CDC's Framework for Program Evaluation in Public Health

Step 4. Gather Credible Evidence

Using surveillance data in your evaluation

Linda Leary

Field Services Evaluation Branch

Lori Armstrong

Surveillance, Epidemiology, and Outbreak Investigations Branch

Surveillance Team

Evaluation is an Essential Organizational Practice

Program evaluation is not practiced consistently across program areas, nor is it well-integrated into the day-to-day management of most programs.

Program evaluation is necessary to fulfill CDC's operating principles for public health, which include:

- Using science as a basis for decision-making and action;
- Expanding the quest for social equity;
- Performing effectively as a service agency;
- Making efforts outcome-oriented; and
- Being accountable

Framework for program evaluation in public health

http://www.cdc.gov/eval/framework.htm

Six Steps in Program Evaluation

1. Engage stakeholders
2. Describe the program
3. Focus the evaluation design
4. Gather credible evidence
5. Justify conclusions
6. Ensure use and share lessons learned

webinar site:

http://www.cdc.gov/nchstp/tb/Program_Evaluation/default.htm

Overview

- Define surveillance data and their use
- Using surveillance data to determine evaluation focus and develop evaluation questions
- Using surveillance data as a source of credible evidence
- Issues and concerns on data quality and completeness, and what you can do about it

How can a local TB program use surveillance data to conduct evaluations?

1. The national TB program requires each grantee to write an evaluation plan by Dec. 16, 2005.

   – Surveillance data can help ensure the right evaluation questions are identified, and

   – Surveillance data can be used to set meaningful benchmarks for progress.

How can a local TB program use surveillance data to conduct evaluations?

2. **TB surveillance data can also be used as one source of credible evidence to compare:**

- **Local objectives against national objectives;**
- **Local area objectives within a state; and**
- **Look at the trend of data over a period of time.**

Surveillance Definition

- Ongoing systematic collection, analysis, and interpretation of outcome-specific data.

- For use in planning, implementation, and evaluation of public health practice.

Uses of Surveillance Data

Public health surveillance is an important part of the information feedback loop that links the public, health care providers, and health care agencies. These data can be useful in posing questions for your evaluation design, such as:

- How to identify people and groups of people at risk for disease?
- How to prioritize health needs in persons at higher risk for disease exposure or infection accompanied by a plan for follow-up?
- How to incorporate surveillance data as a source of information for program planning and evaluation?
- How to use indicators to determine if a condition exists or certain results have been achieved?

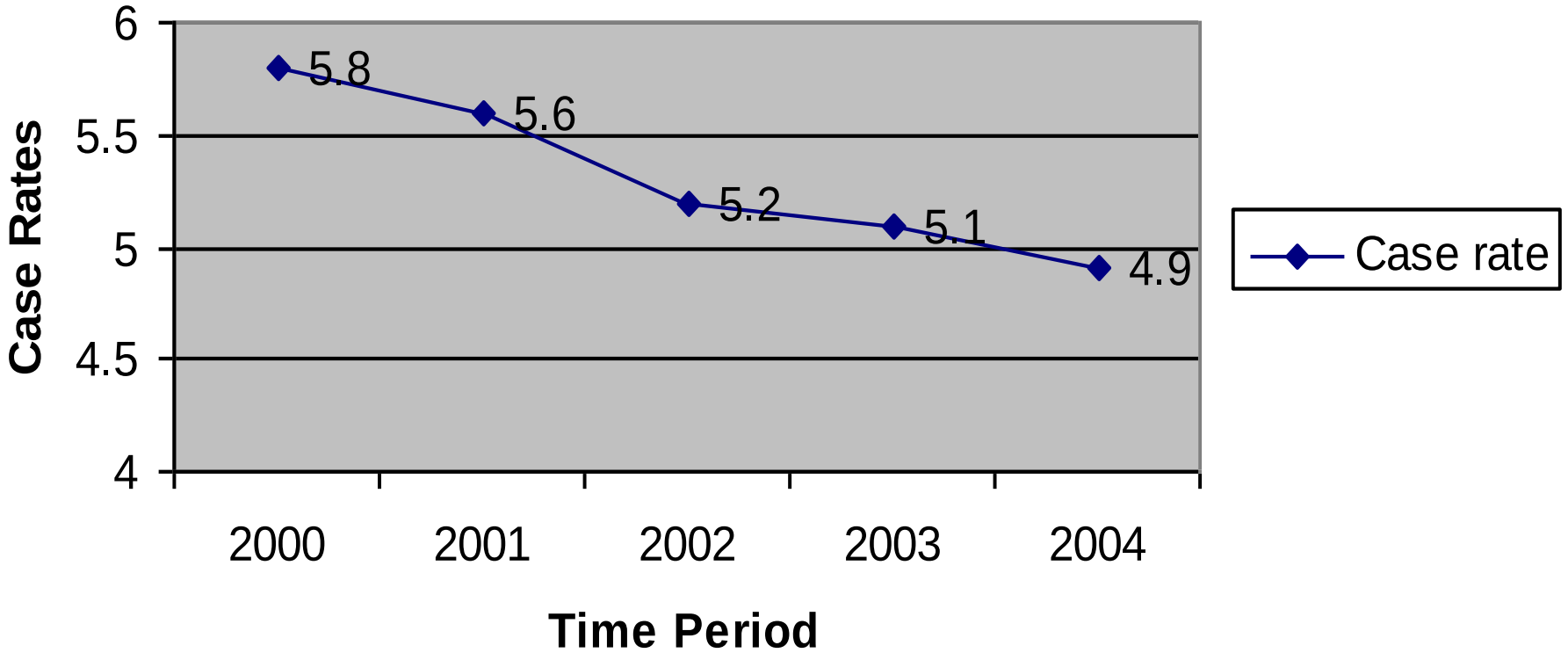
Indicators

Indicators are at the heart of a performance monitoring system.

- They provide a basis for collecting credible evidence that is valid and reliable for evaluation.
- Describes progress in achieving its objectives.
- Tells us what to measure to determine whether the objective has been achieved.

National TB Program Objectives	National TB Program Indicators
• Increase % of TB pts who complete TB treatment within 12 mos.	• Completion of therapy rates
• Increase % of TB pts with initial positive cultures who also are tested and receive drug susceptibility results	• Percent of cultured confirmed drug cases with susceptibility results
• Decrease the TB case rate in reporting areas	• TB case rate
• At least 90% of core RVCT data are complete.	• Completeness of RVCT reporting

Tuberculosis Cases, Rate per 100,000, United States, 2000-2004



Race/Ethnicity – Year 2002

	State A		State B		
	No. Cases	Rate	No. Cases	Rate	US Rate**
Hispanic	2	2	16	23	10
Black, Non-Hispanic (NH)	1	4	16	5	13
Asian, Pacific Islander, Native Hawaiian, NH	137	22	14	39	28
White, NH	6	2	100	3	2
Other	2		0		
Total	148	11.9	146	3.6	5.2

* Rate per 100,000

How do you calculate the TB Case Rate?

- **RVCT variable item #6 – month year counted**
  - Data is obtained from the RVCT.

    [The health department is responsible for: counting TB case by month year, verifying the case as TB, and including it in the official case count.]
  - The national annual surveillance report publishes the total number of TB cases by state.

- **Population estimates from the US Census Bureau**
  - http://www.census.gov/popest

Calculation of TB Case Rate Year 2000 – State X

- Population of **State X** = 554,817
- # of TB Cases for Year 2000 **State X** = 42

42 / 554,817 x 100,000 = 7.6 per 100,000

How do you calculate the TB Case Rate?

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Guidance documents in measuring outcomes

- Using the RVCT as an Evaluation Tool
- Exercises from the Program Manager's Course.
- Request copies of draft documents: lsl1@cdc.gov

Who is OTIS?

The Online TB Information System (OTIS)

- A query-based public use data set of national TB surveillance data from 1993 through 2003
- It includes the 50 states, District of Columbia, and Puerto Rico
- Maintains confidentiality by de-identifying, aggregating, or suppressing data
- Performs queries and *ad hoc* cross-tabulations on 22 variables from the RVCT
- Supplements annual surveillance report
- "Housed" on WONDER server
- http://wonder.cdc.gov/tb

OTIS: current status

- Each state signed a data release agreement form to accept or refuse participation in OTIS.
- States reviewed OTIS for several months
- Data were checked and changes made based on your suggestions
- Release date: November 2005
- Anticipate 2004 data will be available March 2006

TB OTIS Request

The Online Tuberculosis Information System (OTIS) contains information on verified tuberculosis (TB) cases reported to the Centers for Disease Control and Prevention (CDC) by state health departments, the District of Columbia and Puerto Rico from 1993 through 2003. These data were extracted from the CDC national TB surveillance system. See OTIS Technical Reference for more details. More information.

1. Select and order results:

Send ?

Group Results By	Age Groups, Broad
And By	State
And By	Sex
And By	Homeless, Past Year
And By	HIV Status

Notes:
1. Don't group by both **State** and **MSA**.
2. If grouping by **State**, **MSA** or **Age Groups**, select the matching list in section 2 or 3.

2. Select location and time:

Send ?

Note: Locations can be picked from either the **State** or **MSA** lists, but not both. Be sure the button for **State** or **MSA** is set to your choice.

State

- The United States
- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut

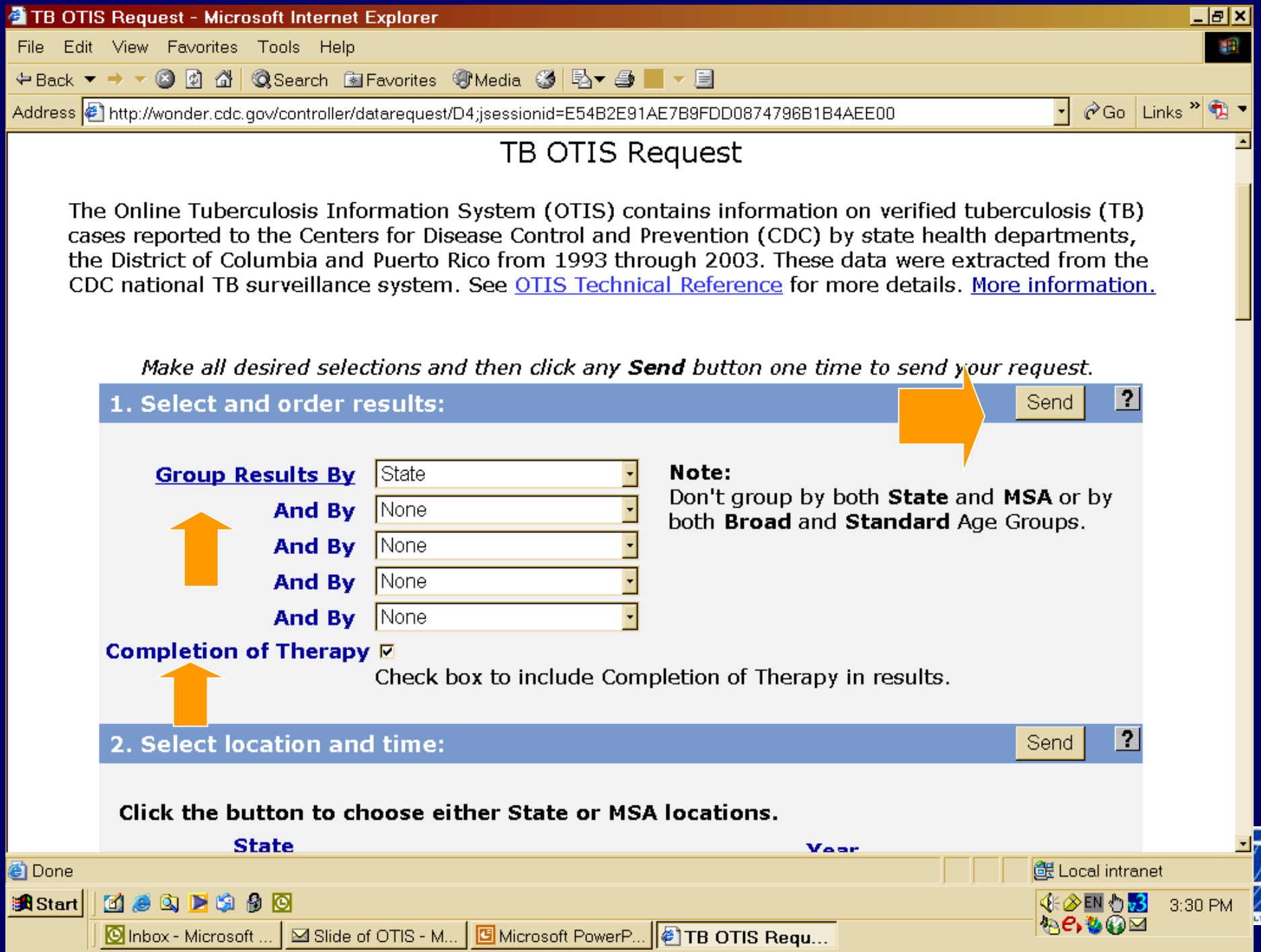
MSA

- The United States
- Akron, Ohio
- Albany-Schenectady, NY
- Albuquerque, NM
- Allentown, Pa
- Ann Arbor, Mich
- Atlanta, Ga
- Austin, Tex

Year

- All Years
- Last 5 Years
- 1993
- 1994
- 1995
- 1996
- 1997
- 1998

Other Notes:
1. "The United States" in the **State** list does not include Puerto Rico. Select everything but "The United States" to use all the states plus Puerto Rico.
2. Year selection can be "All Years" alone, "Last 5 Years" alone, or any combination of individual years.


TB OTIS Request - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://wonder.cdc.gov/controller/datarequest/D4;jsessionid=E54B2E91AE7B9FDD0874796B1B4AEE00
Go Links
TB OTIS Request
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Make all desired selections and then click any Send button one time to send your request.
1. Select and order results:
Send
Group Results By
State
And By
None
And By
None
And By
None
And By
None
Note:
Don't group by both State and MSA or by both Broad and Standard Age Groups.
Completion of Therapy
Check box to include Completion of Therapy in results.
2. Select location and time:
Send
Click the button to choose either State or MSA locations.
State
Year
Done
Local intranet
Start
Inbox - Microsoft ...
Slide of OTIS - M...
Microsoft PowerP...
TB OTIS Requ...
3:30 PM

TB OTIS Results

This page contains the results of your query, additional notes and query description, and has options for changing the results table and exporting the results.

More Information Printing Tips

Export Results

Top Options Notes Description

State	Count	Percent	Completion of Therapy
Alabama	264	1.66%	78.48%
Alaska	54	0.34%	87.76%
Arizona	289	1.81%	81.75%
Arkansas	162	1.02%	91.97%
California	3,329	20.88%	79.64%
Colorado	138	0.87%	93.65%
Connecticut	121	0.76%	71.56%
Delaware	33	0.21%	93.33%

TB OTIS Chart - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media

Address http://wonder.cdc.gov/controller/datarequest/D4;jsessionid=E54B2E91AE7B9FDD0874796B1B4AEE00 Go Links

CDC Home | Search | Health Topics A-Z

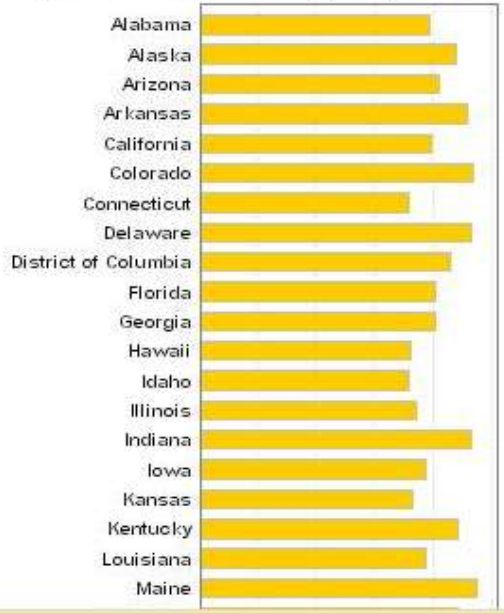
CDC WONDER

WONDER Home | Search | FAQ | Utilities | Help | Contact Us

Request | Table | Map | Chart (Tabs show current contents)

TB OTIS Charts

Completion of Therapy By State



Done

Local intranet

Start

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TB OTIS Map - Microsoft Internet Explorer

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Back Search Favorites Media

Address http://wonder.cdc.gov/controller/datarequest/D4;jsessionid=E54B2E91AE7B9FDD0874796B1B4AEE00 Go Links

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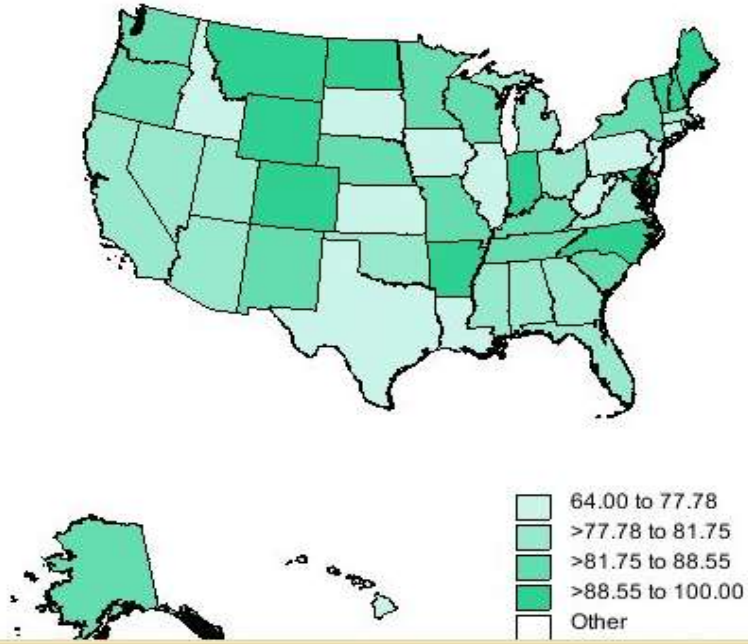
Request | Table | Map | Chart (Tabs show current contents)

TB OTIS Maps

Completion of Therapy for The United States



Done Local intranet

Start Inbox - Microsoft ... Slide of OTIS - M... Microsoft PowerP... TB OTIS Map -... 3:33 PM

Issues of Data Completeness and Quality

Data Completeness

- TIMS data are evaluated for overall completeness each month
- The goal for percent completeness of each RVCT (TIMS) variable is based on GPRA goals or on tradition
- Each RVCT variable has a completeness goal, usually 95% to 99%

Missing and Unknown Reports (MUNK)

- MUNK Reports provide information on RVCT (TIMS) variables that are below the completeness goal
- MUNK reports are sent to each TB program or recording area 1 to 3 times/year and to the FSEB Consultant for that area.

Missing and Unknown Variables

2004 RVCT Data

RVCT Variable	Completeness Goal (%)	Average % completeness among all reporting areas (%)
TB skin test	95	93.1
Year of previous TB	99	98
Month/year arrived in US (FB)	95	86.3
Excess alcohol use	99	96.6
injecting drug use	99	96.5
non-injecting drug use	99	96.1

Data Quality

- High quality RVCT data are essential for proper interpretation of data for TB control programs

- Inconsistent or inaccurate data can lead to inappropriate associations and unrecognized biases in research

- Examples of miscoded information
  - People from India were coded as American Indian - (reclassified to Native American/Alaskan Native in 2003)
  - Young children were coded as alcoholics or IDUs - (Children born to IDUs and alcoholics are not drug abusers or alcoholics)
  - People born in the Philippines or Japan were coded as “Native Hawaiian and Other Pacific Islander”

Native Hawaiian and Other Pacific Islander Miscoded information

In preparation for the 2005 World TB Day MMWR article, we found 37 foreign-born TB cases who were incorrectly coded as “Native Hawaiian and Other Pacific Islander”

Incorrect NH/OPI cases were coded in TIMS as foreign born and from other countries such as Philippines, Japan, Laos, Vietnam, India, Somalia, Iran, Ecuador, Brazil

TB cases by Asian, NH/OPI race, United States, 2004 (provisional data)

	Uncorrected		Corrected*	
Race	N	Rate/100,000	N	Rate/100,000
Asian	3,222	26.7	3,235	26.9
Native Hawaiian and Other Pacific Islander	103	25.9	66	16.6

Native Hawaiian and Other Pacific Islander rate was not reported in the World TB Day MMWR. The count was included in the category

"Other/Unknown"

Native Hawaiian and Other Pacific Islander: Correct Definition

- First introduced as a race code in 2003
- TIMS Race and Ethnicity Classification (9/4/2002) lists all the islands classified as Other Pacific Islands and countries that are considered Asian.
- Examples
  - **NH/OPI**: Carolinian, Chamorro, Fijian, Guamanian, Kiribati, Papua New Guinean, Polynesian, Saipanese, Samoan, Solomon Islander, Hawaiian Islands
  - **Asian**: Filipino, Bhutanese, Asian Indian, Singaporean, Taiwanese, Okinawan, Nepalese, Hmong, Iwo Jiman

Summary

1. Follow the six steps in the CDC Framework in conducting your evaluation.

2. Use surveillance data as one source of credible evidence to use in evaluation. Also, consider using OTIS as another source of gathering information.

3. Strive for data quality. Quality refers to the appropriateness and integrity of information used. Good decisions are based on accurate data.

Contacts

- Linda Leary 404.639.8342 lsl1@cdc.gov
- Lori Armstrong 404.639.8860 lra0@cdc.gov

QUESTIONS

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