



Colorado Department  
of Public Health  
and Environment

# CDPHE Viral Hepatitis Program

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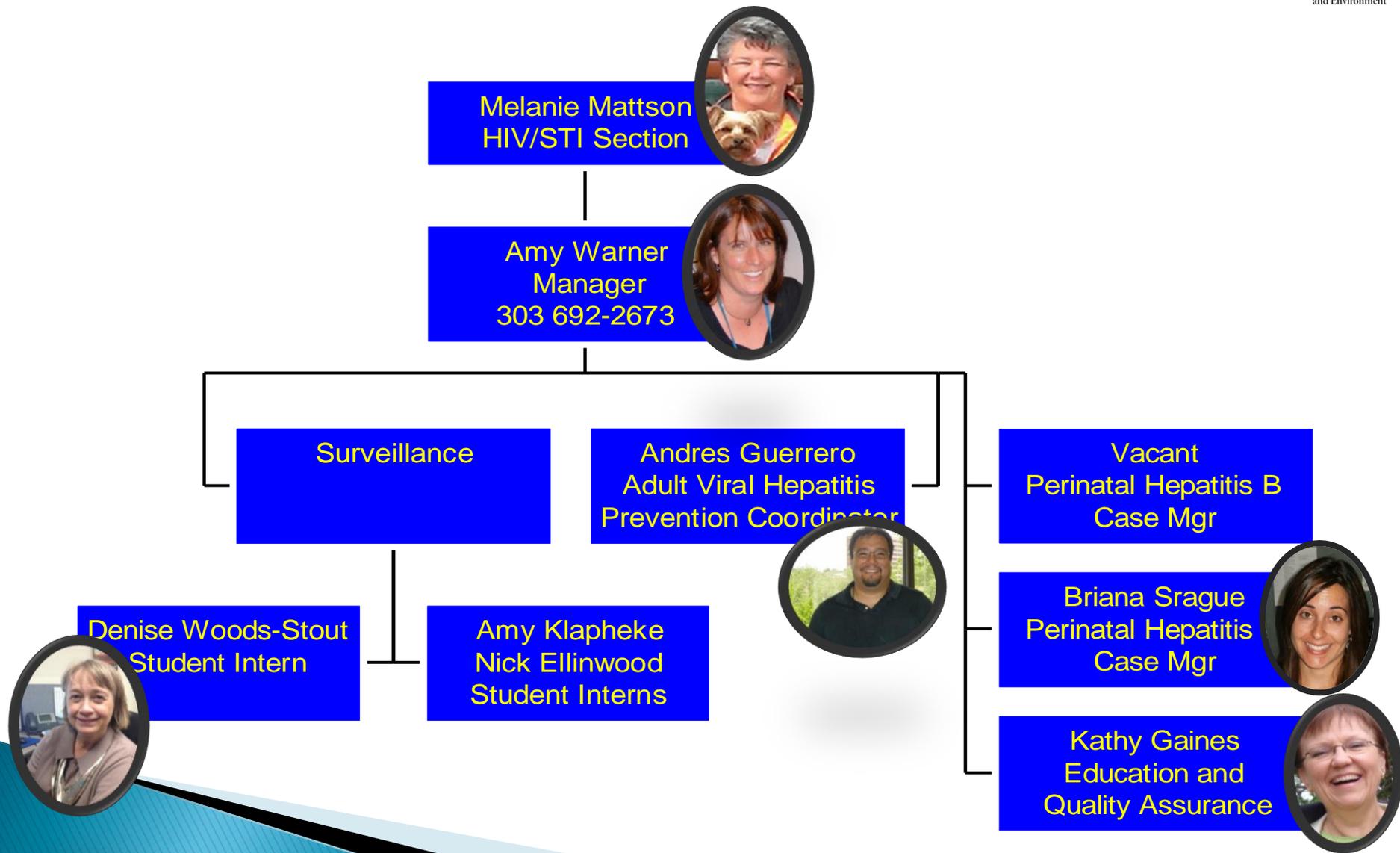
Viral Hepatitis Program  
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# Viral Hepatitis in CDPHE- 2014



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# Hepatitis Topics



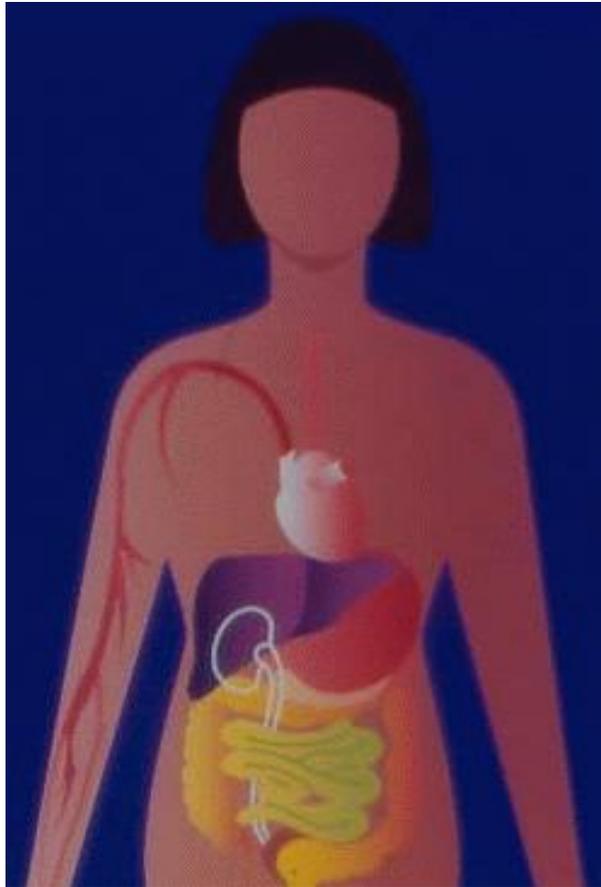
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- ▶ Background
  - What is hepatitis
  - Hepatitis B
  - Hepatitis C
- ▶ Epidemiology
- ▶ Program Activities

I'm not going in order – this is not an outline



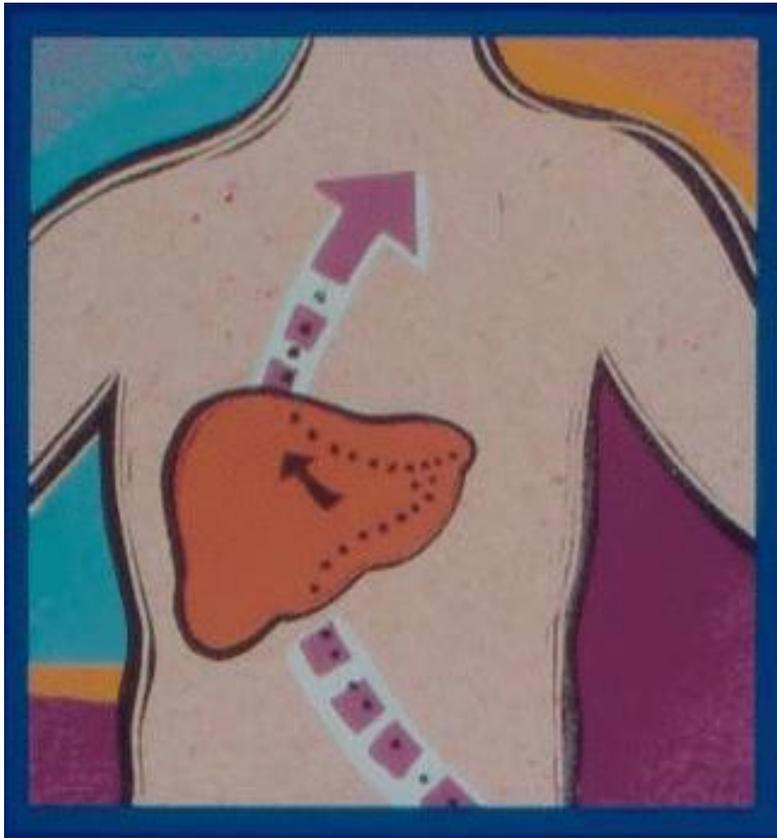
# Hepatitis:



- ▶ Inflammation of the liver
- ▶ Primarily caused by a virus
- ▶ Six hepatitis viruses have been identified (A,B,C,D,E, and G)
- ▶ Some forms can develop quickly, some take years



# Functions of the Liver



- ▶ Produces important proteins
- ▶ Stores glucose, vitamins, & minerals
- ▶ Purifies and eliminates waste products from the body
- ▶ Cleanses the blood

# About Hepatitis B Infection



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## ▶ Acute

- Often very sick
- Infection resolves
- Immunity develops – no re-infection

## ▶ Chronic

- May or may not be sick
- Infection does not resolve
- Immunity does not develop
- Often called a carrier because the virus still circulates in the blood

## ▶ Spread by:

- Sexual
- Parenteral
- Perinatal

## ▶ 100x more infectious than HIV

An infant that becomes infected at birth has a 90% chance of developing chronic infection and a 25% of developing liver disease

# Hepatitis B Complications

- ▶ Fulminant hepatitis
- ▶ Hospitalization
- ▶ Cirrhosis
- ▶ Hepatocellular carcinoma
- ▶ Death

# deaths reported by year	
	Reported Deaths
2008	27
2009	31
2010	20
2011	26
2012	24

\*Colorado Death Certificate

# Who is at Risk of Hepatitis B?

## Behaviors

- ▶ Household contacts
- ▶ Sexual contacts
- ▶ Men who have sex with men
- ▶ Persons with >1 sex partner or with an STI
- ▶ Injection drug use

## Place or Condition

- ▶ People born in endemic countries
- ▶ Persons with HIV
- ▶ hemodialysis
- ▶ Children born to infected mothers
- ▶ Developmentally disabled residents
- ▶ inmates

# Preventing the Spread of Hepatitis B

- ▶ Get Vaccinated!
  - All contacts to an infected person should be immunized
  - All infected people should receive hepatitis A vaccine



Vaccine can only prevent infection. It does not cure it.

# Whose Vaccinated for HBV in Colorado?

## ▶ School Entry

- Routine vaccination of previously unvaccinated children & teens
- Kindergarten/school entry
  - 2012–2013 94.3 (CI 91.3–96.5)

## ▶ Teens

- Vaccinate in settings that provide health-care services to teens

## ▶ Adults

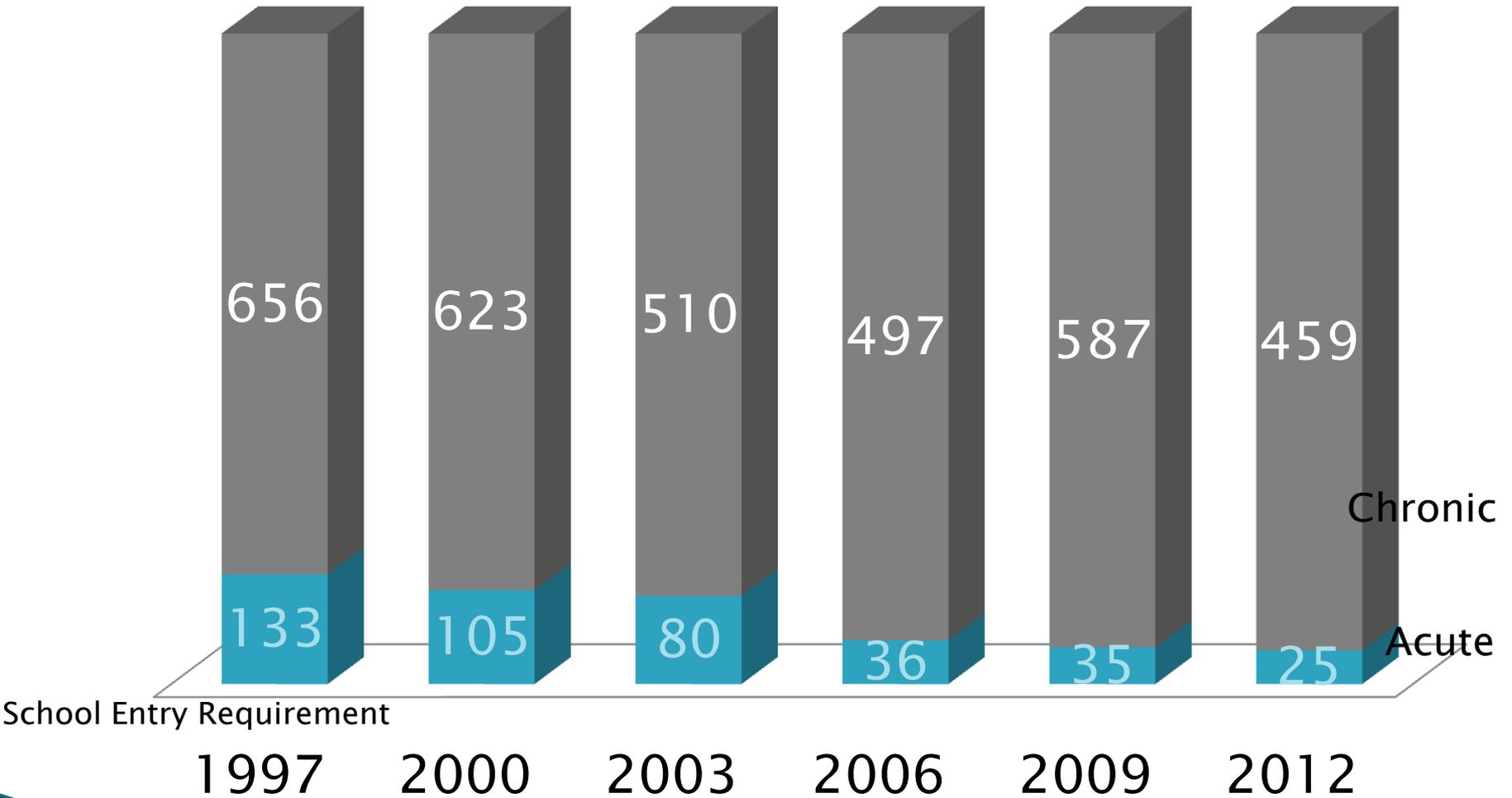
- Hmm?

# Reported Cases of Hepatitis B, Colorado

Source: Colorado Electronic Disease Reporting System



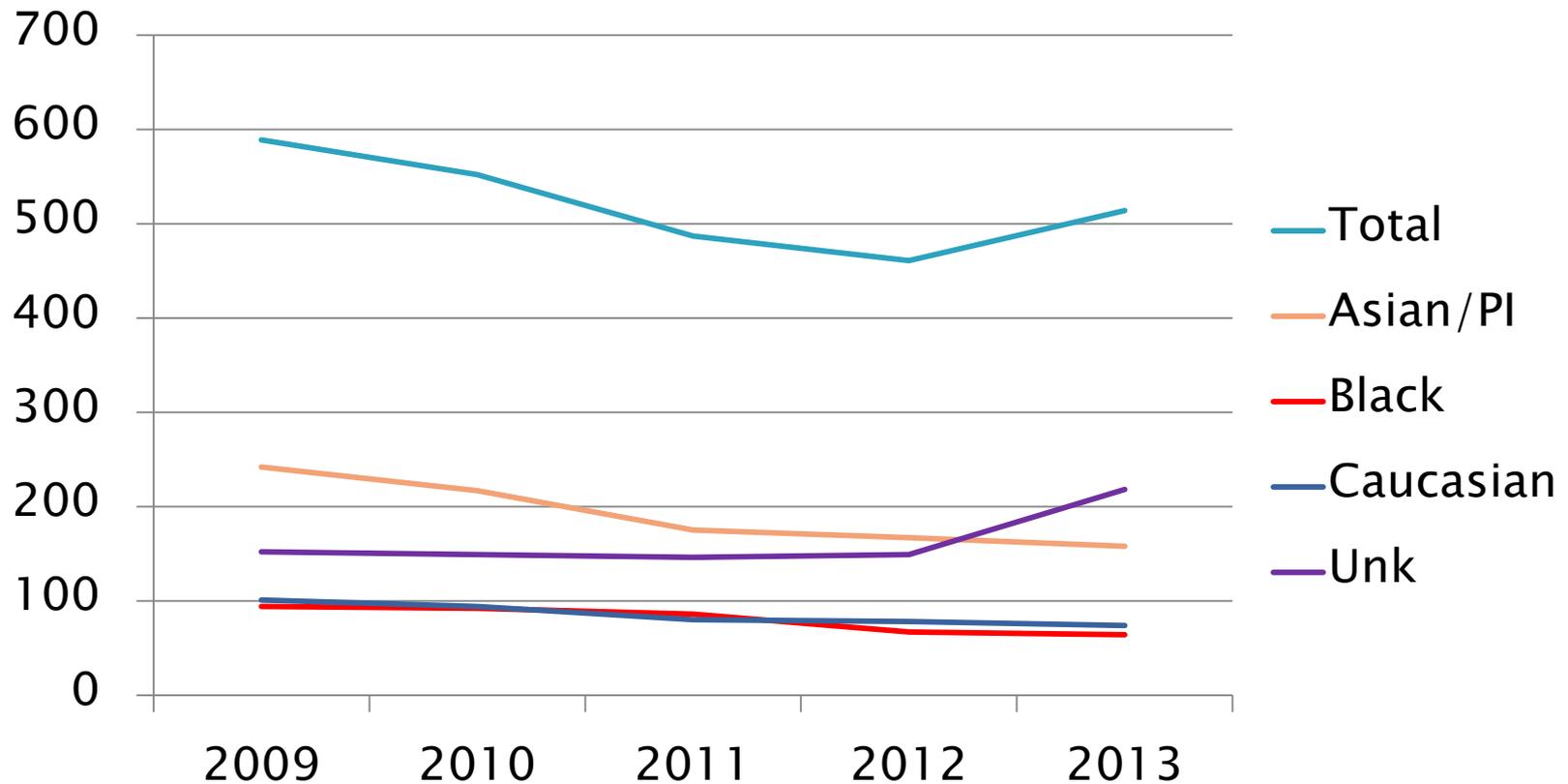
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# Reported Cases of Hepatitis B by Race, Colorado 2008-2012

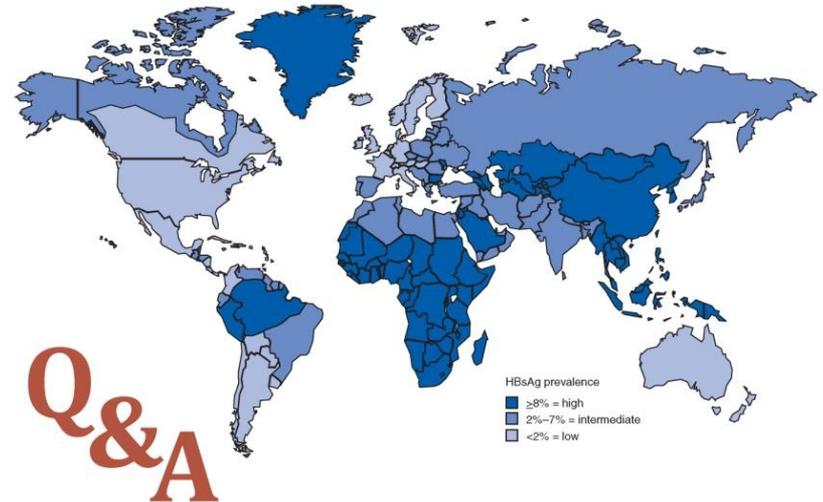


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# Are you at risk?

<http://healthteamworks-media.precis5.com/9246444d94f081e3549803b928260f56>



**Q:** Were you born in a country shown in **dark** or **medium** blue on this map?

**Q:** Did you receive medical care in a country shown in **dark** or **medium** blue on this map?

**A:** If you answered yes, then you should talk to your doctor about being tested for hepatitis B even if you have already been vaccinated. Three doses of vaccine can prevent new infections, but only if you were not already infected. People with a hepatitis B infection can prevent liver diseases such as cirrhosis and liver cancer. They need to be carefully monitored by a doctor, and they need to make sure their loved ones are vaccinated. **Protect yourself and the ones you love from hepatitis B. Talk to your doctor about getting tested and vaccinated.**

#### Areas of high or intermediate prevalence rates for hepatitis B:

- Asia: all countries
- Africa: all countries
- South Pacific Islands: all countries
- Middle East: all countries except Cyprus and Israel
- European Mediterranean: Malta and Spain
- The arctic: indigenous populations of Alaska, Canada, and Greenland
- South America: Ecuador, Guyana, Suriname, Venezuela, and Amazon regions of Bolivia, Brazil, Colombia, and Peru
- Eastern Europe: all countries except Hungary
- Caribbean: Antigua and Barbuda, Dominica, Grenada, Haiti, Jamaica
- Central America: Guatemala and Honduras

Map source: CDC Travelers' health; yellow book, 2008.

# An Immigrant Story of Hepatitis B



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- ▶ <http://www.youtube.com/watch?v=xiS4GH2ntyQ&list=PLXlvWapxrktK84PPBTalp412nVUqkaQry&index=8>

# Targeted materials are available



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## CDC: Know Hepatitis B Campaign



## HealthTeamWorks



**Q:** Have you ever been exposed to another person's blood through broken skin or mucous membranes?

This could include any of the following:

- Blood transfusion
- Hemodialysis
- Needlestick injury
- First responder to an event with traumatic injuries
- Combat related exposures

**Q:** Have you ever shared any of the following with another person (even once)?

- Razors
- Syringes
- Needles
- Drugs
- Drug equipment
- Tattoo equipment
- Body art ink or implements

**Q:** Have you ever been treated for a sexually transmitted disease or have you been the sex partner of someone who was treated for a sexually transmitted disease?

**A:** If you answer yes to any of these questions, your doctor may want to talk to you about testing for hepatitis B or hepatitis C. These can be silent infections that attack the liver and can cause serious illness. There is a vaccine to prevent hepatitis B and treatment is available for those who are infected with hepatitis B or hepatitis C.

## WHO: 1 in 12 Campaign



# Perinatal Hepatitis B Prevention Unit



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- ▶ Stop mother to infant spread of hepatitis B at birth
  - Birth dose of hepatitis B vaccine and a complete series two more vaccine doses by six months of age
- ▶ Case Finding
  - Obtain pregnancy status on all cases 14–45 years of age
  - HBIG forms
  - Birth certificate reports

# Perinatal Hepatitis B Prevention

## ▶ Case Management

- Counsel HBsAg+ pregnant woman
- Provide hepatitis testing for all household and/or sexual contacts of the HBsAg+ pregnant woman
- Vaccinate for all susceptible contacts and infants
- Coordinate testing and vaccination services with hospitals and pediatric providers

# Perinatal Hepatitis B Prevention Outcomes



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- ▶ 2010 = 163 women case managed
  - Cases came from 41 countries
    - Top 5 = Vietnam, China, Ethiopia, Somalia, Thailand
- ▶ 2012 = 170 infants case managed
  - 98% of infants received HBIG and dose 1 within 12 hours of birth
  - 88% correctly vaccinated by 12 months of age (90% by 15 months)

# About Hepatitis C Infection



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## ▶ Acute

- May or may not be sick
- Infection resolves
- Can be re-infected

## ▶ Chronic

- May or may not be sick (60–70% have no symptoms)
- Infection does not resolve
- The virus continues to circulate in the blood.

## ▶ Spread by:

- Sexual
- Parenteral
- Perinatal

▶ 10x more infectious than HIV

▶ Most common bloodborne infection in the U.S.

75%–80% of people who become infected with hepatitis C will be continue to be infected

# Who is at Risk of Hepatitis C?

## Behaviors

- ▶ Injection drug use
- ▶ Current sexual partners of HCV infected person
- ▶ Unprofessional tattoos

## Place or Condition

- ▶ Persons with HIV
- ▶ Children born to HCV infected mothers
- ▶ Received blood products, organ transplant <1992
- ▶ Hemodialysis
- ▶ inmates



# Hepatitis C Complications



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- ▶ Fulminant hepatitis
- ▶ Hospitalization
- ▶ Cirrhosis
- ▶ Hepatocellular carcinoma
- ▶ Death

# deaths reported by year ( <i>draft</i> )	
	Reported Deaths
2008	294
2009	306
2010	277
2011	278
2012	345

\*Colorado Death Certificate

# Benefit of HCV Diagnosis and Care



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- ▶ Early clinical evaluation and ongoing monitoring
  - Treatment response decreases as liver disease progresses
  
- ▶ Protect their liver from further harm
  - Vaccinate against Hepatitis A and B
  - Decrease or eliminate alcohol consumption
  - Understand interactions between herbal supplements, over the counter, and prescription medications
  - Encourage weight loss for persons who have a BMI  $\geq 25$
  
- ▶ Reduce the risk of transmission to others

# Why is now a good time to test?

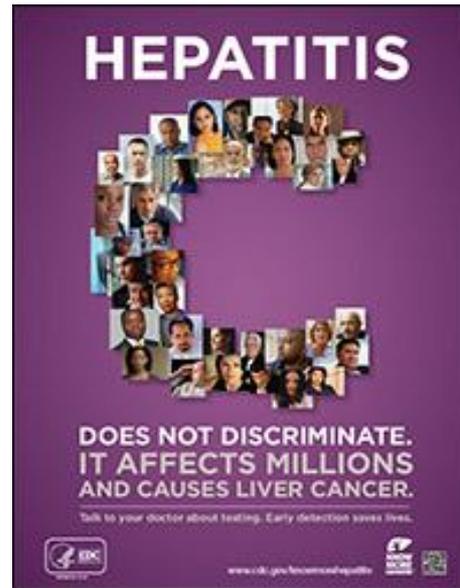
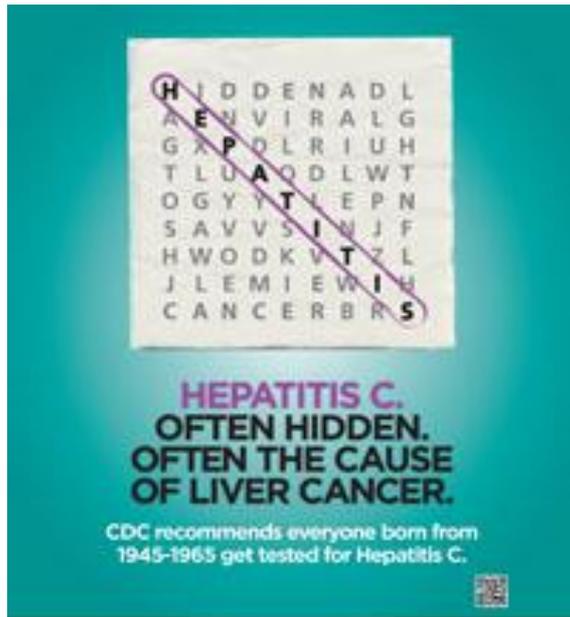
- ▶ ACA
- ▶ DAAs
- ▶ Interferon-free regimens
  - High cure rates
  - More tolerable
  - Shorter courses
- ▶ SVR is good...and getting better
- ▶ Cost effective

# Awareness Materials

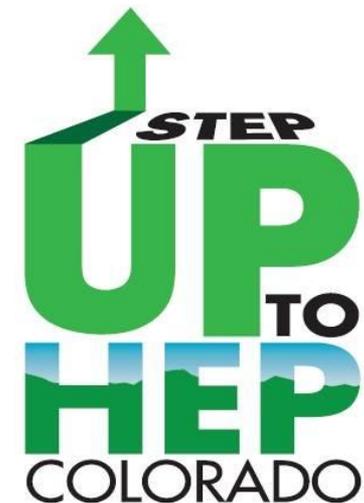


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## ▶ CDC Know More Hepatitis Campaign



CDPHE Campaign



# Targeted Awareness Materials are Available



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Don't say  
**“I'm all good”**  
just because you don't  
have symptoms.

**HEPATITIS C  
CAN LEAD TO LIVER CANCER**

Most people with Hepatitis C do not feel sick. Yet liver damage may be silently taking place. Even if you think you're fine, talk to your doctor about getting tested.

Colorado Department of Public Health and Environment  
[www.cdc.gov/newsroom/hepatitis](http://www.cdc.gov/newsroom/hepatitis)

Yes. Hepatitis C is this serious.

**HEPATITIS C  
CAN LEAD TO  
LIVER CANCER**

Most people with Hepatitis C don't know they have it. If you're serious about your health, talk to your doctor about getting tested. It could save your life.

Colorado Department of Public Health and Environment  
[www.cdc.gov/newsroom/hepatitis](http://www.cdc.gov/newsroom/hepatitis)

“ When I was young,  
I hit the streets  
and they hit me back  
a lot harder ”

**HEPATITIS C  
CAN LEAD TO LIVER CANCER!**

Hard hitting as it may seem, you should be living with Hepatitis C for 50 or 60 years and never have symptoms. Talk to your doctor about getting tested. It could save your life.

Colorado Department of Public Health and Environment  
[www.cdc.gov/newsroom/hepatitis](http://www.cdc.gov/newsroom/hepatitis)

# Monitoring Hepatitis B and C in Colorado



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## ▶ Report Source

- Laboratories
- Physicians
- Hospitals (ICPs)
- Local and national health departments and various other medical clinics/centers

## ▶ Report Types

- Electronic import
- Fax
- Phone call
- USPS (case report forms, labs, etc.)
- CDPHE contractors

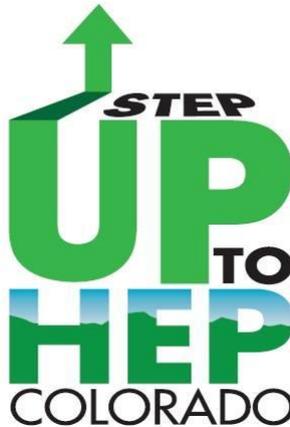
# Monitoring Hepatitis B and C in Colorado



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- ▶ All identified acute hepatitis B and C cases are investigated
- ▶ Follow-up is done on all hepatitis B cases to
  - Identify pregnant women
  - Complete testing and demographic information
- ▶ Follow-up is done on all hepatitis C cases 18 thru 30 years of age
  - Identify acute cases
  - Identify outbreaks

# Viral Hepatitis Prevention



- ▶ Join us on Social Media!
- ▶ <https://www.facebook.com/StepUpToHepCO>
- ▶ <https://mobile.twitter.com/StepUpToHepCO>
- ▶ <http://stepuptohepco.wordpress.com/>
- ▶ Have something to post?
- ▶ Contact: [andres.guerrero@state.co.us](mailto:andres.guerrero@state.co.us)