N	Category	Topic	Question	Answer	Date	Origin	Ref
I1	Indicators	H3 form optional?	Is the H3 form in the PPS 2016-2017 protocol needed if you submit the ward forms (further clarity needed to that on page 11)?	No, it is not. If structure and process indicators are collected at the ward level, the H3 form is optional, meaning these data can but should not be collected. The advantage of collecting them is that they provide a hospital-wide picture for these indicators even if the information for a number of wards is missing.	05.07.2016	VT	
I2	Indicators	Multimodal strategy - hospital-wide	What does hospital-wide mean? How many wards need to have a given component/measure in place before it can be ticked as a yes?	In this context, the term 'hospital-wide' does not mean that the practice needs to be implemeted in all wards of the hospital. Full implementation in at least one ward or specialty other than ICU is sufficient as long as it is endorsed by the institution (not an initiative of a single individual or unit). Certain prevention measures tend to be specialty-specific anyway (e.g. SSI prevention on surgery wards).	05.07.2016	VT	
I3	Indicators	Multimodal strategy - training	Training – what is regular? Is once a year induction enough or even too ambitious?	The PPS expert group agreed on a minimum frequency of once per year.	05.07.2016	VT	
I4	Indicators	Multimodal strategy - feedback	Verbal informal feedback between 2 clinicians should not count – needs to be formal feedback planned as part of the IPC process, usually a report and at least annually? We suggest that verbal feedback as part of an audit should be part of audit, whereas here, we would like to know about (yearly or more frequently) written feedback (e.g. as part of an institutional IPC report).	Agreed by PPS expert group. Only report yes in case of (yearly or more frequently) written feedback (e.g. as part of an institutional IPC report). Verbal feedbacl as part of an audit is not sufficient.	05.07.2016	VT	
I5	Indicators	Multimodal strategy - bundle	Bundle implementation – if there is one ward trialling a bundle led by a local clinician rather than as part of a formally endorsed hospital programme, does this count? We think no.	Agreed by PPS expert group, this does not count. The bundle should be implemented as part of the hospital IPC programme.	05.07.2016	VT	
I6	Indicators	Multimodal strategy - audit	Interpretation of audit varies – protocol should specify that this is measuring PRACTICE against a standard such as SSI prevention measures or AM practice (provide some examples: auditing intubation/catheterisation, tube care/catheter care eg) and giving individual feedback.	Clarified in protocol (v5.3). Includes giving verbal feedback, e.g. between two clinicians. However, note that formal feedback of printed/written results should be reported under feedback.	05.07.2016	VT	
I7	Indicators	Microbiology services during the week-end	Microbiology service: shouldn't it be specified that this is not about processing on Saturdays and Sundays but also (or exclusively) results being returned on these days? Now it states processing AND reporting, which may be too exclusive.	It is both processed and reported, but we will add that receiving back results is within standard turnaround time.	05.07.2016	VT	
I8	Indicators	Closed beds reserved for emergencey preparedness	Closed beds reserved for emergency preparedness such as VHF cases- should these count in the denominator? We suggest no	No, agreed, as these beds do not generate (in)patient-days.	05.07.2016	VT	
I9	Indicators	AHR dispensers vs AHR bottles in pocket	Dispensers at point of care or ABHR in pocket: should both be counted if the hospital policy is for dispenser at point of care, however medical staff and nurses sometimes have non hospital supplied samples in their pockets? Shouldn't there be an additional question about local policy? There may be a potential difficulty in analysing the data in the end (dispenser hospitals should be measured against other dispenser hospitals; bottle hospitals should be measured against other bottle hospitals).	Some hospitals have a policy of dispensers in pocket, bedside or both. It is therefore recommended to always measure both indicators. An additional variable on the policy is not added, as the purpose is to measure the practice (which may differ from the policy) and no more fundamental changes (such as new variables) are made in the PPS protocol after v5.1 (12 March 2016). The analysis will indeed take both measures into account simultaneously.	05.07.2016	VT	
I10	Indicators	Temporarily removed AHR dispensers	Alcohol-based hand rub is sometimes removed from point of care for a good reason e.g. CDI outbreak, demented patient, patient with alcohol issues. How should this be recorded in the ward survey?	If the AHR is normally at point of care but has been removed due to good clinical reasons, then count this as being present in the ward survey of AHR at point of care.	31.08.2016	UK	
I11	Indicators	Number of healthcare workers in the ward	Number of HCWs in the ward at the time of PPS – should physio and psychologist be counted?	The purpose of this variable is to measure the denominator of those carrying AHR dispensers. Therefore, HCWs should not be included if there is no information on the carriage of alcohol hand rub dispensers for these HCWs. But in principle, anyone who can theoretically be carrying AHR should be included.	05.07.2016	VT	
I12	Indicators	Stool samples from other hospitals/outpatient clinics	Our hospital/laboratory tests stool specimens from other hospitals and our outpatient clinics. Should we include these in the number of stool tests for CDI?	Answer: No, only include tests from admitted patients, i.e. 'hospitalised' in your hospital. The 'number of stool specimens tested' will be used to calculate the testing rate in each hospital, i.e. they will be a numerator. Therefore, only include tests performed on specimens from patients that are included in your hospital's denominators, e.g. 'No. of discharges (or admissions)', 'No. of patient-days' should be included.	09.03.2016	ECDC	

N	Category	Topic	Question	Answer	Date	Origin	Ref
I13	Indicators	Formal procedure to review appropriateness of an antimicrobial within 72 hours	Q1. Can a written policy recommending that treating physicians should perform post-prescripton reviews themselves be counted? The definition of the indicator seems not to allow this. Q2. Should there be a minimum activity? How frequently does the post-prescription review need to be carried out on a ward to meet this at the ward level? Q3. Should this be only for broad spectrum and reserve AM, or IV AM only, or in ICU etc? Or is this for all AM? Q4. Can an ID physician perform post-prescription review in his own unit?	Q1. The indicator on post-prescription review has been the subject of much discussion. It refers to post-prescription audit (or prospective audit and feedback) by a person other than the treating physician and not to the routine re-assessment done by the treating team.Perhaps the term audit would be clearer and would avoid confusion with the review by the treating team, but the term “review” has also been used for the same activity (Cosgrove 2012) and was also the term used by TATFAR. On the other hand, it should be noted that any post-prescription review activity, also by the treating team, is captured in the PPS by the new variables measuring changes in antimicrobial therapies. So it is possible to have no formal procedure in place while antimicrobial use data show evidence of intensive post-prescription review activity (by the treating physicians) in practice. Q2. Although a treshold for minimum activity obviously depends on the number of treatments, the PPS expert group agreed to put the treshold at minimum twice per week. Q3. It may be for all AM, but as stated in the definition, “The procedure should at least address the prescription of broad-spectrum or reserve antimicrobials” and the procedure “should be documented and adopted by the hospital management and should be performed by a person or team other than the treating physician” . The procedure can exist in “YESALL = Yes, in all wards; YESSEL = Yes, in selected wards only (usually, but not necessarily, including ICU); YESICU = Yes, in ICU only”. Can be reported at the hospital level (form H3) or by ward (form W). Q4. Not for his own patients.	05.07.2016	FR, UK	
A1	Antimicrobial use	Change in antimicrobials for outpatient antibiotic therapy.	How should a change in AM due to OPAT (Outpatient Parenteral Antibiotic Therapy) be recorded? Patient would still need to be inpatient but moved to OPAT prior to discharge. Not a change due to escalation or de-escalation, just that the new AM is more appropriate in OPAT setting.	Record as OU=change for other or unknown reason, unless any of the other categories (escalation or de-escalation) applies.	25.08.2016	UK	
A2	Antimicrobial use	Adding an antimicrobial to an existing one = escalation?	Is adding an antimicrobial to an existing one considered as escalation in following scenarios? Q1. A second antimicrobial is added for the same indication, e.g. 19/1 start meropenem for PN, 20/1 vancomycin added. Q2. A second antimicrobial is added for a new indication while the first indication continues e.g. 19/1 UTI, start meropenem, 20/1 PN, meropenem continued, vancomycin added (notes: "add vanco to cover gram-positives"). Q3. A second antimicrobial is added when an aspecific diagnosis (e.g. SIRS or CSEP) is replaced by a more specific one (e.g. BAC) e.g. 19/1 CSEP start meropenem for PN, 20/1 CSEP-> BSI, vancomycin added.	Q1. Escalation, for both antimicrobials. Q2. This is not an escalation. The treatment for pneumonia starts on 20/1, and both vancomycin as meropenem are 'No change'. Note that in this case a second record needs to be added for meropenem with start date 20/1 if it is also given for pneumonia. A unique antimicrobial prescription is defined by ATC5 code + route + indication + diagnosis site. Deduplication is done in the analysis phase as appropriate depending on what is counted (e.g. number of prescriptons, number of different drugs, number of indications, number/type of diagnoses etc.). Q3. Escalation for both antimicrobials, diagnosis at the time of PPS (BSI), start date indication (first antimicrobial) = 19/1 for both antimicrobials.	05.07.2016	ECDC, UK	
A3	Antimicrobial use	One antimicrobial stopped for microbiological results = de-escalation?	If a patient receives two antimicrobials and one is stopped after microbiology results because the other AM is sufficient, is this considered de-escalation (of the first AM)?	Yes, the antibiotic that is continued should be reported as de-escalation. (Question discussed with the PPS expert group)	21.03.2016	ECDC	
A4	Antimicrobial use	One antimicrobial stopped, other antimicrobial changed to oral	Patient started on IV co-amoxiclav and clarithromycin for pneumonia and 3 days later the clari is stopped and co-amox changed to oral. We are only recording oral co-amox but is the reason for change ‘de-escalation’ or ‘IV to oral’ switch? Our pharmacists were debating this.	Both would be correct, but prioritise de-escalation over switch (S).	31.08.2016	UK	
A5	Antimicrobial use	Changing diagnosis for antimicrobial use, with or without change in antimicrobial	a. If at the beginning an antibiotic is given empirically for sepsis and during hospitalisation it turns out that it is a proven bloodstream infection/meningitis/UTI/etc and the antibiotic remains the same. Which diagnosis is reported? The first diagnosis (sepsis) or the final diagnosis (bloodstream infection/meningitis/etc.)? b. What if the antimicrobial is changed due to the new diagnosis? What is the start date of the antimicrobial in that case?	Report the reason at the time of the PPS (i.e. the final/current diagnosis). If the antimicrobial was changed: change = yes (+ reason), start date first antimicrobial is start date for the indication, the community infection, not the date of the new diagnosis (which would be the start date of the current antimicrobial) (Question discussed with the PPS expert group).	21/03/2016, 05/07/2016	ECDC	
A6	Antimicrobial use	Antimicrobial changed at admission	Patient takes an antimicrobial at home and this antibiotic is stopped when patient is admitted to the hospital. On admission another antibiotic is started. Do I need to consider this second antibiotic as an escalation? What if the second antibiotic isn’t started immediately after admission but after a few days (to allow a wash-out)?	If the antibiotic is given for the same infection episode then it should be considered Escalation; if the antibiotic is given for a different infection episode it should be considered as a new regimen. If the antibiotic isn’t given on the first day but after a wash-out, it should be considered as a new antibiotic.	22.03.2016	ECDC	

N	Category	Topic	Question	Answer	Date	Origin	Ref
A7	Antimicrobial use	How to record continuous infusion of antibiotics?	How to record continuous infusion of antibiotics? Can a special code (e.g. 999999) be used for the 'number of doses'? It is a pity not to capture this information as it is increasingly used.	A specific code or variable for continuous infusion of antibiotics is not available in the software. Although the logical value for the number of doses would be 1 (x the total dose given during the day), it was agreed with the PPS expert group to accept the number '99' as the code for continuous infusion. Countries wishing to capture information on this should instruct their hospitals to use the number 99 in 'Number of doses'.	05.07.2016	UK	
A8	Antimicrobial use	Antimicrobial use for aspecific/moderate infection signs	In quite a lot of cases patients receive an antibiotic solely because of elevated infection parameters (such as CRP). These patients might also have slight fever (or not) or discomfort (or not) but are by no means septic. How to code the diagnosis site if the prescriber/physician is unsure or not available?	Code the indication as treatment (CI/LI or HI) and diagnosis site as undefined, no systemic inflammation (UND) or systemic inflammatory response with no clear anatomic site (UND). (Question discussed with the PPS expert group)	05.07.2016	DE	
A9	Antimicrobial use	Medical prophylaxis for PROM - dosage	How to code the dosis when the obstetrician starts penicillin for PROM according to guidelines starting with loading dosis 5 milj. IU, then 2.5 milj IU every 4 h till labor and the PPS is done when the patient is still receiving penicillin e.g. 6 times?	Record the dosage on the day of the PPS.	10.05.2016	ECDC	
A10	Antimicrobial use	Surgical prophylaxis for 24 hours	If surgical prophylaxis is planned exactly for 24 hours, is it reported as SP2 or SP3?	Surgical prophylaxis planned for one day (or 24 hours) should be reported as SP2, even if this means that it is given on 2 consecutive calendar days. (Question discussed with the PPS expert group.)	22.03.2016	ECDC	
A11	Antimicrobial use	Surgical prophylaxis - two antimicrobials	If patient is given surgical prophylaxis prior to surgery yesterday afternoon (1 dose), and prescribed another AM for prophylaxis post surgery – how to record second AM? As surgical prophylaxis? Medical prophylaxis?	Record both antimicrobials, indication surgical prophylaxis (SP2 or SP3 depending on the duration).	31.08.2016	UK	
A12	Antimicrobial use	Reporting of dosage for surgical prophylaxis	If the indication for an antimicrobial is surgical prophylaxis, should I report the number of doses?	Yes, number of doses, strength of one dose and unit should be reported.	22.03.2016	ECDC	
A13	Antimicrobial use	Dosage for intermittent antimicrobials (e.g. vancomycin)	How to record the dosage for intermittent, longer term antimicrobials, e.g. vancomycin given intermittently for 6 weeks. It can be difficult to find all of the charts relating to the vancomycin prescribing (often on separate sheet). Do all 6 weeks need to be reviewed to calculate the average number of doses over that time period? And what about the strengths?	1. Determine the number of doses per time unit, e.g. 2 doses per week => Number of doses = 2/7 = 0.29 = 1 dose per 3.5 days 2. Record the strength of dose given in the previous 24 hours. - If one given in the last 24 hours, record the strength of this dose, e.g. 1 g given in last 24 hours for 3.5 days => record 0.29 x 1g - If none given in the last 24 hours, then record the last dose given (will require retrospective review of up to one week), e.g. 1 g given for 3.5 days 2 days ago => report 0.29x1g - If more than one given in the last 24 hours as dose for 3.5 days, e.g. 1.5g at 10pm yesterday and 1g at 10am, intended for 3.5 days: record the total dose => 0.29x2.5g 3. If > 1 dose in last 24 hours intended for 1 day, different doses e.g. 1.5g at 10pm yesterday and 1g at 10am: report the average dose, e.g. 2x1.25g The purpose is to calculate the average daily dose in the EU to inform a DDD update by the WHO Collaboration Centre for Drug Statistics Methodology.	31.08.2016	UK	
A14	Antimicrobial use	Indication/diagnosis for antimicrobial: at start treatment or on day PPS?	Do I need to report only what doctor writes in the notes or my interpretation (e.g. start treatment after lab results arrived or onset of new symptoms)?	The indication and diagnosis for antimicrobial should be what doctor thinks he/she is treating on the day of the PPS. If not written in the recent notes, it is recommended to ask the treating physician (Why are you using this antibiotic on this day?) (Question discussed with the PPS expert group)	21.03.2016	ECDC	
A15	Antimicrobial use	Antimicrobials for peptic ulcer disease	Antimicrobials given for treatment of peptic ulcer disease belong to A02 (this class is not included in the list of antimicrobials to report). Do I need to report them in any case?	These antibiotics should be reported separately with their respective J01 codes. (Question discussed with the PPS expert group)	21.03.2016	ECDC	
A16	Antimicrobial use	Antimicrobial stopped on the day of the survey	Do I need to report an antibiotic that is stopped the day of survey before the survey takes place? E.g. last dose of antibiotic is given at 11 am and medical notes report to stop antibiotic. Survey is performed at 12 am.	Regardless of the half-lives of the antibiotics, antimicrobials that are not ongoing at the time of the survey should NOT be reported. So, in case of the example, the antibiotic should not be reported. (Question discussed with the PPS expert group)	21.03.2016	ECDC	

N	Category	Topic	Question	Answer	Date	Origin	Ref
A17	Antimicrobial use	Same drug for 2 different indications or diagnosis sites	If the same drug is given for 2 different indications, do I need to report it twice or is one with the main indication enough?	A unique record in the AM use table is defined by ATC5 code + route + indication + diagnosis. So a drug should be reported twice e.g. if the same drug is given twice for the same indication & diagnosis site, once orally and once parentally; or if the same drug is used for 2 different indications. Deduplication is done as appropriate in the analysis phase. Report the indication mentioned by the treating physician. If this information is not available and a new infection develops under therapy and therapy is continued, this infection cannot be considered a new indication (because of proven ineffectiveness). (Question discussed with the PPS expert group)	21.03.2016	ECDC	
A18	Antimicrobial use	Antimicrobial diagnosis (site) - mediastinitis	The registration of the infection site for antimicrobial treatment intention is not always clear because of the different lists used for antimicrobial use diagnosis vs HAI case definitions. How to register a mediastinitis for example?	Table T1 (see separate sheet in the current excel file) provides guidance for mapping the diagnosis (site) codes (from the former ESAC PPS protocol) to the HAI case definitions. Surgical site infections would usually be scored as SST-SSI, but for example	07.06.2012	FR	T1
A19	Antimicrobial use	Antimicrobial diagnosis (site) - tuberculosis	Which code should be chosen for tuberculosis?	Pulmonary TB and use of rifampicin or other J04 drugs used for TB (*Mycobacterium tuberculosis*) should NOT be reported in the PPS. J04 use is only reported if it is used for MOTT (mycobacteria other than tuberculosis) or as reserve treatment for multi-resistant bacteria (eg rifampicin for MRSA).	09.11.2011	PL	
A20	Antimicrobial use	Antimicrobial indication - Unknown/Missing	In the table "indications for antimicrobial use" the answer unknown/missing (which is allowed in TESSy) is missing. Can you confirm that this (unknown/missing) is a true answer possibility?	Yes, the value UNK is allowed in TESSy but is not proposed in the protocol in order to limit the number of missing data. The indication list includes the value 'UI' which should be used when the PPS data collector looked for the indication, but could not find an answer, e.g. nothing mentioned in patient notes and the physician could not be asked why he prescribed the antibiotic. The value 'UNK' in TESSy should only be used by national centres when the data is completely missing.	20.07.2011	NL	
A21	Antimicrobial use	Febrile neutropenia	Febrile neutropenia- if the patient had chemotherapy during the last month and came to the hospital with febrile neutropenia- how to code? Indication HI? Diagnosis C-SEP?	The diagnosis site code for febrile neutropenia is FN (CSEP in the diagnosis list excludes FN, see table). Whether the indication is treatment intention for community infection (CI) or hospital infection (HI) depends on the interpretation of the physician who prescribed the antimicrobial.	13.05.2011	EE	
A22	Antimicrobial use	Nystatin	Is nystatin considered oral or topical? We have disagreement between data collectors. It is in the controlled list of antimicrobials	Only oral nystatin A07AA02 (Intestinal antiinfectives) is to be recorded. It is sort of topical (intestinal mucosa), as is oral vancomycin (A07AA09). In general, any antimicrobial that is ingested is to be considered, even if it is not absorbed through the intestinal mucosa. (Question discussed with the PPS expert group)	27.08.2011	UK	
A23	Antimicrobial use	Intra-ocular and intra-thecal antimicrobials	How should the antimicrobial route of intra-ocular AM, intra-thecal AM be recorded?	Parenteral, because the antimicrobials are not applied on the surface. // check with Peter Zarb	31.08.2016	UK	
H1	HAI and case definitions	Implant: what is and what is not an implant? E.g. nephrostomy	The ECDC case definition of surgical site infection still uses the term 'implant' to define the follow-up period for deep/organ-space SSIs as 30 days (without implant) or 90 days (with implant). In the CDC/NHSN case definition however, the term 'implant' was replace by a list of operations for 30 and 90-days follow-up.	The 1999 HICPAC/CDC/NNIS definition of implant should be used: "a nonhuman-derived implantable foreign body (e.g., prosthetic heart valve, nonhuman vascular graft, mechanical heart, or hip prosthesis) that is permanently placed in a patient during surgery." For hernia-mesh: non-absorbable IS an implant. Nephrostomy is not an implant. See T2_Implant for list prepared by UK-EN for further guidance.	05.07.2016	NO	T2
H2	HAI and case definitions	Readmission with HAI after follow-up period	In some countries patient present late due to reimbursement issues, e.g. SSI readmitted later than 30 days post –op. Is it possible to consider adding additional criteria such as 'revision needed' to enable these to be counted as prevalent HAI?	These patients should be captured in the antimicrobial use section, but not in HAI. The new AU diagnosis list now includes the values – will need a cross valdiaiton of SSI section in AMY and HAI	05.07.2016	ECDC	
H3	HAI and case definitions	Bloodtream infection in hemodyalisis patient	55-year old male, having permanent CVC for haemodialysis visiting hospital dialysis centre 3 times a week. Admitted at 2/06/2015 with signs and symptoms of BSI. Further diagnostic tests would allow for coding CRI3-CVC, but.. should it be considered as HAI? CI? LI?	Since there was no admission (=with overnight stay) to an acute care hospital in the previous 48 hours and the CVC was not inserted on Day 1 or day 2, this is not an HAI and the CRI3-CVC or BSI with origin CVC should not be reported. The antimicrobial use should be coded as the physician sees it, probably HI.	05.07.2016	PL	
H4	HAI and case definitions	NEO-CSEP - duration of appropriate antimicrobial therapy'	The case definition of clinical sepsis in neonates mentions 'supervising physician started appropriate antimicrobial therapy for sepsis for at least five days'. If other criteria are fulfilled, but the PPS is done on day 3 of appropriate antimicrobial therapy, should I report it as a NEO-CSEP?	Yes, if supervising physician started appropriate antimicrobial therapy for sepsis with the intention to treat for at least five days. (Question discussed with the PPS expert group)	22.03.2016	ECDC	

N	Category	Topic	Question	Answer	Date	Origin	Ref
H5	HAI and case definitions	PN1/PN2 and previous antimicrobial therapy	It seems to us that PN1 and PN2 are impossible to document if the patient has received antimicrobials before the microbiological diagnostics performed for the diagnosis of pneumonia. Does this imply that anytime a patient has received an antibiotic (for any indication) and is later diagnosed with a pneumonia it can never be PN1 or PN2?	PN 1 and PN 2 criteria were validated without previous antimicrobial therapy. However, this does not mean that these categories have to be excluded if a patient received previous antimicrobials. If the patient meets the criteria for PN1 or PN2, even if he/she received previous antimicrobials, report these as PN1 or PN2. (Question discussed with the PPS expert group)	21.03.2016	DE	
H6	HAI and case definitions	Multiple foci of infection	In case an infection has more then one localisation, do I need to report only the principal localisation or all of them? E.g. Candida blood stream infection with eye localisation?	If all of the localisations meet the criteria for HAI (in the example case: BSI + EENT-EYE) then all of them should be reported. The forms allow reporting two infection sites, please add a form if there are more than two. In the HelicsWin.Net software, there is no limit to the number of reported infection sites per patient. (Question discussed with the PPS expert group)	21.03.2016	ECDC	
H7	HAI and case definitions	CRI3 - removal of CVC	Is the removal of CVC required for a case to be defined as CRI3 even when other criteria (e.g. difference in time to positivity) are met?	No, the removal is not required for CRI3 if one of the following criteria is met: - quantitative blood culture ratio CVC blood sample/peripheral blood sample > 5 - differential delay of positivity of blood cultures: CVC blood sample culture positive two hours or more before peripheral blood culture (blood samples drawn at the same time) - positive culture with the same microorganism from pus from insertion site (Question discussed with the PPS expert group)	21.03.2016	ECDC	
H8	HAI and case definitions	Symptoms not present when physician institutes therapy	An active healthcare-associated infection (associated to acute care hospital stay) present on the day of the survey is defined as follows: 'An infection is active when signs and symptoms of the infection are present on the survey date OR signs and symptoms were present in the past and the patient is (still) receiving treatment for that infection on the survey date. The presence of symptoms and signs should be verified until the start of the treatment in order to determine whether the treated infection matches one of the case definitions of healthcare-associated infection.' Does this mean that if symptoms (e.g. dysuria) are not present at the moment that the physician institutes appropriate therapy for a urinary infection, HAI definition is not met?	Presence of signs and symptoms needs to be verified from the day of the PPS until the day of start of treatment. If the symptoms are not present when the physician institutes therapy and they do not appear afterwards (under treatment), then the case definition is not met. (Question discussed with the PPS expert group)	21.03.2016	ECDC	
H9	HAI and case definitions	Should candida in sputum be reported?	Should candida in sputum be reported?	Yes. The objective is to collect data on all microorganisms isolated in HAIs, not only those that are considered to be the cause of the HAI. (Question discussed with the PPS expert group)	21.03.2016	ECDC	
H10	HAI and case definitions	Microbiology results	Should microbiology be recorded even if the results were not used to meet the case definition?	Yes (pathogen or not), report all isolated microorganisms reported by the lab (and available at the time of the survey). There are many HAI case definitions that do not require positive microbiological results.	31.08.2016	ECDC	
H11	HAI and case definitions	How to report Gram-negative rod, possible pseudomonas	If laboratory reports “oxidase positive Gram negative rod, possible pseudomonas”, should PSESPP or GNBNSP be reported?	Answer GNBNSP, until the official definitive answer is available. (Question discussed with the PPS expert group)	21.03.2016	ECDC	
H12	HAI and case definitions	Underlying cardiac or pulmonary disease in pneumonia	What is meant with "underlying cardiac or pulmonary disease" in the case definition of pneumonia?	The CDC case definition of pneumonia (which was the basis for the EU definition) mentions following conditions as examples: respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic obstructive pulmonary disease, which would often be associated with altered X-ray images. In case of acute pulmonary disease such as a recent (cured) pneumonia or in case of asthma, a previous X-ray is not necessary.	21.03.2016	ECDC	
H13	HAI and case definitions	How long is a chest X-ray considered valid?	One definitive chest X-ray or CT-scan for the current pneumonia episode may be sufficient in patients with underlying cardiac or pulmonary disease, if comparison with previous X-rays is possible. For how long can the previous chest x-ray be considered valid?	For one year, but depending on clinical history. (Question discussed with the PPS expert group)	21.03.2016	ECDC	
H14	HAI and case definitions	Worsening signs and symptoms/superinfection of a community infection	Should worsening signs and symptoms or a superinfection of a community-associated (CA) infection after day two be reported as a HAI? Examples: - Secondary BSI after CA-UTI - Superinfection of a CA pneumonia	Answer: Yes, worsening signs and symptoms of a community-associated infection after day two (or after invasive device use on day 1 or 2) should be reported as an HAI if the worsening condition occurs after clinical improvement of the primary infection. A new infection site such as a bloodstream infections (BSI) secondary to a community-associated infection with onset of new signs and symptoms after day two should always be reported as a HAI. (Question discussed with the PPS expert group)	29.02.2016	ECDC	

N	Category	Topic	Question	Answer	Date	Origin	Ref
H15	HAI and case definitions	Date of onset of an HAI	According to the protocol, the date of onset of an infection is primarily determined by the first signs or symptoms of the infection (and if unknown, record the date treatment was started for this infection or the date the first diagnostic sample was taken). Q1. Should any signs/symptoms of infection in general (e.g. fever, CRP) be considered even if these are not part of the case definition? OR Only signs/symptoms stated in the case definitions? Q2. How to prioritise date of start treatment vs date of sampling if the date of onset of symptoms is unknown?	Q1. All signs and symptoms of an infection should be considered to determine the date of onset. The first signs or symptoms of infection should not necessarily be included in the case definition if afterwards it is clear that the early signs or symptoms were due to that infection. Q2. Between date start treatment and date first sample, record whichever comes first, usually (symptoms/signs >) sampling > treatment. (Question discussed with the PPS expert group)	18/02/2014, 05/07/2016	NO, UK	
H16	HAI and case definitions	Differences between CRI1-CVC/PVC and CVS-VASC	What is the difference between the definition of CRI1-CVC/PCV ("Quantitative CVC/PVC culture >= 1000 CFU/ml (1) or semi-quantitative CVC/PVC culture > 15 CFU (2) and pus/inflammation at the insertion site or tunnel.") and the third criterion of CVS-VASC ("patient has at least one of the following signs or symptoms with no other recognised cause: fever (> 38 °C), pain, erythema, or heat at involved vascular site, and more than 15 colonies cultured from intravascular cannula tip using semiquantitative culture method, and blood culture not done or no organisms cultured from blood.")?	The CVS-VASC case definition was kept as in the CDC/NHSN 2008 case definitions. However, for criterion 3 there is indeed an overlap with the (EU/HELICS) case definitions CRI1 or CRI2. Report CVS-VASC infections matching criterion 3 as CRI1 or CRI2, as appropriate. Also see 'algortihm for diagnosis of catheter-related infections' in the protocol for the hierarchy in the use of the different case definitions.	06.05.2013	ES	
H17	HAI and case definitions	Origin of SSI: current or other hospital?	If a patient has had surgery in another hospital, is transferred, and developes an SSI in the surveyed hospital after day 3 of admission, should this HAI be registered as associated with another acute care hospital or the current hospital?	The answer is not straigtforward, since the origin question is subjective and often the clinician should decide based on all available information. For example if they had the operation and were immediately transferred and post-op wound care took place in the new hospital and it was a superficial wound infection, then one might be inclined to attribute it to the current hospital. But if it was from a leak from the surgical anastomoses site (ssi-o), then it is the other hospital where the surgery was performed.	02.06.2012	NO	
H18	HAI and case definitions	Origin of infection - what is healthcare-associated?	Is it the right understanding that only infections that a patient gets in an acute hospital should be registered as HAI? So a *C. difficile* infection that a patient gets while treated by a primary doctor in the healthcare centre is not considered a healthcare-associated infection but should be registered as a community-acquired infection? Same problem for a patient newly admitted in an acute care hospital but is receiving nursing in home care?	Indeed, only HAIs associated to acute care hospitals have to be reported - but please note that any infection starting after Day 2 of the current hospital admission is considered as associated with the current (acute care) hospital stay and should be reported, even if other elements such as the type of microorganism suggest that it is community- or nursing home-acquired (in such a case, the "other origin/unknown" category can be used to indicate that the infection is probably not associated to an acute care hospital stay). Also note that for *C. difficile* infections that are present on admission or that start on Day 1 or Day2, a discharge from an acute care hospital (at least one overnight stay) has to be verified for the previous 28 days (and 30 days for a SSI). Finally, an 'acute care hospital' is defined according to national definitions. So whether smaller hospitals or healthcare centres with hospitalisation are considered as (small) acute care hospitals or not varies by country. If they are not, then these facilities should also be excluded from the number of acute care hospitals in the national denominator data.	25.05.2012	IS	
H19	HAI and case definitions	Report primary infection if there is a secondary BSI?	If patient has an urosepsis, should both infections be reported: BSI S-UTI and UTI-A or only BSI S-UTI?	Both infections should be reported, at least if for both the criteria of active HAI are fulfilled.	18.05.2012	PL	
H20	HAI and case definitions	Infections in neonates	Should infections in neonates which are considered to be congenital eg. due to mothers' PROM or an evidence of aminotic fluid infection reported as HAI?	Yes they should. Only in utero TORCH infections (Toxoplasmosis, Rubella, Cytomegalovirus, Herpes Simplex) should not be reported as HAI. (Question discussed with the PPS expert group)	13.05.2012	PL	
H21	HAI and case definitions	Is mastitis always nosocomial?	Is mastitis always nosocomial? E.g. if it occurs on the second day of hospitalisation?	No. The overall definition of HAI overrides the definition of single HAIs, so mastitis should be reported as HAI only if the onset of symptoms was on Day 3 or later or if it meets one of the other active HAI criteria. The comment in the case definition of SST-BRST 'Breast abscesses occur most frequently after childbirth. Those that occur within seven days after childbirth should be considered healthcare associated.' was deleted from protocol v5.2 onwards. (Question discussed with the PPS expert group)	21.03.2016	ECDC	

N	Category	Topic	Question	Answer	Date	Origin	Ref
H22	HAI and case definitions	Diagnosis made by attending physician	In many case definitions of HAI the last phrase in many of them is for example "Diagnosis of organ/space SSI made by a surgeon or attending physician" - "Physician diagnosis of a urinary tract infection" - "Physician institutes appropriate therapy for a urinary infection" etc. Is it only the personal view of physicians that counts or do they have to go by some rules or criteria?	It is just the personal clinical opinion of the physician, there are no rules or criteria. But mostly it is not the only criterion for the case definition.	08.05.2012	IS	
H23	HAI and case definitions	Does treatment equal removal of CVC and PVC	In the case definitions for bloodstream infection CRI2 both for PVC and CVC it says: clinical signs improve within 48 hours after catheter removal. Does treatment compensate removal of the catheter?	No it doesn't. In CRI2 (general CRI without positive blood culture) the catheter has to be removed (it should be removed to perform the culture of the tip anyway). Of course if the signs dissapear after catheter removal while the patient receives antimicrobial treatment, then the criterion is positive nevertheless.	08.05.2012	IS	
H24	HAI and case definitions	Relevant device	On Form A for patient based data it says relevant device is intubation for PN, CVC/PVC for BSI and urinary catheter for UTI in 48 hours befor onset of infection, 7 days for UTI. Which one should be used?	If a patient has a healthcare-associated PN , and he/she was intubated (even intermittently) in the 48 hours before infection, then fill in „Yes", otherwise put „No" for that variable, even if there was a CVC/PVC or urinary catheter present. For UTI, consider all use of a urinary catheter in a 7-days period (instead of 48 hours) before onset of UTI, even if the use of the catheter was intermittent. Please note that: 1) This variable is used to apply the (CDC) definition of device-associated HAI: intubation-associated pneumonia, catheter-associated bloodstream infection, catheter-associated urinary tract infection 2) In standard surveillance, the presence of the 4 device types is recorded on the patient form on the day of the survey; so a patient with PN may be intubated on the PPS day (intubation on Form A = „Yes"), but it is possible he/she was not intubated before onset of the infection (Relevant device = „No"), for example if mechanical ventilation was needed to treat the patient with pneumonia.	08.05.2012	IS	
H25	HAI and case definitions	Urinary catheters - Suprapubic catheters	In a previous answer it is written that one should exclude subrapubic catheters. What is ment by that? If a patient has suprapubic catheter isn´t that a relevant device if the patient has an UTI?	No, it isn't. Only indwelling urinary tract catheters should be considered as relevant device for a UTI, or be recorded as urinary catheter in the patient data. An indwelling urinary catheter is defined as a drainage tube that is inserted into the urinary bladder through the urethra, is left in place, and is connected to a closed collection system. Exclusion examples: suprapubic, intermittent (including self-intermittent), external catheter (condom), urostomy, nephrostomy etc.	07.06.2012	IS	
H26	HAI and case definitions	Relevant device - ventriculitis	If the patient has drainage in the ventricules and has ventriculitis because of this, is this drainage relevant device?	Ventriculitis is not in the list of HAIs which require information about relevant device. Information about relevant device should only be collected only for pneumonia (intubation), bloodstream infection (vascular catheter) and urinary tract infection (indwelling urinary catheter). However, please note that a cerebrospinal fluid shunt infection occurs <=90 days of placement, it should be reported as an SSI-O; if later > 90 days or after manipulation/access of the shunt, report as CNS-MEN if the infection meets the general case definition of HAI.	13.05.2011	EE	
H27	HAI and case definitions	Origin of infection other/unknown	The third option for the variable 'Origin of infection' in the HAI data is '(3) other origin or unknown'. Does this mean that HAIs acquired in settings that are different from ACUTE CARE HOSPITALS, e.g. LTCF (BSI in long-term care facility treated in acute hospital) should also be reported? Could the definition of 'other origin' be better specified?	Only HAIs at admission associated with acute hospital stay should be included. The third category in the origin of infection (other/unknown) is meant to allow for a "disagreement" with the criterion HAI = date of onset on day 3 or later (where day 1 is the day of admission). All infections with date of onset on D3 or later should always be reported as HAI if they meet a case definition. However, for a pneumonia starting on day 3 with a typical community pathogen such as *S. pneumoniae* , the PPS staff may disagree with calling this an HAI. In that case they can code this origin of HAI as "other/unkown". This has now been clarified in the protocol as well.	27.06.2011	IT	
H28	HAI and case definitions	Neonatal infections	Neonatal infections must be reported with a specific HAI definition code when found, but what for those HAIs not included in the NEO-definitions? Should the definitions for adults be used, e.g. skin infections?	Yes, please use the 'adult' case definitions for HAI types not included in the NEO-definitions.	27.06.2011	IT	

N	Category	Topic	Question	Answer	Date	Origin	Ref
H29	HAI and case definitions	What is an 'active HAI' ?	What is an 'active HAI' ? Is it possible to have a non-active or passive HAI?	The term 'active' refers to the moment of the PPS. A 'non-active' HAI would for example be an HAI that occurred during the current hospitalisation but that is cured at the time of the survey (no more treatment, no more signs and symptoms).	13.05.2011	EE	
H30	HAI and case definitions	Two HAIs of the same type	Can two HAIs of the same type be reported for the same patient on the day of the PPS? The HelicsWin.Net software does not seem to allow this, e.g. two BSIs with different origins: Patient came to hospital 17.05.2016, haematology unit. First HAI episode started 22.05- PN3 (no material from lower respiratory tract, but blood culture positive for *P. aeruginosa*), so BSI S-PUL would be second HAI (same start 22.05, patient had CVC also at that time)- imipenem for PNEU. Next episode started 30.05- blood cultures positive for *Enterococcus spp* . (asked from lab at the time of PPS), AB was added (vancomycin), no clear source found (HAI code BSI, CVC was in place, so invasive device was marked "yes" and source "UO"). PPS was performed on 31.05 (all AB were in place), so personal coded 3 HI, but HelicsWin.Net did not accept second BSI (error message).	The HelicsWin.Net software does indeed not allow to report two HAIs of the same type, as the analysis is mainly done per patient (e.g. number of patients with BSI) and in many cases two HAIs of the same type would mean an erroneous duplicate entry. In some cases (as in the example), it is nevertheless possible that two HAIs of the same type are active at the time of the PPS. For BSIs, the priority for reporting depends on the origin of the BSI: C-CVC>C-PVC>UO (certified unknown origin)> S-PUL>S-UTI>S-SSI>S-SST>S-OTH>UNK. For pneumonia, duplicate reporting is allowed (because HAI codes are different) but should be avoided, giving priority to PN1>PN2>PN3>PN4>PN5. For bilateral infections, e.g. two SSIs following left and right hip prosthesis, report the first infection. Note that TESSy will accept two HAIs of the same type. These will be deduplicated in the analysis according to the same priority rules.	02.09.2016	EE	
H31	HAI and case definitions	How to report antimicrobial resistance group markers?	Can you report susceptible for the carbapenem group (CAR S) even if only one carbapenem was tested (e.g. meropenem) ?	Yes, if only one 'member' of an antimicrobial group is tested, report the result for that antibiotic as result for the group or as result for the tested antibiotic. In HelicsWin.Net, the group code is automatically proposed as antimicrobial marker. If two members of the group were tested, report the 'most resistant' result (R>I>S) in case of discordant results.	02.09.2016	ECDC	
D1	Denominator data/risk factors	Non-included specialty codes	How should the ward and patient specialty be coded for: 1. subacute care 2. palliative care 3. high dependency units or step-down units	Ward specialties that are not included in the list should be coded as 'other' , sometimes as 'mixed' if appropriate. The specialty of patients admitted to these wards can be more specific (depending on the main disease of the patient or the specialty of the consultant) or can also be coded as 'other'. High dependency units can usually be coded as MED or SUR wards (and detailed specialty code for the patients). They should not be coded as ICU.	21.03.2016	ECDC	
D2	Denominator data/risk factors	Definition of a 'hospitalised' patient	What is the definition of a 'hospitalised' patient?	A patient is considered as hospitalised when he or she is registered as such in the local hospital administration system and will therefore contribute to the denominator data (number of admissions or discharges, number of patient-days). Usually, this involves at least one overnight stay in the hospital.	09.03.2016	ECDC	
D3	Denominator data/risk factors	PEG tube	If a patient has a PEG tube through the stomach wall, should it be registered? How?	No, a percutaneous endoscopic gastrostomy tube should not be registered.	25.05.2012	IS	
D4	Denominator data/risk factors	Age of newborn	If a newborn baby is 5 days old - what is the age in months?	Zero (0) months for all ages before the first month is completed.	25.05.2012	IS	
D5	Denominator data/risk factors	NHSN surgery	The protocol for the 2011-2012 PPS mentioned following footnotes for NHSN surgery: *NOTE: If the incision is not entirely closed at procedure's end (i.e. if wires or tubes extrude through the incision) then the procedure does not meet the criteria of an NHSN operative procedure. + NOTE: If this procedure is performed percutaneously, it is not considered an NHSN operative procedure and should not be included in LAM denominator data. Will all of Europe record any procedure which has wires or tubes coming from the incision site as non-NHSN surgery?	We asked advise from CDC/NHSN for this question. CDC has revised some SSI surveillance aspects such as including all procedures regardless of the type of closure. Therefore, please code procedures from the NHSN list always as NHSN surgery, regardless of the closure type. The footnotes to the NHSN table in the annexes of protocol v4.3 has now been replaced by: "Report NHSN-codes even if the incision is not entirely closed at procedure's end (i.e. if wires or tubes extrude through the incision)."	09.09.2011	UK	
D6	Denominator data/risk factors	McCabe score	Would a previously healthy trauma ICU patient be considered to have a non/non-fatal prognosis unless they have multiple organ failure? If we disregard the influence of acute infections, do we also disregard the influence of acute events such as trauma? If we do, how should a previously healthy trauma patient who now requires full care be coded?	The influence of acute events should be considered for the McCabe score. In fact, the influence of acute infection should also be considered for community-acquired infections. Disregard the influence of acute healthcare-associated infections (active HAIs on the day of the PPS) only. It is recommended to ask the clinician to rate the McCabe score. (Question discussed with the PPS expert group)	25.08.2011	UK	

N	Category	Topic	Question	Answer	Date	Origin	Ref
D7	Denominator data/risk factors	What is surgery?	1. Should insertion of a central line where an incision is made prior to insertion be classed as "minimally invasive surgery"? 2. Should insertion of a chest drain with an incision be classed as "minimally invasive surgery"? 3. Should insertion of an intra-aortic balloon pump without an incision be classed as "no surgery"? 4. Should an angioplasty without incision be classed as "no surgery"?	1. Insertion of a central line where an incision is made prior to insertion: Answer: The purpose of surgery should be primarily therapeutic - devices/lines are NOT included (note: data on central lines are captured elsewhere) 2. Insertion of a chest drain with an incision: Answer: although this is admittedly a more difficult case, the ECDC-PPS Helpdesk team advised NOT to consider drains as surgery because it is not surgery by itself. 3. Insertion of an intra-aortic balloon pump without an incision: Answer: no surgery 4. Angioplasty without incision: Answer: no surgery	25.08.2011	UK	
D8	Denominator data/risk factors	Surgery since admission - plastic surgery	Plastic surgery procedures do not appear in the list of NHSN procedures. Should they be recorded as minimally invasive for consistency across Europe? Or should we add to the list of invasive procedures?	The category "minimal invasive / non-NHSN surgery" should read "non-NHSN surgery (e.g. minimal invasive surgery)" and should capture all surgery that is not included in the NHSN surgery code list. The main objective of these separate categories is to be able to compare the "surgery since admission" data with the data from the PPS performed by CDC Atlanta in the United States. So the main difference between the two surgery categories in the ECDC-PPS protocol is not "invasive" vs "minimal invasive", but "NHSN" versus "non-NHSN".	25.08.2011	UK	
D9	Denominator data/risk factors	Consultant specialty differs from patient specialty	In Scotland (perhaps other countries too?), some patients are admitted by a consultant whose specialty does not necessarily reflect the patient's specialty. For example, if a renal consultant is on duty in a medical admissions unit, they may admit a patient who has had an MI. According to the protocol at the moment, this patient would be categorised under renal medicine. Patients may remain under the care of these consultants for a number of days before being transferred to the care of the appropriate consultant. Should we code these patients as general medicine until they have been transferred to the care of the appropriate consultant?	Code as general medicine or general surgery, as appropriate. The patient specialty has priority over the specialty of the on-duty consultant. If the subspecialty is unclear at the time of the survey, code as "general". In the protocol of the 2016-2017 PPS, the definition of consultant/patient specialty now clarifies "Consultant/patient specialty. Specialty of physician in charge of the patient or main specialty for which the patient was admitted to the hospital. If the consultant specialty differs from the patient specialty, give priority to the patient specialty."	25.08.2011	UK	
D10	Denominator data/risk factors	Inpatient beds and day beds	In some of the independent hospitals, the inpatient and day bed numbers are not clearly defined and are interchanged to be flexible depending on the patients attending. How should the number of beds be recorded?	If a bed is sometimes available for an inpatient then this should be recorded in the total number of beds (excluding day beds). - Total number of beds in hospital (=hospital size): include all beds that may generate inpatient days and discharges reported under "Number of discharges/admissions in year" and "Number of patient-days in year" (including chronic care beds and interchangeable beds) - Total number of beds in included wards: include the interchangeable beds on included wards, but exclude Day bed wards.	31.08.2016	UK	
D11	Denominator data/risk factors	Total number of beds in included wards	Total number of beds on ward: – include beds if a bed is available for an inpatient even though a day patient is currently using it but exclude day patients from number of eligible patients? - include acute care beds only or chronic beds as well?	The 'Total number of beds on ward' is the denominator for 1) The N of beds with AHR dispensers at point of care, and 2) N of beds occupied at 00:01 on the day of PPS (occupancy) In principle, all beds on the ward that can be used as inpatient bed (including chronic care beds) should be included for these indicators. The number of beds assessed should be the same for both indicators.	31.08.2016	UK, HU	
D12	Denominator data/risk factors	Hospital size, acute care beds	Can we have further clarification on the following data items: a. 'Hospital size' – does this include day surgery, 23 hour wards and continuing care beds based on the site? b. 'Acute Care Beds' – does this include continuing care beds?	a. Include all beds that generate inpatient days and discharges reported under "Number of discharges/admissions in year" and "Number of patient-days in year" , so that numerators and denominators correspond. This includes continuing care beds such as rehabilitation etc. However, beds only used for day surgery or 23 hour ward beds that do not generate patient-days and admissions/discharges should theoretically not be included. b. Continuing care or chronic care beds should not be included under acute care beds, but should be included in the total number of beds ('hospital size').	31.08.2016	UK	
D13	Denominator data/risk factors	How to count ICU beds?	Should ICU beds in other wards be included in the total number of ICU beds in the hospital? For example in cardiology wards there can be ICU beds (cardiology intensive care beds), in this case this beds are managed as ICU beds even if are not in a ICU ward.	If these beds are considered as ICU beds according to your national criteria, then yes, they should be included in number of ICU beds on form H1.	27.06.2011	IT	

N	Category	Topic	Question	Answer	Date	Origin	Ref
D14	Denominator data/risk factors	General surgery or digestive tract surgery	General surgery- in Scotland, digestive tract surgeries are often carried out by "general surgeons" in General Surgery wards. Can digestive tract surgery be coded as General Surgery or must we be able to separate for reporting to ECDC?	Please use the specialties as they are used in your country.	21.06.2011	UK	
D15	Denominator data/risk factors	CPAP masks	What about CPAP masks in the ICU, how to code them?	Continuous positive airway pressure (CPAP) is a non-invasive mechanical ventilation. Therefore it should not be recorded as the patient is it does not involve intubation (endotracheal tube or tracheostomy).	13.05.2011	EE	
C1	Inclusion/ exclusion criteria	Patients on trolleys	Should we include patients on trolleys?	Do not include patients on trolleys unless they are on the ward and were admitted at 8:00am on the day of the PPS. E.g. do not include trolleys on emergency department.	31.08.2016	UK	
C2	Inclusion/ exclusion criteria	Include or exclude a patient that dies	If a patient dies while doing the PPS and data were already (partially) collected for that patients, should the deceased patient be included or excluded for this ward?	The patient should be included.	08.05.2012	IS	
C3	Inclusion/ exclusion criteria	Include or exclude a suddenly dismissed patient	If a PPS-survey is ongoing in a ward and you have finished registering several patients but still doing the survey. One of the patients already registered is unexpectedly dismissed. Should you exclude him from the survey or count him in?	The patient should be included.	08.05.2012	IS	