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Hepatitis C Surveillance in Texas

Carlos R. Alvarez, MPH, CPH
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Agenda

- Overview of HCV
- Hepatitis C in the United States
- Hepatitis C in Texas
- HCV surveillance
- CSTE Case definition
- HCV surveillance data
- Questions

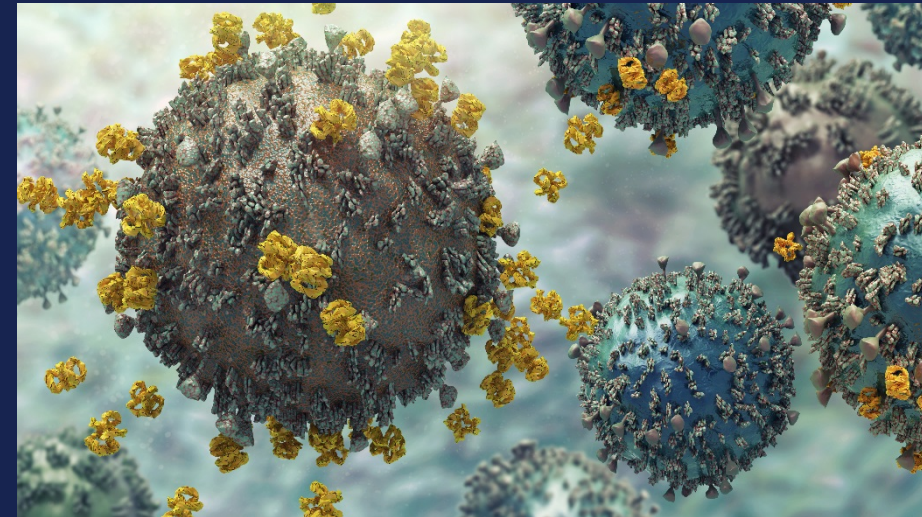
Hepatitis C Overview



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- Blood-Borne Virus
- Previously known as non-A, non-B hepatitis
- Incubation time of 14 to 180 days
 - Average 2-12 weeks
- Causes inflammation of the liver leading to cirrhosis, liver failure and hepatocellular carcinoma (HCC)

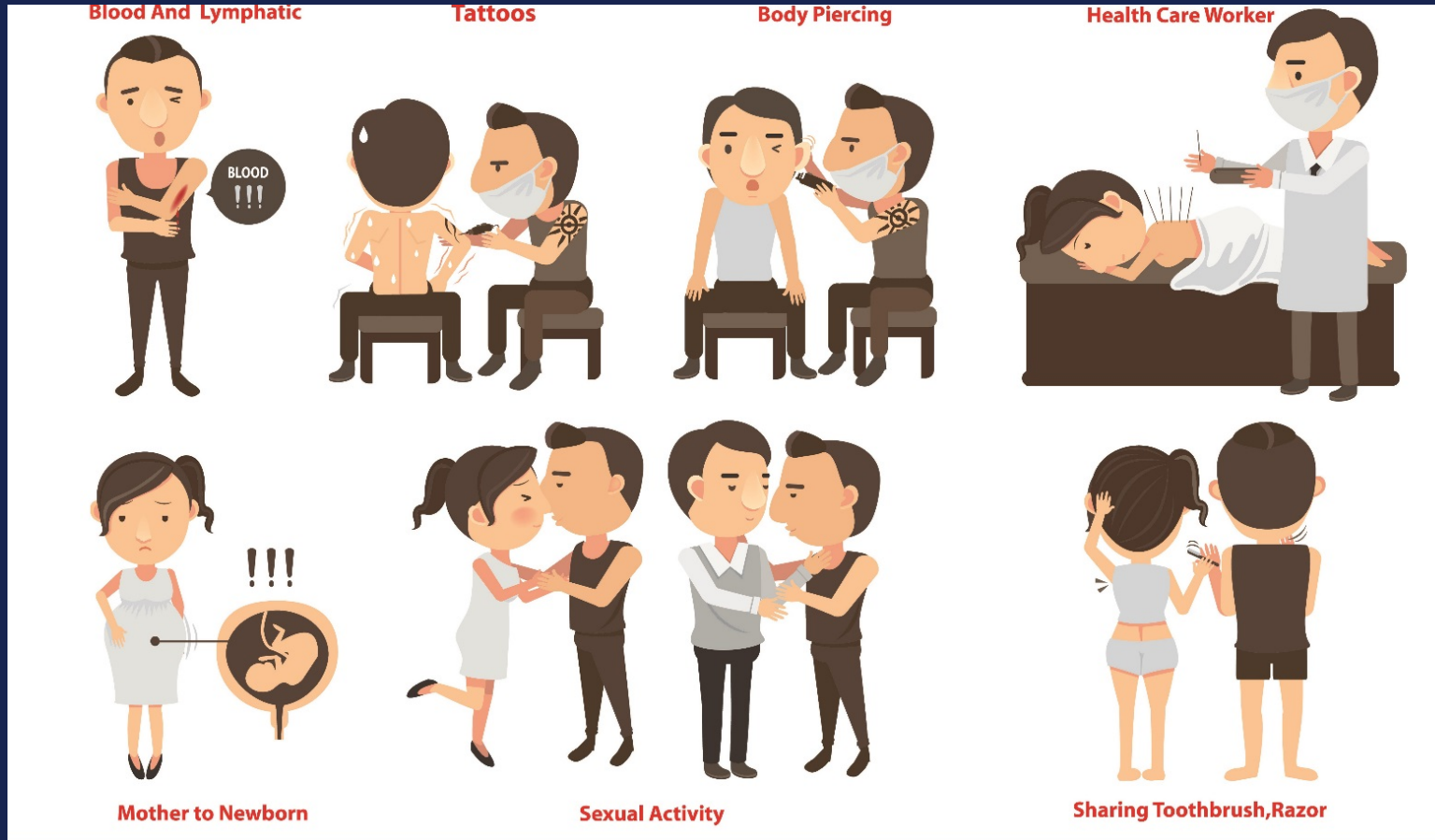


Hepatitis C Transmission



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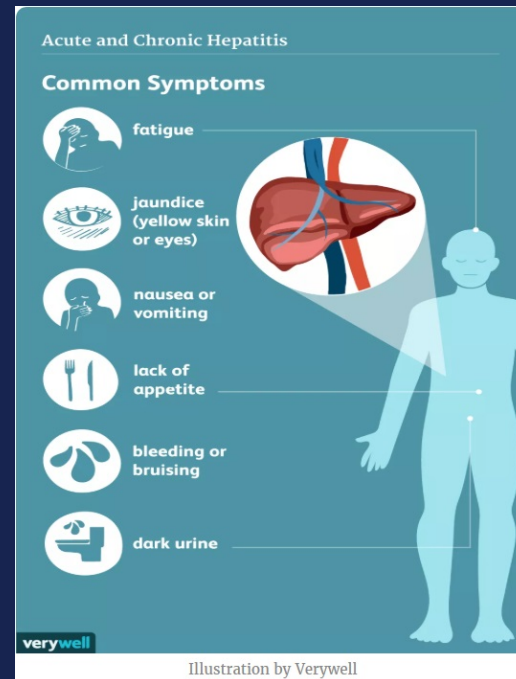
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Clinical Symptoms

- Fever
- Fatigue
- Dark urine
- Clay-colored stool
- Abdominal pain



- Loss of appetite
- Nausea
- Vomiting
- Joint pain
- Jaundice

70%-80% of people infected do not experience any symptoms

These clinical symptoms are considered clinical criteria for surveillance purposes

Risk factors

1. Born Between 1945 and 1965
2. HIV Positive
3. History of sexually transmitted diseases
4. Men who have sex with men (MSM)
5. Injection drug use (IDU)
6. Intranasal drug use (INDU)
7. Had sex for money/drugs
8. Prior/current incarceration
9. Employed in medical/dental field
10. Child born to hepatitis C + mother\
11. Received clotting factors, blood/blood products or organ transplant before 1992
12. Household Contact of confirmed or suspect to HCV case
13. Long term hemodialysis

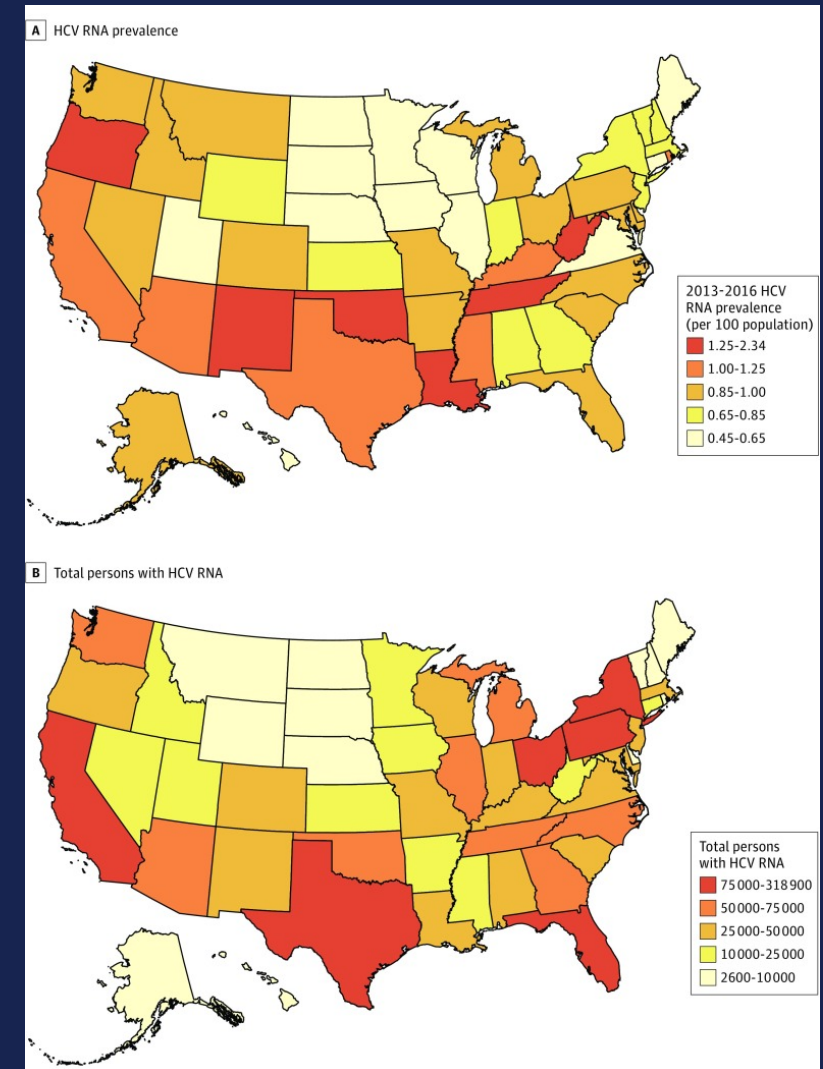


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Hepatitis C in the United States

- Most common blood-borne infection in the US
- An estimated 2.3 million persons in the United States are living with hepatitis C²
- In 2013, HCV killed more people than all other infectious diseases reported to CDC³
- 25% of those living with HIV in the US are co-infected with hepatitis C virus (HCV)¹



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Hepatitis C Prevalence in Texas

- In 2015, Estimated 584,196 (357,098 to 1,313,077) people in Texas living with Chronic Hepatitis C

Based on the U.S. Census 2015 Texas population estimated at 27,469,114 and a national published hepatitis C prevalence rate estimate from 2003-2010 NHANES data (adjusted for the limitations of not including populations of homeless, incarcerated, and institutionalized persons) of 1.3 percent

- Hepatitis C Surveillance Team currently working on updating prevalence estimate

NEDSS

Mortality Data

Hospitalizations

Other



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HCV Surveillance in Texas

- Historically, HCV surveillance activities were housed in EAIDB
- April 2017, TB/HIV/STD Branch begin discussion regarding the transfer of surveillance responsibilities from EAIDB to TB/HIV/STD
- October 2017, 3 HCV epidemiologist and one clinical data specialist join staff in TB/HIV/STD Branch as the HCV Surveillance Team
- November 2017, Official HCV surveillance transfer date from EAIDB to HIV/STD/TB



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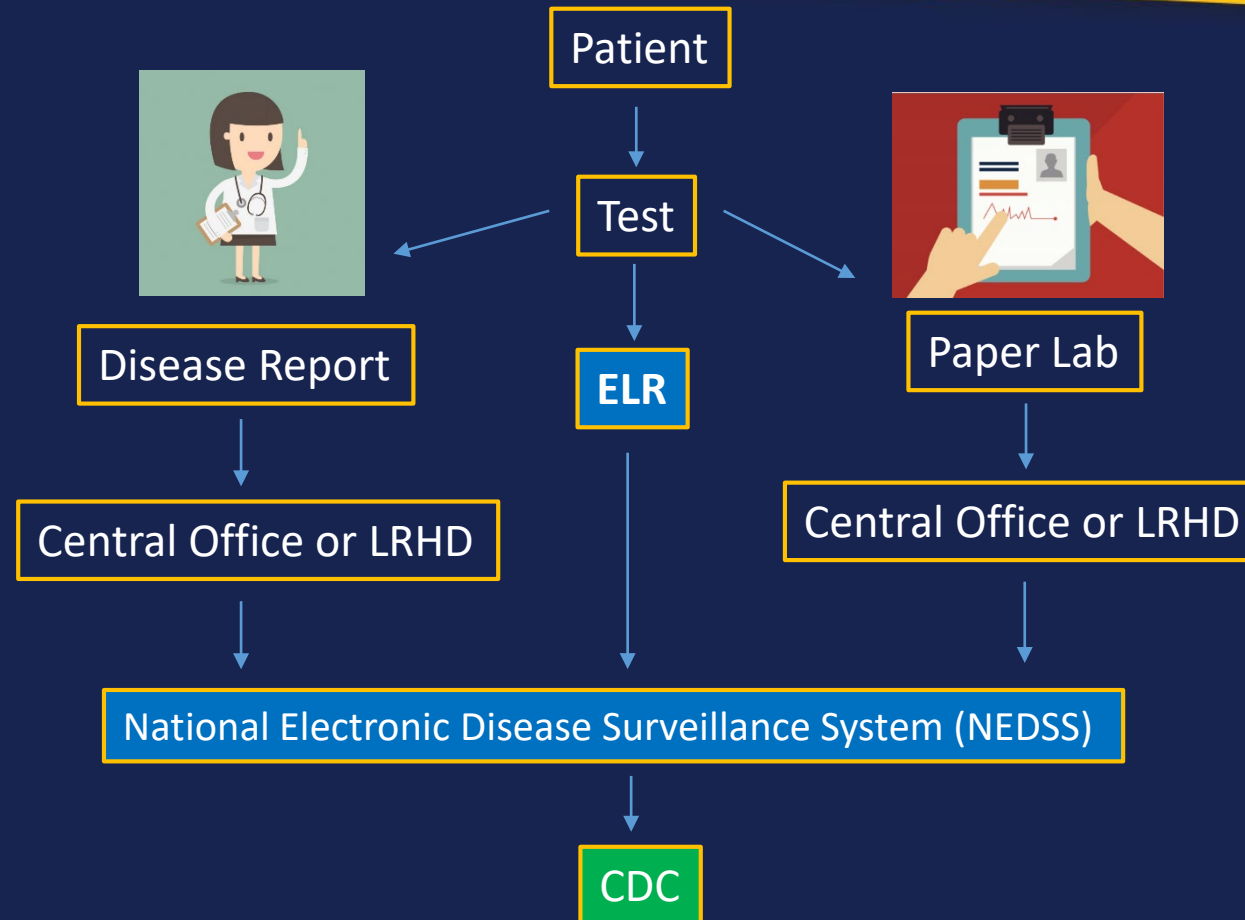
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Surveillance Flow



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Data Sources

- Laboratories
 - ELRs
 - Paper Labs
- Providers
 - Infectious Disease Report for Notifiable Diseases

CSTE Acute Case Definition



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Clinical Case Definition

- **Acute:** An acute illness with discrete onset of symptoms* consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), and a) jaundice or b) abnormal serum alanine aminotransferase levels (ALT level >200 IU/L).

*A documented negative HCV laboratory test result of any type (antibody, antigen, NAT/PCR) followed within 12 months by a positive test result of any type does not require an acute clinical presentation to meet the surveillance case definition.

Laboratory Confirmation

- Nucleic acid test (NAT) or PCR test for HCV RNA positive (including qualitative, quantitative or genotype testing) **OR**
- A positive test indicating presence of hepatitis C viral antigen (HCV antigen)*

* When and if a test for HCV antigen(s) is approved by FDA and available

CSTE Acute Case Classification



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Case Classification

- **Confirmed:**
 - A case that meets clinical criteria and is laboratory confirmed **OR**
 - A documented negative HCV test result (antibody/anti-HCV, antigen, or NAT/PCR) followed within 12 months by a positive result of any of these tests (test conversion – does not require acute clinical presentation).
- **Probable:**
 - A case that meets clinical criteria and has a positive anti-HCV antibody test, but has no reports of a positive HCV NAT or positive HCV antigen tests, **AND** does not have evidence of test conversion within 12 months or has no report of test conversion.

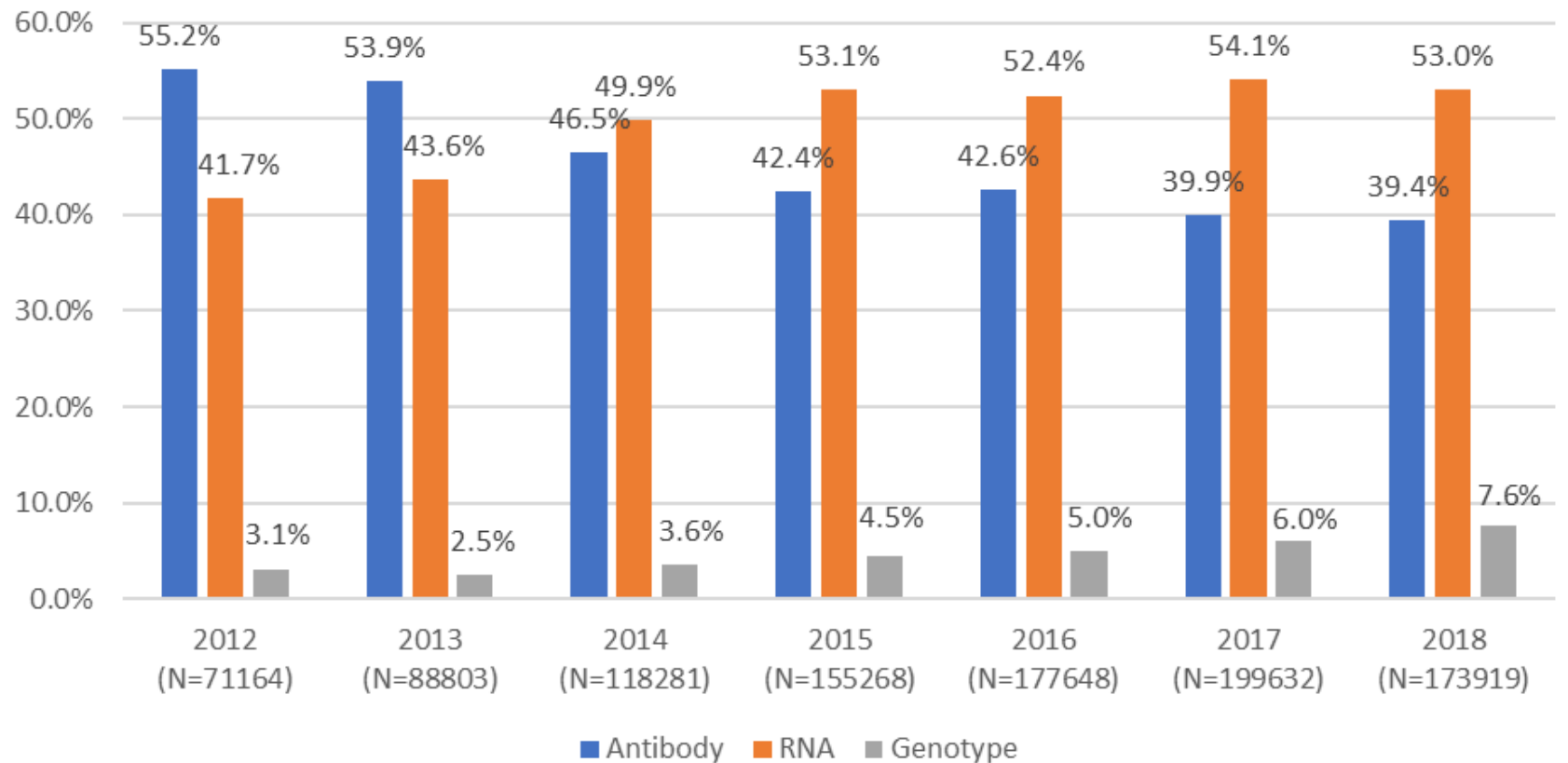
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HCV Labs received by DSHS, 2012-2018



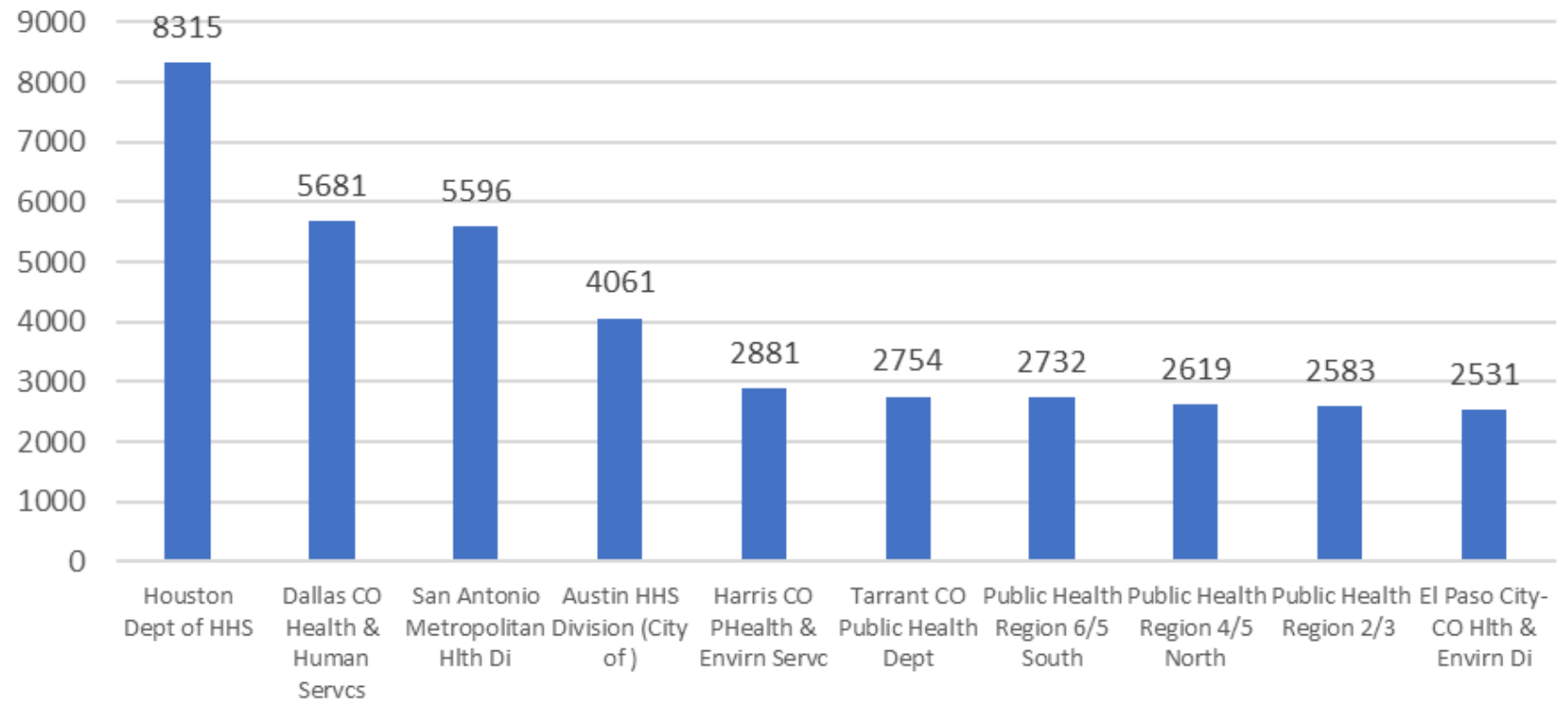
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Antibody Lab Reports by Jurisdiction (Top 10), 2018
(N=68486)



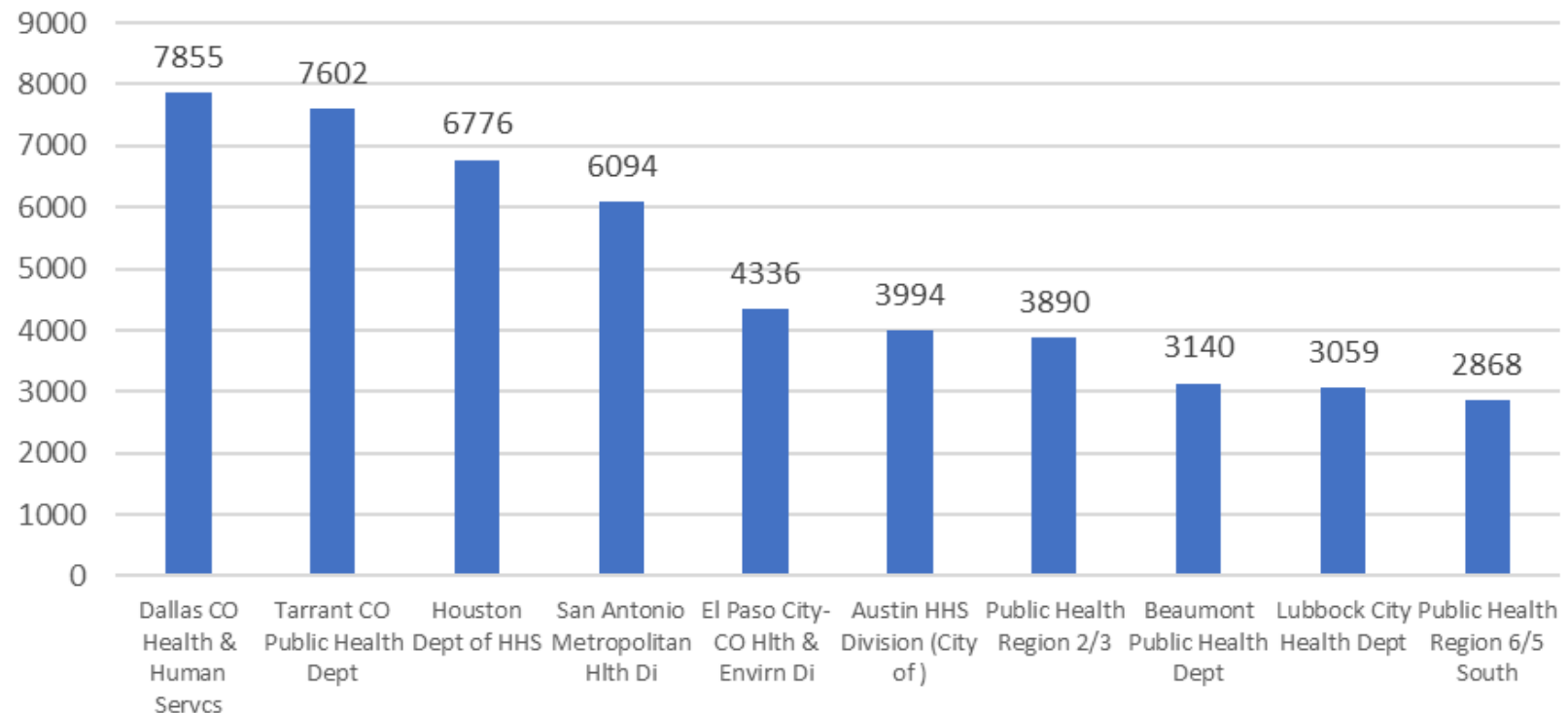
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NAAT Lab Reports by Jurisdiction (Top 10), 2018
(N=92235)



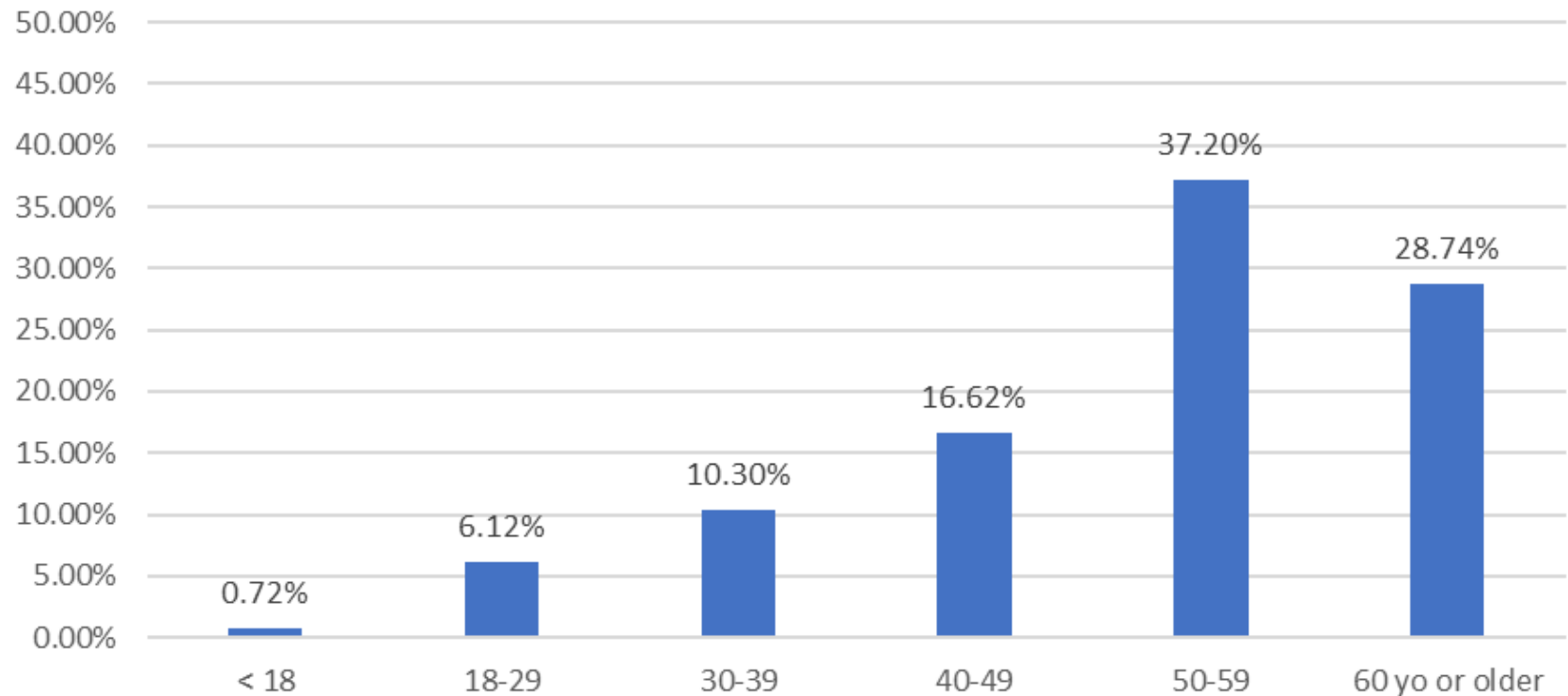
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Proportion of HCV labs by Age Group, 2012-2018
(N=988516)



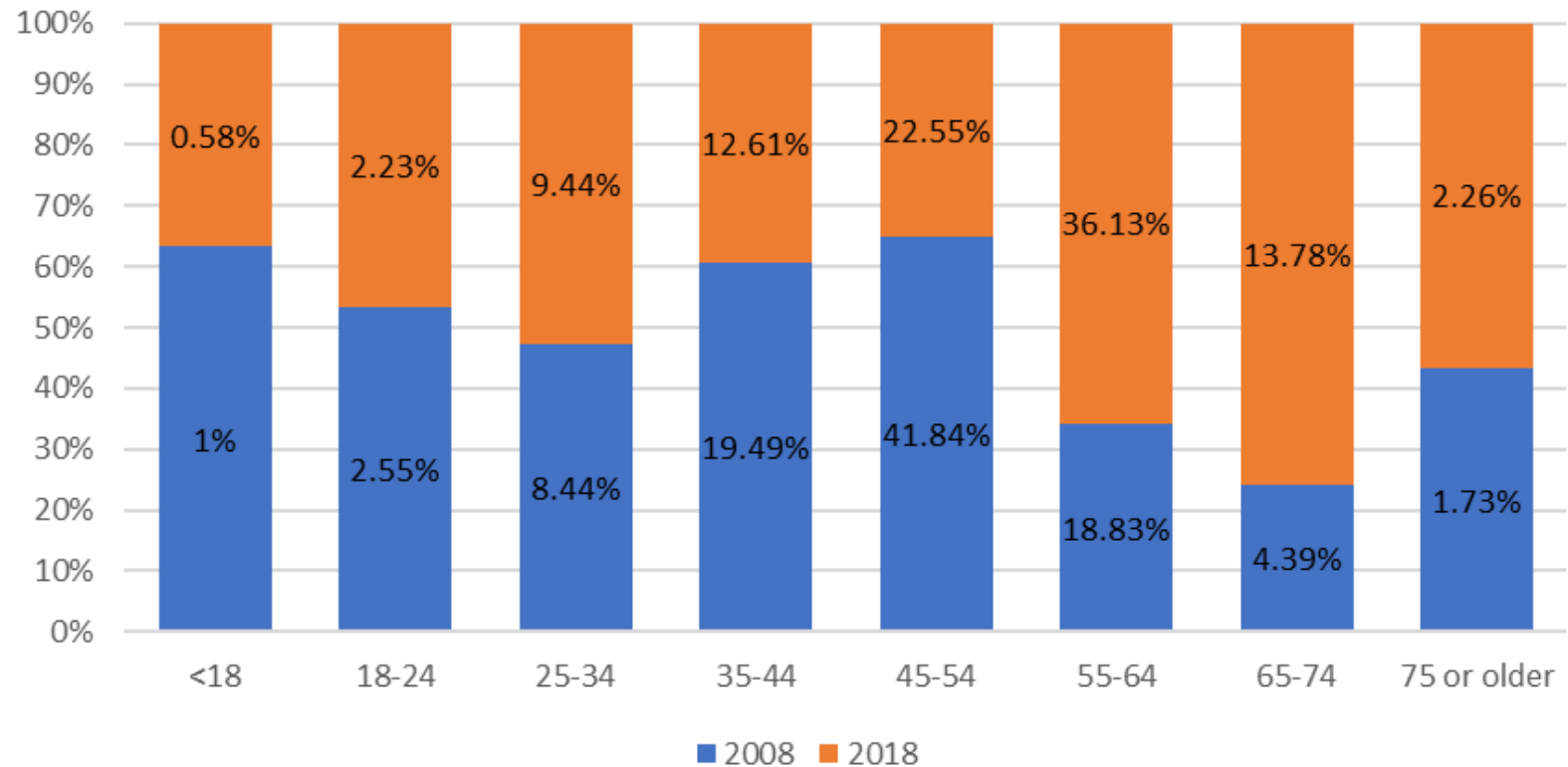
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Proportion of HCV labs by Age Group, 2008 vs 2018

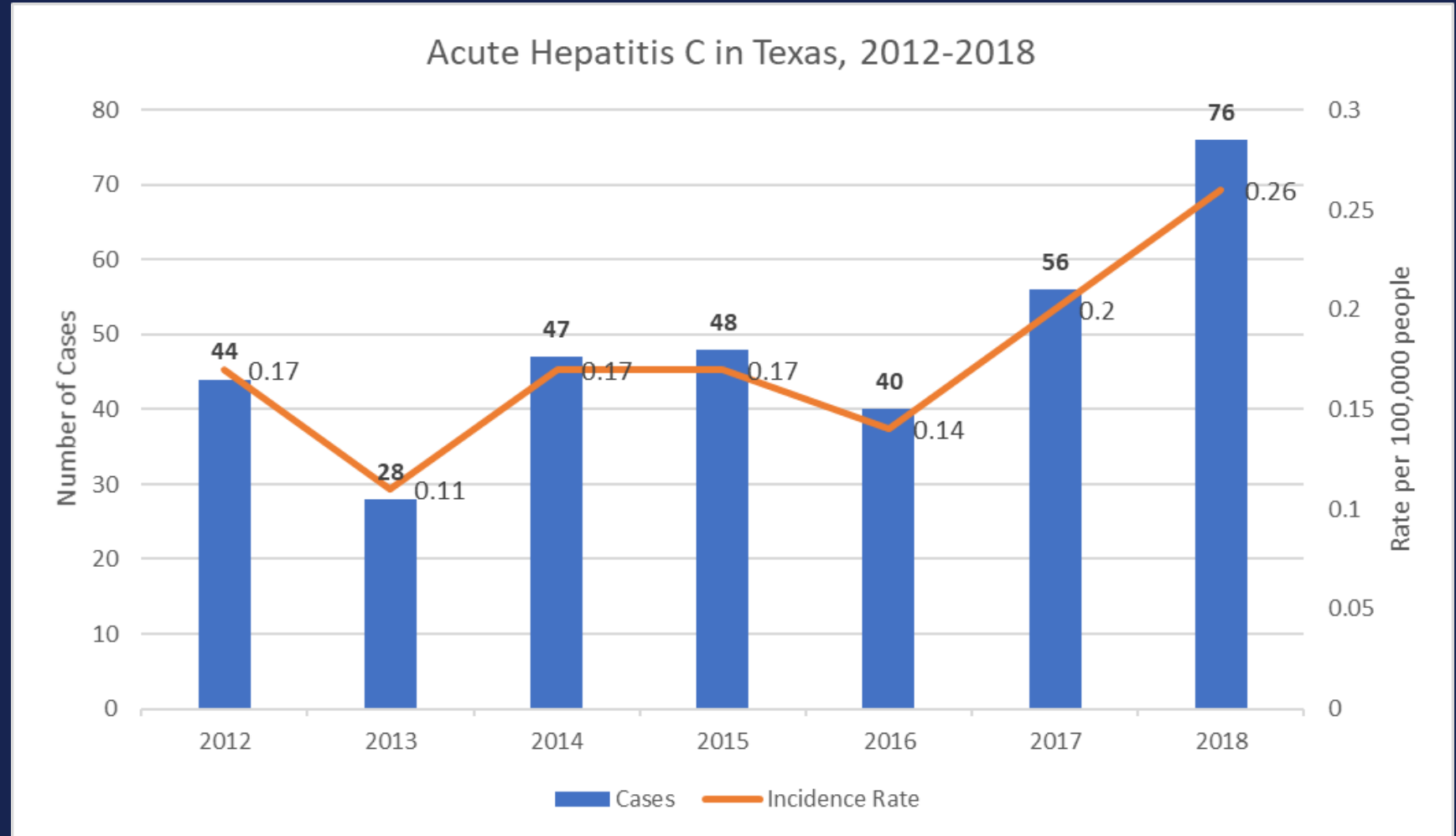


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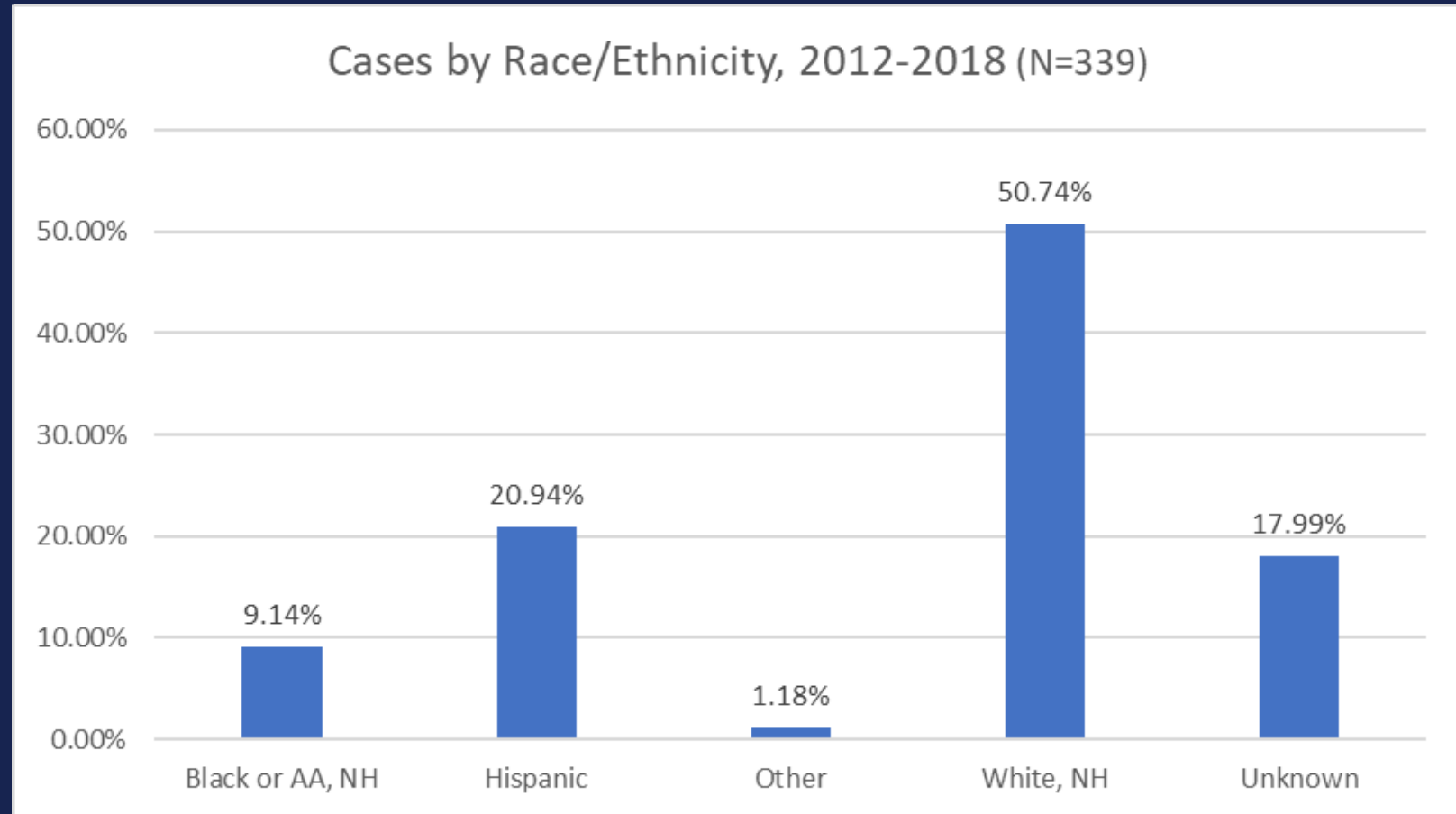


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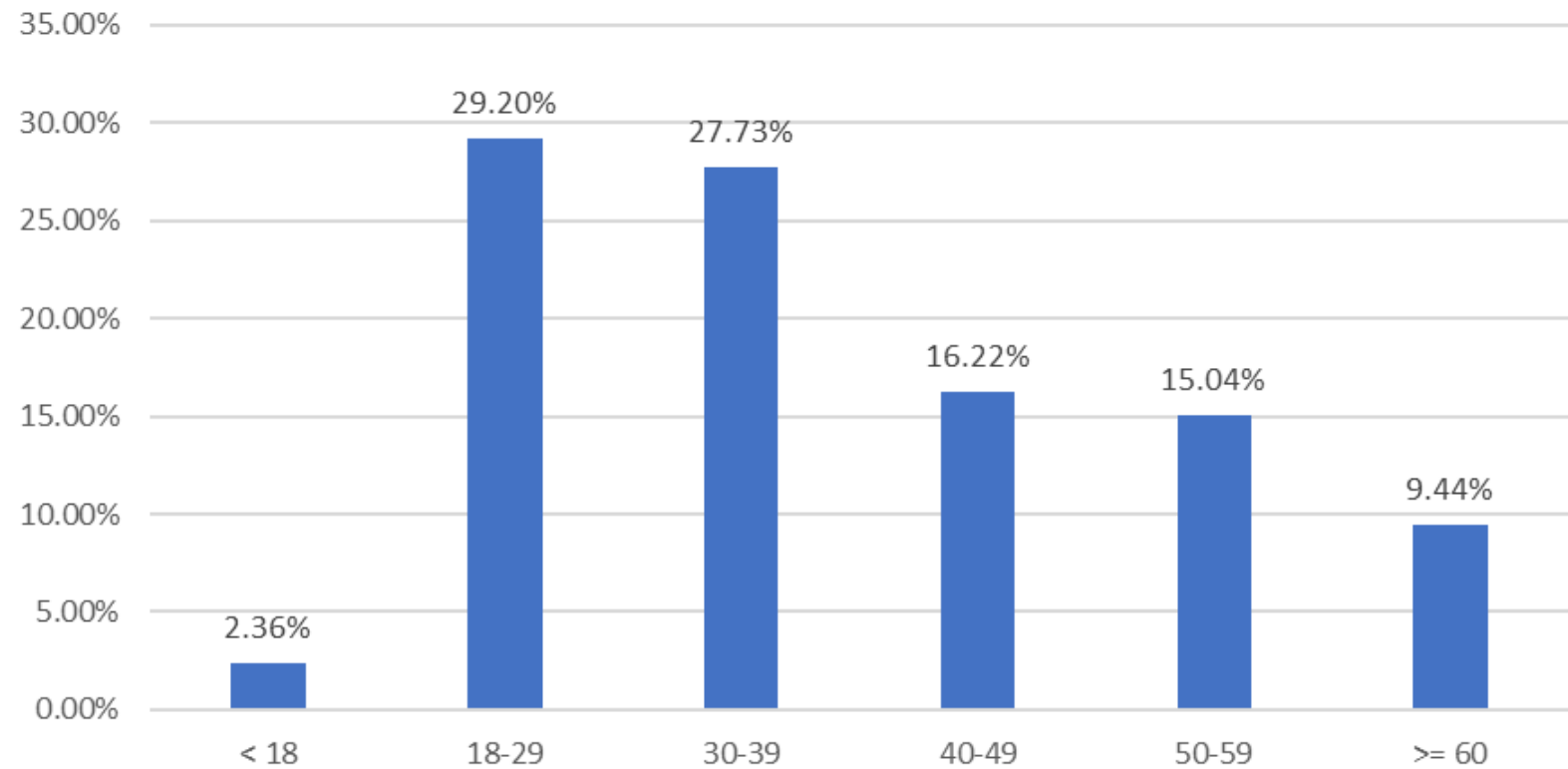
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Cases by Age Group, 2012-2018 (N=339)



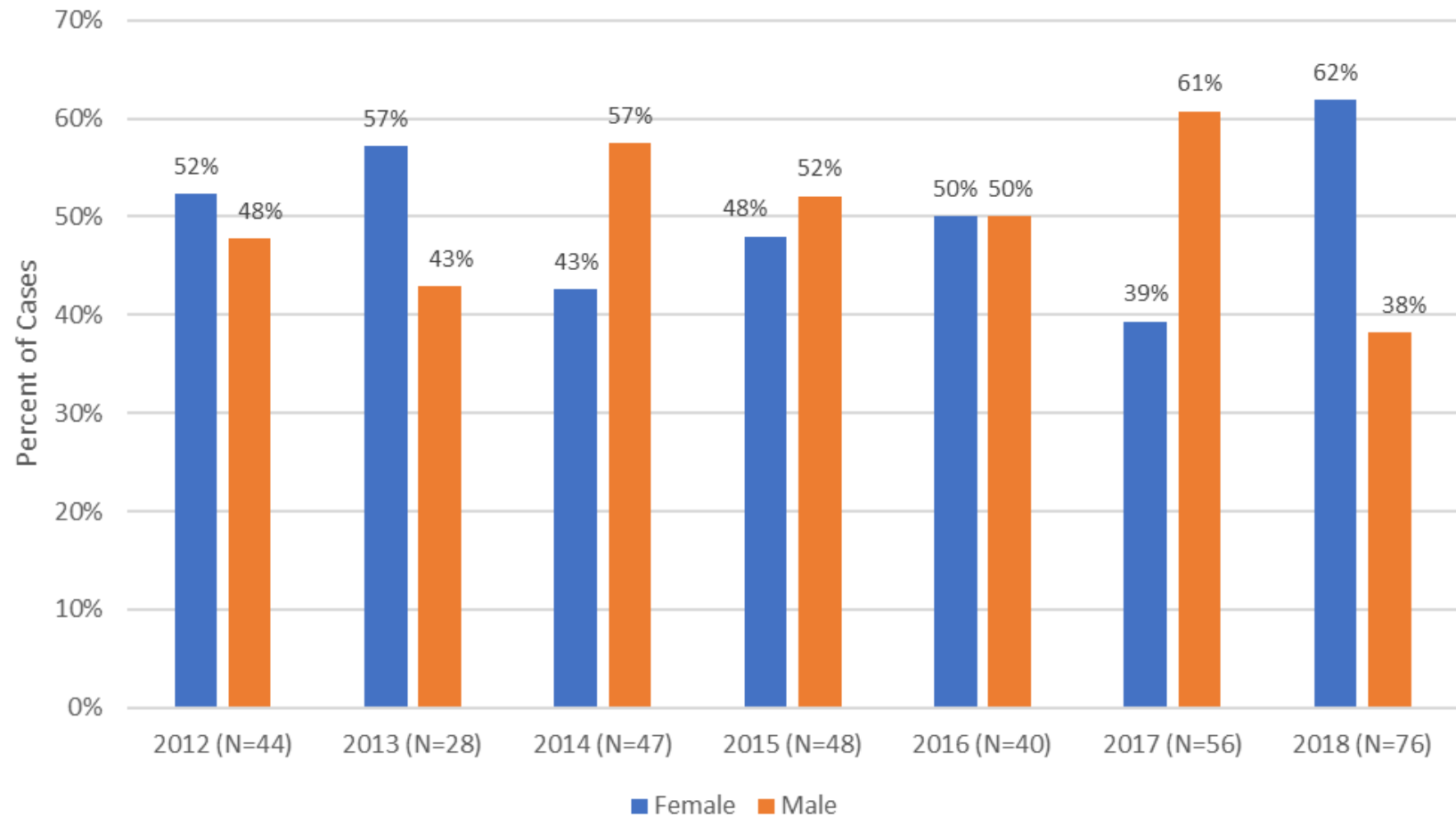
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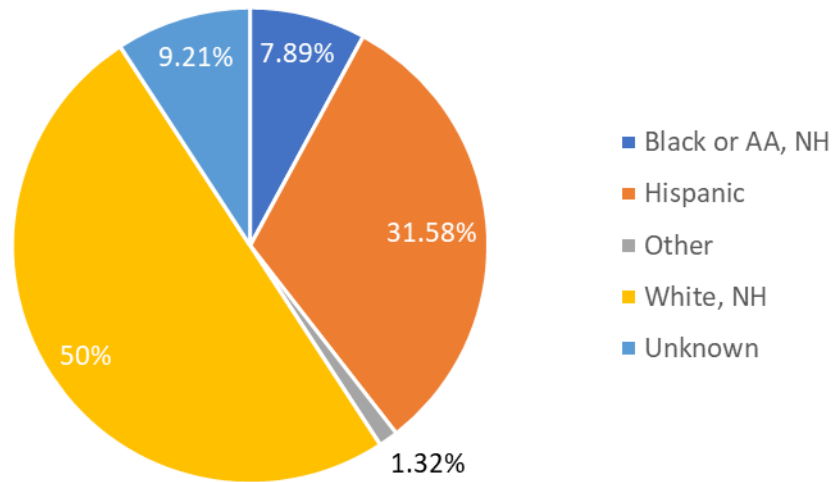
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Cases by Sex, 2012-2018

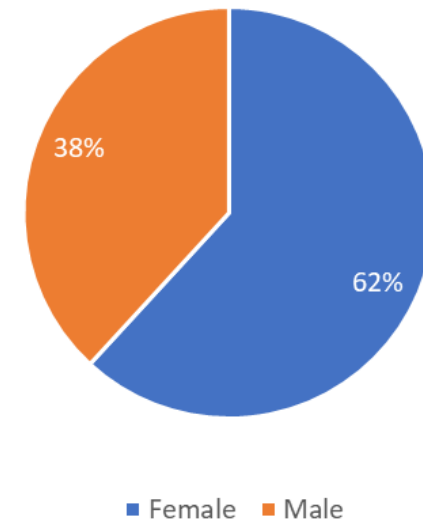


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Acute Hepatitis C Cases by Race in Texas, 2018
(N=76)



Acute Hepatitis C Cases by Sex in Texas, 2018
(N=76)

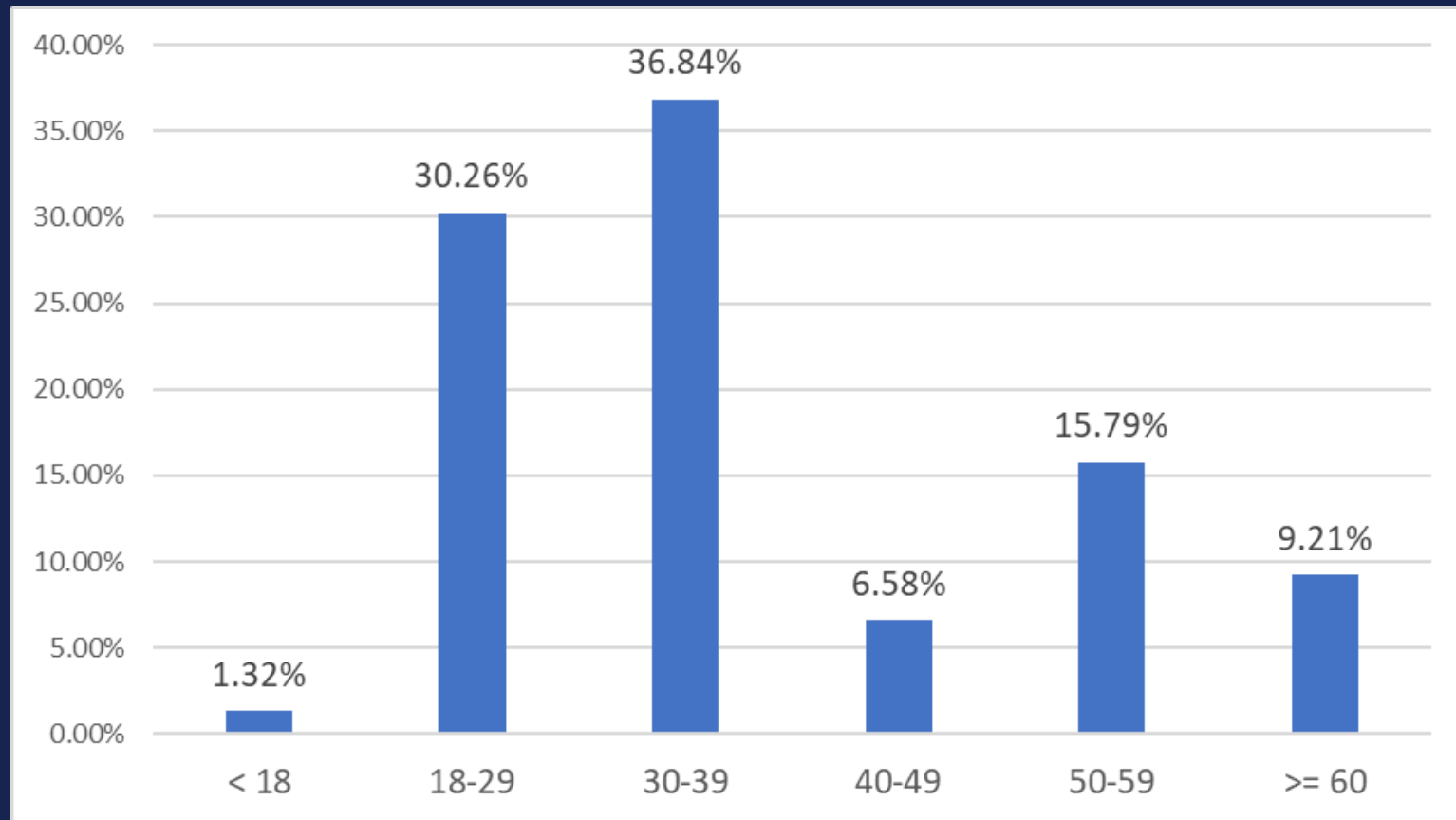


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Acute Hepatitis C Cases by Age in Texas, 2018
(N=76)



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Current Projects

- Epi Profile
- HIV/HCV Data Match
- HCV Surveillance Training
- HCV Provider Tool
- Vulnerability Assessment
- TACKLE HIV/HCV
- HCV Testing Sites



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Questions?



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Acknowledgements

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Contact:

Carlos R. Alvarez

carlos.alvarez@dshs.texas.gov

512-533-3125