

Hepatitis C

Introduction

My topic for this project is Hepatitis C. I chose Hepatitis C, because I know that people commonly confuse Hepatitis A, B and C and I wanted to help clear up common misconceptions about Hepatitis C. Hepatitis C (HCV) is one of the three most common hepatitis viral infections along with Hepatitis A and B. The word hepatitis actually means the inflammation of the liver. Hepatitis C has no vaccine unlike with Hepatitis A or B. Hepatitis C is a blood borne infection, and is the most common chronic blood borne infection in the United States. Hepatitis C can be either “acute” or “chronic,” this means it can be a short-term illness or a lifelong illness. Symptoms of Hepatitis C can be fever, fatigue, dark urine, clay-colored stool, abdominal pain, nausea, vomiting, loss of appetite, joint pain and jaundice (yellowing of skin). People with Chronic HCV are usually asymptomatic, however many exhibit liver disease from HCV, which range in severity. People with chronic HCV are at high risk for developing liver cancer.

Section 1: Background and Problem Statement

Background Section Help

- **Web site #1 Name: Center For Disease Control and Prevention**
- **Web address:** <http://www.cdc.gov/hepatitis/HCV/index.htm>
- **Background Information:**
 - HCV affects 3.2 million Americans, and 60-70% of newly infected individuals are usually asymptomatic (show no symptoms). HCV RNA is detectable 1-3 weeks after infection, and its antibody is detectable 8-9 weeks after infection. Many people with HCV may not know they have it because they are not clinically ill. Approximately, 70-80% of people infected with HCV will develop chronic HCV. HCV is a blood borne disease and thus people at high-risk are intravenous drug abusers, and those who receive transplants or blood that have not been screened for the virus. People who are infected with the HIV virus are also at high-risk for HCV because for this specific group HCV has been found to be spread through sexual intercourse, although findings are not conclusive.
 - Healthy People 2010 doesn't address the issue of Hepatitis C because it is a blood borne virus and thus not highly contagious. Since the introduction of prescreening blood and organs for Hepatitis C before transfusion there is less a chance that people practicing safe and healthy lifestyles will be infected by the virus and thus Healthy People 2010 does not address the topic of Hepatitis C.
- **Web site #2 Name: World Health Organization**
- **Web address:** <http://www.who.int/topics/hepatitis/en/index.html>
- **Background Information:**

- HCV used to be common among transplant or blood donor recipients. This is because HCV screening of blood or organs for transplants was not introduced until 1990. The introduction of this pre-screening for HCV has significantly decreased the risk of donor/blood recipients' infection of HCV in industrialized nations. Over the last 25 years pre-screening of blood for HCV has become a global requirement. Groups at high-risk of contracting Hepatitis C are injecting drug users who share needles, health care workers, hemophiliacs, and infants born to infected mothers.
- **Web site #3 Name:** National Institute of Health
- **Web address:** http://digestive.niddk.nih.gov/ddiseases/pubs/hepc_ez/
- **Background Information:**
 - Hepatitis C is caused by the Hepatitis C virus; it is spread by contact with infected blood. The most common problem with Hepatitis C is that many people infected with HCV are asymptomatic and thus unknowingly spread the virus, infecting more people. If a person is in one of the specified high-risk groups for HCV they can lower their chances of contracting and spreading the virus by getting tested for HCV often, or whenever they suspect they have been exposed to the virus.

Section 2: Research

- **Web site #1 Name:** The New England Journal of Medicine
- **Web address:** <http://content.nejm.org/cgi/content/full/339/21/1485>
- **Summary of the research:**
 - HCV is the leading cause of liver disease and the most common indicator for liver transplants. Although transplants do not get of the virus and it is likely to come back and slowly destroy the new liver. This study looks at the treatment of chronic HCV with interferon alpha-A compared to the patients treated with interferon alpha-A in combination with ribavirin over a 24-48 week period. The research concludes that patients with HCV that were treated with combination therapy of interferon and ribovirin had more histological improvement than those treated with interferon alone. The study shows that an initial treatment of HCV patients with interferon alpha-A and ribavirin is more effective than interferon alone. This would be of interest to those looking at the topic Hepatitis C because it shows research being done to increase the effectiveness of treatments for the infection.
- **Web site #2 Name:** Illinois Department of Public Health: Health Beat
- **Web address:** <http://www.idph.state.il.us/public/hb/hbhepc.htm>
- **Summary of the research:**
 - Hepatitis C is one the four major types of Hepatitis. It is the most likely Hepatitis virus to cause chronic liver disease. Approximately 70% of all HCV carries will develop chronic liver disease even if they are asymptomatic. Approximately 80% of all intravenous drug users that share needles are infected with HCV. HCV is diagnosed by a test that identifies

HCV antibodies this is present in 50% of people with early HCV and approximately all of those with chronic HCV. Synthetic forms of proteins are used to treat patients with chronic HCV. The most efficient way to prevent getting HCV is by avoiding contact with Human Blood. People researching HCV would find this of importance because the page neatly outlines the symptoms, virulence factors, cause, treatments, and prevention of the virus.

- **Web site #3 Name:** HIV & Hepatitis.com
- **Web address:** http://www.hivandhepatitis.com/2010_conference/croi/docs/0223_2010_b.html
- **Summary of the research:**
 - The research is to determine how long the HCV can survive in a syringe after the infected blood has been expelled from it. The survival of viable HCV (able to infect), depended on syringe type. However, syringes with detachable needles were found more likely to transmit the virus. HCV seems to survive longer than HIV in high void volume syringes. This research would be of interest to someone looking at the topic Hepatitis C because it shows the survival rate of HCV in syringes and since it is likely that intravenous drug users that share needles are likely to contract HCV. It shows which needles are more likely to carry the virus. It highlights the importance of distribution of clean unused needles, to this high risk group.

Section 3: Statistics

- **Web site #1 Name:** Institute of Medicine
- **Web address:** <http://www.iom.edu/Reports/2010/Hepatitis-and-Liver-Cancer-A-National-Strategy-for-Prevention-and-Control-of-Hepatitis-B-and-C/Report-Brief-Hepatitis-and-Liver-Cancer.aspx>
- **Summary of the statistics:**
 - About 5.3 million people are living with either chronic hepatitis B or C in the United States. Since Hepatitis is often asymptomatic many living with it do not know they have it. Each year approximately 15,000 people die from liver cancer or disease related to Hepatitis C or B. The statistics show that Hepatitis C is a leading cause of death related to liver disease and cancer. While approximately 2% of the population is infected with HCV or HBV in the United States.
- **Web site #2 Name:** CDC recommendations and reports
- **Web address:** <http://www.cdc.gov/mmwr/preview/mmwrhtml/00055154.htm>
- **Summary of the statistics:**
 - Hepatitis C is the most common type of blood borne virus in the United States. Injecting-drug users are responsible for 60% of HCV transmission in the U.S. Hepatitis C-related liver disease/cancer accounts for 1% of all deaths in the U.S. About 40% of chronic liver disease is HCV-related.

Since 1989, the number of new infections has declined by more than 80%. It affects white and Hispanic populations equally, but is slightly more predominant in males than females. African Americans have a significantly higher HCV infection rates than Whites. In 1990 pre-screening for HCV was introduced reducing the risk of infection by transfusion to 0.001%. In injected-drug users, after 5 years more than 90% will be infected with HCV. These statistics show that while the risk of contracting HCV through transfusion or transplant has dramatically decreased the overall numbers of new HCV infections, injected-drug users are still at high risk.

- **Web site #3: Center for Disease Control and Prevention**
- **Web address: <http://wwwnc.cdc.gov/travel/yellowbook/2010/chapter-5/hepatitis-c.aspx>**
- **Summary of the statistics:**
 - **Approximately 3% (170 million) of the world population has been infected with HCV. For most countries the rate of HCV is lower than 3%. There are much higher rates of infection in areas such as Africa and Asia up to 15% prevalence rate. Egypt has the highest prevalence rate of HCV over 15%. These statistics are important to anyone interested in traveling. The highest rate of infection to travelers are those who have get blood transfusion but has not been screened, receive dental work or medical procedures preformed, get a tattoo or acupuncture, or work in health care field. These people that travel and participate in any of the above listed activities are at high risk for HCV.**

Section 4: Consumer Information

- **Web site #1 Name: Medline Plus**
- **Web address: <http://www.nlm.nih.gov/medlineplus/hepatitisc.html>**
- **Summary of the information:**
 - **Hepatitis C does not present any symptoms for years after contracting it. Hepatitis C does not go away on its own. There is no vaccine for Hepatitis C and it can lead to liver cancer, or disease. It is usually spread by blood contact, or mother to child during childbirth, but in rare cases it has been spread by sexual contact.**
- **Web site #2 Name: Patient Education Publisher**
- **Web address: <http://www.nlm.nih.gov/medlineplus/tutorials/hepatitisc/ge169103.pdf>**
- **Summary of the information:**
 - **The liver regulates the body's nutrition system, processes and absorbs fats, sugars, protein, vitamins, makes bile, and makes chemicals that cause blood to clot when the body gets injured, and gets rid of toxins from the body. The HCV virus enters the body through infected blood and causes the liver infection Hepatitis C, which can lead to serious complications that affect the liver including death. Hepatitis C can lead to liver cirrhosis,**

which means the destruction of the liver so it can't clean the blood or provide the body with proper nutrition. Drinking alcohol when you have HCV greatly increases the risk of getting liver cirrhosis. To prevent HCV always use gloves when in contact with blood, do not share needles, and practice safe sex (use condoms).

- **Web site #3 Name:** National Digestive Disease Information
- **Web address:** http://digestive.niddk.nih.gov/ddiseases/pubs/hepc_ez/
- **Summary of the information:**
 - A person can get HCV by being born to a mother who has it, having sex with an infected person, being tattooed or pierced by an unsterilized tools that were used on infected persons, accidentally getting stuck with a needle that was used by a HCV infected person, using an infected persons toothbrush or razor, and sharing drug needles with someone who is infected. Symptoms of HCV are similar to the flu, aside from jaundice, which is the yellowing of the skin. Hepatitis C becomes a chronic infection when the body can't get rid of the infection. Treatment can include medicines or transplant. Surprisingly even after a liver transplant an infected HCV person usually has to continue drug treatment because hepatitis C usually comes back after surgery.

Section 5: Solutions to the Problem (or Issue)

- **Web site #1 Name:** The South Carolina Hepatitis C coalition
- **Web address:** <http://www.schepatitisc.org/>
- **Summary of the information:**
 - The South Carolina Hepatitis C coalition is a group of health care professionals and concerned citizens that want to spread awareness about Hepatitis C. The Mission is to increase awareness, education, treatment services, and prevention among specific target groups in South Carolina. The site contains educational materials about Hepatitis C its transmission and effects. The non-profit site also contains many “helpful links” with more information on the topic of HCV.
- **Web site #2 Name:** Hepatitis C association
- **Web address:** <http://www.hepcassoc.org/>
- **Summary of the information:**
 - The focus of the Hepatitis C coalition is to educate the public, health care professionals, and patients about Hepatitis C. They provide support groups for patients, educational materials, and spread awareness. They focus a lot of their efforts on high-risk groups such as injected-drug users, African American, and Hispanic populations. There is a message board where people can share their feelings, concerns, or questions. They also sponsor events to spread Hepatitis C awareness, and the importance of

organ donation. They are a non-profit organization that seeks to aid in the prevention of HCV prevalence.

- **Web site #3 Name: The National HCV Prison Coalition**
- **Web address: <http://www.hcvinprison.org/cms/index.php>**
- **Summary of the information:**
 - **The goal of the NHCVPC is to raise awareness and support for prisoners who are suffering with HCV or HIV. They are a non-profit organization that brings a number of other organizations together in support of the coalition. They are a group of many organizations and individuals to advocate for prisoners with HCV or HIV support, as well as to lower to spread of HCV and HIV in prison by spreading awareness.**

Conclusions:

I learned that Hepatitis C is a liver infection caused by the Hepatitis C virus. I also learned that there are two types of Hepatitis C acute and chronic. I hope that after reading this fact sheet people understand the importance of Hepatitis C awareness and Prevention, as well as, the impact that pre-screening of blood/organ donors for Hepatitis C that was instituted in 1990. Pre-screening has virtually eliminated the risk of contracting HCV by blood transfusion or organ transplantation in the U.S. As well as, I hope people will understand how injecting-drug users who share needles are at an especially high risk for HCV, and the importance of clean, and unused needles. Hepatitis C is a serious condition with no vaccine and no cure. I hope that any misconceptions people had about the four most common types of Hepatitis have been debunked in this fact sheet, and people understand that getting vaccinated for Hep A and B does not provide them with any protection against Hepatitis C.

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