

## **Appendix C. Example panel instructions and questionnaires**

This appendix provides an example of the documents sent to clinician panelists during the clinical review process. The documents provide instructions and information regarding administrative data. Also included are two example questionnaires, one for provider level indicators and the other for area level indicators.

## INTRODUCTION

Each questionnaire in this packet describes one potential pediatric patient safety indicator and asks for your feedback on specific aspects of that indicator. You must fill out one questionnaire for each indicator. Please answer all questions on the form. You may comment in the sections provided below each question, or on a separate sheet of paper. Comments are not required. We expect that completing each form will take about 10-15 minutes to complete. The rest of this document provides:

1. background information on codes from administrative data that are used to define the indicators,
2. definitions of terms used in the questionnaire, and
3. an orientation to the format of the indicator questionnaires.

Please submit your completed questionnaire by fax or email no later than Monday, January 17, 2005. Fax forms to Kavita Choudhry, (650) 723-1919. Questions regarding the questionnaire may be directed to Kavita Choudhry, at (650) 724-3546, or [choudhry@healthpolicy.stanford.edu](mailto:choudhry@healthpolicy.stanford.edu).

## ADMINISTRATIVE DATA

All indicators are defined using ICD-9-CM diagnostic and procedure codes, obtained from hospital administrative data. We do not expect that most physicians or nurses will be completely familiar with these codes and thus we provide explanations of all codes.

- ICD-9-CM codes are usually assigned using the physician's charted notes by trained coders.
- In order to receive a code, a condition must not be an expected result of another coded condition. For example, respiratory distress would not be coded in addition to asthma.
- In order to receive a code, a condition must result in additional medical care or a modification to care. For instance, the presence of diabetes may alter care during a surgery for a heart condition, and thus would be coded as a secondary diagnosis. A laceration should only be coded if it required medical attention to treat, such as suturing.
- Each patient discharged from an inpatient facility is given a principal diagnosis, which represents the condition principally responsible for occasioning the patient's admission, and a list of secondary diagnosis codes.
- Major procedures that involve use of the operating room or risk to the patient are also coded.
- Codes between 996 and 999 are always "complications of surgical and medical care."
- Codes beginning with 'E' refer to the external cause of any injury that the patient sustained.

Some indicators limit eligible patients to certain groups, including DRGs and MDCs.

- DRGs are "Diagnostic Related Groups." They are defined by the Health Care Financing Administration (HCFA). One DRG is assigned to each patient per admission. The assigned DRG reflects many factors including the principal diagnosis, listed secondary diagnoses, age, and major procedures.
- MDCs are "Major Diagnostic Categories" and are defined using DRGs. DRGs involving the same body system are generally grouped together to form one MDC.

- All other eligible patient limitations (e.g. trauma, immunocompromised) are derived from ICD-9 codes alone.

## TERMINOLOGY

For the purpose of this study we will use the definitions of Brennan et al<sup>1</sup> of negligence and complications (adverse events). We have created a standard definition of preventable.

- Negligence (medical error): Care that falls below the standard reasonably expected of average physicians in their community.
- Complication: An injury that is caused by medical management (rather than the underlying disease) and that prolongs the hospitalization, or produces a disability at the time of discharge, or both.
- Preventable: Condition for which reasonable clinical steps may reduce (but not necessarily eliminate) the risk of that complication occurring.

## ORIENTATION TO INDICATOR QUESTIONNAIRE

Each questionnaire begins with an indicator description sheet showing the indicator definition, and pertinent information (see diagram on page 4 showing the indicator layout), followed by 10 questions about the indicator (see sample on pages 5 through 7). The most important information provided is the indicator definition. The additional information is provided for your reference, as you are thinking about your responses to the questionnaire.

At the top is the indicator title and general description of the definition. Below are two rows that detail the specific inclusion and exclusion criteria for the indicator. These may include specific ICD-9-CM codes, where both the title and code are provided (e.g. Hemorrhage complicating a procedure [998.11]), or general descriptions of exclusion criteria (e.g. Exclude patients with diagnosis code of immunocompromised state). Exclusion criteria are specified to ensure pediatric cases at risk of potentially preventable complications of care. For instance, all indicators exclude obstetric discharges because care is usually provided outside of the pediatric setting.

Below the specific inclusion and exclusion criteria are rates calculated using a nationwide data sample. The Nationwide Inpatient Sample from year 2000 is a weighted nationwide sample approximating the national hospitalized population. This data is collected and distributed through a partnership with participating States and the Agency for Healthcare Research and Quality (AHRQ). These rates are for children 0-17 (inclusive) that qualify for the indicator. Age stratified rates are also provided. In some cases additional information is provided, such as the number of cases attributable to certain high risk patient populations. These rates are not published information and are confidential. They are provided for your reference. Please do not cite or distribute.

On the second page of provided information we first outline the clinical rationale for the indicator and each inclusion and exclusion criteria. Some criteria are the same as the current definition of the AHRQ Prevention Quality Indicators, developed by our research team and

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<sup>1</sup> Brennan, TA, Leape, LL, Laird, NM, Herbert, L et al. Incidence of adverse events and negligence in hospitalized patients. Results of the Harvard Medical Practice Study I. *New Engl J Med*, 1997 Feb 7;324(6):370-6.

available publicly from AHRQ. Other criteria were added during this project by our research team as we adapted the indicators more specifically to a pediatric population. Second, any literature based evidence applicable to the pediatric population is provided. Little literature exists applying these or similar indicators to the pediatric population. Note that the definitions used in the literature reported the definitions differ somewhat from the definition we are asking you to evaluate.

During the conference call we will be discussing the definition of the indicator and any concerns or recommendations regarding that indicator. In some cases we are aware of specific feedback about which we will be inquiring. These questions are listed for your information and so you can begin to think about your feedback before the call. In addition, we will facilitate discussion based on responses to the questionnaire.

## Diagram of Indicator Description Sheet and Accompanying Information

Indicator title and description

GASTROENTERITIS ADMISSION RATE	
<b>Indicator definition:</b> Number of patients admitted for gastroenteritis (see definition and exclusions below) per 100,000 population.	
<b>Included admissions:</b> All patients 1-17 years old with a principal diagnosis code for gastroenteritis.	
<b>Exclude due to:</b>	
<ul style="list-style-type: none"> <li>• Rotavirus [ICD-9-CM 008.61]</li> <li>• Adenovirus [ICD-9-CM 008.62]</li> <li>• Herpesvirus [ICD-9-CM 008.63]</li> <li>• Other small round virus [ICD-9-CM 008.64]</li> <li>• Calicivirus [ICD-9-CM 008.65]</li> <li>• Astrovirus [ICD-9-CM 008.66]</li> <li>• Enterovirus, not otherwise classified [ICD-9-CM 008.67]</li> <li>• Other viral enteritis [ICD-9-CM 008.69]</li> <li>• Other organisms, not otherwise specified (viral) [ICD-9-CM 008.69]</li> </ul>	<ul style="list-style-type: none"> <li>• Infectious colitis, enteritis and gastroenteritis not otherwise specified [ICD-9-CM 009.01]</li> <li>• Colitis, enteritis, and gastroenteritis of presumed infectious origin [ICD-9-CM 009.11]</li> <li>• Infectious diarrhea [ICD-9-CM 009.21]</li> <li>• Diarrhea of presumed infectious origin [ICD-9-CM 009.22]</li> <li>• Other and unspecified noninfectious gastroenteritis and colitis [ICD-9-CM 009.3]</li> </ul>
<b>Exclude patients transferring from another institution, MDC14 (pregnancy, childbirth, and postpartum), or MDC 15 (neonates and newborns)</b>	
<b>Rate based on year 1999 Nationwide Inpatient Sample</b>	
<b>OVERALL</b>	610.82
<b>Age stratified rate</b>	
0 - 10 days	407.22
10 days - 1 year	613.39
1 - 2 years	328.20
2 - 5 years	95.47
6 - 12 years	41.03
13 - 17 years	25.95

Definition of included population. ICD-9-C< codes included in definition.

Specific inclusion and exclusion criteria. Patients are excluded from numerator. Denominator is population

Calculated rates based on a national sample of hospitalizations. Overall, age stratified rates and additional analyses.

Clinical rationale for each inclusion and exclusion criteria

**Clinical rationale**

This indicator is intended to identify hospitalizations for gastroenteritis, where gastroenteritis is identified as the principal reason for hospitalization. Timely and effective care for gastroenteritis, such as oral rehydration therapy, may reduce the need for hospitalization.

This indicator was developed as part of the Pediatric Quality Indicator measure set, and is adapted from an indicator developed by John Billings and colleagues after favorable evaluation by a physician panel.

**Literature based evidence**

No published studies have specifically addressed the relationship of the gastroenteritis hospitalization rate to quality of outpatient care. John Billings' original study from New York reported 187-fold variation in gastroenteritis hospitalization rate for ages 0-64, with a coefficient of variation of 0.438 and 22% of variance explained by household income. [Billings, 1992 #66] Millman, et al [Millman, 1993 #63] reported that low-income zip codes had 1.9 times more pediatric gastroenteritis hospitalizations per capita than high-income zip codes in the same 11 states in 1989. Similarly, a retrospective analysis of the 1993-94 cohort of infants born in Western Australia showed that aboriginal infants were hospitalized for gastroenteritis 8 times more frequently, and readmitted 2.7 times more frequently than their non-Aboriginal peers [Smyth, 2008 #66]. These findings suggest that this indicator may be useful for poor access to outpatient care.

In a before and after study conducted on the effectiveness of a clinical pathway for gastroenteritis in the emergency department of the Children's Hospital at Westmead, the admission rate was reduced from 20.0% in 1996 to 9.1% in 1999 (P < 0.02) without adverse impacts. [Shannon, 2001 #67]. This finding is consistent with the hypothesis that timely and effective care for gastroenteritis reduces the need for hospitalization.

**Additional questions to consider**

Although we are not asking you to state your opinion on this form, there are some questions that we will be discussing in our conference calls on each of the indicators. For this indicator, we will be discussing whether the age span identified in the included population is appropriate, and whether short stay hospitalizations are likely to affect the validity of this indicator. The concern is that admissions under 24 hours in districts designated short-stay units may be missing from hospital discharge data sets. For example, at one academic medical center in the US, the likelihood of an Observation Unit (OU) admission for enteritis/diarrhea from the emergency department was 2.8 (2.1, 3.6) times greater than the likelihood of an inpatient Unit admission. [Coffano, 2001 #68]

Literature based evidence applicable to pediatrics

Additional information to discuss on conference call



**PANELIST NAME:**

Indicator name: Foreign body left in during procedure

4. How often is this event, when it occurs, clearly charted in medical records by physicians?

1	2	3	4	5	6	7	8	9
Never charted								Always charted

Comments:

5. To what extent is this indicator subject to bias (meaning that some hospitals will be judged as low quality because they systematically differ from other hospitals in some aspect, such as severity of the case mix, that is not due to poor quality care)?

1	2	3	4	5	6	7	8	9
Not at all biased								Very biased

What are the factors that contribute to the bias?

6. Are there ways that providers or health systems could easily appear to better their performance on this indicator, without actually improving the quality of care that they provide?

7. Are there adverse outcomes that could result from implementing this indicator?





**THE FOLLOWING THREE PAGES INCLUDE THE QUESTIONNAIRE FOR AREA LEVEL INDICATORS**

**PANELIST NAME:**

Indicator name: ASTHMA ADMISSION RATE

1. To what extent is this event likely to reflect poor access to high-quality outpatient care?

1	2	3	4	5	6	7	8	9
Not at all likely								Very likely

Comments:

2. How often are these diagnoses, when it is responsible for the admission, clearly charted in medical records by physicians (e.g. as opposed to using different terminology)?

1	2	3	4	5	6	7	8	9
Never charted								Always charted

Comments:

3. To what extent is this indicator subject to bias (meaning that some areas will be judged as low quality because they systematically differ from other areas in some aspect, such as overall health of the population, that is not due to poor quality care or poor access to care)?

1	2	3	4	5	6	7	8	9
Not at all biased								Very biased

What are the factors that contribute to the bias?

**PANELIST NAME:**

Indicator name: ASTHMA ADMISSION RATE

4. Are there ways that areas could easily appear to better their performance on this indicator, without actually improving the quality of care that they provide?

5. Are there adverse outcomes that could result from implementing this indicator?

6. What is your overall rating of the usefulness of this indicator, for quality improvement within an area?

1	2	3	4	5	6	7	8	9
Highly discourage use								Highly recommend use

7. What is your overall rating of the usefulness of this indicator, for comparative reporting amongst areas?

1	2	3	4	5	6	7	8	9
Highly discourage use								Highly recommend use

Please discuss your reasons for assigning the overall rating above.

**PANELIST NAME:**

Indicator name: ASTHMA ADMISSION RATE

8. Would you suggest any changes to the definition of this indicator? Please specify changes and give rationale supporting proposed changes.

9. Is there anything else that you would like us to know about this indicator?