Outcome Measures

Determining if Your Program Has Made a Difference
At the end of this presentation, participants will be able to:

1. Understand the difference between process & outcome evaluation
2. Describe SMART objectives
3. Understand how to detect & show changes in outcome measures
This presentation…

- Will explain what evaluation is, common terminology used, resources available
- Will not provide step-by-step instructions for evaluation process
Discussion

What is evaluation?
What is evaluation?

The process of examining a system or system component to determine the extent to which specified properties are present.
Discussion

Why should evaluation be done?
Why Evaluate?

- Because funding agencies require it!
- Determine if your program is making a difference
- Program improvement
- Best use of resources
Discussion

What do you want to know about one of your programs?
Barriers & Myths

- Evaluation is a complex science. I don’t have time to learn it!
- It’s an event to get over with and then move on
- Evaluation is a whole new set of activities—we don’t have the resources
- There is a “right” way to do outcomes evaluation. What if I don’t get it right?
Barriers & Myths, cont.

- Funders will accept or reject my outcomes plan
- I always know what my clients need, I don’t need to evaluate
- Evaluation diverts resources away from the program
- Evaluation increases the burden for program staff
- Evaluation may produce negative results and make my program look bad
Steps in Conducting Evaluation
Step 1: Assemble a team

- Planning & executing evaluation should be team effort
  - Even with external evaluator, internal staff should be involved
Step 2: Prepare for Evaluation

- Decide what to evaluate
- Develop a program model (logic model)
- State objectives in measurable terms
- Identify the context for evaluation
Step 3: Develop a Plan

- Plan is a blueprint for evaluation
- Identify data sources
- Describes the methods used to evaluate
- Explains the methods used to analyze data
Step 4: Collect Information

- Select collection procedures/instruments
- Develop collection procedures/instruments
Step 5: Analyze Information

- Organize data
- Consider analysis throughout data collection
Step 6: Prepare Report

- Comprehensive document that describes:
  - Program
  - Results of evaluation
  - Interpretation of results
Program Logic Model
Discussion

What is a logic model?
Discussion

A logic model displays the sequence of actions that describe what the program is and will do – how investments link to results.
Logic Model Diagram
Inputs

- Include resources dedicated to or used by program

- Includes, but not limited to:
  - Money
  - Staff, staff time
  - Volunteers, volunteer time

- Parent Education class example
Activities

- What the program does with inputs to fulfill its mission
- Includes, but not limited to:
  - Strategies
  - Techniques
  - Types of treatment that comprise program’s service methodology
- Homeless program example
Outputs

- Direct products of program activities
- Measured by volume of work
- Examples include:
  - Number of classes taught
  - Number of counseling sessions conducted
  - Number of participants served
- Intended to lead to desired benefits
Outcomes

- Benefits, changes for individuals or populations during, after participation in program

- May relate to:
  - Behavior
  - Skills
  - Knowledge
  - Attitudes
  - Etc.
Outcomes Example

Increase in number of children & adolescents served by local MCH agency weighing within the health range BMI of ___% & ___%
Nuts & Bolts
## Goals vs. Objectives

<table>
<thead>
<tr>
<th>Goals</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Warm and fuzzy”</td>
<td>Realistic targets for program/project</td>
</tr>
<tr>
<td>Non-specific</td>
<td></td>
</tr>
<tr>
<td>Non-measurable</td>
<td>Answers</td>
</tr>
<tr>
<td>Ex: All Kansas children will be healthy</td>
<td>Who</td>
</tr>
<tr>
<td></td>
<td>What</td>
</tr>
<tr>
<td></td>
<td>Whey</td>
</tr>
<tr>
<td></td>
<td>Why</td>
</tr>
<tr>
<td></td>
<td>To What standard?</td>
</tr>
</tbody>
</table>
SMART Objectives

- Specific
- Measurable
- Achievable
- Relevant
- Time-framed
**Specific**

- What exactly are we doing to do, with or for whom?
- Program states specific outcome
- Outcome stated in numbers, percentages, frequency, etc.
- Objective is clearly defined
Example Specific Objective

Increase the percent of pregnant women served by the local MCH agency that receives prenatal care in the first trimester of pregnancy from 75% to 80%
**Measurable**

- Is it measurable **and** can we measure it?
- Objective can be measured
- Measurement source identified
- All activities should be measurable at some level
Example Measurable Objective

Increase the percent of children and adolescents served by the local MCH agency weighing within the healthy range of body mass index (BMI) from 69% to 75% with referrals made as appropriate.
Achievable

- Can we get it done in the timeframe, for this amount of money?
- Objective/expectation must be realistic for resources available
- Resources include:
  - Time period
  - Funding available
  - Manpower available
  - Etc.
Increase the percent of pregnant women served by the local MCH agency that report discontinuation of tobacco use from 0% to 50%
**Relevant**

- Will this objective lead to the desired results?
- Outcome or results of program directly supports outcomes of agency, funder’s goal
Example Relevant Objective

Increase the percent of pregnant women served by the local MCH agency who are asked if they are using any tobacco products.
Timeframe

- When will this objective be accomplished?
- State clearly when the objective will be achieved
Example Timeframe Objective

Increase the percent of pregnant women served by the local MCH agency that receives prenatal care in the first trimester of pregnancy from 75% to 80% during SFY2007.
Process & Outcome
Objectives
3 Kinds of Objectives

- Process
- Impact
- Outcome
Process Objectives

- Increases accountability by setting specific numbers/types of activities
- Tell what you are doing and how you will do it
- Describe participants, interactions, activities
By June 2008, the community action team will train at least 15 local childcare providers on non-violent child rearing practices
Impact Objectives

- Tell how you will change attitudes, knowledge or behavior in short term
- Describe degree to which you expect this change
Impact Objective Example

At the end of the training, 10 of the 15 local childcare providers at the training will be able to identify at least 3 non-violent child-rearing practices they will use.
Outcome Objectives

- Explain long-term implications of program
- Describe expected outcome for community
- EX: By 2010, there will be a decrease in the rate of child abuse by 25% in our community
Process & Outcome Measures

- Process measures can include many aspects of your program such as:
  - Members who participate
  - Planning products
  - Media coverage
  - Financial resources
  - Services ultimately provided
  - Community actions
Outcome Objectives

- Change in behavior
  - By 2010, there will be a decrease in the rate of child abuse by 25% in our community.

- Changes in practices
  - 100% of pregnant women, infants, children and adolescents served by the MCH agency will have an identified medical home that consists of a provider as a regular source of care and an identified payor source during SFY 2007.
Stumbling Blocks

- Common problems when writing objectives include:
  - Writing an objective like an activity
  - Writing an objective like a vision
  - Writing too many objectives
Stumbling Blocks, cont.

- Unrealistic expectations
- Numbers are too small
- Can’t show effect of intervention on population served
Places to Start

The Importance of Baseline data & Where to find data
Discussion

What are some sources of data you use for evaluation?
Baseline Data

- It’s IMPORTANT
- Baseline data is basic information gathered before a program begins
  - Used later to provide comparison for assessing program
- Provides sense of where population is now
- Helps guide where program should go
Determinant Baseline Data

- Closely related to proposed program
- Example—if program objective is to:
  - Achieve 20 percent literacy
  - Train 100 teachers
  - Encourage all literacy program graduates to read
- Appropriate determinate baseline data would include:
  - Assessment of current literacy rates
  - Information on the number of trained teachers already available
Indeterminate Baseline Data

- Not directly related to objectives of program
- May provide context for program
- Indeterminate baseline data may include:
  - Average number of children per family
  - Number of schools in the area
  - Attitude of the people towards the use of the language of wider communication
Kansas Information for Communities (KIC)

- Available on-line at http://kic kdhe.state.ks.us/kic/
- Data available by county, age of mother, education, race, ethnicity, etc.
  - Birth or Pregnancy
  - Death
  - Hospital Diagnosis
  - WIC (in Process)
- Emergency Department logs from local hospitals
Kansas Information for Communities

KIC Home

The Kansas Information for Communities (KIC) system gives users the chance to prepare their own queries for vital event and other health care data. The queries designed into this system will answer many health data requests. As KIC is implemented, more data will be added to the list. KIC programs will allow you to generate your own table for specific characteristics, year of occurrence, age, rate, sex, and county.

Datasets that can be queried are: Births, Deaths, Pregnancies, Kansas Population Estimates, Hospital Discharges by Diagnosis, Hospital Discharges by Procedure, Cancer Incidence, and Kansas City Metro Area Deaths.

Please take the KIC user survey!

The Kansas Department of Health and Environment is committed to enhancing Kansas Information for Communities. Your input is helpful to identifying areas in which KIC can be improved. We don't need your name, just your thoughts on how to make our service better.

Click here to go to the survey. Thank you for your help!

For further information on how Kansas Information for Communities was created, Click here.
Birth Statistics Query

This query module enables you to create tables or maps on birth outcomes. The table query will return birth outcomes grouped by year, county, race, Hispanic origin, and marital status. The map query will produce a county map of birth outcomes. Hispanic origin has not yet been incorporated into the map query. Cells with values less than 5 will be suppressed for confidentiality.

While every effort is made to assure the KIC data summaries parallel the results in the Kansas Annual Summary of Vital Statistics, some slight differences may occur. When the age, race, county of residence or any of the birth outcomes are not stated or unknown, these values are not in a separate column. In some instances you will be able to calculate the number of not stated or unknown values by deducting the sum of all the categories of known values from the total number of births.

For further explanation of all queries, click on KIC's notes and limitations. For specific information about birth statistics queries, please read the descriptions and disclaimers on the accompanying popup page. If you have popups blocked on your browser or if the secondary page did not load automatically with this window, it can be opened by clicking here.

There are 2 options for viewing data:

Table by County

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>12</td>
<td>37</td>
<td>28</td>
</tr>
</tbody>
</table>

Map of Counties

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>22</td>
<td>20</td>
</tr>
</tbody>
</table>
### Birth Statistics Table by County

Allows you to generate a table for specific birth outcomes categorized by year of birth, age, race and county. You may specify the row and column variables and you may then specify the specific outcome variables to which the row and column variables will apply.

#### Step 1

Choose which variables you want in your table.

**Rows:**
- Year
- Age Group
- Race
- Marital Status
- Hispanic Origin
- Outcome
- Counties

**Columns:**
- Year
- Age Group
- Race
- Marital Status
- Hispanic Origin
- Outcome
- Counties

#### Step 2 - Optional

You can restrict your search by limiting certain variables.

- Hispanic
- Non-Hispanic
- Not Stated
- All

**Age of Mother:**
- All

**Marital Status:**
- All

**Race of Mother:**
- All

#### Step 3

You can limit your search by the outcome of the birth.

- Low Birth Weight
- Very Low Birth Weight
- Premature
- Smoking during Pregnancy
- Normal Birth Weight

#### Step 4

Select the county or counties that you wish to include.

- State of Kansas
  - Allen County
  - Anderson County
  - Atchison County
  - Barber County

Note: To select multiple counties, pick one with your mouse, then hold the control key down and pick the additional counties.

#### Step 5

Which year(s) would you like to include in your query?

- 1990
- 1991
- 1992
- 1993
- 1995
- 1996
- 1997
- 1998
- 1999
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005

**All Years** | **Clear All**

Finally, you can pick how you want to view the data:

- Frequencies only
- Frequencies and Percents By Column
- Frequencies and Percents By Row
- Frequencies and Rates

[Submit Query]
### Vital and Health Statistics Data

Provided on: Tuesday, April 17, 2007 by Kansas Information for Communities.
Center for Health and Environmental Statistics
Kansas Department of Health and Environment

#### Birth Statistics for the State of Kansas

**Outcomes: Smoking during Pregnancy**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>10 to 14</th>
<th>15 to 17</th>
<th>18 to 19</th>
<th>20 to 24</th>
<th>25 to 29</th>
<th>30 to 34</th>
<th>35 plus</th>
<th>All Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>Number</td>
<td>Rate</td>
<td>Number</td>
<td>Rate</td>
<td>Number</td>
<td>Rate</td>
<td>Number</td>
<td>Rate</td>
</tr>
<tr>
<td>2005</td>
<td># @ @</td>
<td>205</td>
<td>18.1</td>
<td>794</td>
<td>27.6</td>
<td>2,744</td>
<td>24.1</td>
<td>1,639</td>
</tr>
</tbody>
</table>

**Footnote**

# Indicates Confidentiality Rule
Rates Per 100
# Indicates Numbers Below 6
## Death Statistics Table by County

This system allows you to generate a table for specific causes of death, categorized by Year, Age Group, Sex, Race, and County. You may specify the row and column variables and you may then specify the specific outcome variables to which the row and column variables will apply.

### Step 1
Pick which variables you want in your table.

#### Rows:
- Year
- Race
- Sex
- Age Group
- Cause of Death
- Ethnicity
- Counties

#### Columns:
- Year
- Race
- Sex
- Age Group
- Cause of Death
- Ethnicity
- Counties

### Step 2 - Optional
You can restrict your search by limiting certain variables.

- Race:
  - All

- Sex:
  - Both Sexes

- Age:
  - All

Note: If you picked one of these variables as a row or column then selecting it here will do nothing.

### Step 3
Which years do you wish to see data for?

<table>
<thead>
<tr>
<th></th>
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</tr>
</tbody>
</table>

- All Years
- Clear All
- 2004

### Step 4
You can also limit your search by the cause of death. After you get a table for a certain cause of death, you will be allowed to "drill down" on the data, which means that you can look at the more specific causes of death that make up these broader topics.

<table>
<thead>
<tr>
<th>Total for all causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Septicemia</td>
</tr>
<tr>
<td>Syphilis</td>
</tr>
<tr>
<td>Other infections and parasites</td>
</tr>
<tr>
<td>Cancer</td>
</tr>
<tr>
<td>Diabetes</td>
</tr>
</tbody>
</table>

### Step 5
Select the county or counties that you wish to include.

- State of Kansas
- Allen County
- Anderson County
- Atchison County
- Barber County

Note: To select multiple counties, pick the first county with your mouse, then hold the control key down and pick the additional counties.

### Step 6
Choose how you would like to view the data.

- Frequencies only
- Frequencies and Percent by Column
- Frequencies and Percent by Row
- Frequencies and Rates

### Step 7
These menus pertain only if rates are chosen in Step 6.

- Crude Rates
- No Confidence Intervals

Note: If you choose to view rates, you may view either crude or age adjusted rates. Confidence intervals are

- Submit Query
**Vital and Health Statistics Data**

Provided on: Tuesday, April 17, 2007 by Kansas Information for Communities.
Center for Health and Environmental Statistics
Kansas Department of Health and Environment

### Death Statistics for the State of Kansas

<table>
<thead>
<tr>
<th>Year</th>
<th>Under 15</th>
<th>15 to 24</th>
<th>25 to 44</th>
<th>45 to 64</th>
<th>65 and over</th>
<th>All ages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Rate</td>
<td>Number</td>
<td>Rate</td>
<td>Number</td>
<td>Rate</td>
</tr>
<tr>
<td>2004</td>
<td>415</td>
<td>73.5</td>
<td>312</td>
<td>74.5</td>
<td>1,033</td>
<td>138.5</td>
</tr>
<tr>
<td></td>
<td>138.5</td>
<td>18,121</td>
<td>5,110.6</td>
<td>867.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Footnote</th>
<th>Rates Per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- [KIC User Survey](#) | [KIC Home](#) |
- [Birth Query](#) | [Cancer Query](#) | [Death Query](#) | [Discharge Query](#) | [Population Query](#) | [Pregnancy Query](#) |
- [Users Guide](#) | [Notes and Limitations](#) | [E-Mail KIC Staff](#) | [Center for Health and Environmental Statistics](#) |
- [Office of Health Assessment](#) | [Office of Vital Statistics](#) | [KDHE Home](#) |
**Vital and Health Statistics Data**

Provided on: Tuesday, April 17, 2007 by Kansas Information for Communities.
Center for Health and Environmental Statistics
Kansas Department of Health and Environment

<table>
<thead>
<tr>
<th>Year</th>
<th>Under 1 Number</th>
<th>Under 1 Rate</th>
<th>1 - 4 Number</th>
<th>1 - 4 Rate</th>
<th>5 - 14 Number</th>
<th>5 - 14 Rate</th>
<th>Total for Selection Number</th>
<th>Total for Selection Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>284</td>
<td>729.2</td>
<td>59</td>
<td>39.4</td>
<td>72</td>
<td>19.2</td>
<td>415</td>
<td>73.5</td>
</tr>
</tbody>
</table>

[Rotate] [Download]

Footnote | Rates Per 100,000

KIC User Survey | KIC Home
Birth Query | Cancer Query | Death Query | Discharge Query | Population Query | Pregnancy Query
Users Guide | Notes and Limitations | E-Mail KIC Staff | Center for Health and Environmental Statistics
Office of Health Assessment | Office of Vital Statistics | KDHE Home
Hospital Discharge Statistics by Diagnosis

This query generates custom tables for hospital discharges. Tables will display patient counts, rates, or length of stay (total or average) in each cell. Available row/column variables are: Year, Age Group, Sex, Race, Pay Source, Principal Diagnosis, and County. Because all diagnosis data have been reprocessed, queries run before March 1, 2007, will produce different results. Pay source information has also been categorized differently.

For further explanation of all queries, click on KIC’s notes and limitations. For more information about hospital discharge statistics queries, please read the accompanying popup page. If you have popups blocked on your browser or it did not load automatically with this window, you can open it by clicking here.

There is currently one option for querying data:

Creating a table query allows you to select your row and column variables and display the results. These changes have not yet been applied to the map query. This query has been taken off line.
Vital and Health Statistics Data

Provided on: Tuesday, April 17, 2007 by Kansas Information for Communities.
Center for Health and Environmental Statistics
Kansas Department of Health and Environment

<table>
<thead>
<tr>
<th>Hospital Discharge Statistics for the State of Kansas, by Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>16. Injury and poisoning</strong></td>
</tr>
<tr>
<td><strong>Age Group</strong></td>
</tr>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>2005</td>
</tr>
</tbody>
</table>

Rotate Download

<table>
<thead>
<tr>
<th>KIC User Survey</th>
<th>KIC Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Query</td>
<td>Cancer Query</td>
</tr>
<tr>
<td>Users Guide</td>
<td>Notes and Limitations</td>
</tr>
<tr>
<td>Office of Health Assessment</td>
<td>Office of Vital Statistics</td>
</tr>
</tbody>
</table>
Guidelines for Successful Evaluation
Invest in Planning

- Single most important step in evaluation process
- Determine what information is desired about program
- Consider what information is desired about program impact on participants
Integrate into Ongoing Activities

- Integrating evaluation into ongoing program activities increases efficiency, benefits
- Ideally, plan program & evaluation at same time
- Common stumbling block is evaluating after program is over or as added activity
Participate in Evaluation

- Participation of program manager is critical
  - For both internal, external evaluations
- Increases value staff place on evaluation if manager is involved
- Increases sense of ownership for program staff to be involved in evaluation
Involve Program Staff

- Involve as many program staff as feasible
- Involve program staff as early as possible
- Staff experience is rich source of information for evaluation
  - Ensure that evaluation is appropriate to program participants
- Increases sense of ownership of program, evaluation
Be Realistic about Burden on Staff

- Can be heavy burden, even with external evaluator
- Common for agencies, evaluators to underestimate time commitment
- Focusing on key questions can help reduce burden
Cultural, Ethical Issues

- Be aware of cultural, ethical issues when evaluating
- Consider your responsibilities to the participants, community
- Ensure evaluation is relevant to, respectful of cultural backgrounds of participants
  - Includes informing participants they are taking part in evaluation
  - Ensure confidentiality of participants
Resources

- CDC’s Program Evaluation training http://www.cdc.gov/nchs/products/training/phd-osp.htm
- KU’s Community Tool Box: http://ctb.ku.edu
- Pennsylvania St U Evaluation Resources http://www.extension.psu.edu/evaluation/
Resources, cont.

- SAMHSA Intro to Eval
  [http://pathwayscourses.samhsa.gov/eval201/eval201_intro_pg1.htm](http://pathwayscourses.samhsa.gov/eval201/eval201_intro_pg1.htm)

- U of Wisconsin Outcome Eval Resources
  [http://wphf.med.wisc.edu/how_to_apply/evaluationResources.php](http://wphf.med.wisc.edu/how_to_apply/evaluationResources.php)

- Neighborhood Works Evaluation Map
Discussion Time!

We’ll use this time to discuss your experiences, concerns, and triumphs with evaluation.