

## National Respiratory Audit Programme (NRAP)

## **National Respiratory Audit Programme (NRAP)**

COPD secondary care audit - clinical audit dataset Version v5.1: April 2024

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| Arrival information |   |   |  |   |            |
|---------------------|---|---|--|---|------------|
| Item<br>No.         | Question  | Text under question   | Pop-up help note   |   | Validation |
|                     | Inclusion and exclusion criteria  | <ul><li>Include patients:</li><li>who are 35 years and over on the date of admission,</li></ul>   | We suggest that cases sho<br>prospectively.  | ould be identified  |            |
|                     |   | <ul> <li>who have been admitted* to hospital adult services,</li> <li>who have a primary diagnosis of COPD exacerbation,</li> <li>where an initial, or unclear, diagnosis is revised to an acute exacerbation of chronic obstructive pulmonary disease (AECOPD).</li> </ul> | Any gaps should then be oby checking all cases which the following ICD-10 codes secondary position (as pethe first episode of care:  Patients with the following positions in the first episode. | ch have been coded with<br>es in the primary or<br>r the table below) of<br>ag ICD-10 codes and |            |
|                     |   | Exclude patients:  • In whom an initial diagnosis of an AECOPD  | for inclusion in the audit:  Inclusion criteria codes and  | positions:  |            |
|                     |   | <ul> <li>is revised to an alternative at a later stage.</li> <li>Who have had a stay in hospital of less than 4 hours (who would be classed as a</li> </ul>   | 1st position  J44.0 – COPD with acute lower respiratory infection  | 2nd position Any code   |            |
|                     | non-admission).  • With COPD who are being managed for pneumonia, not AECOPD.  *Where admission is an episode in which a patient with an AECOPD is admitted to a ward and | J44.1 – COPD with acute exacerbation J44.8 – other specified  | Any code Any code  |   |            |
|                     |   | J44.9 – COPD unspecified J43.9 - emphysema  | Any code<br>Any code   |   |            |
|                     | stayed in hospital for 4 hours or more (this includes Emergency Medicine Centres, Medical Admission Units, Clinical Decision Units, short stay                            |   | J22 – unspecified acute lower respiratory infection  | J44.0 or J44.1 or J44.8<br>or J44.9 or J43.9  |            |
|                     | wards or similar, but excludes patients treated transiently before discharge from the Emergency Department (ED)).   | R06.0 – dyspnoea<br>(shortness of breath)<br>J96.0 – acute respiratory<br>failure   | J44.0 or J44.1 or J44.8<br>or J44.9 or J43.9<br>J44.0 or J44.1 or J44.8<br>or J44.9 or J43.9   |   |            |

| Arrival in  | Arrival information                             |  |  |  |   |  |
|-------------|---|--|--|--|---|--|
| Item<br>No. | Question  | Text under question  | Pop-up help note   |  | Validation  |  |
|             |   |  | J96.1 – chronic respiratory failure J96.9 – respiratory failure  J10.1 – influenza due to other identified influenza virus with other respiratory manifestations   | J44.0 or J44.1 or J44.8<br>or J44.9 or J43.9<br>J44.0 or J44.1 or J44.8<br>or J44.9 or J43.9<br>J44.0 or J44.1 or J44.8<br>or J44.9 or J43.9 |   |  |
| 1.1         | Date and time<br>of arrival at<br>your hospital | Please record the date and time the patient arrived at your hospital. It is important to record the arrival time because this is the first point of contact with the organisation. | The point of arrival is often the ED or MAU, though patients occasionally come from home/elsewhere into other wards. These cases must also be included.  The arrival time will be used as the start-point when determining the time to acute treatment with NIV for those who receive it. Time is best determined from the ambulance transfer sheet, the A&E/ED record or MAU/ward arrival record. |  |   |  |
| 1.1a        | Date of arrival                                 | dd/mm/yyyy   |  |  | Look of answer option://  Earliest date allowed 01/01/18, Latest date = Today |  |
| 1.1b        | Time of arrival                                 | 24hr clock 00:00   |  |  | Look of answer option::_ Cannot be a time in the future.                      |  |

| Arrival i   | Arrival information   |   |                  |   |  |  |  |
|-------------|---|---|------------------|---|--|--|--|
| Item<br>No. | Question  | Text under question   | Pop-up help note | Validation  |  |  |  |
| 1.2         | Which department did the patient receive their first review and treatment in? | Please record the area of the hospital in which the patient underwent their first review and treatment. |                  | <ul> <li>Radio buttons five options:</li> <li>Emergency department</li> <li>Medical admissions unit</li> <li>Direct respiratory admission</li> <li>Direct admission to other department</li> <li>Admission from hospital outpatients</li> </ul> Can select one option only. |  |  |  |

| Patient     | Patient     |  |   |   |  |  |
|-------------|-------------|--|---|---|--|--|
| Item<br>No. | Question    | Text under question  | Pop-up help note  | Validation  |  |  |
| Patient     | information |  |   |   |  |  |
| 2.1         | NHS number  | The field will accept valid NHS number which are ten digits long.  Optionally, you can use spaces or dashes or 3-3-4 format. | Permission has been granted to use the NHS number as a patient identifier.  This will be used to determine: | Look of answer option:or Must be a 10 digit number. |  |  |

| Patien      | t             |  |  |   |
|-------------|---------------|--|--|---|
| Item<br>No. | Question      | Text under question  | Pop-up help note   | Validation  |
| 2.2         | Date of birth | dd/mm/yyyy   | The NHS number is essential to create a Patient Record. It should only consist of digits.  It may be formatted as 000 000 0000 (spaces) or 000-000-000-0000 (dashes)  It should contain exactly 10 digits.  NHS Numbers start with a 4, 6 or 7  A warning will be given if the number appears invalid.  Use '[NONNHS]' for patients that reside in the UK, but do not have an NHS number.  Date of birth may be entered numerically e.g. 01/03/1957 can be inputted as 1 3 57. | Look of answer option:// or  The web-tool only allows patients that are:  aged 35 years and over  aged under 115 years old.                           |
| 2.3         | Gender        | Please enter the patient's gender as it appears in the notes/referral information. | The 'Other' should be used for patients who do not recognise themselves as either male, female, or transgender.  If the gender for the patient cannot be determined 'Not recorded/Preferred not to say' should be selected.  | Cannot be a future date.  Radio buttons five options:  Male Female Transgender  Other  Not recorded/Preferred not to say  Can select one option only. |
| 2.4         | Home postcode | Please enter the full postcode. For patients with no fixed abode use 'NFA'.        | Permission has been given to facilitate case-mix adjustment and understand local referral trends.  | Allows 'NFA' for patients with no fixed abode.  |

| Patien      | t  |   |   |   |
|-------------|--|---|---|---|
| Item<br>No. | Question   | Text under question   | Pop-up help note  | Validation  |
| 2.5         | Ethnicity  | Please enter the patient's ethnicity as it appears in the notes.                            | It is not expected that services ask patients about their ethnicity. Please answer this question based on the information recorded in the patient notes.            | <ul> <li>Drop down list eighteen options:</li> <li>White British</li> <li>White Irish</li> <li>Any other White background</li> <li>White and Black Caribbean</li> <li>White and Black African</li> <li>White and Asian</li> <li>Any other mixed background</li> <li>Indian</li> <li>Pakistani</li> <li>Bangladeshi</li> <li>Any other Asian background</li> <li>Caribbean</li> <li>African</li> <li>Any other Black background</li> <li>Chinese</li> <li>Any other ethnic group</li> <li>Not known</li> <li>Not recorded</li> <li>Can select one option only</li> </ul> |
| 2.6         | Does this patient have a current mental illness or cognitive | Select all answers or 'No/None' or 'Not recorded'. Please answer this question based on the | It is not expected that services ask patients about their mental health status. Please answer this question based on the information recorded in the patient notes. | <ul> <li>Radio button <u>six</u> options</li> <li>No/None</li> <li>Anxiety</li> <li>Depression</li> </ul>   |

| Patient                                 | atient   |   |  |  |  |  |
|---|--|---|--|--|--|--|
| Item<br>No.                             | Question   | Text under question   | Pop-up help note   | Validation   |  |  |
| i                                       | impairment<br>recorded?  | information recorded in the patient notes.  | 'Other' should be used where the patient is considered to have<br>a mental health illness or cognitive impairment but this does<br>not appear in the options given.  | <ul> <li>Severe mental illness</li> <li>Dementia / mild cognitive impairment</li> <li>Other</li> <li>Not recorded</li> <li>Select <u>all</u> that apply</li> </ul> |  |  |
| Smoking s                               | status   |   |  |  |  |  |
| 6 c c c c c c c c c c c c c c c c c c c | Does the patient currently smoke, or have they a history of smoking any of the following substances?  Tobacco (including cigarettes (manufactured or rolled), pipe or cigars), shisha, cannabis or other illicit substances? | Please select never, ex or current based on the smoking status recorded in the patient notes.  Patients that vape but do not smoke traditional tobacco are not classified as smokers  If the patient stopped smoking at least 4 weeks prior to the admission, please enter 'Ex-smoker'. | <ul> <li>This question aligns to:         <ul> <li>NICE 2011 QS 10, NICE 2023 (Smoking: Supporting People to Stop) QS8c.</li> <li>https://www.nice.org.uk/guidance/qs10/chapter/Quality-statement-8-Hospital-discharge-care-bundle</li> </ul> </li> <li>BTS/SIGN 2016 (Management of asthma) guidelines 6.2.3 and 7.2.6</li> <li>NRAD 2014 (Why asthma still kills), recommendation 2 of patient factors and perception of risk.</li> </ul> <li>Pop-up help note: Please select never, ex or current based on the Using radio buttons – select all that apply</li> | e smoking status recorded in the patient notes.  |  |  |

| Patient     | Patient   |  |  |       |  |  |                 |
|-------------|---|--|--|-------|--|--|-----------------|
| Item<br>No. | Question  | Text under question  | Pop-up help note   |       | Validation                                   |  |                 |
|             |   | If the patient has stopped within 4 weeks, mark as a 'Current smoker'.                       | Tobacco (including cigarettes (manufactured or rolled), pipe or cigars)  Shisha Cannabis Other illicit substance | Never | Ex   | Current                                      | Not<br>recorded |
| 2.8         | Was the patient reviewed by a tobacco dependence specialist during their inpatient admission? | Please select yes, no, declined or not known based on the information in the patients notes. |  |       | <ul><li>No</li><li>Yes</li><li>Dec</li></ul> | on 4 options<br>clined<br>: known            |                 |
| 2.8a        | Was the patient offered nicotine replacement therapy during their inpatient admission?        | Please select yes, no, declined or not known based on the information in the patients notes. |  |       | • No<br>• Yes<br>• Dec                       | on 4 options<br>clined<br>: known            |                 |
| 2.8b        | Was the patient prescribed nicotine replacement therapy during                                | Please select yes, no, declined or not known based on the information in the patients notes. |  |       | Prescrib<br>•                                | on 4 options<br>oed<br>No<br>Yes<br>Declined |                 |

| Patient     | Patient            |                        |                  |                                  |  |  |
|-------------|--------------------|------------------------|------------------|----------------------------------|--|--|
| Item<br>No. | Question           | Text under question    | Pop-up help note | Validation                       |  |  |
|             | their inpatient    |                        |                  | Not known                        |  |  |
|             | admission?         |                        |                  |                                  |  |  |
| 2.9         | Does the patient   | Patients that vape but |                  | Radio button <u>four</u> options |  |  |
|             | currently use a    | do not smoke tobacco   |                  | Never                            |  |  |
|             | vape or electronic | are not smokers        |                  | • Ex                             |  |  |
|             | cigarette?         |                        |                  | Current                          |  |  |
|             |                    |                        |                  | Not recorded                     |  |  |
|             |                    |                        |                  | Can select one option only       |  |  |

| NEWS2       | NEWS2                                       |  |   |  |  |  |
|-------------|---|--|---|--|--|--|
| Item<br>no. | Question                                    | Text under question                                    | Pop-up help note  |  |  |  |
|             | National Early<br>Warning Score<br>(NEWS) 2 | This is to be reintroduced into the dataset be able to | The NEWS2 is based on the aggregate scoring of six simple, and routinely collected, physiological parameters. Find out more here. |  |  |  |

| NEWS2       | IEWS2  |  |                  |   |  |  |
|-------------|--|--|------------------|---|--|--|
| Item<br>no. | Question   | Text under question  | Pop-up help note |   |  |  |
|             |  | measure COPD severity<br>and ensure accurate<br>case fix adjustment for<br>all necessary reporting.  |                  |   |  |  |
| 3.1         | What was the patient's first recorded NEWS 2 score for this admission? | Please enter the recorded score or choose 'Not recorded' or 'Calculate score' and record the first observations in the NEWS2 calculator below, every question must be answered in order for the score to be calculated. This should be the first recorded observations on arrival to hospital. |                  | Drop down list twenty-three options         ● Score not available         ● Calculate score         ● 0         ● 1         ● 2         ● 3         ● 4         ● 5         ● 6         ● 7         ● 8         ● 9         ● 10         ● 11         ● 12         ● 13         ● 14         ● 15         ● 16         ● 17 |  |  |

| NEWS2       |   |   |  |                              |  |  |
|-------------|---|---|--|------------------------------|--|--|
| Item<br>no. | Question  | Text under question   | Pop-up help i  | note                         |  |  |
|             |   |   |  |                              |  | <ul> <li>18</li> <li>19</li> <li>20</li> <li>Can select one option only</li> </ul>               |
| 3.1a        | What was the first recorded respiratory rate for the patient following arrival at | Record as a whole number, within the range of 0-60 BPM.                         | Enter a percentage as a whole number in the range 0 to 60 breaths per minute.  Respiratory score:              |                              |  | Look of answer option: BPM  Whole number. Must be a maximum of 2 digit number between 0-60 only. |
|             | hospital?   |   | Respiration<br>Rate  | Score                        |  |  |
|             |   |   | <= 8<br>9 - 11   | 3                            |  |  |
|             |   |   | 12 - 20  | 0                            |  |  |
|             |   |   | 21 - 24  | 2                            |  |  |
|             |   |   | >= 25  | 3                            |  |  |
| 3.1b        | What was the first recorded NEWS 2 SpO <sub>2</sub> Oxygen Scale?                 | SpO <sub>2</sub> Scale 2 is for patients with a target oxygen saturation of 88– | requirement of 8<br>This should only   | 38–92%.<br>be used in patier | a prescribed oxygen saturation at the confirmed to have    | Greyed out if 3.1 has numeric value entered or if 'Score not available' checked.                 |
|             |   | 92%. Refer to help note for details.  | hypercapnic respiratory failure on blood gas analysis on either a prior, or their current, hospital admission. |                              |  | Please note 3.1a-3.1h must all be completed in order to generate a score.                        |
|             |   |   |  |                              | d be made by a competent<br>d be recorded in the patient's | Radio button two options  • Scale 1  |

| NEWS2       |   |  |  |
|-------------|---|--|--|
| Item<br>no. | Question  | Text under question  | Pop-up help note   |
|             |   |  | In all other circumstances, SpO2 scale 1 should be used.  Scale 2 (hypercapnic respiratory failure)  Can select one option only  Greyed out if 3.1 has numeric value entered or if 'Score not available' checked.  Please note 3.1a-3.1h must all be completed in order to generate a score.   |
| 3.1c        | What was the first recorded SpO <sub>2</sub> Oxygen saturation? | Record as a whole number percentage, within the range of 50%-100%. | Enter a percentage as a whole number in the range 50% to 100%.  Oxygen saturation depends on both the 'scale' and supplemental air/oxygen given:  Cok of answer option:   |
|             |   |  | Oxygen saturation Score Respiration Rate Score Respiration Score Respiration Score Respiration Score Rate Scor |

| NEWS2       |  |                     |   |  |          |                             |             |   |
|-------------|--|---------------------|---|--|----------|-----------------------------|-------------|---|
| Item<br>no. | Question   | Text under question | Pop-up help no                          | te   |          |                             |             |   |
|             |  |                     | 94 - 95 1<br>>= 96 0                    | 86 - 87<br>88 - 92 or<br>>= 93 on air  | 0        | 93 - 94<br>95 - 96<br>>= 97 | 1<br>2<br>3 |   |
| 3.1d        | What was the first recorded any supplemental oxygen? |                     |   | Please indicate if the patient was on room air or oxygen<br>Choose 'None' if this was not given as part of the NEWS scoring<br>assessment. |          |                             |             | Greyed out if 3.1 has numeric value entered or if 'Score not available' checked.  Please note 3.1a-3.1h must all be completed in order to generate a score. |
|             |  |                     | Room air or oxyge                       | en Scor  | е        |                             |             | Radio buttons two options:  |
|             |  |                     | None or Air                             | 0  |          |                             |             | Air   |
|             |  |                     | Oxygen                                  | 2  |          |                             |             | Oxygen Can select one option only   |
| 3.1e        | What was the first recorded systolic                 | mmHg                | Enter the systolic b range 50 to 250 mr |  | as a who | le number in                | the         | Greyed out if 3.1 has numeric value entered or if 'Score not available' checked.  |
|             | blood pressure?                                      |                     | Respiratory score:                      |  |          |                             |             | Please note 3.1a-3.1h must all be completed in order to generate a score.   |
|             |  |                     | Systolic blood pressure                 |  |          |                             |             | Look of answer option:  |
|             |  |                     | <= 90 3                                 |  |          |                             | mmHg        |   |
|             |  |                     | 91 - 100                                | 91 - 100 2   |          |                             |             |   |
|             |  |                     | 101 - 110                               | 1  |          |                             |             |   |
|             |  |                     | 111 - 219                               | 0  |          |                             |             |   |

| NEWS2       |   |  |   |                  |                               |   |
|-------------|---|--|---|------------------|-------------------------------|---|
| Item<br>no. | Question  | Text under question  | Pop-up help no  | te               |                               |   |
|             |   |  | >= 220  | 3                |                               |   |
| 3.1f        | What was the first recorded pulse?                  | Beats/min  Heart rate is an acceptable alternative if no pulse rate is available. If you have both please record the higher of the two readings. | Enter the pulse rat beats per minute.  Pulse rate <= 40 41 - 50 51 - 90 91 - 110 111 - 130 >= 131 | Score 3 1 0 1 2  | mber in the range 0 to 180    | Greyed out if 3.1 has numeric value entered or if 'Score not available' checked.  Please note 3.1a-3.1h must all be completed in order to generate a score.  Look of answer option:BPM  Whole number. Must be a maximum of 3 digit number between 0-200 only. |
| 3.1g        | What was the first recorded level of consciousness? | Alert, Voice, Pain,<br>Unresponsive (AVPU)<br>Score  | Choose if the patie   |                  | ess elements:                 | Greyed out if 3.1 has numeric value entered or if 'Score not available' checked.  |
|             |   |  | Consciousness   | Score            |                               | Please note 3.1a-3.1h must all be   |
|             |   |  | Alert   | 0                |                               | completed in order to generate a score.  Radio button five options, select all that   |
|             |   |  | Voice<br>Pain<br>Unresponsive<br>Confusion  | 3                |                               | <ul><li>apply:</li><li>Alert</li><li>Voice</li><li>Pain</li><li>Unresponsive</li></ul>  |
|             |   |  | Note: Any or all no 3.  | n-alert conditio | ns count as a single score of | <ul> <li>Confusion</li> <li>Can select one option only</li> </ul>   |

| NEWS2       |  |                     |  |   |
|-------------|--|---------------------|--|---|
| Item<br>no. | Question                                 | Text under question | Pop-up help note   |   |
| 3.1h        | What was the first recorded temperature? | Celsius             | Enter the patient's temperature as a number rounded to one decimal place in the range 33.0 to 45.0 degrees Celsius.  Temperature Score <= 35.0 3 35.1 - 36.0 1 36.1 - 38.0 0 38.1 - 39.0 1 >= 39.1 2 | Greyed out if 3.1 has numeric value entered or if 'Score not available' checked.  Please note 3.1a-3.1h must all be completed in order to generate a score.  Look of answer option:(°C) |
| 3.2         | NEWS2 overall<br>total                   |                     | This number is derived from the answers given to each element of the 'NEWS2' scoring system:   | Greyed out if 3.1 has numeric value entered or if 'Score not available' checked.  Please note 3.1a-3.1h must all be completed in order to generate a score.  Updated after saving       |

| NEWS2       | EWS2     |                     |                                   |                  |        |           |                     |                    |                    |                  |  |
|-------------|----------|---------------------|-----------------------------------|------------------|--------|-----------|---------------------|--------------------|--------------------|------------------|--|
| Item<br>no. | Question | Text under question | Pop-up l                          | Pop-up help note |        |           |                     |                    |                    |                  |  |
|             |          |                     | Physiological parameter           | 3                | 2      | 1         | Score<br>0          | 1                  | 2                  | 3                |  |
|             |          |                     | Respiration rate (per minute)     | ≤8               |        | 9–11      | 12–20               |                    | 21–24              | ≥25              |  |
|             |          |                     | SpO <sub>2</sub> Scale 1 (%)      | ≤91              | 92–93  | 94–95     | ≥96                 |                    |                    |                  |  |
|             |          |                     | SpO <sub>2</sub> Scale 2 (%)      | ≤83              | 84–85  | 86–87     | 88–92<br>≥93 on air | 93–94 on<br>oxygen | 95–96 on<br>oxygen | ≥97 on<br>oxygen |  |
|             |          |                     | Air or oxygen?                    |                  | Oxygen |           | Air                 |                    |                    |                  |  |
|             |          |                     | Systolic blood<br>pressure (mmHg) | ≤90              | 91–100 | 101–110   | 111–219             |                    |                    | ≥220             |  |
|             |          |                     | Pulse (per minute)                | ≤40              |        | 41–50     | 51–90               | 91–110             | 111–130            | ≥131             |  |
|             |          |                     | Consciousness                     |                  |        |           | Alert               |                    |                    | CVPU             |  |
|             |          |                     | Temperature (°C)                  | ≤35.0            |        | 35.1–36.0 | 36.1–38.0           | 38.1–39.0          | ≥39.1              |                  |  |

| Admission |                               |   |                  |   |
|-----------|-------------------------------|---|------------------|---|
| Item No.  | Question                      | Text under question   | Pop-up help note | Validation  |
| 4         | Admission                     | We measure both arrival and admission times as there is usually a delay between the two for those patients who need to stay in hospital.  |                  |   |
| 4.1       | Date and time of admission    | Please record the date and time as noted on the initial admission clerking record, in the ED, MAU or other admission ward. You may use the nursing record or time of initial observations if you are unable to find a time on the medical clerking sheet.  Patients must be admitted within 72 hours of arriving. |                  | Must be the same as or within 72 hours of the date and time of arrival.                             |
| 4.1a      | Date of admission to hospital | dd/mm/yyyy  |                  | Look of answer option://  Must be the same as or within 72 hours of the date and time of arrival.   |
| 4.1b      | Time of admission to hospital | 24hr clock 00 : 00  |                  | Look of answer option:  —:  Must be the same as or within 72 hours of the date and time of arrival. |

| Review   |  |                     |   |   |
|----------|--|---------------------|---|---|
| Item No. | Question   | Text under question | Pop-up help note  | Validation  |
| 5        | Respiratory specialist review  |                     | This question aligns with NICE QS10, statement 10, 2013. It measures whether a respiratory specialist has reviewed the patient within 24 hours of admission. This is also a Best Practice Tariff item.  |   |
| 5.1      | Was the patient reviewed by a member of the respiratory team during their admission? |                     | Respiratory team members may be defined locally to include respiratory health professionals deemed competent at seeing and managing patients with acute exacerbation of COPD.  These staff members might include: a respiratory consultant, a respiratory trainee of ST3 or above, a respiratory specialist nurse or physiotherapist, COPD nurse or physiotherapist | Radio buttons two options:  No Yes Can select one option only   |
| 5.1a     | Date of first<br>review by a<br>member of the<br>respiratory<br>team                 | dd/mm/yyyy          |   | Greyed out if previous question was 'no'.  Look of answer option: //  Must be the same as or after date and time of arrival but on or prior to discharge/death. |
| 5.1b     | Time of first<br>review by a<br>member of the<br>respiratory<br>team                 | 24hr clock 00 : 00  |   | Greyed out if previous question was 'no'.  Look of answer option: _::   |

| Review   | Review   |                     |                  |   |  |  |  |  |
|----------|----------|---------------------|------------------|---|--|--|--|--|
| Item No. | Question | Text under question | Pop-up help note | Validation  |  |  |  |  |
|          |          |                     |                  | Must be the same as or after date and time of arrival but on or prior to discharge/death. |  |  |  |  |

| Oxygen   |  |                     |  |  |
|----------|--|---------------------|--|--|
| Item No. | Question   | Text under question | Pop-up help note   | Validation   |
| 6        | Oxygen   |                     | This question assesses the adequacy of oxygen therapy. It aligns with NICE QS10, statement 3 and statement 6, 2023 and the BTS Emergency oxygen guideline. |  |
| 6.1      | Was oxygen administered to the patient at any point during this admission? |                     |  | Radio buttons two options:  No Yes Can select one option only  |
| 6.2      | Did the patient have a target oxygen saturation range set?                 |                     | All patients should have a target oxygen range stipulated.   | Radio buttons <u>two</u> options:  No Yes Can select <u>one</u> option only  |
| 6.2a     | If yes, what was<br>the target<br>oxygen<br>saturation<br>range?           |                     |  | <ul> <li>Radio buttons four options:</li> <li>88-92%</li> <li>94-98%</li> <li>Target range not stipulated</li> </ul> |

| Oxygen   |  |                     |  |   |
|----------|--|---------------------|--|---|
| Item No. | Question   | Text under question | Pop-up help note   | Validation  |
|          |  |                     |  | Other target range stipulated –     Allows free text (100 characters limit)  Can select one option only   |
| 6.2b     | If 'Other', please specify:  |                     |  | Look of answer option:  Allows free text (100 characters limit)   |
| 6.3      | Was oxygen prescribed for the patient at any point during their admission? |                     | Patients likely to require oxygen at any point during their admission should have it formally prescribed. This is to ensure that all patients admitted with an acute exacerbation of COPD have a prescription of oxygen available to them at all times during their in-patient stay and includes patients who do not use the prescription. NRAP advocates a prescription being written for ALL patients hospitalized with COPD exacerbation. | Radio buttons two options:  No Yes Can select one option only   |
| 6.3a     | If yes, was oxygen prescribed to a stipulated target range?                |                     |  | This question is greyed out if 'No' selected for 6.3  Radio buttons four options:  • 88-92%  • 94-98%  • Target range not stipulated  • Other target range stipulated – Allows free text (100 characters limit) |

| Oxygen   | oxygen                                       |                     |                  |   |  |  |  |  |
|----------|--|---------------------|------------------|---|--|--|--|--|
| Item No. | Question                                     | Text under question | Pop-up help note | Validation                                |  |  |  |  |
|          |  |                     |                  | Can select one option only                |  |  |  |  |
| 6.3b     | If 'Other' - please specify:                 |                     |                  | Look of answer option:                    |  |  |  |  |
|          |  |                     |                  | Allows free text (100 characters limit)   |  |  |  |  |
| 6.3c     | If yes, was the correct target oxygen        |                     |                  | Radio buttons <u>two</u> options:  No Yes |  |  |  |  |
|          | saturation range prescribed for the patient? |                     |                  | Can select <u>one</u> option only         |  |  |  |  |

| NIV      |  |                     |  |   |  |
|----------|--|---------------------|--|---|--|
| Item No. | Question                                     | Text under question | Pop-up help note   | Validation  |  |
| 7        | NIV  |                     | This question allows us to determine the number of patients who receive NIV acutely during their exacerbation and how rapidly they are treated. This aligns with NICE QS10, statement 7, 2023, BTS NIV quality standard and the NCEPOD NIV report. |   |  |
| 7.1      | Was an arterial blood gas measurement taken? |                     |  | Radio buttons two options:  No Yes Can select one option only |  |

| NIV      |   |   |                  |   |
|----------|---|---|------------------|---|
| Item No. | Question  | Text under question   | Pop-up help note | Validation  |
| 7.1a     | Date of 1 <sup>st</sup> arterial blood gas  | dd/mm/yyyy  |                  | Look of answer option:// Must be the same as or after date and time of arrival but on or prior to discharge/death.  |
| 7.1b     | Time of 1 <sup>st</sup> arterial blood gas  | 24hr clock 00 : 00  |                  | Look of answer option::_ Must be the same as or after date and time of arrival but on or prior to discharge/death.  |
| 7.2      | Did the patient receive a diagnosis of acidotic hypercapnic ventilatory failure according to their blood gases at any point during admission? | Acidotic hypercapnic ventilatory failure is defined as an arterial partial pressure of carbon dioxide (PaCO <sub>2</sub> ) of >6.5 kPa (>50 mmHg) with blood pH <7.35 |                  | Radio buttons two options:  No Yes Can select one option only   |
| 7.2a     | Date of arterial blood gas measurement demonstrating acidotic hypercapnic ventilatory failure.  | dd/mm/yyyy  |                  | Look of answer option://  Must be the same as or after date and time of arrival but on or prior to discharge/death. |
| 7.2b     | Time of arterial blood gas measurement  | 24hr clock 00 : 00  |                  | Look of answer option::   |

| NIV      | NIV   |                     |                  |  |
|----------|---|---------------------|------------------|--|
| Item No. | Question  | Text under question | Pop-up help note | Validation   |
|          | demonstrating<br>acidotic<br>hypercapnic<br>ventilatory failure |                     |                  | Must be the same as or after date and time of arrival but on or prior to discharge/death.  |
| 7.3      | Did the patient receive acute treatment with NIV?               |                     |                  | Radio buttons <u>two</u> options:  No Yes Can select <u>one</u> option only  |
| 7.3a     | Date NIV first commenced  | dd/mm/yyyy          |                  | Look of answer option: //  Not recorded Can enter numeric value OR select 'Not recorded'  NIV values allowed only on or post arrival and on or prior to  |
| 7.3b     | Time NIV first commenced  | 24hr clock 00 : 00  |                  | discharge/death.  Look of answer option: :  Not recorded  Can enter numeric value OR select  'Not recorded'  NIV values allowed only on or post arrival. |
| 7.3c     | Where was NIV commenced?  |                     |                  | Radio buttons <u>two</u> options:  |

| NIV      | NIV      |                     |                  |  |
|----------|----------|---------------------|------------------|--|
| Item No. | Question | Text under question | Pop-up help note | Validation   |
|          |          |                     |                  | <ul> <li>ICU</li> <li>High dependency unit</li> <li>Respiratory ward</li> <li>General ward</li> <li>Other</li> </ul> |
|          |          |                     |                  | Can select one option only   |

| Spirometry | Spirometry  |   |   |  |  |
|------------|---|---|---|--|--|
| Item No.   | Question  | Text under question                           | Pop-up help note  | Validation   |  |
| 8          | Spirometric evidence of COPD                                    |   | This question allows us to determine whether the patient actually has airflow obstruction. The question aligns with NICE QS10, statement 1, 2023. |  |  |
| 8.1        | What was the patient's most recently recorded FEV1 % predicted? | Please enter a percentage between 15 and 125. |   | Look of answer option: %  \[ \sum \text{Not recorded} \]  Can enter numeric value \( \text{OR} \) select  'Not recorded'   |  |
|            |   |   |   | <ul> <li>Numeric option must be a:</li> <li>percentage</li> <li>maximum of 3 digits to 1 decimal place (values more than 1 decimal place will round up or down)</li> </ul> |  |

| Spirometry | Spirometry  |  |   |  |  |
|------------|---|--|---|--|--|
| Item No.   | Question  | Text under question  | Pop-up help note  | Validation   |  |
| 8.1a       | Date of last recorded<br>FEV1 % predicted                     | Please enter the date of the last recorded FEV1 % predicted. |   | number between 15 and 125.  This question is greyed out if 'Not recorded' is selected for 8.1  |  |
|            |   | dd/mm/yyyy   |   | Look of answer option: //  Not recorded  Can enter numeric value OR select 'Not recorded'  Spirometry values must be on or after patient's 35 <sup>th</sup> birthday.  |  |
| 8.2        | What was the patient's most recently recorded FEV1/FVC ratio? | Please enter a value between 0.20 and 0.95.                  | FEV1/FVC ratio can be calculated by dividing the FEV1 by the FVC. If you only have the ratio recorded as a percentage, please divide this figure by 100 to convert it to a decimal. | Look of answer option:  Not recorded Can enter numeric value OR select 'Not recorded'  Numeric option must be a:  maximum of 1 digit to 2 decimal places, between 0.20 and 0.95 (values more than 2 decimal place will round up or down) |  |
| 8.2a       | Date of last recorded FEV1/FVC ratio                          | Please enter the date of the last recorded FEV1/FVC ratio.   |   | This question is greyed out if 'Not recorded' is selected for 8.2  |  |

| Spirometry | Spirometry  |  |                  |  |  |
|------------|---|--|------------------|--|--|
| Item No.   | Question  | Text under question  | Pop-up help note | Validation   |  |
|            |   | dd/mm/yyyy   |                  | Look of answer option: //  Not recorded Can enter numeric value OR select 'Not recorded'  Spirometry values must be on or after patient's 35 <sup>th</sup> birthday. |  |
| 8.3        | Where was the patient's most recent spirometry performed? | <ul><li>Secondary care</li><li>Primary care or community</li><li>Not known</li></ul> |                  | This question is greyed out if 'Not recorded' is selected for 8.1 or 8.2  Can only choose one answer   |  |

| Discharge | Discharge  |   |   |  |  |  |
|-----------|--|---|---|--|--|--|
| Item No.  | Question   | Text under question                                   | Pop-up help note  | Validation   |  |  |
| 9         | Discharge  |   |   |  |  |  |
| 9.1       | Was the patient alive at discharge from your hospital? |   |   | Radio buttons two options:  Alive  Died as inpatient  Can select one option only |  |  |
| 9.2       | Date of discharge/death                                | Please enter the date of discharge/death.  dd/mm/yyyy | The date of discharge is to be found usually at the end of the admission record, or on the discharge summary.     | Look of answer option:// Must be the same as or after date of                    |  |  |
|           |  |   | If the patient is discharged onto another hospital, an early discharge scheme, hospital at home or community COPD | arrival.   |  |  |

| Discharge | Discharge  |                     |   |  |  |
|-----------|--|---------------------|---|--|--|
| Item No.  | Question   | Text under question | Pop-up help note  | Validation   |  |
|           |  |                     | scheme, please give the date of discharge from your hospital and not the scheme. If the patient self-discharged, use date of self-discharge.  |  |  |
| 9.3       | Was a discharge bundle completed for this admission? |                     | This question aligns with NICE QS10, statement 8, 2023 and the BTS Intermediate Care guidance. This is also a Best Practice Tariff item.  A structured way of improving discharge processes and care leading to improved patient outcomes. Based on evidence based clinical interventions or actions.  A discharge bundle should include:  - Review of medication, specifically review and optimisation of inhaler technique and choice, and understanding of medication use.  - Provision of a co-produced written or digital selfmanagement plan and where appropriate an emergency drug pack.  - Evidence based Smoking cessation advice and treatment with offer of onward referral as appropriate. | This question is greyed out if 'Died as inpatient' is selected for 9.1  Radio buttons three options:  • Yes  • No  • Self-discharge Can select one option only |  |

| Discharge | Discharge  |  |  |   |  |
|-----------|--|--|--|---|--|
| Item No.  | Question   | Text under question  | Pop-up help note   | Validation  |  |
|           |  |  | <ul> <li>Assessment for suitability for referral to pulmonary rehabilitation and referral if appropriate.</li> <li>Ensuring appropriate follow up arrangements are in place prior to discharge.</li> </ul>   |   |  |
| 9.4       | Which of the following specific elements of a discharge bundle were undertaken as part of the patient's discharge: | If any of the good practice care elements have not been completed and/or are not applicable please do not select them. If no elements have been completed please select 'None'.  The elements of a discharge bundle listed are linked to the evidence-based items listed within the best practice tariff guidance. | Follow up requests Communication directly with a named individual responsible for COPD care within the practice, by means of fax or email counts as a request for follow-up.  If the patient has been asked and/or been provided with the necessary information they need to make/request the follow up appointment(s) themselves within the recommended timeframe please select that the component was completed. | This question is greyed out if 'Died as inpatient' is selected for 9.1  Checkboxes eight options select all that apply:  Inhaled therapy reviewed and optimised and inhaler technique checked  Self-management plan self-management plan agreed and provided or referred to community respiratory team for plan.  Smoking cessation Evidence based smoking cessation advice given; NRT or other pharmacotherapy treatment offered, and onward |  |

| Discharge | Discharge |                     |                  |   |
|-----------|-----------|---------------------|------------------|---|
| Item No.  | Question  | Text under question | Pop-up help note | Validation  |
|           |           |                     |                  | referral for behavioural support offered. (Validation: this option is enabled for current tobacco smokers - question 2.7a='Current')                    |
|           |           |                     |                  | Pulmonary rehabilitation     Assessed for suitability for     pulmonary rehabilitation and     referred to pulmonary     rehabilitation if appropriate. |
|           |           |                     |                  | Follow up requests     Follow up has been requested     which should occur within 72     hours of discharge by person or     by phone.                  |
|           |           |                     |                  | Emergency drug pack     Emergency drug pack provided     or referred to community     respiratory team for pack if     appropriate.                     |
|           |           |                     |                  | Emergency drug pack not<br>provided   |

| Discharge | Discharge Control of the Control of |  |                  |  |  |
|-----------|---|--|------------------|--|--|
| Item No.  | Question  | Text under question  | Pop-up help note | Validation   |  |
|           |   |  |                  | Emergency drug pack not provided as assessed as unsuitable   |  |
|           |   |  |                  | None   |  |
| 9.5       | Which additional elements of good practice where  | If any of the good practice care elements have not been completed and/or are not applicable please do not select them. If no elements have |                  | This question is greyed out if 'Died as inpatient' is selected for 9.1   |  |
|           | undertaken as part of the patient's   | been completed please select 'None'.   |                  | Checkboxes four options select all that apply:   |  |
|           | discharge:  |  |                  | Oxygen alert     Oxygen alert (electronic or paper) provided, if appropriate   |  |
|           |   |  |                  | <ul> <li>Multidisciplinary team meeting<br/>(MDT)</li> <li>Patient discussed at an MDT with<br/>a community and/or primary<br/>care team.</li> </ul> |  |
|           |   |  |                  | COPD clinic follow up organised  |  |
|           |   |  |                  | • None   |  |