Today’s class is about...

• What hepatitis is

• How it is caused, prevented, and treated

• Hepatitis A, hepatitis B, and hepatitis C

• Sharing information to help you be safer and healthier
National Hepatitis Epidemic

• About 4 million Americans have Hepatitis C
  – 1-2% of total US population; ~20% of US prison population
  – About 20% of men, 25% of women have HCV in WA DOC

• Hepatitis B affects about 1.4 million Americans
  – 1 in 12 Asian/Pacific Islanders

Hepatitis C is 4 times more common in the U.S. than HIV.
A Little Bit About The Liver...
A Little Bit About The Liver…

- 2nd largest organ
- Filters and processes your blood
  - Detoxifies harmful substances
  - Aids digestion
  - Helps blood clot
- Uncomplaining organ
- Able to regenerate and heal
What is hepatitis?

• “hepa” = liver; “itis” = inflammation

• hepatitis = liver inflammation

• Chronic liver inflammation can lead to scarring (fibrosis, cirrhosis)

• Long term risks of chronic inflammation: cirrhosis, liver cancer, other medical problems
Cirrhosis of The Liver

- Symptoms of cirrhosis can include brain fog, portal hypertension, bleeding, fluid retention, dark urine/light stool
- Hepatitis C may take decades to cause cirrhosis, or may not cause cirrhosis
- Hepatitis C is the leading cause of liver failure and liver transplant in the U.S.
Viral vs. Non-Viral Hepatitis

Viral Hepatitis

- Hepatitis A, B, C, D and E
- Distinct viruses, all different
- Named in order of discovery

Non-Viral Hepatitis

- Alcohol-induced hepatitis
- Autoimmune hepatitis
- Toxic hepatitis
Acute vs Chronic

**Acute** Hepatitis – short-term
• Immune system fights the virus off and you are no longer infected
• Common cold, influenza (flu)...

**Chronic** Hepatitis – long-term
• Infection persists longer than 6 months
• HIV, arthritis, asthma...
Symptoms of Hepatitis A, B, C

- Acute hepatitis: Flu-like symptoms, jaundice, nausea, vomiting
- Chronic hepatitis: Chronic fatigue, flu-like symptoms, jaundice
- Elevated liver enzymes
- Many people do not have any symptoms until cirrhotic or nearly cirrhotic
Overview of Viral Hepatitis

hepatitis A (HAV)
hepatitis B (HBV)
hepatitis C (HCV)
Hepatitis A Virus (HAV)

- **Transmission**: Fecal-oral
- **Route**: Contaminated food/water
  - Sexual transmission is possible
- **Never chronic**, but co-infection can be dangerous
- You can only get it **once**
- **Preventable** by vaccine
Hepatitis B Virus (HBV)

- **Transmission:** Blood, semen, vaginal fluid
- **Route:** Sex (STD), sharing drug/tattoo/hygiene equipment, mother-to-child

- For adults: **Acute** infection 90%, 10% develop **chronic** hepatitis B

- **Chronic** infection = risk of cirrhosis and liver cancer
  - Chronic HBV is treatable but not curable

- You can only get it **once**

- **Preventable** by vaccine
Hepatitis A and B Vaccines

• Twinrix is a combo Hep A/Hep B vaccine
• No vaccine for Hep C
• Safe, easy, lifetime prevention
• Especially important if have Hep C
• Extra doses are not harmful; no need to restart if you have a break between shots; WA database
• Free at the HEP office
Hepatitis C (HCV)

• **Transmission:** Blood-to-blood contact only

• **Route:** *Sharing* drug, tattoo/piercing, hygiene equipment, pre-1992 blood transfusions, sexual activity if blood is present

• **Acute** infection 20%; 80% develop **chronic** hepatitis C

• You can be **re-infected** with HCV

• **Chronic** infection = risk of cirrhosis/liver cancer

• No vaccine but **curable**
Hepatitis C Transmission

How does blood-to-blood contact happen?
## Risk Factors for HIV/HBV/HCV

### Highest Risks
- Sharing equipment to inject drugs
- Sharing tattoo and piercing equipment (especially jail/prison/street tattoos)
- Blood transfusions (pre-1992)

### Other Risks
- Sharing straws to snort drugs
- Sharing personal hygiene tools (toothbrush/razor/nail clippers)
- Fighting
- Sexual transmission
- Occupational exposure (firefighters, healthcare workers, paramedics)

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**Hepatitis viruses are ****NOT** spread by casual contact such as hugging, kissing, sharing food or drinks, playing, sharing a house/bed/toilet**
Injection Drug Use and HIV/HBV/HCV

Sharing **any** injection drug equipment can spread HIV, HBV, HCV

Works = needles, syringes, cottons, cookers, water, tourniquets, gauze, drugs, etc.

Cleaning equipment **reduces** but does not **eliminate** risk.
Injection Drug Use Risk Ladder:

- Injecting using some else’s uncleaned needle and works
- Injecting using someone else’s uncleaned cooker or works, but your own brand new needle
- Rinsing a used needle one time with cold water before injecting
- Rinsing a used needle five times with cold water before injecting
- Using a brand new needle and works every time you inject
Injection Drug Use and HCV

Reusing needles is risky because the needle tip becomes more blunt with each use and the barrel of the needle gets damaged and is more likely to retain blood. This also causes more damages to veins.
Injection Drug Use and HCV

- **RCW 69.41.095** allows anyone at risk for having or witnessing a drug overdose to obtain naloxone, carry it, and administer it in an overdose.

- **RCW 69.50.315** is Washington state’s “Good Samaritan” law which protects a person experiencing an overdose, or a person getting help for someone who is overdosing, from controlled substance charges. Only applies when evidence for possession is obtained as a result of seeking medical assistance. **Does not protect a person from other criminal charges including probation and parole violations and outstanding warrants.**

- **RCW 4.24.300** provides immunity from civil liabilities when responding in a medical emergency.
Naloxone (Narcan)

- Formerly incarcerated people return to environments that strongly trigger relapse to drug use and put them at risk for overdose
- Overdose deaths are 12 times more likely than in the general population
- Overdose rates peak in the first few weeks after release
- Accidental overdoses account for nearly one quarter of deaths post-release

“Stay Alive Outside”
http://youtu.be/_QwgxWO4q38
Naloxone (Narcan)

• You can get new needles and opioid overdose medication at some needle exchanges
• You can also find opioid overdose medication at some pharmacies
• Good Samaritan Law
  • Does not protect a person from other criminal charges including probation, parole violations, intent to sell, or outstanding warrants
  • Only protects the person overdosing and the person administering Naloxone
Tattoos and HIV/HBV/HCV
Tattoos and HIV/HBV/HCV

Tattoo Risk:
• Getting a tattoo on the street or in prison or jail with a used needle and ink
• Getting a tattoo with a clean needle, but reusing ink
• Using a brand new needle and new ink every time you get a tattoo
• Getting a tattoo in a licensed tattoo shop
Body Piercings and HIV/HBV/HCV

Piercing Risk:

• Using unclean equipment risks infection and spread of HBV/HCV
• Piercing & implants with unsterile equipment (sharpened toothbrushes, razors, etc) is unsafe
• Beyond exposure to HIV/HBV/HCV, body can reject implant leading to infection
Hepatitis C - What happens?

It depends...

• Some get over it

• Some have hepatitis C but don’t develop serious problems

• Some have hepatitis C and get serious liver disease including cirrhosis and liver cancer

• Some need a liver transplant or die of liver failure

*Getting treated and cured reduces chances of developing serious liver disease*
HCV Testing

Testing for HCV is a 2-step process:

– *Step 1: Antibody test*
  looks for exposure to virus

– *Step 2: Viral load test*
  looks for actual virus (aka “PCR”)

Both tests are necessary for a full diagnosis
Chronic Liver Disease Progression

• Metavir Scoring System
  – F0: No Fibrosis
  – F1: Mild Fibrosis
  – F2: Moderate Fibrosis
  – F3: Severe Fibrosis
  – F4: Cirrhosis

*Chronic hepatitis B and chronic hepatitis C may take decades to cause liver disease or may not ever cause liver disease*
Hep C Treatment

THEN
• Interferon-based treatment
• 50-70% effective
• Injections once a week plus pills for a year
• Severe side effects
  • Depression
  • Irritability
  • Fatigue
  • Fever
  • Nausea
• Diarrhea
• Hair Thinning
• Thyroid Problems
• Headache

NOW
• Pills, often 1 per day, no injections
• 90-98% effective
• Shorter: Usually 12 weeks, can be 8 – 24 weeks
• Fewer, milder side effects
  • Fatigue
  • Headache
  • Diarrhea
  • Nausea
  • Trouble sleeping

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www.hepeducation.org | (800) 218-6932 | (206) 732-0311
Before treatment, your provider may consider:

- Genotype and other genetic factors
- Amount of liver scarring (fibrosis)
- Patient’s age
- Previous treatment for hep C
- Other medical conditions
Re-entry Treatment:

• Understand your access health insurance upon release
  – WA Apple Health, Seattle Indian Health Board

• Make sure to find a community doctor
  – Country Doctor Re-entry Clinic, Madison Clinic, Harborview After Care Clinic

• Find a medical case manager
  – Hepatitis Education Project

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Self and Liver Care

- Eliminate or reduce alcohol consumption
- See your doctor regularly
- Get vaccinated against HAV/HBV
- Ask your doctor before taking any medications
  - Be especially careful with acetaminophen (Tylenol)
- Be aware that some herbal meds help, some hurt
- Maintain healthy weight
- Nutrition and exercise
- Avoid co-infection with HIV
- Reduce stress
Preventing the spread of viral hepatitis

- **Hepatitis A:** Get vaccinated and wash your hands
- **Hepatitis B:** Get vaccinated and practice safer sex
- **Hepatitis C:** Don’t share any equipment for drug use, tattooing, piercing, or hygiene
Thank you!