Arizona Viral Hepatitis Epidemiological Profile

July 27, 2016

Presenting To
Arizona Infectious Disease Training | Phoenix, AZ

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Hepatitis may also be caused by alcohol, side effects of medications, toxins, or bacteria.
• Hepatitis A Virus
• Hepatitis B Virus
• Hepatitis C Virus
• Hepatitis D Virus
  — requires co-infection with HBV
• Hepatitis E Virus

**Symptoms:** fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, gray-colored bowel movements, joint pain, jaundice

Image: (CC BY-NC-ND 2.0) – Roger Smith
<table>
<thead>
<tr>
<th>Hepatitis A</th>
<th>Hepatitis B</th>
<th>Hepatitis C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated 2,500 cases in 2014 in U.S.</td>
<td>Estimated 19,200 acute cases in 2014 in U.S.</td>
<td>Estimated 30,500 acute cases in 2014 in U.S.</td>
</tr>
<tr>
<td>Oral-fecal contact, Contaminated food</td>
<td>Blood-borne, IDU, Sex, Occupational exposure, Perinatal</td>
<td>Blood-borne, IDU, Occupational exposure, Less common: Sex, Perinatal</td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td><strong>Acute and chronic</strong> About 10% develop chronic infection but 25% of these serious complications</td>
<td><strong>Acute and chronic</strong> About 80% develop chronic infection; most have slowly progressing disease</td>
</tr>
<tr>
<td><strong>Vaccine</strong></td>
<td><strong>Vaccine</strong></td>
<td><strong>No vaccine</strong></td>
</tr>
</tbody>
</table>
Figure 2.1. Reported number of acute hepatitis A cases — United States, 2000–2014

Source: CDC, National Notifiable Diseases Surveillance System (NNDSS)
Hepatitis A cases

Rate per 100,000 population

Arizona

U.S.

Source: CDC, National Notifiable Diseases Surveillance System (NNDSS)
Figure 3.1. Reported number of acute hepatitis B cases — United States, 2000–2014

Source: CDC, National Notifiable Diseases Surveillance System (NNDSS)
Figure 4.1. Reported number of acute hepatitis C cases — United States, 2000–2014

Source: CDC, National Notifiable Diseases Surveillance System (NNDSS)
• **59 outbreaks** (two or more cases) of viral hepatitis related to healthcare in 2008 – 2015

  – 93% in non-hospital settings

<table>
<thead>
<tr>
<th>Virus</th>
<th>Hepatitis B</th>
<th>Hepatitis C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outbreaks</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>OB-Associated Cases</td>
<td>175</td>
<td>&gt;239</td>
</tr>
<tr>
<td>Persons Notified for Screening</td>
<td>&gt;10,700</td>
<td>&gt;99,919</td>
</tr>
</tbody>
</table>

http://www.cdc.gov/hepatitis/outbreaks/healthcarehepoutbreaktable.htm
Hepatitis in young persons who inject drugs


• Notes from the Field: Hepatitis C Virus Infections Among Young Adults — Rural Wisconsin, 2010

• Hepatitis C Virus Infection Among Adolescents and Young Adults --- Massachusetts, 2002—2009

• Notes from the Field: Risk Factors for Hepatitis C Virus Infections Among Young Adults --- Massachusetts, 2010

• Use of Enhanced Surveillance for Hepatitis C Virus Infection to Detect a Cluster Among Young Injection-Drug Users --- New York, November 2004--April 2007

http://www.cdc.gov/hepatitis/outbreaks/youngpwid.htm

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Hepatitis C virus (HCV) infection is a leading cause of liver-related morbidity and mortality (1). Transmission of HCV is primarily via parenteral blood exposure, and HCV can be transmitted vertically from mother to child.
What is an epidemiologic profile?

A document that describes the burden of disease on the population of an area in terms of socio-demographic, geographic, behavioral, and clinical characteristics of persons with the condition.

HIV guidelines:
Harnessing Data to Launch
Viral Hepatitis Epidemiologic Profiles

— Resources from Pilot Sites —

Robust data for viral hepatitis are critical in assisting health agencies broker partnerships with other governmental agencies, healthcare providers, and communities to assure availability of high quality services along the treatment cascade from testing to cure. Health agencies can augment surveillance data and promote innovative uses of traditional data sources through the development of viral hepatitis epidemiologic profiles.

Purpose of Epi Profile

Drive policies

Provide data for planning purposes

Improve surveillance

Raise awareness

Target and promote testing/vaccination

Disseminate findings

Create outbreak response plan
Why an Epi Profile for Arizona?

Use state-specific data

- Prevent new cases
- Increase awareness (community or individual)
- Planning of services
2016 Viral Hepatitis
Epidemiologic Profile for Arizona

June 2016

hepatitisaz.org/
Credit goes to…

Clarisse Tsang

Viral Hepatitis Coordinator at ADHS, until June 2016

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Profile Acknowledgments:
• Xun Zhang; Chris Newton; Keith Laubham; Anna Scherzer; Patty Mead; Victoria Hansen; Irene Ruberto; Shane Brady; Ken Komatsu; Mohammed Khan; Felicia McLean; Lisa Villarroel; Georgia Yee; Rick DeStephens; John Sapero; Mona Doshani, Lauren Canary; Ron Klein; Richard Manch; Robert Gish; Anita Kohli
• Members of the Viral Hepatitis Epidemiologic Profile Stakeholder Group and HCV rapid antibody testing site partners
The prevalence (number of people currently infected) of which virus is highest in Arizona today?

A: Hepatitis A
B: Hepatitis B
C: Hepatitis C
Which of the following systems can provide information about viral hepatitis in Arizona?

A: Laboratory Reporting
B: Hospital Discharge Database
C: Vital Records / Death Certificates
D: All of the above
CDC recommends that U.S. individuals in which group be tested for hepatitis B at least once?

A: Everyone

B: People born in Asia, Africa, and other regions with moderate or high rates of hepatitis

C: Persons born during 1945 – 1965
CDC recommends that U.S. individuals in which group be tested for hepatitis C at least once?

A: Everyone
B: People born in Asia, Africa, and other regions with moderate or high rates of hepatitis
C: Persons born during 1945 – 1965
Communicable Disease Surveillance: Providers & Labs

**What**
- Specific diseases/tests must be reported to PH officials
  - *Per state statute & administrative code*

**Who**
- Healthcare providers
- Laboratories

**When**
- Within 5 days after diagnosis or test completion

**Why**
- Population-level approach
  - *Comprehensive info is important for good decisions*
Symptomatic Case

Healthcare Provider

Clinical Laboratory

Public Health

14 reports – but only 1 case
2006 – 2015

**Acute Hepatitis B**

- 1,479 cases
  - Average 128 / year
- 62% male

**Case definition involves:**

- Discrete illness onset
- Jaundice or elevated liver enzyme levels
- IgM+ (if done), HBsAg+

**Chronic Hepatitis B**

- 9,790 cases
  - Average 979 / year
- 57% male

**Case definition involves:**

- HBsAg + or HBV DNA+ or HBeAg+
- IgM- (if done)
- Doesn’t meet criteria for acute

Case definitions are simplified for this presentation, and have changed during this time period.
HBV – Rate, per 100 000 population

- Acute
- Chronic

The chart shows the rate of HBV (Hepatitis B Virus) over the years 2006 to 2015. The Acute rate has a steady decrease from around 18 per 100,000 population in 2006 to around 2 per 100,000 population in 2015. The Chronic rate shows a more fluctuating trend but generally decreases from around 14 per 100,000 population in 2006 to around 12 per 100,000 population in 2015.
HBV – Rate, per 100 000 population

Age at First Report

- Acute
- Chronic
3,032 cases are included in these calculations. Race/ethnicity data were not available for 69% of the reported cases.
HBV – Rate, per 100 000 population

Acute

Chronic
Hepatitis C surveillance

• 1998 – 2008: communicable disease surveillance as described above (although MEDSIS was not the database used)
  – Included full investigations of a subset of cases (~8%)

• After 2008: ADHS lost most of the resources for HCV surveillance.
  – Unable to continue entering (and de-duplicating!) thousands of reports / year
Hepatitis C

1998 – 2008

• 83,115 cases
  – Average 7,514 / year
• 68% male
• Mean & median age at time of first report = 45 years

Case definition

• Chronic: based on lab testing.
• Unlike for HBV, no lab test to help identify which reports are more likely to be acute illness.
• Distinguishing acute HCV relies on PH investigation to identify discrete onset of compatible symptoms, OR known seroconversion – recent negative test followed by a positive .....very few acute cases identified.
Almost 7,000 cases (8%) investigated during this period.

- Slightly more likely to be female than non-investigated cases.
- Much more likely to be identified in 2000 – 2003 than non-investigated.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Investigated HCV Cases (n=6,898)</th>
<th>All HCV Cases (n=83,115)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Sex (%)</td>
<td>66.5</td>
<td>67.8</td>
</tr>
<tr>
<td>Year reported (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998-1999</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>2000-2001</td>
<td>26</td>
<td>15</td>
</tr>
<tr>
<td>2002-2003</td>
<td>57</td>
<td>23</td>
</tr>
<tr>
<td>2004-2008</td>
<td>10</td>
<td>53</td>
</tr>
</tbody>
</table>
Arizona Population 2010:

- White: 68%
- Hispanic: 20%
- American Indian: 4%
- Black/African American: 7%
- Asian/Pacific Islander: 1%

HCV – investigated cases, 1998 – 2008:

- American Indian: 4%
- Hispanic: 3%
- Asian/Pacific Islander: 1%
- Black/African American: 5%
- Other: 29%
HCV: Risk factors of investigated cases

- Ever used Intravenous Drugs: 67%
- Ever used Intranasal Drugs: 65%
- Tattoo: 52%
- Other Blood Exposure: 27%
- Blood/Organ Transplant <1992: 25%
- Piercing: 15%
- Contact of person with HCV: 11%
- Occupational Blood Exposure: 7%
- Born to HCV Positive Mother: 2%
- Clotting Factor before 1987: 1%
HCV Surveillance 2009 – 2015

• No HCV surveillance program since 2009.

• 2009 forwards: ADHS has been onboarding laboratories to report electronically (ELR).
  ➢ 50% of lab reports submitted electronically since mid-2012.

• HCV results from ELR cleaned, de-duplicated, compared to earlier reports to identify new cases
ELR period – reports are not comprehensive, but we can look at trends.

117,445 HCV cases
Excludes 735 cases with missing birthdate or ages <1 or >99 (possible data errors)
Excludes 735 cases with missing birthdate or ages <1 or >99 (possible data errors)
HCV

2002 – 2008
Annualized rate, per 100 000 county population

2013 – 2015
ELR Reports, relative to county population*

* Color scale is different on the two maps.
Surveillance data: Limitations

• Cases may not all be reported
• Possible inaccuracies in identifying whether a case is newly-reported or not
• Insufficient resources to investigate all cases
  – Acute HBV may be under-identified
• Race/ethnicity data missing for many cases
• Changes in case definitions over time (especially for acute vs. chronic HBV)
• HCV stats after 2008 only include ELR data
  – May not be completely representative
LabCorp HCV testing: 2015

- Only positive HCV lab results are reportable to the health department
- CDC partnered with two major commercial laboratories in 2015, including Laboratory Corporation of America (LabCorp)
- Obtained data on:
  - HCV tests that were ordered, and number positive
  - Antibody and confirmatory (nucleic acid/RNA) tests separated
• HCV antibody tests run on 57,410 people in 2015 in Arizona (LabCorp)
  – Almost 1 in 100 people tested
  – 5.8% positive (3,328)
  – 57% of positive tests were among men

• >8,000 RNA tests run
  – 53% were positive
Antibody tests (total)  Antibody tests (positive)

Confirmatory tests (positive)

Rates, per 10,000 county population

LabCorp HCV Tests, 2015
LabCorp HCV Antibody Tests Run, 2015

64% of Ab tests are among women...but only 43% of positive results

<table>
<thead>
<tr>
<th>Gender</th>
<th>Tests Run</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>21,234</td>
<td>9.3%</td>
</tr>
<tr>
<td>Female</td>
<td>38,020</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

64% of Ab tests are among women...but only 43% of positive results
Younger women are getting tested, but men and women 55 – 64 years are more likely to be positive.
Mohave County HCV investigations

- Investigation by county health department of a subset ($n=167$, 28%) of reported HCV cases

- January 2015 – May 2016
Identified as a high-priority area (top 5% of U.S. counties) for HCV investigations, based on a “vulnerability” score

Score based on:
1. Drug-overdose mortality
2. Access to prescription opioids
3. Access to care (both for use of care and as evidence of need for care)
4. Drug-related criminal activity
5. Injection drug use behaviors
6. Socio-demographics characteristics
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Investigated HCV Cases N = 167 (%)</th>
<th>Non-investigated HCV Cases N = 433 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>104 (62%)</td>
<td>265 (61%)</td>
</tr>
<tr>
<td>Female</td>
<td>63 (38%)</td>
<td>168 (39%)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Median</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>110 (94%)</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>2 (2%)</td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>0 (0%)</td>
<td></td>
</tr>
<tr>
<td>American Indian/</td>
<td>3 (3%)</td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2 (2%)</td>
<td></td>
</tr>
<tr>
<td>Hispanic Ethnicity</td>
<td>10 (10%)</td>
<td>15% of county pop.</td>
</tr>
<tr>
<td>Risk Factor</td>
<td>Percent Reporting</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td>Unprotected sex</td>
<td>58%</td>
<td></td>
</tr>
<tr>
<td>Tattoo</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>Other surgery (not oral)</td>
<td>47%</td>
<td></td>
</tr>
<tr>
<td>Injection Drug Use</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>Incarcerated &gt; 24 hours</td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td>Street Drugs</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>Dental work/oral surgery</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Incarcerated &gt; 6 months</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Ever treated for an STD</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Exposure to someone else's blood</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Accidental needstick</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Contact of HCV case</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Hemodialysis</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>
Hospitalizations

- Arizona Hospital Discharge Data (HDD): hospital discharge records for inpatient and emergency department visits.
- All Arizona licensed hospitals are required to report, per Arizona statute and administrative code.
- Examined INPATIENT records for ARIZONA RESIDENTS for 2009 – 2014
- Identified records based on ICD-9 codes from all 25 available diagnosis fields
- Hospitalization data shown here represents visits rather than patients.
Rate of hospitalization, per 100,000 population

**Hepatitis C**
- 2009: 177
- 2010: 197
- 2011: 221
- 2012: 220
- 2013: 207
- 2014: 216

**Hepatitis B**
- 2009: 13
- 2010: 15
- 2011: 15
- 2012: 14
- 2013: 13
- 2014: 15

**Year of discharge**
Hepatitis B

- 5,565 hospitalizations
- 391 (7%) had principal diagnosis of HBV
- 63% male

For principal diagnosis of HBV only:
- Median length of stay: 4 days
- Total charges: $16.5 million

Hepatitis C

- 80,829 hospitalizations
- 4,995 (6%) had principal diagnosis of HCV
- 66% male

For principal diagnosis of HCV only:
- Median length of stay: 3 days
- Total charges: $23.3 million

2009 - 2014
Hospitalizations data: Limitations

• Hospitalization data shown here represents visits rather than patients. (One patient hospitalized multiple times is counted multiple times.)

• Use principal vs. all diagnosis fields to identify HBV or HCV – no perfect solution.
  – Principal only may under-count visits to which viral hepatitis contributed.
  – Using all diagnosis fields could over-count visits in persons who have hepatitis infection but the infection plays little role in the current visit.

• Surveillance is not the purpose of the HDD.
Liver Cancer

- Arizona Cancer Registry (ACR): a population-based surveillance system that collects and manages information from persons having been diagnosed with cancer, since 1981

- ACR matched with surveillance data for HBV and HCV (1988 – 2014) to identify liver cancer patients with diagnosis or lab confirmation of viral hepatitis.
Hepatitis B

• 112 liver cancer matches

• 85% male

• Average age of cancer diagnosis = 59 years (range 20 – 81)

Hepatitis C

• 948 liver cancer matches

• 81% male

• Average age of cancer diagnosis = 53 years (range 23– 85)
Liver Cancer + HBV

- White: 47%
- Asian and Pacific Islander: 29%
- Black: 11%
- American Indian: 0%
- Hispanic: 11%
- Unknown: 2%

Arizona Population 2010

- 59%
- 29%
- 5%
- 4%
- 3%
Liver Cancer + HCV

Arizona Population 2010

- White: 59%
- Hispanic: 28%
- Black: 7%
- American Indian: 4%
- Asian / Pacific Islander: 2%

Overall: 59%

- Other: 29%
- HCV: 5%
Liver cancer data: Limitations

- Cases were identified by a match between the surveillance data and the cancer registry, so the record had to be in both datasets to be included.

  - Some reasons a person’s record may not have been in the surveillance dataset:
    - Diagnosis (and reporting) of viral hepatitis prior to the time period used for matching
    - Hepatitis B or C report not submitted to PH by providers or labs
    - HCV lab reported > 2008, but not by ELR
Deaths

• ADHS Office of Vital Records maintains all information related to an Arizona resident’s death, including cause of death and demographic info

• Identified deaths documenting hepatitis B or C as a cause or contributing condition to death, using ICD-10 codes

• Age-adjusted to the U.S. 2000 population
Age-Adjusted Mortality Rates per 100,000 population

Hepatitis C

Hepatitis B


4.5 5.3 5.0 5.5 5.6 6.4 7.6 6.8 6.1 0.4 0.6 0.5 0.3 0.3 0.3 0.3 0.3 0.5 0.5


0.4 0.6 0.5 0.3 0.3 0.3 0.3 0.5 0.3 0.5
2011 – 2014

Hepatitis B
• 119 deaths
• 71% male
• 24% born outside the U.S.

Hepatitis C
• 2,033 deaths
• 83% male
• 23% veterans
Hepatitis B Deaths

Mean (median) age = 74 years (76)

Mean and median age = 60 years

Age at Death

Percent of Deaths

2011 – 2014
Age-Adjusted Average Annual Mortality Rate per 100,000 population, 2011 – 2014

- Asian or Pacific Islander: 1.8
- Black: 0.9
- American Indian: 0.5
- Hispanic: 0.4
- White: 0.3

HBV
Mean (median) age = 74 years (76)

Mean (median) age = 59 years (58)
Age-Adjusted Average Annual Mortality Rate per 100,000 population, 2011 – 2014

- Hispanic: 10.0
- Black: 9.0
- American Indian: 8.6
- White: 5.9
- Asian or Pacific Islander: 4.9

HCV
Mortality data: Limitations

• Possibility for some misclassification errors

• Some of the limitations of other datasets are likely minimized for the mortality data: double-counting, missing data, matching
Co-infections with HIV

- ADHS HIV Surveillance Program - investigations and surveillance for HIV since 1983

- HBV & HCV surveillance data from 1998 – 2014 were cross-matched with HIV data from the same time period to identify individuals with co-infections.
1998 – 2014

HIV
11,728

HBV
26,992

HCV
110,023

534
5% of HIV
2% of HBV

975
1% of HCV
8% of HIV
Co-infections of HIV with:

<table>
<thead>
<tr>
<th>Hepatitis B</th>
<th>Hepatitis C</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 534 cases</td>
<td>• 975 cases</td>
</tr>
<tr>
<td>(90 acute, 444 chronic)</td>
<td></td>
</tr>
<tr>
<td>• 95 - 97% male</td>
<td>• 83% male</td>
</tr>
<tr>
<td>• ~50% reported to PH first with HBV</td>
<td>• ~25% reported to PH first with HCV</td>
</tr>
<tr>
<td>• Average age of HBV report: 36 years (acute), 39 years (chronic)</td>
<td>• Average age of HCV report: 41 years</td>
</tr>
</tbody>
</table>

1998 – 2014
Males represent a very high proportion of co-infected cases

HBV-HIV Coinfection: 96%
HCV-HIV Coinfection: 83%
HIV: 86%
Acute HBV: 62%
Chronic HBV: 57%
HCV: 66%

1998 – 2014
Co-infected HBV cases are more likely to be white
Co-infected HCV cases are also more likely to be white

1998 – 2014
Chronic HCV and HIV

1998 – 2014

- Adult MSM: 29%
- Adult high-risk heterosexual contact: 6%
- Adult injection drug user (IDU): 39%
- Adult MSM & IDU: 20%
- Adult with no identified risk: 4%
- Adult with no reported risk: 2%
- Perinatal exposure: 0%

Chronic HCV-HIV
HIV overall

- Chronic HCV-HIV
- HIV overall
Co-infection data: Limitations

Cases were identified by a match between the datasets, so the record had to be in both datasets to be included.

Some reasons a person’s record may not have been included in the surveillance datasets:

- Report of one infection outside period used for data matching
- Report not submitted to PH by providers or labs
- HCV lab reported > 2008, but not by ELR

Difficult to identify when the INFECTION happened, which may be different from diagnosis and/or report.

- Hepatitis first? HIV first? Same time? How long between?
For the full report, (including additional topics!) please see:

hepatitisaz.org/
Hepatitis Program

- Check out ADHS' new hepatitis education materials
- Read CDC's Press Release on Rising Hepatitis C Death Toll
- Read the report *Eliminating the Public Health Problem of Hepatitis B and C in the United States*
- Check out the new AZ hepatitis C resource directory
- May is National Hepatitis Awareness Month. Find out more here

Learn more about this foodborne disease that affects the liver.

Find out more about this bloodborne pathogen that affects the liver.

Information about this common disease that is the leading cause of liver cancer.

Info about lesser-known forms of viral hepatitis that also affect the health of the liver.
Viral Hepatitis

5 million Americans infected - 75% unaware
>80,000 Arizonans infected with hepatitis C
Leading cause of liver cancer and liver transplant
Deaths have been increasing: >20,000 Americans die each year related to hepatitis

Top Reported Infectious Diseases in Arizona**

- Chlamydia 30,476
- Valley Fever 11,888
- Influenza 11,296
- **Hepatitis C* ~10,000**
- Gonorrhea 5,815
- Invasive MRSA 1,166
- **Hepatitis B* 1,043**
- Salmonellosis 996

**5 year median, *acute and chronic cases

Who is at Risk?

**Hepatitis C**
- Baby Boomers
- Veterans
- Persons with HIV
- Persons who have ever injected drugs

**Hepatitis B**
- Asians/Pacific Islanders are 7x more likely to die from hepatitis B

Gaps in Hepatitis C Testing & Linkage to Care

Out of 100 people who were initially positive on the screening test...

- Received confirmatory test (23%)
- Did not receive confirmation (77%)

Goals to Combat Hepatitis in Arizona

- Strengthen surveillance to detect viral hepatitis outbreaks
- Educate providers and communities to reduce health disparities related to viral hepatitis
- Improve screening and linkage to care to prevent liver disease and cancer

www.hepatitisAZ.org
www.hepcaz.org

Arizona Department of Health Services
If You or Your Parents Were BORN IN ASIA or the PACIFIC ISLANDS

CDC Recommends That You Get Tested for HEPATITIS B

Did you know that
1 in 12 Asian Americans have Hepatitis B?

2 out of every 3 Asian Americans with Hepatitis B don’t know they are infected.

People with Hepatitis B often have NO SYMPTOMS.

http://www.cdc.gov/knowhepatitisB/
BABY BOOMERS HAVE THE HIGHEST RATES OF HEPATITIS C.

Talk to your doctor about getting tested. Early detection can save lives.

http://www.cdc.gov/knowmorehepatitis/
THANK YOU

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