Disseminating Vital Statistics

Workshop on Vital Statistics for North and Central Asian Countries
Bishkek, Kyrgyzstan, 7-11 October 2019
Session objectives

By the end of the session, participants will be able to:
• Learn how to identify and communicate to their audience
• Understand the different types of analytical reports
• Identify a single overriding communication objective
Identifying Your Audience and Introduction to Data Communication
Learning Objectives

• Become familiar with a communications plan process
• Understand and be able to identify three major types of stakeholders in health communication
• Learn to adapt communications to audience type
Communications Plan Process

• Who are the stakeholders (audience) of the communication?
• What is the objective of the communication?
• What is the communication channel?
• How will the communication be disseminated?
Stakeholders for Communication

- Policymakers/government officials/CSO*
- Researchers
- Public

*CSO: Civil Society Organization
Stakeholders for Communication

Policymakers/government officials/CSO*
- Technical proficiency: Medium

Researchers
- Technical proficiency: High

Public
- Technical proficiency: Low

*CSO: Civil Society Organization
Policymakers/government officials/CSO*

Technical proficiency: Medium

- Use as evidence for legal change or need
- Use as evidence for resource allocation
- Use to support public health actions

Researchers

Technical proficiency: High

- Generate complex analyses of health issues
- Lecture/teach health concepts
- Write research articles

Public

Technical proficiency: Low

- Use as guide for health decisions
- Use for general awareness of issues

*CSO: Civil Society Organization
Communication Objectives

- **Policymakers/government officials/CSO***
  - Motivate resources; inform on critical health issues

- **Researchers**
  - Share data for further analysis

- **Public**
  - Communicate basic health information

*CSO: Civil Society Organization*
**Communication Channels**

- **Policymakers/government officials/CSO***
  - Motivate resources; inform on critical health issues
  - Health report; policy brief

- **Researchers**
  - Share data for further analysis
  - Datasets; query system

- **Public**
  - Communicate basic health information
  - Press release

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*CSO: Civil Society Organization*
Dissemination of Communication

- Policymakers/government officials/CSO*
  - Motivate resources; inform on critical health issues
    - Health report; policy brief
      - Print; online
- Researchers
  - Share data for further analysis
    - Datasets; query system
      - Online system
- Public
  - Communicate basic health information
    - Press release
  - Journalists

*CSO: Civil Society Organization
Analytical Reports
Types of Analytical Reports

• Annual reports
• Short reports
• Special topics
• Bulletins/updates
• Policy briefs
Annual Reports

SUMMARY OF VITAL STATISTICS 2017
THE CITY OF NEW YORK

The Conquest of Pestilence in New York City
...as shown by the death rate as recorded in the official records of the Department of Public Health and Mental Hygiene.

VITAL STATISTICS OF INDIA
BASED ON THE
CIVIL REGISTRATION SYSTEM
2016

OFFICE OF THE REGISTRAR GENERAL, INDIA
MINISTRY OF HOME AFFAIRS
VITAL STATISTICS DIVISION
CIVIL REGISTRATION SYSTEM SECTION
2/A MAN SINGH ROAD
NEW DELHI-110011

INSURE REGISTRATION OF EVERY BIRTH AND DEATH

Sources: New York City Department of Health and Mental Hygiene; Office of Registrar General India
What to Include in an Annual Report

• Key indicators for the year
• Comparisons by age and sex
• Trends over time
• Geographic patterns
• Comparisons between key social and economic groups
• Information on limitations of the data
Steps to Creating an Annual Report

1. Identify target audience and report purpose
2. Define key indicators
3. Define main analyses
4. Perform analyses and assess findings
5. Decide which findings to include
6. Decide which findings require tables, visualizations, or text
7. Outline and write report
Other Types of Reports
Special Topics

• More in-depth reports focusing on one specific topic/health issue using vital statistics data

• Includes
  • More detailed analysis
  • Concrete conclusions and recommendations
ANALYSIS OF THE CAUSES OF MORTALITY IN PERU, 1986-2015
District Health Barometer 2012/13
FOCUS ON
MATERNAL MORTALITY
Short Reports

- Provides information from vital statistics in a concise format
- Not comprehensive
- Avoids the formality of an annual report
- Less than 10 pages
Mortality in the United States, 2014

Sherry L. Murphy, B.S.; Kenneth D. Kochanek, M.A.; Jiaquan Xu, M.D.; and Elizabeth Arias, Ph.D.

Key findings

Data from the National Vital Statistics System, Mortality
- Life expectancy for the U.S. population in 2014 was unchanged from 2013 at 78.8 years.
- The age-adjusted death rate decreased 1.9% to 724.6 deaths per 100,000 standard population in 2014 from 731.9 in 2013.
- The 10 leading causes of death in 2014 remained the same as in 2013. Age-adjusted death rates significantly decreased for 5 leading causes and significantly increased for 4 leading causes.
- The infant mortality rate decreased 2.3% to a historic low of 5.82 infant deaths per 100,000 live births. The 10 leading causes of infant death in 2014 remained the same as in 2013.

This report presents 2014 U.S. final mortality data on deaths and death rates by demographic and medical characteristics. These data provide information on mortality patterns among U.S. residents by such variables as sex, race and ethnicity, and cause of death. Information on mortality patterns is key to understanding changes in the health and well-being of the U.S. population. Life expectancy estimates, age-adjusted death rates by race and ethnicity and sex, the 10 leading causes of death, and the 10 leading causes of infant death were analyzed by comparing 2014 final data with 2013 final data (1).

Keywords: life expectancy • leading cause • death rates • National Vital Statistics System

How long can we expect to live?

Life expectancy at birth represents the average number of years that a group of infants would live if the group was to experience, throughout life, the age-specific death rates present in the year of birth. In 2014, life expectancy at birth was 78.8 years for the total U.S. population—81.2 years for females and 76.4 years for males (Figure 1). Life expectancy at selected ages, by sex: United States, 2013 and 2014
Policy Brief

• Short (2-4 pages)
• Presents evidence of a problem and evaluates policy solutions
• Usually provides recommendations for policy change based on data analysis and review of scientific literature
• Targeted at policymakers
Why Develop a Policy Brief?

Policy-makers have little time, and often do not have advanced technical skills.

- Translates data and scientific information into understandable format
- Engages stakeholders who can act or advocate for changes needed to address health problems
- Communicates the importance of policy development or changes to decision makers
SAfAIDS Policy Brief: Malawi
Preventing Unsafe Abortions among Young People in Malawi
The Role of Effective Policies
Digital Applications for Data Access
Learning Objectives

By the end of the session, participants will:

• Be familiar with options to make vital statistics data available on the internet
• Understand the pros and cons of each option
Detailed Tables and Query Systems
Audience

- Researchers
- Government officials
Detailed Tables

• Pre-selected tables
• Provide aggregated birth and death data by
  • Time
  • Demographic variables
• UN recommendations: Principles and Recommendations for a Vital Statistics System
• Countries should develop their own list
UN Recommendations - Births

B. Minimal list of tabulations *

LIVE BIRTHS (LB)

| LB-1. | Live births by place of occurrence and sex of child | 108 |
| LB-2. | Live births by place of occurrence and place of usual residence of mother | 109 |
| LB-3. | Live births by place of registration, month of occurrence and month of registration | 110 |
| LB-4. | Live births by month, place of occurrence and place of usual residence of mother | 111 |
| LB-5. | Live births by age, place of usual residence and marital status of mother | 112 |
| LB-6. | Live births by age of father | 113 |
| LB-7. | Live births by place of usual residence, age and educational attainment of mother | 114 |
| LB-8. | Live births by educational attainment and age of mother and live-birth order | 115 |
| LB-9. | Live births by place of usual residence and age of mother, sex of child and live-birth order | 116 |
| LB-10. | Live births by live-birth order and interval between last and previous live-births to mother | 117 |
| LB-11. | Live births by ethnic and/or national group and place of usual residence and age of mother | 118 |
| LB-12. | Live births by place of usual residence and age of mother and legitimacy status | 119 |
| LB-13. | Live births by place of occurrence, site of delivery and attendant at birth | 120 |
| LB-14. | Live births by site of delivery, attendant at birth and birth weight | 121 |
| LB-15. | Live births by birth weight and place of usual residence and educational attainment of mother | 122 |
| LB-16. | Live births by gestational age and birth weight | 123 |
| LB-17. | Live births by birth weight, place of usual residence of mother and month in which prenatal care began | 124 |
| LB-18. | Live births by age and place of usual residence of mother and month in which prenatal care began | 125 |
| LB-19. | Live births by live-birth order, place of usual residence of mother and month in which prenatal care began |
## UN Recommendations - Deaths

### Deaths (DE)

| DE-1. | Deaths by place of usual residence and sex of decedent | 126 |
| DE-2. | Deaths by place of occurrence and place of usual residence and sex of decedent | 127 |
| DE-3. | Deaths by month and place of occurrence and place of usual residence of decedent | 128 |
| DE-4. | Deaths by place of registration, month of occurrence and month of registration | 129 |
| DE-5. | Deaths by place of occurrence and site of occurrence | 130 |
| DE-6. | Deaths by place of usual residence, age and sex of decedent | 131 |
| DE-7. | Deaths by age, sex, place of usual residence and marital status of decedent | 132 |
| DE-8. | Deaths by place of usual residence, age, sex and educational attainment of decedent | 133 |
| DE-9. | Deaths by sex, cause of death, place of usual residence and age of decedent | 134 |
| DE-10. | Deaths by month of occurrence and cause of death | 135 |
| DE-11. | Deaths by place of occurrence, sex of decedent and type of certification | 136 |
| DE-12. | Maternal deaths by cause of death and age of woman |  |
Make Tables Available for Download

- Tables can be created in Word or Excel
  - Excel: provide .csv files
  - Word: PDF with hyperlinks
## Pros and Cons

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>More detailed data</td>
<td>Tables may not meet the needs of users</td>
</tr>
<tr>
<td>Quality of data analyses is controlled</td>
<td>Data in pre-selected tables could be cumbersome to use</td>
</tr>
<tr>
<td>Low-tech solution</td>
<td></td>
</tr>
</tbody>
</table>
Query Systems

• Web interface where user selects what information they need
• Based on user selection, data tables and/or charts are provided by website
• Available analyses can be predefined
Example – New York City

Step 1: Selection

EpiQuery Mortality Module

To begin, select a TOPIC and YEAR of interest and click on the SUBMIT button.

- TOPIC:
  - Mortality - regardless of cause
  - Mortality - by leading causes
  - Mortality - by select causes
  - Premature mortality - regardless of cause
  - Premature mortality - by leading causes

- YEAR:
  - 2014
  - 2013
  - 2012
  - 2011
  - 2010

Click here for more information about this dataset

Source: https://a816-healthpsi.nyc.gov/epiquery/VS/index.html
Example – New York City

Step 2: Preliminary Results and additional analyses

<table>
<thead>
<tr>
<th>Number of Deaths Reported</th>
<th>Death Rate per 1,000 Pop.</th>
<th>Age-Adjusted Death Rate per 1,000 Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>53,034</td>
<td>6.2</td>
<td>5.8</td>
</tr>
</tbody>
</table>

Additional analyses
Example – New York City

Step 3: Final results by age and location - Chart

Mortality
New York City, 2014

Age-adjusted Death Rate per 1,000 population

Female Male

Bronx Brooklyn Manhattan Queens Staten Island

5.2 4.8 4.2 3.9 5.2 7.9

6.7 5.9 5.6 7.4
How to Make Available

• **Step 1**: Determine what data you want to make available
  • Who are the potential users?
  • What are their needs?

• **Step 2**: Work with vendor to help create/adapt software package
## Pros and Cons

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data users can determine what data they need</td>
<td>More expensive and difficult to implement</td>
</tr>
<tr>
<td>Easier to use than line-level data for users who just need some basic statistics</td>
<td>Systems that are slow or cumbersome will discourage use</td>
</tr>
<tr>
<td>Analyses can be quality controlled</td>
<td>Still need to determine what information to make available</td>
</tr>
</tbody>
</table>
Portals and Dashboards
User controls in portals

Metric Selection

Filter
- person
- place
- time

Drill-down
- sub-groups
- sub-areas
- shorter time periods
Main causes of death

1. Select the demographic variables in the orange box in the following order: gender, age, and Federation Unit (FU).
2. Select from the three available metrics for the blue box graphs: mortality rate per 100,000 population, number of deaths, or proportional mortality (percentage).
3. Click Update to update the view.

Download data

Multiple filter combinations

Different Measures

Data-driven elements

Source: Vital Strategies Portal Development Platform
Exercise

• Discuss in groups (5 – 10 minutes)
  • Would you want to make vital statistics data available on the web in your country?
  • How would you do this?
  • Who would be your main audience?
  • What are the key challenges?
  • What would be the main advantages?
Communicating to Lay Audiences
Learning Objectives

• Understand audience expectations and biases as well as overcoming them

• Understand the components of the basic communication model

• Understand elements of lay-friendly data communication
Three Key Audience Expectations

1. Why should I believe the information?

2. What is the rationale for recommendations?

3. What actions should I take?

## Audience Tendencies

<table>
<thead>
<tr>
<th>Difficulty understanding statistics</th>
<th>Resistance to persuasion</th>
</tr>
</thead>
<tbody>
<tr>
<td>80% vs 0.08</td>
<td>Defensive processing</td>
</tr>
<tr>
<td>0.08 per 1,000</td>
<td>Prior information</td>
</tr>
<tr>
<td>Risk, prevalence, rate</td>
<td>Inherent bias</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Propensity for scanning materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal interest</td>
</tr>
<tr>
<td>Conclusions</td>
</tr>
</tbody>
</table>
Basic Communication Model

Source: Adapted from National Cancer Institute.
Making Data Talk: A Workbook . 2011
Overcoming Tendencies and Biases

• Use **brief** and **concise** language
• Present data **transparently** and **completely**
• Address mistaken lay audience beliefs directly
  • Address uncertainty

• Ensure **usability**
  • Highlight boxes and summaries
  • Use familiar types of data like frequencies and round numbers
  • Provide contextual information

• Prepare a **single overriding communication objective (SOCO)**

Single Overriding Communication Objective (SOCHO)

- Single overriding communication objective (SOCHO) for each communication product
  - Clear, concise, and simple talking points about health data
  - Overall, what is the main message?

- Developed by Centers for Disease Control and Prevention to inform communications process

- Four questions to be considered prior to forming a communication
Single Overriding Communication Objective (SOCO)

1. What are the three most important facts about the topic you need to convey?

2. Who is the main audience?

3. What is the ultimate message/action the audience needs to understand/take?

4. Who is the primary point of contact for further information?

Source: US Centers for Disease Control and Prevention (CDC)
Integrating Vital Statistics Data into Press Releases
What is a Press Release?

- Communication directed at the news media
  - Announcing a newsworthy event
  - Targeting journalists, editors, radios, social media
  - Creating open communication with the media
Elements of Good Press Releases

Health Department Announces Drug Overdose Deaths Decreased in 2018 for the First Time in Eight Years Following Historic Investments

There were 1,444 drug overdose deaths in New York City in 2018, 38 fewer deaths than in 2017, and a rate decrease of 3%. However, declines were not evenly distributed by age, borough or race/ethnicity.

For the second year in a row, fentanyl was the most common substance — involved in nearly two thirds of drug overdose deaths.

First quarter of 2019 shows 331 overdose deaths, which represents a decrease of 45 fatalities from the same time period last year and a slight drop from the final quarter of 2018.

As part of HealingNYC, the City continues to fund effective treatment and overdose prevention efforts and support communities most affected by the epidemic.

August 26, 2019 — After seven consecutive years of increasing drug overdose deaths, the Health Department today announced a decrease in the number and rate of overdose deaths from 2017 to 2018, but cautioned the epidemic is not over. There were 1,444 overdose deaths in 2018 — **38 fewer deaths compared with 2017** (PDF).

“The decrease in drug overdose deaths is promising, but far too many New Yorkers are still dying,” said Health Commissioner Dr. Oxiris Barbot. “We are closely monitoring the trends of the epidemic as they evolve and responding to up ticks in emergency department visits and deaths with targeted strategies and community engagement. We remain firmly committed to expanding life-saving services and caring for New Yorkers who use drugs.”

- Attention grabbing headline
- First paragraph gets to the point
- Includes data
- Includes quotes
- Includes contact information
- Provides access to more information

Sources: The Huffington Post, 8 Tips for Writing a Great Press Release, 2012; New York City Department of Health and Mental Hygiene, 2019
Acknowledgements

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