



# Submitting Hepatitis C Samples to NC State Laboratory of Public Health

North Carolina Division of Public Health  
Communicable Disease Branch

Presented by:

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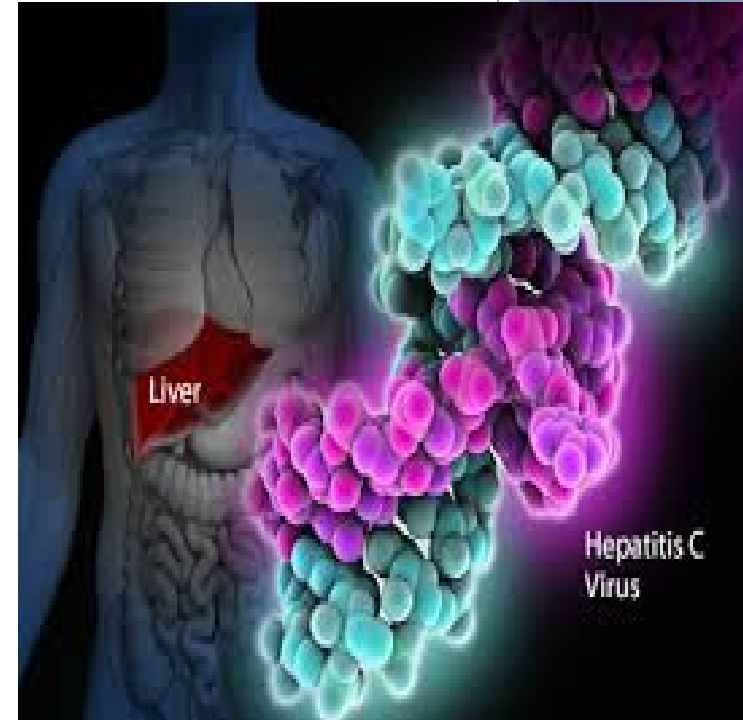
May 2017

# objectives

- Understand the hepatitis C disease process
- Understand the process of submitting hepatitis C tests to the State Lab
- Discuss next steps after an HCV diagnosis
- Discuss hepatoprotective behaviors
- Describe how to prevent transmission

# Hepatitis C virus (HCV)

- Viral infection that directly attacks the liver
- Most common blood borne infection in the US
- Severity of disease ranges
- Diagnosed:
  - Acute hepatitis C
    - Short term, 0-6 months
  - Chronic hepatitis C
    - If unresolved, life long infection
- **No vaccine is available**



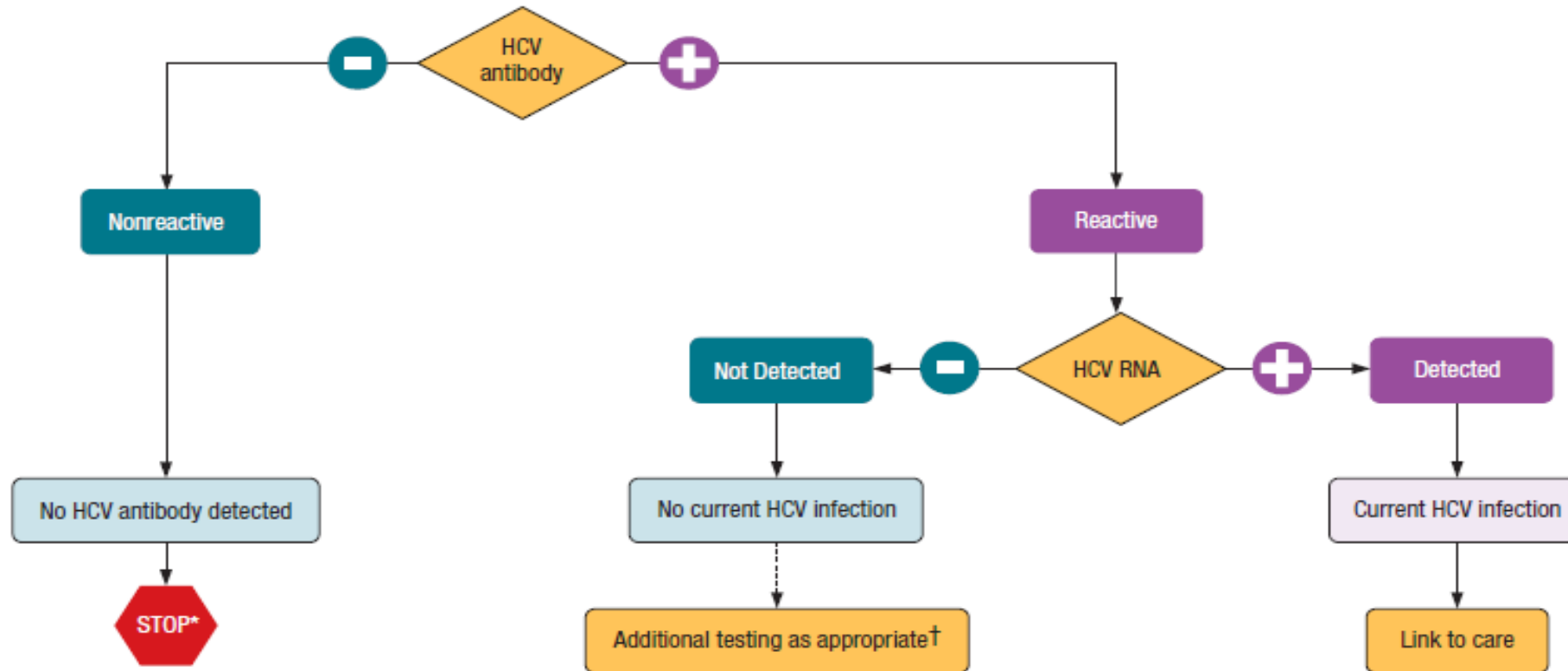
# Hepatitis C virus Transmission

- Primarily through exposure to infectious blood
  - Injection drug use (IDU)
  - Receipt of blood, blood products, organs
  - Needle stick injuries
  - Perinatal ( Child born from a Hepatitis C infected mom)
- Infrequently through
  - Intercourse
  - Sharing personal items
  - Invasive healthcare procedures

# Recommended Testing Sequence for Identifying Current Hepatitis C Virus (HCV) Infection



U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention



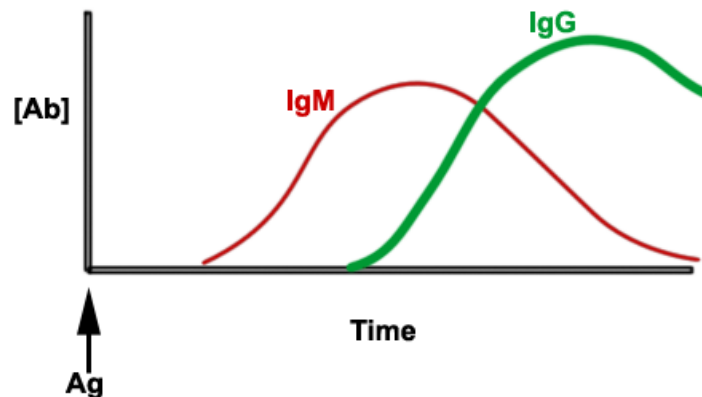
\* For persons who might have been exposed to HCV within the past 6 months, testing for HCV RNA or follow-up testing for HCV antibody is recommended. For persons who are immunocompromised, testing for HCV RNA can be considered.

† To differentiate past, resolved HCV infection from biologic false positivity for HCV antibody, testing with another HCV antibody assay can be considered. Repeat HCV RNA testing if the person tested is suspected to have had HCV exposure within the past 6 months or has clinical evidence of HCV disease, or if there is concern regarding the handling or storage of the test specimen.

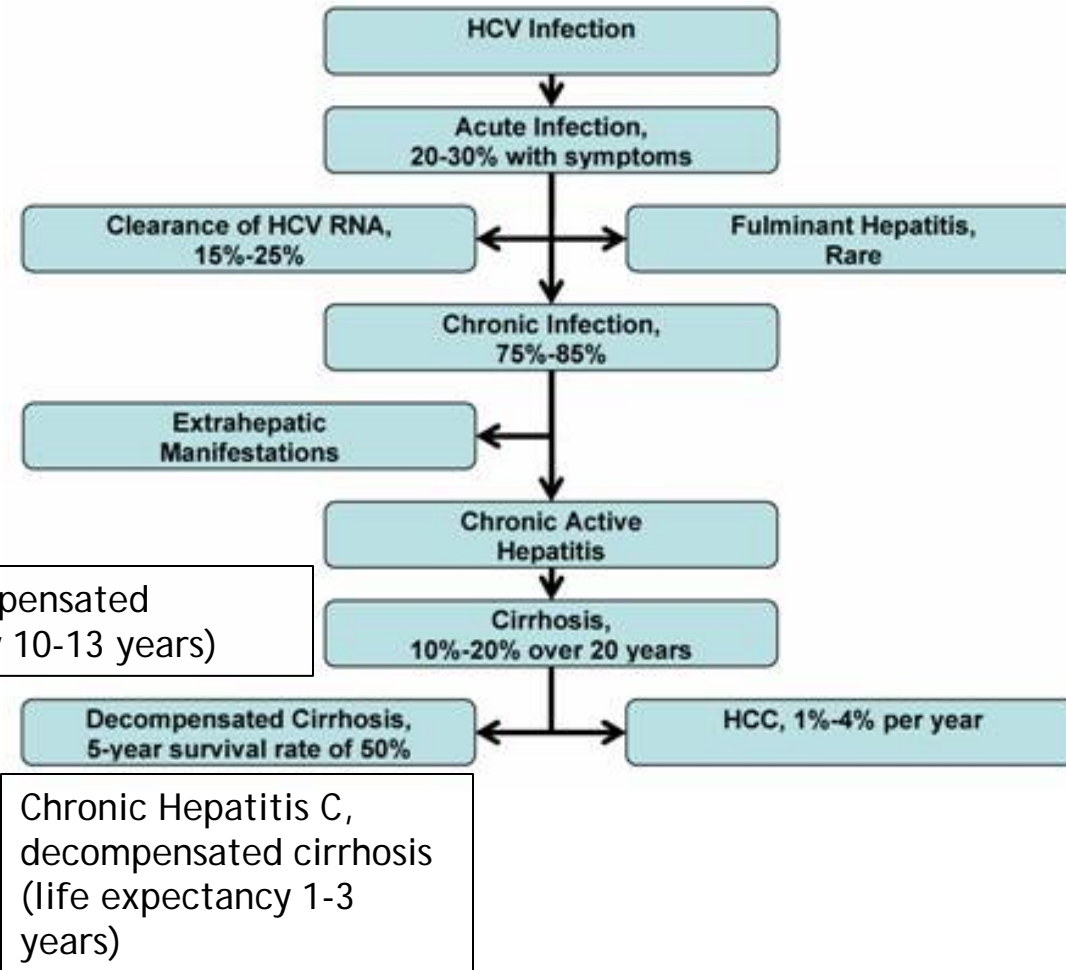
# Hep C

	RNA+	RNA -
Ab +	Current infection	Old infection, cleared
Ab -	?acute infection	Susceptible, never infected

No commercially available IgM for hep C



# Hepatitis C



Chronic Hepatitis C, compensated cirrhosis (life expectancy 10-13 years)

Chronic Hepatitis C, decompensated cirrhosis (life expectancy 1-3 years)

30-40% all liver transplants are due to HCV-cirrhosis and hepatocellular carcinoma

# Hepatitis C evaluation

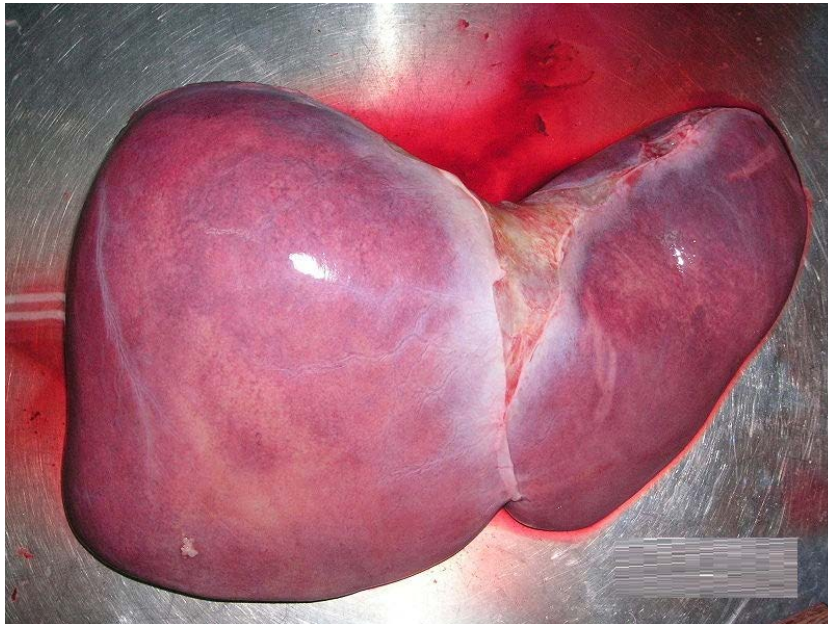
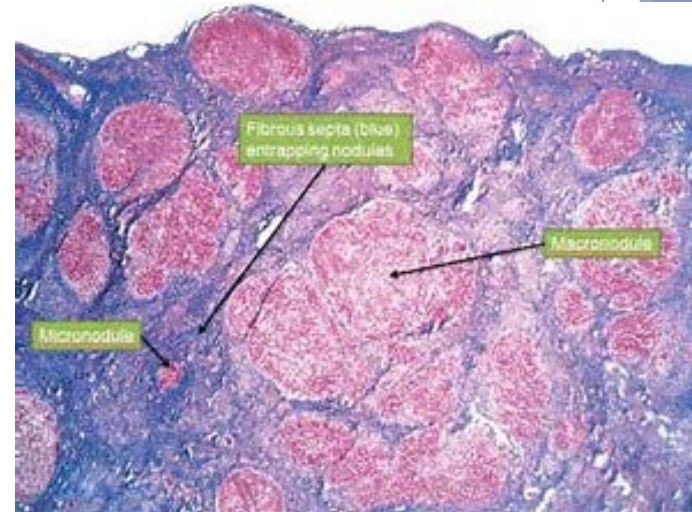
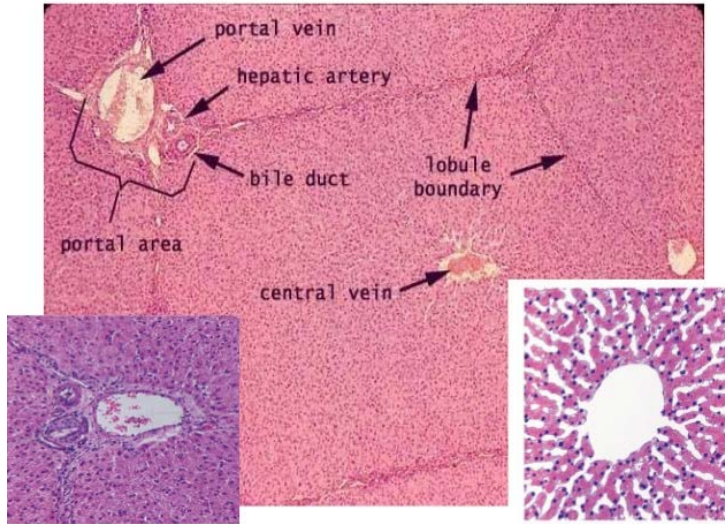
- Ascertain host factors
  - Drug/alcohol use?
  - Obese? Diabetic?
  - Ever treated for Hep C?
- Get more information about virus (likely not through LHD)
  - Genotype (1-4 what we see here in US)
  - Viral load (matters for treating genotype 1)
- Stage liver disease



# Staging liver disease

- Liver biopsy: don't do very often; gold standard; F score from histology
- Fibroscan: sound wave, time to return is measure stiffness liver, correlates to F-score
- Fibrosure: 7 blood factors/chemistries, gives F score
- APRI and FIB 4: calculated from AST/ALT, platelets and age; likelihoods of fibrosis

# Staging liver disease



# Infection Control

- Hep C blood exposure
  - No sharing personal hygiene equipment
    - Toothbrushes, nail clippers/scissors, razors
  - No sharing works, nasal straws
  - Sexual transmission possible
    - Condoms
  - Lives outside body 16 hr-4 day
    - 1:10 bleach dilution

# Hep C

- HIV test
- Vaccinate Hep A/B, pneumonia, influenza
- Counsel on risk reduction
  - Alcohol, weight loss, ongoing substance abuse
  - Coffee (1-2 cups/day) are GOOD for your liver
- Refer to appropriate services
  - Substance abuse
  - Medical home
  - Syringe exchange

# NC Hepatitis C Test, Link, Cure (TLC)

# Two Epidemics

## ■ *Historic Epidemic*

- Chronic HCV
- 150,000+
- Baby boomers born b/w 1945 - 1965 are 5X more likely to have HCV
- Doubling of liver cancer rates during past 10 years

## *Emerging Epidemic*

# Two Epidemics

## *Historic Epidemic*

## *Emerging Epidemic*

- Acute HCV
- ▶ Increasing
- ▶ Associated with IDU epidemic
- ▶ Mostly among younger, white and rural persons in poorer communities



# NC Hepatitis C – Test, Link, Cure (TLC)

- Surveillance
- Community Outreach
- Screening and Testing
- Linkage to Care





# HCV Screening

- Screening/Testing campaign for high risk populations
  - PWID (past or present)
  - HIV
  - Baby Boomers (persons born between 1945-1965)



# Linkage to Care

- NC Carolina Hepatitis Academic Mentorship Program (CHAMP)
  - <http://www.med.unc.edu/champ>

# Prevent the spread of HCV

\*Everyday contact is not risky

- Cover any cuts or blisters to prevent others from coming in contact with your blood
- Carefully dispose of any used bandages, tissues, tampons, sanitary napkins or anything else with your blood on it.
- Wash your hands, and any object that has come in contact with your blood, thoroughly with soap and water

# Prevent the spread of HCV

- Clean spilled blood from surfaces - including dried blood - use household bleach & water. Make a cleaning solution of (one part bleach : ten parts water) Ex. 1 cup : 10 cup or ½ cup to 5 cup
- Do not share personal items like your razor, nail clippers, toothbrush, or anything else that might have blood on it.
- Continue to breastfeed your baby unless your nipples become cracked and bleed.
  - Remember: Hepatitis C is not spread through breast milk!
- Do not donate blood, organs or sperm
- Do not share needles or other equipment with anyone else

# Submitting HCV Samples to NC State Public Health Laboratory



# Supply List for Packaging & Shipping HCV Samples to SLPH

- ▶ Mailer Tubes
- ▶ Specimen Bags
- ▶ Full 3 ml of serum
- ▶ Completed T1535 HIV/HCV Test Request Form
- ▶ Cardboard to prevent the HIV/HCV Forms from folding
- ▶ Manila envelopes for HIV/HCV Forms and Cardboard-  
(Securely tape the mailer tubes to the manila envelopes and/or place in a large Plastic bag for transport to the SLPH.)

# Sample Collection Requirements

- ▶ Same sample collection procedure as for HIV testing-**Both tests (HIV & HCV) can be performed on one sample.**
- ▶ 3 ml serum in plastic screw-capped vial-**(No grossly hemolyzed samples)**
- ▶ Serum sample labeled with first and last names and one other identifier (DOB, SS# or other unique identifier)
- ▶ Make sure the names and second ID are not cut off the label on the serum tube.

# DHHS T1535 Form-HIV/Hepatitis C Testing Request Form

HIV/HCV TESTING REPORT FORM	
Check if No SLPH Test Requested <input type="checkbox"/> (Data Entry Only)	
NC Department of Health and Human Services State Laboratory of Public Health 4312 District Drive Raleigh, NC 27607-5490	
Test Requested <input type="checkbox"/> HIV <input type="checkbox"/> HCV <input type="checkbox"/> HIV and HCV	
Attach Printed Label Below	
Last Name <input type="text"/>	
First Name <input type="text"/> MI <input type="text"/>	
Address <input type="text"/>	
Address <input type="text"/>	
City <input type="text"/> County <input type="text"/> State <input type="text"/> Zip Code <input type="text"/>	
Local PT ID <input type="text"/> SSN <input type="text"/> - <input type="text"/> - <input type="text"/> Date of Birth (MM/DD/CCYY) <input type="text"/> / <input type="text"/> / <input type="text"/>	
Medicaid Client <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Annual Exam Date (MM/DD/CCYY) <input type="text"/> / <input type="text"/> / <input type="text"/> Dx Code/ICD <input type="text"/>	
Race (mark all that apply) <input type="checkbox"/> White <input type="checkbox"/> American Indian/Alaska Native <input type="checkbox"/> Black <input type="checkbox"/> Native Hawaiian/Pacific Isles <input type="checkbox"/> Asian <input type="checkbox"/> Unknown	
Ethnicity <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic <input type="checkbox"/> Unknown	
Gender <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Transgender M2F <input type="checkbox"/> Transgender F2M <input type="checkbox"/> Transgender Unk	
If Female, Pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
EIN Number <input type="text"/> - <input type="text"/> Agency Name <input type="text"/> Program Code <input type="text"/>	
Test Setting (mark only one) <input type="checkbox"/> HIV testing site <input type="checkbox"/> STD Clinic <input type="checkbox"/> Drug Treatment <input type="checkbox"/> Family Planning <input type="checkbox"/> TB Clinic <input type="checkbox"/> Community Health Ctr <input type="checkbox"/> Prison/Jail <input type="checkbox"/> DIS Field Visit <input type="checkbox"/> PreNatal/OB Related <input type="checkbox"/> Community Setting <input type="checkbox"/> Emergency Dept <input type="checkbox"/> Other Clinical <input type="checkbox"/> Other Non-clinical	
Risk Factors <input type="checkbox"/> Current 900 <input type="checkbox"/> History of Injection drug use <input type="checkbox"/> Behaviors during the last 12 months: <input type="checkbox"/> Vaginal/Anal sex with a MALE partner <input type="checkbox"/> Vaginal/Anal sex with a FEMALE partner <input type="checkbox"/> Injection drug use <input type="checkbox"/> Multiple Sexual Partners	
Previous HIV Test? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	
Rapid Test / Other Lab HIV Tests	
Sample Date (MM/DD/CCYY) <input type="text"/> / <input type="text"/> / <input type="text"/>	
Collector ID <input type="text"/>	
Technology <input type="checkbox"/> Rapid <input type="checkbox"/> Conventional <input type="checkbox"/> NAAT/RNA <input type="checkbox"/> Other <input type="checkbox"/> Rapid Test Used <input type="checkbox"/> OraQuick <input type="checkbox"/> Clearview <input type="checkbox"/> Uni-Gold <input type="checkbox"/> Other	
If OTHER, Specify Rapid Test Brand <input type="text"/>	
Test Result <input type="checkbox"/> Negative <input type="checkbox"/> Positive/Reactive <input type="checkbox"/> Indeterminate <input type="checkbox"/> Invalid <input type="checkbox"/> No result	
SLPH Testing	
Sample Date (MM/DD/CCYY) <input type="text"/> / <input type="text"/> / <input type="text"/>	
Collector ID <input type="text"/>	
Type of Sample <input type="checkbox"/> Serum <input type="checkbox"/> Cadaveric Fluid	
Local Use Data Fields	
Local Use Field 1 <input type="text"/>	
Local Use Field 2 <input type="text"/>	
Lab Use Only Bar Code <input type="text"/> Specimen Missing <input type="checkbox"/> Specimen Received <input type="checkbox"/>	



# Completing the HIV/HCV Test Request Form

- ▶ Make sure the first and last names are complete.
- ▶ Make sure all identifiers match the form and the serum sample.
- ▶ **Check the test request box!!!!!!**
- ▶ Do not make copies of the forms as forms are put through a scanner at the SLPH and data may be distorted!!!!
- ▶ Do not fold the test request forms.

# Harm Reduction Messages

According to the Harm Reduction Coalition:

“Harm Reduction is a set of **practical strategies** and ideas aimed at reducing negative consequences associated with drug use. Harm reduction is also a movement for social justice built on a belief in, and respect for, the rights of people who use drugs.”

# Harm Reduction Messages

- Realistic
- Meet people where they are at
- Low barrier
- Free of judgement
- Not abstinence-based
- Not always about illegal substances

*“What is the most immediate, realistic option to prevent harm or promote wellness for this patient?”*

# Harm Reduction Programs

## Do Not:

- Encourage or enable drug use
- Increase criminal behavior
- Exist at odds with 12-step or abstinence based programs

## Do:

- Reduce HIV / Hep C transmission
- Prevent overdose
- Reduce needle waste
- Serve as a gateway to healthcare & resources

# Safer injection Practices

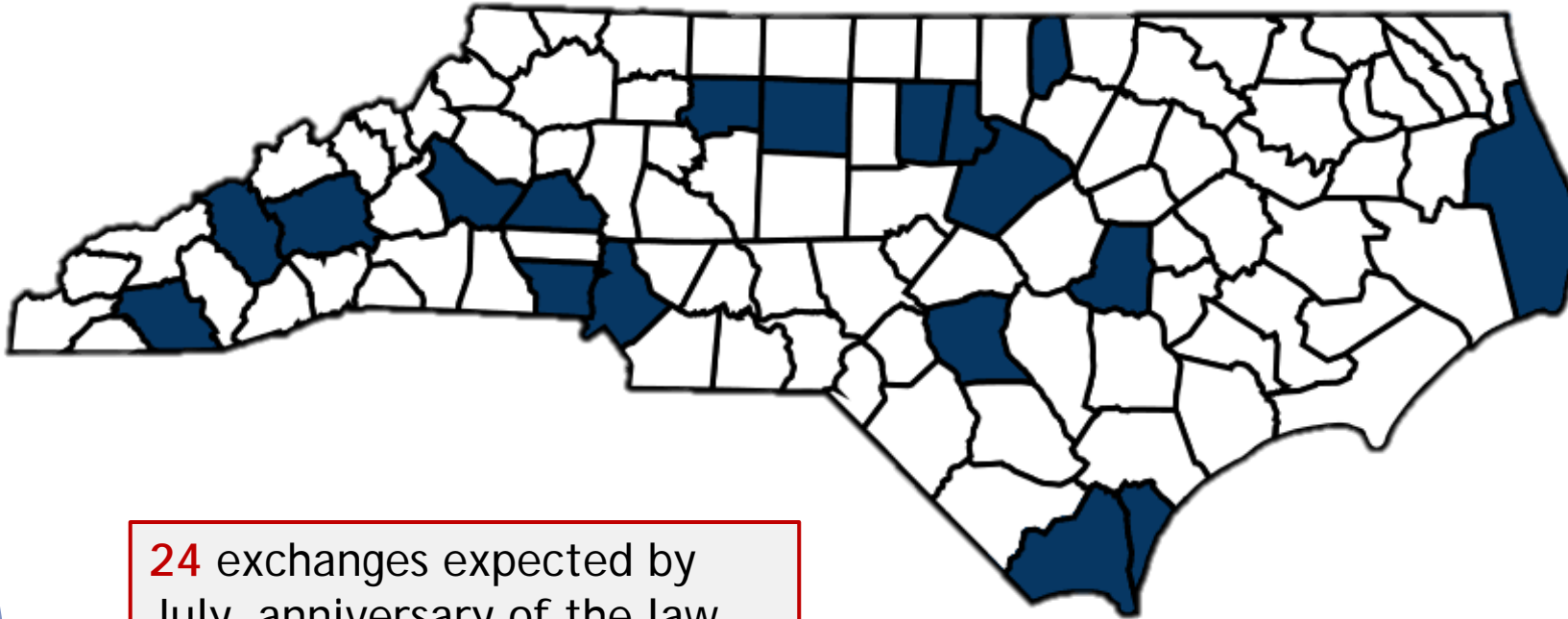
- The #1 cause of new hepatitis C infections is shared injection equipment.
- Hepatitis C is usually spread by sharing :
  - Drugs
  - Water
  - Cottons
  - Cookers
  - Syringes and Ties
  - Blood on surfaces, will later contaminate other items
  - Bloody fingers

# Harm Reduction Practices

1. Try to use less risky methods to take drugs
2. Never share: this goes for all works, especially cotton and water
3. Clean surfaces with 10% bleach before and after\*
4. Wash hands, use hand sanitizer to clean off fingers
5. Utilize Needle Exchanges

# Syringe Exchange in North Carolina

18 Exchanges covering 18 counties



24 exchanges expected by July, anniversary of the law

Source: North Carolina Division of Public Health, February 2017  
Analysis: Injury Epidemiology and Surveillance Unit

# NC Safer Syringe Initiative

- Website
  - NC DHHS, Division of Public Health
  - <http://www.nchrc.org/syringe-exchange>
- Toolkit
  - Overview
  - FAQs
  - Law
  - Logistics
  - Funding options, case studies
  - Sample documents
  - Resources, referrals...and so much more!
- Technical Assistance
  - 1-on-1
  - Trainings and webinars

Source: North Carolina Division of Public Health, February 2017  
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