

**NATIONAL INSTITUTE FOR HEALTH AND CARE  
EXCELLENCE**

**Air pollution: outdoor air quality and health**

**NICE quality standard**

**Draft for consultation**

September 2018

**This quality standard covers** road-traffic-related air pollution and its impact on health. It describes high-quality actions in priority areas for improvement.

**It is for** commissioners, service providers, health, public health and social care practitioners, and the public.

This is the draft quality standard for consultation (from 21 September to 19 October 2018). The final quality standard is expected to publish in February 2019.

## Quality statements

[Statement 1](#) People in vulnerable groups attending a health appointment when air pollution is high or very high are given advice on how to minimise their exposure and manage related symptoms.

[Statement 2](#) Local authorities identify in the Local Plan and other key strategies how they will address air pollution, including enabling zero- and low-emission travel and how to design buildings and spaces to improve air quality.

[Statement 3](#) Local planning authorities assess proposals to minimise and mitigate road-traffic-related air pollution in planning applications for major developments.

[Statement 4](#) Local authorities and NHS organisations identify how they will reduce emissions from their vehicle fleets to address air pollution.

Quality standards that are relevant to reducing the impact of air pollution on health and should be considered when commissioning or providing services include:

- [Physical activity: encouraging activity within the general population](#). Publication expected June 2019
- [Community engagement: improving health and wellbeing](#) (2017) NICE quality standard 148
- [Physical activity: for NHS staff, patients and carers](#) (2015) NICE quality standard 84

A full list of NICE quality standards is available from the [quality standards topic library](#).

## Questions for consultation

### ***Questions about the quality standard***

**Question 1** Does this draft quality standard accurately reflect the key areas for quality improvement?

**Question 2** Are local systems and structures in place to collect data for the proposed quality measures? If not, how feasible would it be for these to be put in place?

**Question 3** Do you think each of the statements in this draft quality standard would be achievable by local services given the net resources needed to deliver them? Please describe any resource requirements that you think would be necessary for any statement. Please describe any potential cost savings or opportunities for disinvestment.

### ***Questions about the individual quality statements***

**Question 4** For draft quality statement 1: To ensure this statement is practical and measurable, should it focus on particular vulnerable groups: people with chronic respiratory and cardiovascular conditions; children; pregnant women; older people?

**Question 5** For draft quality statement 1: To ensure this statement is practical and measurable, should it focus on providing advice at particular types of health appointment such as: initial antenatal booking appointments; child health checks; annual reviews for people with chronic respiratory or cardiovascular conditions; when presenting with an exacerbation of a respiratory or cardiovascular condition?

### ***Local practice case studies***

**Question 6** Do you have an example from practice of implementing the NICE guideline that underpins this quality standard? If so, please submit your example to [NICE local practice case studies](#) on the NICE website. Examples of using NICE quality standards can also be submitted.

## Quality statement 1: Advice for people that are vulnerable to air pollution

### ***Quality statement***

People in vulnerable groups attending a health appointment when air pollution is high or very high are given advice on how to minimise their exposure and manage related symptoms.

### ***Rationale***

Episodes of high or very high air pollution are associated with adverse health effects including asthma attacks, reduced lung function, and increased mortality and admissions to hospital. Providing advice opportunistically to people in vulnerable groups at health appointments during an episode of high or very high air pollution will improve their awareness of how to protect themselves and prevent any health conditions escalating.

### ***Quality measures***

#### **Structure**

a) Evidence that healthcare professionals carrying out health appointments with people in vulnerable groups are trained to provide advice on how to minimise exposure to air pollution and manage related symptoms.

**Data source:** Local data collection, for example, training records.

b) Evidence of local arrangements to notify healthcare professionals when air pollution is high or very high.

**Data source:** Local data collection, for example, service protocols.

c) Evidence of local processes to ensure that people in vulnerable groups attending a health appointment when air pollution is high or very high are given advice on how to minimise their exposure and manage related symptoms.

**Data source:** Local data collection, for example, service protocols.

**Process**

Proportion of people in vulnerable groups attending a health appointment when air pollution is high or very high with a record that advice was given on how to minimise their exposure and related manage symptoms.

Numerator – the number in the denominator with a record that advice was given on how to minimise their exposure and manage related symptoms.

Denominator – the number of people in vulnerable groups attending a health appointment when air pollution is high or very high.

**Data source:** Local data collection, for example, audit of patient records.

**Outcome**

Level of awareness among people in vulnerable groups on how to manage related symptoms and minimise exposure to air pollution.

**Data source:** Local data collection, for example, survey of people in vulnerable groups.

***What the quality statement means for different audiences***

**Service providers** (such as general practices, community health services, hospitals and community pharmacies) ensure that healthcare professionals are aware that information on air quality is available, what it means and what actions are recommended. Service providers ensure that processes are in place to notify healthcare professionals when air pollution is high or very high so that they can provide advice to vulnerable groups on how to minimise their exposure and manage related symptoms.

**Healthcare professionals** (such as doctors, nurses, healthcare assistants and pharmacists) provide advice to people in vulnerable groups attending a health appointment when air pollution is high or very high, on how to minimise their exposure and manage related symptoms.

**Commissioners** (such as clinical commissioning groups and NHS England) ensure an air pollution alert system is in place so that healthcare professionals know when they need to provide advice to people in vulnerable groups.

**People who are more likely to be affected by air pollution**, such as children, pregnant women, older people and people with long-term respiratory and cardiovascular conditions, who have a health appointment when air pollution is high or very high are given advice on how to protect themselves and manage any related symptoms.

### **Source guidance**

[Air pollution: outdoor air quality and health](#) (2017) NICE guideline NG70, recommendation 1.7.7

### **Definitions of terms used in this quality statement**

#### **Vulnerable groups**

Children, pregnant women, older people and people with chronic respiratory and cardiovascular conditions are among the most vulnerable to air pollution. [Adapted from NICE's guideline on [air pollution: outdoor air quality and health](#), terms used in this guideline]

#### **High or very high air pollution**

The Daily Air Quality Index describes air pollution on a scale of 1 to 10 and is divided into 4 bands from low to very high. Notification of a short-term air pollution episode should be sent to healthcare professionals when air pollution is expected to be high (7 to 9) or very high (10). [The Department for Environment Food and Rural Affairs [Daily Air Quality Index](#) and expert opinion]

#### **Advice on how to minimise exposure and manage related symptoms**

Advice could include:

- Avoid or reduce strenuous activity outside, especially in highly polluted locations such as busy streets, and particularly if experiencing symptoms such as sore eyes, a cough or sore throat.
- Use an asthma reliever inhaler more often, as necessary.

- Close external doors and windows facing a busy street at times when traffic is heavy or congested to help stop highly polluted air getting in.

[NICE's guideline on [air pollution: outdoor air quality and health](#) recommendation 1.7.7 and the Department for Environment Food and Rural Affairs [Daily Air Quality Index](#)]

### ***Questions for consultation***

To ensure this statement is practical and measurable, should it focus on particular vulnerable groups: people with chronic respiratory and cardiovascular conditions; children; pregnant women; older people?

To ensure this statement is practical and measurable, should it focus on providing advice at particular types of health appointment such as: initial antenatal booking appointments; child health checks; annual reviews for people with chronic respiratory or cardiovascular conditions; when presenting with an exacerbation of a respiratory or cardiovascular condition?

## Quality statement 2: Strategic plans

### ***Quality statement***

Local authorities identify in the Local Plan and other key strategies how they will address air pollution, including enabling zero- and low-emission travel and how to design buildings and spaces to improve air quality.

### ***Rationale***

Local authorities should work in a coordinated way with key partners to address air pollution. Identifying the approach to air pollution in the Local Plan and other key strategies and plans (such as the core strategy, local transport plan, environment strategy and health and wellbeing strategy) will provide a framework for joined-up local action. Strategies and plans should include enabling zero- and low-emission travel such as cycling and walking and how to design buildings and spaces to improve air quality as key components of an effective approach to addressing air pollution.

### ***Quality measures***

#### **Structure**

Evidence that local authorities identify in the Local Plan and other key strategies how they will address air pollution, including enabling zero- and low-emission travel and how to design buildings and spaces to improve air quality.

**Data source:** Local data collection, for example, review of Local Plan and other key strategies.

#### **Outcome**

a) Proportion of journeys made by local residents that are by walking, cycling or public transport.

**Data source:** Local data collection, for example, survey of residents. Estimated data for local authorities on usual method of travel to work is available from the Office for National Statistics' [Labour Force Survey](#).

b) Annual and hourly exceedances for nitrogen dioxide (NO<sub>2</sub>).



**Data source:** Local data collection. Modelled data from the Automatic Urban and Rural Network is available from the Department of Environment Food and Rural Affairs [UK Air Information Resource](#).

c) Annual and hourly exceedances for particulate matter (PM<sub>10</sub>).

**Data source:** Local data collection. Modelled data from the Automatic Urban and Rural Network is available from the Department of Environment Food and Rural Affairs [UK Air Information Resource](#).

### ***What the quality statement means for different audiences***

**Local authorities** work with partners to ensure the Local Plan and other key strategies identify the approach to addressing air pollution including encouraging zero- and low-emission travel and how to design buildings and spaces.

**People in the community** know that their local authority and other local organisations are working together to protect them from the effects of air pollution on their health.

### ***Source guidance***

[Air pollution: outdoor air quality and health](#) (2017) NICE guideline NG70, recommendation 1.1.1, 1.1.2 and 1.1.3

### ***Definitions of terms used in this quality statement***

#### **Local Plan**

Local Plans set out a vision and a framework for the future development of the area, addressing needs and opportunities in relation to housing, the economy, community facilities and infrastructure – as well as a basis for safeguarding the environment, adapting to climate change and securing good design. They are also a critical tool in guiding decisions about individual development proposals, as Local Plans (together with any neighbourhood plans that have been brought into force) are the starting-point for considering whether applications can be approved. [Ministry of Housing, Communities and Local Government's [Guidance on Local Plans](#)]

**Zero- and low-emission travel**

Includes enabling cycling and walking, travel by zero- and low-emission vehicles such as electric cars, buses, bikes and pedal cycles, and car sharing schemes or clubs. [Adapted from NICE's guideline on [air pollution: outdoor air quality and health](#) recommendation 1.1.1 and glossary]

***Equality and diversity considerations***

Local authorities should ensure that strategic plans identify areas where air pollution is highest and, in particular, locations where people that are vulnerable to air pollution may be exposed to high levels of air pollution, such as schools, nurseries, hospitals and care homes, so that targeted approaches can be put in place.

## Quality statement 3: Planning applications

### ***Quality statement***

Local planning authorities assess proposals to minimise and mitigate road-traffic-related air pollution in planning applications for major developments.

### ***Rationale***

The built environment can affect the emission of road-traffic-related air pollutants by influencing how, and how much, people travel, for example by ensuring good connections to walking and cycling networks. Buildings can affect the way air pollutants are dispersed through street design and the resulting impact on air flow. Addressing air pollution at the planning stage may reduce the need for more expensive remedial action at a later stage and can help to maintain people's health and wellbeing. Local planning authorities should assess the extent to which proposals to minimise and mitigate road-traffic-related air pollution in planning applications for major developments meet the priorities identified in the Local Plan and other key strategies.

### ***Quality measures***

#### **Structure**

a) Evidence of local processes and guidance that ensure planning applications for major developments include proposals to minimise and mitigate road-traffic-related air pollution.

**Data source:** Local data collection, for example, review of planning application forms and guidance for major developments.

b) Evidence of a local framework for assessing proposals to minimise and mitigate road-traffic-related air pollution in planning applications for major developments.

**Data source:** Local data collection, for example, review of assessment criteria for planning applications for major developments.

**Process**

a) Proportion of planning applications for major developments granted permission that include proposals to minimise and mitigate road-traffic-related air pollution.

Numerator – the number in the denominator that include proposals to minimise and mitigate road-traffic-related air pollution.

Denominator – the number of planning applications for major developments granted permission.

**Data source:** Local data collection, for example, local planning application system.

b) Proportion of planning applications for major developments refused permission due to an adverse impact on air quality (at least in part).

Numerator – the number in the denominator that were refused permission due to an adverse impact on air quality (at least in part).

Denominator – the number of planning applications for major developments.

**Data source:** Local data collection, for example, local planning application system.

**Outcome**

a) Proportion of journeys made by local residents that are by walking, cycling or public transport.

**Data source:** Local data collection, for example, survey of residents carried out to monitor a travel plan. Estimated data for local authorities on usual method of travel to work is available from the Office for National Statistics [Labour Force Survey](#).

b) Annual and hourly exceedances for nitrogen dioxide (NO<sub>2</sub>).

**Data source:** Local data collection. Modelled data from the Automatic Urban and Rural Network is available from the Department of Environment Food and Rural Affairs [UK Air Information Resource](#).

c) Annual and hourly exceedances for particulate matter (PM<sub>10</sub>).

**Data source:** Local data collection. Modelled data from the Automatic Urban and Rural Network is available from the Department of Environment Food and Rural Affairs [UK Air Information Resource](#).

### ***What the quality statement means for different audiences***

**Local planning authorities** ensure planning applications for major developments include proposals to minimise and mitigate road-traffic-related air pollution. Local planning authorities provide guidance for applicants and have a clear framework for assessing proposals in line with the Local Plan and other key strategies.

**Local authority planning officers** assess proposals to minimise and mitigate road-traffic-related air pollution in planning applications for major developments using an agreed local framework.

**Planning applicants for major developments** know that the local planning authority will assess proposals to minimise and mitigate road-traffic-related air pollution in planning applications. Planning applicants can get information on what the local planning authority is looking for and how the proposals will be assessed.

**People in the community** know that their local planning authorities require developers to show how they will minimise road-traffic-related air pollution and improve local air quality around big building projects when they apply for planning permission. This is to help protect local people from the effects of air pollution on their health.

### ***Source guidance***

- [Physical activity and the environment](#) (2018) NICE guideline NG90, recommendation 1.1.4
- [Air pollution: outdoor air quality and health](#) (2017) NICE guideline NG70, recommendations 1.1.2 and 1.2.1

### ***Equality and diversity considerations***

Local planning authorities should ensure that proposals to encourage active travel in planning applications for major developments are accessible to people with limited mobility or disabilities.

## Quality statement 4: Reducing emissions from public sector vehicle fleets

### ***Quality statement***

Local authorities and NHS organisations identify how they will reduce emissions from their vehicle fleets to address air pollution.

### ***Rationale***

The public sector fleet is substantial and includes various vehicle types, some of which are highly polluting. Reducing emissions from public sector vehicle fleets will help to reduce road-traffic-related air pollution. Approaches could include replacing vehicles with low-emission vehicles over time, training drivers to change their driving style, and consolidating and sharing vehicles to ensure efficient use. Local authorities and NHS organisations should also ensure that the services they commission identify how they will reduce emissions from their vehicle fleets to address air pollution.

### ***Quality measures***

#### **Structure**

a) Evidence that local authorities and NHS organisations identify how they will reduce emissions from their vehicle fleets to address air pollution.

**Data source:** Local data collection, for example, a plan to reduce fleet emissions.

b) Evidence that local authorities and NHS organisations require commissioned services to identify how they will reduce emissions from their vehicle fleets to address air pollution.

**Data source:** Local data collection, for example, commissioning specifications.

#### **Outcome**

a) Proportion of low-emission vehicles within local authority and NHS organisation vehicle fleets.

**Data source:** Local data collection, for example, fleet statistics.

b) Overall fuel consumption for local authority and NHS organisation vehicle fleets.

**Data source:** Local data collection, for example, fleet statistics.

### ***What the quality statement means for different audiences***

**Service providers** (such as local authorities and NHS trusts) develop a plan for how they will reduce emissions from their vehicle fleet to address air pollution. Providers consider a range of approaches including replacing vehicles with low-emission vehicles over time, training drivers to change their driving style, and consolidating and sharing vehicles to ensure efficient use. Providers monitor the impact of the plan on fuel consumption and vehicle type.

**Public sector fleet managers** support the development and monitoring of a plan to reduce emissions from the vehicle fleet to address air pollution. Public sector fleet managers ensure that staff are aware of the plan and take action in line with the priorities identified.

**Commissioners** (local authorities and clinical commissioning groups) ensure that commissioned services have a plan for how they will reduce emissions from their vehicle fleet to address air pollution and ensure providers monitor the impact of their plan on fuel consumption and vehicle type.

**People in the community** know that local authorities and NHS organisations are working to reduce pollution from their vehicles. This will help to reduce local air pollution and protect people from the effects on their health.

### ***Source guidance***

[Air pollution: outdoor air quality and health](#) (2017) NICE guideline NG70, recommendations 1.4.1, 1.4.2, 1.4.3 and 1.4.6

## About this quality standard

NICE quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements. NICE quality standards draw on existing NICE or NICE-accredited guidance that provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement.

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, and so achievement levels of 100% should be aspired to (or 0% if the quality statement states that something should not be done). However, this may not always be appropriate in practice. Taking account of safety, shared decision-making, choice and professional judgement, desired levels of achievement should be defined locally.

Information about [how NICE quality standards are developed](#) is available from the NICE website.

See [quality standard advisory committees](#) on the website for details of standing committee 2 members who advised on this quality standard. Information about the topic experts invited to join the standing members is available on the [quality standard's webpage](#).

This quality standard has been included in the NICE Pathway on [air pollution](#), which brings together everything we have said on a topic in an interactive flowchart.

NICE has produced a [quality standard service improvement template](#) to help providers make an initial assessment of their service compared with a selection of quality statements. This tool is updated monthly to include new quality standards.

NICE produces guidance, standards and information on commissioning and providing high-quality healthcare, social care, and public health services. We have agreements to provide certain NICE services to Wales, Scotland and Northern Ireland. Decisions on how NICE guidance and other products apply in those countries are made by ministers in the Welsh government, Scottish government, and Northern Ireland Executive. NICE guidance or other products may include references



to organisations or people responsible for commissioning or providing care that may be relevant only to England.

### ***Improving outcomes***

This quality standard is expected to contribute to improvements in the following outcomes:

- annual and hourly exceedances of nitrogen dioxide
- annual and hourly exceedances of particulates including PM<sub>2.5</sub> and PM<sub>10</sub>
- prevalence of cardiovascular disease
- prevalence of respiratory disease
- prevalence of lung cancer
- A&E attendances (respiratory and cardiovascular conditions)
- hospital admissions (respiratory and cardiovascular conditions)
- mortality (respiratory and cardiovascular conditions)
- proportion of journeys by walking, cycling and public transport.

It is also expected to support delivery of the Department of Health and Social Care outcome frameworks:

- [NHS outcomes framework](#)
- [Public health outcomes framework for England](#).

### ***Resource impact***

NICE quality standards should be achievable by local services. The potential resource impact is considered by the quality standards advisory committee, drawing on resource impact work for the source guidance. Organisations are encouraged to use the resource impact products for the source guidance to help estimate local costs:

- [resource impact report and template](#) for the NICE guideline on air pollution: outdoor air quality and health
- [resource impact statement](#) for the NICE guideline on physical activity and the environment.

***Diversity, equality and language***

During the development of this quality standard, equality issues were considered and [equality assessments](#) are available. Any specific issues identified during development of the quality statements are highlighted in each statement.

Commissioners and providers should aim to achieve the quality standard in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

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