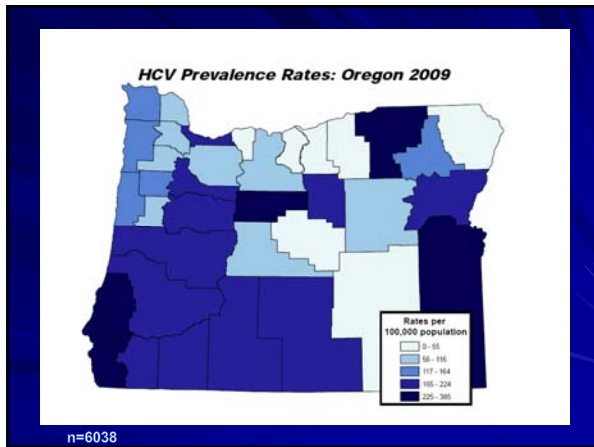
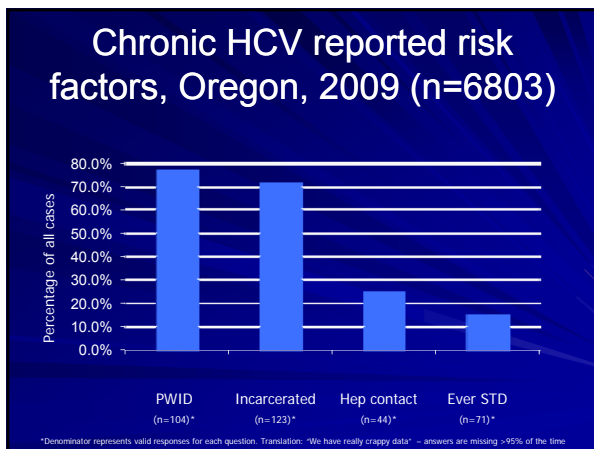


HCV Seroprevalence Among Injection Drug Users, Oregon, 2007-2009

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Seroprevalence Studies

- CIDUS (Collaborative Injection Drug User Study) 1994-2004
 - Prevalence of HCV antibody increases with age, years injecting, and intensity of use
 - Incidence of HCV infection among IDU decreasing in certain areas (Baltimore, LA, all races other than black in Chicago). Remaining stable in NYC and among blacks in Chicago
 - >1 in 3 infected within first 5 years after initiation of injection drug use
- Victorian injecting drug users 1990-1991
 - Seropositivity increased with age, duration of injection, prison history (men only), and methadone therapy (females only)
 - After adjusting for duration of injecting, rural residents were at about half the risk of infection
 - 60% of seroconverters reported rural residence, compared to 3.7% of non-seroconverters
 - Rural seronegative residents reported longer duration of injection than metropolitan seronegative residents (10.5 years vs. 4.2 years)

Amon CID 2008;46:1852-58
Crofts Med J Aust 1993;159:237-241

2007-2009 Pilot HCV Seroprevalence Activities

- 19 participating counties
- Targeted HCV testing based on increased risk for infection
- 1607 tests performed
- 325 (20%) anti-HCV positive specimens
 - 310 (95%) reported injection drug use

HCV Testing Criteria – Based on Increased Risk for Infection

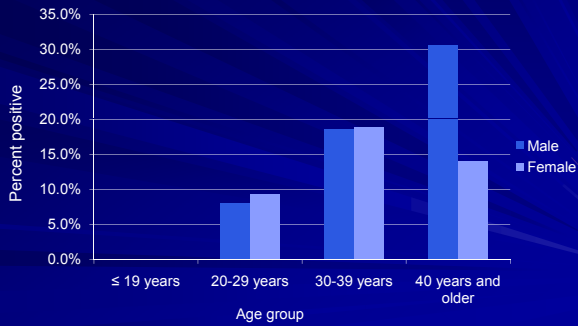
- Ever injected illegal drugs
- Received clotting factors made before 1987
- Received blood/organs before July 1992
- Ever on hemodialysis
- Evidence of liver disease

Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease. MMWR 1998; 47: RR-19

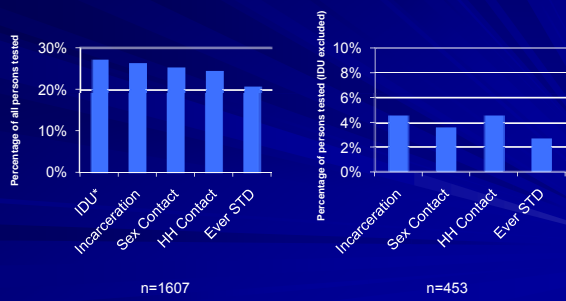
Characteristics of Persons Tested for HCV (n=1607)

	No. (%)
Sex	
Male	894 (55.6%)
Female	707 (44%)
Missing/Unknown	6 (0.4%)
Age	
Under 40	1160 (72.2)
Over 40	444 (27.6)
Missing	3 (0.2%)
Race	
White	1416 (88.1%)
Hispanic	131 (8.2)
Injects drugs	1142 (71.1)

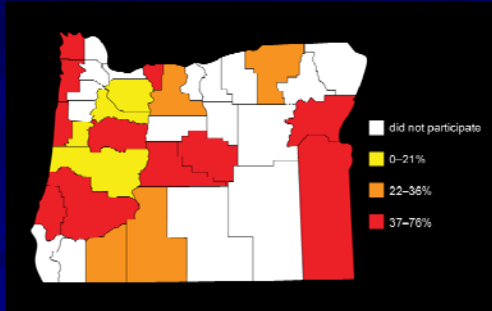
Prevalence of HCV by Age Group and Sex



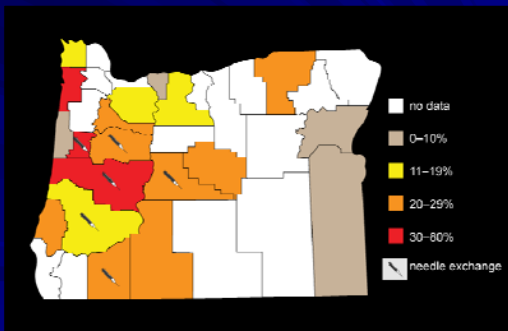
Prevalence of anti-HCV by risk group, overall and IDU excluded



Percent Rural Population, Oregon, 2009



Prevalence of HCV among IDU



Prevalence of HCV among IDU, Comparing Groups

	Percent Rural Population		
	Group 1 (most urban)	Group 2	Group 3 (most rural)
% HCV +	31%	25.6%	22.1%
Odds Ratio (95% CI)	1.5 (1.2 - 2.2)	1.2 (0.82 - 1.8)	—

Prevalence of HCV among IDU by Counties offering NEX

NEX County	% HCV+ (n=221)	Non-NEX County	% HCV + (n=87)
Benton	33%	Baker	0%
Deschutes	24%	Clackamas	17%
Douglas	18%	Clatsop	12%
Jackson	27%	Coos	27%
Lane	40%	Crook	25%
Linn	28%	Klamath	26%
TOTAL	30%	Lincoln	9%
		Marion	20%
		Tillamook	80%
		Umatilla	25%
		Wasco	17%
		TOTAL	22%

NEX data

- Subset of data from a campaign to test and educate IDUs in Lane county in 2008/2009 (n=146)
- 70% reported using NEX services
 - 45% shared needles
 - Seropositivity significantly associated with utilizing NEX - OR: 3.5 (95% CI: 1.6 – 7.6)
- Sharing water, cookers, cottons, or needles were all significant predictors of HCV positivity
- >70% injected with other people, but no significant association found with HCV +

Predictors of HCV among IDUs

- Crude analysis showed statistically significant associations between age >40, presence of NEX services, urban residence, transfusion, incarceration, and sexual contact with a person with hepatitis C with HCV positivity.
- On multivariable analysis, the traditional risk factors were no longer significant. The predictors of seropositivity among IDU were: Age > 40 (OR: 3.28), NEX services (OR: 1.76), and urban residence (OR: 1.67).

HCV in Rural Appalachian Kentucky

- Screening at 4 local health depts in rural Appalachia
- Seropositivity was 57% among IDUs
- HCV positivity significantly associated with IDU, having sex with IDUs, sexual contact with a person with hepatitis, and having tattoos (not from a licensed parlor)
- Age, multiple sexual partners, condom use with IDU, and having piercings were not significant

Christian Pub Health Reports 2010; 125: 121-128

Results

- Prevalence of HCV among IDU is lower in rural areas, but still represents a major disease burden
- Traditional risk factors were found not to be significant after adjustment for rural/urban residence
- Significant association between presence of NEX services and seropositivity among IDU
- Are we seeing a decrease in seroprevalence among IDU in urban settings?

Limitations

- Rural designation based on county of residence. Need more specific residence data
- Duration and frequency of injection not collected
- Association with NEX probably related more to perceived need for NEX in those counties, may mean that presence of NEX that has limited hours/services may not be adequate for HCV prevention
- Populations tested not representative of all persons who have ever injected, our sample skewed to younger persons

Questions?

Drugs of Choice

- 59% of cases (n=673) reported only injecting methamphetamine/speed
- 17% (n=192) reported heroin as the drug of choice; 3% (n=41) favored cocaine.
- 15% (n=174) reported injecting meth/speed in addition to other drugs such as:
 - Heroin
 - Cocaine
 - Speedball (cocaine + heroin)
 - Methadone
 - Morphine
