

**Ward Form** (Mandatory : Fill in one form for each ward included in the PPS)  
**Include only inpatients “admitted before and present at 08:00 hours” on the day of the PPS!**

Date of survey (dd/mm/year)	___/___/___	Person completing form (Auditor code) :			
Hospital name :		Ward Name :			
<b>Ward Type:</b> Tick the most appropriate type of department/ward	<b>Adult wards</b>		<b>Paediatric wards</b>		
	<input type="checkbox"/> <b>AMW</b> (General or mixed <b>Adult Medical Ward</b> ) <input type="checkbox"/> <b>HO-AMW</b> (Haematology-Oncology) <input type="checkbox"/> <b>T-AMW</b> (Transplant (BMT/solid)) <input type="checkbox"/> <b>P-AMW</b> (Pneumology) <input type="checkbox"/> <b>CAR-AMW</b> (Cardiology) <input type="checkbox"/> <b>NEU-AMW</b> (Neurology) <input type="checkbox"/> <b>REN-AMW</b> (Nephrology) <input type="checkbox"/> <b>ID-AMW</b> (Infectious Disease) <input type="checkbox"/> <b>DB-AMW</b> (Dermatology-burn wards) <input type="checkbox"/> <b>PSY-AMW</b> (Psychiatry) <input type="checkbox"/> <b>REH-AMW</b> (Rehabilitation) <input type="checkbox"/> <b>GER-AMW</b> (Geriatrics) <input type="checkbox"/> <b>LTC-AMW</b> (Long-Term care) <input type="checkbox"/> <b>OBG-AMW</b> (gynaecology-obstetrics) <input type="checkbox"/> <b>IS-AMW</b> (Isolation ward, e.g. COVID patients)	<input type="checkbox"/> <b>ASW</b> (General or mixed <b>Adult Surgical Ward</b> ) <input type="checkbox"/> <b>DIG-ASW</b> (Digestive tract surgery) <input type="checkbox"/> <b>ORT-ASW</b> (Orthopaedics-Trauma surg.) <input type="checkbox"/> <b>URO-ASW</b> (Urological surg.) <input type="checkbox"/> <b>CV-ASW</b> (Cardio-vascular surg.) <input type="checkbox"/> <b>NEU-ASW</b> (Neurosurgery) <input type="checkbox"/> <b>ONCO-ASW</b> (Oncology-cancer surg.) <input type="checkbox"/> <b>PLAS-ASW</b> (Plastic, reconstructive surg.) <input type="checkbox"/> <b>ENT-ASW</b> (Ear-nose-throat surg.)  <input type="checkbox"/> <b>AICU</b> (General or mixed <b>Adult Intensive Care Unit</b> ) <input type="checkbox"/> <b>MED-AICU</b> (Medical AICU) <input type="checkbox"/> <b>SUR-AICU</b> (Surgical AICU) <input type="checkbox"/> <b>CAR-AICU</b> (Cardiac AICU) <input type="checkbox"/> <b>AHDU</b> (High Dependency Unit)	<input type="checkbox"/> <b>PMW</b> (Paediatric Medical Ward) <input type="checkbox"/> <b>HO-PMW</b> (Haematology-Oncology) <input type="checkbox"/> <b>T-PMW</b> (Transplant (BMT/Solid)) <input type="checkbox"/> <b>PSW</b> (Paediatric Surgical Ward) <input type="checkbox"/> <b>PICU</b> (Paediatric Intensive Care Unit) <input type="checkbox"/> <b>ID-PMW</b> (Infectious Disease PMW)  <b>Neonatal wards:</b> <input type="checkbox"/> <b>NMW</b> (Neonatal Medical Ward) <input type="checkbox"/> <b>NICU</b> (Neonatal Intensive Care Unit)		
<b>Mixed Ward</b>	<input type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b>				
<b>Activity:</b> Tick as appropriate. In case of mixed wards, tick all encountered activities/specialities		<input type="checkbox"/> <b>Medicine</b>	<input type="checkbox"/> <b>Surgery</b>	<input type="checkbox"/> <b>Intensive Care</b>	
<b>Total number of admitted inpatients</b> (=all patients whether they receive an antimicrobial or not !) on the ward present at 8.00 am on day of PPS. For mixed departments, fill the total number of patients corresponding to each of the encountered activities.					
<b>Total number of beds</b> on the ward present at 8:00 am on day of PPS split up by activity. For mixed departments fill in the total number of beds corresponding to each of the encountered activities.					



**GLOBAL-PPS PATIENT Form** (Mandatory: Fill in one form per patient with an active/ongoing antimicrobial at 8am on the day of the PPS)

Ward Name/code	Activity <sup>1</sup> (M, S, IC)	Patient Identifier <sup>2</sup>	Survey Number <sup>3</sup>	Patient Age <sup>4</sup>			Current Weight* In kg	Neonate only (optional)		Sex M, F, U
				Years ≥ 2 years	Months 1-23 month	Days <1 month		Gestatio- nal age*	Birth weight* (kg)	

Treatment based on biomarker data or WBC		0 Yes – 0 No		Culture(s) sent to the lab to document infection* (Tick if yes)		
If yes, which: CRP, PCT, other or WBC <sup>5</sup>	Type biological fluid sample (Blood/urine/ other)	Most relevant value close to start antimicrobial Value	Unit <sup>6</sup>	<input type="checkbox"/> Blood	<input type="checkbox"/> Cerebrospinal fluid	<input type="checkbox"/> BAL (protected resp. specimen)
				<input type="checkbox"/> Urine	<input type="checkbox"/> Wound (surgery/biopsy)	<input type="checkbox"/> Sputum/bronchial aspirate
				<input type="checkbox"/> Stool	<input type="checkbox"/> Other type of specimen	

Antimicrobial Name <sup>7</sup>	1.	2.	3.	4.	5.
Start date of the antimicrobial* (dd/mm/yyyy)					
Single Unit Dose <sup>8</sup>	Unit (g, mg, IU, MU) <sup>9</sup>				
Doses/ day <sup>10</sup>	Route (P, O, R, I, IM) <sup>11</sup>				
Diagnosis <sup>12</sup> (see appendix II)					
Type of indication <sup>13</sup> (see appendix III)					
Reason in Notes (Yes or No) <sup>14</sup>					
Guideline Compliance (Y, N, NA, NI) <sup>15</sup>					
Is a stop/review date documented? (Yes/No)					
N missed doses* <sup>16</sup>	Reason* (S,P,D,O,M,U) <sup>17</sup>				

Treatment (E: Empirical; T: Targeted) <sup>18</sup>										
<b>The following resistance data is to be filled in only if the treatment choice is based on microbiology data (Treatment=T) available on the day of the PPS</b>										
Maximum 3 microorganisms (MO) to report	MO	R type**	MO	R type**	MO	R type**	MO	R type**	MO	R type**
Maximum 1 Resistance type by MO to report										
Insert codes (see Appendix IV, page 9)	MO 1									
	MO 2									
	MO 3									

**Resistance type\*\*** - choose between: MRSA<sup>19</sup>; MRCoNS<sup>20</sup>; PNSP<sup>21</sup>; MLS<sup>22</sup>; VRE<sup>23</sup>; ESBL (ESBL-producing Enterobacterales<sup>24</sup>); 3GCREB (3<sup>rd</sup> generation cephalosporin resistant Enterobacterales); CRE (Carbapenem-resistant Enterobacterales<sup>25</sup>); ESBL-NF (ESBL-producing non fermenter Gram-negative bacilli<sup>26</sup>); CR-NF (Carbapenem-resistant non fermenter Gram-negative bacilli<sup>27</sup>); other MDRO<sup>28</sup>; Azoles<sup>29</sup>. Encode Microorganism also if resistance type is unknown.

**Note:** \* Current weight, Gestational age (in number of weeks), Birth weight, Start date of the antimicrobial and Cultures sent to the lab, missed doses are **optional variables**.



- <sup>1</sup> **Activity:** M=medicine (including Psychiatric cases, etc.), S=surgery (including orthopaedics, obstetrics and gynaecology, etc.), IC=intensive care
- <sup>2</sup> **Patient Identifier:** A unique patient identifier that allows linkage to patient records at local level for more detailed audit. This unique identifier will not be included in the online database.
- <sup>3</sup> **Survey Number:** A unique non-identifiable number given by WebPPS for each patient entered in the database. Leave blank but note down the number after the patient data has been recorded in the online database. The number is displayed once (and only) after the patient data has been recorded in the online database.
- <sup>4</sup> **Patient Age:** If the patient is 2 years old or older, specify only the number of years, if between 1 and 23 months specify only the number of months, if less than 1 month specify the number of days.
- <sup>5</sup> If treatment based on biomarker, specify which one: **CRP** (C-reactive protein), **PCT** (Procalcitonin), **Other** lab-based biomarker other than CRP, PCT; or **WBC** (white blood cell count).
- <sup>6</sup> The unit for the biomarker CRP or PCT value expressed in mg/L, µg/L, ng/L, mg/dL, ng/dL, ng/mL, µg/mL, nmol/L. In thousand per microliter (µL) for WBC count (normal number of WBCs in the blood is 4,500 to 11,000 WBCs per microliter). For a conversion calculator see: <http://unitslab.com/node/67> (CRP) and <http://unitslab.com/node/103> (procalcitonin).
- <sup>7</sup> **Antimicrobial Name:** Insert generic name.
- <sup>8</sup> **Single Unit Dose:** Numeric value for dose per administration (in grams, milligrams, IU or MU).
- <sup>9</sup> **Unit:** The unit for the dose (g, mg, IU or MU)
- <sup>10</sup> **Doses/day:** If necessary provide fractions of doses: (e.g., every 16h = 1.5 doses per day, every 36h = 0.67 doses per day, every 48h = 0.5 doses per day)
- <sup>11</sup> **Route:** Routes of administration are: Intravenous and intrathecal and intraperitoneal=P, Intramuscular=IM, Oral=O, Rectal=R, Inhalation=I. See also protocol page 18
- <sup>12</sup> See **diagnoses** groups list (Appendix II)
- <sup>13</sup> See **Indication** codes (Appendix III)
- <sup>14</sup> **Reason in Notes:** A diagnosis / indication for treatment is recorded in the patient's documentation (treatment chart, notes, etc.) at the start of antibiotic course (Yes or No)
- <sup>15</sup> **Guideline Compliance:** Refers to antibiotic choice (not route, dose, duration etc) in compliance with **local** guidelines (Y: Yes; N: No; NA: Not Assessable because of absence of local guidelines for the specific indication; NI: No Information because diagnosis/indication is unknown)
- <sup>16</sup> **N missed doses:** Number of missed doses from start date of current antibiotic treatment until the date of the survey. If no doses missed, report as 0. If unknown, leave field empty.
- <sup>17</sup> **Reason:** Reason for missed doses: due to **stock** out (S), patient could not **purchase** (P), patient **declined/refused** (D), **other** reason (O), **multiple** reasons (M), **unknown** (U).
- <sup>18</sup> **Treatment: Report "E"** 1) when the antibiotic is being used as per a local guideline, treatment by which experience has proved to be beneficial; 2) when a culture or microbiological examination is not done ; 3) when a microbiological examination is done, BUT not yet available on the day of the PPS; or the result was not assessable. **Report "T"** if based upon microbiological result; Report also "T" if the micro-organism yielded susceptible results.
- <sup>19</sup> Methicillin-resistant *Staphylococcus aureus* (MRSA)
- <sup>20</sup> Methicillin-resistant coagulase negative staphylococci (MRCoNS)
- <sup>21</sup> Penicillin-non susceptible *Streptococcus pneumoniae* (PNSP)
- <sup>22</sup> Macrolide-lincosamide-streptogramin resistance in *Streptococcus* isolates (MLS)
- <sup>23</sup> Vancomycin-resistant enterococci (VRE)
- <sup>24</sup> Bacteria, producing extended-spectrum beta-lactamases (ESBL)
- <sup>25</sup> Carbapenem-resistant *Enterobacteriales* (CRE) – enteric bacteria resistant to imipenem, meropenem or other carbapenems
- <sup>26</sup> ESBL Non fermenters (ESBL-NF): *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Burkholderia spp.*, *Stenotrophomonas maltophilia* multidrug resistant
- <sup>27</sup> Carbapenem-resistant Nonfermenters (CR-NF) – nonfermenters resistant to imipenem, meropenem or other carbapenems
- <sup>28</sup> Multi-drug resistant (MDR) pathogens, others than the listed above
- <sup>29</sup> Azoles: if the medicinal product chosen is intended to treat infections caused by azole-resistant fungi and yeasts (e.g. *Candida spp.*, *Aspergillus spp.*)

## HOSPITAL PROFILE – “Optional data” to be collected at hospital level

Provide, if available, for each indicator the year of reference and the number “at hospital level”.

	Year (yyyy)	Number
Hospital size : number (N) beds		
Number of admissions (or discharges)/year		
Number of patient days or occupied bed-days/year		
Number of consumption of alcohol-based hand rub in litres/year		
Number of “patients” with blood culture test/year		
Number of stool tests for <i>Clostridioides difficile</i> Infections/year		
Number of FTE* antimicrobial stewardship physicians		
Number of FTE antimicrobial stewardship pharmacists		
Number of FTE Infection prevention control (IPC) doctors		
Number of FTE Infection prevention control (IPC) nurses		

\*FTE=Full-Time Equivalent units or equivalent employees working full-time on antimicrobial stewardship activities or IPC. E.g. if 3 employees work 20 hours, 30 hours and 10 hours/week=total 60 hours/week and assuming that a full-time employee works 40hours/week, the FTE calculation equals 60hours/40hours; or 1.5 FTE

Indicate for each indicator at hospital level if available ‘yes’ or ‘no’.

	Yes	If yes: Year of introduction	No
Presence of formally defined AMS* program	<input type="checkbox"/>		<input type="checkbox"/>
Presence of active AMS group (committee and operational team)	<input type="checkbox"/>		<input type="checkbox"/>
Presence of formally defined IPC* program	<input type="checkbox"/>		<input type="checkbox"/>
Presence of active IPC group (committee and operational team)	<input type="checkbox"/>		<input type="checkbox"/>
Presence of regular IPC (annual, quarterly) feedback to health care workers	<input type="checkbox"/>		<input type="checkbox"/>
Clinical Infectious Disease (ID) consultation available	<input type="checkbox"/>		<input type="checkbox"/>
Specialized AMS or ID training available for physicians/pharmacists	<input type="checkbox"/>		<input type="checkbox"/>
Presence of microbiology lab support on site	<input type="checkbox"/>		<input type="checkbox"/>
Availability of microbiology lab on weekends/holidays	<input type="checkbox"/>		<input type="checkbox"/>
Availability of periodic cumulative antimicrobial susceptibility report**	<input type="checkbox"/>		<input type="checkbox"/>
If yes, is susceptibility report distributed to prescribers?	<input type="checkbox"/>		<input type="checkbox"/>
Availability of standardized criteria for appropriate IV-PO switch	<input type="checkbox"/>		<input type="checkbox"/>
Software available for Infection Control and/or AMS	<input type="checkbox"/>		<input type="checkbox"/>
Presence of bundles or checklists to decrease CAUTI, VAP, CR-BSI, CDIF, SSI°	<input type="checkbox"/>		<input type="checkbox"/>

\*AMS=Antimicrobial Stewardship; IPC=Infection Prevention and Control; \*\* local epidemiological report

° CAUTI=Catheter Associated Urinary Tract Infection; VAP=Ventilator Associated Pneumonia; CR-BSI=Catheter-related Blood Stream Infection; CDIF= Clostridioides Difficile Infection; SSI=Surgical Site Infections.

Tick for each indicator if available at hospital level.

Availability of <b>written policy to document the antimicrobial prescription</b> in the medical record	<input type="checkbox"/> Yes, all wards	<input type="checkbox"/> Yes, selected wards	<input type="checkbox"/> Yes, in ICU	<input type="checkbox"/> No
Availability of <b>formal restriction procedure</b> (defined formulary, restrictive list) for certain antimicrobials	<input type="checkbox"/> Yes, all wards	<input type="checkbox"/> Yes, selected wards	<input type="checkbox"/> Yes, in ICU	<input type="checkbox"/> No
Presence formal review of antimicrobial <b>after 48 hours (post-prescription review)</b>	<input type="checkbox"/> Yes, all wards	<input type="checkbox"/> Yes, selected wards	<input type="checkbox"/> Yes, in ICU	<input type="checkbox"/> No
Presence of <b>antimicrobial ward rounds</b> (Review of antimicrobial orders for assigned patients)	<input type="checkbox"/> Yes, all wards	<input type="checkbox"/> Yes, selected wards	<input type="checkbox"/> Yes, in ICU	<input type="checkbox"/> No
Who can prescribe antibiotics in your hospital?	<input type="checkbox"/> Physician	<input type="checkbox"/> Pharmacist	<input type="checkbox"/> Nurse	<input type="checkbox"/> Other

## Appendix I: Combination anti-infective agents

### Combinations of an antibiotic and a beta-lactamase inhibitor:

- Do not report the dose of the beta-lactamase inhibitor

Ampicillin and beta-lactamase inhibitor: **report only ampicillin dose** (J01CR01)

Amoxicillin and beta-lactamase inhibitor: **report only amoxicillin dose** (J01CR02)

Ticarcillin and beta-lactamase inhibitor: **report only ticarcillin dose** (J01CR03)

Piperacillin and beta-lactamase inhibitor: **report only piperacillin dose** (J01CR05)

Imipenem and beta-lactamase inhibitor: **report only imipenem dose** (J01DH51)

Panipenem and betamipron: **report only panipenem** (J01DH55)

Example:

Amoxicillin and beta-lactamase inhibitor 1.2g IV → 1g (amoxicillin) + 200mg (clavulanic acid), **report only 1 g as unit dose**

Piperacillin and beta-lactamase inhibitor 4.5g IV → 4g (piperacillin) + 500mg (tazobactam), **report only 4 g as unit dose**

### Other combinations of multiple antimicrobial substances:

J01EE01 Sulfamethoxazole and Trimethoprim: **report the total amount of sulfamethoxazole and trimethoprim**

Example:

Co-trimoxazole 960mg: (sulfamethoxazole. 800mg + trimethoprim 160mg), **report 960mg**

Further information on agents included for the Global-PPS is available in the antimicrobial list. Only antimicrobial substance name needs to be written down, NOT the ATC codes! (excel file - available on website under documents: Global-PPS\_antimicrobial\_list.xlsx) <http://www.global-pps.com/>

**Appendix II - Diagnostic therapeutic / treatment codes (what the clinician aims at treating)**

Site	Codes	Examples
CNS	CNS	Infections of the <b>C</b> entral <b>N</b> ervous <b>S</b> ystem
EYE	EYE	Therapy for Eye infections e.g., Endophthalmitis
ENT	ENT	Therapy for <b>E</b> ar, <b>N</b> ose, <b>T</b> hroat infections including mouth, sinuses, larynx
	AOM	Acute otitis media
RESP	LUNG	Lung abscess including aspergilloma
	URTI	<b>U</b> pper <b>R</b> espiratory <b>T</b> ract viral <b>I</b> nfections including influenza but not ENT
	Bron	Acute <b>B</b> ronchitis or exacerbations of chronic bronchitis
	Pneu	<b>P</b> neumonia or LRTI (lower respiratory tract infections)
	COVID-19	Coronavirus disease caused by SARS-CoV-2 infection
	TB	Pulmonary TB (Tuberculosis)
	CF	Cystic fibrosis
CVS	CVS	<b>C</b> ardio <b>V</b> ascular <b>S</b> ystem infections: endocarditis, endovascular device e.g pacemaker, vascular graft
GI	GI	Gastro-Intestinal infections (salmonellosis, <i>Campylobacter</i> , parasitic, etc.)
	IA	Intra- <b>A</b> bdominal sepsis including hepatobiliary, intra-abdominal abscess <i>etc.</i>
	CDIF	<i>Clostridioides difficile</i> infection
SSTBJ	SST	<b>S</b> kin and <b>S</b> oft <b>T</b> issue: Cellulitis, wound including surgical site infection, deep soft tissue not involving bone e.g., infected pressure or diabetic ulcer, abscess
	BJ	<b>B</b> one/ <b>J</b> oint Infections: Septic arthritis (including prosthetic joint), osteomyelitis
UTI	Cys	Lower Urinary Tract Infection (UTI) : cystitis
	Pye	Upper UTI including catheter related urinary tract infection, pyelonephritis
	ASB	Asymptomatic bacteriuria
GUOB	OBYG	<b>O</b> bstetric/ <b>G</b> ynaecological infections, <b>S</b> exually <b>T</b> ransmitted <b>D</b> iseases ( <b>STD</b> ) in women
	GUM	<b>G</b> enito- <b>U</b> rinary <b>M</b> ales + Prostatitis, epididymo-orchitis, STD in men
	Syph	Syphilis
No defined site (NDS)	BAC	Bacteraemia or fungaemia with no clear anatomic site and no shock
	SEPSIS	Sepsis of any origin (eg urosepsis, pulmonary sepsis etc), sepsis syndrome or septic shock with no clear anatomic site. Include fungaemia (candidemia) with septic symptoms
	Malaria	
	HIV	Human immunodeficiency virus
	PUO	Pyrexia of <b>U</b> nknown <b>O</b> rigin - Fever syndrome with no identified source or site of infection
	PUO-HO	Fever syndrome in the non-neutropenic <b>H</b> aemato- <b>O</b> nco patient with no identified source of pathogen
	FN	<b>F</b> ever in the <b>N</b> eutropenic patient
	LYMPH	<b>L</b> ymphatics as the primary source of infection eg suppurative lymphadenitis
	Sys-DI	Disseminated infection (viral infections such as measles, CMV ...)
	Other	Antimicrobial prescribed with documentation but no defined diagnosis group
	UNK	Completely <b>U</b> nknown Indication
PROK	Antimicrobial (e.g. erythromycin) prescribed for <b>P</b> rokinetic use	

### Appendix II, next - Codes for surgical and medical prophylaxis

Site	Codes	Examples
CNS	Proph CNS	Prophylaxis for CNS (neurosurgery, meningococcal)
EYE	Proph EYE	Prophylaxis for Eye operations
ENT	Proph ENT	Prophylaxis for <b>E</b> ar, <b>N</b> ose, <b>T</b> hroat ( <b>Surgical or Medical prophylaxis=SP/MP</b> )
RESP	Proph RESP	Pulmonary surgery, prophylaxis for <b>R</b> espiratory pathogens e.g. for aspergillosis
CVS	Proph CVS	<b>C</b> ardiac or <b>V</b> ascular Surgery, endocarditis prophylaxis
GI	Proph GI	<b>G</b> astro- <b>I</b> ntestinal tract surgery, liver/biliary tree, GI prophylaxis in neutropenic patients or hepatic failure
SSTBJ	Proph BJ	Prophylaxis for SST, for plastic or orthopaedic surgery ( <b>B</b> one or <b>J</b> oint)
UTI	Proph UTI	Prophylaxis for urological surgery ( <b>SP</b> ) or recurrent <b>U</b> rinary <b>T</b> ract <b>I</b> nfection ( <b>MP</b> )
GUOB	Proph OBGY	Prophylaxis for <b>OB</b> stetric or <b>GY</b> naecological surgery (SP: section caesarean, no episiotomy; MP: carriage of group B streptococcus)
No defined site (NDS)	MP-GEN	Drug is used as <b>M</b> edical <b>P</b> rophylaxis in <b>g</b> eneral, without targeting a specific site, e.g. antifungal prophylaxis during immunosuppression

### Appendix II, next - Codes for Neonates

Site	Codes	Examples
Neonatal	MP-MAT	<b>M</b> edical <b>P</b> rophylaxis for <b>M</b> aternal risk factors e.g. maternal prolonged rupture membranes
	NEO-MP	Drug is used as <b>M</b> edical <b>P</b> rophylaxis for <b>N</b> ewborn risk factors e.g. VLBW (Very Low Birth Weight) and IUGR (Intrauterine Growth Restriction)
	CLD	Chronic lung disease: long-term respiratory problems in premature babies (bronchopulmonary dysplasia)

## APPENDIX III - Type of Indication

<b>CAI</b> Community acquired infection	Symptoms started ≤ 48 hours from admission to hospital (or present on admission).		
<b>HAI</b> Healthcare Associated Infection: Symptoms start <b>48 hours after admission</b> to hospital	<b>Device related HAI</b>	<b>HAI1</b> Post-operative surgical site infection (within: 30 days of surgery OR; 90 days after implant surgery)	
		<b>HAI2 Intervention</b> related infections of mixed origin (mixed infection such as mix of CVC-BSI, PVC-BSI, VAP, CAUTI; or related to tubes/drains)	
		<b>HAI2-CVC-BSI</b> (Central Venous <b>Catheter</b> -related Blood Stream Infection)	
		<b>HAI2-PVC-BSI</b> (Peripheral Vascular <b>Catheter</b> -related Blood Stream Infection)	
		<b>HAI2-VAP</b> (Ventilator Associated <b>Pneumonia</b> )	
		<b>HAI2- CAUTI</b> (Catheter Associated <b>Urinary</b> Tract Infection)	
		<b>HAI3</b> <i>C. difficile</i> associated diarrhoea (CDAD) (>48 h post-admission or <30 days after discharge from previous admission episode.	
		<b>HAI4</b> Other hospital acquired infection of mixed or undefined origin (HAP, UTI, BSI)	
		<b>HAI4-BSI</b> Blood Stream Infection, not intervention related	
		<b>HAI4-HAP</b> Non-intervention related Hospital Acquired <b>Pneumonia</b> (not VAP)	
<b>HAI4-UTI</b> Urinary Tract Infection, not intervention related			
<b>HAI5</b> Patient <b>referred</b> from another to the participating hospital with an existing HAI determined and documented on Day 1 of admission or patient <b>readmitted</b> <48h after stay in another hospital, with infection present on current admission or within 48 hours (patient with infection from another hospital).			
<b>HAI6</b> Infection present on admission from long-term care facility (LTCF) or Nursing Home*			
<b>SP</b> Surgical prophylaxis**	<b>SP1</b> Single dose	<b>SP2</b> one day	<b>SP3</b> >1 day
For <b>surgical patients</b> , administration of prophylactic antimicrobials <b>should be checked in the previous 24 hours</b> in order to encode the duration of prophylaxis as either one dose, one day (= multiple doses given within 24 hours) or >1 day. See more explanation and <b>table</b> in <b>protocol page 8</b> !			
<b>MP</b> Medical prophylaxis	For example long term use to prevent UTI's or use of antifungals in patients undergoing chemotherapy or penicillin in asplenic patients <i>etc.</i>		
<b>OTH</b> Other	For example erythromycin as a motility agent (motilin agonist).		
<b>UNK</b>	Completely unknown indication		

### Select 1 possibility for each reported antimicrobial

\*Long-term care facilities represent a heterogeneous group of healthcare facilities, with care ranging from social to medical care. These are places of collective living where care and accommodation is provided as a package by a public-agency, non-profit or private company (e.g. nursing homes, residential homes).

\*\*Surgical prophylaxis includes those antibiotics prescribed before and after a surgical intervention (surgery in the operation room). The code SP1, SP2, SP3 goes with a diagnostic code preceded by 'proph' (e.g. 'proph GI')



## APPENDIX IV – list of micro-organisms by resistance type

Microorganisms (MO)	Code	Resistance type - 1	Resistance type - 2	Resistance type - 3
<i>Staphylococcus aureus</i>	STAAUR	MRSA		
<i>Staphylococcus epidermidis</i>	STAEPI	MRCoNS		
<i>Staphylococcus haemolyticus</i>	STAHAE	MRCoNS		
Other coagulase-negative staphylococci (CNS)	STAOTh	MRCoNS		
<i>Streptococcus pneumoniae</i>	STRPNE	PNSP	MLS	
<i>Streptococcus spp.</i> , other or not specified	STROTH	MLS		
<i>Enterococcus faecalis</i>	ENCFAE	VRE		
<i>Enterococcus faecium</i>	ENCFAI	VRE		
<i>Enterococcus spp.</i> , other or not specified	ENCOTH	VRE		
<i>Neisseria meningitidis</i>	NEIMEN	Other MDRO		
<i>Neisseria gonorrhoeae</i>	NEIGON	Other MDRO		
<i>Listeria monocytogenes</i>	LISMON	Other MDRO		
<i>Citrobacter freundii</i>	CITFRE	ESBL	3GCREB	CRE
<i>Citrobacter spp.</i> , other or not specified	CITOTH	ESBL	3GCREB	CRE
<i>Enterobacter cloacae</i>	ENBCLO	ESBL	3GCREB	CRE
<i>Enterobacter spp.</i> , other or not specified	ENBOTH	ESBL	3GCREB	CRE
<i>Escherichia coli</i>	ESCCOL	ESBL	3GCREB	CRE
<i>Klebsiella aerogenes</i>	KLEPAE	ESBL	3GCREB	CRE
<i>Klebsiella pneumoniae</i>	KLEPNE	ESBL	3GCREB	CRE
<i>Klebsiella oxytoca</i>	KLEOXY	ESBL	3GCREB	CRE
<i>Klebsiella spp.</i> , other or not specified	KLEOTH	ESBL	3GCREB	CRE
<i>Proteus mirabilis</i>	PRTMIR	ESBL	3GCREB	CRE
<i>Proteus vulgaris</i>	PRTVUL	ESBL	3GCREB	CRE
<i>Proteus spp.</i> , other or not specified	PRTOTH	ESBL	3GCREB	CRE
<i>Serratia marcescens</i>	SERMAR	ESBL	3GCREB	CRE
<i>Serratia spp.</i> , other or not specified	SEROTH	ESBL	3GCREB	CRE
<i>Morganella spp.</i>	MOGSPP	ESBL	3GCREB	CRE
<i>Providencia spp.</i>	PRVSPP	ESBL	3GCREB	CRE
<i>Salmonella enteritidis</i>	SALENT	ESBL	3GCREB	
<i>Salmonella typhi</i> or <i>paratyphi</i>	SALTYP	ESBL	3GCREB	
<i>Salmonella typhimurium</i>	SALTYM	ESBL	3GCREB	
<i>Salmonella spp.</i> , other or not specified	SALOTH	ESBL	3GCREB	
<i>Shigella spp.</i>	SHISPP	ESBL	3GCREB	
<i>Yersinia spp.</i>	YERSPP	ESBL	3GCREB	
Other <i>Enterobacterales</i>	ETBOTH	ESBL	3GCREB	CRE
<i>Acinetobacter baumannii</i>	ACIBAU	ESBL-NF	CR-NF	
<i>Acinetobacter spp.</i> , other or not specified	ACIOTH	ESBL-NF	CR-NF	
<i>Pseudomonas aeruginosa</i>	PSEAER	ESBL-NF	CR-NF	
<i>Stenotrophomonas maltophilia</i>	STEMAL	CR-NF		
<i>Burkholderia cepacia</i>	BURCEP	CR-NF		
<i>Burkholderia pseudomallei</i>	BURPSE	CR-NF		
<i>Burkholderia mallei</i>	BURMAL	CR-NF		
<i>Pseudomonadaceae family</i> , other or not specified	PSEOTH	ESBL-NF	CR-NF	
<i>Campylobacter spp.</i>	CAMSPP	Other MDRO		
<i>Helicobacter pylori</i>	HELPLYL	Other MDRO		
<i>Clostridioides difficile</i>	CLODIF	Other MDRO		
<i>Clostridium spp.</i> , other or not specified	CLOOTH	Other MDRO		
Other bacteria Mycobacterium, atypical	MYCATY	Other MDRO		
<i>Mycobacterium tuberculosis</i> complex	MYCTUB	Other MDRO		
Other bacteria	OTHER	Other MDRO		
<i>Candida spp.</i>	CANSPP	Azoles		
<i>Aspergillus spp.</i>	ASPSPP	Azoles		
Other fungi	FUNG_	Azoles		