



Complete Summary

TITLE

Childhood immunization status: percentage of children who had four DTaP/DT, three IPV, one MMR, three haemophilus influenza type B, three hepatitis B and one chicken pox vaccination by the child's second birthday (Combination #2).

SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS 2004. Health plan employer data & information set. Vol. 2, Technical specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2003. 374 p.

Brief Abstract

DESCRIPTION

For Childhood Immunization Status, two separate combination rates are calculated. This measure (Combination #2) assesses the percentage of enrolled children who turned two years old during the measurement year who were continuously enrolled for 12 months immediately preceding their second birthday and who had four DTaP (diphtheria-tetanus-pertussis) or DT, three OPV/IPV (oral polio virus/injectable polio virus), one MMR (measles-mumps-rubella), three HiB (haemophilus influenza type B), three hepatitis B and one chicken pox vaccination (VZV) by the time period specified and by the child's second birthday. See the related measure, [Childhood immunization status: percentage of children who had four DTaP/DT, three IPV, one MMR, three haemophilus influenza type B and three hepatitis B vaccinations by the child's second birthday \(Combination #1\)](#).

RATIONALE

Childhood vaccinations are not at optimal levels, despite their proven efficacy against some infectious diseases. By ensuring and encouraging proper immunization of children by the age of two, consumers, purchasers, and plans/providers will benefit from containing transmission of harmful and costly diseases.

PRIMARY CLINICAL COMPONENT

Immunization; diphtheria; tetanus; pertussis; polio; measles; mumps; rubella; haemophilus influenza type B; hepatitis B; varicella zoster virus (chicken pox)

DENOMINATOR DESCRIPTION

Enrolled children who turn two years old during the measurement year and who were continuously enrolled for 12 months immediately preceding their second birthday with no more than one gap in enrollment of up to 45 days during the continuous enrollment period

NUMERATOR DESCRIPTION

Children who received all of the vaccines (four DTaP [diphtheria-tetanus-pertussis] or DT vaccinations, three OPV/IPV [oral polio virus/injectable polio virus] vaccinations, one MMR [measles-mumps-rubella] vaccination, three HiB [haemophilus influenza type B] vaccinations, three hepatitis B vaccinations and at least one chicken pox vaccination [VZV]) (Combination #2). See the related "Numerator Inclusions/Exclusions" field in the Complete Summary.

Evidence Supporting the Measure

PRIMARY MEASURE DOMAIN

Process

SECONDARY MEASURE DOMAIN

Not applicable

EVIDENCE SUPPORTING THE MEASURE

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Use of this measure to improve performance

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Batelle Medical Technology Assessment and Policy Research Program, Centers for Public Health Research and Evaluation. A cost benefit analysis of the OPV vaccine. Arlington (VA): Batelle; 1994.

Centers for Disease Control and Prevention (CDC). National Immunization Program. What would happen if we stopped vaccinations?. [fact sheet online]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2003 Aug 27 [8 p].

Hatziandreu EJ, Brown RE, Halpern MT. A cost benefit analysis of the measles mumps rubella (MMR) vaccine. Final report prepared for National Immunization

Program, Centers for Disease Control and Prevention. Arlington (VA): Center for Public Health Research and Evaluation, Battelle Memorial Institute; 1994.

U.S. Department of Health and Human Services. Healthy people 2010: understanding and improving health. Conference ed. Washington (DC): Government Printing Office; 2000.

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Accreditation

Decision-making by businesses about health-plan purchasing

Decision-making by consumers about health plan/provider choice

External oversight/Medicaid

External oversight/State government program

Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Managed Care Plans

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

TARGET POPULATION AGE

Children who turned two years old during the measurement year

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

INCIDENCE/PREVALENCE

See "Burden of Illness" field.

ASSOCIATION WITH VULNERABLE POPULATIONS

Children

EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS

Centers for Disease Control and Prevention (CDC). National Immunization Program. What would happen if we stopped vaccinations?. [fact sheet online]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2003 Aug 27 [8 p].

BURDEN OF ILLNESS

Currently there are about 1.25 million people who have life-long hepatitis B virus infection. Each year about 4,000-5,000 of these people die from related liver disease resulting in over \$700 million of medical and work-loss costs. Approximately 25% of children who become infected with life-long hepatitis B virus would be expected to die of related liver disease as adults. If vaccination for chicken pox were to stop, the disease would quickly return to its previous high rate of infection, and every child would miss a week of school, every parent a week of work, and 50-100 varicella-related deaths would occur each year, most of them in previously healthy children and adults.

The expected measles morbidity among a birth cohort of 4.1 million without vaccination against measles would be 3.7 million cases, over 350,000 complications, and 1,859 deaths, with total direct and indirect costs of \$2.2 billion and \$1.6 billion, respectively.

EVIDENCE FOR BURDEN OF ILLNESS

Centers for Disease Control and Prevention (CDC). National Immunization Program. What would happen if we stopped vaccinations?. [fact sheet online]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2003 Aug 27 [8 p].

Hatziandreu EJ, Brown RE, Halpern MT. A cost benefit analysis of the measles mumps rubella (MMR) vaccine. Final report prepared for National Immunization Program, Centers for Disease Control and Prevention. Arlington (VA): Center for Public Health Research and Evaluation, Battelle Memorial Institute; 1994.

UTILIZATION

Unspecified

COSTS

Vaccine-preventable diseases have a costly impact, resulting in doctor's visits, hospitalizations, and premature deaths. Sick children can also cause parents to lose time from work. Currently there are about 1.25 million people who have life-long hepatitis B virus infection. Each year about 4,000-5,000 of these people die from related liver disease, resulting in over \$700 million of medical and work-loss costs. In 1990 in the U.S., the cost of caring for children who contracted chicken pox was estimated as \$918 million annually.

EVIDENCE FOR COSTS

Centers for Disease Control and Prevention (CDC). National Immunization Program. What would happen if we stopped vaccinations?. [fact sheet online]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2003 Aug 27 [8 p].

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness

Data Collection for the Measure

CASE FINDING

Both users and nonusers of care

DESCRIPTION OF CASE FINDING

Enrolled children who turn two years old during the measurement year and who were continuously enrolled for 12 months immediately preceding their second birthday with no more than one gap in enrollment of up to 45 days during the continuous enrollment period

DENOMINATOR SAMPLING FRAME

Enrollees or beneficiaries

DENOMINATOR (INDEX) EVENT

Patient Characteristic

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

Enrolled children who turn two years old during the measurement year and who were continuously enrolled for 12 months immediately preceding their second birthday with no more than one gap in enrollment of up to 45 days during the continuous enrollment period

Exclusions

Children who had a contraindication for a specific vaccine may be excluded from the denominator.

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

For all antigens, the managed care organization (MCO) may count evidence of any of the following:

- evidence of the antigen or
- documented history of the illness or
- a seropositive test result.

For combination vaccinations that require more than one antigen (i.e., DTaP [diphtheria-tetanus-pertussis] and MMR [measles-mumps-rubella]), the MCO must find evidence of all of the antigens.

DTaP/DT: An initial DTaP followed by at least three DTaP, DT, or individual diphtheria and tetanus shots, with at least one diphtheria and one tetanus falling on or between the child's first and second birthdays. (DTP vaccinations are no longer manufactured; however, notations of DTP in medical records count toward the numerator.)

In states where the law allows an exception to a child who receives a pertussis vaccination, the child is compliant if he or she has four diphtheria and four tetanus vaccinations.

OPV/IPV: At least three polio vaccinations (OPV/IPV) with different dates of service by the child's second birthday

MMR: At least one measles, mumps and rubella (MMR) vaccination, with a date of service falling on or between the child's first and second birthdays

HiB: Three haemophilus influenza type B (HiB) vaccinations, with different dates of service by the child's second birthday and with at least one of them falling on or between the child's first and second birthdays

Note: Because use of one particular type of HiB vaccine requires only three doses, the HEDIS measure requires that the MCO meets the minimum possible standard of three doses, rather than the recommended four doses.

Hepatitis B: Three hepatitis B vaccinations, with different dates of service by the child's second birthday with at least one of them falling on or between the child's sixth month [180 days] and second birthday

VZV: At least one chicken pox vaccine (VZV) with a date of service falling on or between the child's first and second birthdays

Exclusions

DTaP/DT: Any vaccination (DTaP, DT, diphtheria, tetanus) administered prior to 42 days after birth cannot be counted.

OPV/IPV: OPV/IPV administered prior to 42 days after birth cannot be counted.

HiB: HiB administered prior to 42 days after birth cannot be counted.

DENOMINATOR TIME WINDOW

Time window precedes index event

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative and medical records data

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Analysis by subgroup (stratification on patient factors)

DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

This measure requires that separate rates be reported for Medicaid and commercial plans.

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends
Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Childhood immunization status.

MEASURE COLLECTION

[HEDIS® 2004: Health Plan Employer Data and Information Set](#)

DEVELOPER

National Committee for Quality Assurance - Private Nonprofit Organization

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

1997 Jan

REVISION DATE

2000 Jan

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS 2004. Health plan employer data & information set. Vol. 2, Technical specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2003. 374 p.

MEASURE AVAILABILITY

The individual measure, "Childhood Immunization Status," is published in "HEDIS 2004. Health Plan Employer Data & Information Set. Vol. 2, Technical Specifications."

For more information, contact the National Committee for Quality Assurance (NCQA) at 2000 L Street, N.W., Suite 500, Washington, DC 20036; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org.

NQMC STATUS

This NQMC summary was completed by ECRI on July 18, 2003. The information was verified by the measure developer on August 29, 2003.

COPYRIGHT STATEMENT

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For detailed specifications regarding the National Committee on Quality Assurance (NCQA) measures, refer to HEDIS Volume 2: Technical Specifications, available from the NCQA Web site at www.ncqa.org.

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Date Modified: 11/1/2004

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