

# Viral Hepatitis C Surveillance Report, 2018-2019

SAN FRANCISCO, CALIFORNIA

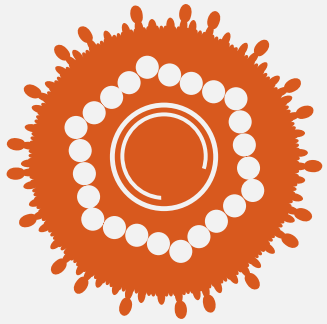


San Francisco Department Of Public Health  
Viral Hepatitis Surveillance Program  
Applied Research, Community Health  
Epidemiology And Surveillance Branch (ARCHES)  
Population Health Division



**POPULATION HEALTH DIVISION**  
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH  
DISEASE PREVENTION & CONTROL

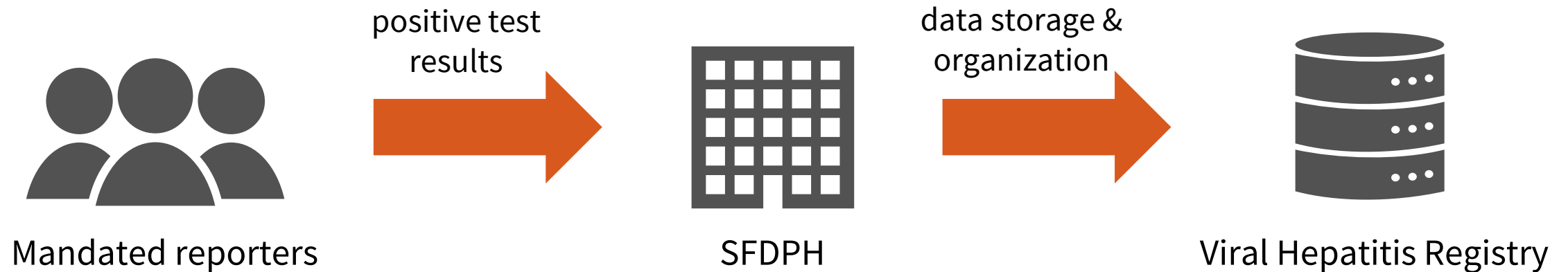
# San Francisco Chronic Viral Hepatitis Registry: CORE SURVEILLANCE



The **San Francisco Chronic Viral Hepatitis Registry** is a population-based registry that supports core surveillance of chronic hepatitis B and/or hepatitis C in San Francisco

**Registry data** include hepatitis B or C test results, along with basic demographic information (e.g. name, sex, birthdate, race/ethnicity, address)

# San Francisco Chronic Viral Hepatitis Registry: CORE SURVEILLANCE



**Registry data** allow us to examine the characteristics of positive HCV test results that are reported from laboratorians, clinicians, and other mandated reporters within a given time period

# Key terminology and definitions (1 of 3)



**Probable case of chronic hepatitis C\*** is a person:

- With a positive test for antibodies to hepatitis C virus (anti-HCV),
- With no report of a positive HCV nucleic acid test (NAT),
- Who has no report of, or does not meet, clinical or laboratory criteria indicative of an acute infection

**Confirmed case of chronic hepatitis C\*** is a person:

- With a positive HCV RNA NAT, including qualitative, quantitative, or genotype testing
- Who has no report of, or does not meet, clinical or laboratory criteria indicative of an acute infection

# Key terminology and definitions (2 of 3)



**Newly reported** cases are those who were reported to SFDPH with chronic hepatitis C for the first time and for whom no positive HCV laboratory report had previously been received

**All cases** are those who were reported to SFDPH with a positive HCV lab report in 2018 and/or 2019, including both newly reported cases and cases reported for the first time prior to 2018

# Key terminology and definitions (3 of 3)



**Age** is the age of the person at the time their first positive hepatitis C result was received by the SFDPH in 2018 or 2019

**Race/ethnicity** is classified as American Indian/Alaska Native, Asian, Black/ African American, Hispanic/Latino, Native Hawaiian/Pacific Islander, White, or Other

- Hispanic/Latino ethnicity includes all persons of Hispanic or Latino ethnicity regardless of race; all other race categories do not include persons of Hispanic or Latino ethnicity

# Data Limitations



- Surveillance data do not measure prevalence.
- Surveillance data do not measure incidence.
- HCV infection data potentially overestimate the number of persons reported with chronic HCV infection because they may include acute or resolved HCV infections.
- Reporting gaps exist for labs that do not report electronically. Death data are not reported; cases who may have died after being reported to SFDPH are included.
- Lab reports are often missing information on patient race, ethnicity, and residential address. Cases with unknown addresses or those who may have moved out of SF are included in this report.
- Duplication of cases may occur if reports from the same person utilize multiple names. Conversely, cases may be erroneously matched.

# Chronic hepatitis C reports in 2018 and 2019

(JANUARY 1, 2018 TO DECEMBER 31, 2019)

2018

7,330 positive HCV test results



4,035 individuals with probable or confirmed chronic hepatitis C



32.7% were newly reported

2019

6,890 positive HCV test results



3,750 individuals with probable or confirmed chronic hepatitis C



33.3% were newly reported

## Following de-duplication of previously reported cases:

- Total of **6,632** individuals with probable or confirmed chronic hepatitis C
- Of which **2,567 (38.7%)** were newly reported



## Key findings: Age and Sex



- About two thirds of cases were male
- Newly reported cases trended younger relative to all reported cases

# Sex of reported cases with chronic hepatitis C, 2018 and 2019

Sex	All Cases Reported*				Newly Reported Cases^			
	2018		2019		2018		2019	
	n	%	n	%	n	%	n	%
Female	1240	30.7%	1129	30.3%	433	32.9%	403	32.7%
Male	2793	69.3%	2603	69.7%	885	67.1%	831	67.3%
Total	4033	100.0%	3732	100.0%	1318	100.0%	1234	100.0%

\* Sex data missing for 2/4035 (0.05%) and 18/3750 (0.5%) of all cases reported in 2018 and 2019, respectively.

^ Sex data missing for 1/1319 (0.1%) and 14/1248 (1.1%) of cases newly reported in 2018 and 2019, respectively.

About 2/3 of cases are male

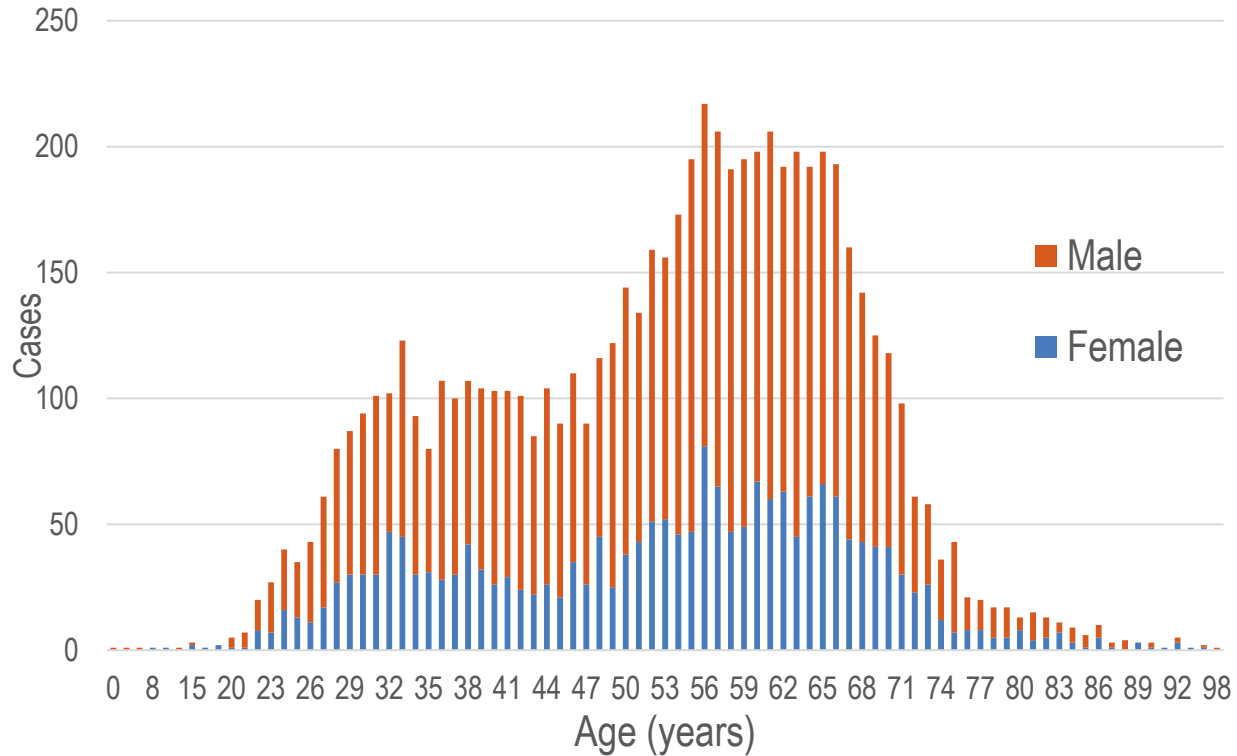
# Age group of reported cases with chronic hepatitis C, 2018 and 2019

Age Group (years)	All Cases Reported				Newly Reported Cases			
	2018		2019		2018		2019	
	n	%	n	%	n	%	n	%
<15	4	0.1%	4	0.1%	3	0.2%	2	0.2%
15-24	73	1.8%	59	1.6%	49	3.7%	41	3.3%
25-34	485	12.0%	507	13.5%	277	21.0%	254	20.4%
35-44	601	14.9%	604	16.1%	247	18.7%	239	19.2%
45-54	833	20.6%	730	19.5%	246	18.7%	197	15.8%
55-64	1264	31.3%	1110	29.6%	309	23.4%	291	23.3%
65-74	653	16.2%	629	16.8%	148	11.2%	177	14.2%
75+	122	3.0%	107	2.9%	40	3.0%	47	3.8%
Total	4035	100.0%	3750	100.0%	1319	100.0%	1248	100.0%

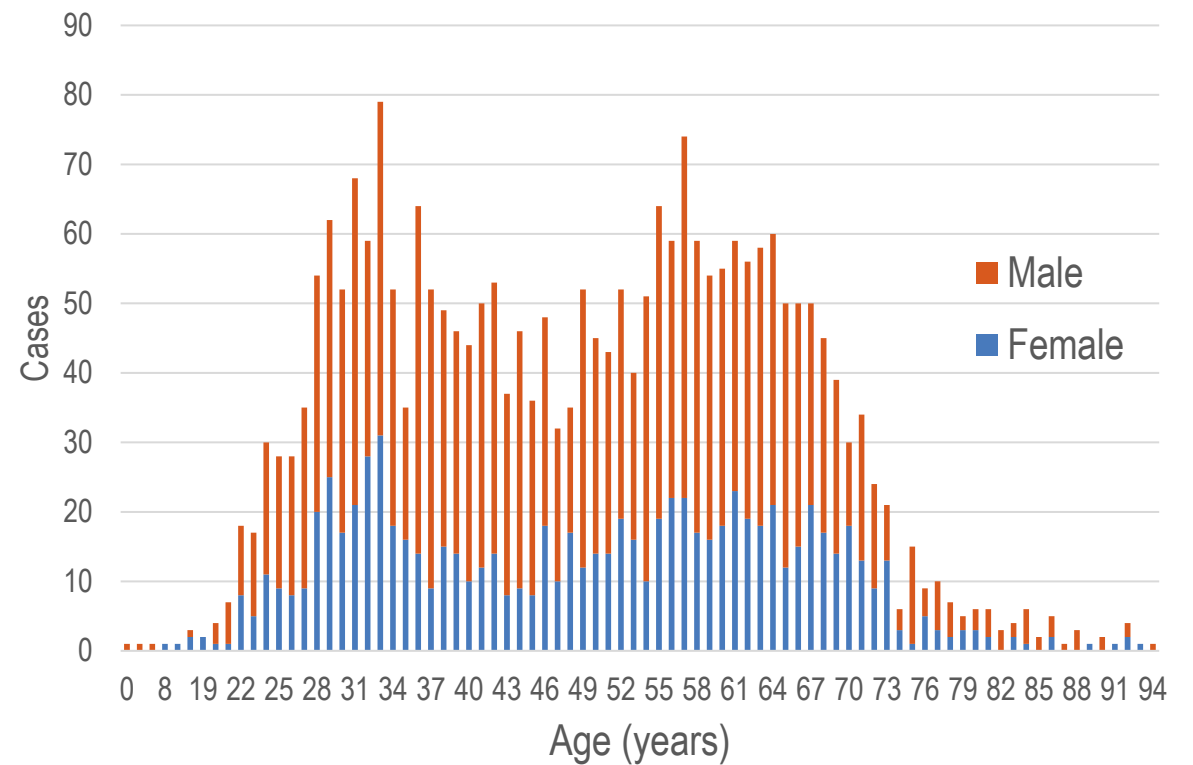
The age group with the highest proportion of reported cases is **55-64 years**

# Age and sex distribution of reported chronic hepatitis C cases , 2018 and 2019

Age and sex distribution of all cases reported with chronic hepatitis C in 2018 and 2019\*



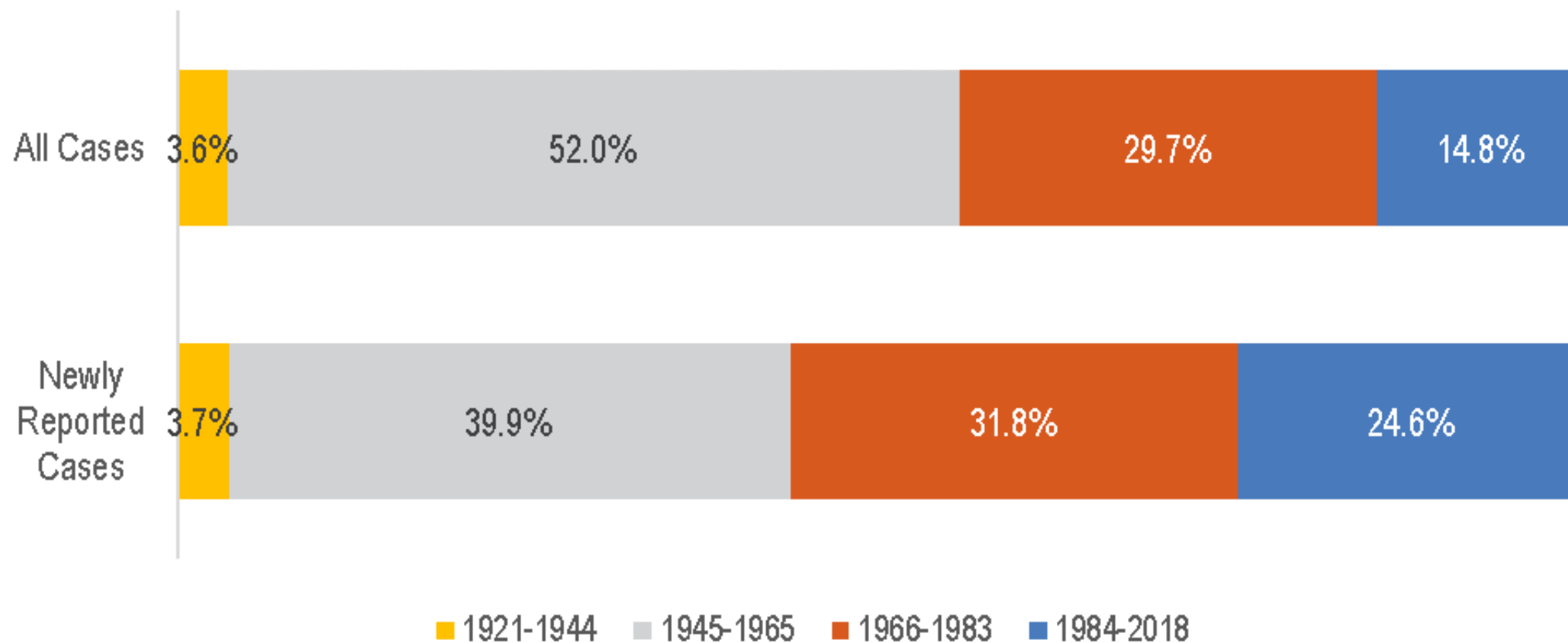
Age and sex distribution of cases newly reported with chronic hepatitis C in 2018 and 2019\*



Compared to all reported cases (left), newly reported cases (right) trend younger in age

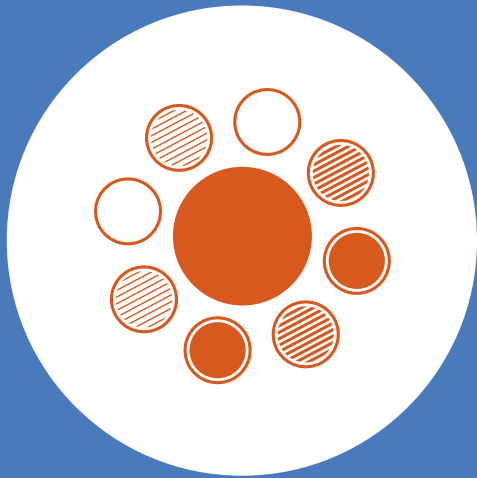
\*Please note that these figures use different y axes when showing the numbers of cases

## Birthyear cohort of reported cases with chronic hepatitis C, 2018 and 2019



Newly reported cases were more likely to be **born after 1984** and less likely to be born in the baby boomer cohort (between 1945 and 1965)

## Key findings: Race/Ethnicity



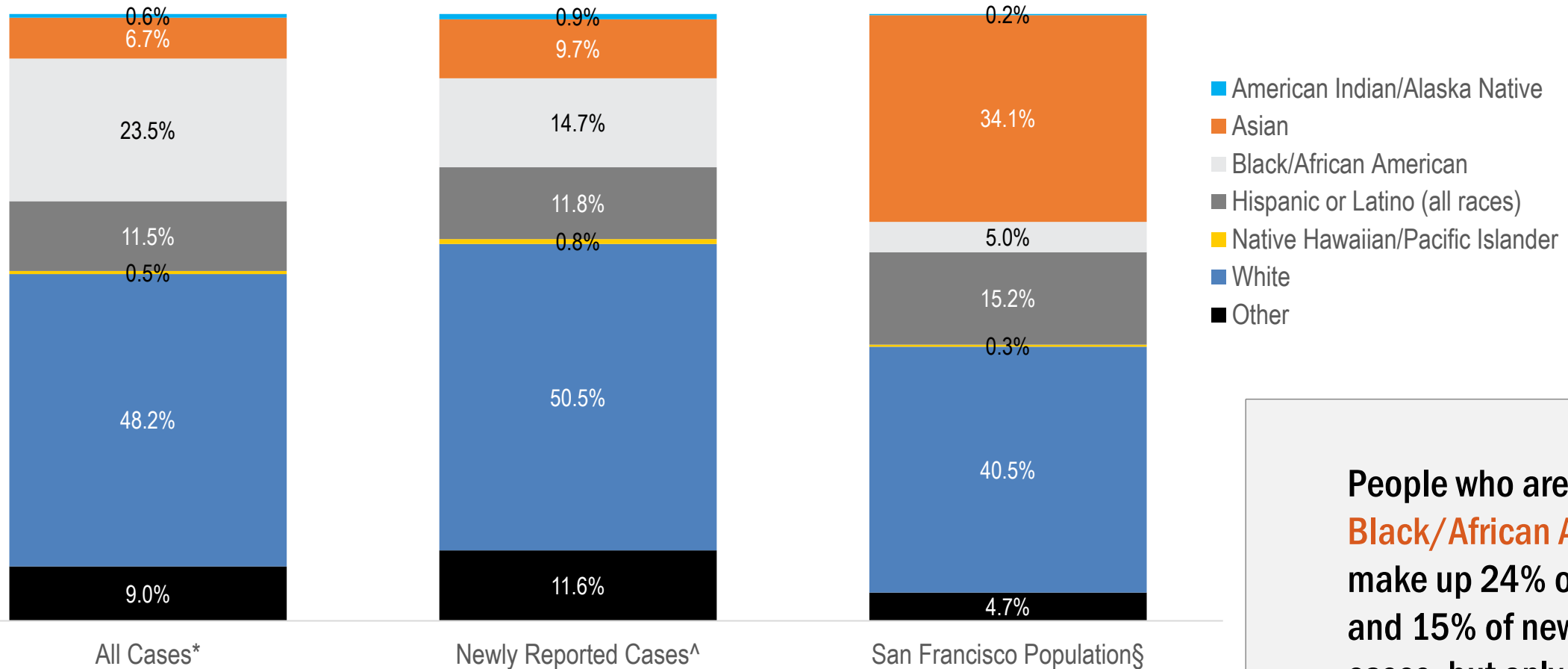
- People who are Black/African American are disproportionately affected relative to their population size

# Race/Ethnicity of reported cases with chronic hepatitis C, 2018 and 2019 and the San Francisco population

Race/Ethnicity	All Cases Reported*				Newly Reported Cases^				San Francisco Population §	
	2018		2019		2018		2019			
	n	%	n	%	n	%	n	%	n	%
American Indian/ Alaska Native	13	0.4%	18	0.6%	7	0.9%	7	0.9%	1634	0.2%
Asian	180	6.0%	184	6.6%	70	8.7%	86	10.8%	298,108	34.1%
Black/ African American	748	25.0%	660	23.7%	113	14.1%	122	15.3%	43,782	5.0%
Hispanic/Latino (all races)	365	12.2%	315	11.3%	105	13.1%	85	10.6%	133,314	15.2%
Native Hawaiian/ Pacific Islander	15	0.5%	11	0.4%	9	1.1%	4	0.5%	2,934	0.3%
White	1417	47.4%	1344	48.2%	411	51.1%	399	49.9%	354,423	40.5%
Other	252	8.4%	256	9.2%	89	11.1%	97	12.1%	40,766	4.7%
Total	2990	100%	2788	100%	804	100%	800	100%	874,961	100%

**Black/African Americans**  
are highly impacted  
relative to their  
population size

# Race/Ethnicity of all cases and newly reported cases with chronic hepatitis C in 2018 and 2019 and the San Francisco population



People who are **Black/African American** make up 24% of all cases and 15% of newly reported cases, but only 5% of the SF population

\*Race/ethnicity data missing for 1767/6632 (26.6%) of all cases, 2018 - 2019

^Race/ethnicity data missing for 963/2567 (37.5%) of newly reported cases, 2018 - 2019

§ San Francisco Population data source: ACS 2019 5-year estimate

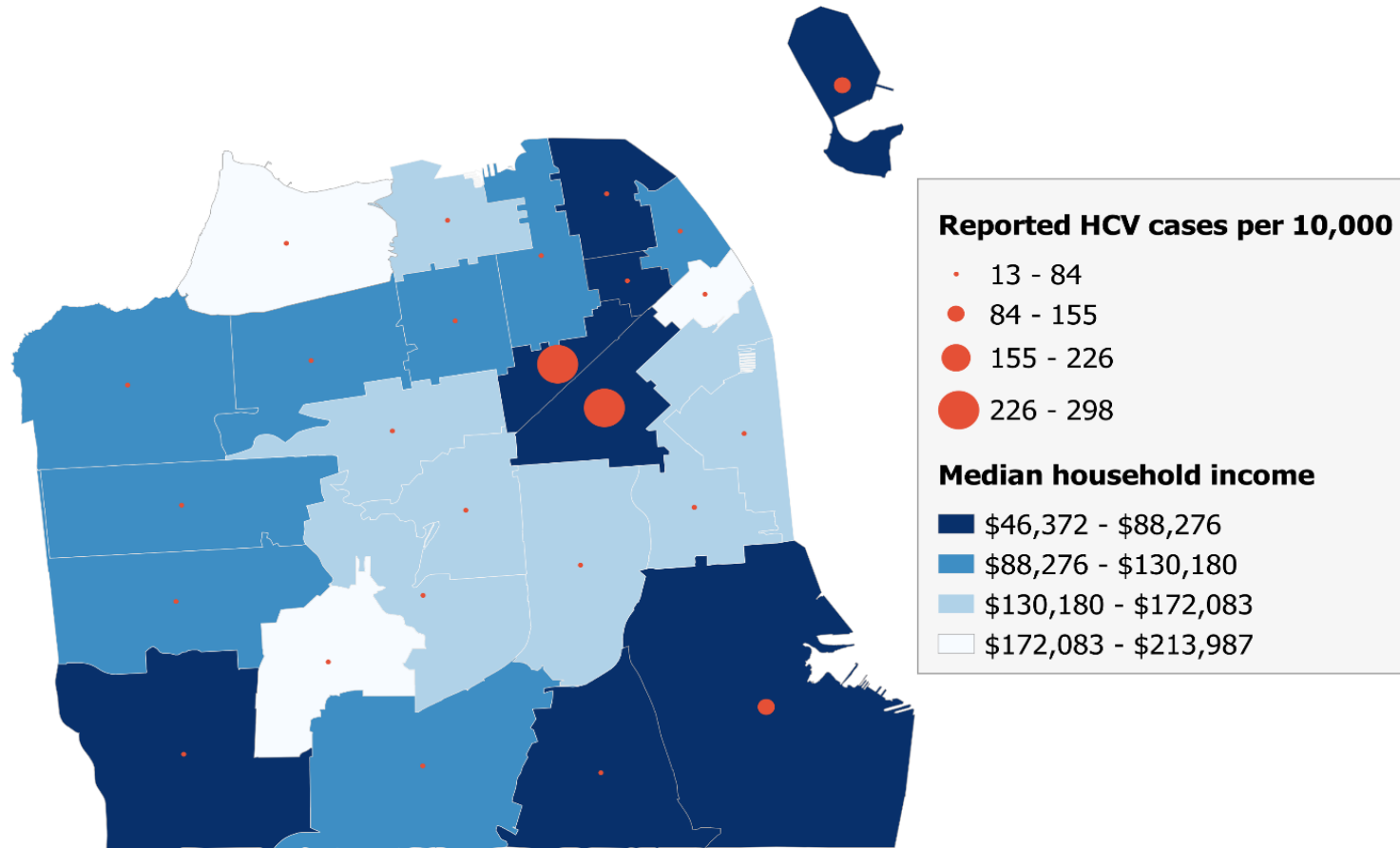


## Key findings: Geography



- San Francisco neighborhoods with the lowest median household incomes are more likely to have a higher number of HCV cases
- Identified priority areas include the Tenderloin and South of Market neighborhoods, followed by the Treasure Island and Bayview-Hunter's Point neighborhoods

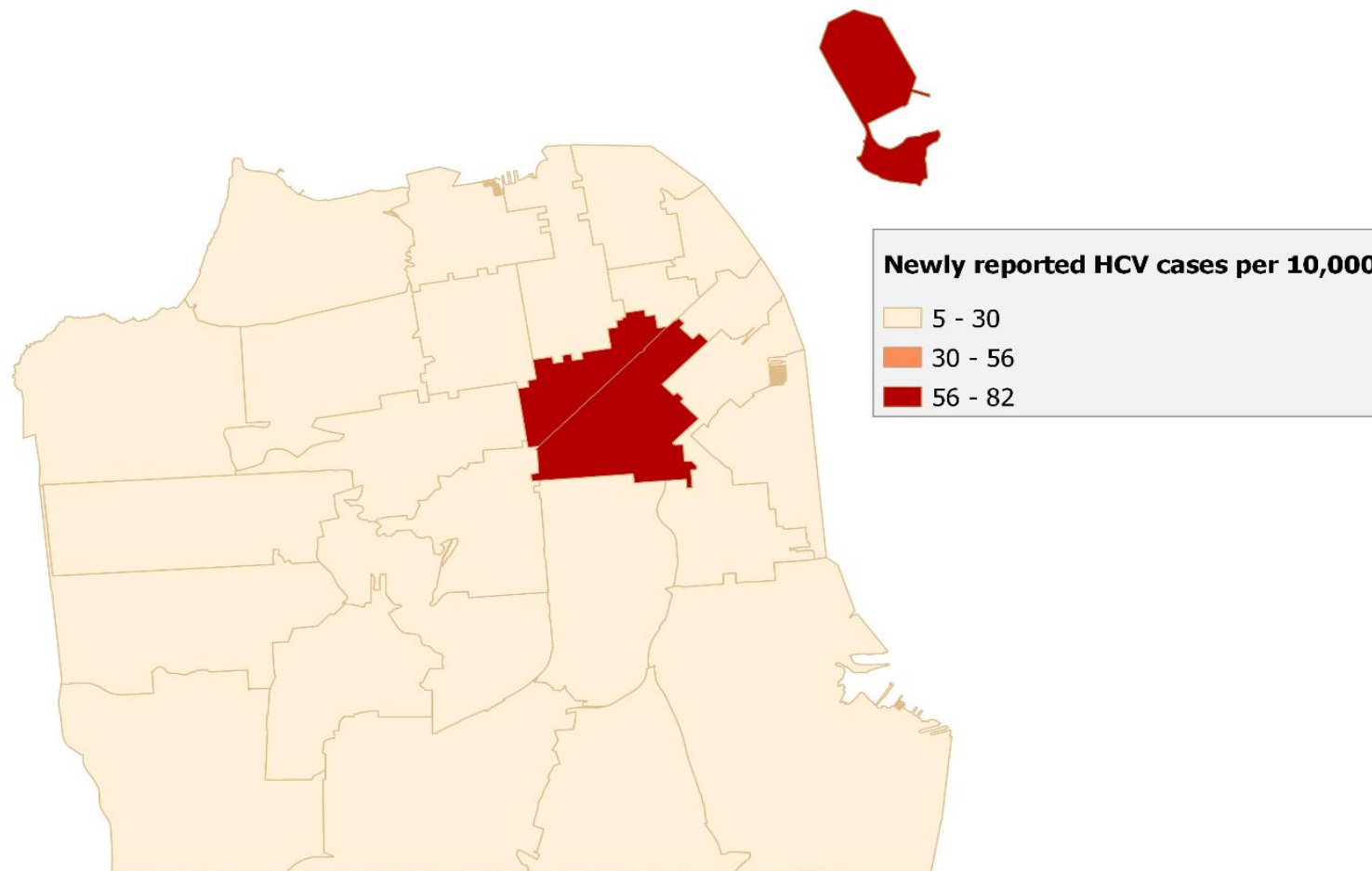
# Chronic hepatitis C cases reported in San Francisco (2018-2019) and median household income (2019), by ZIP code of residence\*



Neighborhoods with lower median household income had higher numbers of reported HCV cases

- Not shown are 1482/6632 (22.3%) of all reported cases with unknown ZIP codes.
- P.O. boxes were mapped to the standard ZIP code of the area in which they were located. Cases from ZIP codes 94143 and 94188 were mapped to the standard ZIP code of the area in which they were located. Due to disproportionately small baseline population size, data from ZIP code 94104 were merged with data from ZIP code 94108.
- \*San Francisco household income and population data source: ACS 2019 5-year estimate

# Chronic hepatitis C cases newly reported in San Francisco (2018-2019) by ZIP code of residence\*



Newly reported HCV cases were **highest** in the Tenderloin, SOMA, and Treasure Island neighborhoods

- Not shown are 810/2567 (31.6%) of newly reported cases with unknown ZIP codes.
- P.O. boxes were mapped to the standard ZIP code of the area in which they were located. Cases from ZIP code 94143 were mapped to the standard ZIP code of the area in which they were located. Due to disproportionately small baseline population size, cases from ZIP code 94104 were merged with cases from ZIP code 94108.
- San Francisco population data source: ACS 2019 5-year estimate

# Key findings: Lab Results

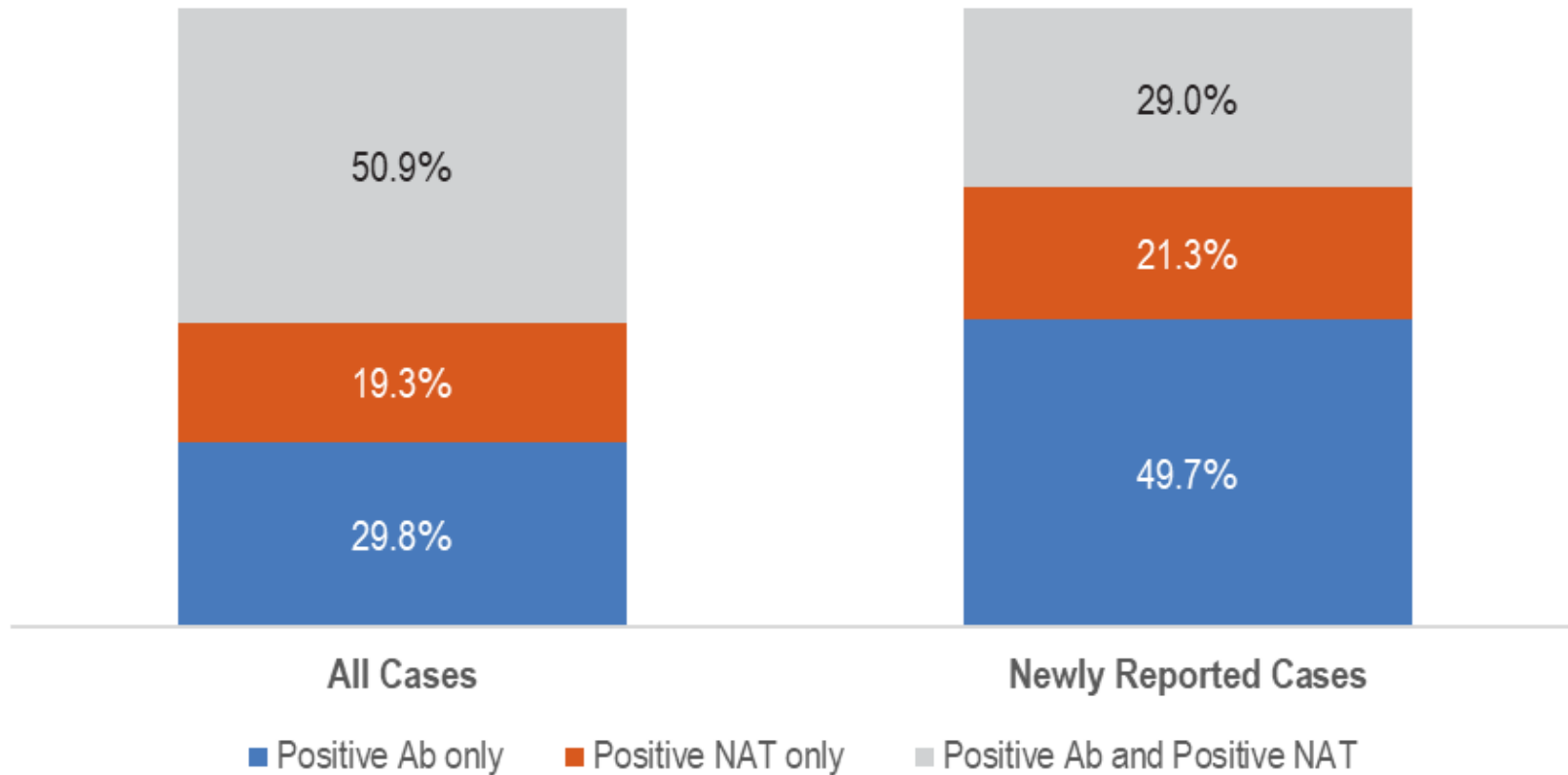


- A large percentage of cases only ever had positive HCV antibody reports
- These large percentages highlight the fact that many cases who are identified as reactive by an HCV antibody test might not subsequently be evaluated for the presence of HCV RNA in their blood to confirm if they have current HCV infection
- Newly reported cases were more likely to only ever have a positive HCV antibody report compared to all cases

# Positive HCV lab test results of reported cases with chronic hepatitis C, 2018 and 2019

HCV Lab Test Results		All Cases Reported				Newly Reported Cases			
		2018		2019		2018		2019	
		n	%	n	%	n	%	n	%
<b>Probable</b> →	Positive Ab Only	1060	26.3%	1100	29.3%	644	48.8%	660	52.9%
<b>Confirmed</b> →	Positive NAT Only	784	19.4%	729	19.4%	288	21.8%	260	20.8%
<b>Confirmed</b> →	Positive Ab and Positive NAT	2191	54.3%	1921	51.2%	387	29.3%	328	26.3%
	Total	4035	100.0%	3750	100.0%	1319	100.0%	1248	100.0%

# Positive HCV lab test results of reported cases with chronic hepatitis C, 2018 and 2019



Nearly a third of all cases and half of newly reported cases had only ever had a **positive HCV antibody report**

(i.e. probable cases)

# Summary of findings

- 1 Approximately two thirds of chronic hepatitis C cases reported in San Francisco in 2018-2019 were male
- 2 Newly reported cases were younger than previously reported cases
- 3 Black/African Americans in San Francisco are disproportionately affected by hepatitis C
- 4 San Francisco neighborhoods with the lowest median household incomes are more likely to have a high number of HCV cases
- 5 Newly reported cases are more likely to only ever had a positive antibody test (i.e. no positive NAT)

# Next steps



Facilitate labs to report **negative HCV RNA** results to SFDPH to better estimate treated, cured, or resolved HCV infections.



Establish a SFDPH **perinatal HCV program** to better monitor the burden of perinatal HCV in San Francisco and to identify potential prevention opportunities.



**Improve data completeness** including demographic and address information.



**Continue collaborations** with End Hep C SF, other community partners, SFDPH programs, CDPH, and CDC.



# Want to know more?

Find the full report here:

<https://www.sfcDCP.org/communicable-disease/publications-data-and-reports/>



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