RightCare Community-acquired Pneumonia Toolkit

Practical advice and guidance for commissioners, service providers, and clinicians on how to commission and provide the best system-wide care for people with community-acquired pnuemonia.

September 2022

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"Pneumonia continues to place a huge burden on the NHS and is the third biggest cause of death from lung disease"

Foreward

“Pneumonia continues to place a huge burden on the NHS and is the third biggest cause of death from lung disease. Community-acquired pneumonia is a leading cause of hospital admissions and in some cases this could be avoided and in others the length of stay could be reduced. It affects older people disproportionately as the incidence doubles for those aged 85-95 years old compared with 65-69 years old.

This RightCare toolkit addresses some of the top priorities facing systems now for community-acquired pneumonia by providing a set of key actions supported by current guidance, evidence and best-practice examples. The toolkit covers high priority areas such as looking at prevention and reducing the risk of contracting and developing the disease in the first place; promoting early detection strategies and accurate diagnostics; looking at evidence-based ways of reducing avoidable admissions to hospital and reducing unexpected deaths due to community-acquired pneumonia. The toolkit also looks at optimal management strategies of the disease including appropriate antibiotic prescribing; improving the way that we discharge patients and how to follow-up and support them.

The toolkit also provides tailored support for specific patient groups at high risk of acquiring pneumonia in the community such as people living in care homes, people with learning disabilities, people with mental ill health and during pregnancy.

The actions set out in this toolkit will help to tackle the urgent challenges facing patients with community-acquired pneumonia. These actions are also aligned with the commitments set out in the NHS Long Term Plan for respiratory disease and will contribute to reducing overall unwarranted variation. Therefore, I am pleased to be supporting this toolkit and its implementation into healthcare systems.”

Professor Andrew Menzies-Gow
National Clinical Director for Respiratory Services
NHS England

Introduction

Pneumonia places a significant burden on the NHS where it continues to be the leading cause for hospital admissions, many of which are avoidable and for which mortality is high. Community-acquired pneumonia disproportionately affects older people and length of stay in hospital in this age group is longer than in other age groups. Inappropriate antimicrobial prescribing for community-acquired pneumonia increases the risk of developing antimicrobial resistance (AMR). People who have acquired pneumonia in the community often experience uncoordinated services and lack of sharing of relevant information between primary and secondary care.

Overview

This RightCare toolkit will support systems to understand the priorities in community-acquired pneumonia care and key actions to take. It provides opportunity to assess and benchmark current systems to find opportunities for improvement. It has been developed with reference to NICE guidelines. Wider consultation has taken place with representatives of people who have acquired pneumonia in the community, clinicians, social care organisations, professional bodies and other expert stakeholders.

The national challenge

Pneumonia places a large burden on the NHS. The current challenges for community-acquired pneumonia are:

- Mortality due to pneumonia is high (29,000 deaths per annum, third greatest cause of death from lung disease after chronic obstructive pulmonary disease (COPD) and lung cancer). Furthermore, 5-15% of patients hospitalised with community-acquired pneumonia, die within 30 days of admission. For people with learning disabilities, pneumonia is the most cited cause of premature death (25%) with aspiration pneumonia being the second (16%) in the 2018 LeDeR report.
- Leading cause for admission to hospital where this is unnecessary in many cases and longer length of stay (LoS) in older age groups (pneumonia disproportionately affects older people where incidence of community-acquired pneumonia is ~7.99/1000 person-years in patients aged 65 older and incidence doubling for those aged 85-95 compared with 65-69).
- Inappropriate antimicrobial prescribing for community-acquired pneumonia increases the risk of developing antimicrobial resistance (AMR).
- Lack of coordination and sharing of relevant information between primary and secondary care for community-acquired pneumonia.

The national RightCare opportunity

- Around £86.2m* could be saved on non-elective spend (where patients aged 65 years and older stayed at least one night) for pneumonia if CCGs achieved the rate of their best 5 peers†
- Nearly 21,000 fewer patients aged 65 years and older, admitted non-electively and stayed at least one night for pneumonia if CCGs achieved the rate of their best 5 peers†

**The approaches outlined within the toolkit should contribute to delivery of efficiency opportunities outlined within RightCare packs, however the impact at a local level may differ based upon system configuration, capacity and contractual arrangements and potential need to invest in alternative services, where these do not currently exist.*

†Potential national opportunities represent the sum of potential opportunities for all CCGs, if all CCGs with significantly worse (higher or lower, dependent on outcome measure) values reduce or increase these values to the average of the 'Best' 5 of their nearest 10 CCGs.

Data and further information resources

There are several sources of respiratory data that we recommend systems and service leads explore.

RightCare 'Where to look' data packs

Where to look packs include 'pathway on a page' charts that highlight performance across key clinical care pathways to help understand how performance in one part of the pathway may affect outcomes further along the pathway. The packs include an asthma, and influenza and pneumonia pathway that has indicators across prevalence, risk factors, primary care and primary care prescribing and inpatients (elective and non-elective).

We recommend that you view the asthma, and influenza and pneumonia pathway charts to see how your area is performing compared to your demographically similar peers. General respiratory data is also presented at Primary Care Network (PCN) level.

Both Where to look and PCN packs, and other RightCare resources, can be found on the RightCare National FutureNHS. Please note that you will need to a become a member of FutureNHS to access the site.

Model Health System (MHS) includes RightCare data

RightCare data is now also included on the Model Health System - a data-driven improvement tool that supports health and care systems to improve patient outcomes and population health. It provides benchmarked insights across the quality of care, productivity and organisational culture to identify opportunities for improvement. Information is presented by Integrated Care Board (ICB) and you can also drill down to place (sub-ICB) level.

Indicators across the asthma and pneumonia pathway including prevalence, risk factors, primary care and primary care prescribing and inpatients (elective and non-elective) and are updated regularly as new date is made available.

For more information and to access the Model Health System please go to the NHS England website.

Getting It Right First Time

Getting It Right First Time (GIRFT) is a national programme designed to improve the treatment and care of patients through in-depth review of services, benchmarking, and presenting a data-driven evidence base to support change. A GIRFT review of respiratory medicine was published in October 2021 and includes recommendations and actions for asthma and pneumonia.

Data and further information resources (continued)

Atlases of Variation

The Atlases of Variation help to identify unwarranted variation and assess the value that healthcare provides to both populations and individuals.

A defining aspect of the atlases is that each of the indicator's maps, column chart and box-and-whisker plot is accompanied by text which provides: the context for the indicator, a description of the variation and trend data, options for action and a list of evidence-based resources to support action. Interactive Atlases services can be accessed via the NHS England website.

The 2nd Atlas of variation in risk factors and healthcare for respiratory disease (2019) includes sections on asthma and pneumonia and can be found on Fingertips. Interactive Atlases services can be accessed via the NHS England website.

Inhale - INteractive Health Atlas of Lung conditions in England

Inhale is an online tool showing data from a range of sources about respiratory diseases including COPD and asthma. It includes data from the Quality and Outcomes Framework (QOF), Hospital Episode Statistics (HES), the Public Health Outcomes Framework (PHOF) and ONS mortality.

Community acquired pneumonia CQUIN

The Commissioning for Quality and Innovation framework (the CQUIN) was introduced to reward care excellence, encouraging a culture of quality improvement, and to achieve better outcomes for patients. The Framework sets a number of quality improvement goals and rewards trusts that achieve them with financial incentives. The CQUIN framework was suspended during the pandemic, but has now been reinstated for 2022/23.

Community acquired pneumonia is included in the CQUIN for 2022/23 and is based on the British Thoracic Society's care bundle which sets out the discrete steps that providers need to follow to improve care for patients.

RightCare toolkit on a page

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System improvement priority 1: Primary prevention and risk factors

Specific strategies can be taken in order to reduce the risk of acquiring pneumonia in the community. These include the uptake of influenza and pneumococcal vaccinations, smoking cessation, better hygiene practices, reducing the use of inhaled corticosteroids if possible and living in damp-free homes.

Key areas for focus:	
Vaccinations: pneumococcal and influenza	There are key groups of people that should be offered the pneumococcal and influenza vaccine in order to protect people from the risk of acquiring pneumonia. It is particularly important to receive the influenza vaccine as spikes in pneumonia often follow influenza trends. For the pneumococcal vaccine, the key at risk groups include babies, people aged 65 and over, anyone from the ages of 2 to 64 with a health condition that increases their risk of pneumococcal infection, anyone at occupational risk, such as welders. For the influenza vaccine, the key at risk groups include anyone aged 65 and over, pregnant women, children and adults with an underlying health condition (such as diabetes) and children and adults with weakened immune systems. Furthermore, vaccinations should be offered with reasonable adjustments for people with learning disabilities.
Risk factors	There are some risk factors, that may make someone more susceptible to either acquiring pneumonia such as smoking, malnutrition, chronic liver disease due to alcohol abuse and poor dentition. There are further risk factors that may make someone develop aspiration pneumonia (lung infection due to inhaled food, stomach acid or saliva) such as severe physical disabilities (e.g. swallowing dysfunction, severe kyphosis) or being fed when lying down.
Good hygiene precautions	In order to reduce the risk of acquiring and transmitting bacteria and viruses that can cause pneumonia, good hand and hygiene precautions should be encouraged. Local systems should promote public health campaigns which encourage the use of tissues when coughing, sneezing or blowing the nose, disposing of used tissues into bins and washing hands afterwards, this is especially important in care home settings.
Inhaled corticosteroid use in COPD patients	People with COPD who take inhaled corticosteroids are at risk of side effects including pneumonia, therefore it is important to be aware of this risk.
Healthy homes	A cold or damp house is linked to increased susceptibility to develop chest infections, particularly in the very young or elderly.

System improvement priority 1: Primary prevention and risk factors

Key area of focus	Actions to take	Guidance and best practice
1.1 Vaccinations: pneumococcal and influenza pneumococcal and influenza	• Education and awareness of the importance of receiving appropriate vaccines for patients and public. • Target at risk patients, their carers and healthcare workers to receive their influenza and pneumococcal vaccines. • Ensure residents and at risk residents receive their influenza and pneumococcal vaccines. • Awareness of Commissioning for Quality and Innovation (CQUIN) Indicator CCG1: Staff Flu vaccinations. • Work with pharmacies to increase awareness and uptake through public health campaigns. • Identify opportunities for vaccination in secondary care environment e.g. at outpatient appointments and on discharge. • Refer to population-based approach example to support at scale delivery of pneumonia vaccinations for targeted at-risk groups. • Refer to example of practice nurses promoting influenza vaccines to the homeless community. • Refer to NICE quality standard QS190: Flu vaccination: increasing uptake. • Sizeable number of people with learning disabilities do not come forward for their vaccinations (influenza and pneumococcal) because of needle phobia. Reasonable adjustments for those at high risk should be made and consider other methods of delivering the vaccination, e.g. nasally.	
1.2 Risk factors	• Embed Make Every Contact Count (MECC) approach to improve people's health and well-being by addressing risk factors such as alcohol, diet, physical activity and smoking during routine appointments and contacts. These can be as brief or very brief interventions. • Define the local offer for weight management, smoking cessation, physical activity and alcohol reduction. • Have commissioned local stop smoking services available in your area to refer patients, and their carers, to or provide alternative methods stop smoking support where there are no local services available. • Hospital stop smoking/smoke-free NHS Long Term Plan for NHS-funded tobacco treatment services. • Embed tobacco dependence treatment in primary care systems.	

System improvement priority 1: Primary prevention and risk factors

Key area of focus	Actions to take	Guidance and best practice
1.2 Risk factors	• Review risk factors of developing aspiration pneumonia. Risks increase in people with severe physical disabilities (e.g. chest abnormalities, severe kyphosis), people with swallowing dysfunction often due to neurological disease and being fed when lying down. If aspiration pneumonia suspected, refer to Speech and Language Therapy (SALT) for a swallow assessment. • Refer to NICE guideline NG48 - Oral health for adults in care homes and quality standard QS151 – Oral health in care homes. • Refer to shared learning for oral health needs for older people living in care homes.	
1.3 Good hygiene precautions	• Refer to and sign-post patients and their carers, healthcare workers and members of the public to NHS stay well this winter website. • Refer to public health awareness campaigns such as the hand-washing campaign; antibiotic stewardship for healthcare workers etc. • Promote a team culture where staff know that they should talk to their patients about healthy lifestyles - 'Making Every Contact Count' initiatives should include the promotion of good hygiene practices, including handwashing, vaccination programmes and optimising health and wellbeing. • Refer to NHS Long Term Plan on commitments set out for supporting people living in care homes • Review NHS England's Enhanced Health in Care Homes (EHCH) Framework for practical guidance and best practice on delivering a mature collaborative EHCH service'. • Refer to NICE public health guideline PH36 – Healthcare-associated infections: prevention and control and quality standard QS61 – Infection prevention and control quality statements 1, 2, 3 and 6. • Refer to complete NICE care homes products (guidance, advice, NICE Pathways and quality standards). • Refer to NICE guideline NG96 – care and support of people growing older with learning disabilities. • Refer to shared learning for improving pre-meal patient hand hygiene compliance in a healthcare setting. • Refer to shared learning for improving quality of care in residential care and nursing homes.	

System improvement priority 1: Primary prevention and risk factors

Key area of focus	Actions to take	Guidance and best practice
1.4 Inhaled corticosteroid use in COPD patients	• Refer to NICE guideline NG115 Chronic obstructive pulmonary disease in over 16s: diagnosis and management: recommendation 1.2.9. where the risk of side effects, including pneumonia should be discussed for people taking inhaled corticosteroids for COPD. • Refer to drug safety update on inhaled corticosteroids and pneumonia from Medicines and Healthcare products Regulatory Agency.	
1.5 Healthy homes	• Work with local authorities to support the healthy homes initiative. • Refer to NICE guideline NG6 Excess winter deaths and illness and the health risks associated with cold homes guidelines. • Refer to NICE quality standard QS117 Preventing excess winter deaths and illness associated with cold homes. Statement 1: Year round planning to identify vulnerable local populations.	

System improvement priority 2: Early detection and accurate diagnosis

As pneumonia can be serious, it is important to detect it early and diagnose it accurately so that appropriate treatment can start quickly. Clear diagnostic pathways should be in place in both primary and secondary care systems for pneumonia.

Key areas for focus:	
Primary and community care diagnosis	Community-acquired pneumonia can be challenging to diagnose in primary and community care settings. Diagnosis of pneumonia in primary care is difficult due to lack of chest x-ray availability and there can be issues with coding between pneumonia and lower respiratory tract infection (LRTI). Furthermore, the condition may be difficult to distinguish between non-pneumonic respiratory infections (e.g. chest infection or LRTI); congestive heart failure and exacerbations of chronic obstructive pulmonary disease (COPD).
Secondary care diagnosis	Diagnosis of community-acquired pneumonia can also occur in a secondary settings e.g. A&E. It is important to have clear processes in place in secondary care for detecting and diagnosing community-acquired pneumonia in patients to expedite appropriate treatment.

Key area of focus	Actions to take	Guidance and best practice
2.1 Primary and community care diagnosis	• Refer to NICE CG191 Pneumonia in adults: diagnosis and management. • Severity assessment (CRB65 score) should be made for all suspected community-acquired pneumonia patients to support clinical judgement when deciding to treat at home or refer to hospital. Refer to NICE Quality Standard QS110 Pneumonia in adults Quality Statement 1: Mortality risk assessment in primary care using CRB65 score. • Review British Thoracic Society Annotated BTS Guideline for the management of community-acquired pneumonia in adults for recommendations on investigations for pneumonia in primary care. • Consider a Point of Care C-reactive protein test if after clinical assessment a diagnosis of pneumonia has not been made and it is not clear whether antibiotics should be prescribed and if resources allow in the primary care setting. Refer to NICE CG191 Pneumonia in adults: diagnosis and management Recommendation 1.1 Presentation with lower respiratory tract infection	

System improvement priority 2: Early detection and accurate diagnosis

Key area of focus	Actions to take	Guidance and best practice
2.2 Secondary care diagnosis	• Refer to NICE CG191 Pneumonia in adults: diagnosis and management. • To implement the pneumonia recommendations from the Getting It Right First Time (GIRFT) Respiratory Speciality Report. • Review British Thoracic Society Care Bundle for the management of community-acquired pneumonia. • Review British Thoracic Society Annotated BTS Guideline for the management of CAP in adults for recommendations on investigations for pneumonia in secondary care. • Severity assessment (CURB65 score) should be interpreted for all community-acquired pneumonia patients in conjunction with clinical judgement in secondary care. Refer to NICE quality standard QS110 Pneumonia in adults Quality Statement 4: Mortality risk assessment in hospital using CURB65 score. • All adults with suspected community-acquired pneumonia in hospital to receive a chest Xray and receive a diagnosis within 4 hours of presentation. Refer to NICE quality standard QS110 Pneumonia in adults Quality Statement 3: Chest Xray and diagnosis within 4 hours of hospital presentation. • Review Specialist Pneumonia Intervention Nurses (SPIN) service where intervention is based onscreening for potential cases from acute medical admissions and implementing key interventions within 4 hours • Refer to the new Commissioning for Quality and Innovation (CQUIN) indicator for community-acquired pneumonia that was introduced in March 2022/23 (Annex: indicators specifications). This CQUIN incentivises best practice care pathways for people admitted to hospital with community-acquired pneumonia and is based on the British Thoracic Societ's best practice care bundle, and the NICE CG191 Pneumonia in adults: diagnosis and management guideline.	

System improvement priority 3: Reducing inappropriate admissions to secondary care and unexpected mortality

Community acquired-pneumonia is a leading cause of admission to hospital, despite being avoidable in many cases. Acute pneumonia admissions have risen by 35% since 2013 with stays in hospitals getting shorter, indicating admission may not have always been essential (NHS Long Term Plan). About 1% of adults have community-acquired pneumonia every year in the U.K. (between 220,000 and 484,000 people in England). It is estimated that 22–42% of these people are admitted to hospital. The mortality rate in hospital is between 5-14% and between 1-10% of adults admitted to hospital with communityacquired pneumonia, are managed in an intensive care unit. For these patients the risk of dying is more than 30%. Therefore, it is important to develop strategies to reduce inappropriate admissions to secondary and mortality due to community-acquired pneumonia.

Key areas for focus:	
Consistent risk stratification in primary care using CRB65 score to reduce inappropriate admissions	Patients with a diagnosis of community-acquired pneumonia in primary care, need to be severity assessed to determine whether they are at low, intermediate or high risk of death using the CRB65 score. Consistent use and application of risk scoring for deteriorating patients may reduce avoidable admissions to hospital.
Patient stratifcation using CURB65 score in secondary care to reduce unexpected mortality	Pneumonia patients diagnosed with community-acquired pneumonia in secondary care should be severity assessed to determine risk of death (to reduce unexpected mortality) or suitability for discharge using the CURB65 score.
End of life care (inappropriate admissions) - better advance care planning	Advance care planning and access to palliative care can reduce hospital admissions. NICE guideline NG94 recommends offering advance care planning to people in the community and in hospital who are approaching the end of life and are at risk of a medical emergency.

System improvement priority 3: Reducing inappropriate admissions to secondary care and unexpected mortality

Key area of focus	Actions to take	Guidance and best practice
3.1 Consistent risk stratification in primary care using CRB65 score	• Severity assessment (CRB65 score) should be made for all community-acquired pneumonia patients to support clinical judgement when deciding to treat at home or refer to hospital. Refer to NICE Quality Standard QS110 Pneumonia in adults Quality Statement 1: Mortality risk assessment in primary care using CRB65 score. • Refer to NICE CG191 Pneumonia in adults: diagnosis and management Recommendation 1.2 Community-acquired pneumonia Severity assessment in primary care (1.2.1 and 1.2.2).	
3.2 Patient stratification using CURB65 score	• Severity assessment (CRB65 score) should be made for all community-acquired pneumonia patients to support clinical judgement when deciding to treat at home or refer to hospital. Refer to NICE Quality Standard QS110 Pneumonia in adults Quality Statement 1: Mortality risk assessment in primary care using CRB65 score. • Refer to NICE CG191 Pneumonia in adults: diagnosis and management Recommendation 1.2 Community-acquired pneumonia Severity assessment in primary care (1.2.1 and 1.2.2). • Severity assessment (CURB65 score) should be interpreted for all community-acquired pneumonia patients in conjunction with clinical judgement. Refer to NICE Quality Standard QS110 Pneumonia in adults Quality Statement 4: Mortality risk assessment in hospital using CURB65 score. • Refer to NICE CG191 Pneumonia in adults: diagnosis and management Recommendation 1.2 Communityacquired pneumonia Severity assessment in secondary care (1.2.3-1.2.5). • Review Specialist Pneumonia Intervention Nurses (SPIN) service where intervention is based on screening for potential cases from acute medical admissions and implementing key interventions within 4 hours. • Refer to the new Commissioning for Quality and Innovation (CQUIN) indicator for Community-acquired Pneumonia that will be introduced from April 2020 (CQUIN guidance and Indicators Specifications). This CQUIN incentivizes best practice care pathways for people admitted to hospital with Community-acquired Pneumonia and is based on the British Thoracic Society's best practice care bundle, and the NICE CG191 Pneumonia in adults: diagnosis and management guideline.	

System improvement priority 3: Reducing inappropriate admissions to secondary care and unexpected mortality

Key area of focus	Actions to take	Guidance and best practice
3.3 End of life (inappropriate admissions) - better advance care planning	• For patients with frailty/dementia and particularly patients in care homes, discussions should be undertaken by community geriatric and primary care services about preventing hospital admissions where appropriate where an admission to hospital is unlikely to change the outcome. • Where a patient is at the end of their life and contracts pneumonia, attention should be given to any preferences outlined within their advance care plan to reduce avoidable and distressing transfers into secondary care. • Where an advance care plan is not in place, sensitive discussions should be held with the patient and/or the person's carer or relatives to discuss the appropriateness of admission into secondary care. • Staff to have education and training around undertaking and completing advance care plans with patients and their carers/relatives. • System education on the appropriate transfer of patients with pneumonia at the end of life. • Refer to NICE NG94 Emergency and acute medical care in over 16s: service delivery and organisation where the aims are reduce the need for hospital admissions by giving advanced training to paramedics and providing community alternatives to hospital care.	

System improvement priority 4: Appropriate management including prescribing

Key areas for focus:	
Consistent use of CURB65	Consistent use and application of mortality risk scoring using CURB65 in conjunction with clinical judgement for patients to manage patients appropriately.
Implement and consistently use care bundles within your system	Embedding the consistent use of care bundles within your system for community-acquired pneumonia enables systems to appropriately manage patients with community-acquired pneumonia.
Antimicrobial stewardship	The term 'antimicrobial stewardship' is defined as 'an organisational or healthcare system-wide approach to promoting and monitoring the judicious use of antimicrobials to preserve their future effectiveness'. Guidelines should be followed for effective use of antimicrobials (including antibiotics) in children, young people and adults. Antimicrobial stewardship aims to change prescribing practice to help slow the emergence of antimicrobial resistance and ensure that antimicrobials remain an effective treatment for infection.

Key area of focus	Actions to take	Guidance and best practice
4.1 Consistent use of CURB65	• Severity assessment (CURB65 score) should be interpreted for all community-acquired pneumonia patients in conjunction with clinical judgement. Refer to NICE quality standard QS110 Pneumonia in adults Quality Statement 4: Mortality risk assessment in hospital using CURB65 score. • Consider CURB65 score for all community-acquired pneumonia patients in conjunction with clinical judgement (as not all patients will be suitable for escalation of care due to existing co-morbidities etc.) to ensure patients referred to most appropriate ward depending on severity e.g. a score of 3 or 4 suggests urgent hospital management such as in-patient highdependency and intensive care. • Refer to NICE CG191 Pneumonia in adults: diagnosis and management Recommendation 1.2 Community-acquired pneumonia Severity assessment in primary care (1.2.3-1.2.5).	

System improvement priority 4: Appropriate management including prescribing

Key area of focus	Actions to take	Guidance and best practice
4.1 Consistent use of CURB65	• Review Specialist Pneumonia Intervention Nurses (SPIN) service where intervention is based on screening for potential cases from acute medical admissions and implementing key interventions within four hours.	
4.2 Implement and consistently use care bundles within your system	• Review British Thoracic Society Care Bundle for the management of community-acquired pneumonia. • Review British Thoracic Society Annotated BTS Guideline for the management of CAP in adults for recommendations on investigations for pneumonia in primary care. • Review British Thoracic Society Annotated BTS Guideline for the management of CAP in adults for recommendations on investigations for pneumonia in secondary care. • Refer to the new Commissioning for Quality and Innovation (CQUIN) indicator for Community-acquired Pneumonia that was introduced in March 2022 (CQUIN guidance and Indicators Specifications). This CQUIN incentivizes best practice care pathways for people admitted to hospital with Community-acquired Pneumonia and is based on the British Thoracic Society's best practice care bundle, and the NICE CG191 Pneumonia in adults: diagnosis and management guideline.	
4.3 Antimicrobial stewardship	• Commissioners should ensure that antimicrobial stewardship operates across all care settings as part of an antimicrobial stewardship programme. • Refer to NICE NG15 Antimicrobial stewardship: systems and processes for effective antimicrobial medicine use for recommendations on antimicrobial stewardship programmes; antimicrobial prescribing and introducing new antimicrobials. • Refer to NICE quality standard QS110 Pneumonia in adults Quality Statement 2: Antibiotic therapy for diagnosed low severity community-acquired pneumonia. • Refer to NICE quality standard QS110 Pneumonia in adults Quality Statement 5: Antibiotic therapy within 4 hours in hospital. • Refer to NICE NG138 Pneumonia (community-acquired): antimicrobial prescribing which outlines antimicrobial prescribing strategy for patients with a confirmed diagnosis of community-acquired pneumonia. It aims to optimise antibiotic use and reduce antibiotic resistance.	

System improvement priority 4: Appropriate management including prescribing

Key area of focus	Actions to take	Guidance and best practice
4.3 Antimicrobial stewardship	• Encourage microbiological testing as per NICE guidelines, and streamline antibiotic regimens based on microbiological aetiology. • Review Specialist Pneumonia Intervention Nurses (SPIN) service where intervention is based on screening for potential cases from acute medical admissions and implementing key interventions within 4 hours. • Review the Getting It Right First Time (GIRFT Respiratory Medicine Specialty Report for recommendations and case studies.	

System improvement priority 5: Discharge and post-disease follow-up

Key areas for focus:	
Patient, family and carers education	Components of an optimal discharge service should include providing education to patients, their family and carers regarding realistic expectations of length of recovery from community acquired pneumonia. This will contribute to optimal self-management strategies post-discharge and therefore reduce the overall burden of pneumonia on systems. Furthermore, there should be opportunities to utilise a shared personalised care and support plan.
Nurse-led discharge	As set out in the NHS Long Term Plan, patients identified with community acquired pneumonia in emergency departments will be supported to be cared for safely out of hospital by receiving nurse-led supported discharge services.
Follow-up x-ray to ensure resolution	A follow-up chest x-ray/radiograph should be arranged for patients who have persistence of symptoms or physical signs or who are at higher risk of underlying malignancy.
Agreed pathways between primary, community and secondary care	It is important to have clear protocols in place to support transition between primary, community and secondary care so that all involved in transition are aware of agreed protocols.

Key area of focus	Actions to take	Guidance and best practice
5.1 Patient, family and carers education	• Provide information to the patient, family/carer on the likely timescales for full recovery. Refer to NICE CG191 Pneumonia in adults: diagnosis and management Recommendation 1.2.22 and 1.2.21 Patient Information. This outlines what to expect from symptoms over time. • Sign post patients, family and carer networks to voluntary sector resources such as British Lung Foundation information leaflet on pneumonia care. • Provide people and their carers with information on how to self manage the after effects of pneumonia. • Have a directory of local third sector and voluntary services available to support people in their recovery. • Share the directory of services with individuals to enable them to access support when they need it. • Use patient activation measure (PAM) to identify level of health literacy and plan interventions accordingly e.g. health coaching, supported self-management.	

System improvement priority 5: Discharge and post-disease follow-up

Key area of focus	Actions to take	Guidance and best practice
5.2 Nurse-led discharge service	• Refer to NICE CG191 Pneumonia in adults: diagnosis and management Recommendation 1.2.20 and 1.2.21 Safe discharge from hospital guideline on discharge from hospital. • Review Specialist Pneumonia Intervention Nurses (SPIN) service where intervention is based on screening for potential cases from acute medical admissions and implementing key interventions within four hours.	
5.3 Follow-up x-ray to ensure resolution	• 2015 - Annotated BTS Guideline for the management of CAP in adults (2009) Summary of recommendations where a chest X-ray should be arranged after about 6 weeks for patients who have no change in symptoms or who are at higher risk of underlying malignancy (especially smokers and those aged >50 years) whether or not they have been admitted to hospital. It is the responsibility of the hospital team to arrange the follow-up plan with the patient and the GP for those patients admitted to hospital. • Raise awareness/education of potential underlying symptoms not relation to pneumonia i.e. cancer so they can be investigated where appropriate.	
5.4 Agreed pathways between community, primary and secondary care	• Have clear protocols in place to support transition between community, primary and secondary care. • Ensure all healthcare staff involved in transition are aware of agreed protocols. • Use personalised care and support planning and share across services.	

System improvement priority 6: Supporting specific groups

Some groups of people who acquire pneumonia groups may require additional or more specialised support. This could be due to the development of co-morbidities, a temporary change such as pregnancy or a patient that requires additional needs. Having timely and correct information and access to the additional support when needed will mean that their condition can continue to be managed safely.

Key areas for focus:	
Supporting people in care homes	4-8% of people aged 65 years and over reside in care homes in the developed world. The current evidence suggests that people living in care homes are more susceptible to respiratory tract infections where prevalence is 0.5-4.4 per 1,000 resident days and pneumonia being the leading cause of death with a mortality rate of 6-23%. Therefore there needs to be opportunities for developing prevention strategies in order to reduce the burden of such infections in the future.
Supporting people with learning disabilities	People with learning disabilities, regardless of age, are more susceptible to pneumonia and other respiratory conditions, have potentially avoidable and longer hospital admissions via A&E and die early from these often-preventable conditions. Those with learning disabilities also age prematurely and so are likely to experience health conditions related to ageing some two decades earlier than the non-learning-disabled population. In the 2018 Learning Disability Mortality Review (LeDeR) report, pneumonia was the most cited cause of premature death (25%) with aspiration pneumonia being the second (16%), highlighting the clinical overlap of aspiration and infective pnuemonias.
Supporting people with mental ill-health	People with severe mental illnesses are at higher risk of poor physical health. Compared with the general patient population, patients with severe mental illnesses are at substantially higher risk of respiratory disease including pneumonia, cardiovascular disease, obesity and diabetes and make more use of urgent and emergency care.
Supporting pregnant woment	The occurrence of community-acquired pneumonia in young adults is uncommon, however pneumonia in pregnant women can be severe and fatal and is the most frequent cause of nonobstetric infection leading to death.

Key area of focus	Actions to take	Guidance and best practice
6.1 Supporting people in care homes	• Ensure residents and at risk residents receive their influenza and pneumococcal vaccines. • Review risk factors of developing aspiration pneumonia. Risks increase in people with severe physical disabilities (e.g. chest abnormalities, severe kyphosis), people with swallowing dysfunction often due to neurological disease and being fed when lying down. If aspiration pneumonia suspected, refer to Speech and Language Therapy (SALT) for a swallow assessment.	

System improvement priority 6: Supporting specific groups

Key area of focus	Actions to take	Guidance and best practice
6.1 Supporting people in care homes	• Refer to NHS Long Term Plan on commitments set out for supporting people living in care homes. • Review NHS England's Enhanced Health in Care Homes (EHCH) Framework for practical guidance and best practice on delivering a mature collaborative EHCH service. • Refer to NICE NG48 - Oral health for adults in care homes and quality standard QS151 – Oral health in care homes. • Refer to NICE public health guideline PH36 – Healthcare-associated infections: prevention and control and quality standard QS61 – Infection prevention and control quality statements 1, 2, 3 and 6. • Refer to complete NICE care homes products (guidance, advice, NICE Pathways and quality standards). • Refer to NICE guideline NG96 – Care and support of people growing older with learning disabilities. • Refer to NICE shared learning for improving pre-meal patient hand hygiene compliance in a healthcare setting. • Refer to NICE shared learning for oral health needs for older people living in care homes. • Refer to NICE shared learning for improving quality of care in residential care and nursing homes.	
6.2 Supporting people with learning disabilities	• Review the Learning Disability Mortality Review (LeDeR) Programme Report 2020 to understand mortality in people with learning disabilities relevant to pneumonia and aspiration pneumonia. • Review risk factors of developing aspiration pneumonia. Risks increase in people with severe physical disabilities (e.g. chest abnormalities, severe kyphosis), people with swallowing dysfunction often due to neurological disease and being fed when lying down. If aspiration pneumonia suspected, refer to Speech and Language Therapy (SALT) for a swallow assessment. • Sizeable number of people with learning disabilities do not come forward for their vaccinations (influenza and pneumococcal) because of needle phobia. Reasonable adjustments for those at high risk should be made and consider other methods of delivering the vaccination e.g. nasally.	

System improvement priority 6: Supporting specific groups

Key area of focus	Actions to take	Guidance and best practice
6.2 Supporting people with learning disabilities	• Ensure that specialist respiratory services are upskilled and making reasonable adjustments to support the needs of people with a learning disability, including working in partnership with learning disability specialist staff. People with a learning disability should have access to the same range of skills, tests and treatments as everybody else. • Local learning disability professionals should be upskilled in management of respiratory diseases including pneumonia. • Reasonable adjustments must be made according to individual patient need and information provided in an accessible and easy read format. Furthermore, for profound and multiple learning disabilities, people need reasonable adjustments in relation to communication e.g. non-verbal communication. • Ensure there is specialist learning disability knowledge to support reasonable adjustments and awareness of the risks to people with profound and multiple disabilities. • Work in partnership with specialist learning disability services where someone has a learning disability or profound and multiple disabilities to ensure appropriate treatment plan in the community. • Ensure that the Learning Disability Standards are known and followed across the system. • Refer to NICE learning disabilities products for people with learning disabilities (guidance, advice, NICE Pathways and quality standards). • Support around medication – education to ensure medication (antibiotics) is taken appropriately. Awareness of stopping over medication of people with a learning disability, autism or both (STOMP) if appropriate when treating pneumonia. • Refer to NICE guideline NG96 – care and support of people growing older with learning disabilities.	

System improvement priority 6: Supporting specific groups

Key area of focus	Actions to take	Guidance and best practice
6.3 Supporting people with mental ill-health	• Ensure primary care staff feel knowledgeable and confident to work with people with mental health issues and to avoid 'diagnostic overshadowing'. • Implementing simple screening questionnaires (PHQ9 and GAD7) via GPs or community respiratory services could be an easy way to identify patients with a developing or developed mental health condition. Appropriate referral or sign-posting to mental health services can then be triggered. • Ensure primary care staff feel knowledgeable and confident to work with people with mental health issues and to avoid 'diagnostic overshadowing'. • Implementing simple screening questionnaires (PHQ9 and GAD7) via GPs or community respiratory services could be an easy way to identify patients with a developing or developed mental health condition. Appropriate referral or sign-posting to mental health services can then be triggered. • Implement social prescribing to make the most of the community-based and informal support available. Refer to guidance to help PCNs introduce the new role of social prescribing link worker into their multi-disciplinary teams. • Review guidance on delivering the mental health commitments in the NHS Long Term Plan. • Refer to NICE mental health and well-being products on mental health and well-being (guidance, advice, NICE Pathways and quality standards).	
6.4 Supporting pregnant women	• One of the most common complications of flu is bronchitis, a chest infection that can become serious and develop into pneumonia. Therefore ensure pregnant women are offered the influenza vaccination. • Refer to NICE public health guideline PH26: for Smoking: stopping in pregnancy and after childbirth. • Refer to NICE Summary of antimicrobial prescribing guidance – managing common infections referring to guidance for pregnant women who have acquired pneumonia in the community. • Refer to NICE Pregnancy products (guidance, advice, NICE Pathways and quality standards).	

System improvement priority 7: Experience of care

Experience is important in a number of different, but related ways:

- As a key part of providing high quality care: Those providing health and care services view experience as a natural part of providing high-quality care, and a good experience is now seen as an important 'outcome' in its own right.
- As a way of improving outcomes: There is strong evidence about the links between experience and the other aspects of high-quality care (clinical effectiveness and safety).
- As a way of indicating value for money and whether services are appropriate: Only by understanding what people want from their services and continually focusing on their experiences will we truly be sure we are delivering value for money.
- As a way of supporting staff engagement: There is strong evidence to show the links between staff engagement and the experience of service users.

Key areas for focus:	
Improving the experience of care for people and their carers who contract pneumonia	The poorest care is often received by those least likely to make complaints, exercise choice or have family to speak up for them such as people living with poorer health conditions. Also, there are concerns about unfair discrimination in access to care. Furthermore, people with a learning disability, autism or both are known to have difficulties when making complaints or expressing concerns. People who use our services have vital insights into their care and many are experts in managing their own conditions, genuine partnerships gives patients' parity of esteem with health professionals and both improve health outcomes and contribute to more cost-effective use of services. 'Good' experience of care will result in people who use our services being more engaged with their own healthcare, leading to improved patient/service user outcomes and productivity gains for NHS services.

Key area of focus	Actions to take	Guidance and best practice
7.1 Improving the experience of care for people and their carers who contract pneumonia	• Ensure there is good understanding of the patient experience pathway for pneumonia and facilitate ways of gathering and collating this information on a regular basis for individual sites and providers and across the whole system. • Services should use experience of care feedback from patients and carers on an ongoing basis to improve and develop services (e.g. analysis of complaints). • Involve third sector organisations to engage and support patients to access services, particularly in more disadvantaged groups who may not be accessing services. • Make information about patient experience available to providers of pneumonia services. • Have a systematic approach to identifying carers supporting people who have contracted pneumonia who are at risk of not managing their own health conditions.	

System improvement priority 7: Experience of care

Key area of focus	Actions to take	Guidance and best practice
7.1 Improving the experience of care for people and their carers who contract pneumonia	• Services use experience of care feedback from patients and carers to improve services using co-production and co-design. • Are there plans to improve experience of care? • Ensure that you identify early symptoms of pneumonia so that people are referred appropriately within the health and social care system. • Do this in a way that is acceptable for people to enables them to work in partnership with their health professionals. • Staff working with people who contract pneumonia should be confident in recognising that a person may also have other health conditions and feel equipped to engage effectively with patients/carers to discuss referral(s) to wider health professionals. • See “Ask Listen Do” for materials to for supporting people with learning disabilities.	

System improvement priority 8: Personalised care

Personalised care means people have choice and control over the way their care is planned and delivered. It is based on what matters to them and their individual strengths and needs. Furthermore, evidence shows that people's well being, satisfaction, and experience improves through good personalised care and support planning (NHS England, 2018; Universal Personalised Care, 2019).

Key areas for focus:	
Effective personalised care and support planning with patients and shared decision making	Personalised care and support planning should address the full needs of the individual, taking steps to address loneliness, isolation, healthy behaviours etc. The process should involve shared decision making between the individual and the professionals supporting them, putting the patient at the centre of decisions about their own care. Voluntary sector organisations can also play an important role in effective care planning and providing follow up support. The Personalised Care and Support Plan must be shared with all individuals working around the service user
Advanced care planning	This is the process of people expressing their preferences, values and goals about their future wishes and priorities for their own health and care. It enables better provision and planning of care, helping people to live well and die well in a place and manner of their choosing (gold standards framework, 2018).

Key area of focus	Actions to take	Guidance and best practice
8.1 Effective personalised care and support planning with patients and shared decision making	• Ensure that people that have personalised care and support plans are completed using shared decision making methods and are supported to undertake self-management for their condition. • Personalised care and support planning should address the full health and wellbeing needs of the individual. • Use patient decision aids to help people make informed choices about their healthcare and treatment options. • Use Patient Activation Measure (PAM) to identify an individuals level of health literacy wil help tailor the support required e.g. health coaching, supported self-management (SSM), social prescribing. SSM can improve knowledge, skills and confidence in managing their diagnosis and can decrease primary and secondary care use.	

System improvement priority 8: Personalised care

Key area of focus	Actions to take	Guidance and best practice
8.2 Advanced care planning	• People with pneumonia are encouraged to review their ongoing support needs and personal planning when a change is noted in their support requirements either by themselves, carers or support staff, and clinicians or key workers. • Services to actively encourage people they work with to complete an advance care directive in a timely manner and ensure this is known to the family and carers as well as held by all agencies the person engages with. • Staff working with people who have pneumonia to be confident in recognising changes in symptoms that may require changes in treatment.	

System enablers

These system enablers are required to be in place to support the successful implementation of the system improvement priorities identified in this toolkit.

Key area of focus	Actions to take	Guidance and best practice
Embed the NHS winter planning guidance	• Ensure winter planning takes place early enough in year to have plans in place for following winter. • Refer to NHS Operational Planning and Contracting Guidance 2019/20 for sections on winter planning. • Refer to NICE NG6 Excess winter deaths and illness and the health risks associated with cold homes guidelines. • Refer to Cold Weather Plan for England	
Education (patients, carers, people with learning disabilities, public and healthcare workers)	• Refer to and sign-post patients and carers, people with learning disabilities, healthcare workers and members of the public to NHS Stay Well This Winter and 'Keep Warm Keep Well' leaflet. • Refer to public health awareness campaigns such as the hand-washing campaign; antibiotic stewardship for healthcare workers etc. • Promote a team culture where staff know that they should talk to their patients about healthy lifestyles - 'Making Every Contact Count' initiatives should include the promotion of good hygiene practices, including handwashing, vaccination programmes and optimising health and wellbeing. • Refer to The 2nd Atlas of Variation in risk factors and healthcare for respiratory disease in England, in particular the pneumonia chapter.	
Joined whole-system perspective	• Commissioning the whole pathway with all relevant stakeholders including social care and local authorities. • Utilise patient and carer experience feedback when redesigning services • Be aware of inequalities in your system - socio-economic disadvantage; housing etc.	
Trained and skilled workforce	• Interface between A&E, acute medicine and respiratory departments is key. • Identifying a Pneumonia lead in each Trust is key to driving change. • Refer healthcare workers to NHS Stay Well This Winter website. • Refer healthcare workers to antibiotic stewardship for healthcare workers. • Promote a team culture where staff know that they should talk to their patients and carers about healthy lifestyles - 'Making Every Contact Count' initiatives should include the promotion of good hygiene practices, including handwashing, vaccination programmes and optimising health and wellbeing. • Embed very brief advice for smoking (ASK, ADVISE, ACT) for all frontline healthcare workers.	

Self-assessment questionnaire

These self-assessment questionnaire (SAQ) is designed to help local areas (including STPs, ICSs and PCNs) gain enhanced understanding of their system for community-acquired pneumonia. The RightCare community-acquired pneumonia toolkit provides a benchmark to enable understanding of the key components of a system. The questions should be used alongside the toolkit to facilitate discussion and identify improvement opportunities or exemplars of good practice. The SAQs have been developed in partnership with the NHS England Clinical Policy Unit.

Specifically these questions are designed to:

- Assess the existing system to provide quality care for people who have contracted community-acquired pneumonia.
- Identify any current gaps in provision and current opportunities to enhance or develop services and systems to support people who have pneumonia.
- Consider future demand from people who have community-acquired pneumonia based on current care models, using local intelligence alongside projected data to ensure accuracy and consistency.
- Assess the progress of any system improvements over time.

For each question, please select the response (using the interactive buttons) which best describe your current asthma service provision. Response options are:

- Yes = Met
- Partly = Partly met
- No = Not met
- N/A = Not applicable

A page for notes and comments is included at the end.

Please note that there is also an interactive self-assement tool available within the Pneumonia Toolkit page of the National RightCare FutureNHS site. Please note that you will need to regsister as a member of FutureNHS.

If you wish to complete and save this questionnaire please enter your organisation name and date of completion below.

Name of organisation:_____ Questionnaire response date:_____ Completed by:_____

Self-assessment questionnaire

Priority areas		Self-assesment questions	Yes	Partly	No	N/A
1. Primary prevention and risk factors	1.1.1	Do you target at risk patients, their carers and healthcare workers to receive their influenza and pneumococcal vaccinations?	☐	☐	☐	☐
	1.1.2	Do you run education and awareness campaigns in your population about the importance of receiving appropriate vaccines and do you work with pharmacies to raise awareness?	☐	☐	☐	☐
	1.1.3	Have you implemented the Commissioning for Quality and Innovation (CQUIN) Indicator CCG1: Staff Flu vaccinations?	☐	☐	☐	☐
	1.1.4	Have you implemented the NICE Quality Standard QS190: Flu vaccination: increasing uptake?	☐	☐	☐	☐
	1.1.5	Do you implement reasonable adjustments, such as alternative methods of vaccine delivery, for people with a learning disability who have needle phobia?	☐	☐	☐	☐
	1.2.1	Have you embedded the Make Every Contact Count (MECC) approach by addressing risk factors such as alcohol, diet, physical activity and smoking during routine appointments and contacts?	☐	☐	☐	☐
	1.2.2	Do you commission and refer people into local weight management, smoking cessation, physical activity and alcohol reduction services where appropriate?	☐	☐	☐	☐
	1.2.3	Do you commission local smoking cessation services or provide alternative stop smoking support where there are no local services available?	☐	☐	☐	☐
	1.2.4	Have you implemented the NHS Long Term Plan stop smoking services for hospital admitted patients, expectant mothers and those in specialist mental health and learning disability services, as outlined in sections 2.9, 2.10 and 2.11?	☐	☐	☐	☐
	1.2.5	Are patients within your population at risk of aspiration pneumonia due to swallowing difficulties identified and provided with a care plan to minimise this risk?	☐	☐	☐	☐
	1.2.6	Do your local care homes refer to the NICE guideline NG48 - Oral health for adults in care homes and implement the quality standard QS151 – Oral health in care homes to reduce the risk of residents contracting pneumonia?	☐	☐	☐	☐
	1.3.1	Are you aware of and implementing NHS England's Enhanced Health in Care Homes (EHCH) Framework?	☐	☐	☐	☐

Self-assessment questionnaire

Priority areas		Self-assesment questions	Yes	Partly	No	N/A
	1.3.2	To reduce risk of pneumonia do you refer and sign-post patients, carers, healthcare workers and the public to awareness campaigns such as NHS Stay Well This Winter, handwashing campaign; antibiotic stewardship for healthcare workers?	☐	☐	☐	☐
	1.3.3	Do your primary, secondary and community services implement the NICE quality standards around infection prevention and control to reduce the risk of contracting pneumonia?	☐	☐	☐	☐
	1.4.1	Do your healthcare professionals provide written information to respiratory patients who are on corticteroids on the risks of developing pneumonia?	☐	☐	☐	☐
	1.5.1	Do you work with local authorities to support the healthy homes initiative?	☐	☐	☐	☐
	1.5.2	Are primary, secondary and community services within your area implementing the NICE quality standard around preventing excess winter deaths and illness associated with cold homes?	☐	☐	☐	☐
2. Early detection and accurate diagnosis	2.1.1	Do you implement the severity assessment (CRB65 score) for all suspected community acquired pneumonia patients to support clinical judgement when deciding to treat at home or refer to hospital? Refer to NICE Quality Standard QS110 Pneumonia in adults Quality Statement 1: Mortality risk assessment in primary care using CRB65 score.	☐	☐	☐	☐
	2.1.2	If resources allow, has your system considered a Point of Care C-reactive protein test for diagnosing pneumonia? Refer to NICE CG191 Pneumonia in adults: diagnosis and management Recommendation 1.1 Presentation with lower respiratory tract infection.	☐	☐	☐	☐
	2.2.1	Have you implemented the use of the British Thoracic Society Care Bundle for the management of community-acquired pneumonia in secondary care?	☐	☐	☐	☐
	2.2.2	Do you implement the severity assessment (CURB65 score) for all community-acquired pneumonia patients diagnosed in secondary care? Refer to NICE Quality Standard QS110 Pneumonia in adults quality statement 4: Mortality risk assessment in hospital using CURB65 score.	☐	☐	☐	☐
	2.2.3	Do all adults with suspected community-acquired pneumonia in hospital receive a chest X-ray and receive a diagnosis within 4 hours of presentation? Refer to NICE Quality Standard QS110 Pneumonia in adults Quality Statement 3: Chest Xray and diagnosis within 4 hours of hospital presentation.	☐	☐	☐	☐

Self-assessment questionnaire

Priority areas		Self-assesment questions	Yes	Partly	No	N/A
3. Reducing inappropriate admissions to secondary care and unexpected mortality	3.1.1	Do you consistently severity assess using the CRB65 score for all suspected community-acquired pneumonia patients? See the NICE Quality Standard QS110 and NICE CG191 Recommendation 1.2.	☐	☐	☐	☐
	3.3.1	Do discussions take place between community geriatric and primary care services about preventing hospital admissions where appropriate where an admission to hospital is unlikely to change the outcome for patients with frailty/dementia and particularly patients in care homes?	☐	☐	☐	☐
	3.3.2	Where a patient is at the end of their life and contracts pneumonia, do you refer to their advance care plan and pay attention to any preferences outlined to reduce avoidable and distressing transfers into secondary care?	☐	☐	☐	☐
	3.3.3	Where an advance care plan is not in place, do you undertake sensitive discussions with the patient and/or the person's carer or relatives to discuss the appropriateness of admission into secondary care?	☐	☐	☐	☐
	3.3.4	Where an advance care plan is not in place, do you undertake sensitive discussions with the patient and the person's carer or relatives to discuss the appropriateness of admission into secondary care?	☐	☐	☐	☐
	3.3.5	Is your system fully aware of the appropriate transfer processes of patients with pneumonia at the end of life?	☐	☐	☐	☐

Self-assessment questionnaire

Priority areas		Self-assesment questions	Yes	Partly	No	N/A
4. Appropriate management including prescribing	4.2.1	Does your system ensure that antimicrobial stewardship operates across all care settings as part of an antimicrobial stewardship programme?	☐	☐	☐	☐
	4.2.2	Do discussions take place between community geriatric and primary care services about preventing hospital admissions where appropriate where an admission to hospital is unlikely to change the outcome for patients with frailty/dementia and particularly patients in care homes?	☐	☐	☐	☐
	4.3.1	Does your system ensure that antimicrobial stewardship operates across all care settings as part of an antimicrobial stewardship programme?	☐	☐	☐	☐
	4.3.2	Are adults with low severity community-acquired pneumonia prescribed a 5-day course of a single antibiotics in line with statement 2 of the NICE quality standard?	☐	☐	☐	☐
	4.3.3	Are adults with community-acquired pneumonia who are admitted to hospital started on antibiotic therapy within four hours of presentation, in line with statement 5 of the NICE quality standard (QS110)?	☐	☐	☐	☐
	4.3.4	Are the NICE (NG138) recommendations for antimicrobial prescribing implemented for those with a confirmed diagnosis of pneumonia?	☐	☐	☐	☐
	4.3.5	Do you encourage microbiological testing as per NICE guidelines, and streamline antibiotic regimens based on microbiological aetiology in your system?	☐	☐	☐	☐

Self-assessment questionnaire

Priority areas		Self-assesment questions	Yes	Partly	No	N/A
5. discharge and post-disease follow-up	5.1.1	Do you provide information to the patient, family and carer on the likely timescales for full recovery? Refer to NICE CG191 Pneumonia in adults: diagnosis and management Recommendation 1.2.22 and 1.2.21 Patient Information. This outlines what to expect from symptoms over time.	☐	☐	☐	☐
	5.1.2	Do you signpost patients, family and carers to voluntary sector resources such as Asthma + Lung UK for information related to pneumonia care?	☐	☐	☐	☐
	5.1.3	Do you provide patients and their carers with information on how to self-manage the after effects of pneumonia?	☐	☐	☐	☐
	5.1.4	Do you have a directory of local third sector and voluntary services available to support people in their recovery?	☐	☐	☐	☐
	5.1.5	Do you use patient activation measure (PAM) to identify level of health literacy and plan interventions accordingly, e.g. health coaching, supported self-management?	☐	☐	☐	☐
	5.3.1	Are x-rays arranged for six weeks post onset if symptoms have not improved, in line with the Annotated BTS Guideline?	☐	☐	☐	☐
	5.3.2	Do you raise awareness and education of potential underlying symptoms not relating to pneumonia, i.e. cancer, so that they can be investigated where appropriate?	☐	☐	☐	☐
	5.3.3	Do you have clear protocols in place to support the transition between community, primary and secondary care and that all involved in the transition are aware of agreed protocols?	☐	☐	☐	☐
	5.4.1	Do you use personalised care and support planning and share across the services?	☐	☐	☐	☐

Self-assessment questionnaire

Priority areas		Self-assesment questions	Yes	Partly	No	N/A
6. Supporting specific groups	6.1.1	Do you ensure that all care home residents receive their influenza and pneumococcal vaccines?	☐	☐	☐	☐
	6.1.2	Are people in care homes or those with severe disabilities routinely reviewed for risk factors of developing pneumonia?	☐	☐	☐	☐
	6.2.1	Have you ensured in your system that specialist respiratory services are upskilled and have made reasonable adjustments to support the needs of people with a learning disability, including working in partnership with learning disability specialist staff?	☐	☐	☐	☐
	6.2.2	Have you ensured that in your system local learning disability professionals are upskilled in the management of respiratory diseases including pneumonia?	☐	☐	☐	☐
	6.2.3	Do you provide reasonable adjustments appropriate to individual patient needs and provide information in an accessible and easy read format, including, for those with profound and multiple learning disabilities, reasonable adjustments in relation to communication, e.g. non-verbal communication?	☐	☐	☐	☐
	6.2.4	Do you work in partnership with specialist learning disability services where someone has a learning disability, or profound and multiple disabilities, to ensure there is an appropriate treatment plan in the community?	☐	☐	☐	☐
	6.2.5	Do you ensure that the Learning Disability Standards are known and followed across the system?	☐	☐	☐	☐
	6.2.6	Is support provided to people with a learning disability on how to take their medication appropriately?	☐	☐	☐	☐

Self-assessment questionnaire

Priority areas		Self-assesment questions	Yes	Partly	No	N/A
6. Supportig specific groups (continued)	6.3.1	Do you ensure primary care staff feel knowledgeable and confident to work with people with mental health issues and to avoid 'diagnostic overshadowing'?	☐	☐	☐	☐
	6.3.2	Have you implemented simple screening questionnaires (PHQ9 and GAD7) via GPs or community respiratory services that could identify patients with a developing or developed mental health condition? Appropriate referral or sign-posting to mental health services can then be triggered.	☐	☐	☐	☐
	6.3.3	Have you implemented social prescribing to make the most of the community-based and informal support available? Refer to guidance to help PCNs introduce the new role of social prescribing link worker into their multi-disciplinary teams.	☐	☐	☐	☐
	6.4.1	Are all pregnant women in your population offered the influenza vaccination?	☐	☐	☐	☐
	6.4.2	Are all pregnant women, who are smokers, referred to smoking cessation services?	☐	☐	☐	☐
7. Experience of care	7.1.1	Do you collect data from services users on patient experience and use this to improve and develop services?	☐	☐	☐	☐
	7.1.2	Do you involve third sector organisations to engage and support patients to access services, particularly in more disadvantaged groups who may not be accessing services?	☐	☐	☐	☐
	7.1.3	Do you make information about patient experience available to providers of pneumonia services?	☐	☐	☐	☐
	7.1.4	Do you have a systematic approach to identifying carers supporting people who have had pneumonia, and who are at risk of not managing their own health conditions and signpost them to relevant support services?	☐	☐	☐	☐
	7.1.5	Do you ensure that you identify early symptoms of pneumonia so that people are referred appropriately within the health and social care system?	☐	☐	☐	☐
	7.1.6	Are staff working with people who contract pneumonia confident in recognising that a person may also have other health conditions and feel equipped to engage effectively with patients/carers to discuss referral(s) to wider health professionals?	☐	☐	☐	☐
	7.1.7	Are staff working with people who contract pneumonia confident to engage with patients/carers in conversation on advance care planning and feel equipped to engage effectively with patients and carers to discuss referral(s) to wider health professionals?	☐	☐	☐	☐

Self-assessment questionnaire

Priority areas		Self-assesment questions	Yes	Partly	No	N/A
8. Personalised care	8.1.1	Do you ensure that people that have personalised care and support plans are completed using shared decision-making methods and are supported to undertake self-management for their condition?	☐	☐	☐	☐
	8.1.2	Does the personalised care and support planning address the full health and wellbeing needs of the individual?	☐	☐	☐	☐
	8.1.3	Do you use patient decision aids to help people make informed choices about their healthcare and treatment options?	☐	☐	☐	☐
	8.1.4	Do you use Patient Activation Measures to identify level of health literacy to tailor support such as health coaching, and supported self-management?	☐	☐	☐	☐
	8.1.5	Are people with pneumonia encouraged to review their ongoing support needs and personal planning when a change is noted in their support requirements either by themselves, carers or support staff, and clinicians or key workers?	☐	☐	☐	☐

Self-assessment questionnaire

Please use the box below to add any notes or comments

Guidance and best practice

This section contains all the relevant guidance, evidence and case studies aligned to each of this toolkit's system improvement priorities and key areas for focus. It supports development of improvement actions when system priorities have been identified.

Overarching NICE Guidelines:

- CG191: Pneumonia in adults: diagnosis and management
- NG103: Flu vaccination: increasing uptake
- NG115: Chronic obstructive pulmonary disease in over 16s: diagnosis and management
- NG6: Excess winter deaths and illness and the health risks associated with cold homes
- NG94: Emergency and acute medical care in over 16s: service delivery and organisation
- NG15: Antimicrobial stewardship: systems and processes for effective antimicrobial medicine use
- NG5: Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes
- CG76: Medicines adherence: involving patients in decisions about prescribed medicines and supporting adherence
- CG138: Patient experience in adult NHS services: improving the experience of care for people using adult NHS services
- NG138: Pneumonia (community-acquired): antimicrobial prescribing
- QS110: Pneumonia in adults
- QS13: End of life care for adults
- QS121: Antimicrobial stewardship
- QS120: Medicines optimisation
- QS15: Patient experience in adult NHS services
- QS117: Preventing excess winter deaths and illness associated with cold homes
- PH48: Smoking: acute, maternity and mental health services

NHS England The Long Term Plan (2019)

Priority 1: Primary prevention and risk factors

Vaccinations

Guidelines

NICE:
- Flu vaccination: increasing uptake guideline (NG103) and quality standard (QS190)
- Sustainability and transformation resource: respiratory conditions: reducing pressure on emergency hospital services

NHS England:
- Community pharmacy seasonal influenza vaccine service including service specification
- Annual national flu programme letter

PSNC Briefing 031/19: guidance on the 2019/20 seasonal influenza vaccination advanced service

Office for Health Improvement and Disparities (OHID), formerly Public Health England: pneumoccocal guideline (green book chapter 25)

Implementation and practical examples

OHID, formerly Public Health England: Healthcare Workers Flu Immunisation Resources

Primary Care Strategy: Developing GP Services 2016-2021 NHS Lewisham Clinical Commissioning Group

Commissioning for Quality and Innovation (CQUIN) Indicator: CCG1: Staff Flu vaccinations.

Practice nurses promoting flu vaccines to the homeless community by setting up a nurse-led outreach clinic with support from partners at Leicester CCG and Leicester City Council. NHS England. (2018)

Risk factors

Guidelines

NICE:
- Making Every Contact Count – How NICE resources can support local priorities
- Sustainability and transformation resource: Respiratory conditions: reducing pressure on emergency hospital services

NHS Long Term Plan for NHS-funded tobacco treatment services

Implementation and practical examples

An implementation guide and toolkit for Making Every Contact Count: Using every opportunity to achieve health and wellbeing. NHS Midlands and East (2014)

Priority 1: Primary prevention and risk factors

Good hygiene precautions

Guidelines

NICE:

- CG139: Healthcare-associated infections: prevention and control in primary and community care.
- Sustainability and transformation resource: respiratory conditions: reducing pressure on emergency hospital services
- Oral health in care homes guideline (NG48) and quality standard (QS151)

NHS England:

- How to wash your hands

Implementation and practical examples

NHS England: Catch it, Bin it, Kill it poster

NICE:

- Shared Learning Database: The Oral Health Needs of Older People Living in Islington Nursing Homes

OHID, formerly Public Health England: Stay Well this Winter resources

Inhaled corticosteroid use in COPD patients

Guidelines

NICE:

- NG115: Chronic obstructive pulmonary disease in over 16s: diagnosis and management Recommendation 1.2.9 Inhaled corticosteroids
- Inhaled corticosteroids: pneumonia Medicines and HealthCare products Regulatory Agency (2014)
- NICE Sustainability and Transformation resource: Respiratory conditions: reducing pressure on emergency hospital services

Implementation and practical examples

Priority 1: Primary prevention and risk factors

Healthy homes

Guidelines

NICE:

- NG6: Excess winter deaths and illness and the health risks associated with cold homes
- QS117: Preventing excess winter deaths and illness associated with cold homes. quality statement 1: year round planning to identify vulnerable local populations
- Sustainability and transformation resource: Respiratory conditions: reducing pressure on emergency hospital services

Local Government Association: Healthy homes, healthy lives (2014)

Implementation and practical examples

- Knowsley Council (2015) Knowsley Healthy Homes Initiative
- Liverpool City Council (2016) Liverpool Healthy Homes programme: delivering NICE Guideline NG6 'Excess winter deaths and morbidity and the health risks associated with cold homes'
- Liverpool City Council Liverpool Healthy Homes
- Helping People in Cold Homes – e-learning module for frontline practitioners (help spot signs and actions that could be taken to help residents).
- Cornwall Council and Citizens Advice Fuel Poverty Toolkits

Priority 2: Early detection and accurate diagnosis

Primary and community care diagnosis

Guidelines

NICE:

- CG191: Pneumonia in adults: diagnosis and management Recommendation 1.2.1-1.2.2 for assessment in primary care
- QS110: Pneumonia in adults
  - Quality statement 1: Mortality risk assessment in primary care using CRB65 score
  - Quality statement 2: Antibiotic therapy for diagnosed low severity communityacquired pneumonia
- CG191: Pneumonia in adults: diagnosis and management Recommendation 1.1 Presentation with lower respiratory tract infection
- NICE Costing statement: Pneumonia – diagnosis and management of community- and hospital acquired pneumonia in adults - Implementing the NICE guideline on pneumonia (CG191) (2014)

British Thoracic Society: Annotated BTS guideline for the management of CAP in adults (2009) summary of recommendations (2015)

Getting It Right First Time (GIRFT) Respiratory Medicine National Specialty Report

Implementation and practical examples

NICE news article: Simple blood test for pneumonia can help limit use of antibiotics

Near-patient testing in Swindon CCG Urgent Care GP service NHS Swindon Clinical Commissioning Group

How we used CRP testing to help cut antibiotics use NHS Sunderland Clinical Commissioning Group

Chest Infection: are you sure you need those antibiotics? Using C Reactive Protein point of care testing in primary care Cross L. NIHR East of England Attenborough Surgery. Health and Care Innovation Expo 2018 page 26

A Small Investment for a Big Saving: Point-of-Care CRP Testing in General Practice – Poster Presentation. Hunt F, Meakin O, Abbott, (2016) University of Manchester and Brookvale Practice, Runcorn

Accuracy of diagnosis of COPD and factors associated with misdiagnosis in primary care setting. E-DIAL (Early DIAgnosis of obstructive lung disease) study group. Nardini S, Annesi-Maesano I, Simoni M, del Ponte A, Sanguinetti CM, De Benedetto FD. Respiratory Medicine. 143: 61-66 (2018)

Priority 2: Early detection and accurate diagnosis

Secondary care diagnosis

Guidelines

NICE:

- CG191: Pneumonia in adults: diagnosis and management Recommendation 1.2.3-1.2.5 for assessment in hospital
- QS110: Pneumonia in adults
  - Quality statement 3: chest Xray and diagnosis within 4 hours of hospital presentation
  - Quality statement 4: mortality risk assessment in hospital using CURB65 score
  - Quality statement 5: antibiotic therapy within 4 hours in hospital

British Thoracic Society:

- Care bundle for the management of communityacquired pneumonia
- Annotated BTS Guideline for the management of CAP in adults

Commissioning for Quality and Innovation (CQUIN) indicator for community-acquired pneumonia (CQUIN guidance and Indicators Specifications). NHS England

Implementation and practical examples

British Thoracic Society: New Specialist Nurse-Led Service halves pneumonia death rates through prompt diagnosis and treatment (2018)

NICE costing statement: Pneumonia – diagnosis and management of community- and hospital acquired pneumonia in adults - Implementing the NICE guideline on pneumonia (CG191) (2014)

Priority 3: Reducing inappropriate admission to secondary care and unexpected mortality

Guidelines

NICE:

- Pneumonia in adults: diagnosis and management clincial guideline (CG191)
- Pneumonia in adults quality standard (QS110)
- Emergency and acute medical care in over 16s: service delivery and organisation guideline (NG94)
- End of life care for adults quality standard (QS13) - see quality statement 3: Coordinated care
- Emergency and acute medical care in pver 16s: service delivery and organisation guideline (NG94) - see recommendation 1.1.9: advance care planning
- NICE evidence review on advance care planning

Royal College of Physicians (2016) End of Life Care Audit – Dying in Hospital: National report for England 2016

Commissioning for Quality and Innovation (CQUIN) indicator for community-acquired pneumonia (CQUIN guidance and indicators specifications). NHS England

Implementation and practical examples

Abel J, Pring A, Rich A and others (2013) The impact of advance care planning of place of death, a hospice retrospective cohort study BMJ Supportive & Palliative Care 2013;3:168-173

Electronic Palliative Care Co-ordination System (EPaCCS) Review and Benefits Summary Greater Manchester and Eastern Cheshire Strategic Clinical Networks

Community-acquired pneumonia in the United Kingdom: a call to action. Chalmers J, Campling J, Ellsbury G, Hawkey PM, Madhava H, Slack M. Pneumonia 9:15 (2007)

Ambulatory Emergency Care: Whole-System Change in East Kent. East Kent Hospitals University NHS FT. Ambulatory Emergency Care Network. (2014)

Community-acquired pneumonia: appropriate care in the North West region of England. Higgins J, Geoghegan C, Jenks T, Kanwar L, Chakrabarti B. Advancing Quality Alliance.(2020)

Priority 4: Appropriate management including prescribing

Guidelines

NICE:

- NG5: Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes
- NG15: Antimicrobial stewardship: systems and processes for effective antimicrobial medicine use
- NG138: Pneumonia (community-acquired): antimicrobial prescribing
- QS10: Pneumonia in adults quality standard
- QS120: Medicines optimisation
- QS121: Antimicrobial stewardship
- CG76: Medicines adherence: involving patients in decisions about prescribed medicines and supporting adherence
- Sustainability and transformation resource: Medicines optimisation

Commissioning for Quality and Innovation (CQUIN) indicator for Community-acquired Pneumonia (CQUIN guidance and Indicators Specifications). NHS England

Implementation and practical examples

British Thoracic Society: New Specialist Nurse-Led Service halves pneumonia death rates through prompt diagnosis and treatment (2018)

Reducing door-to-antibiotic time in community-acquired pneumonia: controlled before-and-after evaluation and cost-effectiveness analysis. Barlow G. et al. Thorax. 62:67-74 (2007)

Getting It Right First Time (GIRFT) Respiratory Medicine Speciality Report - see case study on p.130.

Priority 5: Discharge and post-disease follow up

Guidelines

NICE:

- CG191 Pneumonia in adults: diagnosis and management Recommendation 1.2.22 and 1.2.21 Patient Information.
- CG191 Pneumonia in adults: diagnosis and management Recommendation 1.2.20 and 1.2.19 Safe discharge from hospital

NHS Long Term Plan Chapter 3: Further progress on care quality and outcomes Section 3.87 (2019)

British Thoracic Society: Annotated BTS guideline for the management of CAP in adults (2009) summary of recommendations (2015)

Implementation and practical examples

British Thoracic Society: New Specialist Nurse-Led Service halves pneumonia death rates through prompt diagnosis and treatment (2018)

Priority 6: Supporting specific groups

Supporting people in care homes

Guidelines

NICE:

- Care homes products
- NG48: Oral health for adults in care homes
- QS151: Oral health in care homes
- PH36: Healthcare-associated infections: prevention and control
- QS61: Infection prevention and control
- NG103: Flu vaccination: increasing uptake
- CG139: Healthcare-associated infections: prevention and control in primary and community care

NHS England:

- Community Pharmacy Seasonal Influenza Vaccine Service including service specification
- Annual National Flu Programme Letter
- Enhanced health in care homes vanguards
- The framework for enhanced health in care homes (2016)

PSNC Briefing 023/21: Guidance on the 2021/22 Seasonal Influenza Vaccination Advanced Service

OHID, formerly Public Health England: Pneumoccocal guideline (green book chapter 25)

BMJ Best Practice: Aspiration pneumonia

Implementation and practical examples

Gordon AL, Ewan V. Pneumonia and influenza – specific considerations in care homes Reviews in Clinical Gerontology 2010 20:69.

Improving pre-meal patient hand hygiene compliance; A quality improvement collaborative NICE Shared Learning Database (2019).

The Oral Health Needs of Older People Living in Islington Nursing Homes NICE Shared Learning Database (2016).

Improving quality of care in residential care and nursing homes NICE Shared Learning Database (2018).

Aspiration Pneumonia Pathway Blackpool Teaching Hospitals NHS Foundation Trust

Management of community-acquired pneumonia in older adults Simonetti AF, Viasus D, Garcia-Vidal C, Carratala J. Ther. Adv. Infect. Dis. (2014) 2(1):3-16

Priority 6: Supporting specific groups

Supporting people with learning disabilities

Guidelines

NICE:

- NG96: Care and support of people growing older with learning disabilities
- NG93: Learning disabilities and behaviour that challenges: service design and delivery
- NG54: Mental health problems in people with learning disabilities: prevention, assessment and management
- NG11: Challenging behaviour and learning disabilities: prevention and interventions for people with learning disabilities whose behaviour challenges
- People with learning disabilities products.

BMJ Best Practice: Aspiration pneumonia

NHS England: The learning disability improvement standards for NHS trusts

Implementation and practical examples

People with learning disabilities in England

Aspiration Pneumonia Pathway Blackpool Teaching Hospitals NHS Foundation Trust

Management of community-acquired pneumonia in older adults Simonetti AF, Viasus D, Garcia-Vidal C, Carratala J. Ther. Adv. Infect. Dis. (2014) 2(1):3-16

Stopping over medication of people with a learning disability, autism or both (STOMP) NHS England.

Health and Care of People with Learning Disabilities: 2017-18 NHS Digital.

Priority 6: Supporting specific groups

Supporting people with mental ill-health

Guidelines

NICE:

- Mental health and well-being products
- NG54: Mental health problems in people with learning disabilities: prevention, assessment and management

NHS England:

- Adult Improving Access to Psychological Therapies programme
- Social prescribing link workers
- NHS Mental Health Implementation Plan 2019/20 – 2023/24 (2019)
- Universal Personalised Care: Implementing the Comprehensive Model (2019)
- Improving the physical health of people with mental health problems: Actions for mental health nurses Department of Health, Public Health England, NHS England. (2016).

Implementation and practical examples

Bringing together physical and mental health: A new frontier for NICE Mental health and well-being products. integrated care. The King's Fund. (2016).

Screening tools to to identify patients with a developing or developed mental health condition:

- Patient health questionnaire (PHQ-9)
- Generalised anxiety disorder assessent (GAD-7)

Supporting pregnant women

Guidelines

NICE:

- Pregnancy products
- PH26: Smoking: stopping in pregnancy and after childbirth
- CG191: Pneumonia in adults: diagnosis and management
- NG103: Flu vaccination: increasing uptake

Summary of antimicrobial prescribing guidance – managing common infections prescribing table NICE and Public Health England (2019)

Implementation and practical examples

Maternity colleges urge pregnant women to have flu vaccine and COVID-19 vaccine this winter. News Article from Royal College of Obstetricians and Gynaecologists (2021)

Priority 7: Experience of care

Improving the experience of care for people and their carers who contract pneumonia

Guidelines

NICE:

- CG138: Patient experience in adult NHS services: improving the experience of care for people using adult NHS services
- QS15: Patient experience in adult NHS services

National Quality Board: Improving Experiences of Care: Our shared understanding and ambition (2015)

NHS England:

- Five Year Forward View (2014)
- Commitment to Carers
- The NHS Long Term Plan

Implementation and practical examples

The Beryl Institute: Patient Experience Resources

A Co-production Model - Coalition for Collaborative Care

NHS England:

- Improving Experience of Care through people who use services (2015)
- An integrated approach to identifying and accessing Carer health and wellbeing (2016)
- Insight resources
- Always Events
- The Quality Markers

Patient Experience Improvement Framework NHS Improvement (2018).

Patient Experience Network: Case studies

Picker: Always Events: what have we learned so far? (2018)

Improving the Quality of Pneumonia Care that Patients Experience. Horowitz CR, Chassin MR. Am.J. Med. (2002) 113(5):379-383.

Ask Listen Do materials NHS England

Priority 8: Personalised care

Guidelines

NICE:

- NICE Pathway: Patient experience in adult NHS services: enabling patients to actively participate in their care
- CG138: Patient experience in adult NHS services: improving the experience of care for people using adult NHS services
- QS15: Patient experience in adult NHS services
- NG197: Shared decision making

NHS England

- Universal Personalised Care
- Personalised Care evidence and case studies
- Patient Activation and PAM FAQs
- House of Care
- Developing Person Centred Care
- Shared decision making

National Voices: A narrative for person centred coordinated care

Implementation and practical examples

NHS England and Coalition for Collaborative Care: Personalised care and support planning handbook

NICE KTT23: Shared Decision Making

NICE: What is shared decision making?

The Health Foundation: MAGIC: shared decision making

System enablers

Guidelines

NICE:

- NG6 Excess winter deaths and illness and the health risks associated with cold homes
- Sustainability and transformation resource: Respiratory conditions: reducing pressure on emergency hospital services

NHS Operational Planning and Contracting Guidance 2019/20 for sections on winter planning.

Make Every Contact Count (MECC) Health Education England

Making Every Contact Count (MECC): practical resources OHID, formerly Public Health England

Making Every Contact Count (MECC): Consensus statement OHID, formerly Public Health England, NHS England and Health Education England (2016)

Implementation and practical examples

NHS Stay Well This Winter

How to wash your hands NHS Live-well (2019)

Antimicrobial resistance: professional education and training landing page Health Education England

Keep Warm Keep Well OHID, formerly Public Health England (2018)

The 2nd Atlas of variation in risk factors and healthcare for respiratory disease OHID, formerly Public Health England (2019)

Making Every Contact Count – Ask, Advise Act Primary Care Respiratory Society (PCRS) (2014)

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- OHID, formerly Public Health England:
- Getting it Right First Time (GIRFT)
- Patient Representatives
- NHS England teams:
  - Learning Disabilities and Autism Programme
  - Clinical Policy Unit
  - Specialised Commissioning
  - Personalised Care
  - Experience of Care
  - RightCare