Liver disease

Quality standard
Published: 29 June 2017
nice.org.uk/guidance/qs152
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality statements</td>
<td>4</td>
</tr>
<tr>
<td>Quality statement 1: Advice on physical activity, diet and alcohol</td>
<td>6</td>
</tr>
<tr>
<td>Quality statement</td>
<td>6</td>
</tr>
<tr>
<td>Rationale</td>
<td>6</td>
</tr>
<tr>
<td>Quality measures</td>
<td>6</td>
</tr>
<tr>
<td>What the quality statement means for different audiences</td>
<td>7</td>
</tr>
<tr>
<td>Source guidance</td>
<td>8</td>
</tr>
<tr>
<td>Definitions of terms used in this quality statement</td>
<td>8</td>
</tr>
<tr>
<td>Quality statement 2 (developmental): Testing for advanced liver fibrosis</td>
<td>9</td>
</tr>
<tr>
<td>Quality statement</td>
<td>9</td>
</tr>
<tr>
<td>Rationale</td>
<td>9</td>
</tr>
<tr>
<td>Quality measures</td>
<td>9</td>
</tr>
<tr>
<td>What the quality statement means for different audiences</td>
<td>11</td>
</tr>
<tr>
<td>Source guidance</td>
<td>11</td>
</tr>
<tr>
<td>Definitions of terms used in this quality statement</td>
<td>12</td>
</tr>
<tr>
<td>Quality statement 3 (developmental): Non-invasive testing for cirrhosis</td>
<td>13</td>
</tr>
<tr>
<td>Quality statement</td>
<td>13</td>
</tr>
<tr>
<td>Rationale</td>
<td>13</td>
</tr>
<tr>
<td>Quality measures</td>
<td>13</td>
</tr>
<tr>
<td>What the quality statement means for different audiences</td>
<td>15</td>
</tr>
<tr>
<td>Source guidance</td>
<td>15</td>
</tr>
<tr>
<td>Definitions of terms used in this quality statement</td>
<td>16</td>
</tr>
<tr>
<td>Equality and diversity considerations</td>
<td>17</td>
</tr>
<tr>
<td>Quality statement 4: Surveillance for hepatocellular carcinoma</td>
<td>18</td>
</tr>
<tr>
<td>Quality statement</td>
<td>18</td>
</tr>
<tr>
<td>Rationale</td>
<td>18</td>
</tr>
<tr>
<td>Quality measures</td>
<td>18</td>
</tr>
</tbody>
</table>
What the quality statement means for different audiences................................................................. 19
Source guidance.................................................................................................................................................. 19
Definitions of terms used in this quality statement ......................................................................................... 20
Equality and diversity considerations.................................................................................................................. 20
Quality statement 5: Prophylactic intravenous antibiotics for upper gastrointestinal bleeding ..... 21
Quality statement............................................................................................................................................................. 21
Rationale............................................................................................................................................................................. 21
Quality measures ............................................................................................................................................................ 21
What the quality statement means for different audiences................................................................................. 22
Source guidance............................................................................................................................................................ 23
Definitions of terms used in this quality statement ......................................................................................... 23
About this quality standard............................................................................................................................................. 24
Improving outcomes..................................................................................................................................................... 24
Resource impact ............................................................................................................................................................ 25
Diversity, equality and language.................................................................................................................................... 25
This standard is based on NG49, NG56, CG165 and NG50.

This standard should be read in conjunction with QS140, QS127, QS111, QS94, QS83, QS65, QS38, QS13 and QS11.

Quality statements

**Statement 1** People with non-alcoholic fatty liver disease are given advice on physical activity, diet and alcohol.

**Statement 2** People with non-alcoholic fatty liver disease are offered regular testing for advanced liver fibrosis.

**Statement 3** Young people and adults with risk factors for cirrhosis are offered non-invasive testing for cirrhosis.

**Statement 4** Adults with cirrhosis are offered 6-monthly surveillance for hepatocellular carcinoma.

**Statement 5** Young people and adults with cirrhosis and upper gastrointestinal bleeding are given prophylactic intravenous antibiotics at presentation.
NICE has developed guidance and a quality standard on patient experience in adult NHS services (see the NICE pathway on patient experience in adult NHS services), which should be considered alongside these quality statements.

Other quality standards that should be considered when commissioning or providing liver disease services include:

- **Transition from children’s to adults’ services** (2016) NICE quality standard 140
- **Obesity: clinical assessment and management** (2016) NICE quality standard 127
- **Obesity in adults: prevention and lifestyle weight management programmes** (2016) NICE quality standard 111
- **Alcohol: preventing harmful use in the community** (2015) NICE quality standard 83
- **Hepatitis B** (2014) NICE quality standard 65
- **Acute upper gastrointestinal bleeding in adults** (2013) NICE quality standard 38
- **End of life care for adults** (2011, updated 2017) NICE quality standard 13
- **Alcohol-use disorders: diagnosis and management** (2011) NICE quality standard 11

A full list of NICE quality standards is available from the quality standards topic library.
Quality statement 1: Advice on physical activity, diet and alcohol

Quality statement

People with non-alcoholic fatty liver disease are given advice on physical activity, diet and alcohol.

Rationale

Adopting a healthy lifestyle can help to reduce the rate of progression of non-alcoholic fatty liver disease (NAFLD). Providing lifestyle advice to people with NAFLD can encourage them to consider changes they can make that might help them avoid more serious liver disease.

Quality measures

Structure

Evidence of local arrangements to provide advice on physical activity, diet and alcohol to people with NAFLD.

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

Process

a) Proportion of people with NAFLD who are given advice on physical activity.

Numerator – the number in the denominator who are given advice on physical activity.

Denominator – the number of people with NAFLD.

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

b) Proportion of people with NAFLD who are overweight or obese who are given advice on diet.

Numerator – the number in the denominator who are given advice on diet.

Denominator – the number of people with NAFLD who are overweight or obese.

Data source: Local data collection, for example, audit of patient health records.
c) Proportion of people with NAFLD who drink alcohol who are given advice on alcohol.

Numerator – the number in the denominator who are given advice on alcohol.

Denominator – the number of people with NAFLD who drink alcohol.

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

**Outcome**

a) Awareness of people with NAFLD that lifestyle changes may help them to avoid more serious liver disease.

*Data source:* Local data collection, for example, a patient survey.

b) Rate of disease progression among people with NAFLD.

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

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

**Service providers** (general practices, community healthcare providers, hospitals and specialist liver units) ensure that they give advice on physical activity, diet and alcohol to people with NAFLD. Providers ensure that their staff know where people with NAFLD can get support if they want to make lifestyle changes, such as lifestyle weight management programmes.

**Healthcare professionals** (such as GPs, practice nurses, hepatologists, gastroenterologists and specialist nurses) give advice on physical activity, diet and alcohol to people with NAFLD and ensure that they know where they can get support to make lifestyle changes, such as lifestyle weight management programmes.

**Commissioners** (such as clinical commissioning groups and NHS England) commission services that provide advice on physical activity, diet and alcohol to people with NAFLD. Commissioners ensure that information is available to healthcare professionals on the support available locally to help people with NAFLD to make lifestyle changes, such as lifestyle weight management programmes.

**People with non-alcoholic fatty liver disease**, and their parents or carers if appropriate, are given advice on diet (if they need to lose weight), physical activity and alcohol consumption (if they drink...
alcohol), and are told where they can get support to make lifestyle changes. Following this advice can help to improve non-alcoholic fatty liver disease or stop it from getting worse.

Source guidance

Non-alcoholic fatty liver disease (NAFLD): assessment and management (2016) NICE guideline NG49, recommendations 1.2.12, 1.2.13 and 1.2.16

Definitions of terms used in this quality statement

Advice on physical activity, diet and alcohol

People diagnosed with NAFLD should:

- be offered advice on physical activity and diet if they are overweight or obese, in line with NICE’s guidelines on obesity and preventing excess weight gain
- be advised that there is some evidence that exercise reduces liver fat content
- be advised that, if they drink alcohol, it is important to stay within the government’s recommended limits for alcohol consumption.

[NICE’s guideline on non-alcoholic fatty liver disease, recommendations 1.2.12, 1.2.13 and 1.2.16]
Quality statement 2 (developmental): Testing for advanced liver fibrosis

Developmental quality statements set out an emergent area of cutting-edge service delivery or technology currently found in a minority of providers and indicating outstanding performance. They will need specific, significant changes to be put in place, such as redesign of services or new equipment.

Quality statement

People with non-alcoholic fatty liver disease are offered regular testing for advanced liver fibrosis.

Rationale

There is a risk that non-alcoholic fatty liver disease (NAFLD) will progress to fibrosis and then to cirrhosis. Regular testing for advanced liver fibrosis for people with NAFLD will enable those at high risk of disease progression to be identified so that they can receive advice, treatment and regular monitoring. Regular testing will also reduce unnecessary referrals or further testing for people who are at low risk of disease progression.

Young people and adults with NAFLD should be offered testing in primary care, and referred to a specialist in hepatology if advanced liver fibrosis is diagnosed. Children with NAFLD who are diagnosed with advanced liver fibrosis should already be supported by a paediatric specialist in hepatology in tertiary care.

Quality measures

Structure

a) Evidence of local referral pathways to ensure that people with NAFLD are offered regular testing for advanced liver fibrosis.

Data source: Local data collection, for example, service protocol.

b) Evidence that GP practices and paediatric hepatology services have arrangements to offer regular testing for advanced liver fibrosis to people with NAFLD.

Data source: Local data collection, for example, service protocol.
Process

a) Proportion of people newly diagnosed with NAFLD who are tested for advanced liver fibrosis.

Numerator – the number in the denominator who are tested for advanced liver fibrosis.

Denominator – the number of people newly diagnosed with NAFLD.

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

b) Proportion of adults with NAFLD identified as having a low risk of advanced liver fibrosis (such as an enhanced liver fibrosis [ELF] score below 10.51) who were tested for advanced liver fibrosis within the past 3 years.

Numerator – the number in the denominator who were tested for advanced liver fibrosis within the past 3 years.

Denominator – the number of adults with NAFLD identified as having a low risk of advanced liver fibrosis (such as an ELF score below 10.51).

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

c) Proportion of children and young people with NAFLD identified as having a low risk of advanced liver fibrosis (such as an ELF score below 10.51) who were tested for advanced liver fibrosis within the past 2 years.

Numerator – the number in the denominator who were tested for advanced liver fibrosis within the past 2 years.

Denominator – the number of children and young people with NAFLD identified as having a low risk of advanced liver fibrosis (such as an ELF score below 10.51).

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

Outcome

a) Inappropriate referrals to a specialist for young people and adults with NAFLD.

Data source: Local data collection, for example, audit of patient health records.
b) Incidence of advanced liver fibrosis in people with NAFLD.

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

What the quality statement means for different audiences

Service providers (such as general practices and tertiary paediatric hepatology services) ensure that processes are in place to offer regular testing for advanced liver fibrosis to people with NAFLD. They should ensure that young people and adults diagnosed with advanced liver fibrosis are referred to a specialist in hepatology, and that children diagnosed with advanced liver fibrosis are cared for by a tertiary paediatric hepatology service.

Healthcare professionals (such as GPs and paediatric hepatologists) offer regular testing for advanced liver fibrosis to people with NAFLD. GPs refer young people and adults diagnosed with advanced liver fibrosis to a specialist in hepatology. Paediatric hepatologists continue to care for children diagnosed with advanced liver fibrosis.

Commissioners (such as clinical commissioning groups and NHS England) commission testing for advanced liver fibrosis for people with NAFLD. Commissioners ensure that providers offer testing and re-testing for advanced liver fibrosis to young people and adults with NAFLD and that there is sufficient capacity in hepatology services to meet expected demand for referrals for people diagnosed with advanced liver fibrosis. Commissioners ensure that tertiary paediatric hepatology services have capacity to support children diagnosed with advanced liver fibrosis.

People with non-alcoholic fatty liver disease have a test to check if their liver is scarred every 3 years, or every 2 years if they are aged under 18. If the test shows that their liver is scarred, they are referred to a specialist in hepatology for further advice, treatment and check-ups, or cared for by a paediatric specialist in hepatology if they are under 16.

Source guidance

Non-alcoholic fatty liver disease (NAFLD): assessment and management (2016) NICE guideline NG49, recommendations 1.2.1 and 1.2.7
Definitions of terms used in this quality statement

Regular testing for advanced liver fibrosis

Testing for advanced liver fibrosis, for example with the enhanced liver fibrosis (ELF) test, should be offered to adults every 3 years and to children and young people every 2 years.

[NICE's guideline on non-alcoholic fatty liver disease, recommendations 1.2.2, 1.2.7 and 1.2.8]

Advanced liver fibrosis

A grade of F3 or above using the Kleiner (NASH-CRN) or the steatosis, activity and fibrosis (SAF) score. This is referred to as bridging fibrosis (the presence of fibrosis linking hepatic veins to portal tracts).

[NICE's guideline on non-alcoholic fatty liver disease]

Children, young people and adults

Children are aged under 16. Young people are aged 16 and 17. Adults are aged over 18.

[NICE's guideline on non-alcoholic fatty liver disease]
Quality statement 3 (developmental): Non-invasive testing for cirrhosis

Developmental quality statements set out an emergent area of cutting-edge service delivery or technology currently found in a minority of providers and indicating outstanding performance. They will need specific, significant changes to be put in place, such as redesign of services or new equipment.

Quality statement

Young people and adults with risk factors for cirrhosis are offered non-invasive testing for cirrhosis.

Rationale

Cirrhosis may cause few or no symptoms and may not be identified until serious complications arise. Young people and adults with risk factors for cirrhosis should therefore be tested to find out if they have cirrhosis. Diagnosing cirrhosis will ensure that they get the treatment and support they need to manage their condition. Non-invasive testing is more acceptable to people than a liver biopsy and can be done in an outpatient setting with the results available immediately.

Quality measures

Structure

a) Evidence of local availability of non-invasive testing for cirrhosis.

Data source: Local data collection, for example, service specification.

b) Evidence of local arrangements to ensure that young people and adults with risk factors for cirrhosis are offered non-invasive testing for cirrhosis.

Data source: Local data collection, for example, service protocol.

Process

a) Proportion of young people and adults who have been drinking alcohol in a harmful way for several months (for measurement purposes this could be at least 3 months) who receive non-invasive testing for cirrhosis.

Numerator – the number in the denominator who receive non-invasive testing for cirrhosis.
Denominator – the number of young people and adults who have been drinking alcohol in a harmful way for several months (for measurement purposes this could be at least 3 months).

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

b) Proportion of young people and adults diagnosed with hepatitis C virus infection who receive non-invasive testing for cirrhosis.

Numerator – the number in the denominator who receive non-invasive testing for cirrhosis.

Denominator – the number of young people and adults diagnosed with hepatitis C virus infection.

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

c) Proportion of adults newly referred for assessment for hepatitis B virus infection who receive non-invasive testing for cirrhosis.

Numerator – the number in the denominator who receive non-invasive testing for cirrhosis.

Denominator – the number of adults newly referred for assessment for hepatitis B virus infection.

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

d) Proportion of young people and adults diagnosed with alcohol-related liver disease who receive non-invasive testing for cirrhosis.

Numerator – the number in the denominator who receive non-invasive testing for cirrhosis.

Denominator – the number of young people and adults diagnosed with alcohol-related liver disease.

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

e) Proportion of young people and adults diagnosed with non-alcoholic fatty liver disease with advanced liver fibrosis who receive non-invasive testing for cirrhosis.

Numerator – the number in the denominator who receive non-invasive testing for cirrhosis.
Denominator – the number of young people and adults diagnosed with non-alcoholic fatty liver disease with advanced liver fibrosis.

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

Outcome

Incidence of cirrhosis.

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

What the quality statement means for different audiences

Service providers (such as general practices and hospitals) ensure that they offer non-invasive testing for cirrhosis to young people and adults with risk factors for cirrhosis and give them information about the accuracy, limitations and risks of the different tests for diagnosing cirrhosis.

Healthcare professionals (such as GPs, gastroenterologists and hepatologists) offer non-invasive testing for cirrhosis to young people and adults with risk factors for cirrhosis, and discuss the accuracy, limitations and risks of the different tests for diagnosing cirrhosis with them.

Commissioners (such as clinical commissioning groups and NHS England) commission non-invasive testing for cirrhosis and ensure that providers offer it to young people and adults with risk factors for cirrhosis. They also ensure that providers give young people and adults with risk factors for cirrhosis information about the accuracy, limitations and risks of the different tests for diagnosing cirrhosis.

Young people and adults who have a risk of cirrhosis either because they drink alcohol in a harmful way, or they have hepatitis B or C, alcohol-related liver disease or non-alcoholic fatty liver disease with advanced fibrosis, are offered a scan to check for cirrhosis. If cirrhosis is found, they are offered advice and treatment.

Source guidance

- Cirrhosis in over 16s: assessment and management (2016) NICE guideline NG50, recommendations 1.1.3 and 1.1.4
- Hepatitis B (chronic): diagnosis and management (2013) NICE guideline CG165, recommendation 1.3.3
Definitions of terms used in this quality statement

Young people and adults

Young people are aged 16 and 17. Adults are aged over 18.

[NICE’s guideline on [non-alcoholic fatty liver disease]]

Risk factors

Young people and adults have risk factors for cirrhosis if they:

- drink alcohol in a harmful way, defined as more than 50 units of alcohol per week for men and more than 35 units per week for women, and have done so for several months or
- have hepatitis C virus infection or
- have been newly referred for assessment for hepatitis B virus infection (adults only) or
- have been diagnosed with alcohol-related liver disease or
- have been diagnosed with non-alcoholic fatty liver disease with advanced liver fibrosis.

[NICE’s guideline on [cirrhosis in over 16s], recommendations 1.1.3 and 1.1.4, and NICE’s guideline on [hepatitis B (chronic)], recommendation 1.3.3]

Non-invasive testing for cirrhosis

Non-invasive testing for cirrhosis includes:

- transient elastography (for all people with risk factors for cirrhosis) or
- acoustic radiation force impulse imaging (for young people and adults with non-alcoholic fatty liver disease and advanced liver fibrosis).

[NICE's guideline on [cirrhosis in over 16s], recommendations 1.1.3 and 1.1.4, and NICE's guideline on [hepatitis B (chronic)], recommendation 1.3.3]
Equality and diversity considerations

Community outreach services should support young people and adults with risk factors for cirrhosis who are homeless or who inject drugs to enable them to have non-invasive testing for cirrhosis.

Prisons should ensure that prisoners who have risk factors for cirrhosis are offered non-invasive testing for cirrhosis.
Quality statement 4: Surveillance for hepatocellular carcinoma

Quality statement

Adults with cirrhosis are offered 6-monthly surveillance for hepatocellular carcinoma.

Rationale

Cirrhosis is a substantial risk factor for hepatocellular carcinoma. Hepatocellular carcinoma develops quickly and may be asymptomatic until it is advanced. Regular surveillance of adults with cirrhosis at 6-month intervals helps to ensure that it is detected early. Treatment can then begin promptly, which can improve the person's chances of survival.

Quality measures

Structure

Evidence of local arrangements to ensure that adults with cirrhosis are offered 6-monthly surveillance for hepatocellular carcinoma.

_data source_: Local data collection, for example, service protocol.

Process

Proportion of adults with cirrhosis who received ultrasound surveillance for hepatocellular carcinoma within the past 6 months.

Numerator – the number in the denominator who received ultrasound surveillance for hepatocellular carcinoma within the past 6 months.

Denominator – the number of adults with cirrhosis.

_data source_: Local data collection, for example, audit of patient health records.

Outcome

a) Proportion of adults with cirrhosis who are diagnosed with hepatocellular carcinoma at an early stage.
Numerator – the number in the denominator who are diagnosed with hepatocellular carcinoma at an early stage.

Denominator – the number of adults with cirrhosis who are diagnosed with hepatocellular carcinoma.

**Data source:** National Cancer Registration and Analysis Service cancer outcomes and services dataset. Early-stage diagnosis may be based, for example, on stages 0 or A of the Barcelona Clinic Liver Staging classification.

b) Hepatocellular carcinoma survival rates.

**Data source:** Local data collection, for example, audit of patient health records. Hepatocellular carcinoma is included within liver cancer in the Office for National Statistics’ cancer survival for adults in England.

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

**Service providers** (such as hospitals, and specialist liver centres) have recall systems in place to ensure that adults with cirrhosis are offered 6-monthly surveillance for hepatocellular carcinoma.

**Healthcare professionals** (such as gastroenterologists and hepatologists) ensure that adults with cirrhosis are routinely offered 6-monthly surveillance for hepatocellular carcinoma.

**Commissioners** (such as clinical commissioning groups) commission services that have recall systems in place to offer 6-monthly surveillance for hepatocellular carcinoma to adults with cirrhosis.

**Adults with cirrhosis** should have a check for liver cancer every 6 months. This will ensure that they can be offered treatment as early as possible if liver cancer develops.

**Source guidance**

- [Cirrhosis in over 16s: assessment and management](https://www.nice.org.uk/guidance/ng50) (2016) NICE guideline NG50, recommendation 1.2.4

- [Hepatitis B (chronic): diagnosis and management](https://www.nice.org.uk/guidance/cg165) (2013) NICE guideline CG165, recommendation 1.7.1
Definitions of terms used in this quality statement

Adults with cirrhosis

Adults aged over 18 diagnosed with cirrhosis, excluding people who are receiving end of life care.

[NICE’s guideline on cirrhosis in over 16s, recommendations 1.2.4 and 1.2.6]

6-monthly surveillance for hepatocellular carcinoma

Ultrasound surveillance with or without measurement of serum alpha-fetoprotein. Surveillance for adults with cirrhosis who have hepatitis B should include alpha-fetoprotein testing.

[NICE's guideline on cirrhosis in over 16s, recommendation 1.2.4, and NICE's guideline on hepatitis B (chronic), recommendation 1.7.1]

Equality and diversity considerations

Adults with cirrhosis who are homeless or who inject drugs may need additional support from community outreach services to ensure that they attend for 6-monthly surveillance for hepatocellular carcinoma.

Prisons should ensure that prisoners with cirrhosis are offered 6-monthly surveillance for hepatocellular carcinoma.
Quality statement 5: Prophylactic intravenous antibiotics for upper gastrointestinal bleeding

Quality statement

Young people and adults with cirrhosis and upper gastrointestinal bleeding are given prophylactic intravenous antibiotics at presentation.

Rationale

People with cirrhosis and upper gastrointestinal bleeding are prone to have bacterial infections during or soon after a bleeding episode. Those who develop bacterial infections have a higher risk of death and early rebleeding. Giving prophylactic intravenous antibiotics at presentation reduces bacterial infections. Giving antibiotics intravenously also overcomes the difficulties of oral administration in people with haematemesis and critical illness.

Quality measures

Structure

Evidence of local arrangements to ensure that young people and adults with cirrhosis and upper gastrointestinal bleeding are given prophylactic intravenous antibiotics at presentation.

Data source: Local data collection, for example, service protocol.

Process

Proportion of presentations of young people and adults with cirrhosis and upper gastrointestinal bleeding in which the person receives prophylactic intravenous antibiotics at presentation.

Numerator – the number in the denominator in which the person receives prophylactic intravenous antibiotics at presentation.

Denominator – the number of presentations of young people and adults with cirrhosis and upper gastrointestinal bleeding.

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

a) Rate of bacterial infection in young people and adults with cirrhosis and upper gastrointestinal bleeding.

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

b) Length of hospital stay for young people and adults with cirrhosis and upper gastrointestinal bleeding.

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

c) Hospital re-admission rate for young people and adults with cirrhosis and upper gastrointestinal bleeding.

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

d) Mortality rate in young people and adults with cirrhosis and upper gastrointestinal bleeding.

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

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

**Service providers** (such as hospitals, including emergency departments and specialist liver centres) have processes in place to ensure that young people and adults with cirrhosis and upper gastrointestinal bleeding are given prophylactic intravenous antibiotics at presentation. Providers should ensure that the choice of antibiotics is determined by local microbiological practices and that intravenous antibiotics are reviewed in line with NICE’s guideline on antimicrobial stewardship.

**Healthcare professionals** (such as emergency consultants, gastroenterologists and hepatologists) give prophylactic intravenous antibiotics to young people and adults with cirrhosis and upper gastrointestinal bleeding at presentation. Healthcare professionals ensure that the choice of antibiotics is determined by local microbiological practices and that intravenous antibiotics are reviewed in line with NICE’s guideline on antimicrobial stewardship.
Commissioners (such as clinical commissioning groups) commission services that give prophylactic intravenous antibiotics to young people and adults with cirrhosis and upper gastrointestinal bleeding at presentation.

Young people and adults with cirrhosis who are vomiting blood or passing blood in their stools should be given antibiotics through a drip to stop them getting an infection.

Source guidance

- Cirrhosis in over 16s: assessment and management (2016) NICE guideline NG50, recommendation 1.3.2

Definitions of terms used in this quality statement

Young people and adults

Young people are aged 16 and 17. Adults are aged over 18.

[NICE's guideline on non-alcoholic fatty liver disease]
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.

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 incorporated into the NICE pathways on non-alcoholic fatty liver disease, cirrhosis and hepatitis B (chronic).

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:

- diagnosis of liver disease
- progression of liver disease
- detection of hepatocellular carcinoma
health-related quality of life for people with liver disease
hospital admissions for people with liver disease
length of hospital stay for people with liver disease
hospital re-admission rates for people with liver disease
mortality associated with liver disease.

It is also expected to support delivery of the Department of Health’s outcome frameworks:

- Adult social care outcomes framework 2015–16
- NHS outcomes framework 2016–17

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 template for the NICE guideline on non-alcoholic fatty liver disease
- resource impact template for the NICE guideline on cirrhosis
- costing template for the NICE guideline on hepatitis B.

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.
Endorsing organisation

This quality standard has been endorsed by NHS England, as required by the Health and Social Care Act (2012)

Supporting organisations

Many organisations share NICE's commitment to quality improvement using evidence-based guidance. The following supporting organisations have recognised the benefit of the quality standard in improving care for patients, carers, service users and members of the public. They have agreed to work with NICE to ensure that those commissioning or providing services are made aware of and encouraged to use the quality standard.

- British Association for the Study of the Liver
- Foundation for Liver Research
- Primary Care Society for Gastroenterology
- Royal College of Pathologists
- Royal College of General Practitioners
- British Liver Trust