Public Health 2015: An Update from Tri-County Health Department

John M. Douglas, Jr. MD
Executive Director
Tri-County Health Department

Arapahoe County Board of Commissioners
4 May, 2015
# Leading Causes of Death

**Leading causes of death**\(^1\) for Adams, Arapahoe and Douglas County and Colorado, 2013

<table>
<thead>
<tr>
<th>Cause of death</th>
<th>Adams County</th>
<th>Arapahoe County</th>
<th>Douglas County</th>
<th>Colorado</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All cancers</td>
<td>159.2</td>
<td>126.2</td>
<td>110.3</td>
<td>138.1</td>
</tr>
<tr>
<td>2. All heart diseases</td>
<td>140.4</td>
<td>106.7</td>
<td>94.0</td>
<td>124.5</td>
</tr>
<tr>
<td>3. Unintentional injuries</td>
<td>52.7</td>
<td>39.6</td>
<td>38.2</td>
<td>46.3</td>
</tr>
<tr>
<td>4. Chronic lower respiratory diseases(^2)</td>
<td>58.5</td>
<td>44.4</td>
<td>29.1</td>
<td>45.4</td>
</tr>
<tr>
<td>5. Cerebrovascular diseases(^3)</td>
<td>27.9</td>
<td>28.9</td>
<td>26.3</td>
<td>31.5</td>
</tr>
<tr>
<td>6. Alzheimer’s disease</td>
<td>34.8</td>
<td>37.9</td>
<td>34.0</td>
<td>26.9</td>
</tr>
<tr>
<td>7. Suicide</td>
<td>15.7</td>
<td>18.5</td>
<td>19.2</td>
<td>18.5</td>
</tr>
<tr>
<td>8. Diabetes mellitus</td>
<td>19.7</td>
<td>16.9</td>
<td>7.8</td>
<td>14.8</td>
</tr>
<tr>
<td>9. Chronic liver disease and cirrhosis</td>
<td>14.7</td>
<td>12.5</td>
<td>5.8</td>
<td>12.5</td>
</tr>
<tr>
<td>10. Influenza and pneumonia</td>
<td>17.7</td>
<td>8.2</td>
<td>14.7</td>
<td>11.9</td>
</tr>
</tbody>
</table>

1. Leading causes of death were ranked based on absolute number of deaths. Age-adjusted rates are provided for comparison and are per 100,000 population and age-adjusted to the 2000 census population.

2. Includes asthma, chronic bronchitis, emphysema.

3. All diseases that affect the blood vessels in the brain; stroke is an example of a cerebrovascular disease.

Source: Health Statistics Section, Colorado Department of Public Health and Environment
Deaths Due to Cancer and Heart Disease

Deaths due to CANCER per 100,000 population*
Adams, Arapahoe and Douglas Counties and Colorado 2001-2013

Deaths due to HEART DISEASE per 100,000 population*
Adams, Arapahoe and Douglas Counties and Colorado, 2001-2013

*Age-adjusted to the US 2000 standard population.
Source: Health Statistics Section, CO Dept of Public Health &
Deaths Due to Suicide and Unintentional Injury

Deaths due to SUICIDE per 100,000 population*
Adams, Arapahoe and Douglas Counties and Colorado, 2001-2013

Deaths due to UNINTENTIONAL INJURIES per 100,000 population*
Adams, Arapahoe and Douglas Counties and Colorado, 2001-2013

*Age-adjusted to the US 2000 standard population.
Source: Health Statistics Section,
CO Dept of Public Health & Environment
Deaths Due to Motor Vehicle Crashes and Poisonings

Deaths due to MOTOR VEHICLE CRASHES per 100,000 population*
Adams, Arapahoe and Douglas Counties and Colorado, 2001-2013

Deaths due to POISONING per 100,000 population*
Adams, Arapahoe and Douglas Counties and Colorado, 2001-2013

* Age-adjusted to the US 2000 standard population.
Source: Health Statistics Section, CO Dept of Public Health & Environment.
Deaths Due to Falls and Alzheimer’s Disease

Deaths due to FALLS per 100,000 population*
Adams, Arapahoe and Douglas Counties and Colorado, 2001-2013

Deaths due to ALZHEIMER’S DISEASE per 100,000 population*, Adams, Arapahoe and Douglas Counties and Colorado, 2001-2013

* Age-adjusted to the US 2000 standard population.
Source: Health Statistics Section, Colorado Dept of Public Health & Environment.
Smoking and Binge Drinking

Percent of adults reporting currently smoking cigarettes
Adams, Arapahoe and Douglas Counties and Colorado,
2001-2013

Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, Colorado Dept of Public Health & Environment

Percent of adults reporting binge drinking*
Adams, Arapahoe and Douglas Counties and Colorado,
2001-2013

*Binge drinking=females ≥4 drinks or males ≥5 drinks on one occasion
Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, Colorado Dept of Public Health & Environment
Physical Activity and Obesity

Percent of adults reporting not engaging in any leisure time physical activity
Adams, Arapahoe and Douglas Counties and Colorado, 2001-2013

Percent of adults who are obese (BMI ≥30)*
Adams, Arapahoe and Douglas Counties and Colorado, 2001-2013

Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, Colorado Dept of Public Health & Environment

*BMI calculated from self-reported height and weight; adults=20 years and older
Source: Behavioral Risk Factor Surveillance System, Health Statistics Section, Colorado Dept of Public Health & Environment
Proportion of Youth reporting select risk factors, Adams, Arapahoe and Douglas County and Colorado, 2013

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Adams County</th>
<th>Arapahoe County</th>
<th>Douglas County</th>
<th>Colorado</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth not engaging in 60 minutes of physical activity on at least one day in past 7 days</td>
<td>15.8%</td>
<td>13.6%</td>
<td>12.7%</td>
<td>13.0%</td>
</tr>
<tr>
<td>Youth who are obese</td>
<td>10.1%</td>
<td>7.7%</td>
<td>4.1%</td>
<td>8.0%</td>
</tr>
<tr>
<td>Youth who binge drink&lt;sup&gt;1&lt;/sup&gt;</td>
<td>18.7%</td>
<td>13.9%</td>
<td>13.8%</td>
<td>16.6%</td>
</tr>
<tr>
<td>Youth who currently smoke cigarettes</td>
<td>11.1%</td>
<td>8.5%</td>
<td>9.3%</td>
<td>10.7%</td>
</tr>
</tbody>
</table>

<sup>1</sup>Binge drinking=females ≥4 drinks or males ≥5 drinks on one occasion

Source: Healthy Kids Colorado Survey, High school students only, 2013
Pneumonic Plague

- *Yersinia pestis*
- “The Black Death”
- Endemic in western U.S.: 10-14 human cases/year
- Potential BT agent
- Transmission: ingestion of rodent, flea bite, direct contact with blood/tissue, droplet inhalation
- Pneumonic plague
  - Most serious form
  - Transmittable person-to-person
  - CO 2014 outbreak largest since 1924 (MMWR April 30, 2015)
Experts Offer Steps for Avoiding Public Hysteria, a Different Contagious Threat

By BENEDICT CAREY  OCT. 15, 2014

As health officials scramble to explain how two nurses in Dallas became infected with Ebola, psychologists are increasingly concerned about another kind of contagion, whose symptoms range from heightened anxiety to avoidance of public places to full-blown hysteria.

So far, emergency rooms have not been overwhelmed with people afraid that they have caught the Ebola virus, and no one is hiding in the basement and hoarding food. But there is little doubt that the events of the past week have left the public increasingly worried, particularly the admission by Dr. Thomas R. Frieden, director of the Centers for Disease Control and Prevention, that the initial response to the first Ebola case diagnosed in the United States was inadequate.
FOR IMMEDIATE RELEASE
April 20, 2015
Contact:
Christi Lightcap, CDA, (303) 869-9005
Gary Sky, Tri-County Health Department (720) 200-1529

Pet and Livestock Owners Cautioned About Rabies

The Colorado Department of Agriculture and Tri-County Health Department have confirmed the rabid skunks in Adams, Arapahoe and Elbert counties in the past week. Pet owners are encouraged to check records to ensure rabies vaccinations are up to date. Livestock owners need to be vigilant in monitoring health issues in their animals, and discuss health concerns with their local veterinarian. Tri-County Health Department staff members are available to residents living near each of the skunk incidents about the benefit of vaccinating their livestock.

“The Department of Agriculture would like to stress two very important points,” said State Veterinarian, Dr. Keith Roehr. “One—livestock owners need to be aware that rabies can spread from one species to another so they should monitor their property for skunks; and two—local veterinarians are a valuable resource to help producers decide the best course of action to protect their livestock.”

“These rabid skunks confirm that rabies is present in the eastern regions of these counties and can spread from skunks to other mammals and we are concerned about the increase in skunks during the summer time of year. Rabies is a deadly disease and vaccination is the single best method to protect pets and livestock. People can get rabies if an animal in their home or on their property gets bitten by a rabid skunk,” said John M. Douglas, Jr., MD, Executive Director of Tri-County Health Department.

Between January 1 and April 17, 2015, there have been six rabid skunks identified in Adams, Arapahoe and Elbert counties, five since March 4th. For statewide data please visit https://www.colorado.gov/pacific/edphe/rabies-data.

Rabies is a viral disease in mammals that infects the brain and nearly all cases result in death. The clinical appearance of rabies typically falls into two category types: “aggressive” and “dumb.” Aggressive rabies symptoms include combative and unusual aggressive behavior such as biting. There is also a “dumb” form of the disease in which the animal is lethargic, weak in one or more limbs, and unable to raise its head or make sounds because its throat and neck muscles are paralyzed.
TCHD Emergency Preparedness: Point Of Dispensing (POD) Efforts

- TCHD Mass Prophylaxis Annex
  - Worst case scenario antibiotics or vaccine for large numbers
  - 14 public PODs (schools, fairgrounds)
- Activation (Real and Exercises)
  - 2009 H1N1 (63k+ vx’d, 62 PODs)
  - 2013 Operation Spore exercise (anthrax BT)
- Ongoing Efforts
  - 2015 Mass Vaccination exercise (using influenza vaccine)
Tri-County Health Department

STRATEGIC PLAN

Adams, Arapahoe and Douglas Counties 2014 – 2019
TCHD Strategic Plan Goals

• *Foundational Capacities* are considered to be cross-cutting domains of activity that will involve all TCHD divisions and offices and support both the effectiveness of current programs, as well as new efforts to address emerging health issues.

• **Goal 1:** Improve and Expand *Informatics and Technology*
• **Goal 2:** Improve and Expand *Strategic Communication*
• **Goal 3:** Improve and Expand *Policy and Partnerships*
• **Goal 4:** Improve and Expand *Sustainability of Key Organizational Resources*
TCHD Strategic Plan Goals

• *Population Health Priorities* are ones considered to be broadly important for TCHD’s communities, and while not new areas of activity for TCHD, a specific focus on them is intended to improve and expand TCHD’s efforts to address these areas across the lifespan.

• **Goal 5:** Reduce the Health Burden of *Obesity/Chronic Disease*
• **Goal 6:** Reduce the Health Burden of *Tobacco/Substance Abuse*
• **Goal 7:** Improve and Expand *Public Health Interactions with Health Care Delivery System*
• **Goal 8:** Improve and Expand Efforts to Promote *Healthy Human Environments*
• **Goal 9:** Address *Mental Health* as a Public Health Issue
New approaches to address strategic priorities

- Informatics (Goal 1)
  - Informatics coordinator, workgroup
- Communication (Goal 2)
  - New website, social media platforms
  - Strategic Communication Coordinator
- Organizational sustainability (Goal 4)
  - Revenue enhancement (grant-writing, billing, investment policy)
  - New EHRs
  - Public Health Accreditation
# Public Health Accreditation Process

Major Milestones with Estimated Timeline – 3/2015

<table>
<thead>
<tr>
<th>Milestone Step</th>
<th>Completion Timeline Estimate</th>
</tr>
</thead>
</table>
| **1. Complete Self-Assessment**  
(Self-assessment against PHAB standards & measures—Accreditation Team & Domain Sponsors) | April 2015                   |
| **2. Submit PHAB Statement of Intent (SOI)**  
(Up to 12 months to submit application) | May 2015                     |
| **3. PHAB reviews SOI, sends notification of fee, and provides TCHD with access to online application** | Estimate: May/June 2015      |
| **4. Submit Application & Fee**  
Pre-requisites:  
- Community Health Assessment (CHA)  
- Community Health Improvement Plan (PHP)  
- Agency Strategic Plan  
- TCHD Organizational Chart  
- Letter of Support from Appointing Authority  
- Fee: $47,700 | October/November 2015          |
| **5. PHAB:**  
- Reviews application & sends TCHD notification of acceptance;  
(Up to 12 months to submit documentation for all standards & measures (once system access is granted)) | Estimate: March-April 2016    |
| **6. Submit Documentation**  
(preceded by selection, revising, review & uploading of documentation for all standards & measures in all domains) | March-April 2017              |
| **7. PHAB reviews submission & sends notification of acceptance of documentation; selection of site visitors & site visit schedule** | Estimate: Sept. 2017          |
| **8. Complete Site Visit** | October 2017                  |
| **9. Receive Accreditation Decision** | January 2018                  |
Chronic Disease Prevention Grants (Goals 5 & 6)

- HPV vaccine coverage
- Radon-related disease prevention
- Increase in use of healthy beverages
- Worksite wellness promotion
- Community health teams
- Tobacco prevention
- Wisewoman (cardiovascular disease screening)
Survey of Marijuana Use among TCHD WIC Clients (Goal 6)

- 1,749 out of 2,903 eligible participated (60.2%)
- Majority were mothers or pregnant mothers receiving WIC services (N=1,616; 92%)
- Overall 470 (29.1%) ever used MJ
  - 95 (5.9%) current users (within past 30 days)
  - 375 (23.2%) past users

<table>
<thead>
<tr>
<th>Time of MJ Use</th>
<th>Ever Users (N=470)</th>
<th>Current Users (N=95)</th>
<th>Past Users (N=375)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy</td>
<td>10.9%</td>
<td>35.8%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Since the baby was born</td>
<td>9.6%</td>
<td>41.1%</td>
<td>1.6%</td>
</tr>
<tr>
<td>While nursing</td>
<td>3.0%</td>
<td>13.7%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>
Interest in Marijuana Education

Percent of WIC clients responding 'yes' to questions about specific topics

- Health effects on Children: 45.8% (English) - 81.5% (Spanish)
- Health effects on adults: 39.6% (English) - 77.2% (Spanish)
- MJ active in body: 43.4% (English) - 80.9% (Spanish)
- MJ use and pregnancy: 37.0% (English) - 55.2% (Spanish)
- MJ use and breastfeeding: 38.0% (English) - 55.0% (Spanish)
- Medical vs. Recreational MJ: 47.2% (English) - 73.1% (Spanish)
- MJ use on parenting: 41.8% (English) - 76.1% (Spanish)
- MJ addiction: 37.9% (English) - 74.9% (Spanish)
- MJ effects on driving: 42.1% (English) - 74.7% (Spanish)
- Types of MJ products: 41.1% (English) - 76.3% (Spanish)
- Quit using MJ: 21.4% (English) - 48.9% (Spanish)

English surveys
Spanish surveys
Goal 7: Health Care Systems Interactions

- Enhance access, linkage, use of care
- Health care data for PH use
- Non-profit hospital Community Benefits
- Collaborate to assure delivery of recommended clinical preventive services

**Medicaid Enrollment in Adams, Arapahoe, Douglas, and Denver Counties, 2010-March 2015**

Source: Colorado Department of Health Care Policy and Financing; Colorado Health Institute
Map 1. Ratio of Population to Primary Care Physician Full-Time Equivalents (FTEs), by Health Statistics Region, 2013

Adams: 1,849 : 1
Arapahoe: 1,955 : 1
Douglas: 1,995 : 1

Sources and Notes
1. Peregrine, Medical Quest Database, June 2013.
2. Calculated from data collected from Colorado Primary Care Office, Colorado Department of Public Health and Environment.
Map 3. Ratio of Medicaid Caseload to Medicaid Primary Care Physician Full-Time Equivalents (FTEs), by Health Statistics Region, 2013

Adams: 2,768 : 1
Arapahoe: 2,414 : 1
Douglas: 1,361 : 1

Map prepared November 6, 2013.
Dental Services

Map 4. Percentage of Dentists Accepting Medicaid, by County, 2014

- Oral health remains a need for both children and adults
- Support by Medicaid important but a work in progress
- Because Medicare doesn’t provide dental coverage, seniors > 65 are a group with particular needs
- TCHD will work to provide Sr. Dental services or assure their provision elsewhere

Ratio of Medicaid Enrollees to Medicaid Dentists

- Colorado: 1,261 : 1 (1.1 m enrolled)
- Adams: 753 : 1 (125 k enrolled)
- Arapahoe: 953 : 1 (122 k enrolled)
- Douglas: 1,291 : 1 (20k enrolled)
Goal 8: Healthy Human Environments

- Water quality & quantity
- Air quality indoor & outdoor
- Food safety
- Health in all policies approach (e.g., Health Impact Assessments)
Goal 9: Public Health Improvement Plan for Adams, Arapahoe, and Douglas Counties: Mental Health

- Requirement of the Public Health Act of 2008
- Partner engagement 2012-13
  - Top 3 issues: Obesity, Access to Health Care, Mental Health
  - Final focus: Mental Health
- Approved by State BOH, 2014
- Goals
  - Reduce stigma
  - Increase community prevention, early intervention
  - Enhance access to clinical mental health services
  - Enhance population data collection relevant to mental health
2015 Legislation of Interest to TCHD

- HB-1226 Retail Food Fees
- HB-1194 Long Acting Reversible Contraception $
- HB-1257 Penalty Removable Local Tobacco Tax
- Local Funding in Long Bill (General PH, CIIS funding)
- Others
  - SB 53, Dispensing for Overdose Victims (Naloxone)*
  - SB 116, Needle Stick Prevention*
  - HB 1039, Prescription Give-back for Institutions*
  - SB 085 & HB 1102 – Cottage Food
  - HB 1164 Postpone Jury Duty for Breast-feeding *
  - HB 1003 Safe Routes to School Funding
* Signed by Governor
Colorado strengthens vaccination rules, adding exemption requirements

By Electa Draper
The Denver Post

The state Board of Health on Wednesday passed new immunization rules that officials say strengthen school policies and will improve the state’s low vaccination rates.

The new rules, effective July 2016, will require parents seeking non-medical exemptions from school and child-care vaccine requirements to submit them more than once. They will be required at each age when recommended vaccines are due for pre-kindergartners and annually from kindergarten through 12th grade.

Currently, the state requires submission of an exemption request just once.

Gov. John Hickenlooper said in a written statement that the new rules will strengthen immunization rates in the state, which are among the lowest in the nation.

"Yet we know our work is not done," Hickenlooper said, "and will continue to work with the Board of Health, medical community and our state agencies to ensure parents have the facts about immunizations."
Summary: Colorado Family Planning Initiative

- Long-acting reversible contraceptives (LARCs)
  - IUDs, long-acting hormonal implants
  - 99+ % effective
- CO Family Planning Initiative
  - Free LARCs distributed statewide via Title X programs
  - Usage in low-income women 15-24 increased
- Outcomes 2009-13
  - 40% reduction in teen pregnancy
  - 42% reduction in teen abortions
  - Medicaid savings of $49-111 m in birth-related costs
  - ROI of $5.85 for every $1 spent

How does use of LARC vary by state among teens ages 15-19 seeking birth control at Title X-funded centers?

Percentage of LARC Users
- 0-5%
- 6-10%
- 11-20%
- 21% +

SOURCE: Title X Family Planning Annual Report, United States, 2013
Highlights

- Fall # premature deaths in 60% of counties
- New income inequality indicator
  - income 80% level/income 20% level
- Specific measures more accurate reflection of status than overall rank

Real estate move prevents new crude oil train traffic

By Charlie Bar
Senior Staff Writer

Hennepin County, Minn. plans to keep trains carrying Bakken crude oil from expanding traffic in the metro area. The county land-use plan calls for a conditional use permit to build a connection between their existing rail network and the evolving Bakken oil service. If successful, the purchase would protect several dozen Minneapolis suburbs from increased traffic in volatile crude oil from western North Dakota.

Clinton County, Pa. Commission Chairman Pete Spanitz (R) is preparing to testify on behalf of NACo about the proposed “waters of the U.S.” rule before the House Committee on Agriculture’s Subcommittee on Conservation and Forestry.
Trends in County Health Rankings

County Health Ranking for Health Outcomes, Adams, Arapahoe and Douglas Counties, 2010-2015

County Health Ranking for Health Factors, Adams, Arapahoe and Douglas Counties, 2010-2015
Arapahoe County

Successes
• Premiere deaths
• Exercise opportunities
• Teen births
• Density of dentists
• Injury deaths

Challenges
• Low birthweight
• Alcohol impaired driving
• Sexually transmitted infections
• Uninsured
• Density of mental health providers
• Social determinants – single parent households, violent crime
• Commuting to work
Premature Death, Years of Potential Life Lost before age 75 per 100,000 population, Adams, Arapahoe, Douglas Counties, 2010-2015

Per 100,000 population

Adams
Arapahoe
Douglas

5% decline
Preventable Hospital Stays, Rate for 1,000 Medicare enrollees, Adams, Arapahoe, Douglas Counties, 2010-2015

- Adams
- Arapahoe
- Douglas

26% decline
Summary: Implications of County Health Rankings

• **The major goal of the Rankings is to raise awareness about the many factors that influence health and that health varies from place to place**

• Like other ranking approaches, intuitive appeal, but many limitations

• Year to year change in rankings less important than low performance and trends in key measures

• Measurable progress in all 3 counties in several areas

• Best use of rankings may be annual re-focus on the spectrum of factors that contribute to community health
Appreciation: Big Thanks for Facility Upgrades

- Capital Improvement Project funding supporting the Altura Plaza remodel effort 2013-15.
- Flexibility in allowing TCHD to make cosmetic improvements at the Englewood facility 2013-2014.
- Both projects greatly appreciated by staff and especially our clients.
Summary: Looking Ahead

- TCHD has well-recognized track record in provision of core public health services
  - Evidenced by 17 NACCHO Model Practice awards over past decade (2 in 2015)
  - Should be enhanced by Public Health Accreditation
- New Strategic Plan is allowing us to
  - Strengthen core services
  - Improve health of our communities by strengthening foundational capacities and prioritizing key population health issues
- Our county governments will continue to be key partners as we seek to maximize our impact