HAI & ANTIMICROBIAL USE PREVALENCE SURVEY: ANTIMICROBIAL QUALITY ASSESSMENT (AQUA)

FORM 3c: CAP

CDC ID: ☐☐-☐☐☐☐☐ **Date:** ☐☐/☐☐/☐☐ **Data collector initials:** _____

Clinical information

1. Check any of the following ICD-10 codes that were present on admission for this patient: ☐None

☐J09.X1	☐J09.X2	☐J09.X3	☐J10.00	☐J10.01	☐J10.08	☐J10.1	☐J10.2	☐J10.81	☐J10.82
☐J10.83	☐J10.89	☐J11.00	☐J11.08	☐J11.1	☐J11.2	☐J11.81	☐J11.82	☐J11.83	☐J11.89
☐J12.0	☐J12.1	☐J12.2	☐J12.3	☐J12.81	☐J12.89	☐J12.9	☐J13	☐J14	☐J15.0
☐J15.1	☐J15.3	☐J15.4	☐J15.20	☐J15.211	☐J15.212	☐J15.29	☐J15.5	☐J15.6	☐J15.7
☐J15.8	☐J15.9	☐J16.0	☐J16.8	☐J18.0	☐J18.1	☐J18.9	☐A48.1	☐Other (specify):_____	

2. CAP onset date (mm/dd/yy): ___ / ___ /___ or

☐Prior to survey hospitalization but specific date unknown ☐Unable to determine

3. CAP signs and symptoms in first 2 hospital days; check all that apply: ☐None

☐Fever	☐Increased secretions/sputum production	☐Grunting
☐Chills or rigors	☐Hemoptysis	☐Nasal flaring
☐Cough	☐Chest pain	☐Head bobbing
☐Dyspnea	☐Mental status changes or functional decline	☐Chest wall retractions
☐O_2 saturation < 90%	☐Apnea	☐Wheezing
☐Sore throat	☐Rhinorrhea	☐Muscle aches

4. Did the patient require mechanical ventilation at any time during the hospitalization?

☐Yes
☐No
☐Unknown

4a. If yes, was the patient removed from mechanical ventilation before hospital discharge?

☐Yes, clinical status improved
☐Yes, removed from mechanical ventilation for end-of-life care (or for reasons other than improvement)
☐No
☐Unknown

5. Complete the chest imaging table, recording studies done in the first 5 hospital days (____/____/____ through ____/____/____):

No imaging studies done: ☐ **Unknown whether imaging studies were done:** ☐

	Date (mm/dd/yy)	Findings on chest imaging studies			
1	___ / ___ / ___	☐Bronchopneumonia/pneumonia ☐New or worsening infiltrates ☐Infiltrate, single lobe	☐Air space density/opacity ☐No evidence of pneumonia ☐Infiltrate, multiple lobes	☐Consolidation ☐Cavitation ☐Pleural effusion	☐Cannot rule out pneumonia ☐None of these
2	___ / ___ / ___	☐Bronchopneumonia/pneumonia ☐New or worsening infiltrates ☐Infiltrate, single lobe	☐Air space density/opacity ☐No evidence of pneumonia ☐Infiltrate, multiple lobes	☐Consolidation ☐Cavitation ☐Pleural effusion	☐Cannot rule out pneumonia ☐None of these
3	___ / ___ / ___	☐Bronchopneumonia/pneumonia ☐New or worsening infiltrates ☐Infiltrate, single lobe	☐Air space density/opacity ☐No evidence of pneumonia ☐Infiltrate, multiple lobes	☐Consolidation ☐Cavitation ☐Pleural effusion	☐Cannot rule out pneumonia ☐None of these
4	___ / ___ / ___	☐Bronchopneumonia/pneumonia ☐New or worsening infiltrates	☐Air space density/opacity ☐No evidence of pneumonia	☐Consolidation ☐Cavitation ☐Pleural	☐Cannot rule out pneumonia ☐None of these

		☐ Infiltrate, single lobe	☐ Infiltrate, multiple lobes	effusion
5	___ / ___ / ___	☐ Bronchopneumonia/pneumonia ☐ New or worsening infiltrates ☐ Infiltrate, single lobe	☐ Air space density/opacity ☐ No evidence of pneumonia ☐ Infiltrate, multiple lobes	☐ Consolidation ☐ Cavitation ☐ Pleural effusion ☐ Cannot rule out pneumonia ☐ None of these

CDC ID: ☐☐-☐☐☐☐☐

Antimicrobial drug treatment

6. Was the patient receiving antimicrobial treatment for this episode of CAP before the survey hospitalization?

☐ Yes ☐ No ☐ Unknown

7. CAP treatment during the survey hospitalization:

First date (mm/dd/yy): ____ / ____ /____ or ☐ Unknown **Last date (mm/dd/yy):** ____ / ____ /____ or ☐ Unknown

8. Complete the table for all antimicrobial drugs given to treat CAP during the survey hospitalization:

No.	Drug name	First date (mm/dd/yy)	First route	Last date (mm/dd/yy)	Last route
1		____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH	____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH
2		____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH	____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH
3		____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH	____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH
4		____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH	____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH
5		____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH	____ / ____ / ____ ☐ Unk	☐ IV ☐ IM ☐ PO ☐ INH

More than 5 antimicrobial drugs were given to treat CAP: ☐

8a. Did the patient receive other antimicrobial drugs in the hospital during the CAP treatment period?

☐ Yes—complete table below in 8b. ☐ No ☐ Unknown

8b. Other antimicrobial drugs given in the hospital (during the CAP treatment period defined by the dates in #7):

No.	Drug name*	First date (mm/dd/yy)	First Route	Last date (mm/dd/yy)	Last Route
1		____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH	____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH
2		____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH	____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH
3		____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH	____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH
4		____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH	____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH
5		____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH	____ / ____ / ____ ☐Unk	☐IV ☐IM ☐PO ☐ INH

***Enter separate records for vancomycin IV and vancomycin PO.**

More drugs than fit in the table: ☐

9. Were antimicrobial drugs prescribed at hospital discharge (i.e., prescribed to be administered to the patient for additional days after hospital discharge) to treat CAP or for other reasons?

☐ Yes ☐ No ☐ Unknown

9a. Antimicrobial drugs prescribed at discharge for CAP or other reasons (enter CAP drugs first):

No.	Drug name	Route (check all that apply)	Indication (check all that apply)
1		☐IV ☐IM ☐PO ☐INH ☐Unk	☐CAP ☐Other ☐Unknown
2		☐IV ☐IM ☐PO ☐INH ☐Unk	☐CAP ☐Other ☐Unknown
3		☐IV ☐IM ☐PO ☐INH ☐Unk	☐CAP ☐Other ☐Unknown
4		☐IV ☐IM ☐PO ☐INH ☐Unk	☐CAP ☐Other ☐Unknown
5		☐IV ☐IM ☐PO ☐INH ☐Unk	☐CAP ☐Other ☐Unknown

More drugs than fit in the table: ☐

9b. If antimicrobials were prescribed at discharge for CAP, what was the total duration of the post-discharge CAP treatment?

_____ days, OR the prescription end date is ____ / ____ / _____, OR ☐Duration is unknown

Laboratory testing

10. Complete table below for POSITIVE cultures collected in the first 5 hospital days:

No positive cultures: ☐ **Culture data unknown:** ☐

No.	Specimen	Collect date (mm/dd/yy)	Culture result final date (mm/dd/yy)	Pathogens identified (insert codes)	Culture growth quantity* for lower respiratory cultures only	Antimicrobial drugs given on the DAY AFTER the test result was final	Were pathogens susceptible (S) to ≥1 antimicrobial the patient was getting the DAY AFTER the test result was final?
1	☐Sputum ☐Blood ☐ETA ☐Urine ☐BAL ☐Stool ☐Upper resp ☐Other _____	____ / ___ / ___	____ / ___ / ___	Path1 _____ Path2 _____ Path3 _____	Path1: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path2: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path3: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk	Drug1 _____ Drug2 _____ Drug3 _____ Drug4 _____	Path1: ☐Y ☐N ☐ Path2: ☐Y ☐N ☐ Path3: ☐Y ☐N ☐
2	☐Sputum ☐Blood ☐ETA ☐Urine ☐BAL ☐Stool ☐Upper resp ☐Other _____	____ / ___ / ___	____ / ___ / ___	Path1 _____ Path2 _____ Path3 _____	Path1: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path2: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path3: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk	Drug1 _____ Drug2 _____ Drug3 _____ Drug4 _____	Path1: ☐Y ☐N ☐ Path2: ☐Y ☐N ☐ Path3: ☐Y ☐N ☐
3	☐Sputum ☐Blood ☐ETA ☐Urine ☐BAL ☐Stool ☐Upper resp ☐Other _____	____ / ___ / ___	____ / ___ / ___	Path1 _____ Path2 _____ Path3 _____	Path1: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path2: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path3: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk	Drug1 _____ Drug2 _____ Drug3 _____ Drug4 _____	Path1: ☐Y ☐N ☐ Path2: ☐Y ☐N ☐ Path3: ☐Y ☐N ☐
4	☐Sputum ☐Blood ☐ETA ☐Urine ☐BAL ☐Stool ☐Upper resp ☐Other _____	____ / ___ / ___	____ / ___ / ___	Path1 _____ Path2 _____ Path3 _____	Path1: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path2: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path3: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk	Drug1 _____ Drug2 _____ Drug3 _____ Drug4 _____	Path1: ☐Y ☐N ☐ Path2: ☐Y ☐N ☐ Path3: ☐Y ☐N ☐
5	☐Sputum ☐Blood ☐ETA ☐Urine ☐BAL ☐Stool ☐Upper resp ☐Other _____	____ / ___ / ___	____ / ___ / ___	Path1 _____ Path2 _____ Path3 _____	Path1: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path2: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path3: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk	Drug1 _____ Drug2 _____ Drug3 _____ Drug4 _____	Path1: ☐Y ☐N ☐ Path2: ☐Y ☐N ☐ Path3: ☐Y ☐N ☐
6	☐Sputum ☐Blood ☐ETA ☐Urine ☐BAL ☐Stool ☐Upper resp ☐Other _____	____ / ___ / ___	____ / ___ / ___	Path1 _____ Path2 _____ Path3 _____	Path1: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path2: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path3: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk	Drug1 _____ Drug2 _____ Drug3 _____ Drug4 _____	Path1: ☐Y ☐N ☐ Path2: ☐Y ☐N ☐ Path3: ☐Y ☐N ☐

7	☐ Sputum ☐ Blood ☐ ETA ☐ Urine ☐ BAL ☐ Stool ☐ Upper resp ☐ Other _____	____ / ___ / ___	____ / ___ / ___	Path1 _____ Path2 _____ Path3 _____	Path1: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path2: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path3: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk	Drug1 _____ Drug2 _____ Drug3 _____ Drug4 _____	Path1: ☐Y ☐N ☐ Path2: ☐Y ☐N ☐ Path3: ☐Y ☐N ☐
8	☐ Sputum ☐ Blood ☐ ETA ☐ Urine ☐ BAL ☐ Stool ☐ Upper resp ☐ Other _____	____ / ___ / ___	____ / ___ / ___	Path1 _____ Path2 _____ Path3 _____	Path1: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path2: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk Path3: ☐≥10^4 CFU/ml or similar ☐<10^4 or similar ☐Unk	Drug1 _____ Drug2 _____ Drug3 _____ Drug4 _____	Path1: ☐Y ☐N ☐ Path2: ☐Y ☐N ☐ Path3: ☐Y ☐N ☐

More positive cultures than fit in the table: ☐

ETA=endotracheal aspirate (or tracheal aspirate). BAL=bronchoalveolar lavage (includes bronchial lavage, mini-BAL).

*Check "≥10^4 CFU/ml or similar" if quantity of growth in the culture is reported to be as follows: moderate, many, heavy, abundant, etc. Check "<10^4 or similar" if quantity of growth in the culture is reported to be <10^4 CFU/ml or as follows: few, scarce, scant, rare, etc. Check "unknown" if no organism quantity is noted in the culture report.

CDC ID: ☐☐-☐☐☐☐☐

CDC ID: ☐☐-☐☐☐☐☐☐

11. During the first 5 hospital days, did the patient have a Gram stain of lower respiratory secretions (sputum, BAL, ETA, etc.)? ☐Yes ☐No ☐Unknown

11a. If yes, did the Gram stain report indicate the following:

☐Heavy, 4+, or ≥25 neutrophils (or white blood cells) per low power field [x100]

☐Rare, occasional, few, 1+ or 2+, or ≤10 squamous epithelial cells per low power field [x100]

☐Neither of the above

☐Unknown

12. Complete the table for NEGATIVE cultures collected during the first 5 hospital days:

No negative cultures: ☐ **Culture data unknown:** ☐

No.	Collect date (mm/dd/yy)	Specimen	Culture result final date (mm/dd/yy)
1	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___
2	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___
3	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___
4	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___
5	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___
6	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___
7	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___
8	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___
9	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___
10	___ / ___ / ___	☐Blood ☐Lower resp ☐Urine ☐Stool ☐Other _____	____ / ___ / ___

More negative cultures than fit in the table: ☐

13. Complete the table for non-culture microbiology tests (positive and negative) collected during the first 5 hospital days:

No non-culture tests done: ☐ **Non-culture test data unknown:** ☐

No.	Collect Date (mm/dd/yy)	Specimen	Test	What pathogen(s) were tested for?	Result
1	____ / ___ / ___	☐Blood ☐Lower resp ☐Upper resp ☐Urine ☐Stool ☐Other _____	☐PCR ☐DFA ☐Antigen test ☐Other_____	☐Legionella ☐Cdiff ☐RSV ☐Pneumococcus ☐Adeno ☐Influenza ☐hMPV ☐Paraflu ☐Other _____	☐Negative ☐Unknown ☐Positive (insert code): Path1_____Path2_____ Path3_____
2	____ / ___ / ___	☐Blood ☐Lower resp ☐Upper resp ☐Urine ☐Stool ☐Other _____	☐PCR ☐DFA ☐Antigen test ☐Other_____	☐Legionella ☐Cdiff ☐RSV ☐Pneumococcus ☐Adeno ☐Influenza ☐hMPV ☐Paraflu ☐Other _____	☐Negative ☐Unknown ☐Positive (insert code): Path1_____Path2_____ Path3_____

3	____ / ___ / ___	☐ Blood ☐ Lower resp ☐ Upper resp ☐ Urine ☐ Stool ☐ Other _____	☐ PCR ☐ DFA ☐ Antigen test ☐ Other_____	☐ Legionella ☐ Cdiff ☐ RSV ☐ Pneumococcus ☐ Adeno ☐ Influenza ☐ hMPV ☐ Paraflu ☐ Other _____	☐ Negative ☐ Unknown ☐ Positive (insert code): Path1_____Path2_____ Path3_____
4	____ / ___ / ___	☐ Blood ☐ Lower resp ☐ Upper resp ☐ Urine ☐ Stool ☐ Other _____	☐ PCR ☐ DFA ☐ Antigen test ☐ Other_____	☐ Legionella ☐ Cdiff ☐ RSV ☐ Pneumococcus ☐ Adeno ☐ Influenza ☐ hMPV ☐ Paraflu ☐ Other _____	☐ Negative ☐ Unknown ☐ Positive (insert code): Path1_____Path2_____ Path3_____
5	____ / ___ / ___	☐ Blood ☐ Lower resp ☐ Upper resp ☐ Urine ☐ Stool ☐ Other _____	☐ PCR ☐ DFA ☐ Antigen test ☐ Other_____	☐ Legionella ☐ Cdiff ☐ RSV ☐ Pneumococcus ☐ Adeno ☐ Influenza ☐ hMPV ☐ Paraflu ☐ Other _____	☐ Negative ☐ Unknown ☐ Positive (insert code): Path1_____Path2_____ Path3_____

More tests than fit in the table: ☐

14. Did the patient have any of the following blood test results during the first 2 hospital days?
Check all that apply, or ☐ None.

☐ Arterial pH < 7.35 ☐ BUN > 30 mg/dL (11 mmol/L) ☐ Glucose > 250 mg/dL
☐ PaO_2 < 60 mmHg ☐ Sodium < 130 mmol/L ☐ Hematocrit < 30%

*****FORM IS COMPLETE*****