



## Complete Summary

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### GUIDELINE TITLE

Routine preventive services for infants and children (birth - 24 months).

### BIBLIOGRAPHIC SOURCE(S)

Michigan Quality Improvement Consortium. Routine preventive services for infants and children (birth-24 months). Southfield (MI): Michigan Quality Improvement Consortium; 2007 May. 1 p.

### GUIDELINE STATUS

This is the current release of the guideline.

## \*\* REGULATORY ALERT \*\*

### FDA WARNING/REGULATORY ALERT

**Note from the National Guideline Clearinghouse:** This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- [June 15, 2007, RotaTeq \(Rotavirus, Live, Oral, Pentavalent Vaccine\)](#): Changes to the ADVERSE REACTIONS and POST-MARKETING sections of the product's prescribing information. The ADVERSE REACTIONS section was updated to include six cases of Kawasaki disease that were observed during the Phase 3 clinical trial.

## COMPLETE SUMMARY CONTENT

\*\* REGULATORY ALERT \*\*

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## SCOPE

### DISEASE/CONDITION(S)

Preventable diseases or conditions such as:

- Infectious diseases such as diphtheria, tetanus, pertussis, poliomyelitis, measles, mumps, rubella, hepatitis A and B, varicella, influenza, pneumococcal pneumonia, *Haemophilus influenzae b* (Hib) infection, rotavirus infection
- Sudden infant death syndrome (SIDS)
- Injuries due to motor vehicles, burns, and poisoning, and other preventable causes
- Tobacco use/exposure to second-hand smoke
- Newborn metabolic disorders
- Lead in blood

### GUIDELINE CATEGORY

Counseling  
Prevention  
Risk Assessment  
Screening

### CLINICAL SPECIALTY

Family Practice  
Pediatrics  
Preventive Medicine

### INTENDED USERS

Advanced Practice Nurses  
Health Plans  
Physician Assistants  
Physicians

### GUIDELINE OBJECTIVE(S)

- To achieve significant, measurable improvements in the routine preventive services for infants and children (birth to 24 months) through the development and implementation of common evidence-based clinical practice guidelines
- To design concise guidelines that are focused on key management components of routine preventive services for infants and children to improve outcomes

### TARGET POPULATION

All infants and children from birth to 24 months

## **INTERVENTIONS AND PRACTICES CONSIDERED**

### **Counseling/Screening/Prevention/Risk Assessment**

1. Risk assessment
2. Parental education and counseling regarding:
  - Immunizations, nutrition, breast-feeding, physical activity, dental health, child abuse, depression, alcohol/drug abuse, anxiety, stress reduction, coping skills
  - Motor-vehicle safety, poison prevention, burn and injury prevention
  - Sudden infant death syndrome (SIDS) and infant sleep positioning
3. Newborn metabolic screening
4. Tobacco use screening
5. Blood lead testing
6. Immunizations
  - Diphtheria, tetanus, and acellular pertussis vaccine (DTaP)
  - Inactivated poliovirus vaccine (IPV)
  - Measles, mumps, rubella (MMR) or measles, mumps, rubella, and varicella vaccine (MMRV)
  - Varicella vaccine
  - Pneumococcal 7 valent conjugated polysaccharide vaccine (PCV7)
  - *Haemophilus influenzae b* (Hib) conjugate vaccine
  - Rotavirus vaccine
  - Hepatitis A vaccine
  - Hepatitis B vaccine
  - Influenza vaccine

## **MAJOR OUTCOMES CONSIDERED**

Not stated

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

The Michigan Quality Improvement Consortium (MQIC) project leader conducts a search of current literature in support of the guideline topic. Computer database searches are used to identify published studies, existing protocols and/or national guidelines on the selected topic developed by organizations such as the American Diabetes Association, American Heart Association, American Academy of Pediatrics, etc. If available, clinical practice guidelines from participating MQIC health plans and Michigan health systems are also used to develop a framework for the new guideline.

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

## **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Weighting According to a Rating Scheme (Scheme Given)

## **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

### **Levels of Evidence for the Most Significant Recommendations**

- A. Randomized controlled trials
- B. Controlled trials, no randomization
- C. Observational studies
- D. Opinion of expert panel

## **METHODS USED TO ANALYZE THE EVIDENCE**

Review

## **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

## **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Using information obtained from literature searches and available health plan guidelines on the designated topic, the Michigan Quality Improvement Consortium (MQIC) project leader prepares a draft guideline to be reviewed by the medical directors' committee at one of their scheduled meetings. Priority is given to recommendations with [A] and [B] levels of evidence (see "Rating Scheme for the Strength of the Evidence" field).

The initial draft guideline is reviewed, evaluated, and revised by the committee resulting in draft two of the guideline. Additionally, the Michigan Academy of Family Physicians participates in guideline development at the onset of the process and throughout the guideline development procedure. The MQIC guideline feedback form and draft two of the guideline are distributed to the medical directors, as well as the MQIC measurement and implementation group members, for review and comments. Feedback from members is collected by the MQIC project leader and prepared for review by the medical directors' committee at their next scheduled meeting. The review, evaluation, and revision process with several iterations of the guideline may be repeated over several meetings before consensus is reached on a final draft guideline.

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

## COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

## METHOD OF GUIDELINE VALIDATION

External Peer Review  
Internal Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

When consensus is reached on the final draft guideline, the medical directors approve the guideline for external distribution to practitioners with review and comments requested via the Michigan Quality Improvement Consortium (MQIC) health plans (project leader distributes final draft to medical directors' committee, measurement and implementation groups to solicit feedback).

The MQIC project leader also forwards the approved guideline draft to appropriate state medical specialty societies for their input. After all feedback is received from external reviews, it is presented for discussion at the next scheduled committee meeting. Based on feedback, subsequent guideline review, evaluation, and revision may be required prior to final guideline approval.

The MQIC Medical Directors approved this guideline in May 2007.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

The level of evidence grades (A-D) are provided for the most significant recommendations and are defined at the end of the "Major Recommendations" field.

Recommendations	Birth	1 mo	2 mos	4 mos	6 mos	12 mos	15 mos	18 mos	24 mos
Health, developmental and risk assessments	X	X	X	X	X	X	X	X	X
Parental education and counseling: <ul style="list-style-type: none"> <li>Immunizations, nutrition, breast-feeding <b>[A]</b>, physical activity, dental health, child abuse, depression, alcohol/drug abuse, anxiety,</li> </ul>	X	X	X	X	X	X	X	X	X

<b>Recommendations</b>	<b>Birth</b>	<b>1 mo</b>	<b>2 mos</b>	<b>4 mos</b>	<b>6 mos</b>	<b>12 mos</b>	<b>15 mos</b>	<b>18 mos</b>	<b>24 mos</b>
stress reduction, coping skills <ul style="list-style-type: none"> <li>• Motor vehicle safety - Rear facing car seat when riding in a motor vehicle until 1 year and 20 pounds <b>[B]</b>.</li> <li>• Poison prevention - Keep National Poison Control numbers readily accessible; use child resistant containers</li> <li>• Burn prevention - Install smoke detectors and test bi-annually; carbon monoxide detectors; water heater temperature and fire prevention</li> <li>• Injury prevention - Use of gates; never leave infant unattended on changing table; water safety; CPR training</li> <li>• SIDS and infant sleep positioning - Place infants on their back <b>[B]</b></li> </ul>									
Tobacco Use Screening: Establish tobacco use and second-hand exposure	X	X	X	X	X	X	X	X	X
Neonatal Screening: Newborn metabolic screening prior to hospital discharge >24 hours of age <b>[D]</b>	X >24 hours of age								
Blood Lead Testing <b>[B]</b>						X			

Abbreviations: CPR, cardiopulmonary resuscitation; SIDS, sudden infant death syndrome

### **Immunizations**

- Consult the Advisory Committee on Immunization Practices (ACIP) website ([www.cdc.gov/nip/acip/](http://www.cdc.gov/nip/acip/)) for most updated immunization schedules for routine and high risk populations.
- Use combination vaccines to minimize the number of injections
- Update the Michigan Care Improvement Registry (MCIR)

Vaccines	Birth	1 mo	2 mos	4 mos	6 mos	12 mos	15 mos	18 mos	24 mos
DTaP [A]			X	X	X		X		
IPV			X	X		X			
MMR (MMRV) [A]						X			
Varicella [A]						X			
Pneumococcal (PCV7)			X	X	X	X			
Hib [A]			X	X	X	X			
Rotavirus			X	X	X				
Hep B [A] Schedule 1	X	X				X			
Hep B [A] Schedule 2		X	X			X			
Hep A						X		X	
Influenza [B]						X (6 to 59 months, annually)			

Abbreviations: DTaP, diphtheria, tetanus, acellular pertussis; Hep A, hepatitis A; Hep B, hepatitis B; Hib, *Haemophilus influenzae* type b; IPV, inactivated poliovirus vaccine; MMR, measles, mumps, rubella; MMRV, measles, mumps, rubella, varicella; PCV7, pneumococcal 7 valent conjugated polysaccharide vaccine

**Definitions:**

**Levels of Evidence for the Most Significant Recommendations**

- A. Randomized controlled trials
- B. Controlled trials, no randomization
- C. Observational studies
- D. Opinion of expert panel

**CLINICAL ALGORITHM(S)**

None provided

## EVIDENCE SUPPORTING THE RECOMMENDATIONS

### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is provided for the most significant recommendations (See "Major Recommendations" field).

This guideline is based on several sources including: Preventive Services for Children and Adolescents, Institute for Clinical Systems Improvement, 2006 ([www.icsi.org](http://www.icsi.org)).

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

Through a collaborative approach to developing and implementing common clinical practice guidelines and performance measures for routine preventive services for infants and children from birth to 24 months, Michigan health plans will achieve consistent delivery of evidence-based services and better health outcomes. This approach also will augment the practice environment for physicians by reducing the administrative burdens imposed by compliance with diverse health plan guidelines and associated requirements.

### POTENTIAL HARMS

Not stated

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

This guideline lists core management steps. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

Approved Michigan Quality Improvement Consortium (MQIC) guidelines are disseminated through email, U.S. mail, and websites.

The MQIC project leader prepares approved guidelines for distribution. Portable Document Format (PDF) versions of the guidelines are used for distribution.

The MQIC project leader distributes approved guidelines to MQIC membership via email.

The MQIC project leader submits request to website vendor to post approved guidelines to MQIC website ([www.mqic.org](http://www.mqic.org)).

The MQIC project leader completes a statewide mailing of the comprehensive set of approved guidelines and educational tools annually. The guidelines and tools are distributed in February of each year to physicians in the following medical specialties:

- Family Practice
- General Practice
- Internal Medicine
- Other Specialists for which the guideline is applicable (e.g. endocrinologists, allergists, pediatricians, cardiologists, etc.)

The statewide mailing list is derived from the Blue Cross Blue Shield of Michigan (BCBSM) provider database. Approximately 95% of the state's M.D.'s and 96% of the state's D.O.'s are included in the database.

The MQIC project leader submits request to the National Guideline Clearinghouse (NGC) to post approved guidelines to NGC website ([www.guideline.gov](http://www.guideline.gov)).

## **INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES**

### **IOM CARE NEED**

Staying Healthy

### **IOM DOMAIN**

Effectiveness  
Patient-centeredness

## **IDENTIFYING INFORMATION AND AVAILABILITY**

### **BIBLIOGRAPHIC SOURCE(S)**

Michigan Quality Improvement Consortium. Routine preventive services for infants and children (birth-24 months). Southfield (MI): Michigan Quality Improvement Consortium; 2007 May. 1 p.

### **ADAPTATION**

This guideline is based on several sources including: Preventive Services for Children and Adolescents, Institute for Clinical Systems Improvement, 2006 ([www.icsi.org](http://www.icsi.org)).

### **DATE RELEASED**

2007 May

### **GUIDELINE DEVELOPER(S)**

Michigan Quality Improvement Consortium - Professional Association

**SOURCE(S) OF FUNDING**

Michigan Quality Improvement Consortium

**GUIDELINE COMMITTEE**

Michigan Quality Improvement Consortium Medical Director's Committee

**COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

Physician representatives from participating Michigan Quality Improvement Consortium health plans, Michigan State Medical Society, Michigan Osteopathic Association, Michigan Association of Health Plans, Michigan Department of Community Health and Michigan Peer Review Organization

**FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Standard disclosure is requested from all individuals participating in the Michigan Quality Improvement Consortium (MQIC) guideline development process, including those parties who are solicited for guideline feedback (e.g. health plans, medical specialty societies). Additionally, members of the MQIC Medical Directors' Committee are asked to disclose all commercial relationships.

**GUIDELINE STATUS**

This is the current release of the guideline.

**GUIDELINE AVAILABILITY**

Electronic copies: Available in Portable Document Format (PDF) from the [Michigan Quality Improvement Consortium Web site](#).

**AVAILABILITY OF COMPANION DOCUMENTS**

None available

**PATIENT RESOURCES**

None available

**NGC STATUS**

This NGC summary was completed by ECRI Institute on March 5, 2008. The information was verified by the guideline developer on March 12, 2008.

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