Scientific Institute of Public Health - Healthcare associated infections and antimicrobial resistance
National surveillance of ICU-acquired Infections; Data Definition
Update 22/3/2017

| Protocol: | Export file ID: | Description: |
|---|---|---|
| ALL | L | [0] Hospital, Unit, Surveillance, Denominator data  (ICU L1 and L2) |

| New: | Variable (description): | | Prim: | Req: | Type: | Value (description): | |
|---|---|---|---|---|---|---|---|
| ☑ | SURV_DT_ST | Start date of surveillance period; Should be the first day of the month | ☑ | ☑ | dbDate | | |
| ☑ | SURV_L | Length of surveillance period in months (either 1 one or 3). | ☐ | ☑ | | 1 | 1M |
| | | | | | | 3 | 3M |
| ☑ | HOSPITAL | Hospital code | ☑ | ☑ | | | |
| ☑ | ICU | NSIH-ICU: unit code, provide a separate line for each unit under surveillance | ☑ | ☑ | | | |
| ☑ | H_SIZE_N | Hospital number of beds | ☐ | ☑ | dbInteger | | |
| ☑ | H_TYPE | Hospital type | ☐ | ☑ | | -1 | unknown |
| | | | | | | 1 | University hospital |
| | | | | | | 2 | General hospital, teaching |
| | | | | | | 3 | General hospital, non-teaching |
| | | | | | | 4 | specialist or other hospital |
| ☑ | ICU_SIZE | NSIH-ICU: number of beds in unit | ☐ | ☑ | dbInteger | | |
| ☑ | ICU_TYPE | NSIH-ICU: unit type | ☐ | ☑ | | -1 | unknown |
| | | | | | | 1 | mixed |
| | | | | | | 2 | medical |
| | | | | | | 3 | surgical |
| | | | | | | 4 | coronary care unit |
| | | | | | | 5 | burns |
| | | | | | | 6 | neurosurgical |
| | | | | | | 7 | pediatric |
| | | | | | | 8 | neonatal |
| | | | | | | 9 | other |
| ☑ | ICUS_L2 | NSIH-ICU: Level 2 (patient-based, Yes) or Level 1 (unit-based, No)? | ☐ | ☑ | dbBoolean | | |
| ☑ | ICUS_L2_ABU | NSIH-ICU: Daily antibiotic use (Yes) or not (No)? | ☐ | ☑ | dbBoolean | | |
| ☑ | ICUS_L2_E | NSIH-ICU: Extended Level 2 (Yes, Full invasive device use and SOFA scores) or not (No)? | ☐ | ☑ | dbBoolean | | |
| ☑ | ICUS_INF_BSI | NSIH-ICU: ICU-acquired Bloodstream infections included in surveillance (Yes) or not (No) | ☐ | ☑ | dbBoolean | | |
| ☑ | ICUS_INF_CRI | NSIH-ICU: ICU-acquired Catheter Related Infections included in surveillance (Yes) or not (No) | ☐ | ☑ | dbBoolean | | |
| ☑ | ICUS_INF_PN | NSIH-ICU: ICU-acquired Pneumonia included in surveillance (Yes) or not (No) | ☐ | ☑ | dbBoolean | | |
| ☑ | ICUS_INF_UTI | NSIH-ICU: ICU-acquired Urinary tract infections included in surveillance (Yes) or not (No) | ☐ | ☑ | dbBoolean | | |
| ☑ | ICUS_MO | NSIH-ICU: Option "AMR data collected (Yes) or Not (No)" | ☐ | ☑ | dbBoolean | | |
| ☑ | ADI_2D | NSIH-ICU L1 denominator (only if icus_l2=No): Number of new admissions staying more than 2 days in ICU | ☐ | ☑ | dbInteger | | |

LEGEND: See NSIH-ICU surveillance protocol for details; NEW: New field since last update; PRIM(ARY): The combination of all fields with PRIM=Yes must be unique for all observations within a particular export file ID; REQ(UIRED): required field, it is possible to submit data with only these fields; (DATA)TYPE: DBBOOLEAN = "Yes/No" field; dbINTEGER = Integer field ; dbDATE = date field; dbTEXT = text field.

| Protocol: | Export file ID: | Description: |
|-----------|-----------------|--------------|
| ALL | L | [0] Hospital, Unit, Surveillance, Denominator data  (ICU L1 and L2) |

| New: | Variable (description): | | Prim: | Req: | Type: | Value (description): |
|------|-------------------------|--|-------|------|-------|----------------------|
| ☑ | PDI_2D | NSIH-ICU L1 denominator (only if icus_l2=No): Number of patient days for patients staying more than 2 days in ICU | ☐ | ☑ | dbInteger | |
| ☑ | ADI_ALL | NSIH-ICU L1 denominator (only if icus_l2=No): Number of new admissions in ICU, all | ☐ | ☐ | dbInteger | |
| ☑ | PDI_ALL | NSIH-ICU L1 denominator (only if icus_l2=No): Number of patient-days in ICU, all | ☐ | ☐ | dbInteger | |
| ☑ | CDI_2D | NSIH-ICU L1 denominator (only if icus_l2=No): Number of catheterdays for patients staying more than 2 days in ICU | ☐ | ☐ | dbInteger | |
| ☑ | IDI_2D | NSIH-ICU L1 denominator (only if icus_l2=No): Number of intubation days for patients staying more than 2 days in ICU | ☐ | ☐ | dbInteger | |

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| Protocol: | Export file ID: | Description: |
|---|---|---|
| ICU | I | [1] Patient-based admission data (ICU L2) |

| New: | Variable (description): | | Prim: | Req: | Type: | Value (description): | |
|---|---|---|---|---|---|---|---|
| ☐ | HOSPITAL | Hospital code; must refer to L.H_CODE; can be left out if constant over entire file | ☑ | ☑ | | | |
| ☐ | PATIENTID | Patient identifier | ☑ | ☑ | dbText | | |
| ☐ | ICU | ICU unit code, must refer to L.ICU | ☐ | ☑ | | | |
| ☐ | ADDT_ICU | Date of admission to ICU | ☑ | ☑ | dbDate | | |
| ☐ | DISDT_ICU | Discharge date from ICU | ☐ | ☑ | dbDate | | |
| ☐ | DIS_ST | Discharge status | ☐ | ☐ | | 1 | alive |
| | | | | | | 2 | died at icu |
| | | | | | | 3 | "DNR" (do not reanimate) |
| | | | | | | 4 | alive (end of follow-up) |
| | | | | | | 9 | Unknown |
| ☐ | AGE | Age at ICU admission | ☐ | ☑ | dbInteger | | |
| ☐ | GENDER | Gender | ☐ | ☑ | | F | Female |
| | | | | | | M | Male |
| | | | | | | U | Unknown |
| ☐ | SURG_SIT1 | Prior surgery site, provide up to 2 sites per ICU patient | ☐ | ☐ | | 0 | No Surgery |
| | | | | | | 1 | Coronary surgery |
| | | | | | | 2 | Other cardiac surgery |
| | | | | | | 3 | Other thoracic surgery |
| | | | | | | 4 | Other vascular surgery |
| | | | | | | 5 | Abdominal surgery |
| | | | | | | 6 | Neurosurgery |
| | | | | | | 7 | Other surgery |
| ☐ | GLAS_EST | Estimated glasgow score | ☐ | ☐ | dbSingle | | |
| ☐ | GLAS_MEA | Measured glasgow score | ☐ | ☐ | dbSingle | | |
| ☐ | ADM_TYP | Type of admission | ☐ | ☐ | | 2 | Scheduled surgical |
| | | | | | | 1 | Medical |
| | | | | | | 3 | Unscheduled surgical |
| | | | | | | 99 | ? |
| ☐ | SAPS | SAPS - II score | ☐ | ☐ | dbInteger | | |
| ☐ | APACHE | APACHE - II score | ☐ | ☐ | dbInteger | | |
| ☐ | PRISM | PRISM score | ☐ | ☐ | dbInteger | | |
| ☐ | PT_ORI | patient origin | ☐ | ☐ | | 1 | other service (same/other hospital) |
| | | | | | | 2 | other ICU |
| | | | | | | 3 | community |
| | | | | | | 4 | nursing home |
| ☐ | TRAUMA | trauma | ☐ | ☐ | | 0 | no multiple trauma |
| | | | | | | 1 | multiple trauma |
| | | | | | | -1 | unknown |
| ☐ | IMMUNE | impaired immunity | ☐ | ☐ | | 0 | no impaired immunity |
| | | | | | | 1 | impaired immunity |
| | | | | | | -1 | unknown |
| ☐ | AMT_ADM | antibiotic use in 48h before/after admission to ICU | ☐ | ☐ | | 0 | no antibiotic treatment in 48h before/after admission |

LEGEND: See NSIH-ICU surveillance protocol for details; NEW: New field since last update; PRIM(ARY): The combination of all fields with PRIM=Yes must be unique for all observations within a particular export file ID; REQ(UIRED): required field, it is possible to submit data with only these fields; (DATA)TYPE: DBBOOLEAN = "Yes/No" field; dbINTEGER = Integer field ; dbDATE = date field; dbTEXT = text field.

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| Protocol: | Export file ID: | Description: |
|---|---|---|
| ICU | I | [1] Patient-based admission data (ICU L2) |

| New: | Variable (description): | | Prim: | Req: | Type: | Value (description): | |
|---|---|---|---|---|---|---|---|
| ☐ | AMT_ADM | antibiotic use in 48h before/after admission to ICU | ☐ | ☐ | | 1 | antibiotic treatment in 48h before/after admission |
| | | | | | | 9 | unknown |
| ☐ | CORO | acute coronary care | ☐ | ☐ | | 0 | no acute coronary care |
| | | | | | | 1 | acute coronary care |
| | | | | | | -1 | unknown |

LEGEND: See NSIH-ICU surveillance protocol for details; NEW: New field since last update; PRIM(ARY): The combination of all fields with PRIM=Yes must be unique for all observations within a particular export file ID; REQ(UIRED): required field, it is possible to submit data with only these fields; (DATA)TYPE: DBBOOLEAN = "Yes/No" field; dbINTEGER = Integer field ; dbDATE = date field; dbTEXT = text field.

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| Protocol: | Export file ID: | Description: |
|---|---|---|
| ICU | Z | [1] Patient-based daily follow-up data (ICU L2) |

| New: | Variable (description): | | Prim: | Req: | Type: | Value (description): | |
|---|---|---|---|---|---|---|---|
| ☐ | _ | Provide in separate fields: (HOSPITAL,) PATIENTID, ADDT_ICU for this patient | ☑ | ☑ | | | |
| ☐ | FU_DT | day in unit | ☑ | ☑ | dbDate | | |
| ☐ | FU_EXP | daily follow-up category; For invasive device use, provide device (categories given right), For SOFA score, provide organ (categories given right), For Antibiotic use, provide ATC code. | ☑ | ☑ | | D_CVC | central venous catheters |
| | | | | | | D_INT | intubation |
| | | | | | | D_F_OIT | naso-oro-intestinal tube without feeding |
| | | | | | | D_F_NIT | naso-oro-intestinal tube with feeding |
| | | | | | | D_F_PN | parenteral nutrition |
| | | | | | | D_UC | urinary catheter |
| | | | | | | D_IV | (ICU L2 extended): mechanical invasive ventilation |
| | | | | | | D_NIV | (ICU L2 extended): mechanical non-invasive ventilation |
| | | | | | | D_INT_TRA | (ICU L2 extended): route: tracheotomy |
| | | | | | | D_reint | (ICU L2 extended): reintubation that day |
| | | | | | | D_respi | (ICU L2 extended): sofa score, respiration |
| | | | | | | D_Coag | (ICU L2 extended): sofa score, coagulation |
| | | | | | | D_liver | (ICU L2 extended): sofa score, liver |
| | | | | | | D_cardio | (ICU L2 extended): sofa score, cardio |
| | | | | | | D_cns | (ICU L2 extended): sofa score, cns |
| | | | | | | D_renal | (ICU L2 extended): sofa score, kidney |
| ☐ | FU_RES | daily follow-up result; For Invasive Devices, leave empty; For SOFA score, enter score 0-4; For Antibiotic Use, provide Reason (categories given right) | ☐ | ☑ | | S | S : Selective digestive decontamination |
| | | | | | | P | P : Prophylaxis |
| | | | | | | E | E : Empiric Therapy |
| | | | | | | M | M : Gram-stain or Micro-organism known |
| | | | | | | A | A : Antibiogram known |

LEGEND: See NSIH-ICU surveillance protocol for details; NEW: New field since last update; PRIM(ARY): The combination of all fields with PRIM=Yes must be unique for all observations within a particular export file ID; REQ(UIRED): required field, it is possible to submit data with only these fields; (DATA)TYPE: DBBOOLEAN = "Yes/No" field; dbINTEGER = Integer field ; dbDATE = date field; dbTEXT = text field.

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| Protocol: | Export file ID: | Description: |
|---|---|---|
| ICU | B | [2] ICU-acquired infection data (ICU L1 and L2) |

| New: | Variable (description): | | Prim: | Req: | Type: | Value (description): | |
|---|---|---|---|---|---|---|---|
| ☐ | _ | Provide in separate fields: (HOSPITAL,) PATIENTID, ADDT_ICU for this patient (see I file for description) | ☑ | ☑ | | | |
| ☐ | ICU | (Encode only if ICU L1) ICU unit code, must refer to L.ICU | ☐ | ☑ | | | |
| ☐ | AGE | (Encode only if ICU L1) Age at ICU admission | ☐ | ☑ | dbInteger | | |
| ☐ | GENDER | (Encode only if ICU L1) Gender of the patient | ☐ | ☑ | | F | Female |
| | | | | | | M | Male |
| | | | | | | U | Unknown |
| ☐ | INF_DT | infection date | ☑ | ☑ | dbDate | | |
| ☐ | INF_SITE | Infection site category | ☑ | ☑ | | PN1 | Pneumonia: protected sample+quantitative culture |
| | | | | | | PN2 | Pneumonia: non-protected sample (eta) + quantitative culture |
| | | | | | | PN3 | Pneumonia: alternative microbiological criteria |
| | | | | | | PN4 | Pneumonia: sputum bacteriology or non-quantitative ETA |
| | | | | | | PN5 | Pneumonia: no microbiological criterion |
| | | | | | | BSI | Bloodstream Infection: positive hemoculture recognized pathogen / 2HC + skin contaminant |
| | | | | | | UTI-A | Urinary Tract Infection: microbiologically confirmed symptomatic UTI |
| | | | | | | UTI-B | Urinary Tract Infection: symptomatic UTI |
| | | | | | | CRI1 | Catheter Related Infection: local catheter infection |
| | | | | | | CRI2 | Catheter Related Infection: generalized catheter infection |
| | | | | | | CRI3 | Catheter Related Infection: cvc-related bloodstream infection |
| ☐ | INV_DEV | Invasive device in 48 hours preceding infection | ☐ | ☑ | | 0 | no |
| | | | | | | 1 | yes |
| | | | | | | 9 | unknown |
| ☐ | BSI_ORI | Origin of Bloodstream infection | ☐ | ☑ | | C | catheter |
| | | | | | | C-CVC | central venous catheter |
| | | | | | | C-PER | peripheral catheter |
| | | | | | | C-ART | arterial catheter |
| | | | | | | S | Secundary to another site |
| | | | | | | S-PUL | pulmonary |
| | | | | | | S-UTI | urinary tract infection |
| | | | | | | S-DIG | digestive tract infection |
| | | | | | | S-SSI | surgical site infection |
| | | | | | | S-SST | skin and soft tissue |
| | | | | | | S-OTH | other |

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| Protocol: | Export file ID: | Description: |
|-----------|-----------------|--------------|
| ICU | B | [2] ICU-acquired infection data (ICU L1 and L2) |

| New: | Variable (description): | | Prim: | Req: | Type: | Value (description): | |
|------|-------------------------|--|-------|------|-------|---------------------|--|
| ☐ | BSI_ORI | Origin of Bloodstream infection | ☐ | ☑ | | U0 | unknown: BSI of unknown origin (origin was verified but no source could be found for the BSI) |
| | | | | | | UNK | Missing, data unavailable |

LEGEND: See NSIH-ICU surveillance protocol for details; NEW: New field since last update; PRIM(ARY): The combination of all fields with PRIM=Yes must be unique for all observations within a particular export file ID; REQ(UIRED): required field, it is possible to submit data with only these fields; (DATA)TYPE: DBBOOLEAN = "Yes/No" field; dbINTEGER = Integer field ; dbDATE = date field; dbTEXT = text field.

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| Protocol: | Export file ID: | Description: |
|---|---|---|
| ICU | A | [3] Antimicrobial Resistance data (optional, ICU L1 and L2) |

| New: | Variable (description): | | Prim: | Req: | Type: | Value (description): |
|---|---|---|---|---|---|---|
| ☐ | _ | Provide in separate fields: (HOSPITAL,) PATIENTID, ADDT_ICU, INF_DT, INF_SITE for this patient (see I and B files for description) | ☑ | ☐ | | |
| ☐ | PATHOGEN | micro-organism code, see NSIH-ICU surveillance protocol for prioritised MOCODExAB combinations | ☑ | ☐ | | |
| ☐ | ANTIBIOTIC | AMR test (code), see NSIH-ICU surveillance protocol for prioritised MOCODExAB combinations | ☑ | ☐ | | |
| ☐ | SIR | AMR test susceptibility result (S I R) | ☐ | ☐ | | |

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