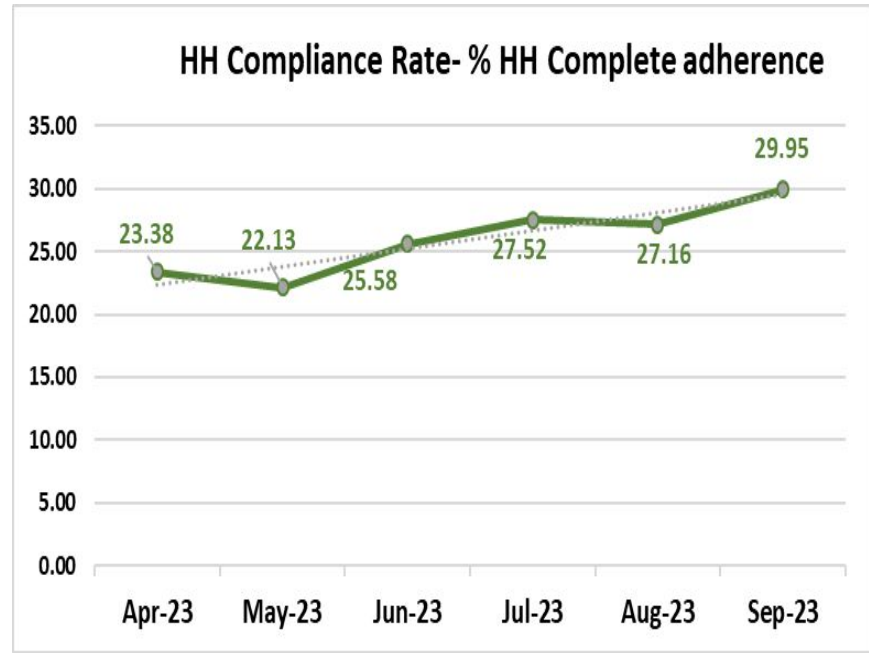
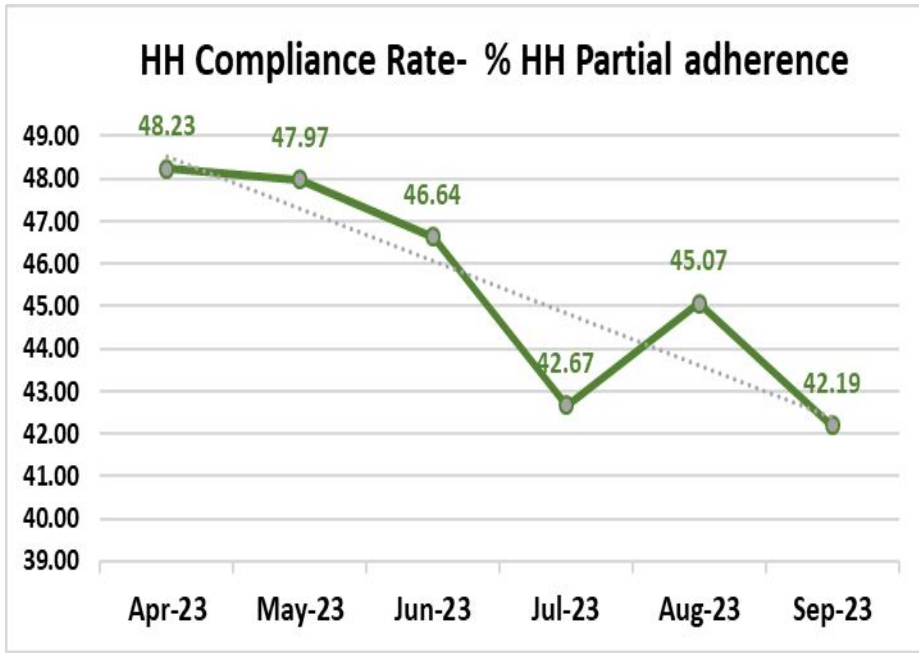
HH Compliance Rate- % HH Complete adherence



—●— Doctor



—●— Nursing Officer



— Hospital attendant+House keeping+Others+Students

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