

# EVALUATING COMMUNICATION STRATEGIES OF SURVEILLANCE REPORTING

Asthma Prevention and Control Program

Michigan Department of Health and Human Services

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# BACKGROUND

## Michigan Asthma Prevention & Control Program (APCP)

- Past
  - Surveillance- Phase I (1998 CDC Grant)
  - Partnerships-Phase II
  - Interventions
  - Evaluation
- Continuously founded by the CDC since 2001
- Present- Phase 5
  - Infrastructure
    - Leadership
    - Partnerships
    - Communication
    - Surveillance
    - Evaluation
  - Services
  - Health Systems
- APCP develops a variety of surveillance reports, including
  - infographics,
  - PowerPoint presentations,
  - web-based tools,
  - factsheets, and
  - surveillance briefs.

# EVALUATION PURPOSE

- understand the most effective methods of sharing information
- find ways to improve these surveillance resources

# STAKEHOLDERS

## State Coalitions

- Asthma Network of West Michigan\*
- MI Air MI Health

## Educational Institutions

- University of Michigan\*
- Michigan State University\*

## Government Agencies

- Michigan Department of Environmental Quality\*
- Michigan Department of Health and Human Services\*

## Healthcare Providers

- Blue Cross and Blue Shield of MI\*
- Molina Healthcare\*

## Non-profit Organizations

- CLEAR Corps Detroit\*
- American Lung Association\*
- Asthma and Allergy Foundation of America- MI Chapter
- Michigan Environmental Council \*

\* Selected Participants

# EVALUATION DESIGN

## Evaluation questions:

- 1) What is the **most frequently accessed** resource?
- 2) What are the **most useful** resources?
- 3) How can the resources be **improved**?
- 4) How can the **content** of the resources be **improved**?

Collect **cross-sectional** data from **multiple sources**

- Survey Monkey Poll
- Focus groups
- Site visit traffic

# SURVEY MONKEY POLL

## Questions

- ❖ 1) How likely are you to **use information** from this product?
- ❖ 2) How likely are you to **disseminate this product**?
- ✓ 3) What do you think is the **best feature** (check all)?
- 4) Please **explain** more about why you chose the feature(s) you listed above.
- ✓ 5) What feature **needs improving** (check all)?
- 6) Please **explain** how you think the feature(s) listed above could be improved.
- ❖ 7) What is your **overall satisfaction** with the product?
- 8) What is your **overall impression** of the product?

## Methods

### ❖ Scale

- 1 (Very unlikely/Unsatisfied)
- 5 (Very likely/ Satisfied)

### Free Response

### ✓ Categories (Check all):

- The length of the product
- The statistical content
- The graphs and figures
- The readability
- Other (please specify)

# FOCUS GROUPS

## Questions

- 1)Of the products we sent out to you, or a product released in the past, which product was your **favorite** and **why**?
- 2)Of the variety of products you have seen from MDHHS which is your **least preferred** method of surveillance reporting?
- 3)What is your **ideal format** for future surveillance products from MDHHS?
- 4)What is the product that you **use most**, why and how was it used?
- 5)Do you **distribute** MDHHS surveillance products? If so, who do you typically distribute them to?
- 6)What **additional surveillance resources** would you like to receive from MDHHS?
- 7)Is there anything else you would like to say about how surveillance reporting **can be improved**? Or **better communicated**?

## Methods

- 5 Groups
- 2-5 Participants/group
- 1hr Conference call
- Interview questions emailed prior to call

# HOSPITAL SURVEILLANCE BRIEF

**MDHHS** Michigan Asthma Hospitalization Surveillance Brief August 2015

**Background:**  
Asthma hospitalization is an indicator of uncontrolled asthma. With regular visits to a primary care physician and asthma specialist, long-term asthma control medication use, avoidance of environmental triggers, and an Asthma Action Plan, asthma hospitalizations can usually be avoided. Calculating asthma hospitalization rates can provide information on which populations are at highest risk for uncontrolled asthma. In addition, analyzing Intensive Care Unit (ICU) use can be used to help understand which hospitalized asthma patient populations were in severe condition on admission or had become severe during hospitalization.

**Methods:**  
Using the Michigan Inpatient Database (MIDB), collected by the Michigan Health and Hospital Association (MHHA), and yearly bridged-race population estimates provided by the National Vital Statistics System maintained by the Centers for Disease Control and Prevention, age-adjusted asthma hospitalization rates from 2002-2013 were calculated for Michigan across different demographics and counties. In addition, ICU usage statistics were calculated from the 2011-2013 asthma hospitalization records. The MIDB is a voluntary survey system of every hospital discharge from almost all (98%) of Michigan's acute care hospitals and of discharges of Michigan residents from acute care hospitals in contiguous states. In this brief, an asthma hospitalization was defined as a hospitalization for which the principal discharge diagnosis was asthma (ICD-9-CM 493.XX).

**Results:**  
**Geography:** In 2011 through 2013, the asthma hospitalization rate in Michigan was 13.3 per 10,000 people. The total number of asthma hospitalizations in Michigan from 2011-2013 was 40,851, for an average of 13,617 per year. Asthma hospitalizations and hospitalization rates have declined 24.7% from 16,572 (16.6 per 10,000 people) in 2003 to 12,837 (12.5 per 10,000 people) in 2013 (Figure 1).  
Five counties had rates significantly higher than the 2011-2013 state rate: Wayne, Saginaw, Genesee, Monroe, and Ingham (in descending order; Table 1).

County	Rate per 10,000 people (95% CI)
Michigan	13.3 (13.1-13.4)
Wayne	26.4 (26.0-26.9)
Saginaw	24.1 (22.8-25.4)
Genesee	18.2 (17.4-18.9)
Monroe	15.1 (14.0-16.2)
Ingham	15.1 (14.2-16.0)

**Figure 1: Michigan Age-Adjusted Asthma Hospitalization Rate by Year, 2003-2013**

Year	Rate per 10,000 People
2003	16.6
2004	16.2
2005	16.8
2006	16.0
2007	15.5
2008	16.2
2009	16.8
2010	15.5
2011	14.5
2012	13.8
2013	12.5

Intended to provide summary of data analysis to a professional audience

## Results

### Best features:

- Brief single page document (front/back)
- Provides **methods and citations**

### Improvement ideas:

- Provide **less text** and more graphs & charts
- **Organize** information better
- Use more common **language**

# ASTHMA HOSPITALIZATIONS IN MICHIGAN INFOGRAPHIC

Intended to distribute to general public

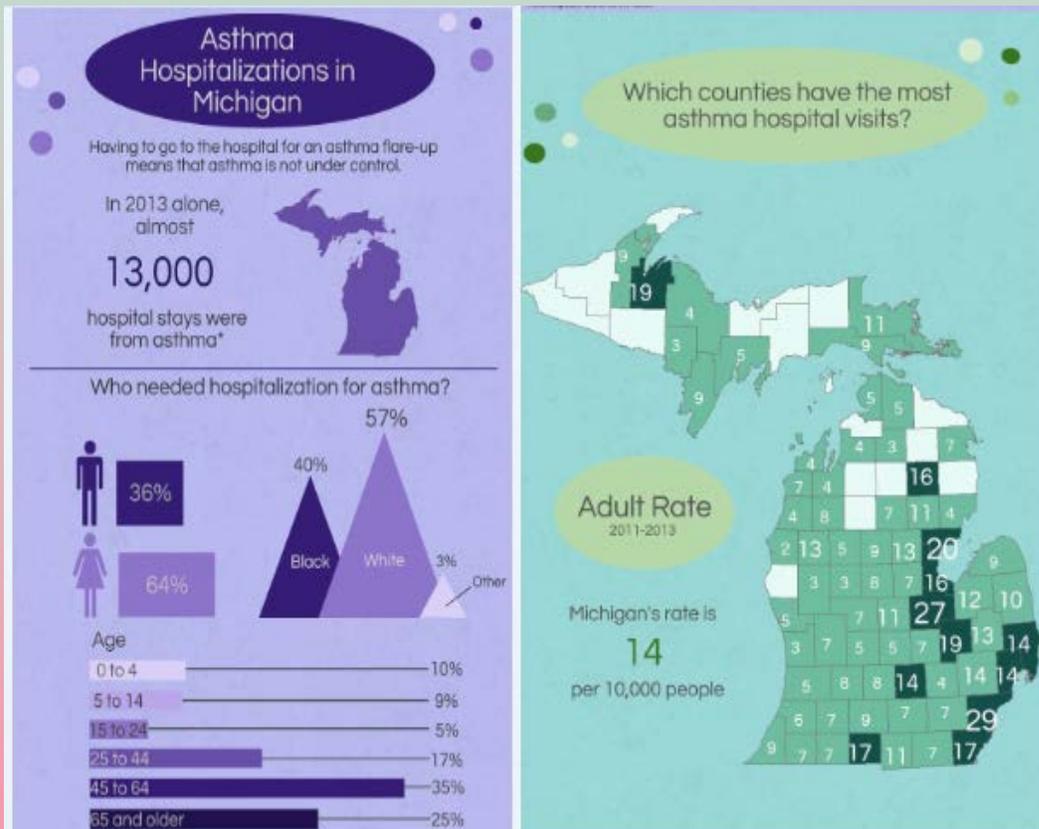
## Results

Best features:

- Visual
- Compact

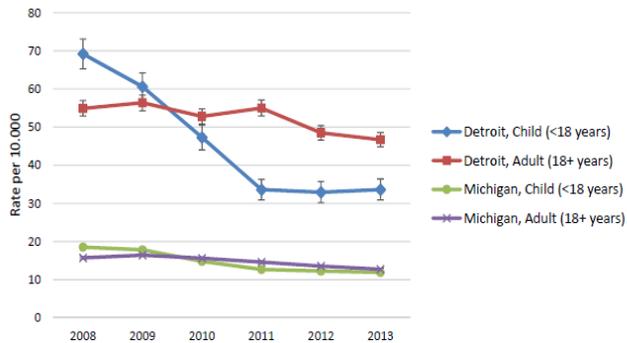
Improvement ideas:

- Present statistics and graphs using simplified formats
- Cite sources of the data
- Provide more information (national rates)



# DETROIT: THE CURRENT STATUS OF THE ASTHMA BURDEN

## 6. Rates<sup>1</sup> of Asthma Hospitalization<sup>2</sup> by Age Group, Detroit and Michigan, 2008-2013



- In Detroit, the rate of adult asthma hospitalizations surpassed the rate among children in 2010; in Michigan, adult rates first rose above child rates in 2011.

- In 2013, the rate of asthma hospitalizations among Detroit children was 33.6 per 10,000. Among adults, the rate was 46.7 per 10,000.

- The asthma hospitalization rate for children in Detroit was almost three times the rate in Michigan as a whole. The asthma hospitalization rate for adults in Detroit was almost 3.7 times the rate in Michigan as a whole.

- Between 2008 and 2013, asthma hospitalization rates among children in Detroit and in Michigan decreased, with decreases of 35.6 and 6.6 per 10,000, respectively. Among adults, these rates also decreased in Detroit and in Michigan, with decreases of 8.2 and 3.0 per 10,000, respectively.

### Data Notes:

Source: Michigan Inpatient Database, 2008-2013, MDHHS

1. Age-adjusted to the 2000 US Standard Population

2. Asthma as primary diagnosis, ICD-9-CM: 493.XX

Intended to serve as source of statistics, graphs and charts for partners in PowerPoint format

## Results

### Best features:

- Very comprehensive
  - Data by counties & zip codes
- Provides methods and data citations

### Improvement ideas:

- Shorten length (44 page document)

# DISPARITIES IN MICHIGAN'S ASTHMA BURDEN

**DISPARITIES IN MICHIGAN'S ASTHMA BURDEN**

Michigan is proud to have made strides to improve asthma health in our communities, but significant disparities still exist in the asthma burden among different racial, gender, and socioeconomic populations in our state. These differences are influenced by multiple factors: access to health care, genetics, environments, and knowledge of asthma control. Efforts to reduce the burden of asthma across the state and improve the health of all Michiganders must address these differences.

**Racial and Gender Disparities in Michigan's General Population**

**Asthma Hospitalization**

- Asthma hospitalization rates for Black children and adults are more than three times the rates for White children and adults.
- Male children are hospitalized for asthma at a rate 37% higher than female children.
- Female adults are hospitalized for asthma 2.2 times as often as male adults.

**Asthma Hospitalization Rates, by Race and Age, Michigan, 2011-2013**

Age Group	White	Black
Children	7.7	30.1
Adults	9.4	41.0

**Asthma Urgent Visits**

- Two times as many female adults than male adults visited the emergency department (ED) or urgent care two or more times in the past 12 months.
- More female children than male children visited the ED or urgent care two or more times in the past 12 months, 27.1% and 15.1%, respectively.
- Black adults had significantly higher prevalence of ≥2 emergency asthma visits than White adults.

**Prevalence (%) of People with Asthma with 2 or more Visits to the Emergency Department (ED) or Urgent Care in the Past 12 Months, by Gender, Michigan, 2011-2013**

Age Group	Female	Male
Children	27.1	15.1
Adults	10.0	5.7

**Asthma Mortality**

- Asthma deaths for Black people occur at a rate 3.2 times that of White people.
- Overall, asthma mortality rates in Michigan have almost decreased by half since 1990, but significant disparities still exist.
- For both Black people and White people in Michigan, the rate of asthma death is higher among adults than among children.

**Asthma Mortality Rates, by Race, Michigan 2011-2013**

Race	Rate per 1,000,000
White	7.5
Black	23.8

Intended to provide information to general public

## Results

Best features:

- “Succinct” (4 page document)
- Well organized, clear & meaningful titles and subheadings
- Many graphs and tables with clear descriptions
- Provides definitions
- Provides citations and methods of data analysis

Improvement ideas:

- Comparison to **national rates**

# MOST FREQUENTLY ACCESSED RESOURCE

## Website traffic

	Number of Site Visits & Downloads (Jan- May 2016)		
Website	Michigan.gov/Asthmaepi	Getasthmahelp.org	Total
Hospitalization Surveillance Brief	34	154	188
Asthma Hospitalizations in Michigan Infographic	98	605	703
Detroit: The Current Status of the Asthma Burden	89	307	396
Disparities in Michigan's Asthma Burden	46	474	520

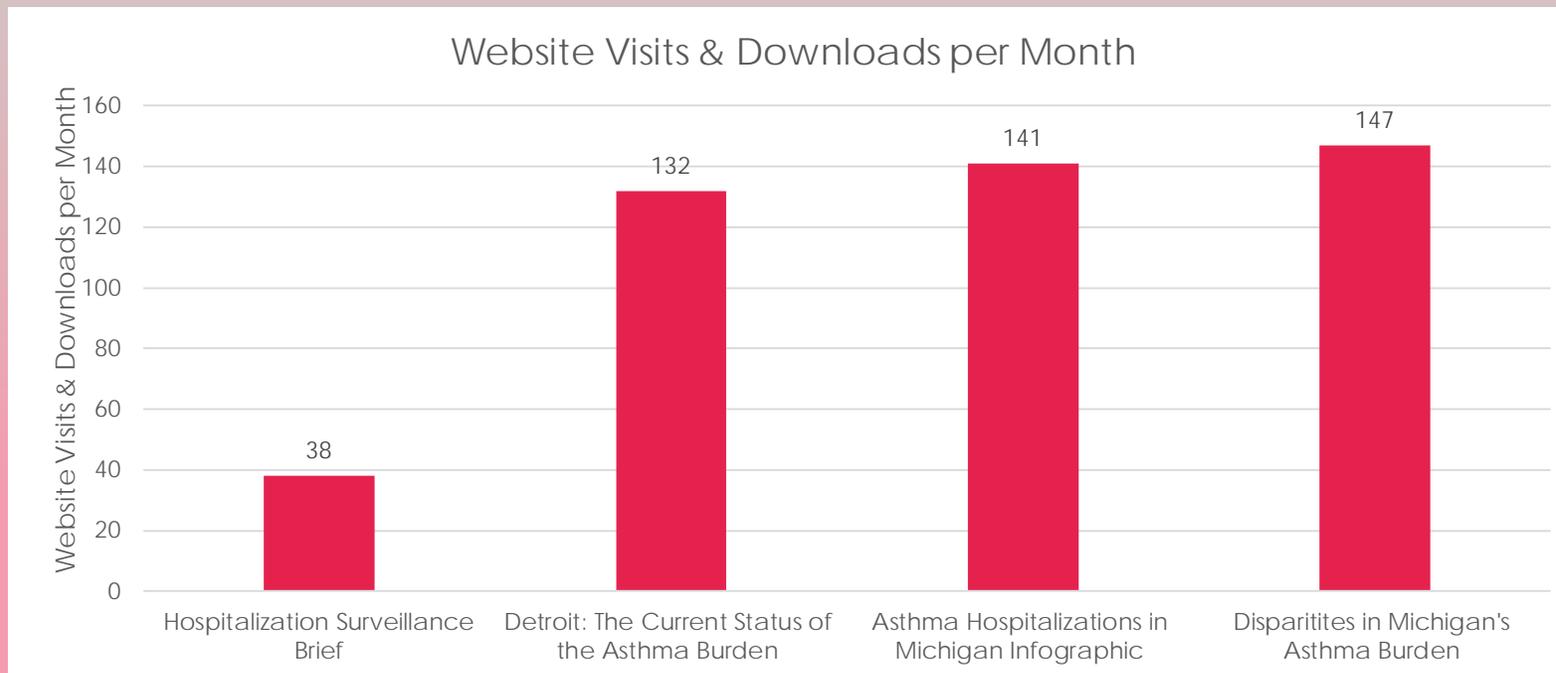
# EVALUATION RESULTS

Site visit traffic, survey monkey poll, and focus group feedback all agree:

**Most useful resource:** Disparities in Michigan's Asthma Burden

**Ideal format to distribute:** A well designed infographic

**Potential resource:** Detroit the Current Status of the Asthma Burden



# RECOMMENDATIONS

- Keep intended target audience in mind during the design process of these documents
  - 4 page document is optimal for the length
- Include methods and data sources
- Use simple easy to understand charts and graphs
- Provide clear description of charts and graphs
- Organize documents with clear and effective headings and titles

# CONCLUSIONS

- Important to evaluate effectiveness/use of resources every few years
- Engage a variety of stakeholders in the evaluation process
- If possible collect data from multiple sources
  - Quantitative
  - Qualitative- include a variety of questions
    - Use clear and specific wording
    - Also provide free space for comments

# NEXT STEPS

- Consult the Steering Committee
- Consider designing a new Infographic
- Consider the use of focus groups and surveys to improve documents during the design process in the future

# CONTACT INFORMATION

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