Community Acquired Pneumonia Hospital Attendance Questionnaire

A. Introduction

What is this study about
To identify and explore avoidable and modifiable factors in the care of adults presenting to hospital with a diagnosis of community acquired pneumonia.

Inclusions
All patients aged 18 or over who presented to hospital between 1st October 2021 and 31st December 2021 with a primary diagnosis of community acquired pneumonia. Same day emergency care patients and those admitted to hospital are included.

Who should complete this questionnaire?
This questionnaire should be completed by the named consultant, or the most appropriate clinician should it not be the named person, responsible for the patients care when they were treated in hospital.

Questions or help
Further information regarding this study can be found here: https://www.ncepod.org.uk/cap.html
If you have any queries about this study or this questionnaire, please contact: cap@ncepod.org.uk or telephone 020 7251 9060

CPD accreditation
Consultants who complete NCEPOD questionnaires make a valuable contribution to the investigation of patient care. Completion of questionnaires also provides an opportunity for consultants to review their clinical management and undertake a period of personal reflection. These activities have a continuing medical and professional development value for individual consultants. Consequently, NCEPOD recommends that consultants who complete NCEPOD questionnaires keep a record of this activity which can be included as evidence of internal/self directed Continuous Professional Development in their appraisal portfolio.

About NCEPOD
The National Confidential Enquiry into Patient Outcome and Death (NCEPOD) reviews healthcare practice by undertaking confidential studies, and makes recommendations to improve the quality of the delivery of care, for healthcare professionals and policymakers to implement. Data to inform the studies are collected from NHS hospitals and Independent sector hospitals across England, Wales, Northern Ireland and the Offshore Islands. NCEPOD are supported by a wide range of bodies and the Steering Group consists of members from the Medical Royal Colleges and Specialist Associations, as well as observers from The Coroners Society of England and Wales, and the Healthcare Quality Improvement Partnership (HQIP).

Impact of NCEPOD
Recommendations from NCEPOD reports have had an impact on many areas of healthcare including:

Development of the NICE 'Acutely ill patients in hospital guideline' (CG50) - following publication of the 2005 'An Acute Problem' report.
Appointment of a National Clinical Director for Trauma Care - following publication of 'Trauma: Who Cares?' 2007. Development of NICE Clinical Guidelines for Acute Kidney Injury, published in 2013 - 'Adding Insult to Injury' 2009.
Development of ICS Standards for the care of adult patients with a temporary Tracheostomy, published 2014 - 'On the right trach?' 2014.
Development of guidelines from the British Society of Gastroenterology: diagnosis and management of acute lower gastrointestinal bleeding, published 2019 - 'Time to Get Control' 2015.
Development of the British Thoracic Society's Quality Standards for NIV, published 2018 - 'Inspiring Change' 2017.

This study was commissioned by The Healthcare Quality Improvement Partnership (HQIP) as part of the Clinical Outcome Review Programme into Medical & Surgical care.

B. Patient details

1. Please use this space to provide a brief overview of the presentation/admission to hospital.

To be included in the study the patient must be 18 or over and have presented to hospital with a primary diagnosis of community acquired pneumonia between 1st October 2021 and 31st December 2021 inclusive.

2. Age at presentation to hospital?

Patients aged 18 or over are included in the study

years ☐ Unknown

Value should be between 18 and 150

3. Sex

- ○ Male
- ○ Female
- ○ Other
- ○ Unknown

4. Ethnicity

- ○ White British/White - other
- ○ Black/African/Caribbean/Black British
- ○ Asian/Asian British (Indian, Pakistani, Bangladeshi, Chinese, other Asian)
- ○ Mixed/Multiple ethnic groups
- ○ Unknown

If not listed above, please specify here...

5. Patient's usual place of residence

- ○ Own home
- ○ Residential home
- ○ Nursing home
- ○ Homeless
- ○ Unknown

If not listed above, please specify here...

6a. Did the patient have any co-morbidities pre-dating this presentation?

- ○ Yes
- ○ No
- ○ Unknown

6b. If answered "Yes" to [6a] then:
Which of the following co-morbidities did the patient have?
Please tick all that apply

- ☐ AIDS
- ☐ Bronchiectasis
- ☐ Coronary artery disease
- ☐ Congestive cardiac failure
- ☐ Chronic liver disease
- ☐ COPD
- ☐ Cancer (metastatic)
- ☐ Cancer (localised)
- ☐ Connective tissue disease
- ☐ Dementia
- ☐ Diabetes Type 1
- ☐ Diabetes Type 2
- ☐ Hemiplegia
- ☐ Hypertension
- ☐ Leukemia
- ☐ Lymphoma
- ☐ Moderate or severe kidney disease
- ☐ Multiple sclerosis
- ☐ Myocardial infarction
- ☐ Parkinsons
- ☐ Pulmonary fibrosis
- ☐ Previous stroke
- ☐ Peripheral vascular disease
- ☐ Peptic ulcer disease
- ☐ Transient ischaemic attack

Please specify any additional options here...

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7. Was there a documented learning disability?

○ Yes ○ No ○ Unknown

8a. What was the patient's smoking status?

- ○ Current smoker
- ○ Ex-smoker (at least 3 months since stopped)
- ○ Non-smoker
- ○ Not recorded

If not listed above, please specify here...

8b. If answered "Current smoker" to [8a] then:
Was smoking cessation advice offered to the patient during this admission?

○ Yes ○ No ○ Unknown

8c. If answered "Current smoker" to [8a] then:
Was nicotine replacement prescribed to the patient during this admission?

○ Yes ○ No ○ Unknown

9a. Did the patient have any history of recreational drug use?

○ Yes ○ No ○ Unknown

9b. If answered "Yes" to [9a] then:
Which recreational drugs?
Please tick all that apply

☐ IV drug use ☐ Heroin smoking ☐ Crack cocaine use ☐ Unknown

Please specify any additional options here...

9c. If answered "IV drug use", "Heroin smoking" or "Crack cocaine use" to [9b] and "Yes" to [9a] then:
Were they actively using these at the time of admission?

○ Yes ○ No ○ Unknown

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10. From your review of the case notes, please score the patient's baseline Rockwood clinical frailty score prior to presentation to hospital.
https://www.england.nhs.uk/south/wp-content/uploads/sites/6/2022/02/rockwood-frailty-scale_.pdf

- ◯ 1 - Very Fit
- ◯ 2 - Well
- ◯ 3 - Managing Well
- ◯ 4 - Vulnerable
- ◯ 5 - Mildly Frail
- ◯ 6 - Moderately Frail
- ◯ 7 - Severely Frail
- ◯ 8 - Very Severely Frail
- ◯ 9 - Terminally Ill
- ◯ Unknown

11a. If answered "Own home" or "Homeless" to [5] then: Was the patient receiving any Social support / care?

- ◯ Yes (Full-Time care)
- ◯ Yes (Part-Time care)
- ◯ No
- ◯ Unknown

If not listed above, please specify here...

[ ]

11b. If answered "Yes (Full-Time care)" or "Yes (Part-Time care)" to [11a] then: Please specify frequency
(visits per week)

[ ]

12a. Prior to this hospital attendance, did the patient contact/engage with healthcare services relating to this episode of community acquired pneumonia?

- ◯ Yes
- ◯ No
- ◯ Unknown

12b. If answered "Yes" to [12a] then: Which services? (please mark all that apply)

- ☐ GP
- ☐ Emergency department at this hospital
- ☐ Community nurse
- ☐ Emergency department of another hospital
- ☐ Urgent Care Centre
- ☐ 111/ NHS 24 services
- ☐ Other out-of-hours service

Please specify any additional options here...

[ ]

13a. Had the patient been treated previously for pneumonia?
(in either primary or secondary care)

- ◯ Yes
- ◯ No
- ◯ Unknown

13b. If answered "Yes" to [13a] then: How long before this hospital presentation was the previous treatment for pneumonia?

- ◯ <14 days
- ◯ 2-6 weeks
- ◯ >6 weeks
- ◯ Unknown

C. Presenting Features

1. Where was the initial assessment?

- ◯ Pre-hospital
- ◯ In the hospital
- ◯ Unknown

If not listed above, please specify here...

2. What were the presenting symptoms at the time of first assessment? (including pre-hospital)

Please tick all that apply

- ☐ Cough purulent (yellow/green)
- ☐ Cough non-purulent (clear/white)
- ☐ Cough dry
- ☐ Dyspnoea
- ☐ Wheeze
- ☐ Pleuritic pain
- ☐ Haemoptysis
- ☐ Fever
- ☐ Rigors
- ☐ Fall
- ☐ Fatigue
- ☐ Vomiting
- ☐ Diarrhoea
- ☐ Abdominal pain
- ☐ Confusion
- ☐ None of these
- ☐ Unknown

Please specify any additional options here...

3a. Were antibiotics prescribed pre-hospital?

- ◯ Yes
- ◯ No
- ◯ Unknown

3b. If answered "Yes" to [3a] then:
Date first dose of antibiotics was prescribed?

☐ Unknown

3c. If answered "Yes" to [3a] then:
Indication for these antibiotics?

- ◯ Treatment for pneumonia or LRTI
- ◯ Treatment for other infection
- ◯ Unclear

If not listed above, please specify here...

3d. If answered "Yes" to [3a] then:
How were initial antibiotics prescribed?

- ◯ Primary care clinician (GP or ANP)
- ◯ Out of hours service
- ◯ Patient held rescue pack
- ◯ Unknown

If not listed above, please specify here...

3e. If answered "Yes" to [3a] then:
In your opinion, were the antibiotics appropriate?

- ◯ Yes
- ◯ No
- ◯ Unknown

3f. If answered "No" to [3e] then:
Please explain why

3g. If answered "Yes" to [3a] then:
How long were antibiotics taken prior to admission?

- ○ Less than a day
- ○ 1 day
- ○ 2 days
- ○ 3 days
- ○ 4 days
- ○ 5 days
- ○ 6 days
- ○ 7 days
- ○ Over 7 days
- ○ Unknown

If not listed above, please specify here...

D. Admission to hospital / first assessment and initial management

1. Source of admission / presentation to hospital?

- ◯ Primary care clinician (GP or ANP) referral
- ◯ Emergency department
- ◯ Outpatient clinic
- ◯ Urgent care centre
- ◯ Out of hours service
- ◯ Same day emergency care (SDEC)
- ◯ Unknown

If not listed above, please specify here...

[ ]

2a. Date of arrival to hospital

[ ] ☐ Unknown

2b. Time of arrival to hospital
24 Hour Format Only

[ ] ☐ Unknown

3a. Did the patient arrive by ambulance?

◯ Yes ◯ No ◯ Unknown

3b. If answered "Yes" to [3a] then:
Is the Ambulance Service Patient Report Form available to you?

◯ Yes ◯ No

3c. If answered "Yes" to [3b] then:
Date of ambulance crew assessment

[ ] ☐ Unknown

3d. If answered "Yes" to [3b] then:
Time of ambulance crew assessment
24 Hour Format Only

[ ] ☐ Unknown

Please complete the following questions from the Ambulance Service Patient Report Form:

4a. If answered "Yes" to [3a] and "Yes" to [3b] then:
ACVPU Score

◯ Alert ◯ Confused ◯ Verbal ◯ Pain
◯ Unresponsive ◯ Not recorded

4b. If answered "Yes" to [3a] and "Yes" to [3b] then:
Respiratory rate

[breaths p/m] ☐ Unknown

Value should be no more than 60

4c. If answered "Yes" to [3a] and "Yes" to [3b] then:
Systolic Blood Pressure

[mmHg] ☐ Unknown

Value should be no more than 200

4d. If answered "Yes" to [3a] and "Yes" to [3b] then:
Diastolic Blood Pressure

[mmHg] ☐ Unknown

Value should be no more than 200

4e. If answered "Yes" to [3a] and "Yes" to [3b] then: Temperature

[ ] °C ☐ Unknown

Value should be no more than 50

4f. If answered "Yes" to [3a] and "Yes" to [3b] then: Pulse rate

[ ] beats p/m ☐ Unknown

Value should be no more than 200

4g. If answered "Yes" to [3a] and "Yes" to [3b] then: Glasgow Coma Scale Score

[ ] Total score ☐ Unknown

Value should be between 3 and 15

4h. If answered "Yes" to [3a] and "Yes" to [3b] then: Oxygen saturation

[ ] % ☐ Unknown

Value should be no more than 100

5a. Did the patient receive oxygen?

○ Yes ○ No ○ Unknown

5b. If answered "Yes" to [5a] then: Oxygen delivery device

○ Nasal cannulae ○ Venturi ○ Non-rebreathe device
○ HUDSON oxygen mask ○ Not recorded

If not listed above, please specify here...

E. Initial presentation in hospital

1a. Location of first hospital review

- ○ Emergency department
- ○ Same day emergency care service
- ○ Medical assessment unit
- ○ Unknown

If not listed above, please specify here...

1b. Date of review

☐ Unknown

1c. Time of review
24 Hour Format Only

☐ Unknown

1d. Details of reviewer grade

- ○ Advanced nurse practitioner
- ○ Basic grade (FY1 or 2)
- ○ Specialist trainee (ST1-2)
- ○ Specialist trainee (ST3+)
- ○ Speciality doctor
- ○ Consultant
- ○ Unknown

If not listed above, please specify here...

1e. Reviewer Specialty?

- ○ Acute medicine
- ○ General medicine
- ○ Respiratory
- ○ Critical Care
- ○ ED Clinician
- ○ Unknown

If not listed above, please specify here...

2a. Was the patient reviewed by a consultant?

- ○ Yes
- ○ No
- ○ Unknown

**2b. If answered "Yes" to [2a] then:
Date of first consultant review**

☐ Unknown

**2c. If answered "Yes" to [2a] then:
Time of first consultant review**
24 Hour Format Only

☐ Unknown

**2d. If answered "Yes" to [2a] then:
Consultant reviewer specialty?**

- ○ Acute medicine
- ○ Respiratory medicine
- ○ Care of the elderly
- ○ General medicine
- ○ Not recorded

If not listed above, please specify here...

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3. The time recorded of the FIRST vital signs assessment in hospital

☐ Unknown

3. The first vital signs assessment in hospital

i. ACVPU Score

- ◯ Alert
- ◯ Confused
- ◯ Verbal
- ◯ Pain
- ◯ Unresponsive
- ◯ Not recorded

ii. Respiratory rate

[breaths p/m] ☐ Unknown

Value should be no more than 60

iii. Systolic Blood Pressure

[mmHg] ☐ Unknown

Value should be no more than 200

iv. Diastolic Blood Pressure

[mmHg] ☐ Unknown

Value should be no more than 200

v. Temperature

[°C] ☐ Unknown

Value should be no more than 50

vi. Pulse rate

[beats p/m] ☐ Unknown

Value should be no more than 200

vii. Glasgow Coma Scale Score

[Total Score] ☐ Unknown

Value should be between 3 and 15

viii. Oxygen saturation

[%] ☐ Unknown

Value should be no more than 100

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4. Was there new onset confusion?

- ◯ Yes
- ◯ No
- ◯ Unknown

5a. Was the patient receiving supplemental oxygen?

- ◯ Yes
- ◯ No
- ◯ Unknown

5b. If answered "Yes" to [5a] then:
Oxygen delivery device

- ◯ Nasal cannulae
- ◯ Venturi
- ◯ Non-rebreathe device
- ◯ Nasal high flow oxygen
- ◯ HUDSON oxygen mask
- ◯ Not recorded

If not listed above, please specify here...

[ ]

6a. Was a NEWS 2 Score documented?

- ◯ Yes
- ◯ No

6b. If answered "Yes" to [6a] then:
NEWS 2 Score

[Score] ☐ Unknown

Value should be no more than 50

6c. Was a CURB65 Score documented?

- ◯ Yes
- ◯ No
- ◯ Unknown

6d. If answered "Yes" to [6c] then:
CURB65 Score

[Score] ☐ Unknown

Value should be no more than 5

F. Investigations

1. On what pathway was the patient managed after initial review?

- ○ Admitted to hospital ward
- ○ Same day emergency care pathway
- ○ Discharged after initial review
- ○ Unknown

If not listed above, please specify here...

____

Radiology

2a. Did the patient have a Chest X-ray during this presentation to hospital?

○ Yes ○ No ○ Unknown

2b. If answered "No" to [2a] then:
Please explain why not
e.g. chest x-ray in the community, rushed to CT, mild pneumonia, death

____

2c. If answered "Yes" to [2a] then:
Date of Chest X-ray

____________________ ☐ Unknown

2d. If answered "Yes" to [2a] then:
Time of Chest X-ray

____________________ ☐ Unknown

2e. If answered "Yes" to [2a] then:
In your opinion, was there a delay to the patient receiving the X-Ray?

○ Yes ○ No ○ Unknown

2f. If answered "Yes" to [2e] then:
Please give further details

____

3a. If answered "Yes" to [2a] then:
Were the CXR findings recorded by the clinical team in the case notes?

○ Yes ○ No ○ Unknown

3b. If answered "Yes" to [3a] then:
Which of the following were documented by the clinical team?
Please tick all that apply

- ☐ Unilateral lobar consolidation/pneumonia
- ☐ Unilateral patchy consolidation/bronchopneumonia
- ☐ Bilateral lobar consolidation/pneumonia
- ☐ Pleural effusion
- ☐ Suspicion of lung cancer
- ☐ Multilobar consolidation/pneumonia
- ☐ None apply
- ☐ Normal X-Ray

Please specify any additional options here...

3c. If answered "Yes" to [3a] then:
Date recorded?

☐ Unknown

3d. If answered "Yes" to [3a] then:
Time recorded?
24 Hour Format Only

☐ Unknown

4a. If answered "Yes" to [2a] then:
Date of CXR report

☐ Unknown

4b. If answered "Yes" to [2a] then:
Time of CXR report
24 Hour Format Only

☐ Unknown

4c. If answered "Yes" to [2a] then:
Did the report differ from the findings noted by the clinical team?

○ Yes ○ No ○ Unknown

4d. If answered "Yes" to [4c] then:
What did the report say?
Tick all that apply

- ☐ Unilateral lobar consolidation/pneumonia
- ☐ Unilateral patchy consolidation/pneumonia
- ☐ Bilateral lobar consolidation/pneumonia
- ☐ Multilobar consolidation/pneumonia
- ☐ Pleural effusion
- ☐ Suspicion of lung cancer
- ☐ None apply
- ☐ Normal X-Ray

Please specify any additional options here...

4e. If answered "Yes" to [2a] then:
Could anything have been improved about the X-Ray reporting?

○ Yes ○ No ○ Unknown

4f. If answered "Yes" to [4e] then:
Please give further details

5a. Were any of the following additional investigations done?
Please tick all that apply

- ☐ CT thorax
- ☐ CT pulmonary angiogram
- ☐ Ultrasound thorax
- ☐ Point of care ultrasound
- ☐ Bronchoscopy
- ☐ Repeat Chest X-Ray
- ☐ None apply

5b. If answered "CT thorax", "CT pulmonary angiogram", "Ultrasound thorax", "Point of care ultrasound", "Bronchoscopy" or "Repeat Chest X-Ray" to [5a] then:
In your opinion, were any of these investigations unnecessary?

○ Yes ○ No ○ Unknown

5c. If answered "Yes" to [5b] then:
Please explain

5d. In your opinion should any additional radiological investigations have been done?

○ Yes ○ No ○ Unknown

5e. If answered "Yes" to [5d] then:
Please detail which investigations and why they should have been done

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Initial blood tests

6a. Urea

[ ] mmol/L ☐ Unknown

Value should be between 1 and 100

6b. Creatinine

[ ] umol/L ☐ Unknown

Value should be between 1 and 9,999

6c. C-reactive protein

[ ] mg/L ☐ Unknown

Value should be no more than 999

6d. HIV test

○ Positive ○ Negative ○ Not done ○ Unknown

6e. Lactate

[ ] mmol/L ☐ Unknown

Value should be no more than 50

6f. White cell count

[ ] 10^9 /L ☐ Unknown

Value should be no more than 100

6g. Was liver function:

○ Normal ○ Abnormal ○ Not done ○ Unknown

6h. If answered "Abnormal" to [6g] then:
Please give further detail

[ ]

6i. (ABG) Blood pH level

[ ] pH ☐ Not Applicable ☐ Unknown

Value should be no more than 10

6j. (ABG) Blood CO2 level

[ ] mEq/L ☐ Not Applicable ☐ Unknown

Value should be no more than 100

6k. (ABG) Blood PO2 level

[ ] mmHg ☐ Not Applicable ☐ Unknown

Value should be no more than 200

7a. In your opinion should any additional blood tests have been done?

○ Yes ○ No ○ Unknown

7b. If answered "Yes" to [7a] then:
Please explain which additional blood tests should have been done and why

[ ]

Microbiology

8a. Sputum culture

- ○ No growth
- ○ Only resp. commensals
- ○ Positive
- ○ Not done
- ○ Unknown

8b. If answered "No growth", "Only resp. commensals" or "Positive" to [8a] then: Date recorded?

[ ] ☐ Unknown

8c. If answered "No growth", "Only resp. commensals" or "Positive" to [8a] then: Time samples sent off?

24 Hour Format Only

[ ] ☐ Unknown

8d. If answered "Positive" to [8a] then: If positive, result?

- ○ Pneumococcus
- ○ Haemophillus

If not listed above, please specify here...

9a. Blood culture

- ○ No growth
- ○ Positive culture
- ○ Probable contaminant
- ○ Not done
- ○ Unknown

9b. If answered "No growth", "Positive culture" or "Probable contaminant" to [9a] then: Date recorded?

[ ] ☐ Unknown

9c. If answered "No growth", "Positive culture" or "Probable contaminant" to [9a] then: Time samples sent off?

24 Hour Format Only

[ ] ☐ Unknown

9d. If answered "Positive culture" to [9a] then: If positive, result?

- ○ Staphylococcus aureus
- ○ Pseudomonas aeruginosa
- ○ Klebsiella pneumoniae

If not listed above, please specify here...

10a. Respiratory viral testing

- ○ Negative
- ○ Positive
- ○ Not done
- ○ Unknown

10b. If answered "Negative" or "Positive" to [10a] then: SARS-COV2

- ○ Positive
- ○ Negative
- ○ Unknown

If not listed above, please specify here...

10c. If answered "Negative" or "Positive" to [10a] then: Influenza

- ○ Positive
- ○ Negative
- ○ Unknown

If not listed above, please specify here...

10d. If answered "Negative" or "Positive" to [10a] then:
RSV

- ◯ Positive
- ◯ Negative
- ◯ Unknown

If not listed above, please specify here...

10e. Pneumococcal urinary antigen

- ◯ Negative
- ◯ Positive
- ◯ Not done
- ◯ Unknown

10f. Serum for atypical titres
e.g. mycoplasma, legionella

- ◯ Negative
- ◯ Positive
- ◯ Not done
- ◯ Unknown

10g. Legionella urinary antigen

- ◯ Negative
- ◯ Positive
- ◯ Not done
- ◯ Unknown

11a. In your opinion should any additional microbiological investigations have been done?

- ◯ Yes
- ◯ No
- ◯ Unknown

11b. If answered "Yes" to [11a] then:
Which additional microbiological investigations?

12a. In your opinion, were all relevant investigations done for this patient?

- ◯ Yes
- ◯ No
- ◯ Unknown

12b. If answered "No" to [12a] then:
Please give further details

1a. Please tick which pathway best relates to the patient:

- ◯ In-patient
- ◯ Same day emergency care/ambulatory care
- ◯ Unknown

1b. If answered "In-patient" to [1a] then:
Which of the following best describes the ward the patient was FIRST admitted to?

- ◯ Short stay bed in Emergency Department
- ◯ Acute medical
- ◯ Non-Respiratory
- ◯ Respiratory
- ◯ Respiratory support unit
- ◯ ICU level 3
- ◯ HDU level 2
- ◯ Discharged after first assessment

If not listed above, please specify here...

2a. If answered "In-patient" to [1a] then:
Was a ward transfer required to optimise treatment at any stage of the admission?

- ◯ Yes
- ◯ No

2b. If answered "Yes" to [2a] then:
What ward was the patient transferred to?

- ◯ Acute medical
- ◯ Non-Respiratory
- ◯ Respiratory
- ◯ Respiratory support unit
- ◯ ICU level 3
- ◯ HDU level 2

If not listed above, please specify here...

3a. Were decisions on ceilings of treatment made for the patient?

- ◯ Yes
- ◯ No
- ◯ Unknown

3b. If answered "Yes" to [3a] then:
Which of these were used to make the decisions?

- ☐ DNACPR
- ☐ TEP form
- ☐ Limited Critical Care
- ☐ ReSPECT form
- ☐ Ward-based care

Please specify any additional options here...

Antibiotics

4a. Were there any allergies to antibiotics documented?

- ◯ Yes
- ◯ No
- ◯ Unknown

4b. If answered "Yes" to [4a] then:
Which antibiotic/s?

5a. Please indicate all antibiotics included on the first hospital antibiotic course
Please tick all that apply

- ☐ Amoxicillin (oral)
- ☐ Amoxicillin (intravenous)
- ☐ Benzylpenicillin (intravenous)
- ☐ Cephalosporin (oral)
- ☐ Cephalosporin (intravenous)
- ☐ Clarithromycin (oral)
- ☐ Clarithromycin (intravenous)
- ☐ Co-amoxiclav (oral)
- ☐ Co-amoxiclav (intravenous)
- ☐ Co-trimoxazole (oral)
- ☐ Co-trimoxazole (intravenous)
- ☐ Doxycycline (oral)
- ☐ Erythromycin (oral)
- ☐ Erythromycin (intravenous)
- ☐ Gentamicin (intravenous)
- ☐ Levofloxacin (oral)
- ☐ Levofloxacin (intravenous)
- ☐ Meropenem (intravenous)
- ☐ Moxifloxacin (oral)
- ☐ Moxifloxacin (intravenous)
- ☐ Tazocin (intravenous)
- ☐ No data or not recorded
- ☐ No antibiotics prescribed

Please specify any additional options here...

5b. If answered "Amoxicillin (oral)", "Amoxicillin (intravenous)", "Benzylpenicillin (intravenous)", "Cephalosporin (oral)", "Cephalosporin (intravenous)", "Clarithromycin (oral)", "Clarithromycin (intravenous)", "Co-amoxiclav (oral)", "Co-amoxiclav (intravenous)", "Co-trimoxazole (oral)", "Co-trimoxazole (intravenous)", "Doxycycline (oral)", "Erythromycin (oral)", "Erythromycin (intravenous)", "Gentamicin (intravenous)", "Levofloxacin (oral)", "Levofloxacin (intravenous)", "Meropenem (intravenous)", "Moxifloxacin (oral)", "Moxifloxacin (intravenous)" or "Tazocin (intravenous)" to [5a] then:
Were these antibiotics appropriate based on local formulary guidance?

○ Yes ○ No ○ Unable to answer

6a. What was the date of the first antibiotic prescription in hospital?

☐ Unknown

6b. If known, what was the time recorded?
24 Hour Format Only

☐ Unknown

6c. What was the date the first dose of antibiotics was administered in hospital?

☐ Unknown

6d. If known, what was the time recorded?
24 Hour Format Only

☐ Unknown

7a. Were antibiotics changed during the course of hospital treatment?

○ Yes ○ No ○ Unknown

7b. If answered "Yes" to [7a] then:
Please indicate all of the additional/subsequent antibiotics prescribed
Please tick all that apply

- ☐ Amoxicillin (oral)
- ☐ Amoxicillin (intravenous)
- ☐ Benzylpenicillin (intravenous)
- ☐ Cephalosporin (oral)
- ☐ Cephalosporin (intravenous)
- ☐ Clarithromycin (oral)
- ☐ Clarithromycin (intravenous)
- ☐ Co-amoxiclav (oral)
- ☐ Co-amoxiclav (intravenous)
- ☐ Co-trimoxazole (oral)
- ☐ Co-trimoxazole (intravenous)
- ☐ Doxycycline (oral)
- ☐ Erythromycin (oral)
- ☐ Erythromycin (intravenous)
- ☐ Gentamicin (intravenous)
- ☐ Levofloxacin (oral)
- ☐ Levofloxacin (intravenous)
- ☐ Meropenem (intravenous)
- ☐ Moxifloxacin (oral)
- ☐ Moxifloxacin (intravenous)
- ☐ Tazocin (intravenous)
- ☐ No data or not recorded

Please specify any additional options here...

7c. If answered "Yes" to [7a] then:
Was this due to:
Tick all that apply

- ☐ Poor clinical response
- ☐ Worsening pneumonia severity
- ☐ Culture results
- ☐ Microbiology advice
- ☐ Patient improvement

Please specify any additional options here...

8a. In your opinion, was there any room for improvement with antibiotic usage?

○ Yes ○ No ○ Unknown

8b. If answered "Yes" to [8a] then:
Please give further details

Oxygen administration

9a. Was oxygen prescribed?

○ Yes ○ No ○ Unknown

9b. Was oxygen therapy administered to this patient?

○ Yes ○ No ○ Unknown

9c. If answered "Yes" to [9b] then:
Which of the following devices were used?
Please tick all that apply

- ☐ Nasal cannulae
- ☐ HUDSON oxygen mask
- ☐ Venturi device
- ☐ Nasal high flow system
- ☐ Device not documented

Please specify any additional options here...

10a. Did the patient receive respiratory support?

- ○ Yes
- ○ No
- ○ Unknown

10b. If answered "Yes" to [10a] then:
Which of the following used for respiratory support?
Please tick all that apply

- ☐ Non-Invasive ventilation
- ☐ CPAP
- ☐ Invasive ventilation
- ☐ .Unknown

Please specify any additional options here...

Pneumonia complications

11a. Were there any complications of pneumonia?

- ○ Yes
- ○ No
- ○ Unknown

11b. If answered "Yes" to [11a] then:
Please tick all that apply:

- ☐ Pleural effusion
- ☐ Empyema
- ☐ Lung abscess
- ☐ Disseminated infection
- ☐ Sepsis

Please specify any additional options here...

H. Discharge and follow-up arrangements

1a. Discharge destination

- ○ Own home
- ○ Residential home
- ○ Nursing home
- ○ Death
- ○ Unknown

If not listed above, please specify here...

[ ]

1b. Date of hospital discharge or death

[ ] ☐ Unknown

1c. If known, time of hospital discharge or death

24 Hour Format Only

[ ] ☐ Unknown

2. If answered "Own home", "Residential home" or "Nursing home" to [1a] then: Were specific criteria used to facilitate discharge without the need for medical review?

Criteria-led Discharge (CLD)

- ○ Yes
- ○ No
- ○ Unable to answer

3. If answered "Own home", "Residential home" or "Nursing home" to [1a] then: Did the patient require home oxygen on discharge?

- ○ Yes
- ○ No
- ○ Not recorded

4. If answered "Own home", "Residential home" or "Nursing home" to [1a] then: Was the patient discharged while on antibiotics?

- ○ Yes
- ○ No
- ○ Unable to answer

5. If answered "Own home", "Residential home" or "Nursing home" to [1a] then: Was written information provided to the patient about pneumonia?

- ○ Yes
- ○ No
- ○ Unable to answer

6a. Follow-up X-Ray

- ○ Requested and done
- ○ Requested but not done
- ○ Not requested
- ○ Unknown

6b. If answered "Requested and done" to [6a] then: Date when follow up X-ray was done

[ ] ☐ Unknown

7. If answered "Own home", "Residential home" or "Nursing home" to [1a] then: Which of the following follow up arrangements were made?

If multiple answers apply, specify using "Other"

- ○ Ambulatory care follow-up
- ○ Hospital physician led outpatient clinic
- ○ Hospital nurse led outpatient clinic
- ○ Chest x-ray only
- ○ GP follow up
- ○ No follow up arranged
- ○ Not recorded

If not listed above, please specify here...

[ ]

I. Outcome and readmissions

1. Overall outcome of hospital admission

◯ Discharged ◯ Died

2. If answered "Discharged" to [1] then:
Was the patient readmitted within 30 days?

◯ Yes ◯ No ◯ Unclear

3a. If answered "Yes" to [2] then:
Was the readmission due to pneumonia and/or complications of pneumonia?

◯ Yes ◯ No ◯ Unknown

If not listed above, please specify here...

3b. If answered "Yes" to [3a] then:
What treatment was required?

◯ Antibiotics for pneumonia with same area of consolidation
◯ Chest drain for pleural effusion or empyema

If not listed above, please specify here...

3c. If answered "No" to [3a] then:
What was the reason for readmission
Free Text

4a. If answered "Yes" to [2] then:
Was the original discharge plan appropriate?

◯ Yes ◯ No

4b. If answered "No" to [4a] then:
Please give further details

4c. If answered "Yes" to [2] then:
In your opinion, was the readmission avoidable

○ Yes ○ No

4d. If answered "Yes" to [4c] then:
Please give further details

5a. On review of this case did you identify any patient safety incidents?

○ Yes ○ No

5b. If answered "Yes" to [5a] then:
Please provide details

End of Questionnaire

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE

By doing so you have contributed to the dataset that will form the report and recommendations due for release in winter 2023