Instructions for Completion of the Pneumonia (PNEU) 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 patient civil ID number
File Number	Write patient hospital file number
Patient Name	Write 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 birth of the patient using this format: dd/mm/yyyy.
Date Admitted to Facility	Enter date patient admitted to an inpatient location using this format: dd/mm/yyyy. • 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 PNEU 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 PNEU event. If the PNEU occurs on the day of transfer/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. eg. ward 2, adult medical
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 PNEU 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 pulled 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 pulled, use the last day of the previous month as the Date of Event.
Post-procedure PNEU	Check "Yes" if this event occurred after an NHSN defined procedure (under any category from the **form C**) but before discharge from the facility, otherwise check "No".
Date of Procedure	If the answer in post-procedure PNEU = "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 PNEU = "Yes", write the procedure name as written in operation sheet. eg. Lt sided popliteal bypass with graft. Otherwise, don't answer this question.
NHSN Procedure Category Name	If the answer in post-procedure PNEU = "Yes", enter the appropriate NHSN procedure category name according to **form C** eg. Lt 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 PNEU = "Yes", enter the appropriate KNHSS procedure category code according to **form C**. e.g. PVBY code will be 31. Otherwise, don't answer this question.

MDRO infection surveillance	
MDRO Infection Surveillance	Do not fill this part now – This part is for the future plan
Risk factors	
Is ventilator a risk factor (VAP)	Check "Yes" if the patient with PNEU had a device to assist or control respiration through a tracheostomy or by endotracheal intubation that had been in place for more than two calendar days on the date of the event or the day before inclusive of the weaning period, otherwise check "No". **NOTE:** • Date of device insertion = Day 1. • Lung expansion devices such as intermittent positive-pressure breathing (IPPB); nasal positive end-expiratory pressure (PEEP); and continuous nasal positive airway pressure (CPAP, hypo CPAP) are **not** considered ventilators **unless** delivered via tracheostomy or endotracheal intubation (e.g., ET-CPAP).
NICU patient	Check "Yes" if the patient is in the NICU. Check "No" if the patient is not in the NICU
Birth weight	If the answer to NICU patient = "Yes", record patient's weight at the time of birth in grams, **not** the weight on the date of event. Otherwise, don't answer this question.
Location of device insertion	Enter the patient location where the intubation and ventilation procedure was performed. **Note:** • Location of device insertion is not necessarily the same as patient location recorded above. • Location of device insertion is not necessarily an inpatient location. • If device was inserted in a hospital (government or private) other than your facility, write the location name as "Others" and specify the name of the hospital in text.
Location code of device insertion	Write the patient location code where the intubation and ventilation procedure was performed. Refer to **form G**.

	Note: • If device was inserted in a hospital (government or private) other than your facility, write the location code as "106"
Date of device insertion	Enter the date the intubation and ventilation procedure was performed using the format: dd/mm/yyyy. Enter the date of extubation and removal of this device (if applicable) If the patient was reintubated, enter the dates of re-intubation and extubation using the format: dd/mm/yyyy
Event details	
Specific event: PNEU	Check one: Clinically Defined Pneumonia (PNU1), Pneumonia with specific laboratory findings (PNU2), Pneumonia in immunocompromised patients (PNU3) for the specific event type you are reporting. For the immunocompromised question, check "Yes" if the patient is immunocompromised* otherwise check "No". *Immunocompromised patients include only : • those with neutropenia defined as absolute neutrophil count or total white blood cell count (WBC) <500/mm3 • those with leukemia, lymphoma or who are HIV positive with CD4 count <200 • those who have undergone splenectomy • those who have a history of solid organ or hematopoietic stem cell transplant • those on cytotoxic chemotherapy • those on enteral or parenteral administered steroids (excludes inhaled and topical steroids) daily for >2 weeks on the date of event
Specify criteria used	Check each of the elements of the criteria that were used to identify the specific type of PNEU being reported. Write the dates that each element was first detected using the format: dd/mm/yyyy. **The Chest Imaging and Signs and Symptoms sections must have responses. If no criteria are checked in these two sections, a PNEU event cannot be reported.**

Pathogen (s) identified	Check "Yes" if a pathogen is identified, otherwise check "No". **Note:** • Pathogens identified should be checked "No "if the specific event is PNU1 • "Normal respiratory flora," "normal oral flora," "mixed respiratory flora," "mixed oral flora," "altered oral flora" or other similar results indicating isolation of commensal flora of the oral cavity or upper respiratory tract cannot be accepted as PNEU pathogens. • The following organisms, <u>unless isolated from cultures of lung tissue or pleural fluid</u>, cannot be accepted as PNEU pathogens i. Candida species* or yeast not otherwise specified ii. coagulase-negative *Staphylococcus* species iii. *Enterococcus* species **Candida* species isolated from sputum, endotracheal aspirate, broncho-alveolar lavage (BAL) or protected specimen brushing cultures combined with a matching blood culture can be used to satisfy the PNU3 definition. • Additionally, because organisms belonging to the following genera are typically causes of community-associated infections and are rarely or are not known to be causes of HAI, they are also excluded, and cannot be used to meet any NHSN definition: *Blastomyces, Histoplasma, Coccidioides, Paracoccidioides, Cryptococcus* and *Pneumocystis*
Number of Pathogens	Write the number of isolated pathogen(s) causing PNEU (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 secondary BSI pathogens are cultured, they should be entered only after site-specific pathogens are entered.

	• 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".

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MDR-Pseudomonas aeruginosa: Tested intermediate or resistant (I or R) for at least one agent in at least 3 of the following 5 classes:
<table>
<tr><th>β-lactam/β-lactam β-lactamase inhibitor combination</th><th>Aminoglycosides</th><th>Carbapenems</th><th>Fluoroquinolones</th></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></td><td></td><td></td></tr>
<tr><td>Cefepime
Ceftazidime</td><td></td><td></td><td></td></tr>
</table>
If present: check “MDR-PA”.

Carbapenem Non-Susceptible (C-NS) Pseudomonas aeruginosa: Pseudomonas aeruginosa testing intermediate or resistant (I or R) to imipenem, meropenem or doripenem. If present: check “C-NS PA”.

MDR-Acinetobacter spp.: Any Acinetobacter spp. testing intermediate or resistant (I or R) to at least one agent in at least 3 antimicrobial classes of the following 6 antimicrobial classes:
<table>
<tr><th>β-lactam/β-lactam β-lactamase inhibitor combination</th><th>Aminoglycosides</th><th>Carbapenems</th><th>Fluoroquinolones</th></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.: Any Acinetobacter spp. testing intermediate or resistant (I or R) to imipenem, meropenem or doripenem. If present: check “C-NS-A.spp”.
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<td>Secondary BSI</td>
<td>Check “Yes” if there is a culture confirmed bloodstream infection (BSI), and a related PNEU, otherwise check “No”.
(For detailed instructions on identifying whether the blood culture represents a secondary BSI, refer to the Secondary BSI guide (Appendix 1) of the KNHSS BSI protocol).</td>
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	• Secondary BSI should be checked "No "if the specific event is PNU1 • If the patient develops a secondary BSI (for PNU2 and PNU3 only) after submission of the PNEU form but within the secondary BSI attribution period, fill out and submit the HAI surveillance follow-up form.
Died	Check "Yes" if the patient died during the hospitalization, otherwise check "No". **NOTE:** • If the patient is still hospitalized and not discharged at the time of submission of the PNEU form, **leave this question unanswered** and submit the form without completing this field. • However, the record is incomplete until the data are entered either died or not (i.e. if the patient died during the current hospitalization, but after submission of the PNEU form, fill out and submit the HAI surveillance follow-up form.
If died; PNEU contributed to death	If patient died, check "Yes" if the PNEU contributed to death (checked from his/her hospital death report), otherwise check "No". If the patient did not die, do not answer this question.
Discharge/death date	Write the date patient discharged from facility or died using this format: dd/mm/yyyy.