The KPC$_{2000+}$ Rapid Core Assessment Tool on Child Health (CATCH)

Tabulation Plan

This tabulation plan serves as a guide for analyzing and interpreting information collected in the *KPC$_{2000+}$ Rapid Core Assessment Tool on Child Health (CATCH)*. Questions in the *Rapid CATCH* relate to intended beneficiary-level results of child survival (CS) projects. As seen below, there are nine technical intervention areas that fall under the aegis of the Child Survival Grants Program.

CS Technical Intervention Areas

1. Immunization
2. Nutrition and Micronutrients
3. Breastfeeding Promotion
4. Control of Diarrheal Disease
5. Pneumonia Case Management
6. Control of Malaria
7. Maternal and Newborn Care
8. Child Spacing
9. STI/HIV/AIDS Prevention

The *Rapid CATCH* comprises a small set of questions from the *KPC$_{2000+}$* modules and is intended to provide a snapshot of the target population in terms of child health. **Projects that are interested in collecting in-depth information related to specific interventions should consult the KPC$_{2000+}$ modules for suggested questions.**

In this tabulation plan, questions in the *Rapid CATCH* are linked to a concise set of indicators that reflect current international standards in each technical area. The Interagency Working Group (IAWG) on the Integrated Management of Childhood Illnesses (IMCI) has developed a list of household-level IMCI indicators. This list served as a basis for the *Rapid CATCH*; however, the survey's scope has been further expanded to include non-IMCI issues such as child spacing, maternal and newborn care, HIV/AIDS, and hand washing.

Below is a list of illustrative indicators that can be gleaned from the *Rapid CATCH*. Every question in the survey has not been linked to an indicator; 13 priority indicators have been identified. The prevalence of underweight is highlighted as a sentinel measure of child health and wellbeing. The remaining indicators relate primarily to the prevention of illness and death in children.

PRIORITY CHILD HEALTH INDICATORS

Sentinel Measure of Child Health and Well-being

1. Percentage of children age 0–23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)

Prevention of Illness/Death

2. Percentage of children age 0–23 months who were born at least 24 months after the previous surviving child
3. Percentage of children age 0–23 months whose births were attended by skilled health personnel
4. Percentage of mothers with children age 0–23 months who received at least two tetanus toxoid injections before the birth of their youngest child
5. Percentage of children age 0–5 months who were exclusively breastfed during the last 24 hours
6. Percentage of children age 6–9 months who received breastmilk and complementary foods during the last 24 hours
7. Percentage of children age 12–23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday
8. Percentage of children age 12–23 months who received a measles vaccine
9. Percentage of children age 0–23 months who slept under an insecticide-treated net (in malaria risk areas) the previous night
10. Percentage of mothers with children age 0–23 months who cite at least two known ways of reducing the risk of HIV infection
11. Percentage of mothers with children age 0–23 months who report that they wash their hands with soap/ash before food preparation, before feeding children, after defection, and after attending to a child who has defecated

Management/Treatment of Illness

12. Percentage of mothers of children age 0–23 months who know at least two signs of childhood illness that indicate the need for treatment
13. Percentage of sick children age 0–23 months who received increased fluids and continued feeding during an illness in the past two weeks

ANALYZING THE DATA

As a first step, it is important to run frequencies (counts) of responses to each survey question. Simple cross tabulations of the data by key background variables are also encouraged. Although KPC sample sizes are typically small, cross tabulations may suggest important differences between subgroups of mothers/children that warrant further investigation. It is helpful to report findings for any cross tabulations that are performed, even if it can only be stated that no differences between subgroups were observed for certain variables.

The following are some background characteristics to consider when analyzing the data and examples of ways in which mothers and children can be categorized:

CHARACTERISTIC	SUBGROUP CATEGORIES
1. Maternal age	<25, ≥25
2. Child's age	0–11 months, 12–23 months
3. Sex of child	male, female
4. Under-five household density	households with ≤ 2 children under five, households with > 2 children under five

Given the small sample size associated with most KPC surveys, caution should be exercised in choosing more than two categories for subgroup analysis. For example, there may not be a sufficient number of cases to explore differences between women in five-year age groups (i.e., 15–19, 20–24, 25–29, 30–34, etc.). As a result, the five-year age groups are collapsed into broader age categories.

The context in which a survey is conducted may impact the categories that are chosen. For example, in societies where women marry young, a younger age cut-off may be more appropriate (e.g., < 20 versus ≥ 20). Also, in societies where premarital childbearing is common, some projects may choose to include an additional question on mother's marital status (married versus unmarried) or type of household (e.g., female-headed versus male-headed) in order to obtain results that speak to the specific context in which the PVO is working.

The following table illustrates the importance of subgroup analysis. In a hypothetical survey with 300 children age 0–23 months, 47 percent of children (140 out of 300) are fully immunized before the first birthday. When immunization coverage is examined by child's sex, however, it is apparent that the picture is particularly bleak for girls: only 29 percent (40 out of 140) are fully immunized, compared with 63 percent of boys (100 out of 160). While an overall estimate of coverage is important, findings that highlight subgroup differences may assist projects in targeting individuals, as well as in demonstrating improvements in coverage for particular segments of the target population.

		FULLY IMMUNIZED BEFORE 1st BIRTHDAY?		
		Yes	No	TOTAL
SEX OF CHILD	Male	**100**	60	160
	Female	**40**	100	140
	TOTAL	140	160	300

TABULATING KEY INDICATORS

This section provides guidance in tabulating the priority indicators listed on page two. The order in which each indicator is presented corresponds to the order in which its relevant questions appear in the *Rapid CATCH*.

The indicators presented below are calculated as proportions. In order to convert each indicator into a percentage, simply multiply the proportion by 100.

CHILD SPACING (Questions 3–5)

Access to effective methods of child spacing enables couples to space births and to prevent unwanted pregnancies. Birth intervals of at least 24 months are associated with a lower risk of illness and death in children.

INDICATOR

- *Birth Interval Between Two Youngest Surviving Children*: percentage of children age 0–23 months who were born at least 24 months after the previous surviving child

  Numerator: Number of children age 0–23 months whose date of birth is at least 24 months after the previous sibling's date of birth **(Question 5)**

  Denominator: Number of children age 0–23 months in the survey who have an older sibling

NOTE: This indicator is based solely on children who are alive at the time of the interview and thus may not be comparable to birth interval indicators from other data sources (in particular, those that take non-live births and/or both surviving and non-surviving children into account).

➢ ***For more in-depth questions related to child spacing, refer to Module 6 (Child Spacing) of the KPC_{2000+}.***

ANTHROPOMETRY (Questions 6–7)

In poor countries, malnutrition contributes to more than 50 percent of under-five mortality. The prevalence of underweight (low weight-for-age) is a reflection of both chronic (past) and acute (current) undernutrition. Projects receiving Title II (Food Assistance Program) funds are required to report this indicator to USAID.

INDICATOR

- *Underweight (low weight-for-age) prevalence:* percentage of children age 0–23 months who are below 2 standard deviations (-2 SD) from the median weight-for-age, according to the WHO/NCHS reference population

Numerator: Number of children age 0–23 months whose weight **(Question 7)** is –2 SD from the median weight of the WHO/NCHS reference population for their age

Denominator: Number of children age 0–23 months in the survey who were weighed (response=1 for **Question 6)**

EPI-Info has two programs, ENTER and EPINUT, that handle anthropometric data. ENTER is ideal in clinical settings, whereas EPINUT is a more efficient means of tabulating population-level data. The ENTER program calculates indices one child at a time and is useful in rapidly detecting data entry and data collection errors. In contrast, the EPINUT program calculates indicators on batches of data (i.e., multiple individuals at a time). It is the preferable choice when data on age, sex, and height/weight have already been entered into a computer, and the project would like to calculate anthropometric measures based on those data.

For additional guidance in analyzing and interpreting anthropometric data, consult the following document from the Food and Nutrition Technical Assistance Project (FANTA):

Cogill, Bruce. 2000. *Anthropometric Indicators Measurement Guide.* Food and Nutrition Technical Assistance Project (FANTA)/AED.

Check FANTA's website (http://www.fantaproject.org) for recent publications.

EXPLORING DIFFERENTIALS

There are different reference standards for boys and girls, therefore, it is very important to disaggregate the data by sex. Once the indicator is tabulated, projects could also explore differences in underweight prevalence by the following:

- Child's age group
- Previous birth interval
- Under-five household density

➢ ***For more in-depth questions related to anthropometry, refer to Module 3 (Growth Monitoring and Maternal/Child Anthropometry) of the KPC$_{2000+}$.***

MATERNAL AND NEWBORN CARE (Questions 8–10)

In an effort to reduce the number of child deaths due to tetanus, all pregnant women should receive two tetanus toxoid injections during pregnancy, up to a total of five for lifetime protection. In addition, the international community recognizes that delivery assistance by skilled health personnel can provide hygienic conditions for safe delivery, and can ensure early recognition, treatment, and/or referral of complications that arise during childbirth.

INDICATORS

- *Tetanus toxoid coverage:* percentage of mothers of children age 0–23 months who received at least two tetanus toxoid injections before the birth of their youngest child

Numerator: Number of mothers of children age 0–23 months with responses=2 ('twice') or 3 ('more than two times') for **Question 9**

Denominator: Number of mothers of children age 0–23 months in the survey

- *Skilled delivery assistance*: percentage of children age 0–23 months whose births were attended by skilled health personnel

Numerator: Number of children age 0–23 months with responses =A ('doctor'), B ('nurse/midwife'), or C ('auxiliary midwife') for **Question 10**

Denominator: Number of children age 0–23 months in the survey

Per international guidelines, traditional birth attendants (TBA), whether trained or untrained, are not included in the numerator of this indicator. Projects whose activities include TBA training may want to calculate this indicator in two ways: 1) excluding TBAs (to comply with the international definition of skilled delivery assistance) and 2) including trained TBAs (to document changes in delivery care-seeking as it relates to the project intervention).

➢ ***For more in-depth questions related to maternal and newborn care, refer to Modules 5A (Prenatal Care), 5B (Delivery and Immediate Newborn Care), and 5C (Postpartum Care) of the KPC$_{2000+}$.***

BREASTFEEDING AND NUTRITION (Questions 11–13)

The following are current international standards related to breastfeeding and infant/child nutrition:

- Exclusive breastfeeding of infants until about six months of age
- Appropriate complementary feeding from about six months of age

INDICATORS

- *Exclusive breastfeeding rate*: percentage of infants age 0–5 months who were exclusively breastfed in the last 24 hours

Numerator: Number of infants age 0–5 months with only response=A ('breastmilk') for **Question 13**

Denominator: Number of infants age 0–5 in the survey

- *Complementary feeding rate:* percentage of infants age 6–9 months receiving breastmilk and complementary foods

Numerator: Number of infants age 6–9 months with responses= A ('breastmilk') and D ('mashed, pureed, solid, or semi-solid foods') for **Question 13**

Denominator: Number of infants aged 6–9 months in the survey

A note about age ranges: Age ranges include children who are exactly the lower number up to the end of the upper number. For example, 0–5 months refers to children age 0 months (i.e., age 0–29 days) to age 5 months and 29 days.

In recent years, the recommended duration of exclusive breastfeeding has changed from four months to 'about six months'. Some countries may still have national policies that promote the earlier cutoff, however. Projects may want to calculate the rate of exclusive breastfeeding in two ways: 1) in compliance with the current international policy and 2) in compliance with the national policy for the country in which they are working (to ensure comparability with estimates from other data sources within the country).

EXPLORING DIFFERENTIALS

It is suggested that, at minimum, projects tabulate the above indicators by child's sex in order to explore gender differences in infant feeding. Other differentials may exist, for example, by previous birth interval.

- ***For more in-depth questions related to breastfeeding and nutrition, refer to Module 2 (Breastfeeding and Infant/Child Nutrition) of the KPC_{2000+}.***

CHILD IMMUNIZATION (Questions 14–16)

The ultimate goal of immunization programs is to reduce the incidence of vaccine-preventable diseases in children. This is achieved through full immunization coverage against five diseases (poliomyelitis, diphtheria, pertussis, tetanus, and measles) by the end of the first year of life. The following indicators are based upon the two options presented in the *Rapid CATCH*.

INDICATORS

- *Full immunization coverage before the first birthday*: percentage of children age 12–23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday

  Numerator: Number of children age 12–23 months who received Polio3 (OPV3), DPT3, and measles vaccines before the first birthday, according to the child's vaccination card **(as documented in Question 15**)

  Denominator: Number of children age 12–23 months in the survey who have a vaccination card that was seen by the interviewer (response=1 'yes, seen by interviewer' for **Question 14**)

It is important that projects limit this indicator to children who have vaccination cards at the time of the interview. Some children who do not have vaccination cards may have been fully vaccinated; however, without a card, it is not possible to determine if a child was fully vaccinated *before the first birthday*. By including children who do not have cards in the denominator, and not in the numerator, a project would *underestimate* full coverage before the first birthday. This is the rationale behind limiting the indicator to card-confirmed cases.

- *Measles vaccination coverage based on maternal report*: percentage of children age 12–23 months who received a measles vaccine

Numerator: Number of children age 12–23 months with response=1 ('yes') for **Question 16**

Denominator: Number of children age 12–23 months in the survey

The above indicator, which is less stringent than the previous indicator on full coverage, is an opportunity to assess all children, whether or not they have a vaccination card. The indicator is limited to measles because the child survival field has identified measles prevention as a priority activity.

➢ ***For more in-depth questions related to Child Immunization, refer to Module 4A (Childhood Immunization) of the KPC$_{2000+}$.***

MALARIA PREVENTION (Questions 17–19)

- *Child bednet use*: percentage of children age 0–23 months who slept under an insecticide-treated[1] bednet the previous night (in malaria-risk areas only)

  Numerator: Number of children age 0–23 months with 'child' (response=A) mentioned among responses to **Question 18** AND response=1 ('yes') for **Question 19**

  Denominator: Number of children age 0–23 months in the survey

➢ ***For more in-depth questions related to malaria, refer to Module 4E (Malaria) of the KPC$_{2000+}$.***

INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESSES (IMCI) (Questions 20–23)

Two focuses of the community IMCI strategy are 1) timely caregiver recognition of signs in children that indicate the need for treatment and 2) effective home management of child illnesses. Corresponding *CATCH* indicators are presented below.

INDICATORS

- *Maternal knowledge of child danger signs*: percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment

  Numerator: Number of mothers of children age 0–23 months who report at least two of the signs listed in B through H of **Question 20**

  Denominator: Number of mothers of children age 0–23 months in the survey

[1] "Insecticide-treated" includes immersion in an insecticide solution and/or regular direct spraying.

- *Increased fluids and continued feeding:* percentage of sick children age 0–23 months who received increased fluids and continued feeding during an illness in the past two weeks

  Numerator: Number of children age 0–23 months with response=3 ('more than usual') for **Question 22** AND response=2 ('same amount') or 3 ('more than usual') for **Question 23**

  Denominator: Number of children surveyed who were reportedly sick in the past two weeks (children with any responses other than K ('none") for **Question 21**).

➢ ***For more in-depth questions related to childhood illnesses, refer to Modules 4B (Sick Child), 4C (Diarrhea), 4D (Acute Respiratory Illnesses), and 4E (Malaria) of the KPC$_{2000+}$.***

HIV/AIDS (Questions 24–25)

Widespread knowledge of ways to reduce the risk of HIV transmission is critical in thwarting the spread of HIV/AIDS.

INDICATOR

Maternal knowledge of HIV risk reduction: percentage of mothers of children age 0–23 months who cite at least two known ways of reducing the risk of HIV infection

Numerator: Number of mothers of children age 0–23 months who mention at least two of the responses that relate to safer sex or practices involving blood for **Question 25**

Denominator: Number of mothers of children age 0–23 months in the survey

➢ ***For more in-depth questions related to HIV/AIDS, refer to Module 7 (HIV/STIs) of the KPC$_{2000+}$.***

HAND WASHING (Question 26)

The promotion of hand washing and other hygiene practices are critical to the reduction of illness and death in young children.

INDICATOR

Maternal hand-washing behavior: percentage of mothers of children age 0–23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated

Numerator: Number of mothers of children age 0–23 months who mention responses B through E for **Question 26**

Denominator: Number of mothers of children age 0–23 months in the survey

- ***For more in-depth questions related to hand washing and other hygiene practices, refer to Module 1a (Household Water and Sanitation) of the KPC_{2000+}.***