

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

NICE indicator validity assessment

Indicator

The percentage of children who reached 5 years old in the preceding 12 months, who have received a reinforcing dose of DTaP/IPV and at least 2 doses of MMR between the ages of 1 and 5 years.

Importance

Considerations	Assessment
<p>The Department of Health and Social Care (DHSC) will publish a vaccination strategy in Autumn 2020 to maintain and develop the UK immunisation programme.</p> <p>A booster vaccine for diphtheria, tetanus, pertussis and poliomyelitis (DTaP / IPV) and a second dose of MMR (MMR2) is offered as part of the childhood immunisation programme in England. It is offered at aged 3 years and 4 months or soon after.</p> <p>Routine childhood immunisations are part of the general medical services (GMS) contract.</p>	<p>The indicator reflects a specific priority area identified by the DHSC.</p>
<p>2018-19 data from NHS Digital and PHE Childhood Vaccination Coverage Statistics shows 86.4% national coverage for a second dose of MMR at 5 years of age, and 84.8% national coverage for the DTaP/IPV reinforcing dose at the age of 5 years. Regional coverage reported by local authority for a second dose of MMR at 5 years of age ranged from 76.3% (London) to 91.4% (North East). Regional coverage reported by local authority for a reinforcing dose of DTaP/IPV at 5 years ranged from 73.9% (London) to 89.9% (North East) (NHS Digital, 2019).</p>	<p>The indicator relates to an area where there is known variation in practice.</p> <p>The indicator addresses under-treatment.</p>

Considerations	Assessment
<p>MMR is the combined vaccine that protects against measles, mumps and rubella. These are highly infectious common conditions that can have serious complications such as meningitis, encephalitis and deafness.</p> <p>Diphtheria is an acute infectious disease affecting the upper respiratory tract and resulting in membranous pharyngitis. The toxin affects the myocardium, nervous and adrenal tissues causing paralysis and cardiac failure.</p> <p>Tetanus is an acute disease caused by the action of tetanus toxin following infection by the bacterium <i>Clostridium tetani</i>. The disease is characterised by generalised rigidity and spasms of skeletal muscles.</p> <p>Pertussis (whooping cough) is an acute infectious disease with an initial catarrhal stage followed by an irritating cough that becomes paroxysmal within one to two weeks. This is followed by a characteristic 'whoop' or vomiting. In young infants there may be periods of apnoea. It may be complicated by bronchopneumonia and cerebral hypoxia.</p>	<p>The indicator will lead to a meaningful improvement in patient outcomes.</p>

Evidence base

Considerations	Assessment
<p>Immunisations: reducing differences in uptake in under 19s (2009, updated 2017) NICE public health guideline PH21, recommendations 1, 2 and 3</p> <p>Immunizations – childhood (2020) NICE clinical knowledge summary</p>	<p>The indicator is derived from a high-quality evidence base.</p> <p>The indicator measures receipt of the vaccines by 5 years of age although the immunisation schedule states these are due at around 1 year old and then 3 years and 4 months old.</p> <p>Measurement by 5 years of age aims to achieve full immunisation before school.</p>

Specification

Considerations	Assessment
<p>Numerator: The number in the denominator who have received a dose of DTaP/IPV and at least 2 doses of MMR between 1 and 5 years old.</p> <p>Denominator: The number of children who reached 5 years old in the preceding 12 months.</p> <p>Exclusions: The MMR vaccine should not be given to patients who are immunocompromised. The MMR and DTaP/IPV vaccines should not be given to patients with a confirmed anaphylactic reaction to a previous dose of these vaccines or any components of the vaccines.</p>	<p>The indicator has defined components necessary to construct the indicator, including the numerator, denominator and exclusions.</p>
<p>This indicator would be reported at general practice level for practices with more than 20 eligible patients.</p>	<p>The indicator outlines minimum numbers of patients needed to be confident in the assessment of variation.</p>

Feasibility

Considerations	Assessment
<p>The childhood vaccination schedule details that these vaccines are given at 3 years and 4 months to 5 years of age.</p> <p>Cover of vaccination evaluated rapidly (COVER) data is collected by Public Health England and reported quarterly and annually by NHS Digital and Public Health England. Data is submitted by the local teams and child health record departments and reported nationally and regionally. From 2019-20 this will include general practice level coverage.</p> <p>The Childhood Immunisation Scheme is part of the GP contract in England.</p>	<p>The indicator is repeatable.</p>
<p>There are codes available for this vaccine and contraindication to the vaccine on SNOMED-CT.</p>	<p>The indicator is measuring what it is designed to measure.</p> <p>The indicator uses existing data fields.</p>

Acceptability

Considerations	Assessment
<p>The first booster dose of DTaP / IPV should be given three years after completion of the primary course. If the primary course has been delayed, this booster should be given at least one year after the third primary dose. Immunisation may be deferred in some conditions such as an evolving neurological abnormality or poorly controlled epilepsy.</p> <p>Guidance in the green book suggests that if the MMR has been given before the first birthday, this dose should be ignored. Individuals with unknown or incomplete vaccination history should be assumed to be unimmunised. The MMR vaccine should not be given to those who are immunocompromised.</p> <p>The vaccines should not be given to those with a confirmed anaphylactic reaction to a previous dose of the vaccines or any component of the vaccines. Data quoted in the Green Book suggests rates of 0.65 to 3 anaphylaxis events per million doses of vaccines given (Public Health England, 2013).</p> <p>There may be over-estimation of denominators and therefore under estimation of coverage in individual practices as children may have moved away but remained on the register.</p> <p>Some parents choose not to vaccinate their children despite information given.</p>	<p>The indicator assesses performance that is attributable to or within the control of the audience. Patient choice not to vaccinate should be considered and personalised care adjustments recorded accordingly.</p>
<p>Data for the GP additional services contract is collected quarterly by NHS Digital.</p>	<p>Practices currently submit data to NHS Digital. The results of the indicator can be used to improve practice.</p>

Risk

Considerations	Assessment
<p>Parents may choose not to vaccinate their children.</p> <p>Some data quality issues have been reported to PHE including missing data, late immunisation and systems in transition.</p>	<p>The indicator has an acceptable risk of unintended consequences. Care should be taken to respect patient choice and record personalised care adjustments accordingly.</p>

NICE indicator advisory committee recommendation

The NICE indicator advisory committee approved this indicator for publication on the menu.