



# Alaska Department of Corrections



## Hepatitis C in Alaska's Prisons and Jails

**Robert Lawrence, MD, M.Ed**

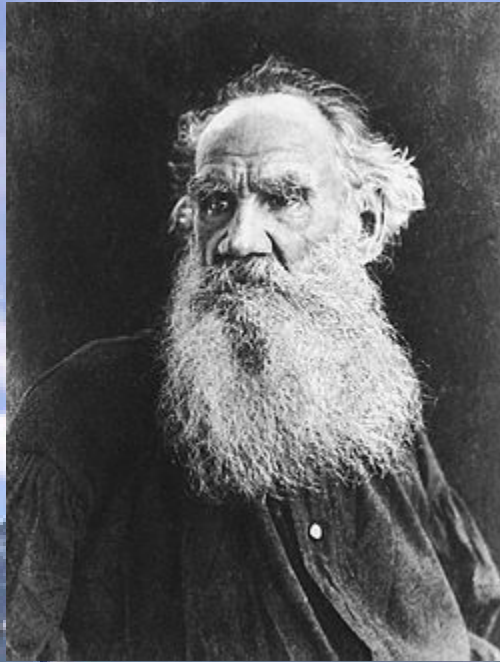
Chief Medical Officer

Alaska Dept. of Corrections

Health and Rehabilitative Services

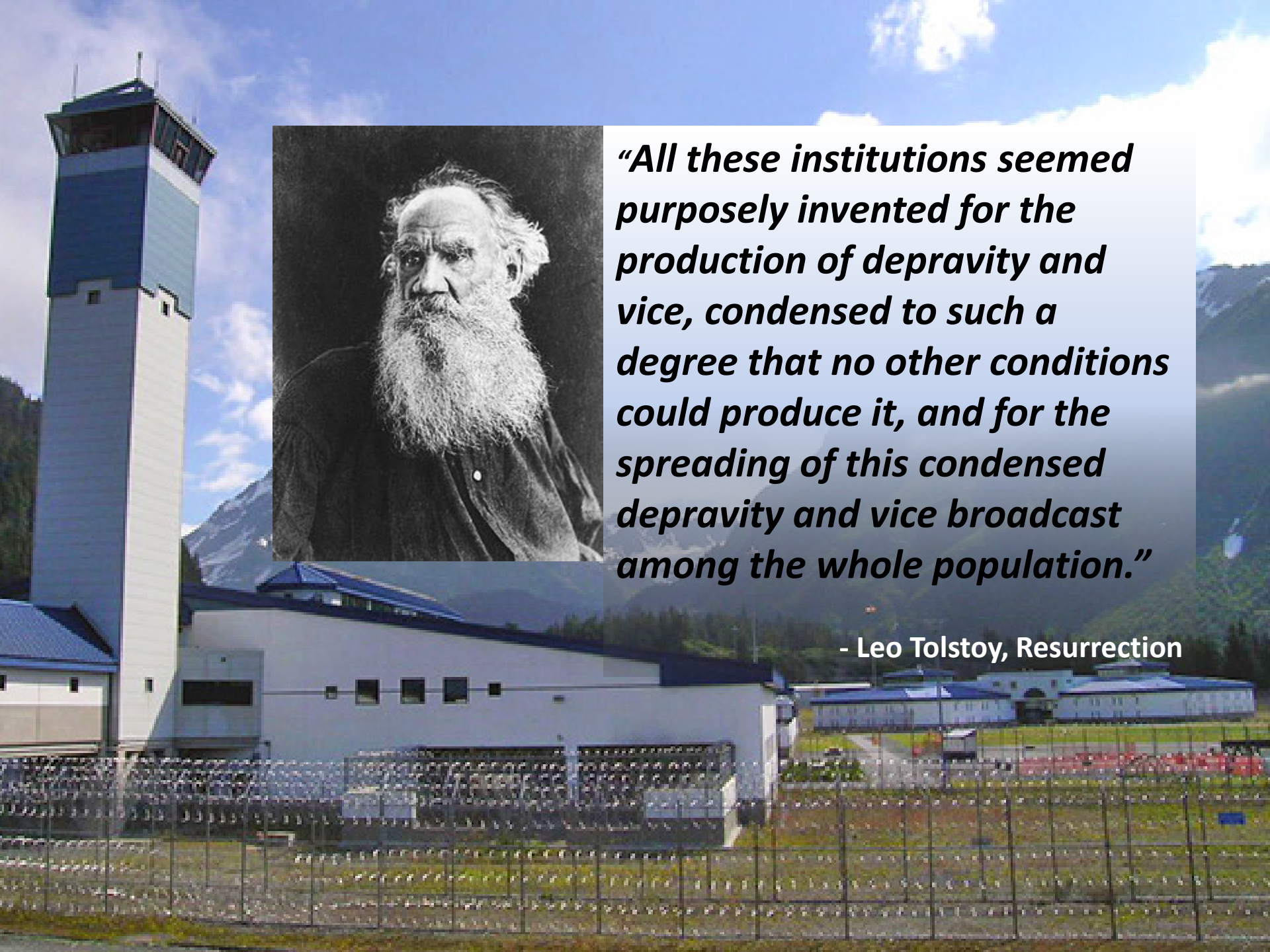
October 2018





***“All these institutions seemed purposely invented for the production of depravity and vice, condensed to such a degree that no other conditions could produce it, and for the spreading of this condensed depravity and vice broadcast among the whole population.”***

**- Leo Tolstoy, Resurrection**











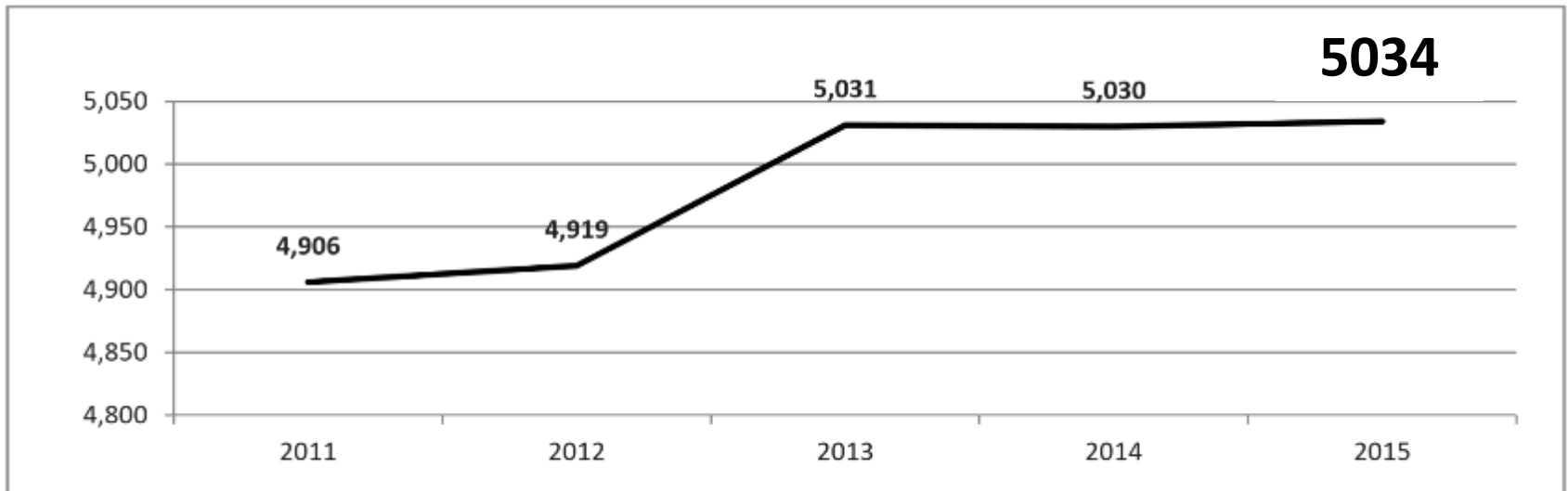
A photograph of the Fairbanks Correctional Center in winter. The scene is covered in a thick layer of snow. In the foreground, a blue sign with yellow lettering reads "FAIRBANKS CORRECTIONAL CENTER". Behind the sign is a large, snow-covered sculpture. In the background, the prison building is visible, along with several parked cars and snow-laden trees.

## **Prisoners retain three basic health care rights:**

1. Access to health care
2. Right to receive care ordered by a health care provider
3. Professional medical judgement



# Alaska Department of Corrections

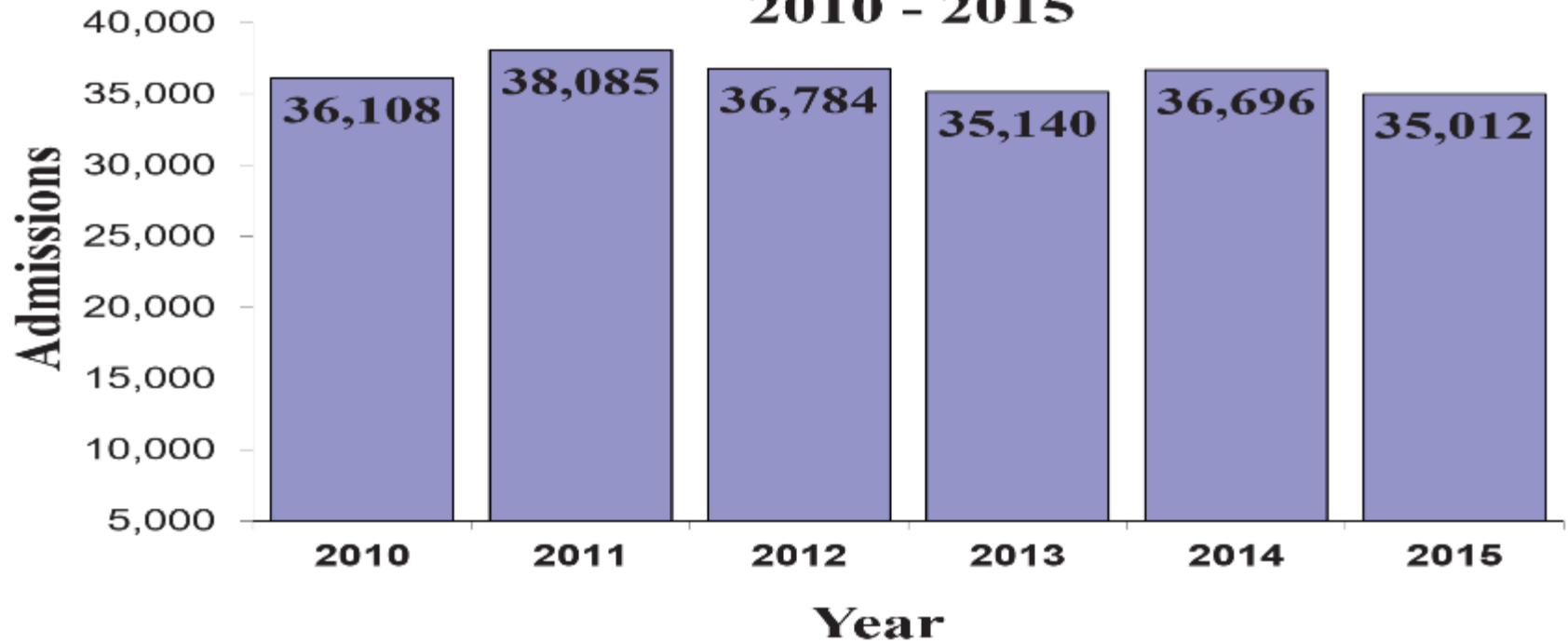


Number of Offenders in Institutions  
June 30, 2011 - 2015



# Alaska Department of Corrections

**Total Admissions by Year  
2010 - 2015**





Approx. 1%-1.5% of Americans have chronic hepatitis C (HCV)

CDC Correctional Facilities and Viral Hepatitis Jan. 23, 2014

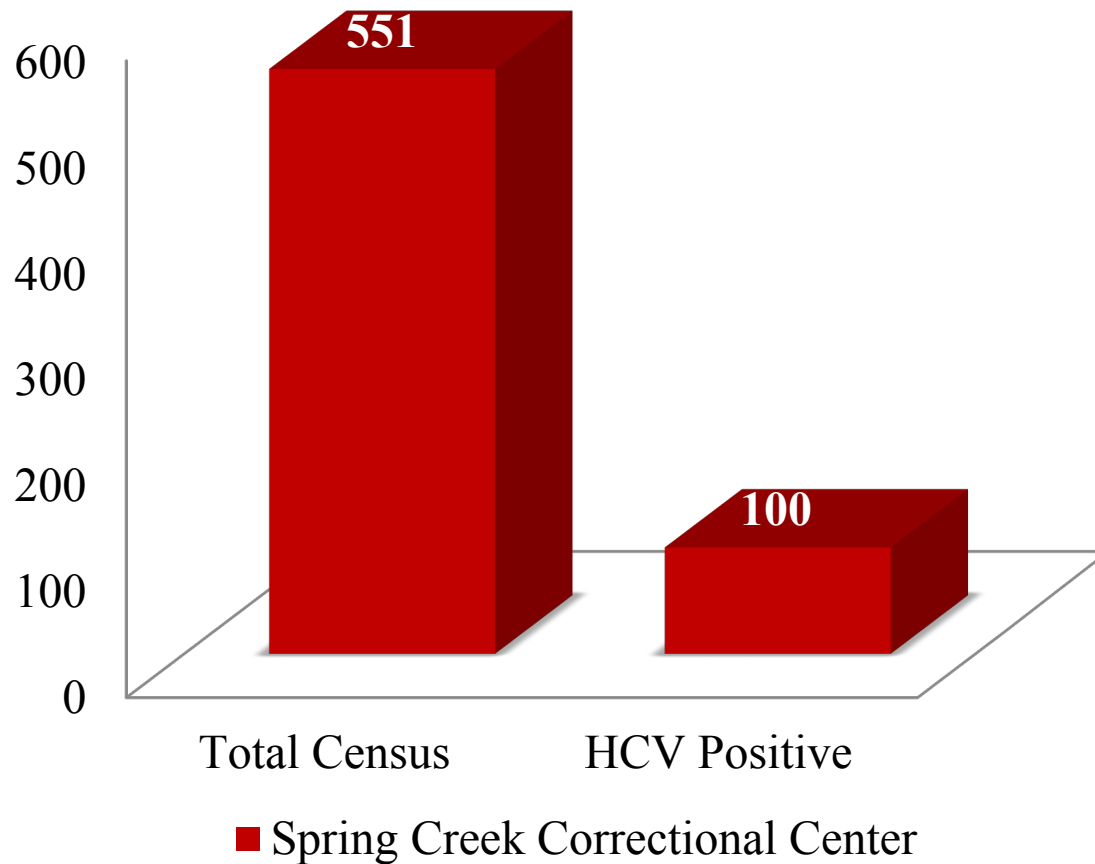
HCV prevalence among inmates nationally is reported as 17% to 29%

Varan AK, et al. Hepatitis C seroprevalence among prison inmates since 2001: still high but declining. Public Health Rep. 2014 Mar-Apr;129(2):187-95.

Beckwith CG, et al. A pilot study of rapid hepatitis C virus testing in the Rhode Island Department of Corrections. J Public Health (Oxf). 2016 Mar;38(1):130-7.

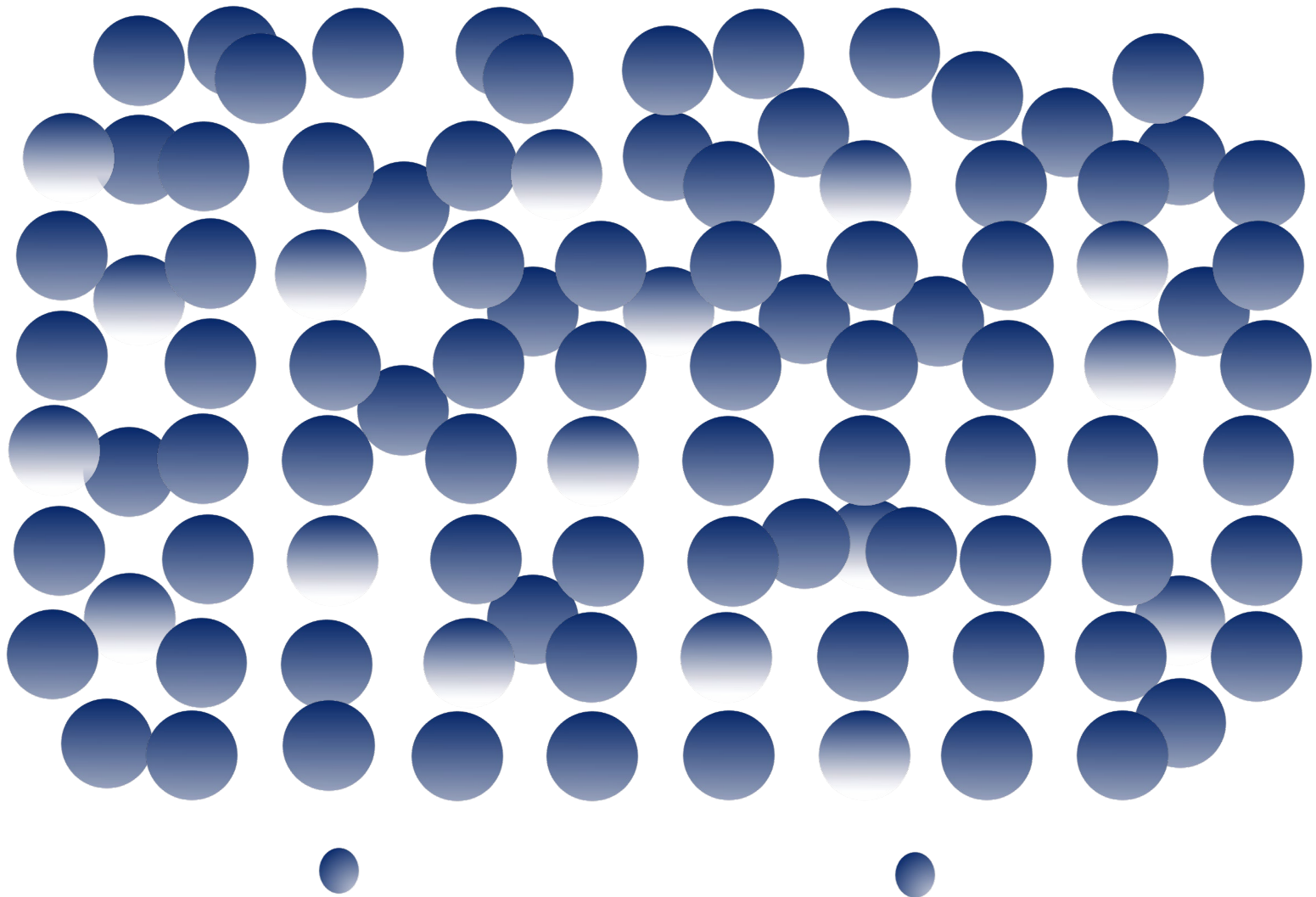
# **HCV in the United States**

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## AK Prison Population with Chronic HCV

# US Population

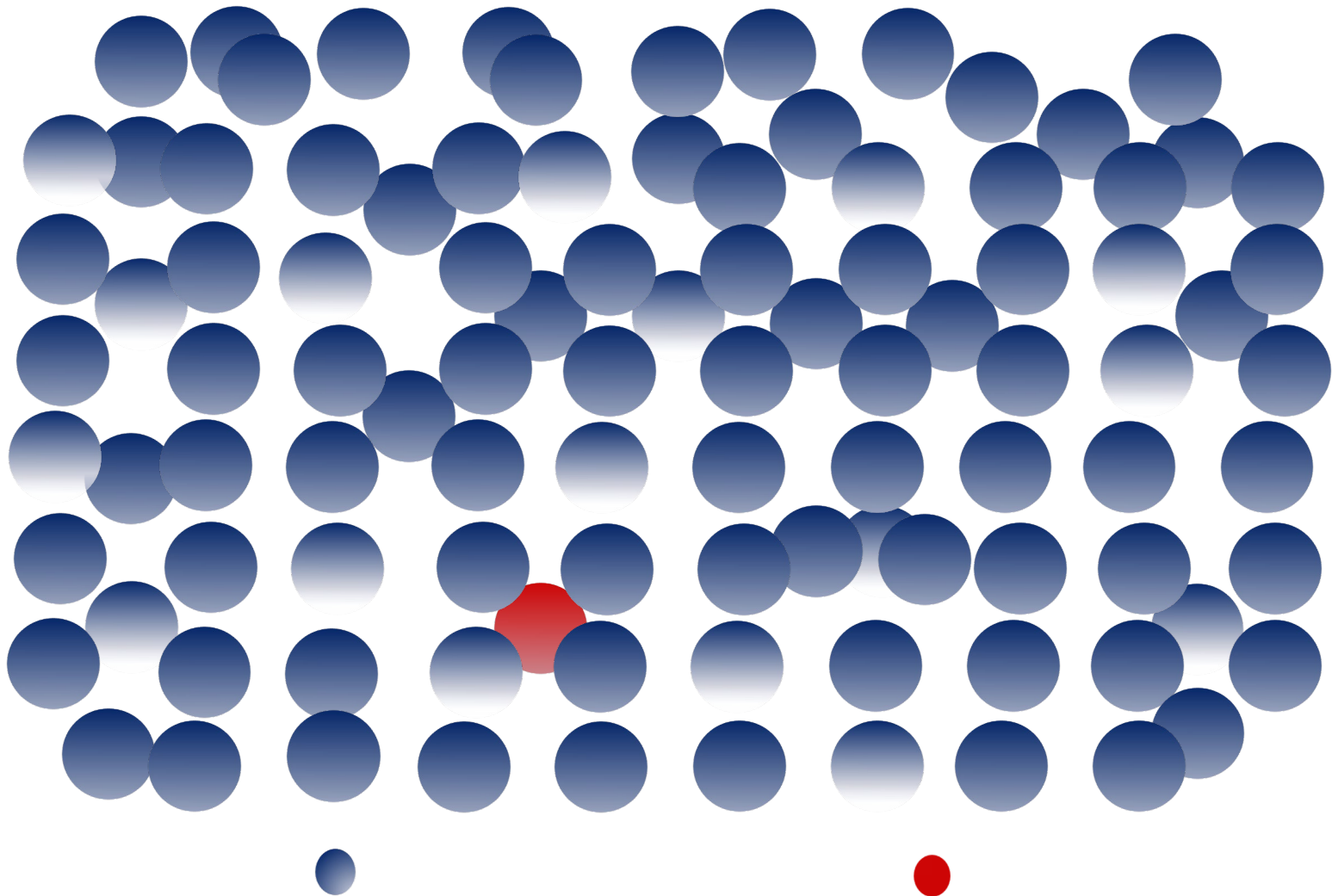


**HCV Free Individuals**

**HCV Positive Individuals**



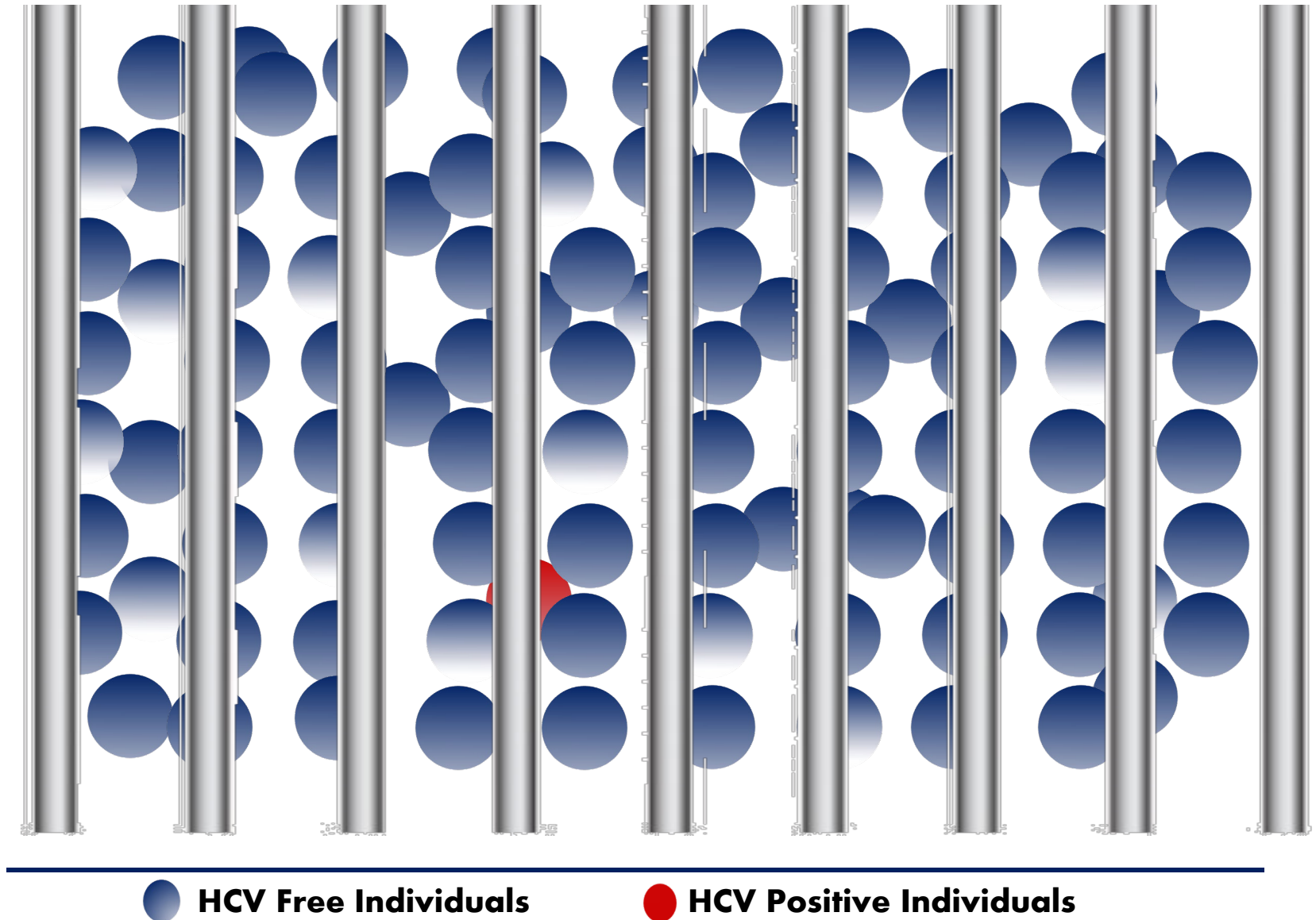
# Prevalence of HCV in General U.S. Population



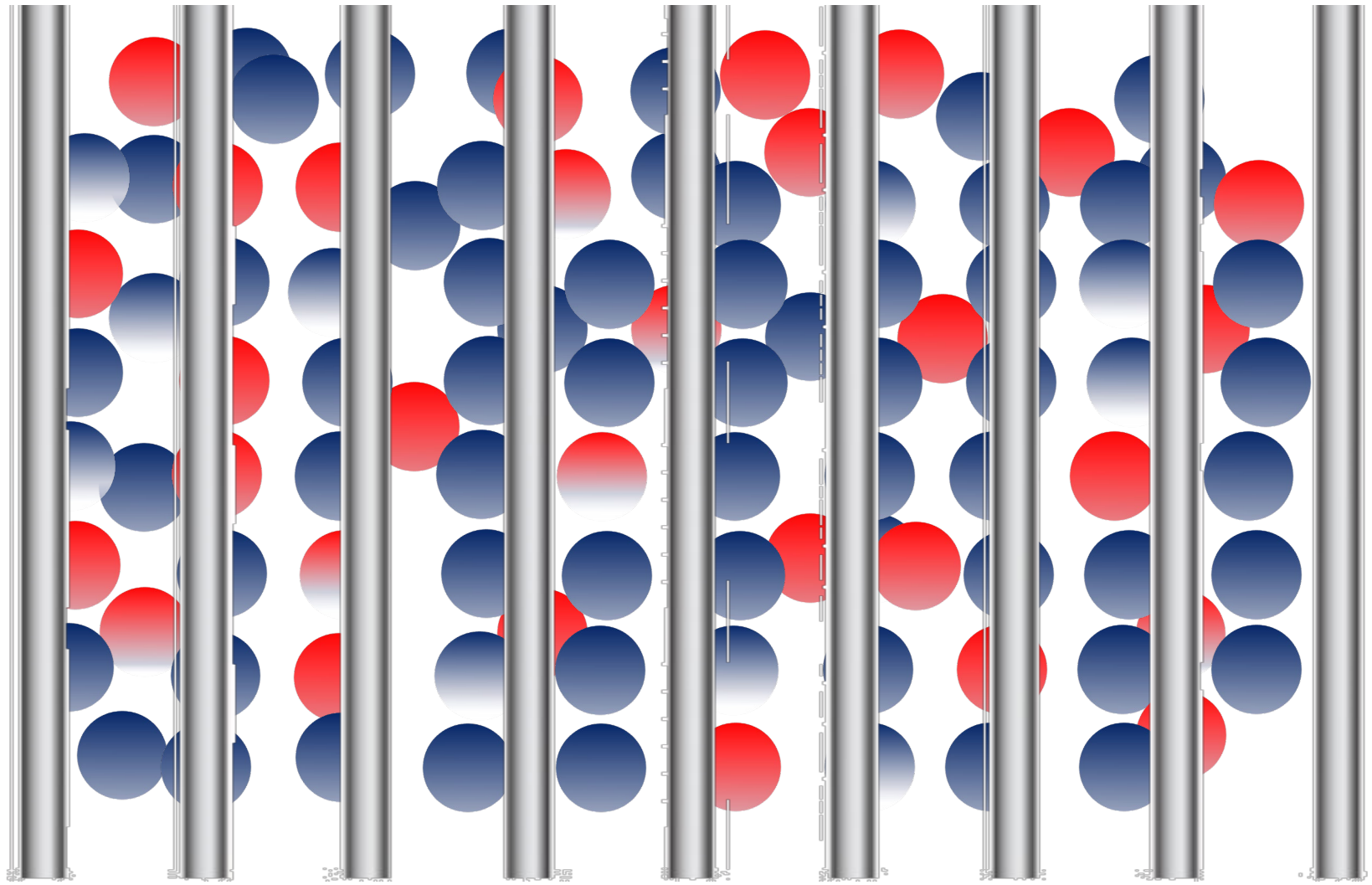
**HCV Free Individuals**

**HCV Positive Individuals**

# Prevalence of HCV in the Prison Population



# Prevalence of HCV in All Alaska Facilities



● HCV Free Individuals

● HCV Positive Individuals





HCV cases in correctional  
populations represent about 1/3 of  
total US HCV cases

Varan et al. Hepatitis C Seroprevalence Among Prison Inmates Since 2001: Still High but Declining. Public Health Reports, 2014; 129: 187-195.

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# **Annual Reported Cases of HCV 2015**

Reported HCV cases from Alaska Dept. of Corrections  
**392**

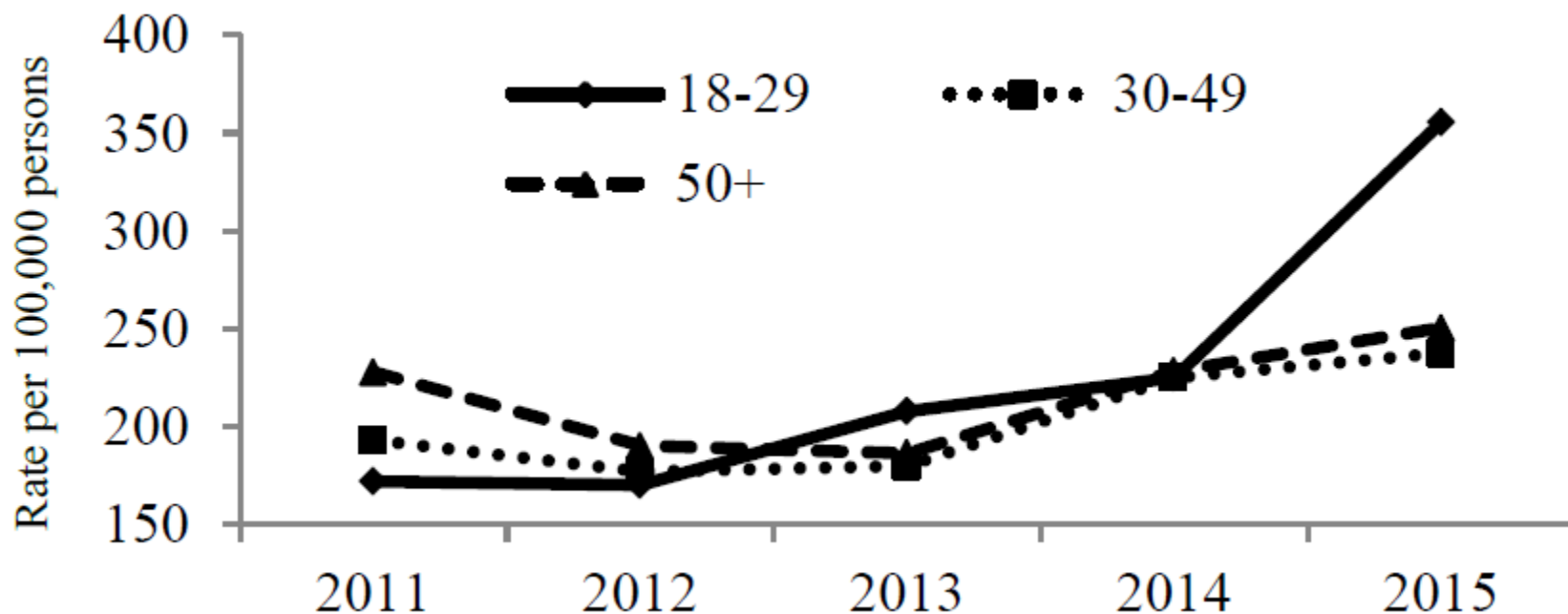
Reported HCV cases to Section of Epidemiology in  
Alaska  
**1511**

Section of Epidemiology. Alaska Department of Health and Social Services. Annual  
Reported Cases of Hepatitis in Alaska. August 25, 2016.

Alaska State Virology Lab Data. October 20, 2016.

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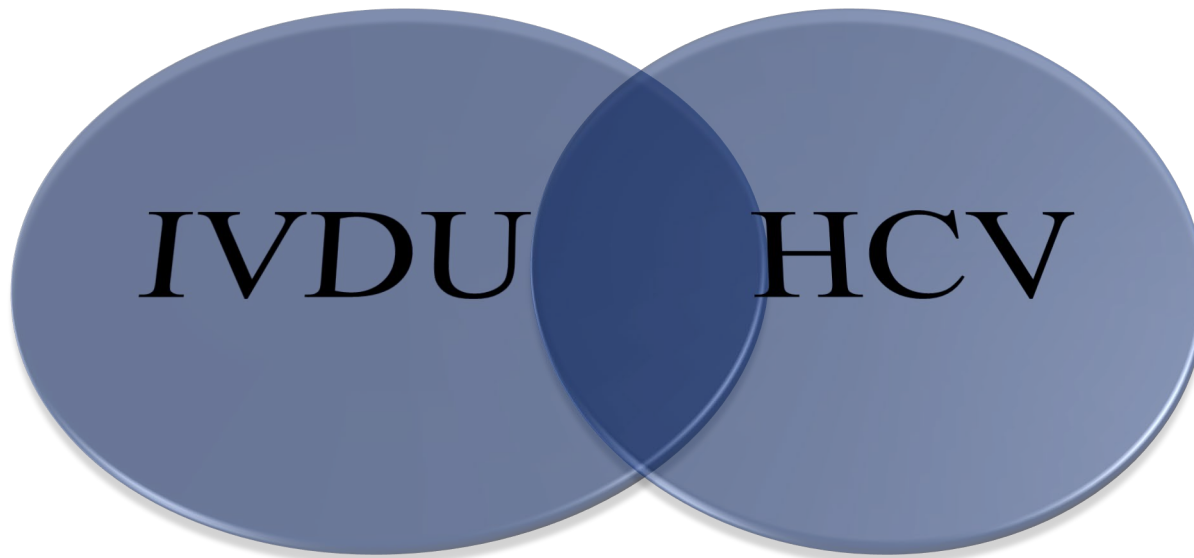
# HCV Cases increasing among Young Adults



McLaughlin, J and Castrodale, L. *Increase in Hepatitis C Cases among Young Adults—Alaska, 2011-2015*.  
State of Alaska Epidemiology Bulletin. No. 19. August 25, 2016.



# HCV Cases increasing among Young Adults



McLaughlin, J and Castrodale, L. *Increase in Hepatitis C Cases among Young Adults—Alaska, 2011-2015*.  
State of Alaska Epidemiology Bulletin. No. 19. August 25, 2016.

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**The incidence of HCV is lower in prison than the community, but the transmission risk is over 2 fold higher among recently released persons who inject drugs.**

Stone, J et al. Modelling the Impact of Incarceration and Prison-based Hepatitis C Virus (HCV) Treatment on HCV Transmission Among People who Inject Drugs in Scotland. *Addiction*. 2017; 112(7):1302-1314. Epub 2017 Mar 3.

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*“The concentration of a deadly infectious disease in the prison system has wide public health ramifications because detainees are not a static population, often transferring to multiple facilities within the prison system and back and forth to the outside community.”*

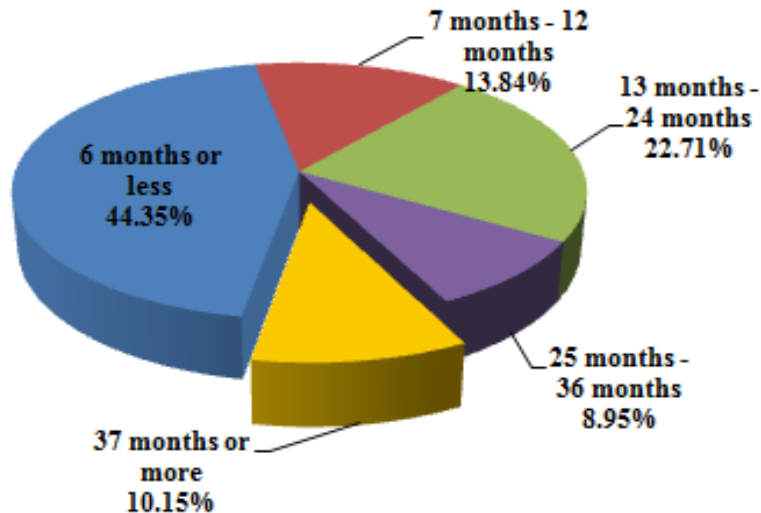
Dolan K, Wirtz A, Moazen B, Ndeffo-mbah M, Galvani A, Kinner S, Courtney R, McKee M, Amon J, Maher L, Hellard M, Beyrer C, Altice F. Global burden of HIV, viral hepatitis, and tuberculosis in prisoners and detainees. Lancet 2016; 388:1089-102.

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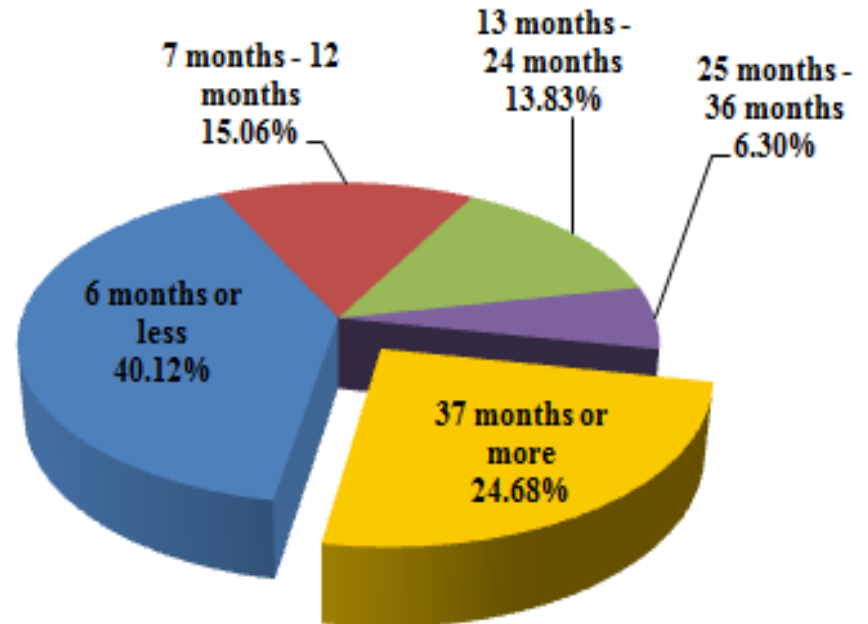
# Percent of Offenders by Length of Stay from Admission

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As of June 30, 2002

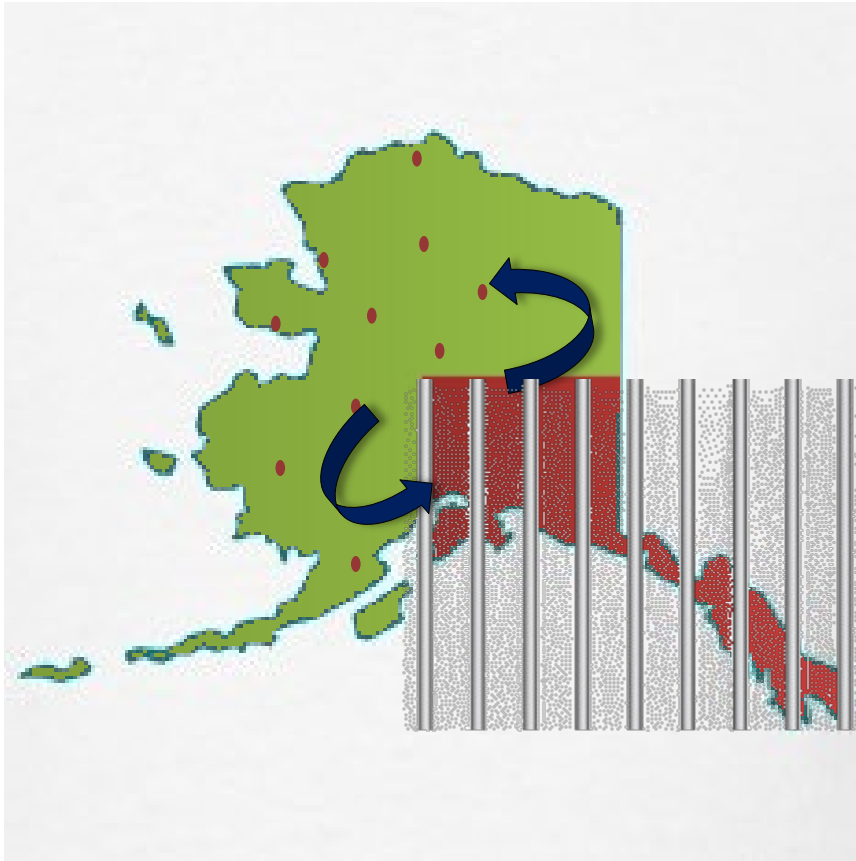


As of June 30, 2014



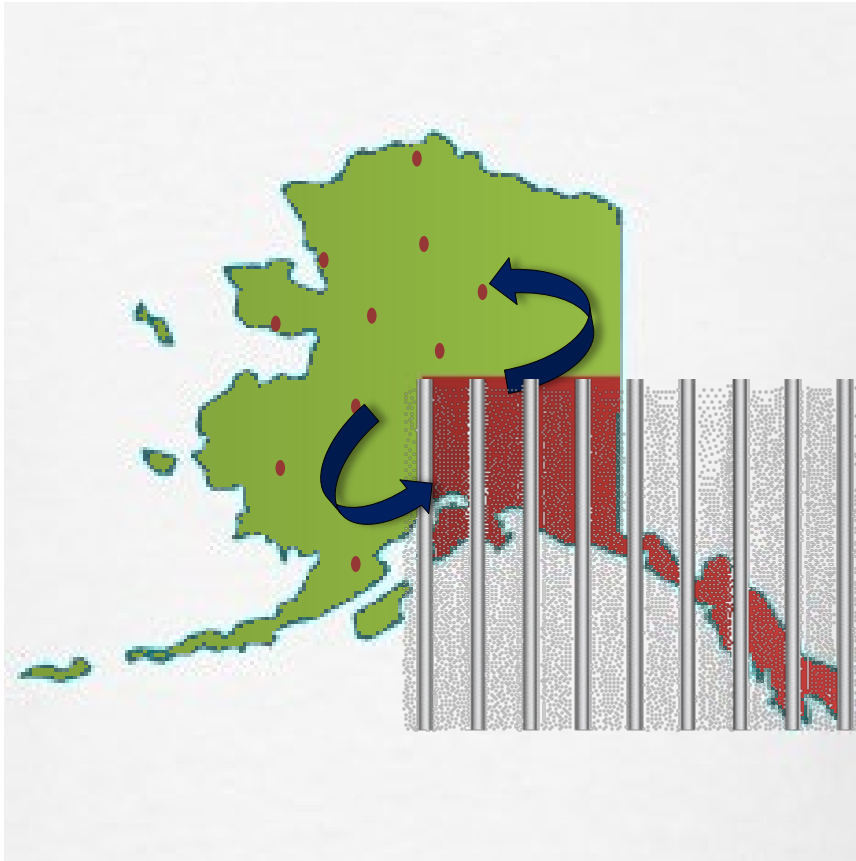


# Hepatitis C Virus in Alaska



**28.5% - 32.8 %** of seropositive HCV cases are in the corrections system on any given day.

# Hepatitis C Virus in Alaska



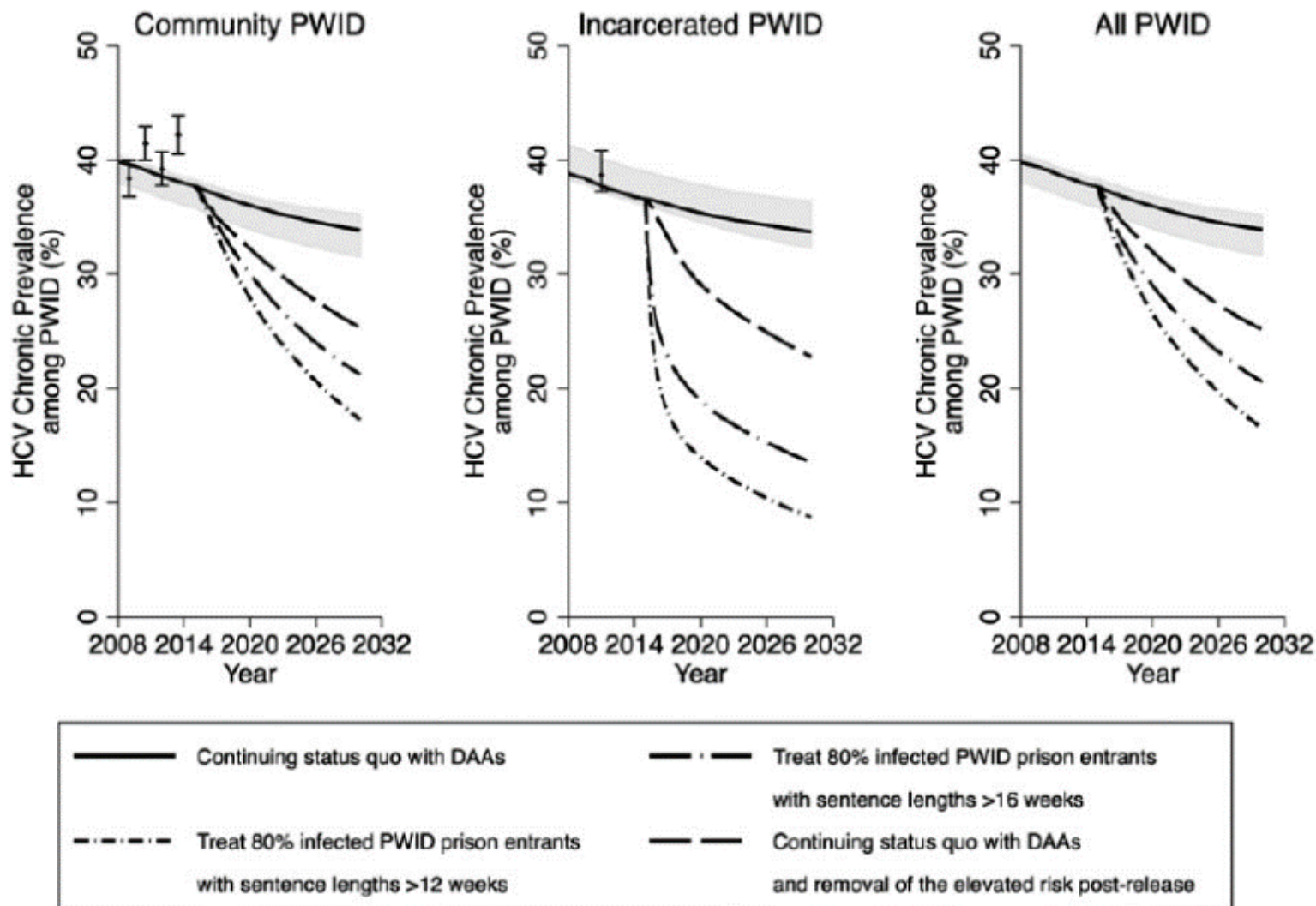
Approx. **75%** of Alaska's inmates will return to the community within three years; eventually **95%** return to the community

*“Since over 90% of prisoners will be released, providing HCV testing, treatment, and linkage to care services to people while they are incarcerated can improve the health of our everyday communities by saving lives, reducing disease transmission, and reducing costs related to rising HCV mortality.”*

National Hepatitis Corrections Network (NHCN). Hcvinprison.org 04/2014.

Spaulding AC, Kim AY, Harzke AJ, et al. Review: Impact of New Therapeutics for Hepatitis C Virus Infection in Incarcerated Populations. *Topics in Antiviral Med.* 2013;21(1): 27-35

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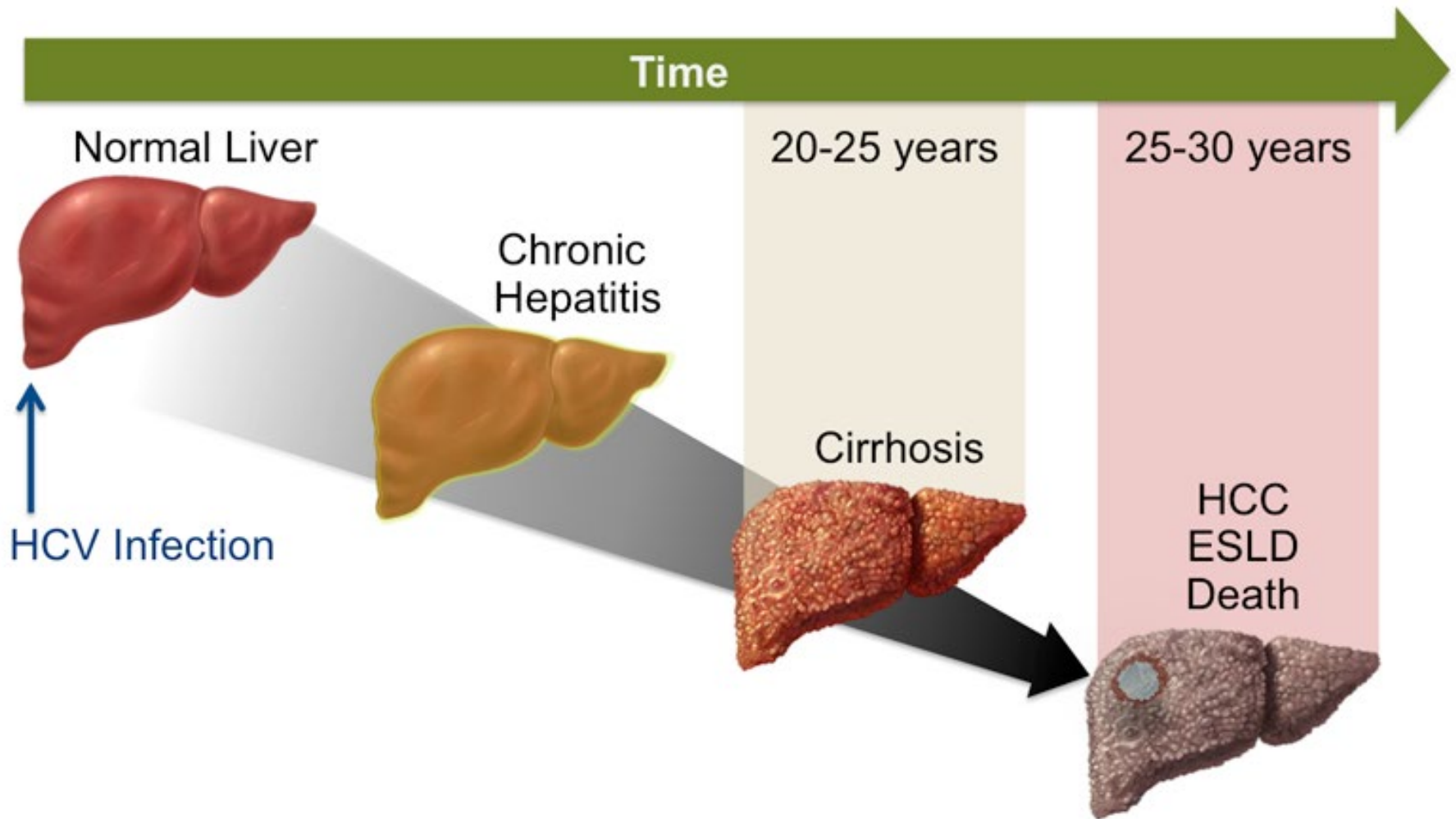


Stone, J et al. Modelling the Impact of Incarceration and Prison-based Hepatitis C Virus (HCV) Treatment on HCV Transmission Among People who Inject Drugs in Scotland. *Addiction*. 2017; 112(7):1302-1314. Epub 2017 Mar 3.

Cost to treat all offenders  
with chronic HCV in custody  
on any given day

**\$16,380,000**

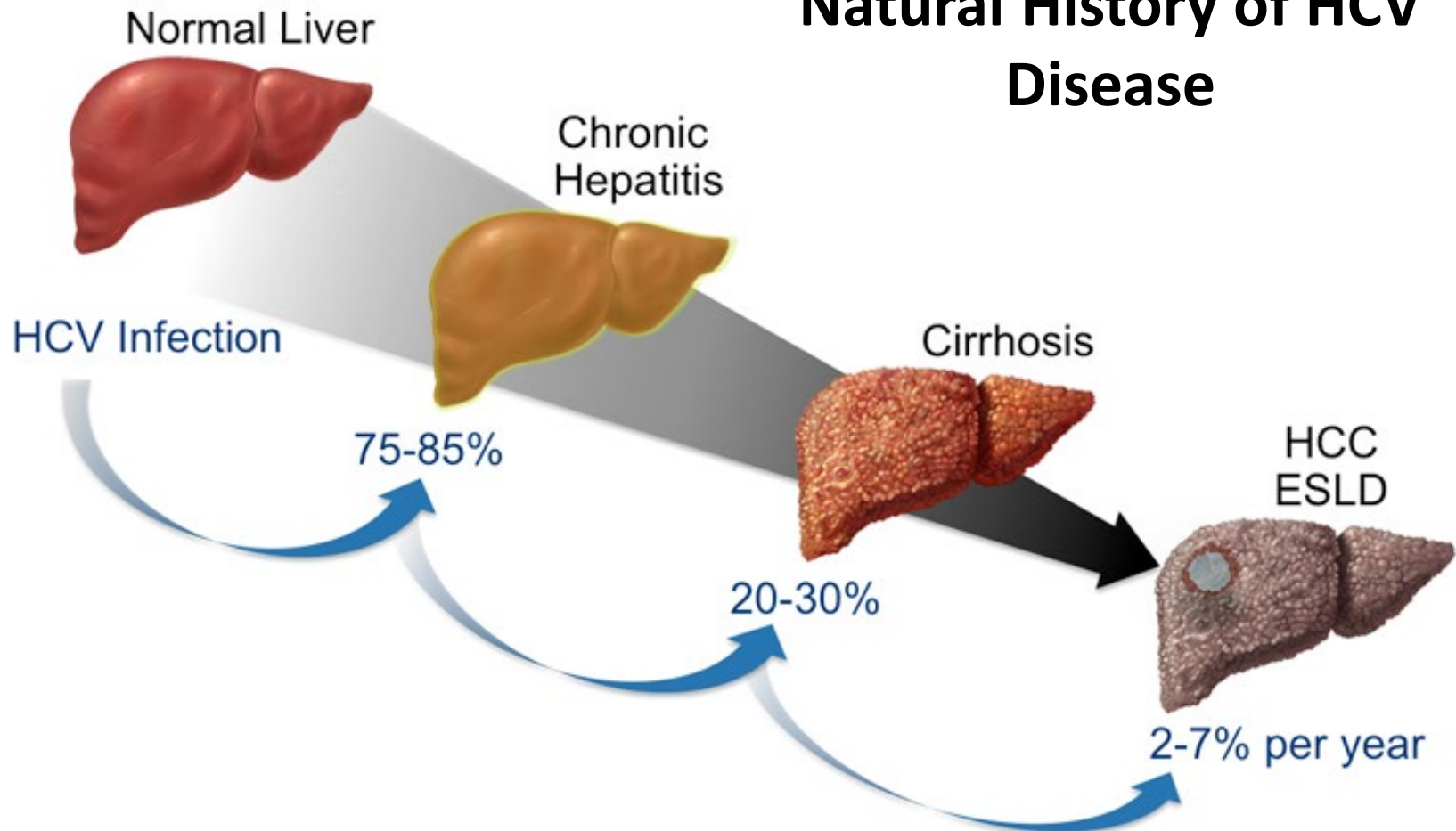




**Time Course of Progression with Chronic Hepatitis C Infection**

This graphic shows the time course for the natural history of chronic hepatitis C infection. Following initial HCV infection, there is typically a lag of 20 to 25 years before cirrhosis develops.

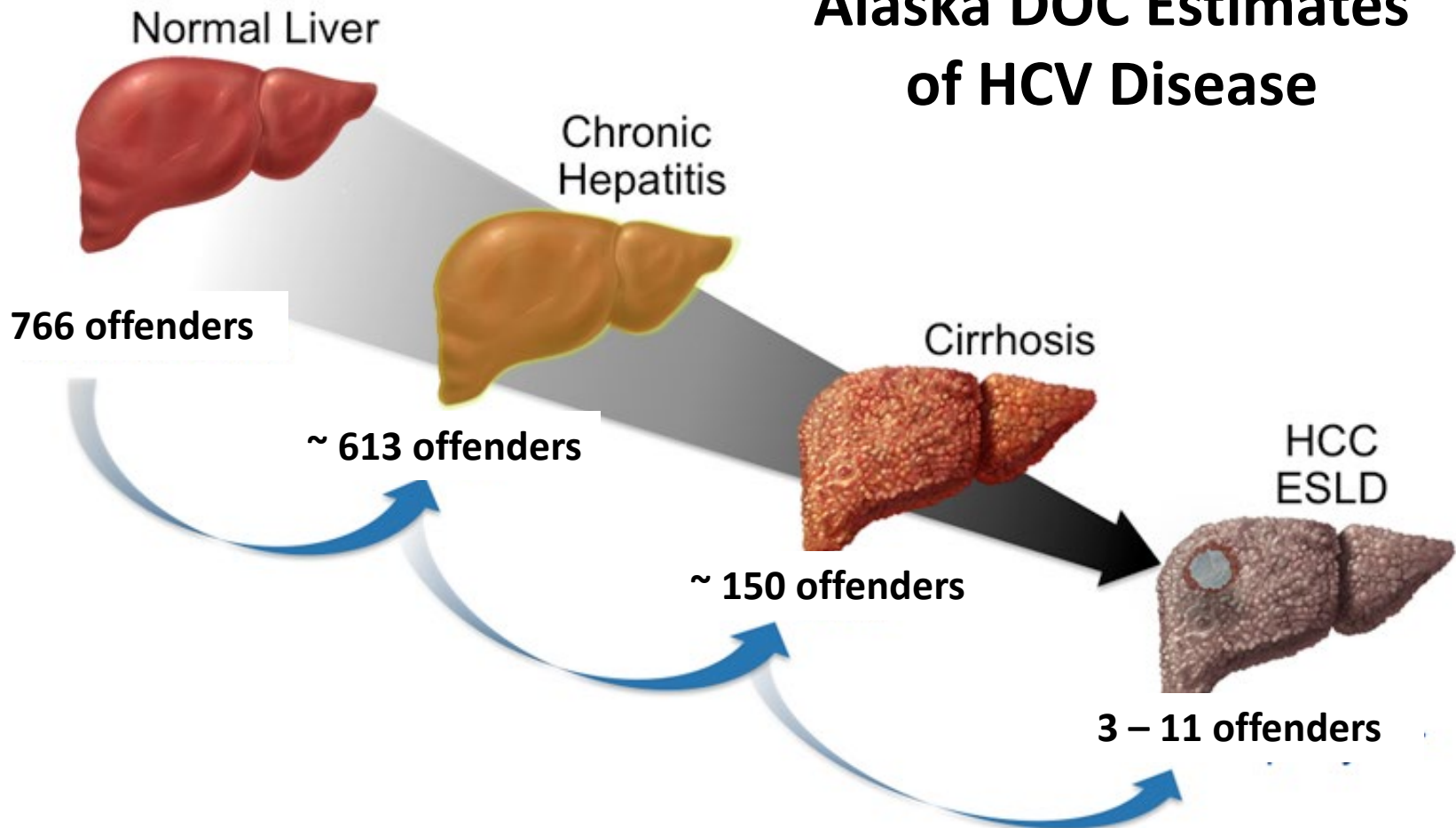
# Natural History of HCV Disease



## Natural History Following Initial Infection with HCV

Following initial infection with HCV, approximately 75 to 85% of persons develop chronic infection. Among those with chronic infection, approximately 20 to 30% will eventually develop cirrhosis. Patients who have HCV-related cirrhosis have a 2 to 7% per year risk of developing either end-stage liver disease or hepatocellular carcinoma. Abbreviations: ESLD = end stage liver disease HCC = hepatocellular carcinoma

# Alaska DOC Estimates of HCV Disease



## Natural History Following Initial Infection with HCV

Following initial infection with HCV, approximately 75 to 85% of persons develop chronic infection. Among those with chronic infection, approximately 20 to 30% will eventually develop cirrhosis. Patients who have HCV-related cirrhosis have a 2 to 7% per year risk of developing either end-stage liver disease or hepatocellular carcinoma. Abbreviations: ESLD = end stage liver disease HCC = hepatocellular carcinoma

## **Cost of Cure**

**What is the cost of cure?**

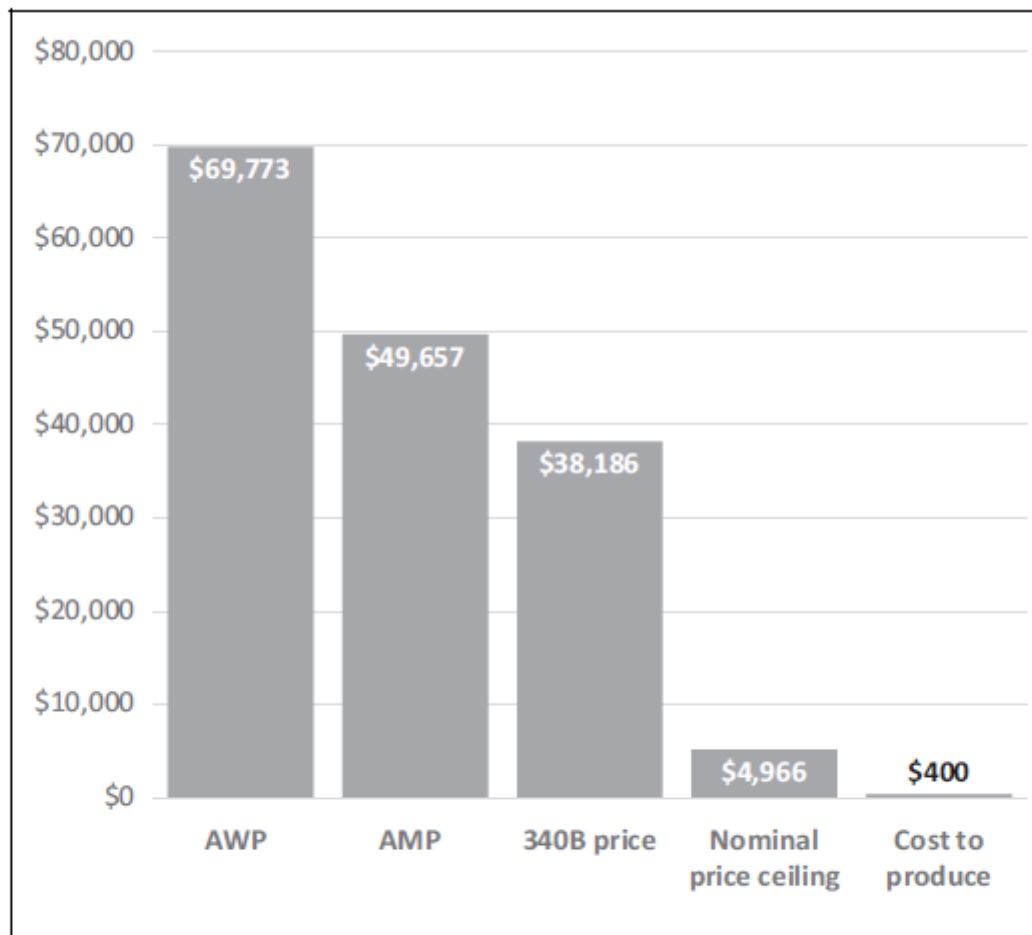
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Brand	Generic	Genotype	Cost
<b>Sovaldi / RBV</b>	Sofosbuvir / RBV	Genotype 2 Genotype 3	<b>\$78,322*</b> (12 weeks)
<b>Harvoni</b>	Sofosbuvir / Ledipasvir	Genotype 1	<b>\$22,680*</b> (8 weeks)
<b>Mavyret</b>	Glecaprevir / Pibrentasvir	Genotype 1-6	<b>\$26,399 *</b> (8 weeks)
<b>Epclusa</b>	Velpatasvir / Sofosbuvir	Genotype 1-6	<b>\$26,166*</b> (12 weeks)
<b>Vosevi</b>	Velpatasvir / Sofosbuvir / Voxilaprevir	Genotype 1-6	<b>\$62,798*</b> (12 weeks)

## Cost of Treatment in DOC

\* AK DOC price 2018






**Figure I.** Estimated price per course of hepatitis C treatment in prisons, direct-acting agents for hepatitis C. *Source:* Authors' analysis as outlined in Method section, based on data supplied by Georgia Department of Corrections, November 2017. Modified from Spaulding et al. (2018).



**Figure 2.** Number of persons with chronic hepatitis C hypothetically treated and missed under three pricing strategies. The total amount of \$15,280,287 can treat 219 people when cost is AWP (\$69,773), 400 people when treated under 340B pricing (\$38,186), and 3820 people when nominally priced (\$4,000). *Source:* Georgia Department of Corrections, fiscal year 2017 to 2018.





“So what are you  
in for?”

“I robbed Peter to  
pay Paul.”

States are now being sued for not treating  
everyone with an HCV infection

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# Budget Impact Analysis

*“Corrections have inherited an important public health opportunity to address the HCV epidemic. It is unrealistic, however, to expect correctional facilities to attempt widespread HCV treatment with the currently available budgets.”*

Nguyen JT, Rich JD, Brockmann BW, Vohr F, Spaulding A, Montague BT. A Budget Impact Analysis of Newly Available Hepatitis C Therapeutics and the Financial Burden on a State Correctional System. J Urban Health. 2015 Apr 1. [Epub ahead of print]

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# Corrections Departments are Progressing through a Step-Wise Response

1. *Reactionary treatment only*
  2. *Screen and document prevalence*
  3. *Screen broadly but prioritize treatment*
  4. *Screen broadly and treat broadly*
  5. *Communicate with stakeholders (Public health, IHS, Medicaid, insurance companies, state officials)*
  6. *Comprehensive public health test, treat, educate, and prevent spread of HCV*
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