Vision and Eye Health Surveillance System

--- introduced by ---

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Prevent Blindness
Data to Support Vision and Eye Health in the U.S.
Vision and Eye Health Surveillance System

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VEHSS year 3 update
  – Who?
  – Why?
  – What?
  – When?
  – Where?

VEHSS website
  – What is available now?

Next steps
  – What is still to come?
Who is VEHSS?

- CDC’s Vision Health Initiative
- NORC at the University of Chicago
- Our research partners
- Vision research community, stakeholders and users
Why VEHSS?

- Much of our best epidemiological data is older
- New and different sources of data are now available
- Repeated calls for public health surveillance
  - CDC expert panel
  - National Academies of Science, Engineering, and Medicine
What is VEHSS?

• Foundation for a national surveillance system
  – A system to consolidate existing sources of prevalence information
  – A platform to develop case definitions
  – A system to generate new prevalence estimates
When is VEHSS?

• 2016 – Literature and data source reviews
• 2017 – Selecting data and defining data indicators
• 2018 – Analyzing data sources and creating system website
• 2019 – Generating integrated prevalence estimates and improving website
Where is VEHSS?

www.cdc.gov/visionhealth/vehss
What is available now on the website?

• Literature review
• 8 Data sets
  – VEHSS Data Explorer
  – Data Portal
• Documentation
  – Info pages on website
  – Documentation report for download
Data sources – 4 Types of data

• Published Examination-based Studies
  – Literature review of prevalence estimates

• National Surveys
  – ACS, BRFSS, NHANES, NHIS, NSCH

• Electronic Health Records Registry
  – IRIS Registry

• Administrative Claims Databases
  – Medicare Fee for Service, VSP
Data indicators – 4 Topics

• Medical Diagnoses
  – 17 diagnosis code categories, 79 subgroups

• Service utilization
  – Eye exams, by provider type

• Vision Exam Measures
  – Visual Acuity

• Survey instruments
  – Categorizes vision/eye health variables from 16 surveys
Data explorer

1. Select your data
2. Select a topic
3. Choose a category
4. Click Go!
2015 Medicare Claims
Annual prevalence of treated infectious and inflammatory diseases:
All Infectious and inflammatory diseases
Age Group: All Ages; Gender: Total; Race/Ethnicity: All races
Risk Factor: All patients; Risk Factor Response: Total
Data Type: Crude Prevalence

National: 8.46%
95% CI (8.45 - 8.47)
N = 30,027,200
Drill down to specific population groups

- Subgroup
- Age Group
- Gender
- Race/Ethnicity
- Risk Factor
- Year
### Table: Annual Prevalence of Treated Infectious and Inflammatory Diseases: Conjunctivitis

- **Age Group:** 65-84 years
- **Gender:** Male
- **Race/Ethnicity:** Hispanic, any race
- **Risk Factor:** All patients; Risk Factor Response: Total
- **Data Type:** Crude Prevalence
- **Compare:** Overall

<table>
<thead>
<tr>
<th>Location</th>
<th>Percent (%)</th>
<th>95% CI</th>
<th>N</th>
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<tbody>
<tr>
<td>National</td>
<td>4.44</td>
<td>4.38 - 4.50</td>
<td>510,900</td>
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<tr>
<td>Alabama</td>
<td>3.65</td>
<td>2.60 - 4.98</td>
<td>1,000</td>
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<tr>
<td>Alaska</td>
<td>2.03</td>
<td>1.05 - 3.52</td>
<td>600</td>
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<td>Arizona</td>
<td>3.96</td>
<td>3.66 - 4.28</td>
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<td>Arkansas</td>
<td>4.21</td>
<td>3.20 - 5.42</td>
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<tr>
<td>California</td>
<td>4.66</td>
<td>4.54 - 4.78</td>
<td></td>
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</tbody>
</table>
Compare by population group
More things to do

- Generate a PDF report
- Download CSV files
- Go to the data source information page
- Go to the data indicators page
- Download documentation reports
Data Portal

- Custom queries
- More advanced visualizations
- Direct download summary data tables
- Online data feeds
Next steps - 2019

- Data and website updates
  - Potential changes to indicators or methods
  - More data
    - Medicaid MAX
    - MarketScan commercial insurance claims
    - Military Health Data System Repository
  - More website functionality
    - Explore by location (state-level reporting)
    - Data comparisons
    - Trend lines
Next steps- 2019

- VEHSS Integrated Prevalence estimates

- Blindness
- Visual impairment
- AMD
- Cataract
- Glaucoma
- Diabetic retinopathy
- Blue bars
  - NHANES exams
  - ACS (≥65)
- Black bars
  - Published exam-based studies
- Red
  - Modeled prevalence rate predictions

(sneak peek: blindness prevalence in progress)