

Utilizing Electronic Lab Reporting Data to Assess HCV Burden in Arizona

Clarisse Tsang, MPH

Viral Hepatitis Prevention Coordinator/Senior Epidemiologist

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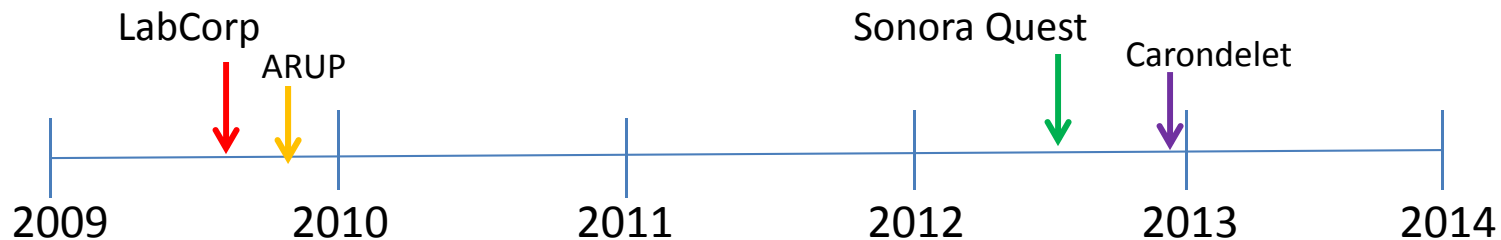
Health and Wellness for all Arizonans

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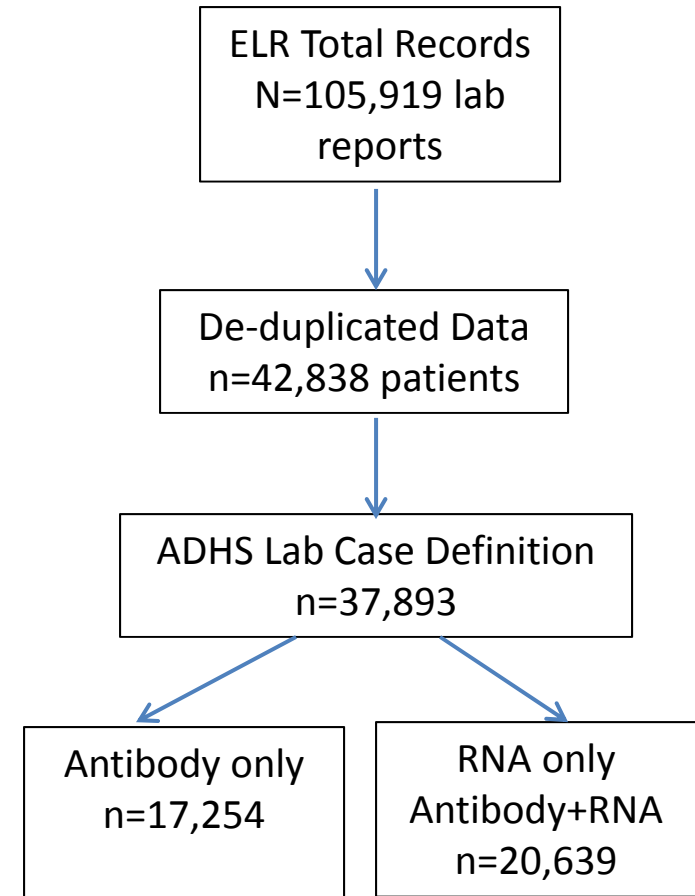
Background

- Since 2007, Arizona Department of Health Services (ADHS) has not had the resources to conduct HCV surveillance.
- Beginning in 2009, ADHS has been onboarding laboratories to report electronically.
- **Goal:** To assess the use of Electronic Laboratory Reporting (ELR) data to estimate the current burden of HCV in AZ



Methods

- Obtained ELR extract of data reported from 1/1/2009-3/5/2014
- De-duplicated and analyzed data using SAS statistical software
- Cases were classified according to the CSTE/ADHS laboratory case definition*
- HCV data from 1998-2008 and HBV data from 2013 were also analyzed



*Laboratory criteria: HCV RIBA positive; OR Nucleic acid test (NAT) for HCV RNA positive (including qualitative, quantitative, or genotype testing); OR Antibodies to hepatitis C virus (anti-HCV) screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay as defined by CDC.

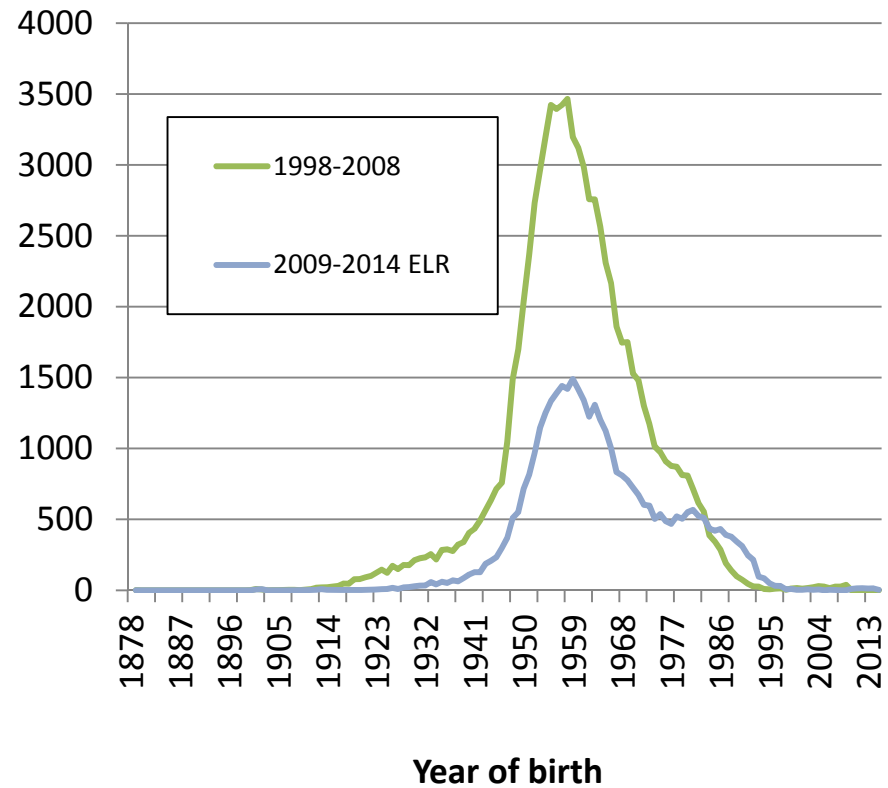
Characteristics of HCV cases

	HCV ELR, 2009-2014 n=37,893 (%)	HCV, 1998-2008 n=82,774 (%)
Male Gender	24,079 (64)	56,140 (68)
Age Group		
0-9	81 (0)	268 (0)
10.-19	280 (1)	730 (1)
20-29	3,790 (10)	7,873 (10)
30-39	5,287 (14)	17,065 (21)
40-49	8,952 (24)	30,380 (37)
50-59	13,146 (35)	19,120 (23)
60-69	5,083 (13)	4,329 (5)
70-79	824 (2)	2,036 (2)
80-89	205 (1)	677 (1)
90+	55 (0)	86 (0)
Missing	190 (1)	210 (0)

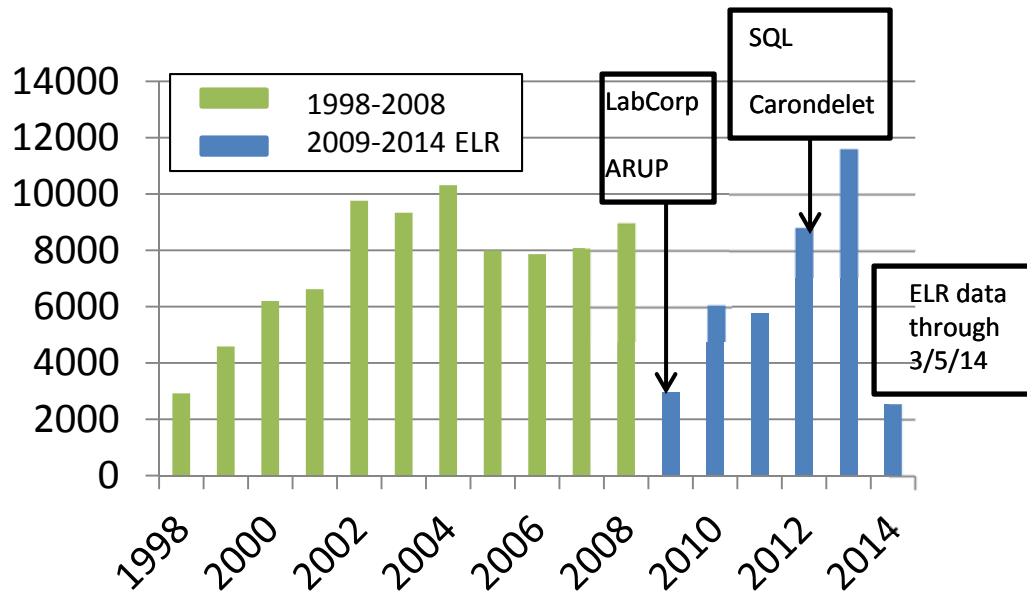
Baby boomer

46-66 y.o.

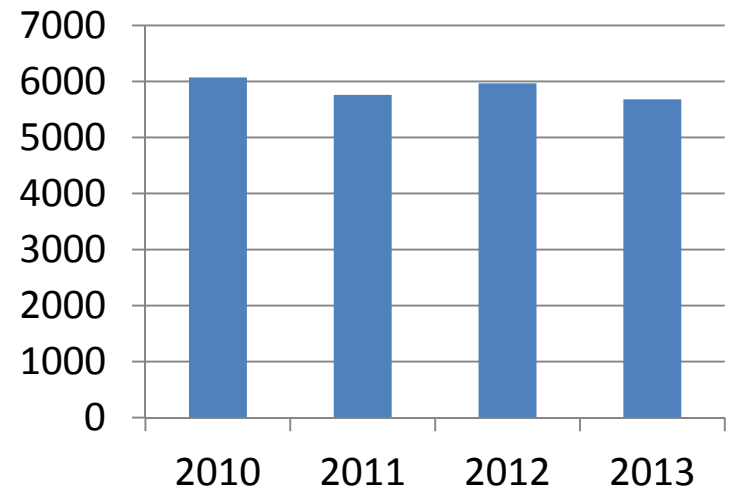
38-58 y.o.



Number of HCV cases by year



ARUP and LabCorp, ELR



Results

Lab Reports

Positive quantitative
PCR
n=25,404 lab results

n=16,585 patients

Viral Loads

Min: 5 IU/mL Max: >100,000,000 IU/mL
Mean: 70,946 IU/mL Median: 1,170,000 IU/mL

58% had a high max viral load (i.e. $\geq 800,000$ IU/mL)

HBV 2013 Data

- 866 cases
 - 78% were reported through ELR
 - For chronic HBV, males ($p < .0001$) and persons ≥ 65 years ($p = 0.0013$) were less likely to be reported through ELR

Conclusions

- ELR data indicates a large burden of HCV amongst Arizonans
 - ELR data alone reflect at least 11,611 HCV incident and prevalent cases reported in 2013
 - A quarter of the HCV patients reported through ELR had a high viral load
- Comparative analysis suggests ELR data can be used to represent the HCV population in AZ

