



Healthcare-associated infections and antimicrobial use in European long-term care facilities (HALT-3)

RESIDENT QUESTIONNAIRE

RESIDENT DATA

GENDER	<input type="checkbox"/> <i>Male</i>	<input type="checkbox"/> <i>Female</i>				
BIRTH YEAR	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table> (YYYY)					
LENGTH OF STAY IN THE FACILITY	<input type="checkbox"/> <i>Less than one year</i>	<input type="checkbox"/> <i>One year or longer</i>				
ADMISSION TO A HOSPITAL IN THE LAST 3 MONTHS	<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>				
SURGERY IN THE PREVIOUS 30 DAYS	<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>				
PRESENCE OF:						
URINARY CATHETER	<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>				
VASCULAR CATHETER	<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>				
INCONTINENCE (URINARY AND/OR FAECAL)	<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>				
WOUNDS						
- PRESSURE SORE	<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>				
- OTHER WOUNDS	<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>				
DISORIENTATION (IN TIME AND/OR SPACE)	<input type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No</i>				
MOBILITY	<input type="checkbox"/> <i>Ambulant</i>	<input type="checkbox"/> <i>Wheelchair</i> <input type="checkbox"/> <i>Bedridden</i>				

On the day of the survey, the resident:

- RECEIVES AN *ANTIMICROBIAL AGENT*** **→ COMPLETE PART A**
*This includes: (i) Residents receiving prophylactic antimicrobials
OR (ii) Residents receiving therapeutic antimicrobials*

- PRESENTS CONFIRMED OR PROBABLE *INFECTION(S)*** **→ COMPLETE PART B**
Residents with infection(s) AND resident not receiving antimicrobials

- BOTH: *ANTIMICROBIAL USE AND INFECTION(S)*** **→ COMPLETE PART A & B**
*This includes: (i) Residents with infection(s) AND receiving antimicrobials today (whether or not linked to same infection site)
OR (ii) Residents whose signs/symptoms of an infection have resolved but who are still receiving antimicrobials for that infection*

PART A: ANTIMICROBIAL USE				
	ANTIMICROBIAL 1	ANTIMICROBIAL 2	ANTIMICROBIAL 3	ANTIMICROBIAL 4
ANTIMICROBIAL NAME
ADMINISTRATION ROUTE <i>PARENTERAL = IM, IV OR SC</i>	<input type="checkbox"/> Oral <input type="checkbox"/> Parenteral <input type="checkbox"/> Other	<input type="checkbox"/> Oral <input type="checkbox"/> Parenteral <input type="checkbox"/> Other	<input type="checkbox"/> Oral <input type="checkbox"/> Parenteral <input type="checkbox"/> Other	<input type="checkbox"/> Oral <input type="checkbox"/> Parenteral <input type="checkbox"/> Other
END DATE / REVIEW DATE OF TREATMENT KNOWN?	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
TYPE OF TREATMENT	<input type="checkbox"/> Prophylactic <input type="checkbox"/> Therapeutic	<input type="checkbox"/> Prophylactic <input type="checkbox"/> Therapeutic	<input type="checkbox"/> Prophylactic <input type="checkbox"/> Therapeutic	<input type="checkbox"/> Prophylactic <input type="checkbox"/> Therapeutic
ANTIMICROBIAL GIVEN FOR	<input type="checkbox"/> Urinary tract <input type="checkbox"/> Genital tract <input type="checkbox"/> Skin or wound <input type="checkbox"/> Respiratory tract <input type="checkbox"/> Gastrointestinal <input type="checkbox"/> Eye <input type="checkbox"/> Ear, nose, mouth <input type="checkbox"/> Surgical site <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Systemic infection <input type="checkbox"/> Unexplained fever <input type="checkbox"/> Other (specify)	<input type="checkbox"/> Urinary tract <input type="checkbox"/> Genital tract <input type="checkbox"/> Skin or wound <input type="checkbox"/> Respiratory tract <input type="checkbox"/> Gastrointestinal <input type="checkbox"/> Eye <input type="checkbox"/> Ear, nose, mouth <input type="checkbox"/> Surgical site <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Systemic infection <input type="checkbox"/> Unexplained fever <input type="checkbox"/> Other (specify)	<input type="checkbox"/> Urinary tract <input type="checkbox"/> Genital tract <input type="checkbox"/> Skin or wound <input type="checkbox"/> Respiratory tract <input type="checkbox"/> Gastrointestinal <input type="checkbox"/> Eye <input type="checkbox"/> Ear, nose, mouth <input type="checkbox"/> Surgical site <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Systemic infection <input type="checkbox"/> Unexplained fever <input type="checkbox"/> Other (specify)	<input type="checkbox"/> Urinary tract <input type="checkbox"/> Genital tract <input type="checkbox"/> Skin or wound <input type="checkbox"/> Respiratory tract <input type="checkbox"/> Gastrointestinal <input type="checkbox"/> Eye <input type="checkbox"/> Ear, nose, mouth <input type="checkbox"/> Surgical site <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Systemic infection <input type="checkbox"/> Unexplained fever <input type="checkbox"/> Other (specify)
WHERE PRESCRIBED?	<input type="checkbox"/> In this facility <input type="checkbox"/> In the hospital <input type="checkbox"/> Elsewhere	<input type="checkbox"/> In this facility <input type="checkbox"/> In the hospital <input type="checkbox"/> Elsewhere	<input type="checkbox"/> In this facility <input type="checkbox"/> In the hospital <input type="checkbox"/> Elsewhere	<input type="checkbox"/> In this facility <input type="checkbox"/> In the hospital <input type="checkbox"/> Elsewhere

PART B: HEALTHCARE-ASSOCIATED INFECTIONS					
		INFECTION 1	INFECTION 2	INFECTION 3	INFECTION 4
INFECTION CODE		_____	_____	_____	_____
<i>IF 'OTHER', PLEASE SPECIFY</i>	
PRESENT AT (RE-)ADMISSION		<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
DATE OF ONSET (DD/MM/YY)		___/___/___	___/___/___	___/___/___	___/___/___
ORIGIN OF INFECTION		<input type="checkbox"/> Current LTCF <input type="checkbox"/> Other LTCF <input type="checkbox"/> Hospital <input type="checkbox"/> Unknown	<input type="checkbox"/> Current LTCF <input type="checkbox"/> Other LTCF <input type="checkbox"/> Hospital <input type="checkbox"/> Unknown	<input type="checkbox"/> Current LTCF <input type="checkbox"/> Other LTCF <input type="checkbox"/> Hospital <input type="checkbox"/> Unknown	<input type="checkbox"/> Current LTCF <input type="checkbox"/> Other LTCF <input type="checkbox"/> Hospital <input type="checkbox"/> Unknown
A. NAME OF ISOLATED MICROORGANISM (PLEASE USE CODE LIST) B. TESTED ANTIMICROBIAL(S) AND RESISTANCE <small>ONLY FOR STAAUR, ENC***, ACIBAU, PSEAEER OR ENTEROBACTERIACEAE (CIT***, ENB***, ESCCOL, KLE***, MOGSPP, PRT***, SER***)</small>	1. A	_____	_____	_____	_____
	B	_____ _____	_____ _____	_____ _____	_____ _____
	2. A	_____	_____	_____	_____
	B	_____ _____	_____ _____	_____ _____	_____ _____
	3. A	_____	_____	_____	_____
	B	_____ _____	_____ _____	_____ _____	_____ _____

¹Tested antibiotic(s): STAAUR: oxacillin (OXA) or glycopeptides (GLY); ENC***: GLY only; Enterobacteriaceae: 3rd-gen cephalosporins (C3G) or carbapenems (CAR); PSEAEER and ACIBAU: CAR only. ²Resistance: S=sensitive, I=intermediate, R=resistant, U=unknown



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CASE DEFINITIONS OF INFECTIONS

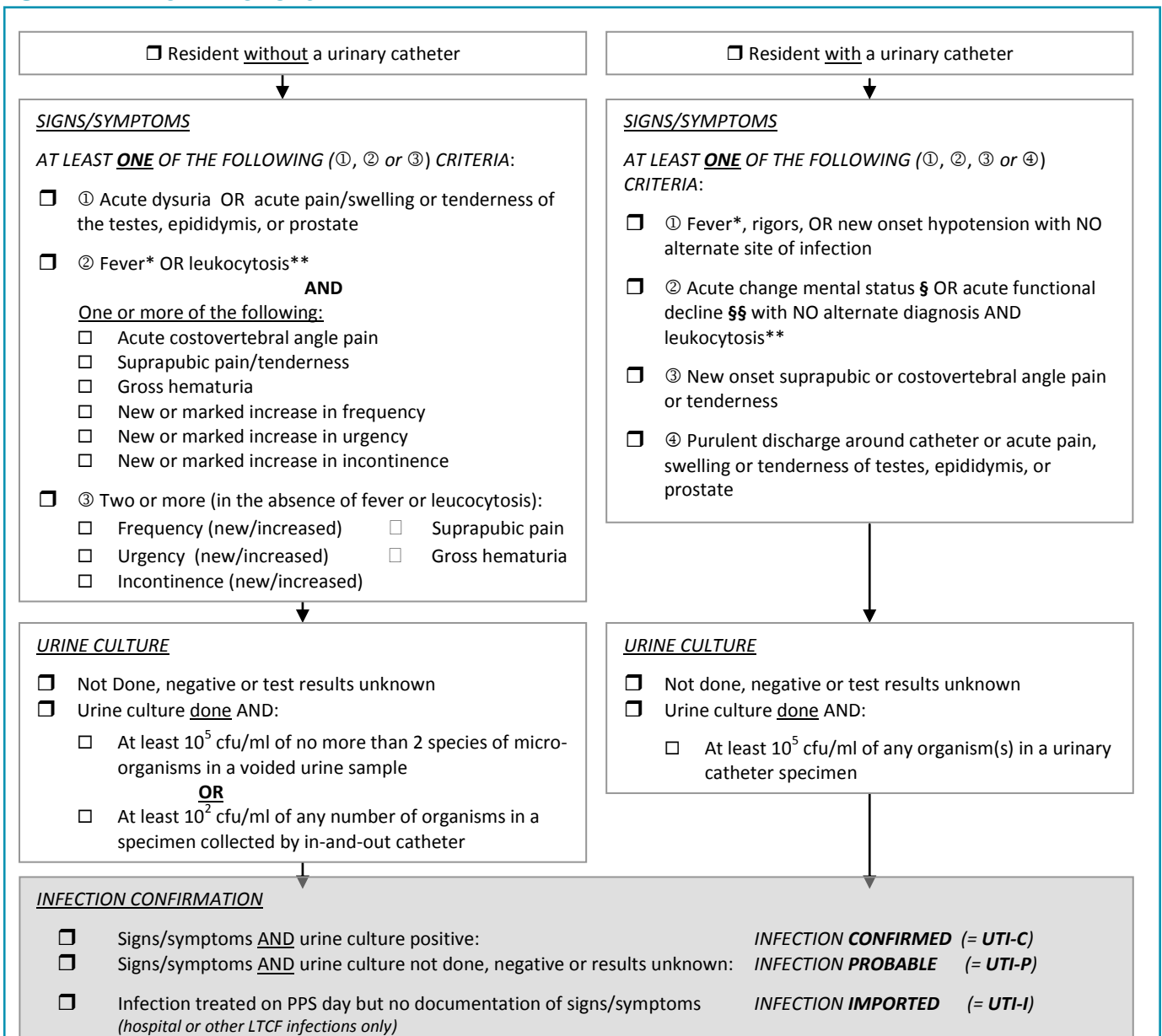
IMPORTANT REMARK:

All **active infections** present on the day of the survey should be reported. An infection is **active** when signs/symptoms of the infection are present on the survey date **OR** signs/symptoms were present in the past and the resident is (still) receiving treatment for that infection on the survey date. The presence of symptoms and signs in the two weeks (14 days) preceding the PPS day should be verified in order to determine whether the treated infection matches one of the case definitions.

Infections can only be reported as 'imported' for residents recently transferred from another healthcare facility (i.e. hospital or other LTCF) and still treated for an infection on the PPS day in the absence of documentation on (all) signs/symptoms that were present in the past.

- * **Fever:** 1) single > 37.8°C oral/tympanic membrane **or** 2) repeated > 37.2°C oral or > 37.5°C rectal **or** 3) > 1.1°C over baseline from any site (oral, tympanic, axillary)
- ** **Leucocytosis:** 1) Neutrophilia > 14,000 leucocytes/mm³ **or** 2) left shift (>6% bands or ≥ 1500 bands/mm³)
- § **Acute change in mental status from baseline:** Acute onset + fluctuating course + inattention **AND** either disorganized thinking **or** altered level of consciousness
- §§ **Acute functional decline:** New 3 point increase in total ADL score (Range 0-28) from baseline based on 7 ADL items (bed mobility, transfer, locomotion, dressing, toilet use, personal hygiene, eating) each scored from 0 (independent) - 4 (total dependence) **OR** increased dependency defined by scales other than ADL

URINARY TRACT INFECTIONS



RESPIRATORY TRACT INFECTIONS

COMMON COLD or PHARYNGITIS

AT LEAST **TWO** OF THE FOLLOWING CRITERIA:

- Runny nose or sneezing
- Stuffy nose (i.e. congestion)
- Sore throat or hoarseness or difficulty in swallowing
- Dry cough
- Swollen or tender glands in the neck (cervical lymphadenopathy)

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= COLD-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (= COLD-I)**
(hospital or other LTCF only)

FLU diagnosis can be made also outside the Flu season

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- Fever *(for definition see top of page 3)*
AND
- At least **three** of the following:
 - Chills
 - New headache or eye pain
 - Myalgias or body aches
 - Malaise or loss of appetite
 - Sore throat
 - New or increased dry cough

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= FLU-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (= FLU-I)**
(hospital or other LTCF only)

LOWER RESPIRATORY TRACT INFECTIONS

- Resident **with** a POSITIVE chest x-ray for pneumonia or a new infiltrate

- Resident **without** a POSITIVE chest x-ray for pneumonia or a new infiltrate OR chest x-ray not done

SIGNS/SYMPTOMS

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- At least **one** of respiratory signs or symptoms:
 - New or increased cough
 - New/increased sputum production
 - O₂ saturation < 94% or reduced >3% from baseline
 - Abnormal lung examination (new or changed)
 - Pleuritic chest pain
 - Respiratory rate ≥ 25 breaths/min

AND

- One or more constitutional signs/symptoms (fever, leucocytosis, confusion, acute functional decline; *for definitions see top of page 3 §§*)

SIGNS/SYMPTOMS

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- At least **two** of respiratory signs or symptoms:
 - New or increased cough
 - New/increased sputum production
 - O₂ saturation < 94% or reduced >3% from baseline
 - Abnormal lung examination (new or changed)
 - Pleuritic chest pain
 - Respiratory rate ≥ 25 breaths/min

AND

- One or more constitutional signs/symptoms (fever, leucocytosis, confusion, acute functional decline; *for definitions see top of page 3 §§*)

Absence of other conditions such as chronic heart failure that could account for symptoms

INFECTION CONFIRMATION

- Signs/symptoms criteria met AND chest x-ray positive: **PNEUMONIA INFECTION CONFIRMED (= PNEU-C)**
- Infection treated on PPS day but no documentation of signs/symptoms *(hospital or other LTCF only)*: **PNEUMONIA INFECTION IMPORTED (= PNEU-I)**

INFECTION CONFIRMATION

- Infection criteria fully met: **OTHER LOWER RTI CONFIRMED (= LRTI-C)**
- Infection treated on PPS day but no documentation of signs/symptoms *(hospital or other LTCF only)*: **OTHER LOWER RTI IMPORTED (= LRTI-I)**

SKIN INFECTIONS

CELLULITIS/SOFT TISSUE/WOUND INFECTIONS

ONE OF THE FOLLOWING (① or ②) CRITERIA MUST BE MET:

- ① Pus at a wound, skin, or soft tissue site
- ② **Four or more** new or increasing signs/symptoms at affected site:
 - Heat
 - Tenderness or pain
 - Redness
 - Serous drainage
 - Swelling
 - One constitutional sign/symptom (fever, leucocytosis, confusion, acute functional decline; for definitions see top of page 3)

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= SKIN-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= SKIN-I)**

NOTE:

If the infection matches one of the Surgical Site Infection (SSI) definitions, please give priority to the SSI. Do not apply another case definition for the same infection.

SCABIES

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- Maculopapular and/or itching rash
- AND**
- At least one** of the following:
 - Physician diagnosis
 - Laboratory confirmation (positive scraping or biopsy)
 - Epidemiological linkage to a case of scabies with lab confirmation

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= SCAB-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= SCAB-I)**

HERPES SIMPLEX OR ZOSTER INFECTION

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- A vesicular rash
- AND**
- Physician diagnosis or laboratory confirmation

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= HERP-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= HERP-I)**

FUNGAL INFECTION

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- Characteristic rash or skin lesions
- AND**
- Physician diagnosis or lab confirmed fungal pathogen from scraping or biopsy

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= FUNG-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= FUNG-I)**

SURGICAL SITE INFECTIONS

Infection occurs within 30 days after the operation date if no implant is left in place or within 90 days if implant is in place

SUPERFICIAL INCISIONAL

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- Infection involves only skin and subcutaneous tissue of the incision

AND

- At least **one** of the following:
 - Purulent drainage with or without laboratory confirmation, from the superficial incision
 - Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision
 - At least **one** of the following signs or symptoms of infection:
 - Tenderness or pain
 - Localised swelling
 - Redness
 - Heat

AND

Superficial incisional SSI made by a surgeon or attending physician

DEEP INCISIONAL

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- Infection appears to be related to the operation and infection involves deep soft tissue (e.g. fascia, muscle) of the incision

AND

- At least **one** of the following:
 - Purulent drainage from the deep incision but not from the organ/space component of the surgical site
 - A deep incision spontaneously dehisces or is deliberately opened by a surgeon when the patient has at least one of the following signs or symptoms: fever (> 38 °C), localised pain or tenderness, unless incision is culture-negative.
 - An abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination.
- Diagnosis of deep incisional SSI made by a surgeon or attending physician

ORGAN/SPACE

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- Infection appears to be related to the operation and infection involves any part of the anatomy (e.g. organs and spaces) other than the incision which was opened or manipulated during an operation

AND

- At least **one** of the following:
 - Purulent drainage from a drain that is placed through a stab wound into the organ/space
 - Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space
 - An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination
- Diagnosis of organ/space SSI made by a surgeon or attending physician

INFECTION CONFIRMATION

- Infection criteria fully met:
INFECTION CONFIRMED
(= SSSI-C)
- Infection treated on PPS day but no documentation of signs/symptoms (*hospital or other LTCF only*):
INFECTION IMPORTED
(= SSSI-I)

INFECTION CONFIRMATION

- Infection criteria fully met:
INFECTION CONFIRMED
(= DSSI-C)
- Infection treated on PPS day but no documentation of signs/symptoms (*hospital or other LTCF only*):
INFECTION IMPORTED
(= DSSI-I)

INFECTION CONFIRMATION

- Infection criteria fully met:
INFECTION CONFIRMED
(= OSSI-C)
- Infection treated on PPS day but no documentation of signs/symptoms (*hospital or other LTCF only*):
INFECTION IMPORTED
(= OSSI-I)

NOTE:
If the infection matches one of the Surgical Site Infection (SSI) definitions, please give priority to the SSI. Do not apply another case definition for the same infection.

EYE, EAR, NOSE AND MOUTH INFECTIONS

CONJUNCTIVITIS

ONE OF THE FOLLOWING (①, ② or ③) CRITERIA MUST BE MET:

- ① Pus appearing from one or both eyes, present for at least 24 hours
- ② New or increased conjunctival erythema, with or without itching
- ③ New or increased conjunctival pain, present for at least 24 hours

Symptoms must not be due to allergy or trauma to the conjunctiva

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= CONJ-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= CONJ-I)**

EAR

ONE OF THE FOLLOWING (① or ②) CRITERIA MUST BE MET:

- ① Diagnosis by a physician of any ear infection
- ② New drainage from one or both ears (non-purulent drainage must be accompanied by additional symptoms, such as ear pain or redness)

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= EAR-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= EAR-I)**

SINUSITIS

- Sinusitis diagnosed by physician

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= SINU-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= SINU-I)**

ORAL CANDIDIASIS

BOTH OF THE FOLLOWING CRITERIA MUST BE MET:

- Presence of raised white patches on inflamed mucosa OR plaques on oral mucosa
- AND**
- Diagnosed by a dentist or a physician

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= ORAL-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= ORAL-I)**

GASTROINTESTINAL INFECTIONS

GASTROENTERITIS

ONE OF FOLLOWING (①, ② or ③) CRITERIA MUST BE MET:

- ① Diarrhoea, three or more liquid or watery stools above normal baseline for the resident in 24-hr period
- ② Vomiting, two or more episodes in 24-hr period
- ③ **Both** of the following:
 - Positive stool specimen for bacterial or viral pathogen**AND**
 - At least one of the following: nausea, vomiting, abdominal pain or tenderness, diarrhoea

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= GE-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= GE-I)**

CLOSTRIDIUM DIFFICILE INFECTION

ONE OF FOLLOWING (①, ② or ③) CRITERIA MUST BE MET:

- ① Diarrhoeal stools or toxic megacolon **AND** a positive laboratory assay for *C. difficile* toxin A and/or B in stools or a toxin-producing *C. difficile* organism detected in stool via culture or other means e.g. a positive PCR result
- ② Pseudomembranous colitis revealed by lower gastrointestinal endoscopy
- ③ Colonic histopathology characteristic of *C. difficile* infection (with or without diarrhoea) on a specimen obtained during endoscopy or colectomy

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= CDI-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= CDI-I)**

BLOODSTREAM INFECTIONS

ONE OF THE FOLLOWING (① or ②) CRITERIA MUST BE MET:

- ① Two or more blood cultures positive for the same organism
 - ② A single blood culture documented with an organism thought not to be a contaminant
- AND**
- At least **one** of the following:
- Fever (*for definition see top of page 3*)
 - New hypothermia (<34.5° C, or does not register on the thermometer being used)
 - A drop in systolic blood pressure of >30 mm Hg from baseline
 - Worsening mental or functional status

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= BSI-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= BSI-I)**

UNEXPLAINED FEVER

- The resident must have documentation in the medical record of fever (*for definition see top of page 3*) on two or more occasions at least 12 hours apart in any 3-day period, with no known infectious or non-infectious cause

INFECTION CONFIRMATION

- Infection criteria fully met: **INFECTION CONFIRMED (= FUO-C)**
- Infection treated on PPS day but no documentation of signs/symptoms: **INFECTION IMPORTED (hospital or other LTCF only) (= FUO-I)**

OTHER INFECTION(S)

Please specify (= OTHER)