



## GOVERNMENT OF KERALA

### Abstract

Health & Family Welfare Department-Standard Operating Procedure for certification process of Antibiotic Smart Hospitals, Antimicrobial Stewardship Compliant Hospitals, Antibiotic Literate Local Self Government and Antimicrobial Stewardship compliant LSGs-Orders Issued

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### **HEALTH & FAMILY WELFARE (F) DEPARTMENT**

**G.O.(Rt)No.102/2026/H&FWD Dated, Thiruvananthapuram, 08-01-2026**

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Read:- 1. G.O.(Rt) No.2118/2023/H&FWD dated 18/08/2023.  
 2. G.O.(Rt) No.726/2024/H&FWD dated 11/03/2024.  
 3. E-mail from the Convenor, KARSAP Working Committee dated 17/12/2025.

### ORDER

The Department of Health and Family Welfare is taking various initiatives to tackle the 'silent pandemic' of antimicrobial resistance scientifically and systematically. The Department with the involvement of all the line departments under 'ONE HEALTH' approach has been working on achieving Kerala Antibiotic literate state. These activities are undertaken involving the primary, secondary and tertiary stakeholders viz people, the governing structure at the grassroots - the local Self Government, Hospitals and Health service providers. In order to encourage these stakeholders to take various measures to tackle antimicrobial resistance problem at institutional level and in the community, an innovative accreditation system is developed by identifying key performance indicators and giving weightages to arrive at performance score to give certification regarding Antibiotic Smart Hospitals, Antimicrobial Stewardship Compliant Hospitals, Antibiotic Literate Local Self Government and Antimicrobial Stewardship compliant Local Self Government.

Government have examined the accreditation system and are pleased to approve the Standard Operating Procedure for certification process of Antibiotic Smart Hospitals, Antimicrobial Stewardship Compliant Hospitals, Antibiotic Literate Local Self Government and Antimicrobial

Stewardship Compliant Local Self Government, as annexed to this order.

(By order of the Governor)

Dr. Rajan Namdev Khobragade I A S  
ADDITIONAL CHIEF SECRETARY

The State Mission Director, National Health Mission, Thiruvananthapuram.  
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The Director, Animal Husbandry Department, Thiruvananthapuram.  
The Director, Fisheries Department, Thiruvananthapuram.  
The Principal Director, Local Self Government Department, Thiruvananthapuram.  
The Director, General Education Department, Thiruvananthapuram.  
The Executive Director, Kudumbashree, Thiruvananthapuram.  
The Director, Agriculture Development & Farmers Welfare Department, Thiruvananthapuram.  
The Director of Health Services, Thiruvananthapuram.  
The Director of Medical Education, Thiruvananthapuram.  
The Drugs Controller, Thiruvananthapuram.  
Additional Director of Health Services (Medical), Thiruvananthapuram.  
All District Medical Officers (Health).  
All Members, KARSAP Working Committee.  
Nodal Officer, KARSAP.  
Member Secretary, Kerala State Pollution Control Board, Thiruvananthapuram.  
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Stock File/ Office Copy( to File F1/343/2022-Health-Part(2)).

Forwarded /By order

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**Standard Operating Procedure for certification process of**  
**Antibiotic smart Hospitals, Antimicrobial stewardship compliant hospitals,**  
**Antibiotic Literate Local Self Government Institutions and AMS compliant**  
**LSGIs**

**Antibiotic Smart Hospitals: a pragmatic approach to tier based antimicrobial stewardship**

The Government of Kerala as a part of KARSAP took a significant step in combating AMR by launching the Antibiotic Smart Hospital Initiative (ASH).

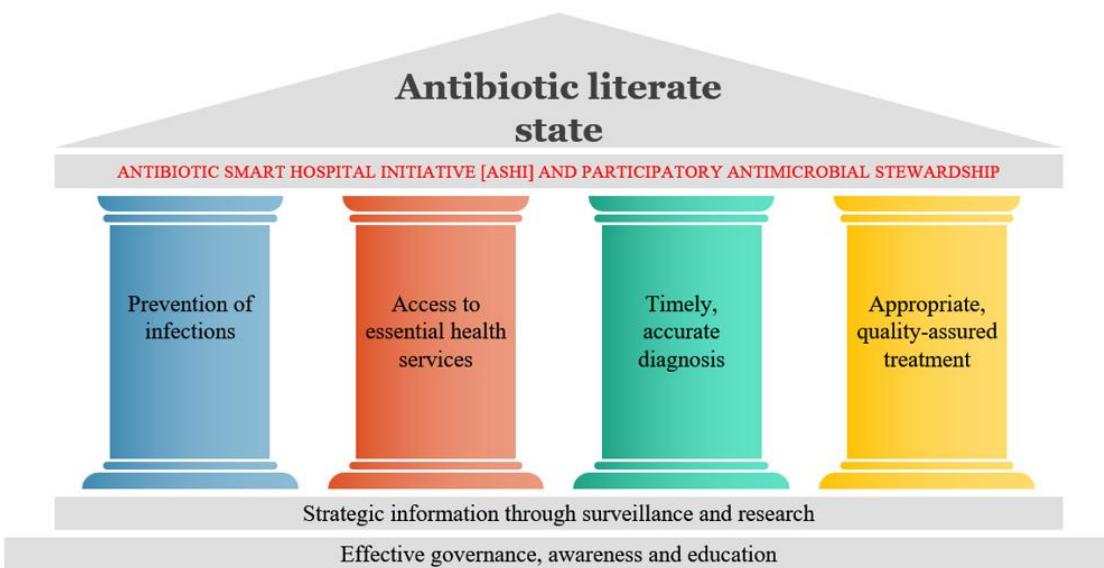
Antibiotic smart hospitals (ASH) are healthcare institutions which implements a pragmatic model of antimicrobial and diagnostic stewardship while ensuring compliance with standard IPC practices. These hospitals act as source of continuous IEC activities to healthcare workers and public thereby fostering participatory stewardship. Antibiotic smart primary care institutions act as the fulcrum for community engagement at the grass root level.

The criteria for becoming ASH are different for primary, secondary and tertiary care institutions based on the patient profile to which they cater and available resources. Figure 1 highlights the criteria to be satisfied by hospitals in each tier to be declared as antibiotic smart. Primary care hospitals should satisfy 10 criteria and secondary/tertiary care hospitals should satisfy 12 criteria. 95% of antibiotics used in outpatient department (OPD) in primary care hospitals should be from Access category, whereas for secondary care it is 90% and tertiary care 85%.

## Existing criteria to Assess Antibiotic Smart Status at Different Tiers of Health Care

	PRIMARY CARE LEVEL	SECONDARY CARE LEVEL	TERtiARY CARE LEVEL
Display of Posters on AMR in Malayalam	✓	✓	✓
All healthcare workers and students fully trained in AMR and IPC	✓	✓	✓
Prescription audit quarterly	✓	✓	✓
Antibiotics utilisation metrics calculation quarterly by pharmacy	✓	✓	✓
AWaRe metrics- ACCESS usage in OPD	95%	90%	85%
Functional HICC and AMSP committee	✓	✓	✓
IEC for public fortnightly	✓	✓	✓
Posters on AWaRe classification in prescribing areas	✓	✓	✓
Certified by	NQAS (or within 1 year)	NQAS/KAYAKALP /NABH(or within 2 years)	NQAS/KAYAKALP /NABH(or within 2 years)
Implementation of PROUD programme	✓	✓	✓
Surgical safety checklist in surgical specialities		✓	✓
Prospective audit and feedback for Reserve antibiotics by AMSP team		✓	✓
Low hanging fruit model of AMSP		✓	✓
HAI surveillance		✓	✓
STPs (Sewage Treatment Plants)/ ETP (Effluent Treatment Plant) as per the guidelines from pollution control board		✓	✓

4 Pillars and 2 foundational steps



**Revised differential score-based Criteria to be satisfied to become  
Antibiotic Smart Hospital and AMS Compliant Hospital at Primary care  
level [FHC/CHC/BLOCK FHC/UPHC/UHWC/UCHC]**

<b>1</b>	Posters on AMR in Malayalam should be displayed in the Hospital.	1 POINT
<b>2</b>	Posters on AWaRe classification of antibiotics should be displayed in all prescribing areas.	1 POINT
<b>3</b>	IEC sessions for public should be conducted every fortnight.	1 POINT
<b>4</b>	All health care workers should be trained in infection prevention and control and antimicrobial stewardship program.	1 POINT
<b>5</b>	Prescription Audit must be conducted quarterly	1 POINT
<b>6</b>	95% antibiotic prescription in OPDs should be from Access category [Proportion]	2 POINTS
<b>7</b>	Antibiotic utilisation metrics regarding dispensed antibiotics from Pharmacy based on AWaRe classification should be calculated quarterly	1 POINT
<b>8</b>	Functional Hospital Infection control and Anti-microbial stewardship Committee must be present.	1 POINT

<b>9</b>	Hospital should be NQAS certified/should have a plan to work for obtaining certification in next one year.	2 POINTS
<b>10</b>	nPROUD Program or initiative for proper disposal of expired, un used antibiotics should be implemented in hospitals.	2 POINTS
<b>11</b>	15% incremental decrease in total antibiotic consumption in OPD compared to previous years baseline	2 POINTS
<b>TOTAL SCORE</b>		<b>15</b>
<b>ANTIBIOTIC SMART HOSPITAL</b>		<b>12 POINTS</b>
<b>AMS COMPLIANT HOSPITAL</b>		<b>15 POINTS</b>

**Revised differential score-based criteria for declaration of secondary & tertiary care hospitals as antibiotic smart hospital and AMS compliant Hospital**

<b>1</b>	Posters on AMR in Malayalam should be displayed in the Hospital.	1 POINT
<b>2</b>	Posters on AWaRe classification of antibiotics should be displayed in all prescribing areas.	1 POINT
<b>3</b>	All healthcare workers and students should be trained in infection prevention and control and antimicrobial stewardship.	1 POINT

4	<p>Prescription Audit must be conducted quarterly and AWaRe metrics should be calculated. More than 90% antibiotic prescription in OPDs should be from Access category in Taluk level hospitals (THQH/TH/other sub district level) and district level hospitals (GH/DH/Other district level hospitals other than those with functional super specialty services ) and 85% antibiotic prescription in OPDs should be from Access category in tertiary health care institutions (Medical colleges and other tertiary health care institutions &amp; district level hospitals with functional super specialty services). In all levels of hospitals out of total antibiotics prescribed, 60% should be from Access category.</p>	2 POINTS
5	<p>Functional Hospital Infection control committee and Antimicrobial Stewardship Committee must be present.</p>	1 POINT
6	<p>Antibiotic stewardship committee must perform prospective audit and feedback for all cases in which Reserve antibiotics are prescribed.</p>	2 POINTS
7	<p>Low hanging fruit model of antimicrobial stewardship should be implemented in the hospital</p>	3 POINTS

<p><b>Model of Antimicrobial Stewardship:</b></p> <ol style="list-style-type: none"> <li>1. If antimicrobials are prescribed the reason for the same has to be documented in case record.</li> <li>2. Should have written down customized plan for antimicrobial stewardship, diagnostic stewardship and infection control in the hospital.</li> <li>3. If WHO Reserve antibiotics are prescribed, AMS team should be informed for performing prospective audit and feedback. For this Carbapenems should also be considered as Reserve drug.</li> <li>4. If more than two antibiotics are combined, the reason for the same has to be documented.</li> <li>5. If antibiotics are continued for more than 7 days, reason for the same has to be documented.</li> <li>6. Antibiotics administered as part of surgical prophylaxis if continued for more than 2 doses, the reason should be documented.</li> <li>7. Double anaerobic coverage is redundant. If double anaerobic coverage is used, the reason for the same has to be documented.</li> </ol>	
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	8. If de-escalation of antibiotics is not performed according to culture and susceptibility report, reason for the same has to be documented.	
<b>8</b>	Hospital infection control committee should perform surveillance with regard to Healthcare Associated Infections (HAIs) like surgical site infections, catheter associated urinary tract infections, central line associated infections etc.	2 POINTS
<b>9</b>	WHO surgical safety checklist should be implemented in the hospital by all surgical units.	2 POINTS
<b>10</b>	Hospital should be NQAS/KAYAKALP /NABH certified/should have a plan to work for obtaining certification in next two years.	2 POINTS
<b>11</b>	nPROUD Program or initiative for proper disposal of expired, un used antibiotics should be implemented in hospitals.	2 POINTS
<b>12</b>	STPS (Sewage Treatment Plants)/ ETP (Effluent Treatment Plant) in the hospital should function as per the guidelines from the pollution control board, and grey water management in the hospital also should be as per the guidelines	2 POINTS

<b>13</b>	10% incremental decline in total antibiotic use in this year in IPD and ICU [DDD/DOT] from last years baseline.	3 POINTS
<b>14</b>	Antibiotic prescription should be made in the antibiotic prescription page which should be part of case record/electronic format	2 POINTS
<b>15</b>	Hospital should be part of KARSNET AMR Surveillance network	2 POINTS
<b>TOTAL SCORE</b>		<b>30 POINTS</b>
<b>ANTIBIOTIC SMART HOSPITAL</b>		<b>20 POINTS</b>
<b>AMS COMPLIANT HOSPITAL</b>		<b>30 POINTS</b>

**ANTIBIOTIC LITERATE LOCAL SELF GOVERNMENT  
INSTITUTIONS [LSGI] AND AMS COMPLIANT LSGI ASSESSMENT  
CRITERIA**

<b>1</b>	PHC/FHC/UCHC/UPHC/UHWC in the LSG should satisfy 9/10 criteria for antibiotic smart hospital status. [For this first 10 criteria are considered]	2 POINTS
<b>2</b>	All AMR hot spots under LSG should be mapped eg poultry farms, pig farms, duck farms, aquaculture, dairy farms, butcheries, slaughter houses, medical shops, pharma /hospital effluents, hospitals etc.	2 POINTS

<b>3</b>	Targeted IEC with help of line departments should be conducted.	1 POINT
<b>4</b>	All schools in the LSG should be mapped and yearly IEC given to students and teachers.	2 POINTS
<b>5</b>	Awareness on AMR for LSG representatives should be given through grama sabhas etc.	1 POINT
<b>6</b>	WAAW should be organized every year in LSG.	1 POINT
<b>7</b>	Pharmacists in all hospitals should be trained in AMS metrics calculation.	1 POINT
<b>8</b>	House to house awareness on AMR should be conducted through JPHN/ASHA/JHI etc with customized messages in local language	2 POINTS
<b>9</b>	All pharmacists in medical shops under LSG should be trained.	1 POINT
<b>10</b>	With the help of Agriculture officer, a micro-action plan should be there for the LSGI to educate farmers to reduce antimicrobials containing fungicides, pesticides, weedicides and to use organic methods instead.	1 POINT
<b>11</b>	Sale of Antibiotics without prescription in human side should be zero% in LSGI	2 POINTS

12	Sale of Antibiotics without veterinary doctors' prescription in animal husbandry side should be <5% in LSGI	2 POINTS
13	Cumulative Antibiotic footprint <sup>1</sup> in the LSGI [ all sectors combined] should decrease by 10% every year from baseline	2 POINTS
	<b>TOTAL SCORE</b>	20
	Antibiotic Literate LSGI	12 POINTS
	AMS Complaint LSGI	20 POINTS

<sup>1</sup>Calculation Antibiotic foot print for the LSGI- Antibiotic Footprint of an LSGI is the total amount of antibiotics consumed in that LSGI. This is estimated by combining the total amount of antibiotics consumed by humans and by animal agriculture. To estimate LSGI antibiotic footprint “from taking antibiotics” (grams per person per year), “the amount of tonnes/Kg of antibiotics people consume per year in the LSGI” will be captured from data from drugs control department or through pharmacists. This number is divided by “the total population in the LSGI” to estimate “the amount of grams of antibiotics each people consume per year in the LSGI”.

**Animal and Agriculture:** Data is gathered from records of LSGI sales data of antibiotics and potentially farm-level usage records. This data is will be reported in milligrams per Population Correction Unit (mg/PCU), where PCU is the estimated weight (biomass) of the total livestock population at risk. Gather data on the total mass of antibiotics sold or used in animal agriculture for the region in Kg/Tonnes. The metric mg/PCU can be calculated based on total animal biomass in LSGI.

LSGI Antibiotic footprint=total human consumption[mass]+ total animal consumption [mass]+total fisheries consumption [mass]+total agriculture consumption [mass]

Per capita Antibiotic footprint in the LSGI= LSGI Antibiotic footprint [total mass]/Total population in LSGI

### **Process of Evaluation**

For evaluating these criteria, institutions should perform the following activities and maintain proper records. The designated assessors will inspect the institution and verify the processes / records.

### **Methodology of Assessment**

- 1. First level assessment-By Institutional team**
- 2. Second level assessment by Block level team**
- 3. Verification of records of first and second level assessment by district team and State team.**
- 4. Declaration of antibiotic smart/AMS compliant status by state team**

### **Assessment to be conducted by.**

<ul style="list-style-type: none"><li>First level of assessment is done by Institution.</li></ul>
<ul style="list-style-type: none"><li>Second level of assessment to be done by either block team or district team whichever can be performed at earliest.</li></ul>
<ul style="list-style-type: none"><li>If DNO also takes part in institutional level assessment, there is no need for block level assessment.</li></ul>
<ul style="list-style-type: none"><li>Documentation of first level and second level assessment should be forwarded to State team for verification and declaration</li></ul>

**Institutional team:** - after doing gap analysis and gap filling, institutions will do a basic assessment using a check list and will prepare a report to inform block regarding readiness for assessment.

Following members will be part of the institutional assessment team:

- Medical officer I/C/ Superintendent /Nodal officer for AMR in the institution.
- ID specialist/ physician/ paediatrician/ Clinical Microbiologist/Surgeon/a medical officer other than charge MO, designated as the nodal officer for AMR in the institution.
- Pharmacologist (for tertiary care institution)
- Hospital Infection control Nurse.
- A pharmacist (preferably with Pharm D/ M Pharm/ B pharm) from the hospital.
- District Nodal Officer

[At least 3 members should be there in the institutional assessment team]

- a. **Block level team:** - will assess the institution using following criteria using a checklist and prepare report and submit to district.

Following members will be part of the block assessment team:

- Block MO/ one MO from Block designated by Block MO (An MO from a hospital should not be part of the block team while assessing the hospital in which he / she is working)
- One HIC nurse from Block/ one HIC nurse designated by Block MO (An HIC nurse should not be the part of the block team while assessing the hospital in which he / she is working)
- A pharmacist from the block area with Pharm D/ M Pharm/ B pharm (A pharmacist should not be the part of the block team while assessing the hospital in which he / she is working)
- Block epidemiologist
- District Nodal officer

*A particular institution to be assessed by at least 2 members from this team. Randomly a team from another Block may also be invited to assess antibiotic smart hospital/ Antibiotic literate LSGI status.*

**District Level team:** - Reports of assessment done by Institutional and Block level team should be reported to District team. District team will verify the assessment reports and if found satisfactory should forward to State team. There is no need for physical verification of records by District team. Physical verification should be conducted by district team only in two situations.

- If there is an undue delay for block level assessment after Institutional assessment, District direct assessment may be performed.
- Random Physical verification of Institutional assessment should be done by District team. At least 5 sites should be selected randomly every two months by district team for physical assessment. If there is a disparity in score by more than two points between institutional assessment and district random assessment, then that site should be allowed reassessment only after 6 months.

Following members will be part of the district team:

- DMO/ DPM/Deputy DMO in charge of AMR program.
- District Nodal Officer AMR Program (Physician/ Paediatrician/ Surgeon/ ID specialist - Specialist medical officer trained in infection prevention control and antibiotic stewardship program)
- District Clinical Microbiologist, AMR Program
- A Pharmacologist from medical college in the district (He/ She should not be part of the team while assessing the institution in which He/ She is working.
- District Nursing Officer

- District Mass media officer
- District Quality Assurance Officer, NHM

*A particular institution to be assessed by a team of at least 3 members from the above list including DNO.*

*DNO, AMR Program should not hold other program charge, including administrative charge of institution.*

**State level:** State team will go through all records and reports forwarded by assessment teams.

For secondary and tertiary care institutions, as per location, the assessment scheme can be modified as institutional assessment, district level assessment and state level verification.

2 levels of reviews will be conducted at state level.

**1<sup>st</sup> level: For DHS institutions and Private /Autonomous Institutions**

Director of health services- Chair

ADHS Medical & HA/ ADHS PH

SNO, AMRprogram hub & spoke Model under DHS

SNO, One health Under DHS

SPM, NHM

State Quality Assurance Officer, NHM

Atleast 3 members from above including first three should be present during verification.

**1<sup>st</sup> level: For DME institutions:**

1. Director of Medical education- Chair

2. JDME
3. Nodal officer of KARSAP [HOD Microbiology GMC Thiruvananthapuram]
4. HOD Infectious Diseases GMC Thiruvananthapuram.
5. HOD Pharmacology GMC Thiruvananthapuram
6. State PEID cell co-ordinator.

Atleast 3 members should be present during the verification

Second level:

Report of first level evaluation from DHS and DME side should be forwarded to ACS Health/Principal secretary health for final approval and declaration.

### **1. Assessment areas:**

1. **Hospital infection control committee activities-** The Institution should conduct HICC meetings once a month over the last 1 yr. The documented-monthly Minutes of HIC Committee meetings should be verified by assessor
2. **Antibiotic stewardship program [ASP] committee-** institution should conduct ASP meetings once in every month during last 6 months and the documented- Monthly Minutes of ASP Committee meetings should be verified by assessor.
3. **AWaRe metrics calculation & audit-** Quarterly audits to be conducted during last one year and documented. And the institution to achieve and maintain target of 95% from access group for OPD cases in Primary care institutions, 90% in secondary care institutions and 85% in secondary care institutions with functional superspeciality services/ tertiary care institutions during last 2 quarters- assessor to verify quarterly reports.
4. **Infection prevention and control [IPC] Training-** To be imparted to all categories of staff in the institution. Institution to ensure imparting training for any new staff posted in the institution within 3 months of joining & records maintained. Refresher trainings also to be given. Assessors to verify the training register & records.

5. **Antibiotic stewardship program Training**- To be imparted to doctors, PGs, interns, and pharmacists in the institution. Institution to ensure imparting training for any concerned staff posted in the institution within 3 months of joining & records maintained. Refresher trainings also to be given. Assessors to verify the training register & records.
6. **NQAS certification**- Institution should be NQAS certified or at least completed institutional, block level and district level assessment and going for NQAS certification in next 1 year.
7. **Prescription audit**: Assessors to verify the records.
  - a. **Institutional level**- Institution should conduct monthly prescription audit every month for at least last 6 months with verification of 50 prescriptions, analysis, report and findings recorded and maintained. Audit can be by either review of hard copies of prescriptions or from e health HMS module.
  - b. **District and Block level**- Random prescription audits should be conducted by district and block teams by randomly selecting one institution per block once in every quarter for at least last 6 months with verification of 100 prescriptions and findings recorded and maintained. Audit can be by either reviewing hard copies of prescriptions or from e health HMS module.
8. **Provision for proper disposal of expired and unused antibiotics**: A functional provision should be made for drug disposal by placing a colour coded Bin (Yellow) for use of patients/ relatives since at least last 3 months through IMAGE/ KEIL and records maintained- assessor to verify the records.
9. **IEC materials in Malayalam** regarding IPC, importance of AMR containment in one health approach, AWaRe classification etc to be properly exhibited. Assessors to physically verify the exhibited IECs.

#### **10. Awareness classes:**

- a. **Within the institution**- for patients/bystanders on AMR during last 6 months- month wise sessions and participant numbers- to be maintained as training register- assessor to verify the documents.
- b. **In educational institutions**- schools & colleges including professional colleges- for students/ teachers on AMR during last 6 months- month wise sessions and participant numbers- to be maintained as training register- assessor to verify the documents.
- c. **Line departments**- for staff/ PRI members on AMR during last 6 months- month wise sessions and participant numbers- to be maintained as training register- assessor to verify the documents.
- d. **Community level** - on AMR during last 6 months- month wise sessions and participant numbers- to be maintained as training register- assessor to verify the documents.
- e. **Awareness classes to field staff from Health dept and line departments:**  
On AMR during last 6 months- JHI/JPHN/MLSL/ASHA/ AWW/Kudumbasree workers- month wise sessions and participant numbers- records to be maintained- assessor to verify the documents.
- f. **Awareness to JAS members**- on AMR during last 6 months- month wise sessions and participant numbers- to be maintained as training register- assessor to verify the documents.
- g. **House to house campaign**- through sensitized field staff of health department and line department- done during last 6 months- month wise houses and households covered and number IEC materials if any supplied to household. - records to be maintained. Assessor to verify the records.

**11. Number of times the MO in charge/Superintendent/ representative attended the block level AMR committee meetings**- to be documented by Block MO& Team- assessor to verify the registers& minutes.

**12. Observing WAAW-** institution should observe WAAW at least since last 1 yr and records on activities conducted and participant numbers to be maintained- assessor to verify the records.

**13. Observing World Hand hygiene day and global hand washing day-** institution should observe World Hand hygiene day and global hand washing day at least since last 1 yr and records on activities conducted and participant numbers to be maintained- assessor to verify the records.

**14. Medical Shops-** Records on number of medical shops in the LSGI with number of medical shops with exhibited IEC insisting prescriptions from doctors for dispensing antibiotics & number of medical shop staff sensitized on AMR at least since last 6 months- records to be maintained. Assessor to verify the records.

Certification will be for 2 yrs from the date of certification. Regular quarterly follow-up by the institutional/ block team to be continued during this period to ensure that the institution is maintaining the targets for the Antibiotic Smart Hospital.

**COLOUR CODED GRADING OF INSTITUTIONS AS PER THE  
NUMBER OF CRITERIA ACHIEVED TO BE CLASSIFIED AS  
ANTIBIOTIC SMART HOSPITAL**

**1. PRIMARY CARE INSTITUTIONS**

	CRITERIA ACHIEVED	COLOUR CODE
	15	LIGHT BLUE
	12 TO 14	DARK BLUE
	8 TO 11	GREEN
	3 TO 7	YELLOW
	< 3	PINK

## 2. SECONDARY AND TERTIARY CARE INSTITUTIONS

	CRITERIA ACHIEVED	COLOUR CODE
	30	LIGHT BLUE
	20 TO 29	DARK BLUE
	15 TO 19	GREEN
	7 TO 14	YELLOW
	< 7	PINK

## 3. COLOUR CODING GRIDS FOR LOCAL SELF GOVERNMENT INSTITUTIONS WITH REGARD TO ANTIBIOTIC LITERATE STATUS

	CRITERIA ACHIEVED	COLOUR CODE
	20	LIGHT BLUE
	12 TO 19	DARK BLUE
	6 TO 11	GREEN
	LESS THAN 6	YELLOW

- Within 3 months of releasing the SOP, all institutions under DHS and DME should be colour coded as per the stipulated criteria.
- District and Block AMR committees should ensure that all the private hospitals under their administrative domain are also colour coded.
- The colour coding [except Light blue] assessment can be done by Institutional committee itself.
- A six-monthly assessment of colour coding of individual institutions should be conducted by Block/District/DME committee.

## **OUTCOME INDICATOR MATRIX TO BE ASSESSED BY DISTRICT AND BLOCK AMR COMMITTEE EVERY 6 MONTHS**

Total No Of Primary Care Hospitals In The District	Colour grid	No of hospitals in each colour grid in first 6 months (first half)	No of hospitals in each colour grid in next 6 months (second half)

Total No Of LSGIs In The District	Colour Grid	No of LSGs in each colour grid in first 6 months (first half)	No of LSGs in each colour grid in next 6 months (second half)

Block AMR committees should also assess institutions and LSGs under their jurisdiction using the same matrix every 6 months.

## **GRANULAR LEVEL OUTCOME INDICATORS TO BE ASSESSED BY BLOCK LEVEL AND DISTRICT AMR COMMITTEES**

- a) No of meetings conducted by Hospital infection control committee during each quarter
- b) No of institutions which conduct HICC meetings once a month over the last 1 yr.
- c) No of institution which conduct documented Antimicrobial stewardship meetings once in every month during last 1 year.
- d) No of institutions where AWaRe metrics calculation & audit conducted during each quarter
- e) No of staff trained on Infection prevention and control [IPC]
- f) No of Institution which conducted monthly prescription audit every month for at least last 6 months with verification of 50 prescriptions and findings recorded and maintained.
- g) No of Blocks where institutions conducted monthly prescription audit every month for at least last 6 months with verification of 50 prescriptions and findings recorded and maintained.
- h) No of Blocks where block level prescription audits should be conducted once in every quarter by block level team for at least last 6 months with verification of 100 prescriptions and findings recorded and maintained.
- i) No of District level prescription audits conducted by district team by randomly selecting one institution per block once in every quarter for at least last 6 months with verification of 100 prescriptions and findings recorded and maintained.
- j) No of institutions where provision for proper disposal of expired and unused antibiotics present by placing a colour coded Bin (Yellow) for use of patients/ relatives since at least last 3 months through IMAGE/ KEIL/nPROUD and records maintained-

- k) No of institutions where IEC materials in Malayalam regarding IPC, Importance of AMR containment in one health approach, AWaRe classification etc properly exhibited.
- l) No of awareness sessions for patients/bystanders on AMR during last 6 months- month wise sessions and participant numbers
- m) No of awareness sessions In educational institutions- schools & colleges including professional colleges- for students/ teachers on AMR during last 6 months- month wise sessions and participant numbers
- n) No of awareness sessions in Line departments- for staff/ PRI members on AMR during last 6 months- month wise sessions and participant numbers
- o) No of awareness sessions at Community level - on AMR during last 6 months- month wise sessions and participant numbers
- p) No of Awareness classes to field staff from Health dept and line departments:  
On AMR during last 6 months- JHI/JPHN/MLSL/ ASHA/ AWW/Kudumbasree workers- month wise sessions and participant numbers
- q) No of Awareness class to JAS members- on AMR during last 6 months- month wise sessions and participant numbers
- r) No of Houses visited through sensitized field staff of health department and line department- done during last 6 months- month wise houses and households covered and number IEC materials if any supplied to household.
- s) Number of times the MO in charge/Superintendent/ representative attended the block level AMR committee meetings
- t) No of Blocks where all institutions Observed WAAW
- u) No of institutions which Observed World Hand hygiene day and global hand washing day at least since last 1 yrs and records on activities conducted and participant numbers maintained
- v) Number of medical shops in the LSGD with exhibited IEC insisting prescriptions from doctors for dispensing antibiotics & number of medical shop staff sensitized on AMR at least since last 6 months

## **Annexure 1: Composition of Antimicrobial stewardship [AMS] Committees.**

- AMS committees at all tiers of healthcare should be chaired by Medical Superintendent/Medical Officer in charge of administration.
- Member Secretary should be an Infectious disease physician/ Physician /Paediatrician/Clinical Microbiologist/Clinical Pharmacologist/Medical officer trained in IPC / AMS.
- Representatives from clinical microbiology, Pharmacology, Community Medicine and all clinical specialities should be part of the committee.
- Infection control Nurses and clinical pharmacists [MPharm /BPharm/ Pharm D] should also be part of the committee
- Representative from MRD dept

## Annexure 2

### **Antimicrobial Stewardship Committee, Institution**

<b>Tertiary Care Prescriber's Checklist for Antibiotics</b>						
<b>Misuse leads to antibiotic resistance.</b>						
Do not start antibiotics in the absence of evidence of bacterial infection.						

	a)	b)	c)	d)	e)	f)
Antibiotic category:	Access/Watch /Reserve					
Indication:						
Dose:						
Route:						
Duration:						
Date of start:						
Tentative stop date:						

Date→	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12
Antibiotic												
a)												
b)												
c)												
d)												
e)												
f)												
Can you stop antibiotics? Y/N												
Assessed possibility of switch from Reserve → Watch/Access; Y/N												
Assessed possibility of switch from Watch→ Access; Y/N												
Assessed possibility of I/V to oral substitution? Y/N												
Assessed overlapping of spectrum? Y/N												
Culture and AST sent? Y/N												
Is the antibiotic susceptible in C/S report? Y/N												

D1: date of start of first antibiotic

Improve ACCESS antibiotic use.

Reduce use of WATCH and RESERVE antibiotics to reduce anti-microbial resistance.

### Annexure 3

#### Low Hanging Fruit Model of Antimicrobial Stewardship:

1. If antimicrobials are prescribed the reason for the same has to be documented in case record.
2. Should have written down customized plan for antimicrobial stewardship, diagnostic stewardship and infection control in the hospital.
3. If WHO Reserve antibiotics are prescribed, AMS team should be informed for performing prospective audit and feedback. For this Carbapenems should also be considered as Reserve drug.
4. If more than two antibiotics are combined, the reason for the same has to be documented.
5. If antibiotics are continued for more than 7 days, reason for the same has to be documented.
6. Antibiotics administered as part of surgical prophylaxis if continued for more than 2 doses, the reason should be documented.

7. Double anaerobic coverage is redundant. If double anaerobic coverage is used, the reason for the same has to be documented.

8. If de-escalation of antibiotics is not performed according to culture and susceptibility report, reason for the same has to be documented.