



# KY Hepatitis Connections

On behalf of the KY Viral Hepatitis Program, we are pleased to share with you the February 2014 issue of *KY Hepatitis Connections*. The *KY Hepatitis Connections* provides current information about viral hepatitis, opportunities for viral Hepatitis continuing professional education and information about educational materials available.

Please feel free to forward and/or copy and distribute to other professionals in your network. Your knowledge and input are greatly valued, as we are committed to keeping you up to date on shared progress in the medical community on viral hepatitis and its impact on our families throughout the Commonwealth.

Join us on Facebook at KY Viral Hepatitis.

Kathy Sanders, RN MSN

## REMINDER:

### Hepatitis C: Perinatal and Children Aged Five Years or Less

<http://www.clinicaloptions.com/Hepatitis/Treatment%20Updates/Clinical%20Focus%20Best%20Practices/CCO%20Slideset/Slides.aspx>

The Kentucky Department for Public Health is requesting the assistance of Kentucky Healthcare Providers with an active surveillance project to help us estimate the number of pregnant women and children aged five years and less who are infected with hepatitis C virus (HCV), and seen in birthing hospitals, medical practices, and clinics throughout the Commonwealth.

In Kentucky, only acute hepatitis C cases are normally required to be reported. **Starting January 1, 2014 through March 31, 2014, we are asking for healthcare providers to voluntarily report: 1) all HCV-positive pregnant women; 2) all infants born to HCV-positive women; and 3) all HCV-positive infants and children aged five years or less seen in birthing hospitals, medical practices, and clinics, in addition to the current hepatitis B infection reporting requirements in these populations.** To report any HCV-positive individuals in the above categories during this time period, please complete the reporting form at the end of this newsletter and fax to the Kentucky Department for Public Health at: 502-564-4760. This letter and reporting form was distributed to KY healthcare providers in December 2013

We deeply appreciate your time and effort in assisting us with this active surveillance project for perinatal HCV infections. If you have additional questions or concerns, please call Kathy Sanders, RN, MSN at 502-564-3261, ext. 4236 or Julie Miracle, RN, BSN at 502-564-4478, ext. 4260.

**Hospital Infection Preventionists: Please distribute** to medical providers, nursing staff, and other health-care personnel in Emergency Medicine, Critical Care, Laboratory Medicine, Infectious Diseases, Obstetrics, Newborn Nursery, NICU, Pediatrics, Internal Medicine, Family Medicine, and Primary Care or Ambulatory Care.

**LHD staff: Please distribute** to community healthcare providers in Infectious Diseases, Obstetrics, Pediatrics, Internal Medicine, Family Medicine, and Primary Care or Ambulatory Care and to FQHCs and RHCs.

## **Hep C Drug Pipeline: New Additions and Three Combos to Watch for in 2014**

**A handy guide to show which drugs are available now and who the top contenders are for an anticipated 2014, interferon-free, Hepatitis C cure.**

Analysts believe that 2014 will be a tremendous year for advancements in Hepatitis C therapy. Excitement is growing as we inch closer to approval for an improved, highly effective, safer drug combination that experts say could cure many people of Hepatitis C. For the most common strain in the U.S., Hepatitis C genotype 1, the current standard therapy generally combines three drugs:

- pegylated interferon
- ribavirin
- a direct acting antiviral (DAA)

Direct acting antivirals are medications that attack the ability of the Hepatitis C virus to replicate. Different DAA's interfere with the Hepatitis C replication cycle at different stages. Telaprevir (Incevik) and boceprevir (Victrelis) are protease inhibitors – one type of DAA. Although adding one of these protease inhibitors to interferon and ribavirin treatment boosts treatment success from 50 percent up to 75 percent effectiveness, they are both associated with some extremely distressing side effects including anemia, rash, anal itching and rectal burning. Read More:

<http://www.hepatitiscentral.com/mt/archives/2014/01/hep-c-drug-pipeline-new-additions-and-three-combos-to-watch-for-in-2014.html?eml=hepcen202>

## **AbbVie All-oral Combination Cures Most Hepatitis C Patients in Phase 2 Study**

An all-oral regimen of AbbVie's experimental HCV drugs ABT-450, ABT-333, and ABT-367 plus ribavirin was well-tolerated and cured 88% of genotype 1 hepatitis C patients with only 8 weeks of therapy, rising to 95% with 12 weeks, according to a report in the January 16, 2014, *New England Journal of Medicine*.

Direct-acting antiviral agents have started to revolutionize hepatitis C treatment, but many people with hepatitis C and their providers are still waiting for all-oral regimens that avoid the difficult side effects of interferon.

Kris Kowdley from Virginia Mason Medical Center and colleagues conducted a study to evaluate various interferon-free combinations containing the HCV protease inhibitor ABT-450 boosted with ritonavir, the non-nucleoside HCV polymerase inhibitor ABT-333, the NS5A inhibitor ABT-267, and/or ribavirin.

Read More: <http://www.hivandhepatitis.com/hcv-treatment/experimental-hcv-drugs/4481-abbvie-all-oral-combination-cures-most-hepatitis-c-patients-in-phase-2-study>

## Anti-TB drug hepatotoxicity increased in those with HCV

Patients coinfecting with hepatitis C and tuberculosis are more likely to experience drug-induced hepatotoxicity related to first-line tuberculosis therapy, according to recent data.

“Hepatotoxicity is the major adverse effect of three of the first-line anti-TB agents: isoniazid, rifampin and pyrazinamide,” the researchers wrote in *PLoS One*. “Underlying liver disease may increase the risk of developing drug-induced hepatotoxicity and there is concern that HCV and/or HIV coinfection may increase the risk of anti-TB drug-induced hepatotoxicity.”

The study took place among patients in the country of Georgia. Researchers from the National Center for Tuberculosis and Lung Diseases in Tbilisi, Georgia, enrolled 326 patients with culture-confirmed TB between March 2007 and March 2010. Among these patients, 68 (21%) also were coinfecting with HCV. Of all the patients in the study, 38 did not return for follow-up visits and were excluded.

Read More: <http://www.healio.com/infectious-disease/hepatitis-resource-center-2013/anti-tb-drug-hepatotoxicity-increased-in-those-with-hcv>

## Price of Pill that Will Likely Cure 90% of Hep C Patients

### \$1,000 Pill For Hepatitis C Spurs Debate Over Drug Prices

Federal regulators this month opened a new era in the treatment of a deadly liver virus that infects three to five times more people than HIV. Now the question is: Who will get access to the new drug for hepatitis C, and when?

The drug sofosbuvir (brand name Sovaldi) will cost \$1,000 per pill. A typical course of treatment will last 12 weeks and run \$84,000, plus the cost of necessary companion drugs. Some patients may need treatment for twice as long. Read More:

<http://www.wbur.org/npr/256885858/-1-000-pill-for-hepatitis-c-spurs-debate-over-drug-prices>

## Combining Well Care and Sick Care for Hepatitis C

There are two approaches (at least) to nearly every situation – and managing a liver condition like Hepatitis C is representative of this seeming duality. Despite the apparent opposition in maintaining your liver’s well-being versus killing the virus that is harming your liver, a strategy combining the two approaches ends up being most effective. Recognizing the difference between well care and sick care can help those practicing just one strategy to appreciate the value of blending the two together. By integrating well care and sick care into one comprehensive effort, those with Hepatitis C gain a clear health advantage.

According to a 2012 column published in the *Eagle Tribune* by Karen van Unen, president of the Massachusetts Public Health Association:

- 97 percent of our healthcare dollars are spent caring for people once they've become sick
- 3 percent of our healthcare dollars are spent to prevent diseases from developing in the first place

Read More: <http://www.hepatitiscentral.com/mt/archives/2013/12/combining-well-care-and-sick-care-for-hepatitis-c.html?eml=hepcen202>

## **Shaping the Future: Clinicians and Faculty Define Strategies for the Next Era of HCV Therapy**

The treatment and management of hepatitis C virus (HCV) has evolved dramatically since it was discovered in 1989. When testing became available in early 1991, the standard of care treatment was 3 weekly doses of interferon. A major breakthrough came in 1998 with the addition of ribavirin (RBV). The mechanism of action for RBV is still not completely understood, although it doubled the overall sustained virologic response (SVR) rate when added to interferon. Three years later, long-acting pegylated interferon was developed with once-weekly dosing, and these 2 drugs were the standard of care until the advent of first-generation protease inhibitors (PI) telaprevir and boceprevir in 2011, which are used in combination with peginterferon and RBV. These agents further increased the SVR rate although they also increased the toxicity.

Now, just 2 years later, simeprevir and sofosbuvir (SOF) have been approved for the treatment of hepatitis C in genotype 1 infection in combination with peginterferon and RBV. Perhaps even more of a milestone is the approval of the first all-oral, interferon-free regimen for HCV in the form of SOF plus RBV for patients infected with HCV genotypes 2 and 3.

With many new agents for HCV infection progressing rapidly through the development pipeline, we are now seeing dramatic improvements in SVR, even in the more difficult-to-treat populations, with fewer adverse effects using all-oral, interferon-free—and in some cases even RBV-free—regimens. This is leading to an unprecedented number of potential treatment options that provoke several key questions which will shape the future of therapy for this disease. Some of these questions will be addressed throughout this module, which was developed based on a symposium presented at the 2013 American Association for the Study of Liver Diseases meeting and represents contributions both from leading experts in the field and from the clinician audience in attendance.

Read More:

[http://www.clinicaloptions.com/Hepatitis/Treatment%20Updates/Shaping%20the%20Future/Module/Shaping\\_the\\_Future/Pages/Page%201.aspx](http://www.clinicaloptions.com/Hepatitis/Treatment%20Updates/Shaping%20the%20Future/Module/Shaping_the_Future/Pages/Page%201.aspx)

## **Eradication of hepatitis C infection: The importance of targeting people who inject drugs**

Hepatitis C virus (HCV) affects ~170 million people worldwide and causes significant morbidity and mortality.[1] In high-income countries, people who inject drugs (PWID) are at greatest risk of HCV infection.[2] Until recently HCV eradication seemed unlikely, but recent advances in HCV treatment and improved understanding of the effectiveness of harm-reduction intervention effectiveness give reason for optimism. Current HCV treatments can cure ~75% of patients and new drugs will further improve effectiveness (over 90% cure) and improve tolerability.[3] If HCV treatment can be delivered effectively to those at highest risk of onward transmission, significant reductions in future HCV cases are possible. The feasibility of disease eradication must be assessed on both scientific criteria (e.g., epidemiological susceptibility, effective and practical intervention available and demonstrated feasibility of elimination) and political criteria (e.g., burden of disease, cost of intervention). Read More:

<http://hepatitisresearchandnewsupdates.blogspot.com/2014/02/eradication-of-hepatitis-c-infection.html>

## **Hepatitis: Websites & Resources**

### [\*\*www.cdc.gov/hepatitis\*\*](http://www.cdc.gov/hepatitis)

The Division of Viral Hepatitis (DVH) is part of the [National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention](#) at CDC. In collaboration with domestic and global partners, DVH provides the scientific and programmatic foundation and leadership for the prevention and control of hepatitis virus infections and their manifestations.

DVH consists of three branches — the Epidemiology and Surveillance Branch, the Prevention Branch, and the Laboratory Branch — that work collaboratively to prevent viral hepatitis infections and associated liver disease.

### [\*\*www.hcvadvocate.org\*\*](http://www.hcvadvocate.org)

The Hepatitis C Support Project (HCSP) is a registered non-profit organization founded in 1997 by Alan Franciscus and other HCV positive individuals to address the lack of education, support, and services available at that time for the HCV population. HCSP's mission is to provide unbiased information, support, and advocacy to all communities affected by HCV and HIV/HCV co-infection, including medical providers.

### [\*\*www.hepfi.org\*\*](http://www.hepfi.org)

The Hepatitis Foundation International (HFI) is dedicated to the eradication of viral hepatitis, a disease affecting over 500 million people around the world. We seek to raise awareness of this enormous worldwide problem and to motivate people to support this important – and winnable – battle.

## [www.hepb.org](http://www.hepb.org)

This is the Hepatitis B Foundation in Pennsylvania. According to their website, “We are dedicated to finding a cure and improving the quality of life for those affected by hepatitis B worldwide. Our commitment includes funding focused research, promoting disease awareness, supporting immunization and treatment initiatives, and serving as the primary source of information for patients and their families, the medical and scientific community, and the general public.

”

## [www.liver.stanford.edu/alc](http://www.liver.stanford.edu/alc)

The Asian Liver Center at Stanford University is the first non-profit organization in the United States that addresses the high incidence of hepatitis B and liver cancer in Asians and Asian Americans. Founded in 1996, the center uses a three-pronged approach towards fighting hepatitis B through outreach, education, advocacy, and research.

## [www.liverfoundation.org](http://www.liverfoundation.org)

The American Liver Foundation website states, “Our mission is to facilitate, advocate and promote education, support and research for the prevention, treatment and cure of liver disease.”

## [www.nvhr.org](http://www.nvhr.org)

The National Viral Hepatitis Roundtable is dedicated to developing, implementing and maintaining a national strategy to eliminate viral hepatitis in the United States. The National Viral Hepatitis Roundtable began on December 7, 2003 at its inaugural meeting. The Roundtable, a coalition of numerous advocacy organizations, government agencies, insurers, and others developed from the hard work of representatives of 25 organizations who met periodically throughout 2003 to establish a blueprint by which the NVHR could operate.

## [www.nastad.org/programs/ViralHepatitis](http://www.nastad.org/programs/ViralHepatitis)

The NASTAD Viral Hepatitis Program provides systematic guidance and information that HIV/AIDS and viral hepatitis programs need to 1) develop appropriate staff expertise on viral hepatitis; 2) inform them of the full range of existing materials and resources on this subject; and 3) enable them to conduct an assessment of how to incorporate viral hepatitis issues into their existing program infrastructures.

## [www.AmInumber12.org](http://www.AmInumber12.org)

The World Hepatitis Alliance provides global leadership and supports action that will halt the death toll and improve the lives of people living with chronic viral hepatitis B and C. Through better awareness, prevention, care, support and access to treatment, our ultimate goal is to work with governments to eradicate these diseases from the planet. World Hepatitis Day is coordinated by the World Hepatitis Alliance, a non-governmental organisation that represents approximately 200 hepatitis B and hepatitis C patient groups from around the world.

## [www.hepctrust.org.uk](http://www.hepctrust.org.uk)

The Hepatitis C Trust is the national UK charity for hepatitis C and has been operating since 2001. It is an entirely patient-led and patient-run organisation: all of its staff, both paid and voluntary, either have hepatitis C or have had it and have cleared it after treatment.

## <http://chfs.ky.gov/dph/diseases/Hepatitis+C.htm>

The VISION of the Hepatitis Prevention Program is: Eliminate viral hepatitis in Kentucky.

The MISSION of the Hepatitis Prevention Program is: Prevent the transmission of viral hepatitis between individuals. GOALS of the Hepatitis Prevention Program:

- 1) Raise statewide awareness of viral hepatitis
- 2) Develop and distribute educational information
- 3) Coordinate and collaborate regarding intervention, prevention and disease control programs
- 4) Track the burden of disease through hepatitis case surveillance and reporting
- 5) Conduct research and evaluation
- 6) Reduce hepatitis morbidity and mortality



## Hepatitis B Corner

The Immunization Action Coalition (IAC) is recognizing hospitals and birthing centers that have attained 90% or greater coverage rates for administering hepatitis B vaccine at birth and have met specific additional criteria. These criteria define the important elements of written birth dose policies aimed at protecting newborns. The IAC recognizes the hospital's dedication to patient safety. The birth dose of hepatitis B vaccine is critical to safeguarding all infants from hepatitis B virus infection which can lead to chronic liver disease.

Since September of 2013, four Kentucky's Birthing Hospitals have been included to the IAC'S Hepatitis B Birth Dose Honor Roll. They are:

**Ephraim McDowell Regional Medical Center, Danville, KY**

Reported a coverage rate of 99% from 10/1/2012 to 9/29/2013.

**Georgetown Community Hospital, Georgetown, KY**

Reported a coverage rate of 98% from 3/1/2012 to 3/1/2013.

**Harrison Memorial Hospital, Cynthiana, KY**

Reported a coverage rate of 99% from 9/1/2012 to 8/31/2013.

**Paul B. Hall Regional Medical Center, Paintsville, KY**

Reported a coverage rate of 97% from 10/1/2012 to 10/23/2013.

The Kentucky Department for Public Health applauds your dedication to protecting patients

The Kentucky Department for Public Health is encouraging all birthing Hospitals to assess their policies and the vaccination coverage rates of the Hepatitis B birth dose and apply for the IAC's Hepatitis B Birth Dose Honor Roll. To apply for the Birth Dose Honor Roll, visit [www.immunize.org/honor-roll/birthdose](http://www.immunize.org/honor-roll/birthdose).

The Universal hepatitis B birth dose is supported by leading health organizations

- American Academy of Family Physicians (AAFP)
- American Academy of pediatrics (AAP)

- American College of Obstetricians and Gynecologists (ACOG)
- Center for Disease Control and Prevention (CDC)

If you have questions regarding the IAC's Hepatitis B Birth Dose Honor Roll or Perinatal Hepatitis B please contact Julie Miracle, RN, BSN at 502-564-4478 x4260 or by e-mail at [Julie.Miracle@ky.gov](mailto:Julie.Miracle@ky.gov).



## **Viral Hepatitis Prevention Program Staff:**

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**CABINET FOR HEALTH AND FAMILY SERVICES  
DEPARTMENT FOR PUBLIC HEALTH**

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**Audrey Tayse Haynes**  
Secretary

December 18, 2013

Dear Healthcare Provider,

The Kentucky Department for Public Health is requesting your assistance to help us estimate the number of pregnant women and children aged five years and less who are infected with hepatitis C virus (HCV), and seen in birthing hospitals, medical practices, and clinics throughout the Commonwealth. The Kentucky Adult Viral Hepatitis Prevention Program has been conducting a pilot test of HCV laboratory testing at selected local health departments for the last two years. The pilot testing sites have reported an increase in confirmed HCV-positive tests among individuals aged 20 through 29 years. A concern is that this age group includes women of child bearing ages where potential HCV transmission to the infant/child could occur if the pregnant woman was HCV infected.

In Kentucky, only acute hepatitis C cases are normally required to be reported. Starting January 1, 2014 through March 31, 2014, we are asking for healthcare providers to voluntarily report: 1) all HCV-positive pregnant women; 2) all infants born to HCV-positive women; and 3) all HCV-positive infants and children aged five years or less seen in birthing hospitals, medical practices, and clinics, in addition to the current hepatitis B infection reporting requirements in these populations. To report any HCV-positive individuals in the above categories during this time period, please complete the attached reporting form and fax to the Kentucky Department for Public Health at: 502-564-4760.

We deeply appreciate your time and effort in assisting us with this active surveillance project for perinatal HCV infections. If you have additional questions or concerns, please call Kathy Sanders, RN, MSN at 502-564-3261, ext. 4236 or Julie Miracle, RN, BSN at 502-564-4478, ext. 4260.

*Robert L. Brawley, MD, MPH*

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275 East Main Street, MS: HS2GW-C  
Frankfort, KY 40621-0001



# Kentucky Reportable Disease Form

Department for Public Health  
 Division of Epidemiology and Health Planning  
 275 East Main St., Mailstop HS2E-A  
 Frankfort, KY 40621-0001

**Hepatitis Infection in a Pregnant Woman, Infant, or Child (aged five years or less)**  
 Fax Form to 502-564-4760

DEMOGRAPHIC DATA					
Patient's Last Name	First	M.I.	Date of Birth	Age	Gender <input type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> Unk
Address			City	State	Zip
County of Residence		Phone Number	Patient ID Number	Ethnic Origin <input type="checkbox"/> Hisp. <input type="checkbox"/> Non-Hisp.	Race <input type="checkbox"/> W <input type="checkbox"/> B <input type="checkbox"/> A/PI <input type="checkbox"/> Am. Ind. <input type="checkbox"/> Other

DISEASE INFORMATION			
Describe Clinical Symptoms:	Date of Onset: / /	Jaundice: <input type="checkbox"/> Yes <input type="checkbox"/> No	Date of Diagnosis: / /
Is Patient Pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, # wks _____	Expected Date of Delivery: / /	Name of Hospital for Delivery:	
Physician Provider Name: Address: Phone:			

LABORATORY INFORMATION				
Hepatitis Markers	Results	Date of test	Viral Load *if applicable	Name of Laboratory
HBsAg	<input type="checkbox"/> Pos <input type="checkbox"/> Neg	/ /		
IgM anti-HBc	<input type="checkbox"/> Pos <input type="checkbox"/> Neg	/ /		
HBeAg	<input type="checkbox"/> Pos <input type="checkbox"/> Neg	/ /		
IgM anti-HAV	<input type="checkbox"/> Pos <input type="checkbox"/> Neg	/ /		
HCV Antibody	<input type="checkbox"/> Pos <input type="checkbox"/> Neg	/ /		
HCV RNA Confirmation	<input type="checkbox"/> Pos <input type="checkbox"/> Neg	/ /		

SERUM AMINOTRANSFERASE LEVELS			
Patient	Reference	Date of test	Name of Laboratory
AST (SGOT) U/L	U/L	/ /	
ALT (SGPT) U/L	U/L	/ /	

Mother: Hepatitis Risk Factors <input type="checkbox"/> IDU <input type="checkbox"/> Multiple Sexual Partners <input type="checkbox"/> Tattoos <input type="checkbox"/> STD <input type="checkbox"/> HIV <input type="checkbox"/> Foreign Born/ Country _____ <input type="checkbox"/> Exposure to known HBV/HCV Pos contact	Child: Hepatitis Risk Factors <input type="checkbox"/> Mother HBV Pos <input type="checkbox"/> Household member exposure HBV Pos <input type="checkbox"/> Mother HCV Pos <input type="checkbox"/> Household member exposure HCV Pos <input type="checkbox"/> Foreign Born / Country _____
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Mother: Hepatitis A vaccination history:  Yes  No  Refused Dates Given: \_\_\_\_\_  
 Hepatitis B Vaccination history:  Yes  No  Refused  
 If yes, how many doses  1  2  3 Year completed: / /  
 Child: Hepatitis A vaccination history:  Yes  No  Refused Dates Given: \_\_\_\_\_  
 Hepatitis B Vaccination history:  Yes  No  Refused Dates Given: \_\_\_\_\_  
 Was PEP for Infant of Positive HBV mother given at birth?  Yes  No

