



*Asthma Surveillance in DC
Emergency Departments and Hospitals*

December 14, 2017

Outline

- Methods
- Hospitals
- Data from 2010-2015
 - Pediatric - 0-17 years
 - All visits
 - DC zip codes only
 - Adult - 18-64 years
 - All visits
 - DC zip codes only
 - Senior Data - Over 65 years
 - All visits
 - DC zip codes only

Methods

- DC DOH supported data collect since 2005.
- Data received from DC Hospital Association, provided by Truven Health Analytics.*
- ED Visit dataset includes “treat-and-release” visits. ED visits that resulted in hospital admission are included only in the Hospital Discharge dataset.
- Hospital Discharge dataset includes all hospital admissions, regardless of whether visits began in the ED, including transfers.
- Based on ICD-9 codes 493.xy and ICD-10 codes J45.xy,** including cases with primary, secondary, or tertiary diagnosis of asthma.

* Data on ED visits to United Medical Center received separately.

** ICD-10 conversion occurred October 2015.

Hospitals

- Children's National
- George Washington University Hospital
- Georgetown University Hospital
- Howard University Hospital
- Providence Hospital
- Sibley Memorial Hospital
- United Medical Center
- Washington Hospital Center

2010-2015

PEDIATRIC DATA

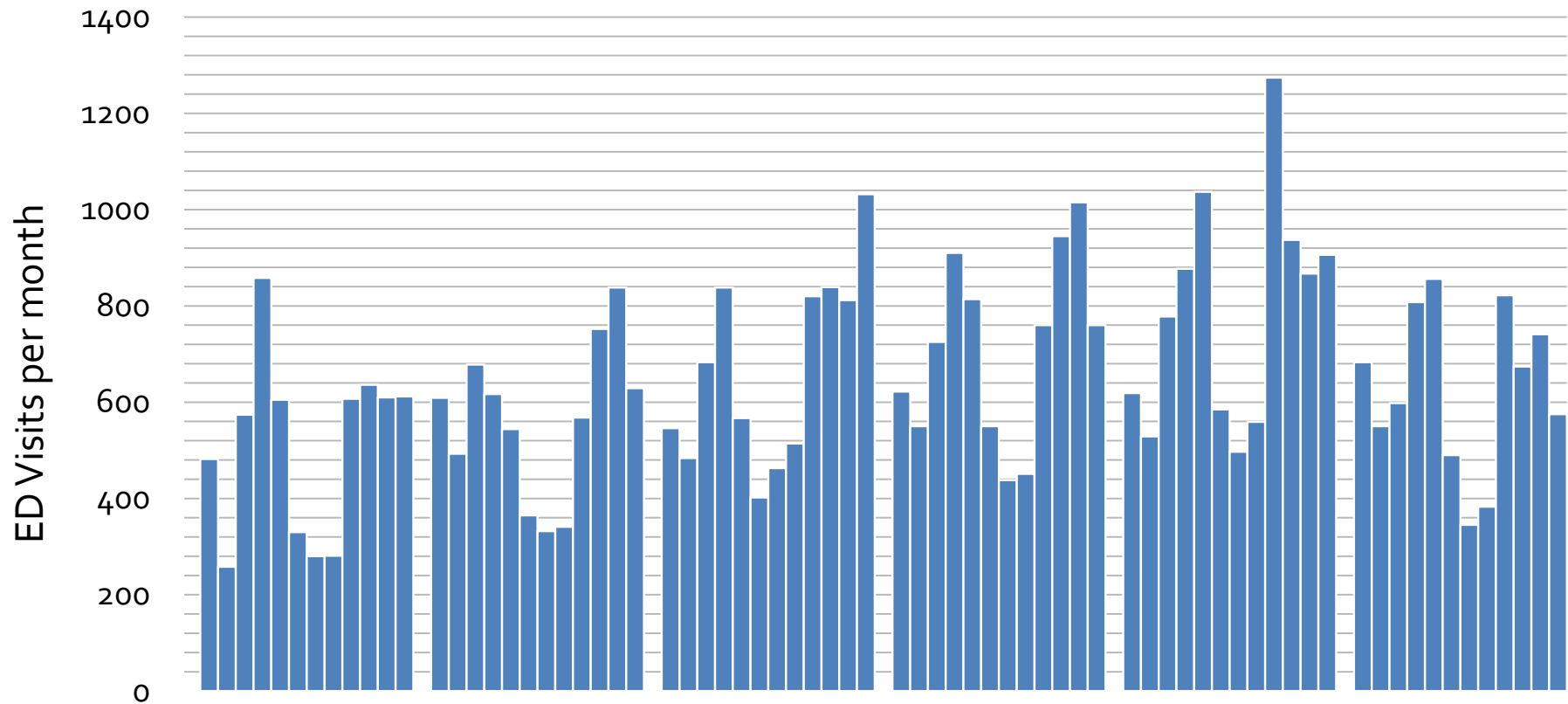
December 14, 2017



Children's National.

ED Visits for Asthma per Month

Age 0-17y



Year

2010

2011

2012

2013

2014

2015

Total

6133

6766

8000

8540

9465

7525

Mean

511

564

667

712

789

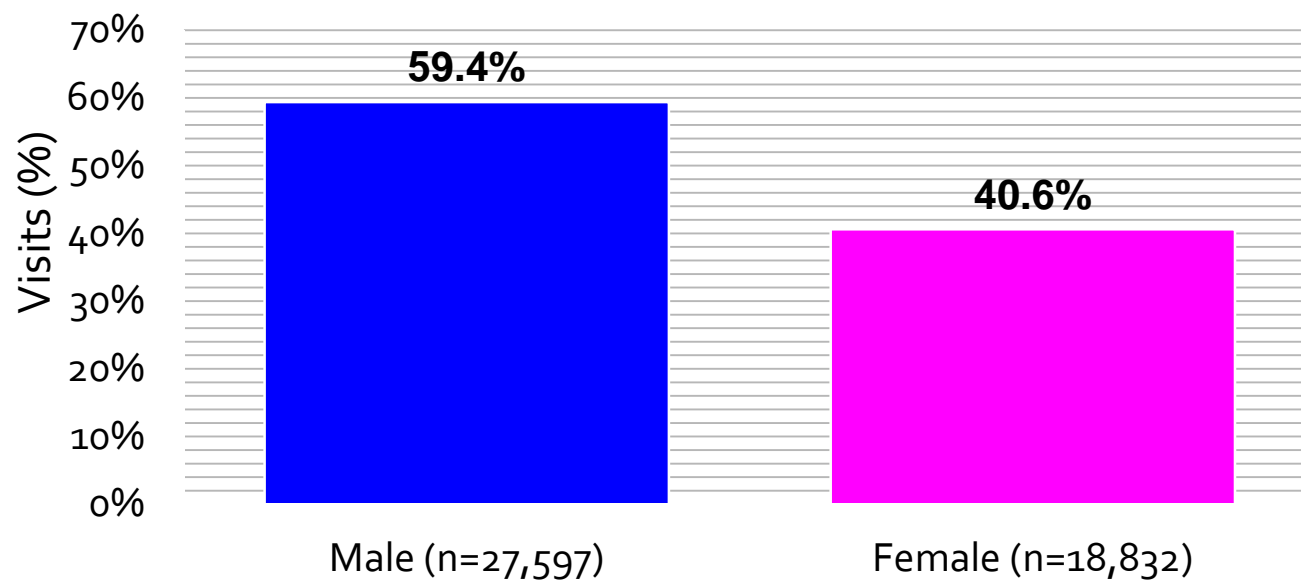
627

(/month)

Gender Distribution of ED Visits

Age 0-17y

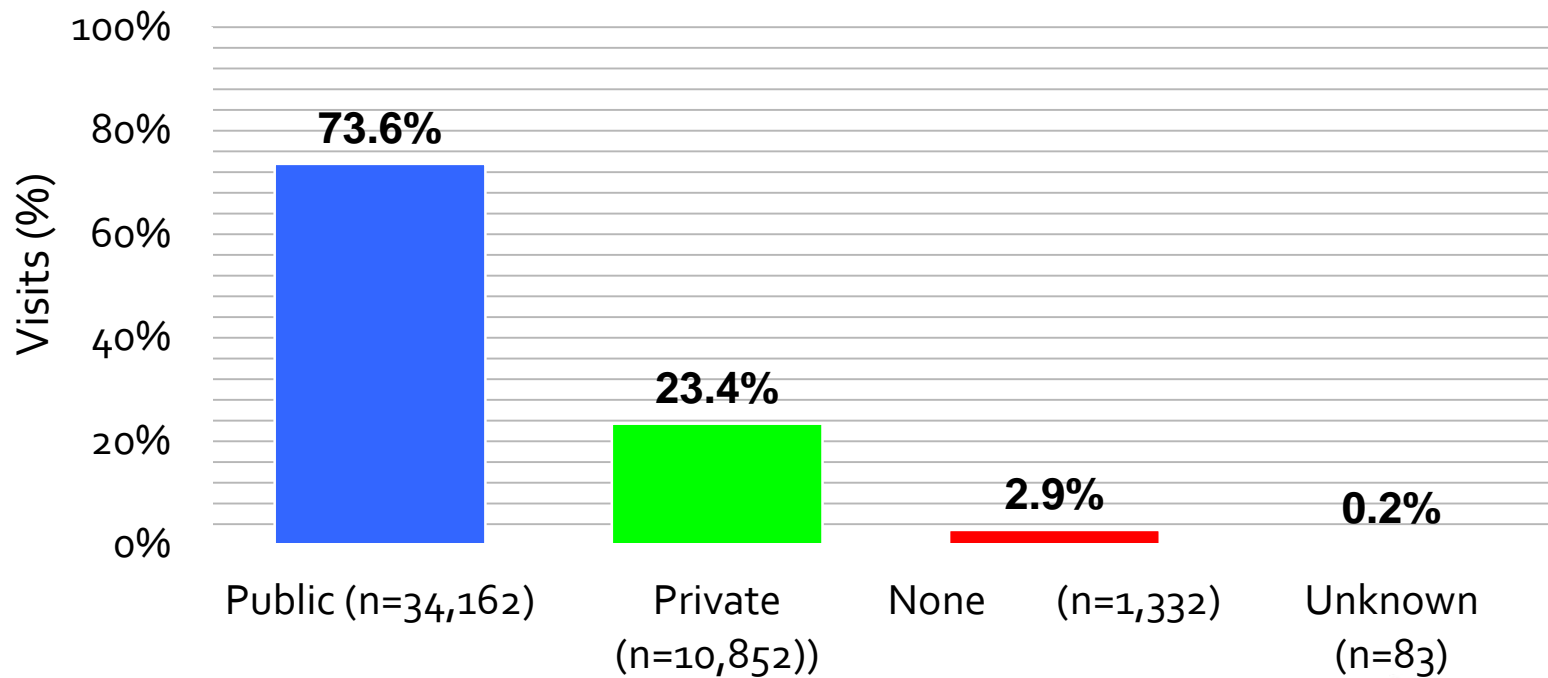
2010-2015 (n=46,429)



Insurance Type of ED Visits

Age 0-17y

2010-2015 (n=46,429)



ED Visits and Admissions for Asthma

Age 0-17y

| | ED Visits | Admissions | % Admitted * |
|--------------|---------------|---------------|--------------|
| 2010 | 6,133 | 1,687 | 21.6% |
| 2011 | 6,766 | 1,700 | 20.1% |
| 2012 | 8,000 | 1,858 | 18.8% |
| 2013 | 8,540 | 1,699 | 16.6% |
| 2014 | 9,465 | 1,566 | 14.2% |
| 2015 | 7,525 | 1,648 | 18.0% |
| Total | 46,429 | 10,158 | 18.0% |

* Percentage of total visits (ED visits and hospital admissions)

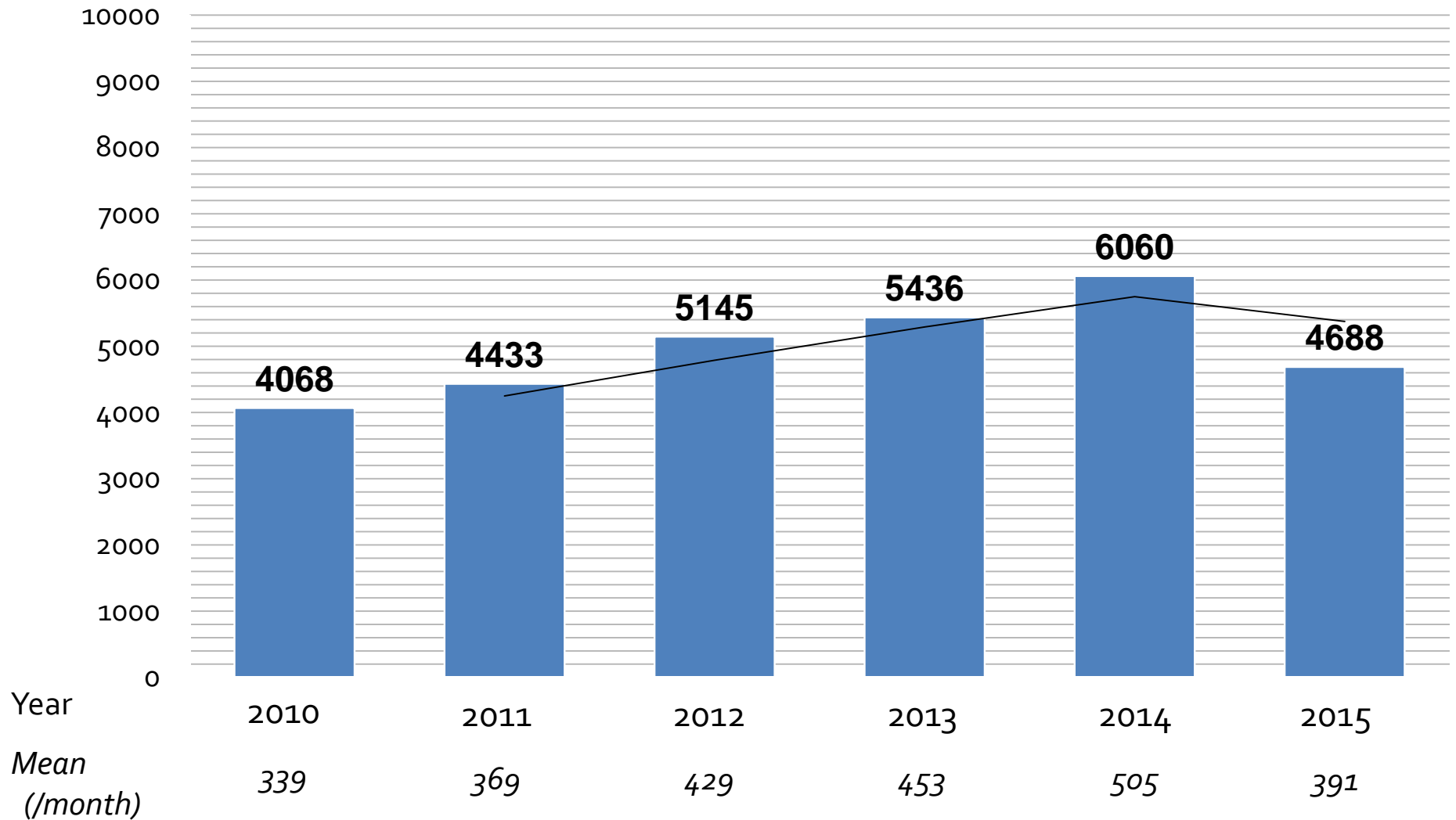
Proportion of Total Visits

Made by DC Residents
Age 0-17y

| | ED Visits | Admissions |
|-------|-----------|------------|
| 2010 | 66.3% | 43.7% |
| 2011 | 65.5% | 45.4% |
| 2012 | 64.3% | 42.7% |
| 2013 | 63.7% | 37.1% |
| 2014 | 64.0% | 37.2% |
| 2015 | 62.3% | 37.3% |
| Total | 64.2% | 40.6% |

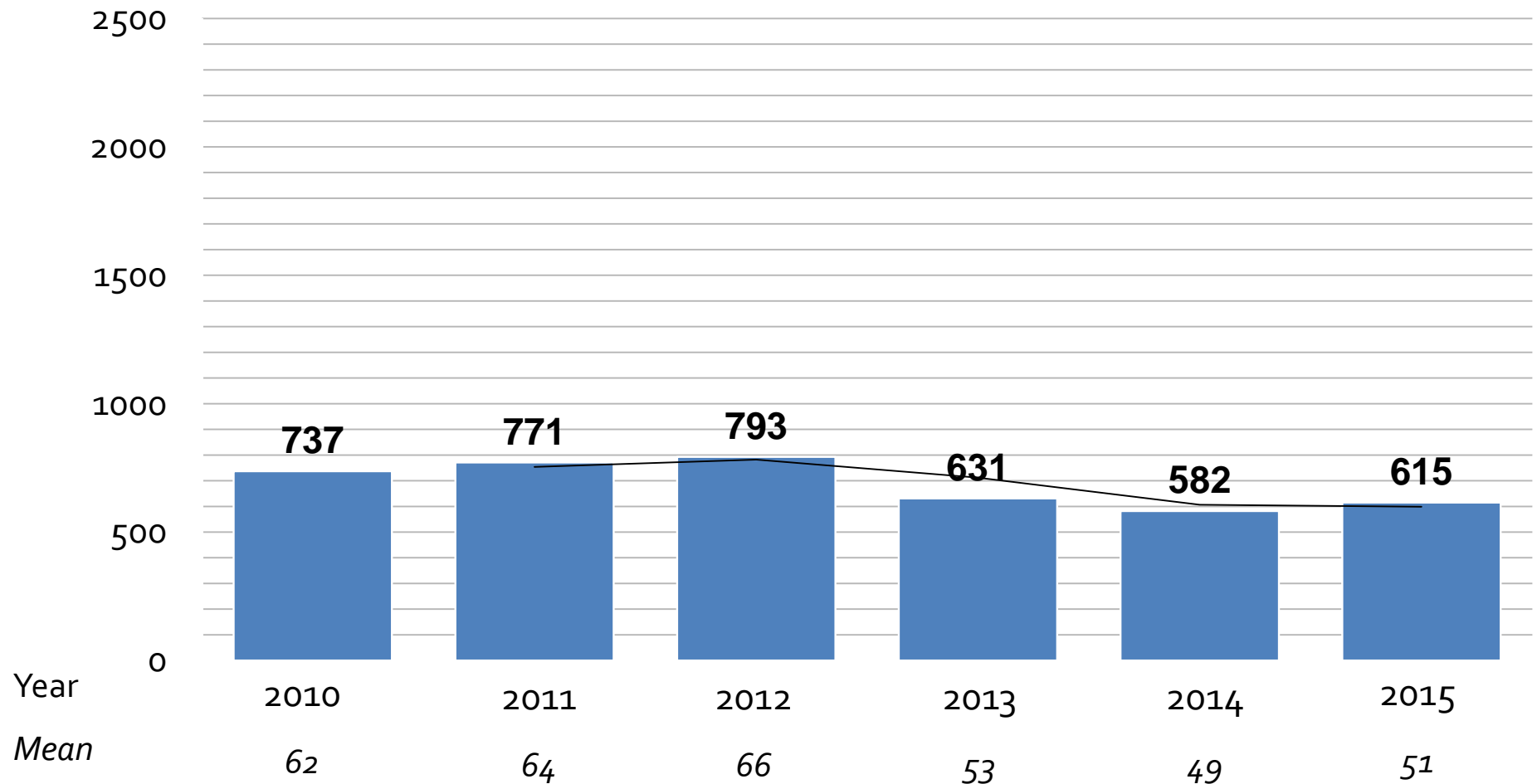
ED Visits for Asthma

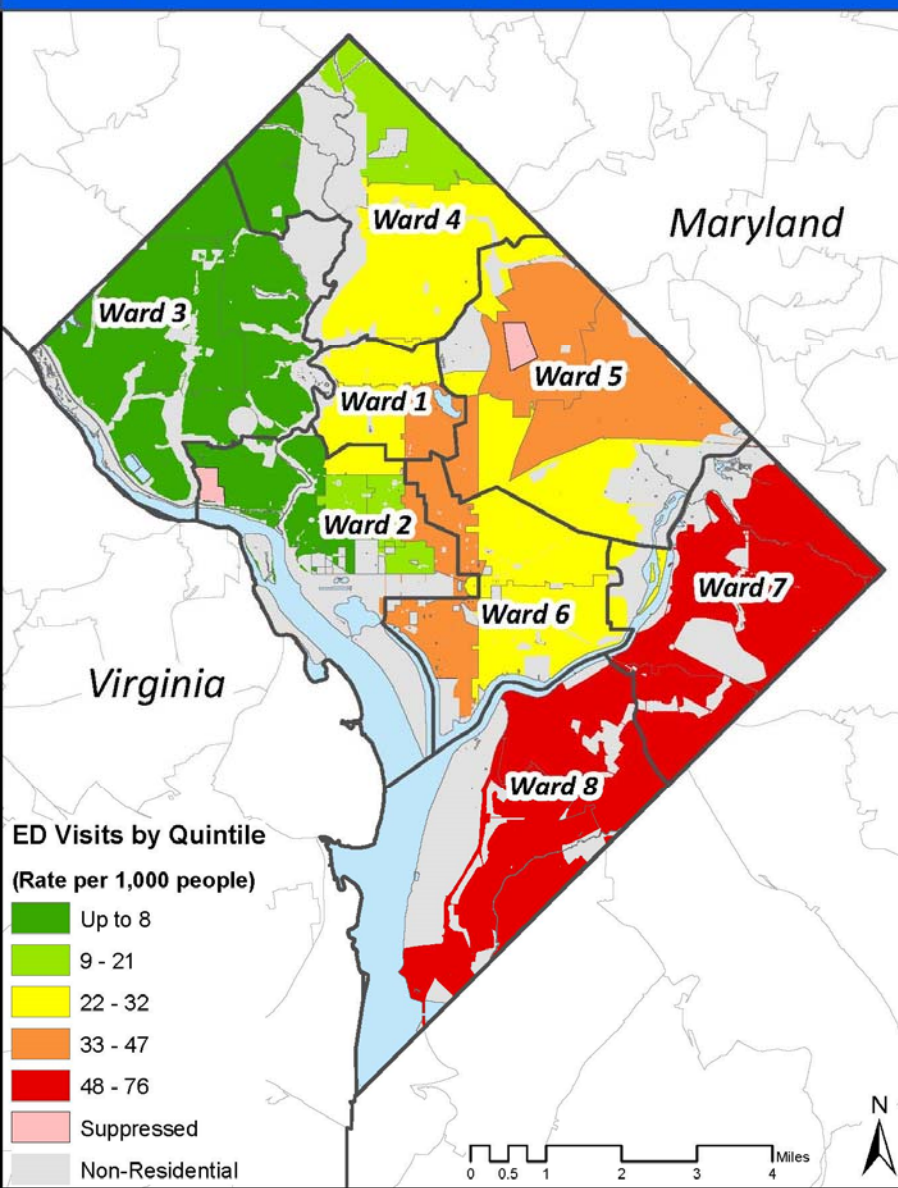
DC Zip Codes Only, Age 0-17y



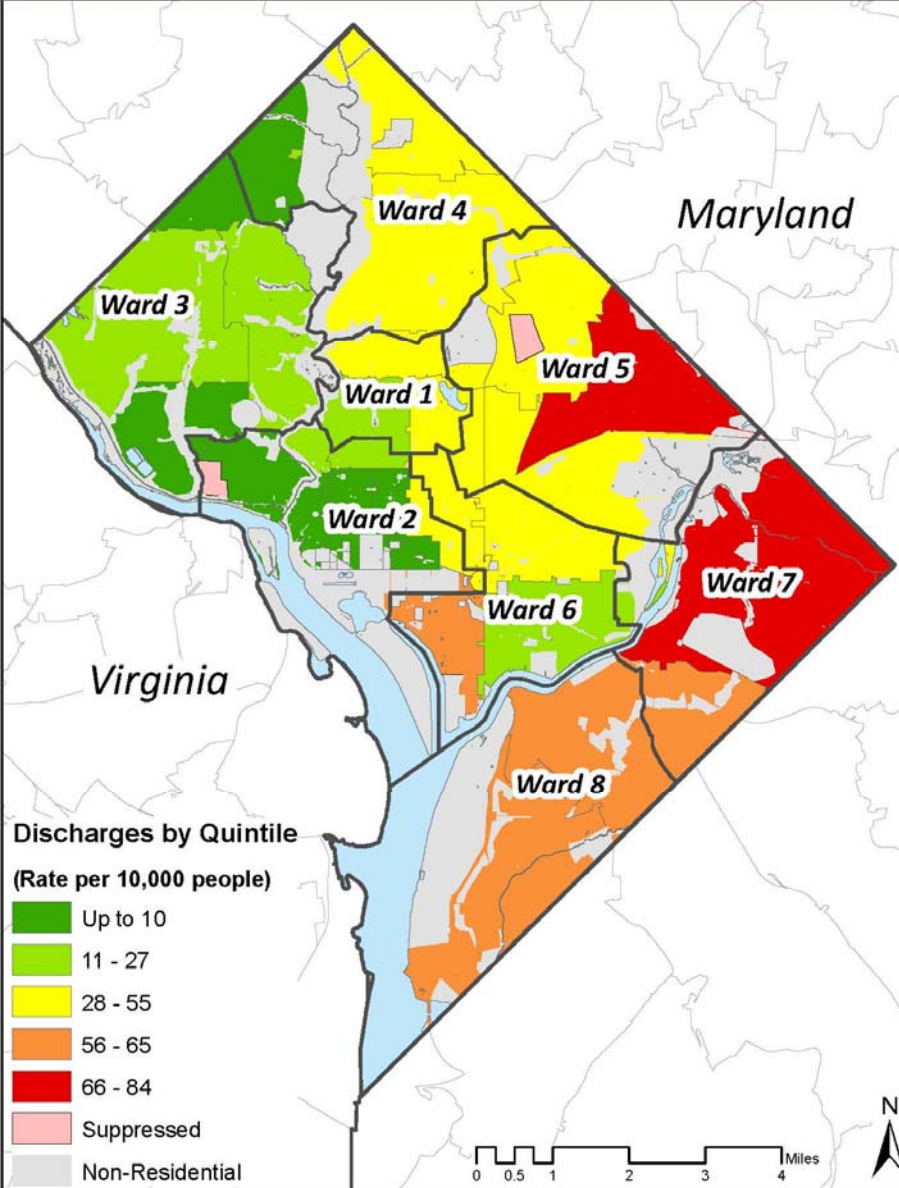
Hospital Admissions for Asthma

DC Zip Codes Only, Age 0-17y





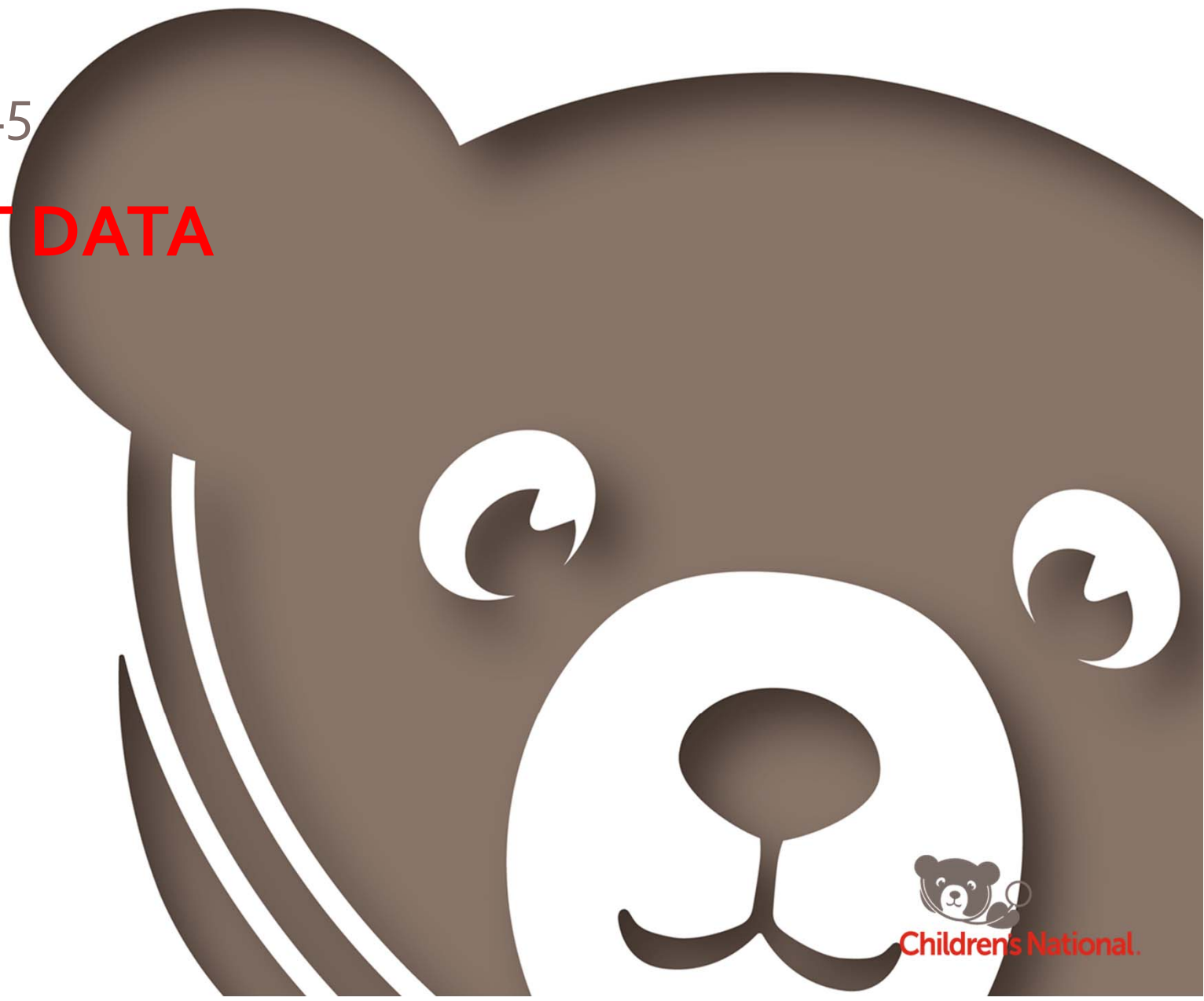
Source: Truven Health Analytics, file received from DC Hospital Association.
Map produced by Children's National Health System.



Source: Truven Health Analytics, file received from DC Hospital Association.
Map produced by Children's National Health System.

2010-2015

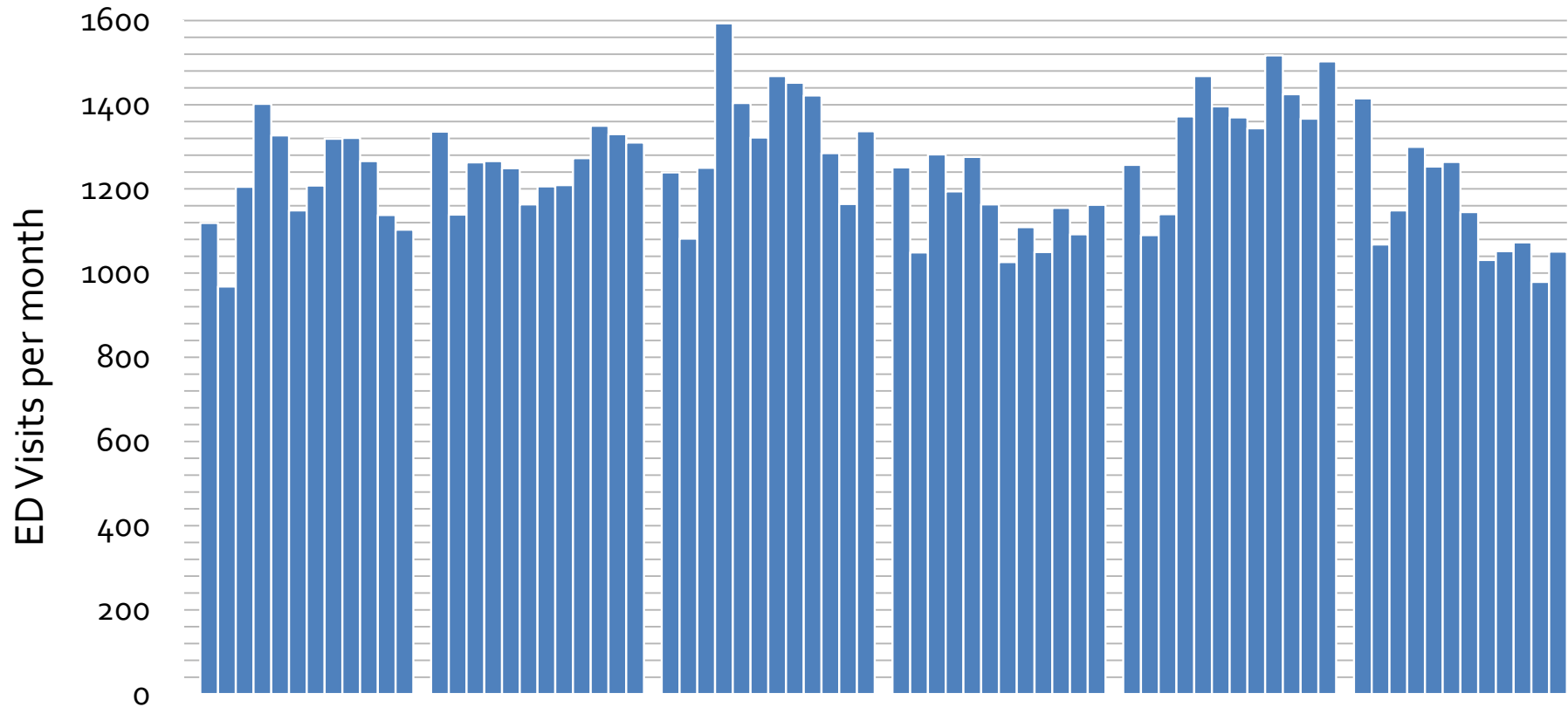
ADULT DATA



December 14, 2017

ED Visits for Asthma per Month

Age 18-64y



Year

2010

2011

2012

2013

2014

2015

Total

14,525

15,094

16,018

13,809

16,249

13,780

Mean

1,210

1,258

1,335

1,151

1,354

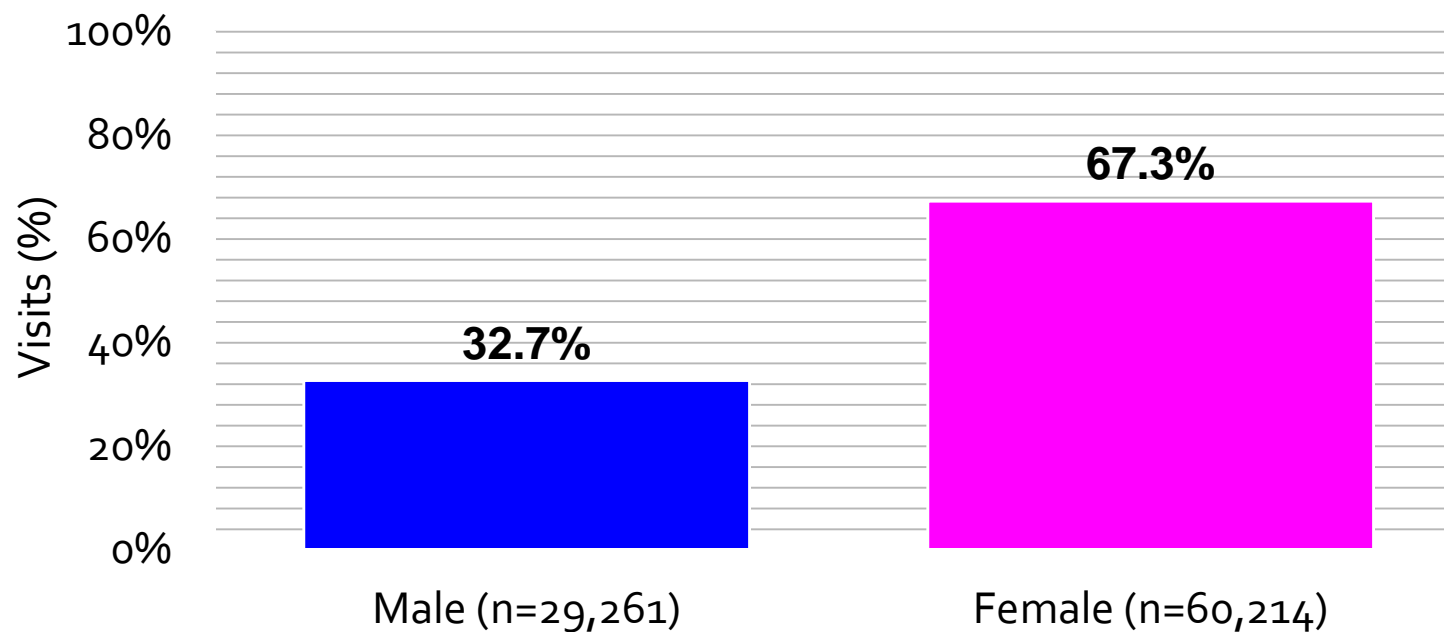
1,148

(/month)

Gender Distribution of ED Visits

Age 18-64y

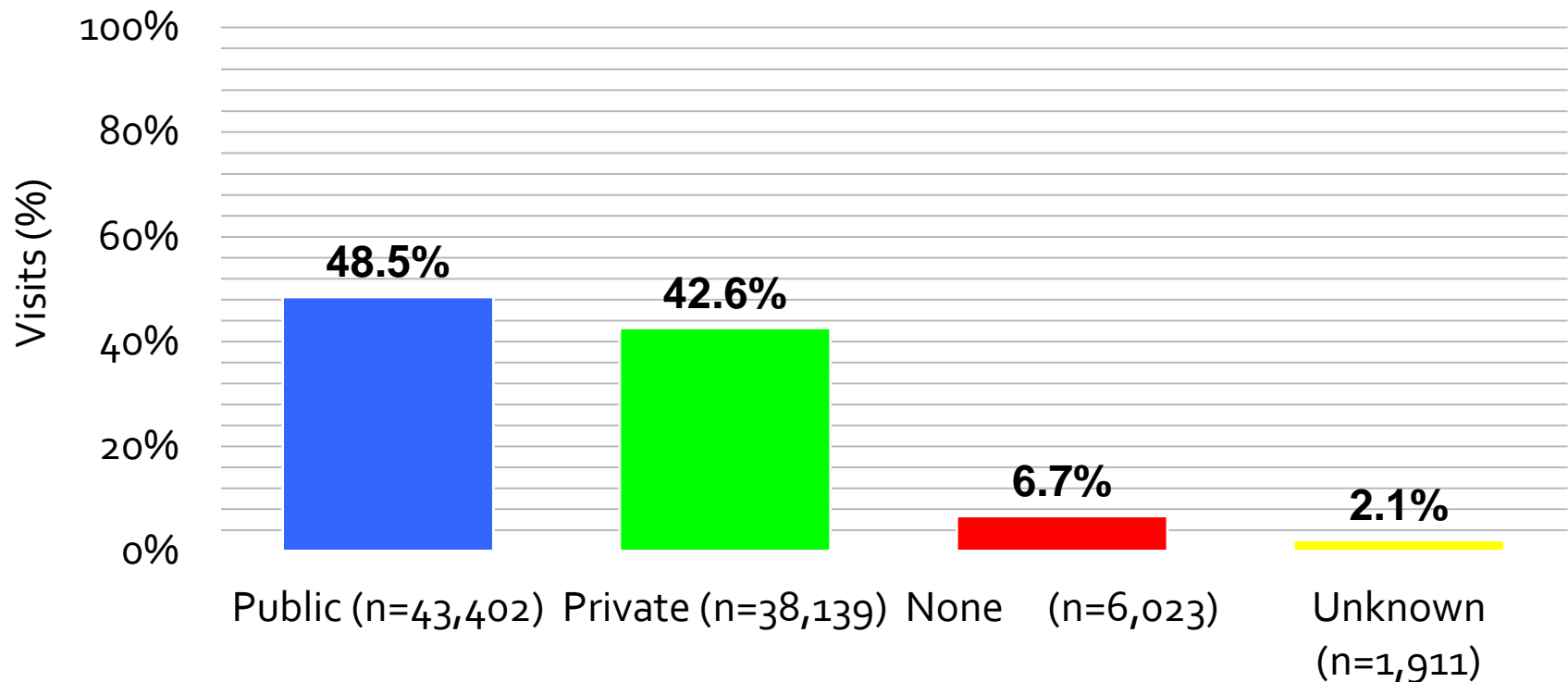
2010-2015 (n=89,475)



Insurance Type of ED Visits

Age 18-64y

2010-2015 (n=89,475)



ED Visits and Admissions for Asthma

Age 18-64y

| | ED Visits | Admissions | % Admitted* |
|-------|-----------|------------|-------------|
| 2010 | 14,525 | 2,844 | 16.4% |
| 2011 | 15,094 | 2,943 | 16.3% |
| 2012 | 16,018 | 2,928 | 15.5% |
| 2013 | 13,809 | 2,730 | 16.5% |
| 2014 | 16,249 | 2,662 | 14.1% |
| 2015 | 13,780 | 2,245 | 14.0% |
| Total | 89,475 | 16,352 | 15.5% |

* Percentage of total visits (ED visits and hospital admissions)

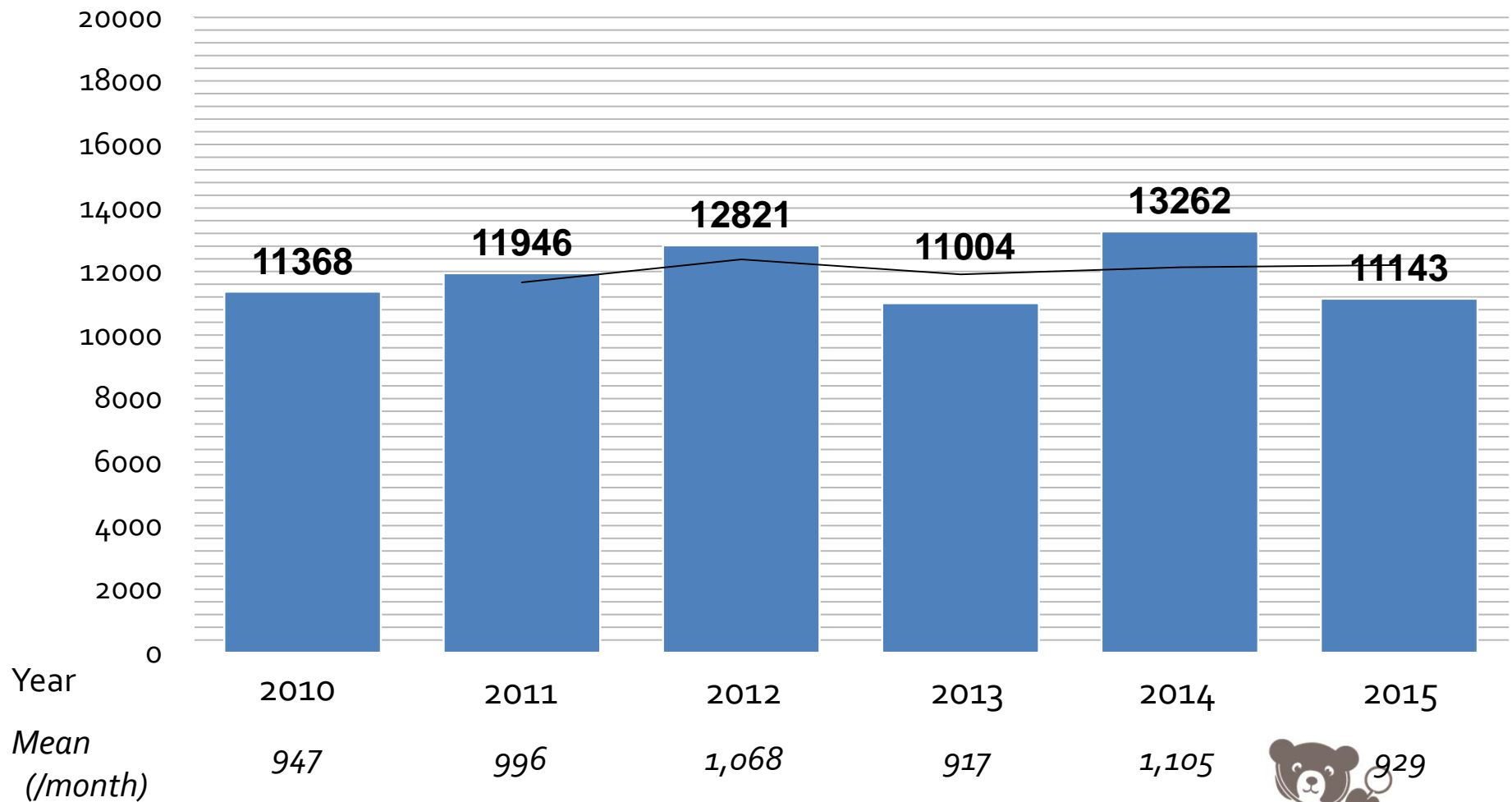
Proportion of Total Visits

*Made by DC Residents
Age 18-64y*

| | ED Visits | Admissions |
|-------|-----------|------------|
| 2010 | 78.3% | 73.6% |
| 2011 | 79.1% | 73.3% |
| 2012 | 80.0% | 73.2% |
| 2013 | 79.7% | 73.0% |
| 2014 | 81.6% | 74.1% |
| 2015 | 80.9% | 72.0% |
| Total | 80.0% | 73.2% |

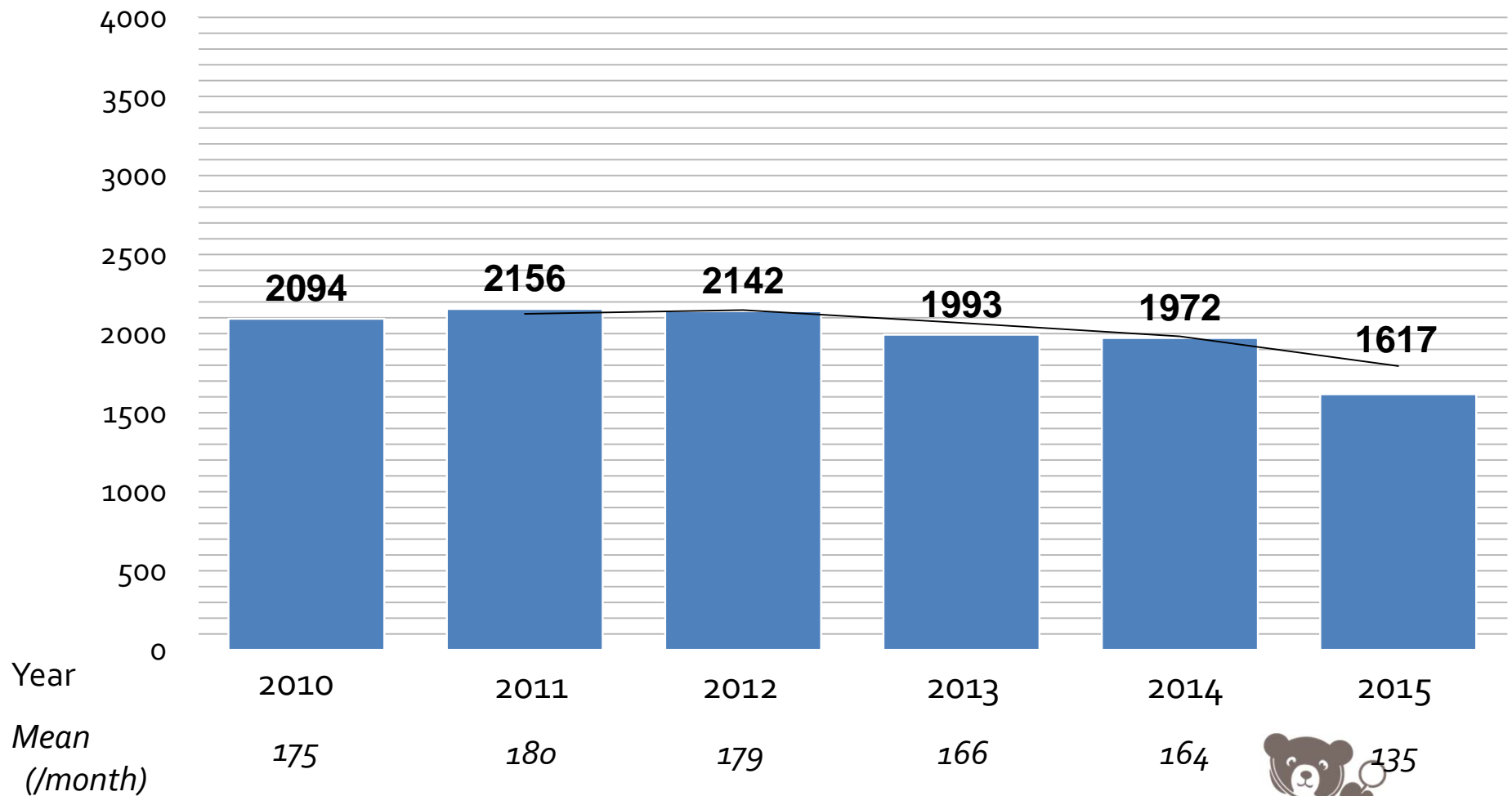
ED Visits for Asthma

DC Zip Codes Only, Age 18-64y



Hospital Admissions for Asthma

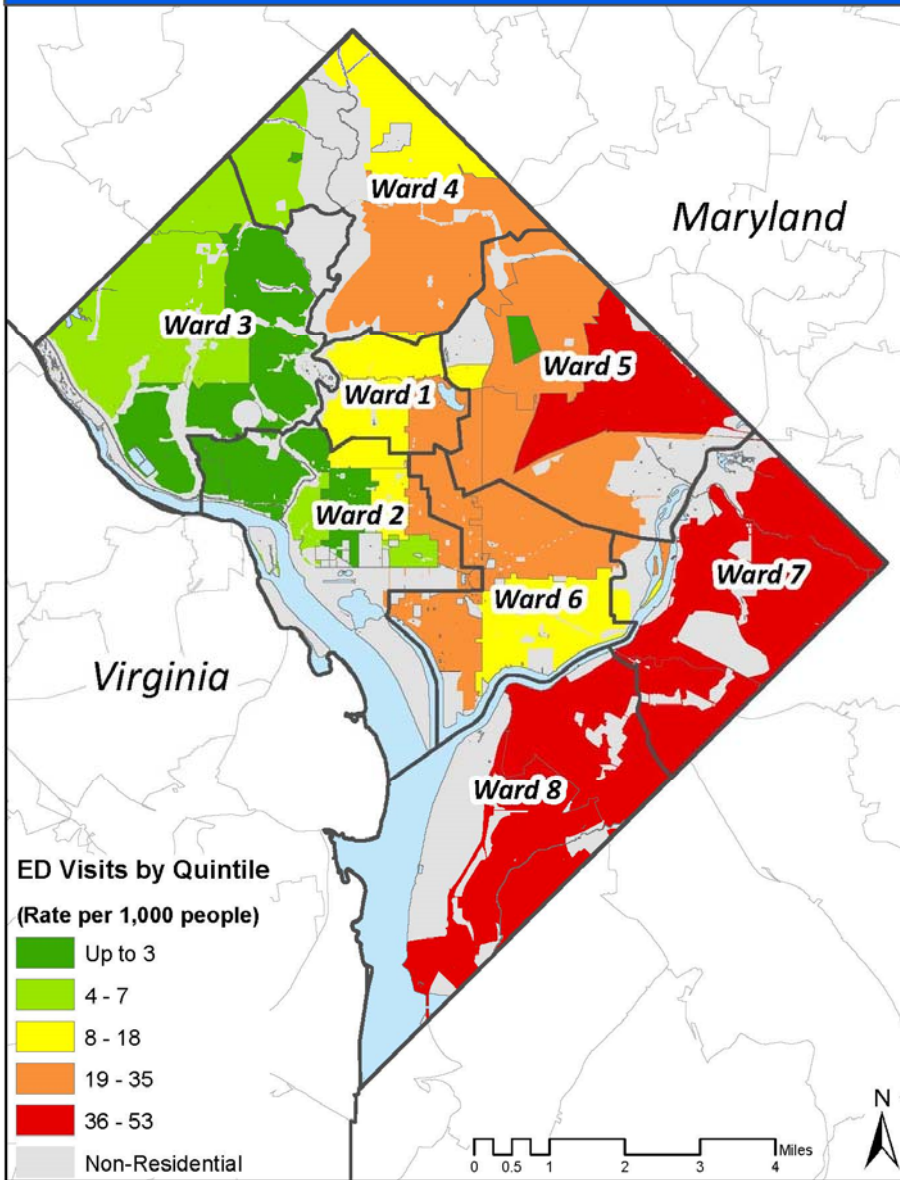
DC Zip Codes Only, Age 18-64y





ED Visit Rate by ZIP Code in Washington, DC - 2015

Asthma as Primary, Secondary or Tertiary Diagnosis (18 - 64 Years)

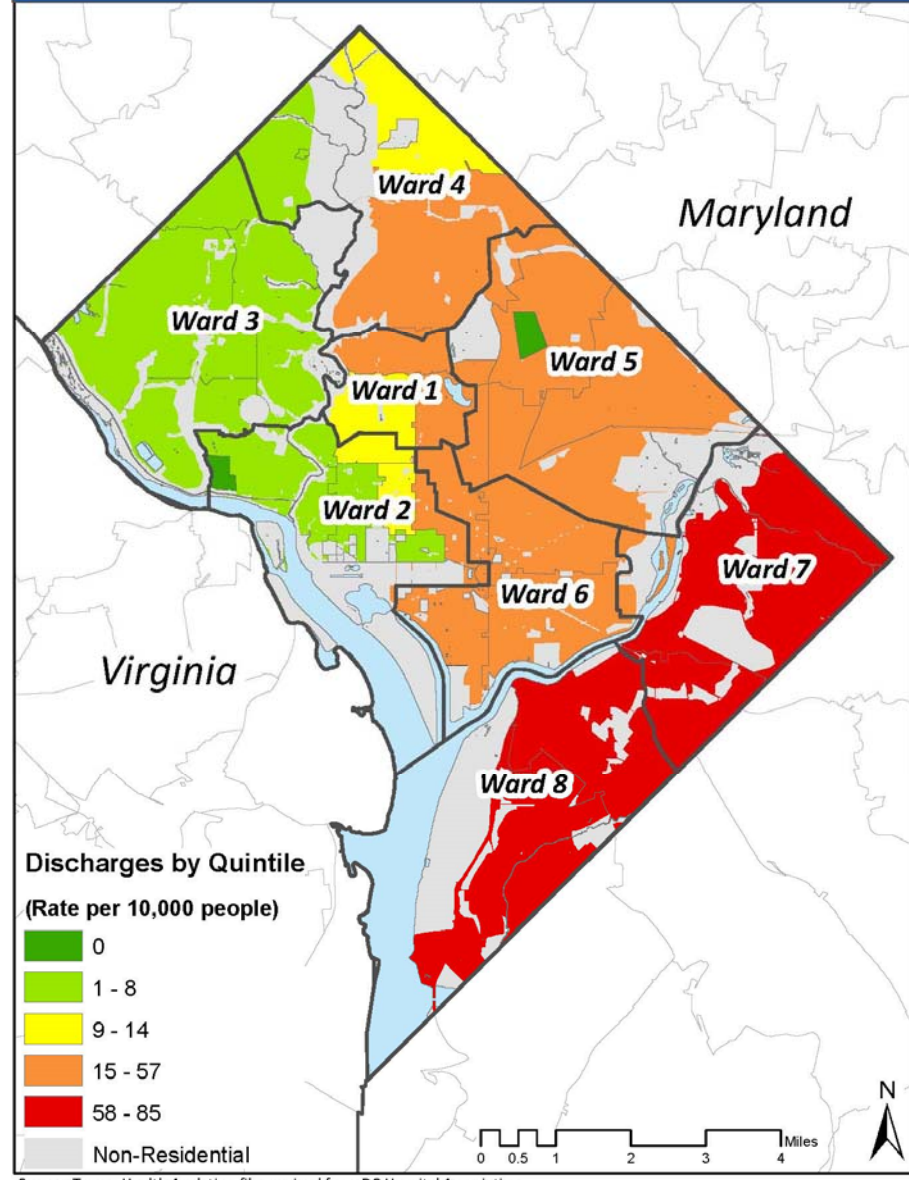


Source: Truven Health Analytics, file received from DC Hospital Association.
Map produced by Children's National Health System.



Discharge Rate by ZIP Code in Washington, DC - 2015

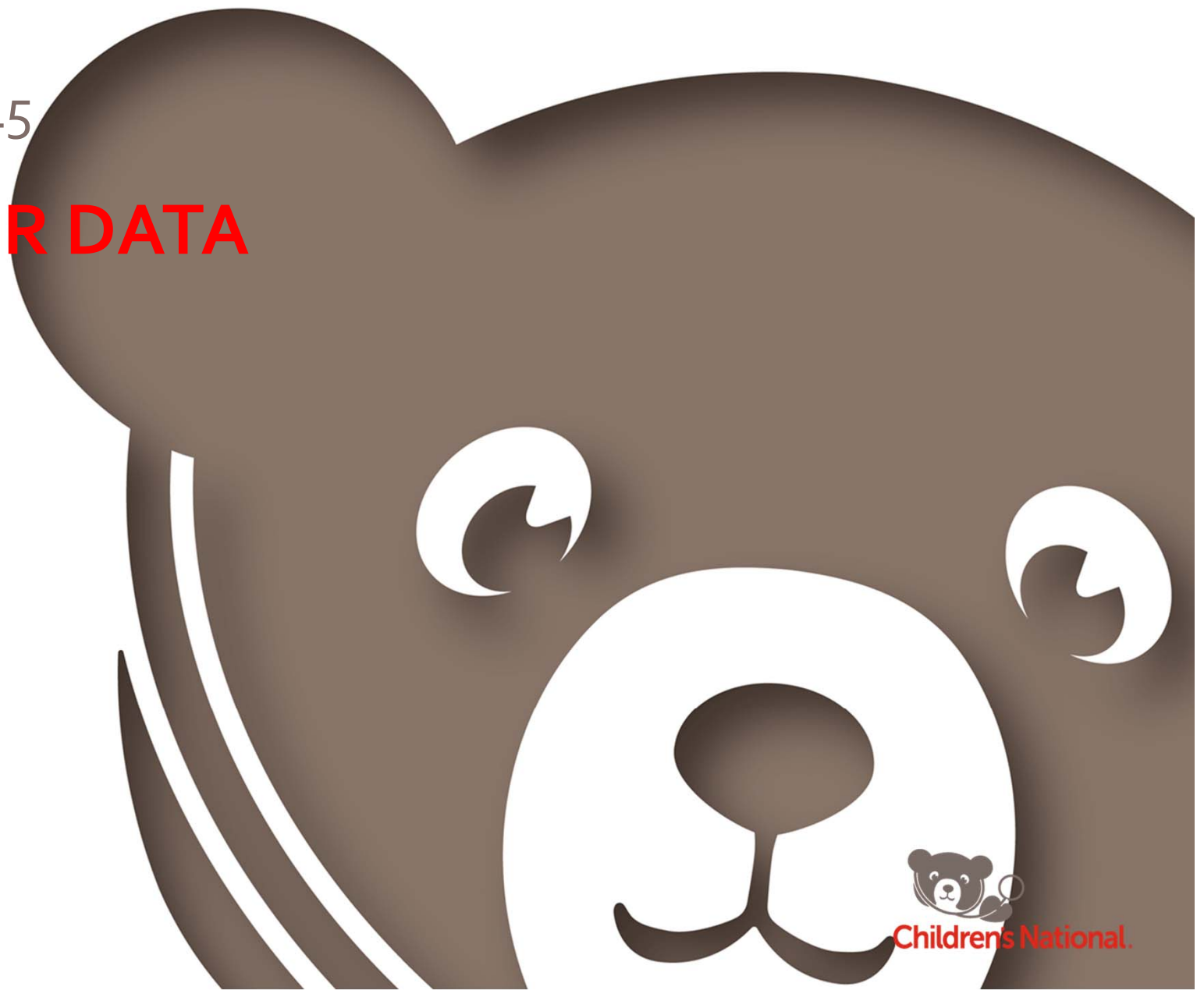
Asthma as Primary, Secondary or Tertiary Diagnosis (18 - 64 Years)



Source: Truven Health Analytics, file received from DC Hospital Association.
Map produced by Children's National Health System.

2010-2015

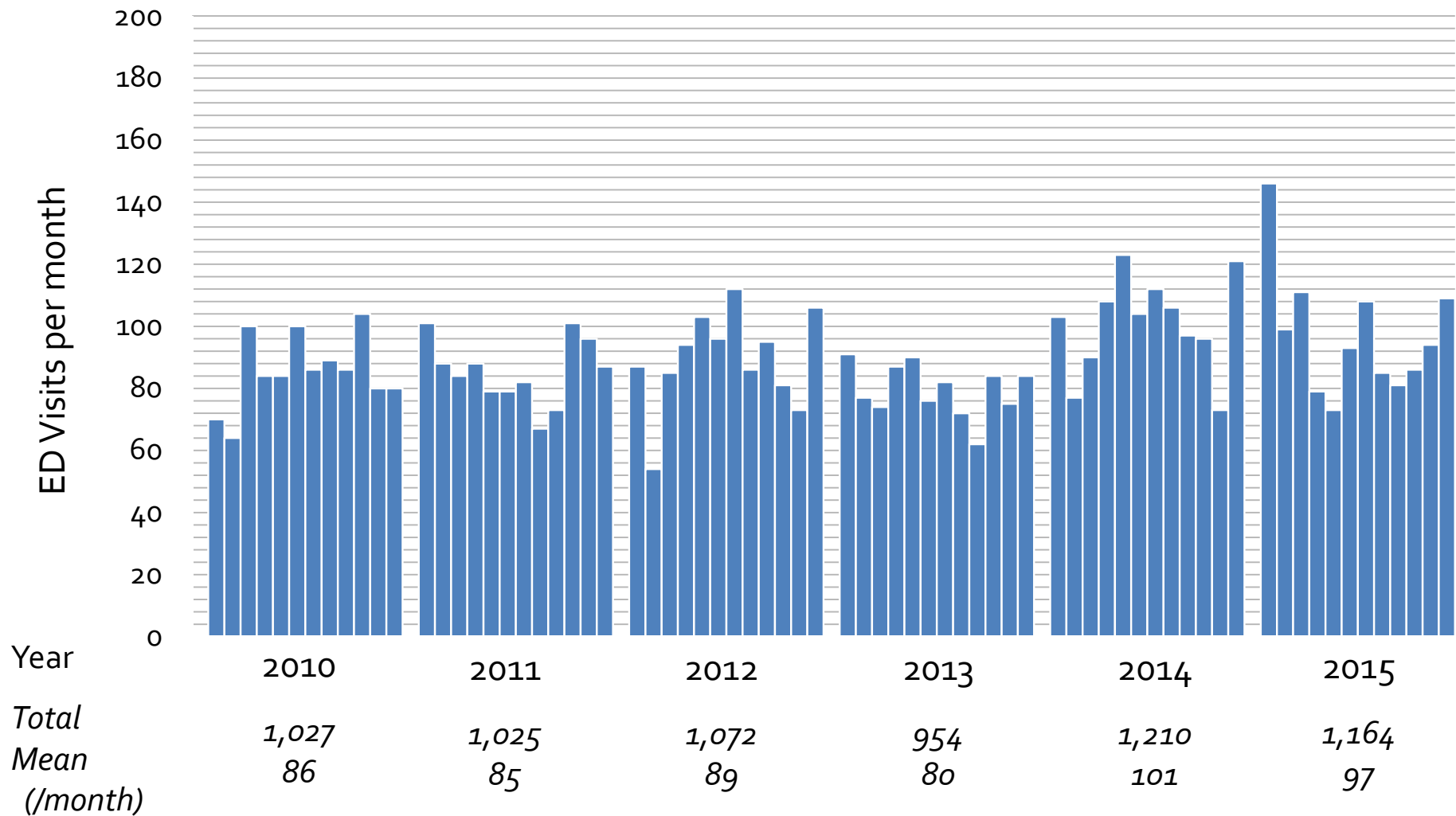
SENIOR DATA



Children's National.

ED Visits for Asthma per Month

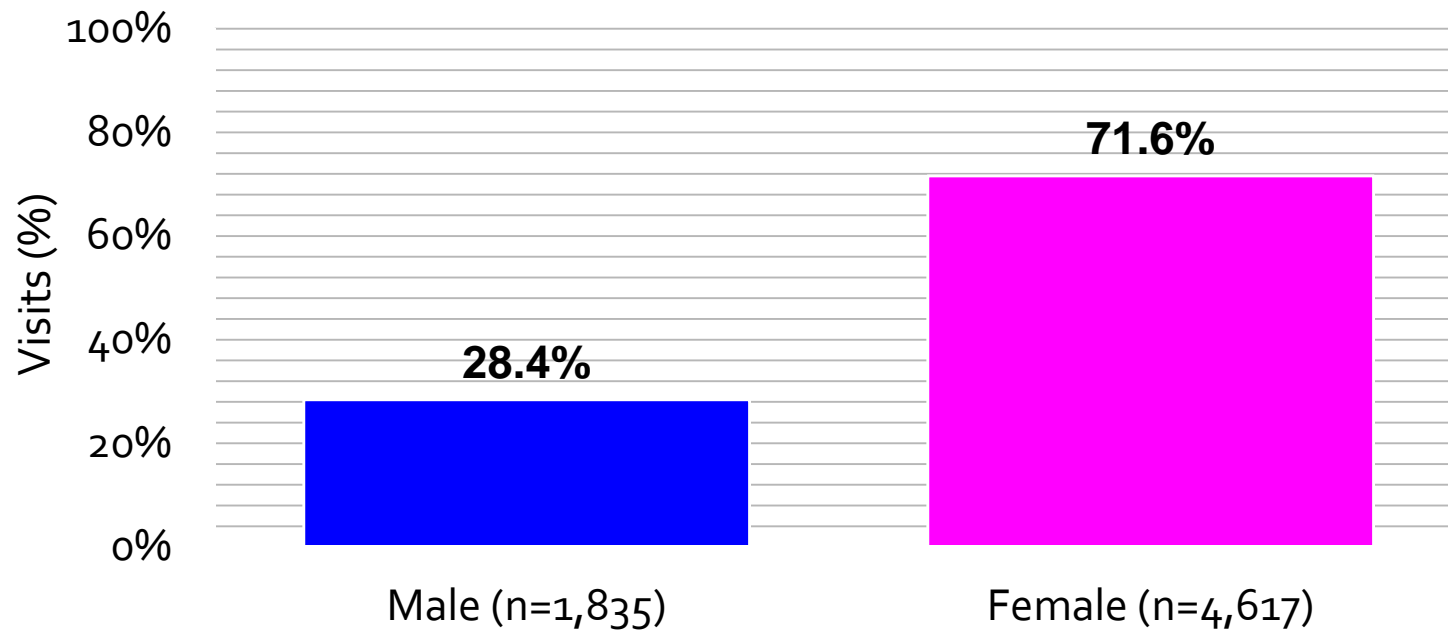
Age ≥65y



Gender Distribution of ED Visits

Age $\geq 65y$

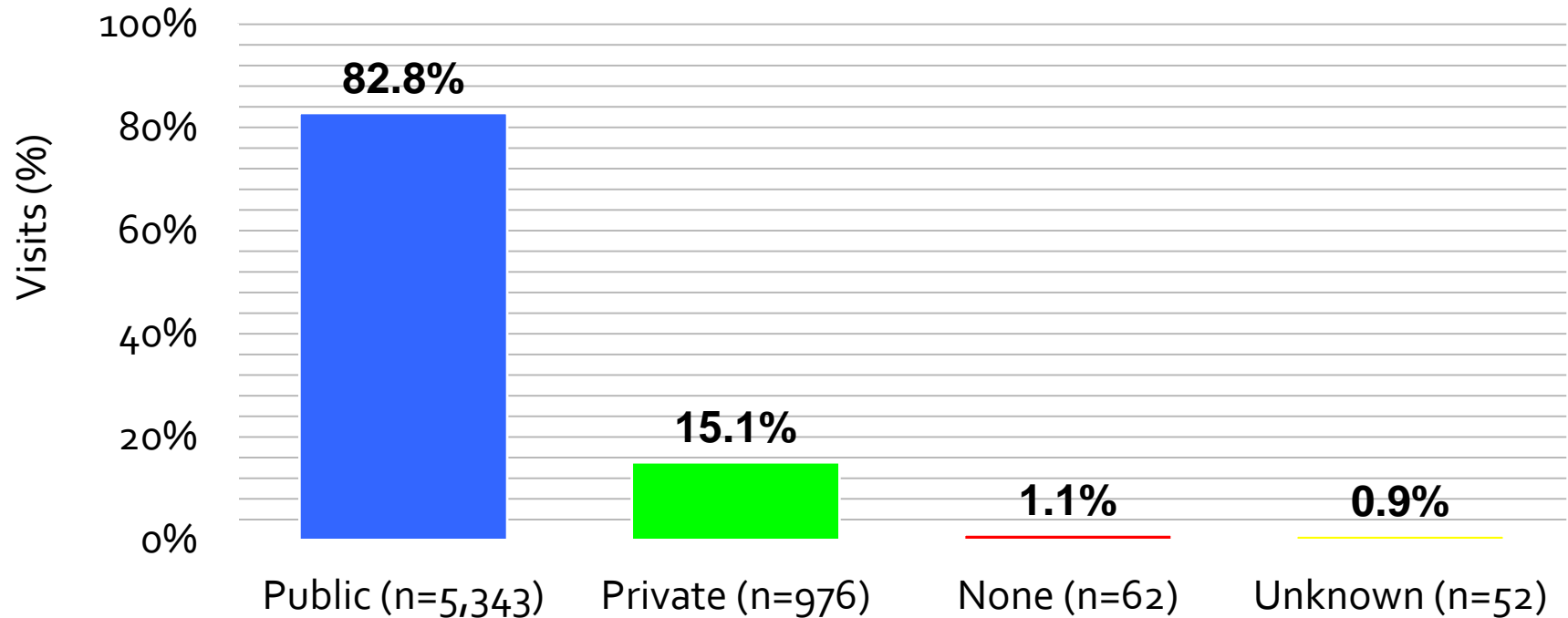
2010-2015 (n=6,452)



Insurance Type of ED Visits

Age ≥65y

2010-2015 (n=6,452)



ED Visits and Admissions for Asthma

Age ≥65y

| | ED Visits | Admissions | % Admitted* |
|-------|-----------|------------|-------------|
| 2010 | 1,027 | 703 | 40.6% |
| 2011 | 1,025 | 736 | 41.8% |
| 2012 | 1,072 | 763 | 41.6% |
| 2013 | 954 | 700 | 42.3% |
| 2014 | 1,210 | 599 | 33.1% |
| 2015 | 1,164 | 510 | 30.5% |
| Total | 6,452 | 4,011 | 38.3% |

* Percentage of total visits (ED visits and hospital admissions)

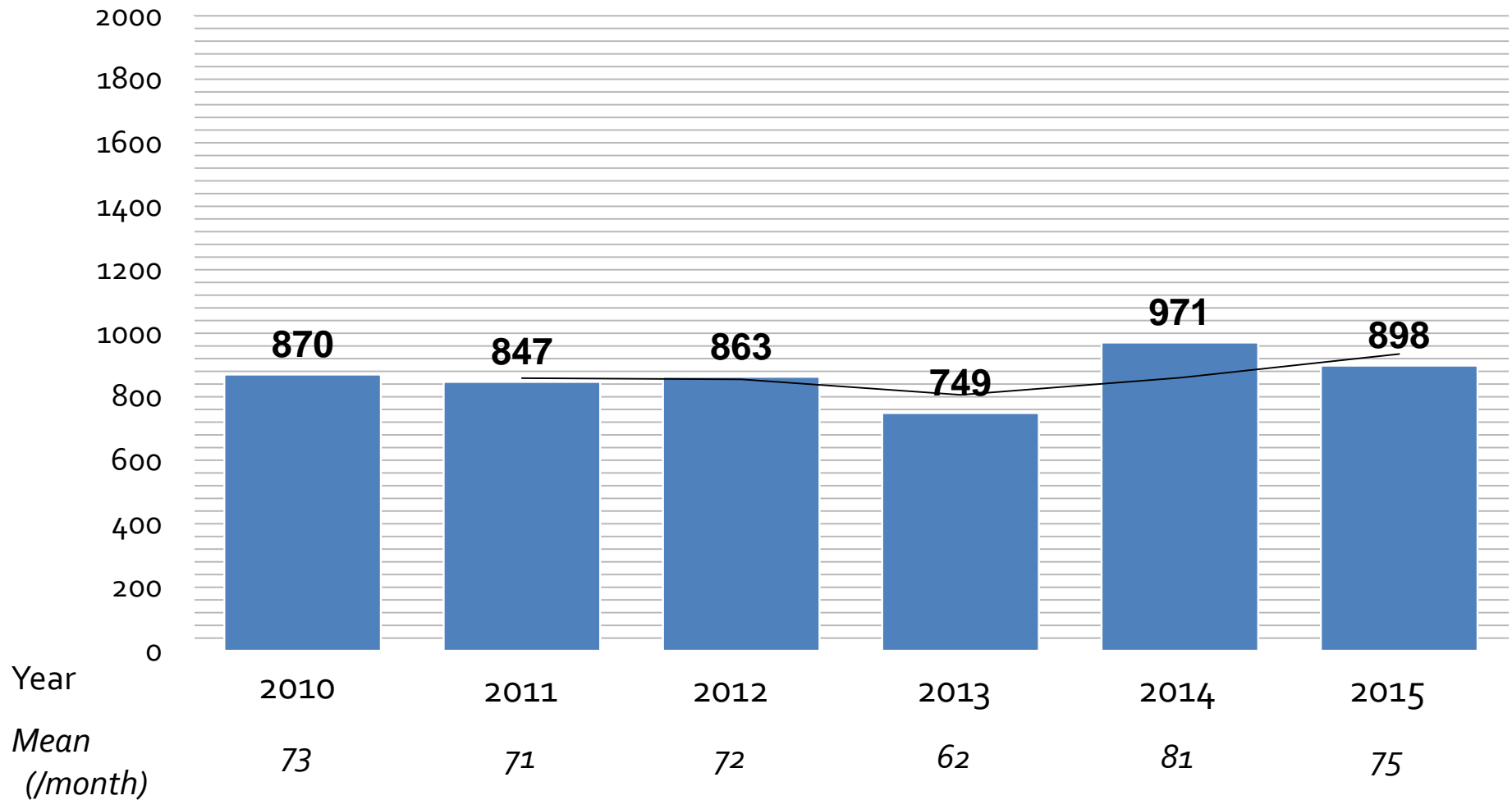
Proportion of Total Visits

Made by DC Residents
Age $\geq 65y$

| | ED Visits | Admissions |
|-------|-----------|------------|
| 2010 | 84.7% | 71.8% |
| 2011 | 82.6% | 74.2% |
| 2012 | 80.5% | 71.7% |
| 2013 | 78.5% | 68.9% |
| 2014 | 80.2% | 69.4% |
| 2015 | 77.1% | 71.2% |
| Total | 80.6% | 71.3% |

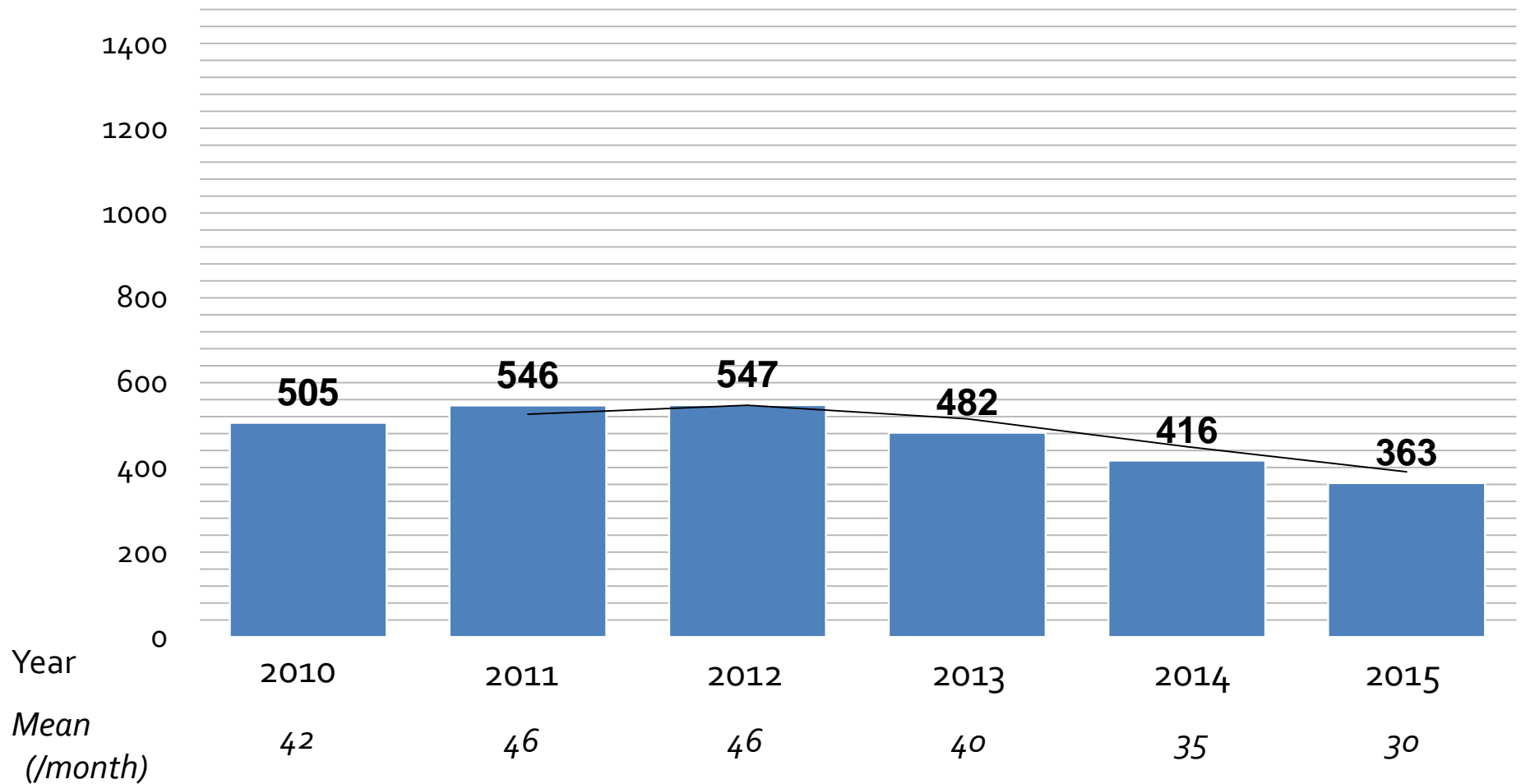
ED Visits for Asthma

DC Zip Codes Only, Age ≥65y



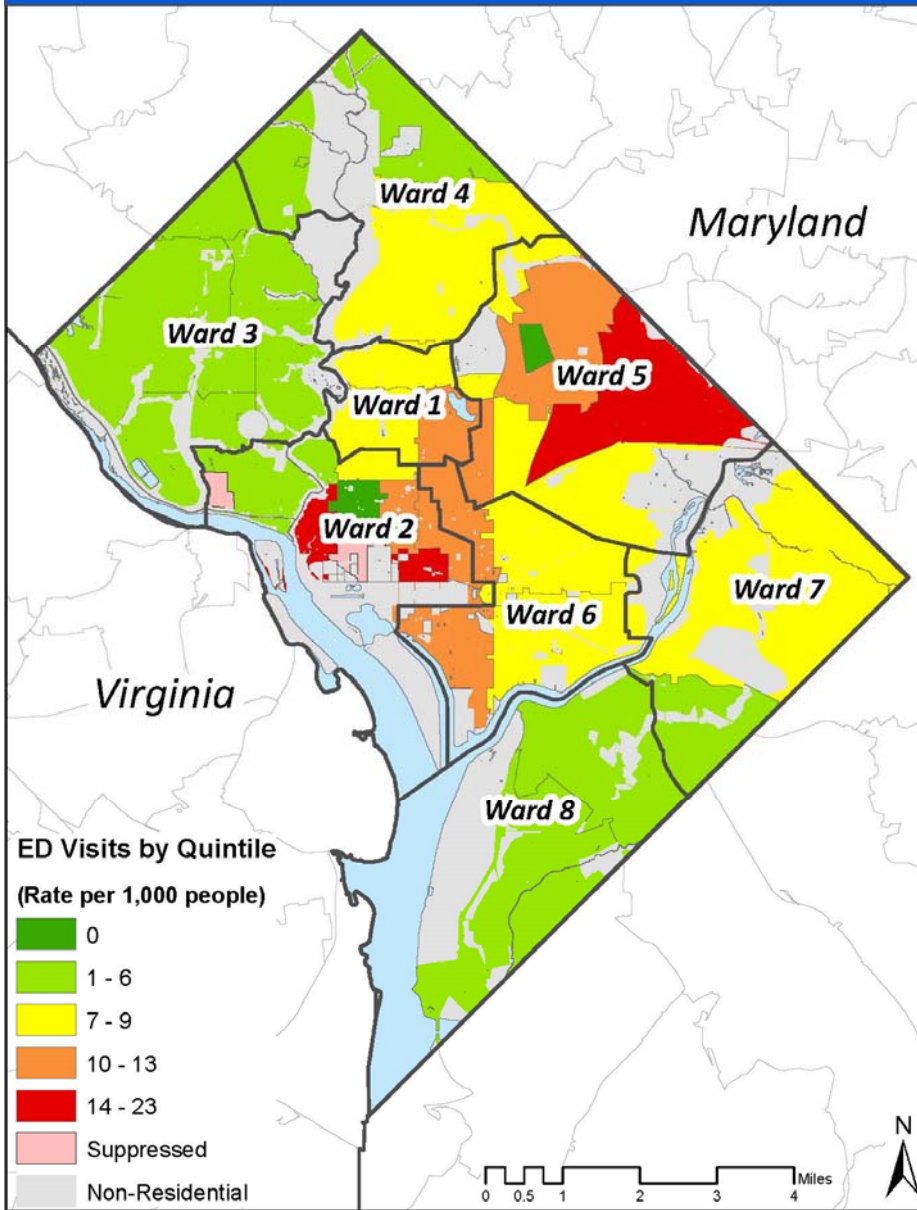
Hospital Admissions for Asthma

DC Zip Codes Only, Age $\geq 65y$





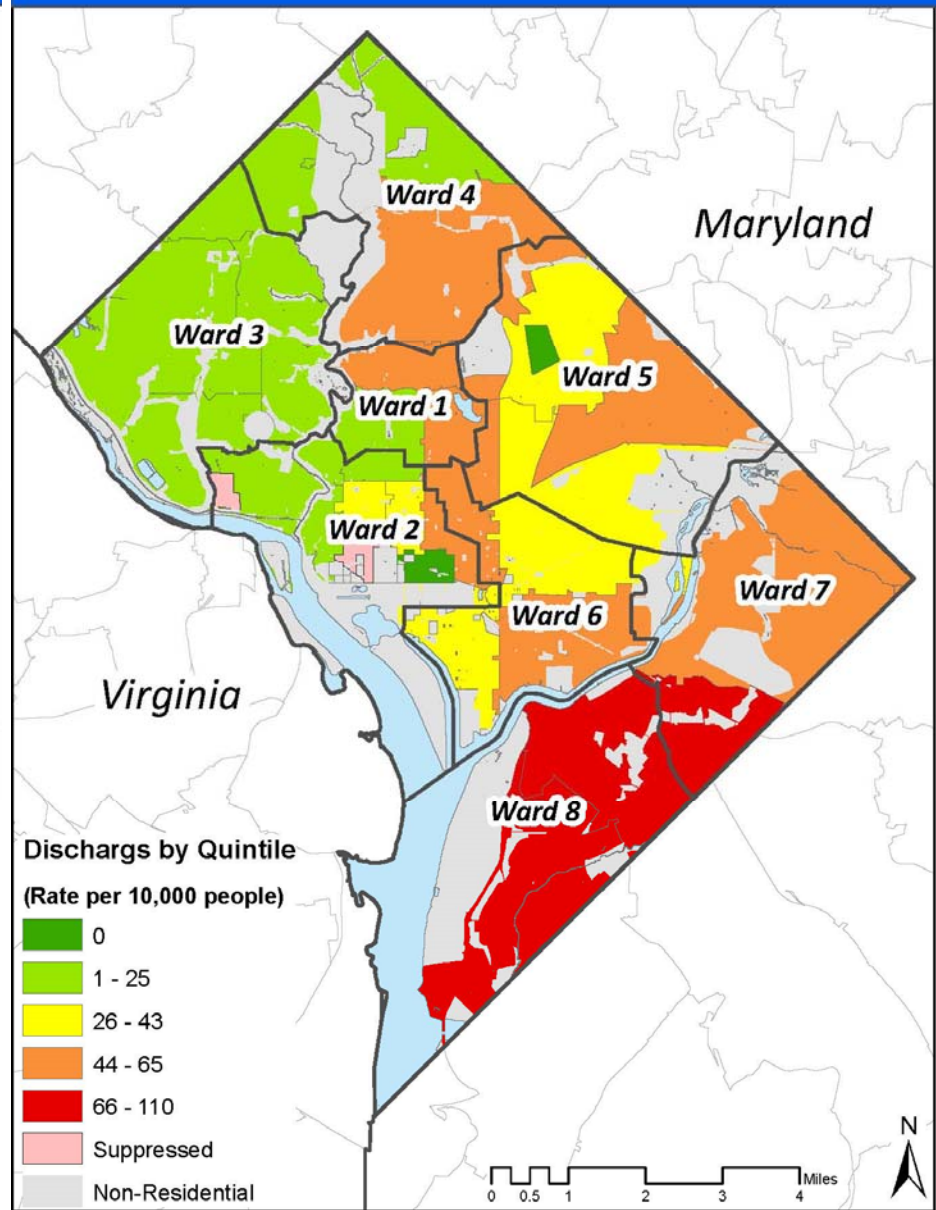
ED Visit Rate by ZIP Code in Washington, DC - 2015
Asthma as Primary, Secondary or Tertiary Diagnosis (65 Years and older)



Source: Truven Health Analytics, file received from DC Hospital Association.
Map produced by Children's National Health System.



Discharge Rate by ZIP Code in Washington, DC - 2015
Asthma as Primary, Secondary or Tertiary Diagnosis (65 Years and older)



Source: Truven Health Analytics, file received from DC Hospital Association.
Map produced by Children's National Health System.

Thank you!



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