



HCV Epidemiology

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Data sources

- CDC, NHANES
 - IHS National Data
 - WA state data
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IHS data

- ▶ NPIRS database analyzed by CDC for 2005-2015
 - ▶ POR region within West, POR+CA combined
 - ▶ Overestimates and underestimates true RNA+ cases
 - ▶ Historical cases 'bunched' into early years, skewing trends over time
- 



Quick refresher

- Prevalence: proportion of population with existing infection, often expressed as a percentage
- Incidence: rate of new infections, often expressed as per 100,000 population

Bathtub analogy:

Prevalence is how high the water is

Incidence is how fast it is coming out of the faucet



HCV prevalence

Estimated 180 million nationwide

5 million in USA

30,000 I/T/U facilities, of which

5800 in West

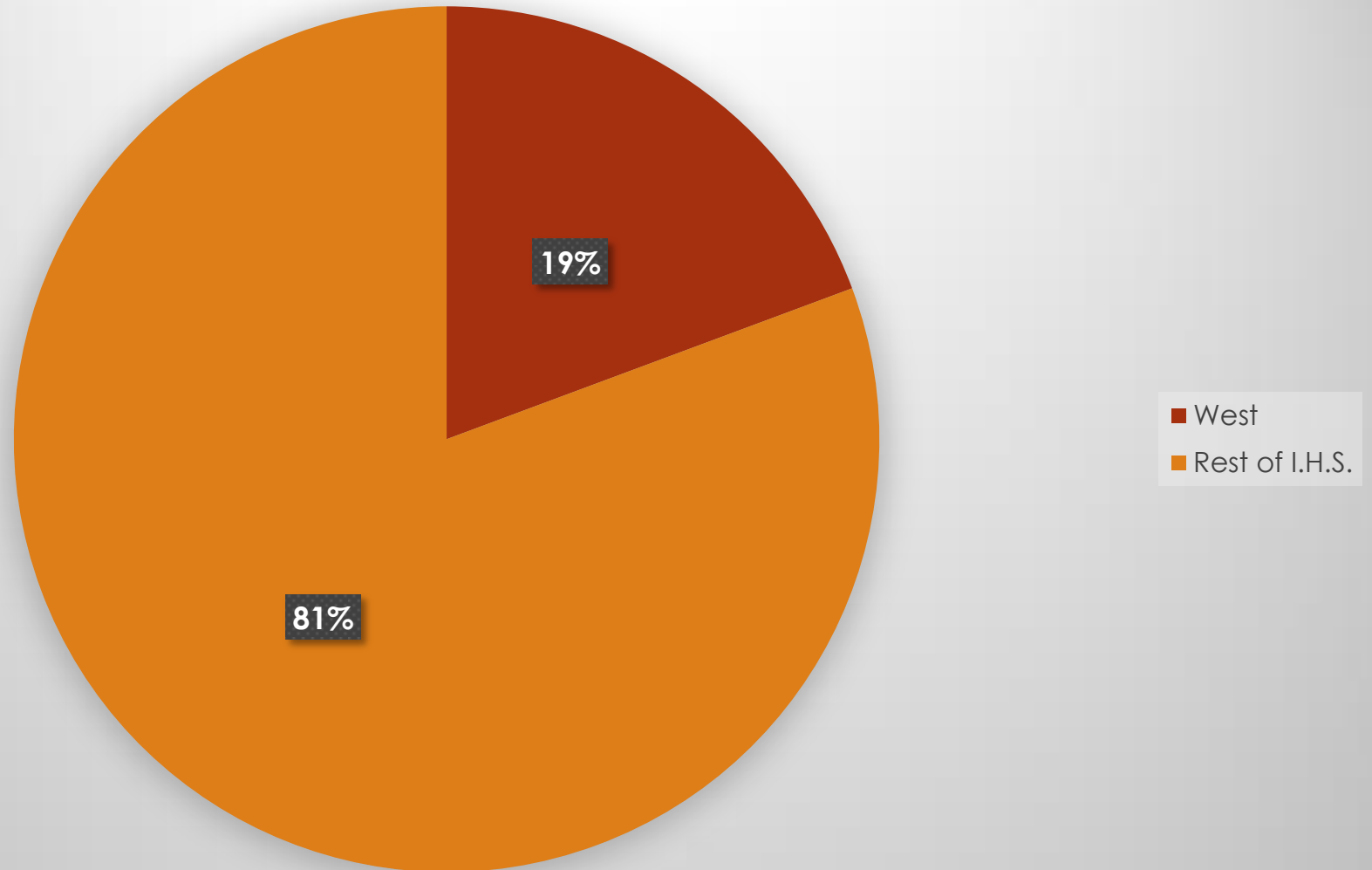




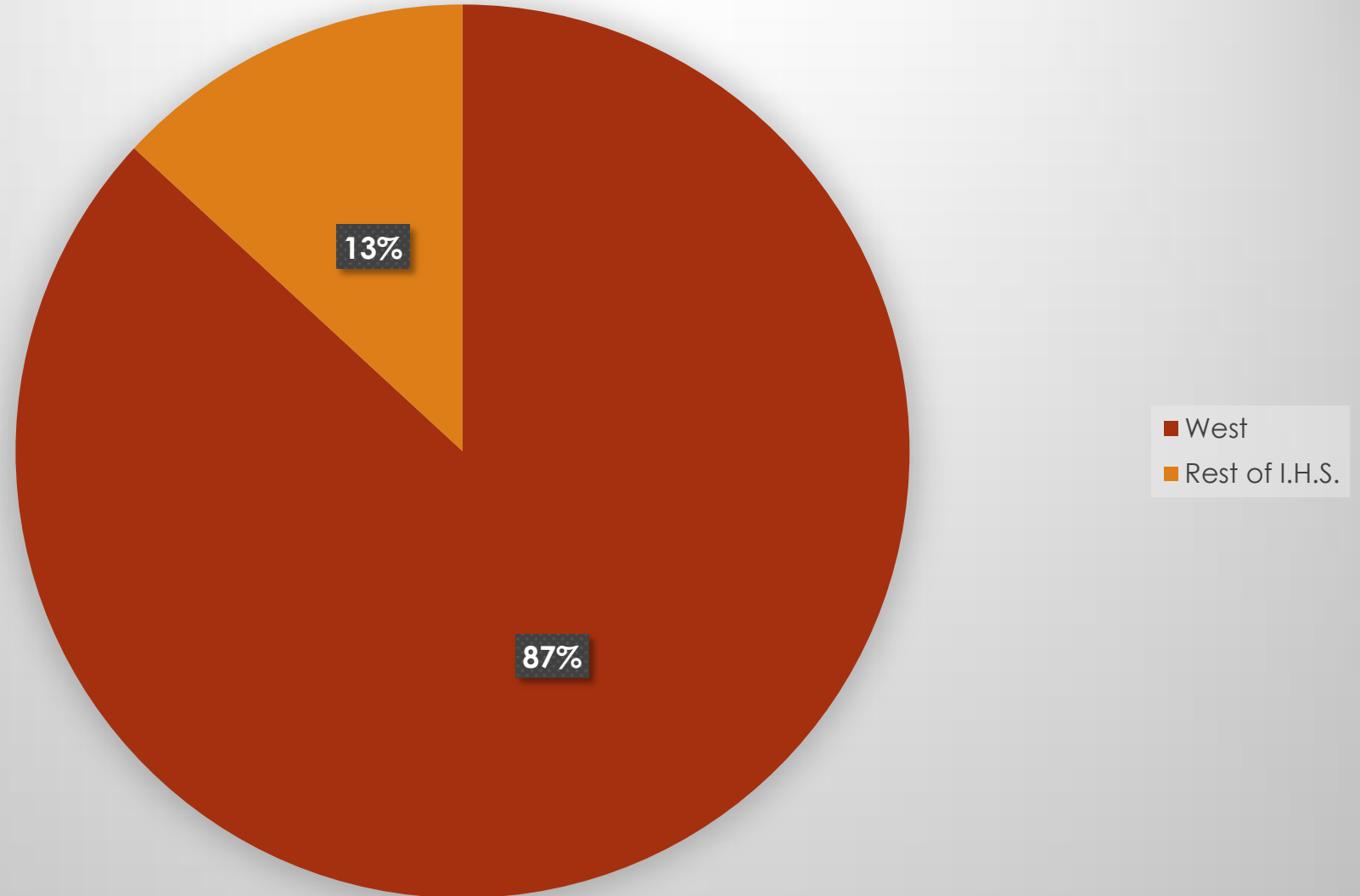
HCV incidence (US National)

- In 2011, 16,500 estimated new infections,
- In 2014, 30,500 estimated new infections
- Peak in 1980s, 230,000 per year

I.H.S. New Diagnoses of HCV 2005-2015 (N=29,803)



I.H.S. New Diagnoses of HCV 2015 (N=2110)





New HCV diagnoses rate per 100,000

2005-2015

- ▶ West: 286
- ▶ National average: 179
- ▶ West highest rate from 2005-2011

2015

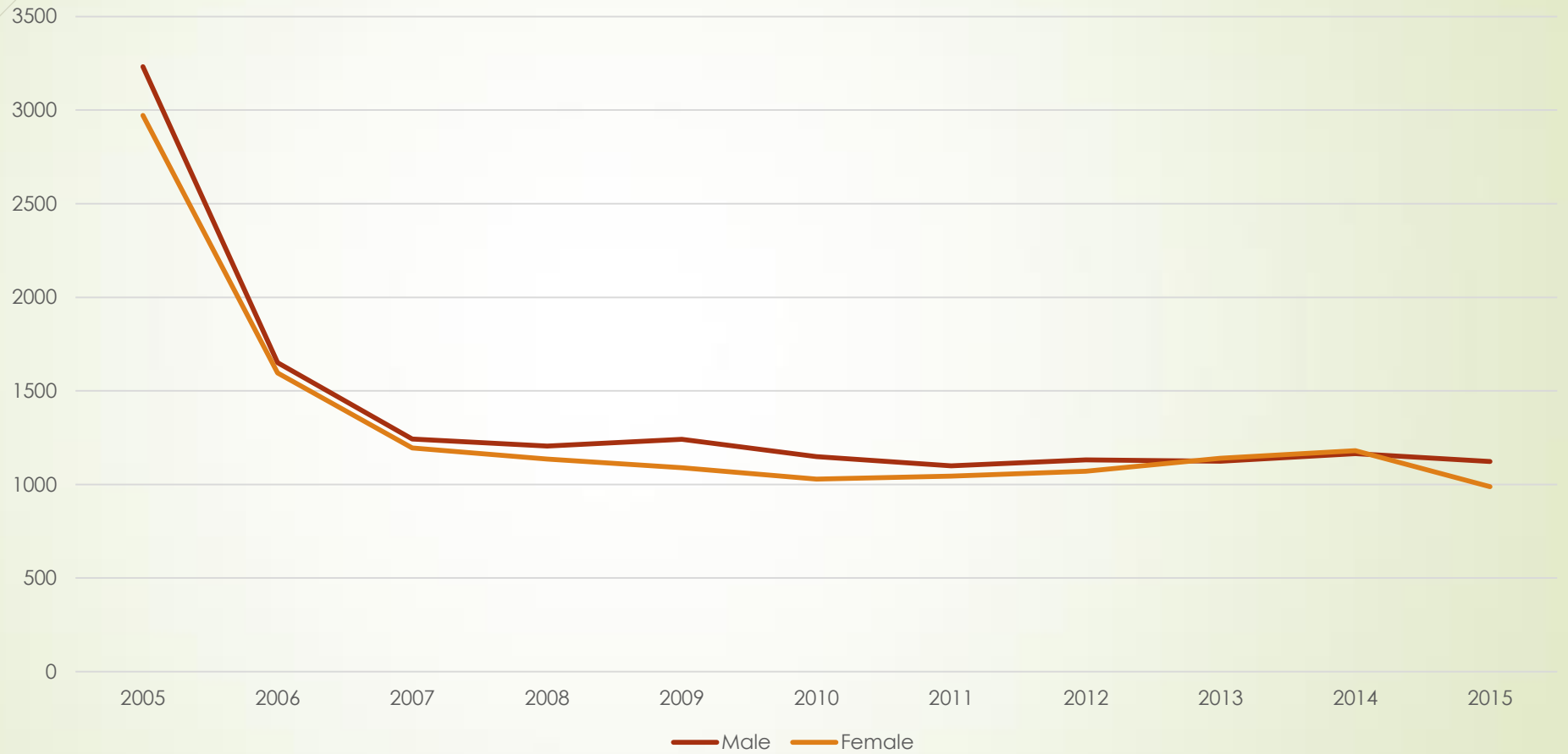
- ▶ West: 138
- ▶ National average: 131



WA State Data

- ▶ HCV related deaths more than doubled from 2010 to 2014 (262 to 645)
- ▶ AI/AN mortality rate 3x non Hispanic Whites
- ▶ Diagnosis of cancer of liver/intra-hepatic bile duct for AI/ANs (22.34/100,000) compared to non Hispanic Whites (7.27/100,000)

HCV 2005-2015 by sex

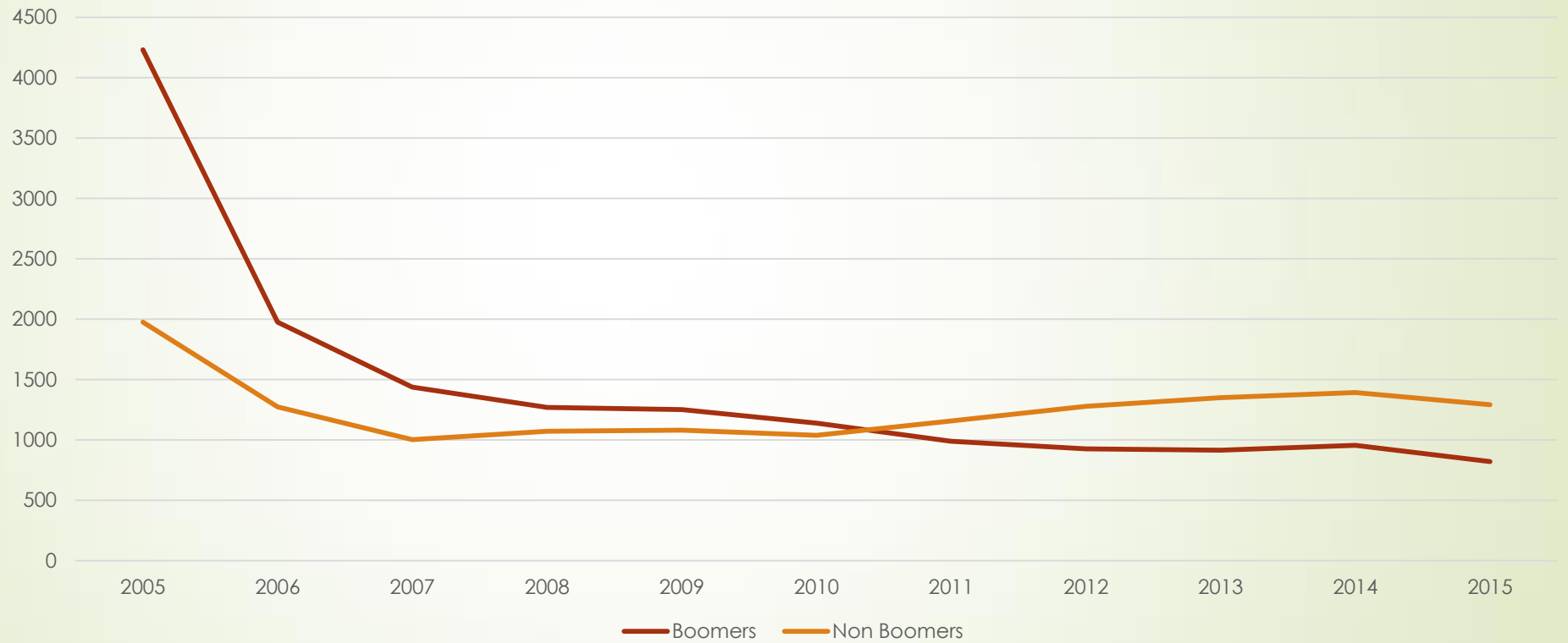




By Age

- In USA, approximately 75% Boomers
- In IHS approximately 53% Boomers
(15,900/29,803)
- Since 2011, more non-boomers diagnosed although boomers still much higher in terms of rates

HCV by boomers/non boomers 2005-2015



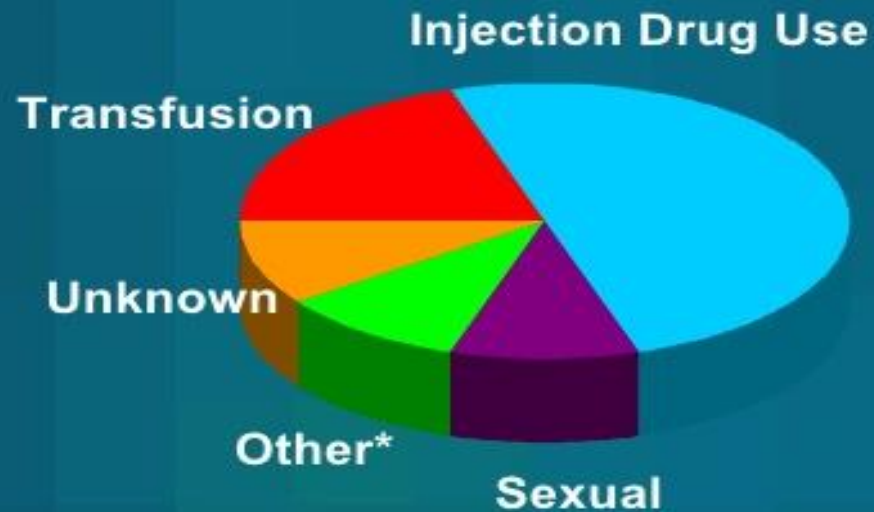


Transmission

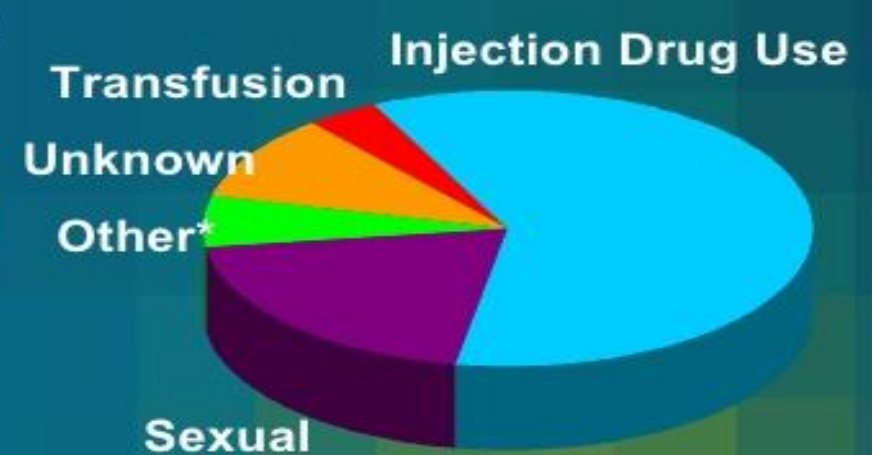
- 45% no risk factor identified
- 8% prevalence in dialysis patients, still high outbreak risk
- >50% of HCV from IDU, up to 30% infected in first year or two of injection, reaching up to 90% Ab+ in IDU communities, can be highly variable. Declined in IDUs due to infection saturation
- “New” HCV is young, non urban, oral opiate user that has transitioned to heroin
- MSM, intranasal drugs, non professional tattoos, medical professional

Relative Importance of Risk Factors for Hepatitis C

Remote (>15 yrs ago)



Recent (<15 yrs ago)



* Nosocomial, occupational, perinatal

Adapted from CDC Hepatitis Slide Kit <http://www.cdc.gov/ncidod/diseases/hepatitis/slideset>

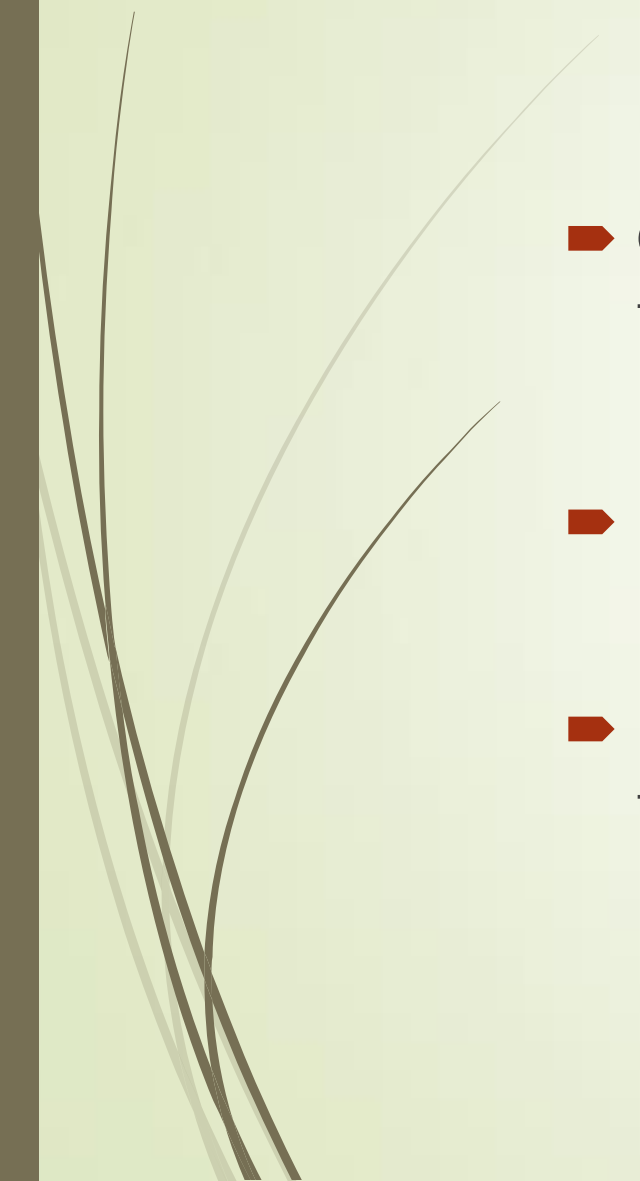


Perinatal

- Approximately 5% mother to child transmission
- Infection at time of birth, and correlated with RNA levels at time of birth
- Normal childbirth and breastfeeding recommendations
- Only 4%-10% of children will develop chronic infection
- Reminder: women of childbearing age can qualify for tx regardless of liver stage



Household contact

- ▶ Only recommendations are to not share razors or toothbrushes
 - ▶ No condom recommendation for discordant couples
 - ▶ Key part of destigmatizing disease, along with better treatment knowledge, which will assist patient follow up
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6. HOLD PATIENT AS STILL AS POSSIBLE AND HOLD THE INJECTOR **PERFECTLY STILL** AGAINST THE SITE; REST FINGER ON TRIGGER; THEN PULL TRIGGER WHILE COUNTING-- "1001, 1002, 1003." KEEP INJECTOR STILL UNTIL FULL COUNT IS COMPLETED.

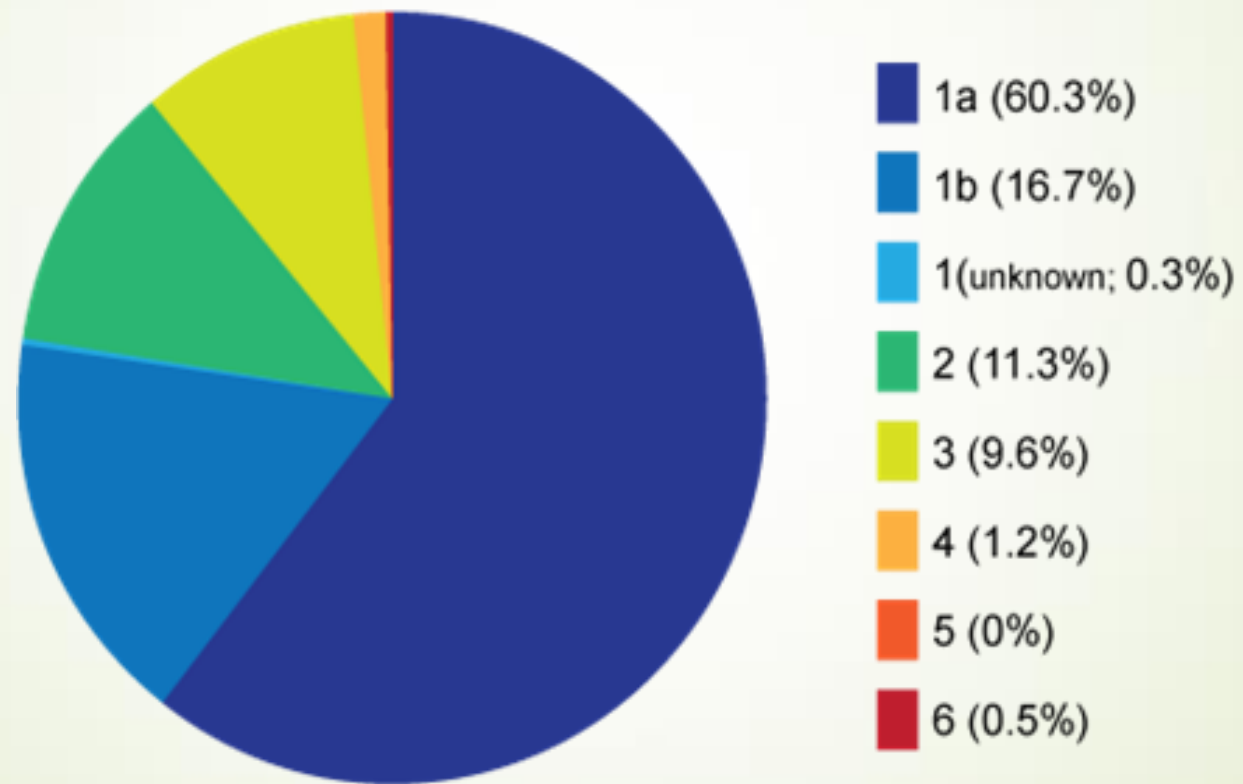
WARNING

INCOMPLETE INJECTIONS OR EXCESSIVE BLEEDING WILL RESULT IF INJECTOR IS NOT HELD AGAINST THE SITE LONG ENOUGH.




Genotype distribution, USA

Distribution of HCV Genotypes (Subtypes) 1-6





Liver staging

- No national data, must be estimated/extrapolated
 - Based on Cherokee Nation results, 25%-35% of boomers with HCV in stage 3 or 4
 - Nationwide approximately 16,000 Boomers, or 4,000 in immediate need for treatment
 - Linkage to care for historical cases requiring resources in the short term
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Cascade of Care: A key part of response

Challenges

- Resources needed to engage historical patients diagnosed years ago
- SVR12 return rates lower than expected





Conclusions

- ▶ HCV prevalence requires extra resources in short term to meet clinical demand and prevent deaths
 - ▶ Use your local data, national data highly variable
 - ▶ Majority of GT1 is 'good' for medical response needs and drug access
 - ▶ Better understanding of HCV transmission and treatment options may be key to decreasing stigma and increasing linkage to care
- ▶ HCV incidence requires strategies to engage substance abuse issues



Questions



“It has been an exceptional experience for the providers and has shown to be invaluable for the patients. We are very proud of the hard work and progress that our providers & staff in the HCV clinic have accomplished. “

Clinical Director, OK SU, March 8 2017