KNHSS

Kuwait National Healthcare-associated
Infections Surveillance System

Instructions for Completion of the Primary Bloodstream Infection (BSI) Form

Data Field	Instructions for Data Collection
Page 1	
Surveillance date	Write down surveillance date in form of month/year using the format: mm/yyyy.
Facility name	Write down the facility name.
Facility code	Write down facility code using **Form A.**
Patient information	
Patient ID	Write down patient civil ID number.
File number	Write down patient hospital file number.
Patient name	Write down first, middle and the last name of the patient.
Nationality	Check Kuwaiti or Non Kuwaiti to indicate nationality of the patient.
Gender	Check Male or Female to indicate the gender of the patient.
Date of Birth	Record the date of the patient birth using this format: dd/mm/yyyy.
Date admitted to facility	• Enter date patient admitted physically to an inpatient location using this format: dd/mm/yyyy. Do not use the date the admission order is written. • When determining a patient's admission dates to both the facility and specific inpatient location, take into account all such days, including any days spent in an inpatient location as an "observation" patient before being officially admitted as an inpatient to the facility, as these days contribute to exposure risk. Therefore, all such days are included in the counts of admissions and patient days for the facility and specific location, and facility and admission dates must be moved back to the first day spent in the inpatient location. • When reporting a BSI which occurs on the day of or day after discharge use the previous date of admission as admission date.
Location	Enter the inpatient location to which the patient was assigned on the date of the BSI event. If the date of BSI occurs on the day of transfer or discharge from a location or the next day, indicate the transferring/discharging location, not the current location of the patient, in accordance with the Transfer Rule. Write location as specified in patient file. E.g. ward 2.

Location code	Refer to **Form G** to identify the code of the location.
Date of event	The date when the first element used to meet the BSI infection criterion occurred for the first time during the infection window period. Enter date of this event using this format: dd/mm/yyyy. NOTE: If a device has been discontinued on the first day of the month in a location where there are no other device days in that month, and a device-associated infection develops after the device is discontinued, use the last day of the previous month as the Date of Event.
Post-procedure BSI	Check "Yes" if this event occurred after an NHSN defined procedure but before discharge from the facility, otherwise check "No".
Date of procedure	If the answer in post-procedure BSI = "Yes", record the date of the procedure using this format: dd/mm/yyyy. Otherwise, don't answer this question.
Procedure name	If the answer in post-procedure BSI = "Yes", write procedure name as written in operation sheet. E.g. Left sided popliteal bypass with graft. Otherwise, don't answer this question.
NHSN Procedure category name	If the answer in post-procedure BSI = "Yes", enter the appropriate NHSN procedure category name according to **Form C.** E.g. Left sided popliteal bypass with graft will be written as PVBY. Otherwise, don't answer this question.
KNHSS Procedure category code	If the answer in post-procedure BSI = "Yes", enter the appropriate KNHSS procedure category code according to **Form C**. E.g. PVBY code will be 31.
MDRO infection surveillance	
MDRO infection surveillance	Do not fill this part now – This part is for the future plan
Risk factors	
Is central line a risk factor (CLABSI)	Check "Yes" if patient had a central line (CL) present for more than 2 calendar days on the date of event or the day before, and then check the central line that apply. Day of device insertion = Day 1. If the patient is admitted or transferred into a facility with an implanted central line (port) in place, and that is the patient's only central line, day of first access in an inpatient location is considered Day 1.

	Otherwise, check "No". **NOTE: When one of the exclusions listed below is met, these events are considered LCBIs, but are NOT considered central line associated, even in the presence of a CL. In such a case, please mark the "Is central line a risk factor " field = No" in the presence of an eligible central line:** a) In case of patients with **Extracorporeal life support (ECMO)** that has been in place for more than 2 days on the BSI date of event (DOE), and is still in place on the DOE or the day before- such cases are considered LCBIs but are not central line associated (not a CLABSI) for KNHSS reporting purposes. Check the "Patient has eligible ECMO" option if this exclusion is present. b) In case of patients with **Ventricular Assist Device (VAD)** that has been in place for more than 2 days on the BSI date of event (DOE), and is still in place on the DOE or the day before- such cases are considered LCBIs but are not central line associated (not a CLABSI) for KNHSS reporting purposes. Check the "Patient has eligible VAD" option if this exclusion is present. c) In neonates, **Group B Streptococcus** identified from blood, with a date of event during the first 6 days of life, will not be reported as a CLABSI for KNHSS reporting purposes. Check the "Group B Strep ≤6 days after birth" option if this exclusion is present. d) Occasionally, a patient with both a central line and **another vascular access device will have pus at the other access site**. If there is pus at the site of one of the vascular access devices listed below and a specimen collected from that site has at least one matching organism to an organism identified in blood – both collected within the infection window period ,such cases are considered LCBIs but are not central line associated (not a CLABSI) for KNHSS reporting purposes. Check the "Pus at non-CL vascular access site" option if this exclusion is present. Vascular access devices included in this exception are limited to: • Arterial catheters • Arteriovenous fistulae • Arteriovenous grafts • Atrial catheters (intra-cardiac catheters) • Hemodialysis reliable outflow (HERO) dialysis catheters • Intra-aortic balloon pump (IABP) devices • Non-accessed CL (those neither inserted nor used during current admission • Peripheral IV or Midlines

	e) **MBI-LCBI** cases are considered LCBIs but are not central line associated (not a CLABSI) for KNHSS reporting purposes. Check the "MBI-LCBI" option if this exclusion is present.
If ICU/other locations: central line	**If central line is a risk factor= "Yes",** and the location is an ICU (including CCU) or location other than SCA/ONC or NICU: check central line. (e.g. of other locations: Wards, Step Down Units, Step Down Neonatal Nursery (Level II), Well Baby Nursery (Level I), Chronic Care Units, Mixed Acuity Units).
If Specialty Care Area/Oncology Permanent central line Temporary central line	**If central line is a risk factor= "Yes"** and the location is Specialty Care Area/Oncology (including oncology ICU): check Permanent central line **or** Temporary central line or **both**. Check Permanent central line: for tunneled or implanted central line (CL). Check Temporary central line: for a non-tunneled or non-implanted central line (CL).
If NICU: Birth weight	**If central line is a risk factor= "Yes"** and the location is NICU: Check a central line (CL): for central line or umbilical catheter (UC). Record patient's weight at the time of birth in grams, **not** the weight on the date of event.
Any hemodialysis catheter present	Check "Yes" if the patient had any central line in place for the purpose of hemodialysis. Check "No" if the patient had no central line in place for the purpose of hemodialysis. If the patient has >1 central line at the time of the event, check "Yes" if any were in place for the purpose of hemodialysis. There is no requirement for this central line to have been accessed to check "Yes".
Location of device insertion	Enter the patient location where the central line was inserted. • If the patient has more than one central line, enter the location where the first central line was inserted. • If the patient has both a permanent and a temporary central line, enter the location where the temporary line was inserted.

	Note: • Location of central line insertion is not necessarily the same as patient location recorded above. • Location of central line insertion is not necessarily an inpatient location.
Location code of device insertion	Write the patient location code where the central line was inserted. Refer to **Form G**.
CL1,CL2,CL3	For each Central Line, record the date of insertion and date of removal (if applicable). Enter the dates using the format: dd/mm/yyyy. **N.B**: Record the date of insertion and date of removal (if applicable) even if the central line is not considered the risk factor.
Event details	
Laboratory-confirmed (LCBI).	The event should be laboratory confirmed blood stream infection. Check LCBI-1, MBI-LCBI-1, LCBI-2, MBI-LCBI-2, LCBI-3 or MBI-LCBI-3 for the specific event type you are reporting.
Specify criteria used	Check each of the elements of the criterion that was used to identify this infection.
Specify pathogen(s) and antimicrobial susceptibility on page 2	Specify pathogen(s) and antimicrobial susceptibility results on page 2.
Number of Pathogens	Write the number of isolated pathogen(s) causing BSI. (up to 3 pathogens may be reported).
Pathogen(s) code(s)	Write the code of each pathogen according to **Form D**. • If multiple pathogens are identified, enter the pathogen judged to be the most important cause of infection as #1, the next most as #2, and the least as #3 (usually this order will be indicated on the laboratory report). • If the species is not given on the lab report or is not found on the KNHSS list **(Form D)**, then select the "spp" choice for the genus.

MDRO

Check "Yes" and write the code if the isolated organism(s) was/were MDRO of the following, otherwise check "No".

MRSA: ***S. aureus*** cultured from any specimen that tests oxacillin- resistant (R), cefoxitin-resistant, or methicillin-resistant by standard susceptibility testing methods, or any laboratory finding of MRSA (includes but not limited to PCR or other molecular based detection methods).If present: check "MRSA".

VRE: ***Enterococcus faecalis*, *Enterococcus faecium*, or any *Enterococcus* species** that is resistant (R) to vancomycin, by standard susceptibility testing methods or a laboratory finding of VRE (includes but not limited to PCR or other molecular based detection methods).If present: check "VRE".

ESBL producing Gram negative bacteria: Gram negative spp. producing ESBLs enzymes that mediate resistance to extended-spectrum (third generation) cephalosporins (e.g., ceftazidime, cefotaxime, and ceftriaxone) and monobactams (e.g., aztreonam) but do not affect cephamycins (e.g., cefoxitin and cefotetan) or carbapenems (e.g., meropenem or imipenem). If present: check "ESBL".

CRE: ***Escherichia coli, Klebsiella oxytoca, Klebsiella pneumoniae, Klebsiella aerogenes , Enterobacter spp. or any Enterobacteriaceae* spp.** (see table 1 for a partial list of *Enterobacteriaceae* spp.) testing resistant (R) to imipenem, meropenem, doripenem, or ertapenem by standard susceptibility testing methods (i.e., minimum inhibitory concentrations of ≥4 mcg/mL for doripenem, imipenem and meropenem or ≥2 mcg/mL for ertapenem) OR by production of a carbapenemase (specifically KPC, NDM, VIM, IMP, OXA-48) demonstrated using a recognized test (e.g., polymerase chain reaction, metallo-β-lactamase test, modified-Hodge test, Carba-NP). **For *Morganella morganii, Proteus* spp and *Providencia* spp**. that have intrinsic imipenem non-susceptibility, resistance to carbapenems other than imipenem is required.
If present: check "CRE".

MDR-*Pseudomonas aeruginosa*: Tested intermediate or resistant (I or R) for at least one agent in at least 3 of the following 5 classes:

β-lactam/β-lactam β-lactamase inhibitor combination	Aminoglycosides	Carbapenems	Fluoroquinolones
Piperacillin Piperacillin/tazobactam	Amikacin Gentamicin Tobramycin	Imipenem Meropenem Doripenem	Ciprofloxacin Levofloxacin
Cephalosporins			
Cefepime Ceftazidime			

<table>
<tr><td></td><td>If present: check “MDR-PA”.

Carbapenem Non-Susceptible (C-NS) Pseudomonas aeruginosa: Carbapenem non-susceptibility in Pseudomonas aeruginosa is defined as a result of <u>intermediate or resistant (I or R)</u> to imipenem, meropenem or doripenem. If present: check “C-NS PA”.

MDR-Acinetobacter spp.: Any Acinetobacter spp. testing <u>intermediate or resistant (I or R)</u> to at least one agent in at least 3 antimicrobial classes of the following 6 antimicrobial classes:
<table>
<tr><td>β-lactam/β-lactam β-lactamase inhibitor combination</td><td>Aminoglycosides</td><td>Carbapenems</td><td>Fluoroquinolones</td></tr>
<tr><td>Piperacillin
Piperacillin/tazobactam</td><td>Amikacin
Gentamicin
Tobramycin</td><td>Imipenem
Meropenem
Doripenem</td><td>Ciprofloxacin
Levofloxacin</td></tr>
<tr><td>Cephalosporins</td><td>Sulbactam</td><td></td><td></td></tr>
<tr><td>Cefepime
Ceftazidime</td><td>Ampicillin/sulbactam</td><td></td><td></td></tr>
</table>
If present: check “MDR-A.spp”.

Carbapenem Non-Susceptible (C-NS) Acinetobacter spp.: Carbapenem non-susceptibility in Acinetobacter spp. is defined as a result of <u>intermediate or resistant (I or R)</u> to imipenem, meropenem or doripenem. If present: check “C-NS-A.spp”.</td></tr>
<tr><td>Died</td><td>Check “Yes” if patient died during the current hospitalization. Check “No” if the patient was discharged alive following the current hospitalization.
N.B:
If the patient was not discharged at the time of submission of the BSI form, do not answer this question.
If the patient died after submission of the form, send the follow up form.</td></tr>
<tr><td>If died; BSI contributed to death</td><td>If patient died: check “Yes” if the BSI contributed to death (checked from his/her hospital death report), otherwise check “No”.
If the patient did not die, do not answer this question.</td></tr>
<tr><td>Discharge/death date</td><td>Write the date patient discharged from facility or died using this format: dd/mm/yyyy.</td></tr>
</table>