

COMPdata Monthly Monitor - Montana
December 2004
Hepatitis C

IHA/AMR's COMPdata is pleased to provide you with the December 2004 COMPdata Monthly Monitor focused on Hepatitis C. The Hepatitis C Virus (HCV) is the most common chronic bloodborne viral infection in the U.S. and a major cause of chronic liver disease. It has become a major global health concern and is likewise a concern for Montana hospitals. Some of the facts described in this report are:

1. The number of Montana inpatients with a secondary diagnosis of HCV increased 74% from 2000 to 2003. Aside from the direct risks due to HCV, the course of treatment and recovery for other diseases is also affected.
2. Hospitals' outpatient surgery services are crucial to the complete care and treatment of HCV patients. Liver biopsies were performed on 98% of Montana outpatient surgical cases having a principal diagnosis of HCV.
3. There is no vaccine available for HCV and the treatment options that exist today have limited effectiveness and are very costly. There is no known cure for HCV. Deaths due to HCV are predicted to double or triple in the next 15 to 20 years.

Introduction

The Hepatitis C Virus (HCV) is a disease of growing concern due to:

- No immunization against HCV
- Ease of transmission through blood contact
- Most often undetected by those with disease
- Lack of successful treatments and no known cure
- Increasing volume of cases in other nations

HCV was identified and isolated by scientists only 15 years ago. It is the most common chronic bloodborne viral infection in the United States and is one of the major causes of chronic liver disease.¹ The virus is found in the blood of persons who have the disease and is spread by contact with the blood of an infected person.

HCV Infections. As of 1999, the Centers for Disease Control and Prevention (CDC) estimate that as many as 4 million people in the U.S. or 1.8 percent are HCV-infected and 2.7 million of those are chronically infected.^{2,3} HCV is now on the Institute of Medicine's list of emerging infectious diseases and has become a major global health concern.

According to the World Health Organization (WHO), an estimated 170 million persons in the world are infected with HCV and another 3 to 4 million persons are newly infected each year.⁴

Treatment Effectiveness. Treatment with interferon alone is effective in about 10% to 20% of patients. Interferon combined with ribavirin is effective in about 30% to 50% of cases; but ribavirin alone is not effective. The treatment cost is very high.⁴

HCV Diagnostics. Diagnostic tests readily distinguish HCV from other forms of hepatitis but many people are never tested or are tested long after liver damage has occurred. One reason is that the symptoms of both acute and chronic HCV can be confused with less serious illnesses. Moreover, most HCV-infected persons may go many years free of any symptoms

that would lead them to be tested – about 50% of chronic carriers don't know they have the disease.⁵

Since the progression of liver damage runs through specific stages, once a carrier has been identified through blood tests, it may be necessary to perform a liver biopsy to assess the degree of damage to the liver. The following facts illustrate the complexity of this disease and importance of early detection:²

- 80% of HCV-infected persons have no symptoms.
- 50%-85% of HCV-infected persons have a chronic infection.
- Currently 1% to 5% of infected persons may die. However, the CDC predicts that deaths due to HCV will double or triple in the next 15 to 20 years.
- HCV is the leading indication for liver transplant.
- Infants born to HCV-infected women have about a 5% chance of being infected.
- The chance of being infected from a blood transfusion today is less than 1 per 1,000,000 units.

Patients At Risk

It is clear that the best chance for HCV carriers to have a longer and more productive life is to be diagnosed as soon as possible. There are several groups of people who are most at risk for contracting HCV:^{2, 5}

- Injection drug users, including those who used drugs briefly many years ago.
- Recipients of clotting factors made before 1987.
- People who had blood transfusions before June 1992, when sensitive tests for anti-HCV were introduced for blood screening.
- People who have frequent exposure to blood products, including patients with hemophilia, solid-organ transplants, chronic renal failure, or cancer requiring chemotherapy.
- Infants born to HCV-infected mothers. In general, at-risk infants should not be tested for HCV until 18 months of age.
- Health care workers who suffer needle-stick and other exposures to blood.

Alcohol and other hepatitis viruses exacerbate HCV. Therefore, individuals who know they are infected should abstain from alcohol and be vaccinated for hepatitis A and B.⁵

HIV - HCV Coinfection

As many as one-quarter of HIV-infected people are also infected with HCV. This is especially troublesome because an HCV infection progresses more rapidly to liver damage in HIV-infected persons. In addition, an HCV infection may impact the course and management of an HIV infection.⁶ It is now recommended that all HIV-infected persons be screened for HCV infection.

Hospital and Community Health Roles

While there is no vaccine and no cure for HCV, there is much that hospitals and other health care providers can do to improve the lives of HCV patients. A top priority is to identify persons who should be counseled and tested for HCV. Health care professionals in primary care, specialty, and public health settings should routinely question patients about risk factors for infection. Since many at-risk individuals may not be seen in traditional health care settings, it is important for hospitals to work with local community groups to facilitate targeted outreach to settings such as drug treatment programs, correctional institutions, HIV counseling and testing

sites, and STD clinics.

When it comes to treating HCV-infected persons, hospitals and their affiliated primary care and specialty physicians must work together to achieve the most successful treatment options possible for this very complex disease. The treatment team might involve primary care physicians, gastroenterologists, infectious disease physicians, hepatologists, counselors, and others. As HCV progresses it's likely that the patient will require a liver biopsy in the hospital outpatient surgery center. A liver biopsy is not necessary for diagnosis but is helpful for grading the severity of disease and staging the degree of fibrosis and permanent damage to the liver.

The FDA has approved treatment options that employ interferons and ribavirin and/or their combination and their use can eradicate the virus in some patients.⁵ Treatment may slow disease progression, improve histology, and reduce the risk of liver cancer. However, treatment is not recommended for all patients and for others there can be severe side effects.⁷ Unfortunately, the most common HCV variant (genotype 1) is least responsive to treatment.

Hepatitis C Virus in Montana Patients **Inpatient Statistics from COMPdata**

All of the following inpatient statistics exclude newborns and obstetric cases – Major Diagnostic Categories 14 and 15. While pregnant women and newborns are both potentially at risk for HCV, they represent a very small percentage of inpatient HCV patients. On the other hand they represent a very large percentage of all inpatients, such that including them in the analysis would tend to distort the results.

In 2003 there were 869 inpatients with HCV as any diagnosis or 1.1% of all inpatients. The HCV ICD-9 codes included in these analyses are: 07041, 07044, 07051, 07054, and V0262. There were 496 HCV inpatients in 2000 compared to the 869 in 2003; representing an increase of 75.2% from 2000 to 2003. The number of patients with a secondary diagnosis of HCV increased from 487 in 2000 to 850 in 2003 a 74.5% increase. This large increase is significant because of the impact that the HCV infection may have on the course of treatment and recovery for other diseases.

HCV As Principal Diagnosis. The following statistics explore in more detail the characteristics of the 20 inpatients who had a principal diagnosis of HCV in the year 2003.

Of the four HCV diagnoses, 70% were for patients without coma:
Acute HCV with Coma (ICD-9 code 07041): 3 patients or 15.0%
Chronic HCV with Coma (07044): 3 patients or 15.0%
Acute HCV without Coma (07051): 7 patients or 35.0%
Chronic HCV without Coma (07054): 7 patients or 35.0%

- The majority of the HCV inpatients were between the ages of 40 and 59 (90.0%).
- Slightly more men (55.0%) than women (45.0%) were HCV inpatients.
- The majority (70.0%) of these patients were admitted through the emergency room, though 15.0% were admitted through a physician's referral.
- The admission type for HCV inpatients was emergency for 35.0% of HCV patients; 55.0% were urgent, and 10.0% were elective.

- Most HCV inpatients were routine discharges to home or self care (90.0%) while all others were discharged or transferred to another facility.
- The primary payer for one-half (50.0%) of HCV patients was coded as 'Miscellaneous.' Among other payers, 15.0% were covered by commercial insurer (15.0%), 15.0 were self-pay patients, 10.0% were Medicare, and 5.0% Medicaid.
- The majority of HCV inpatients were discharged from hospitals in rural areas (65.0%); and 35.0% from other urban hospitals.

The average length of stay (ALOS) and average total charge varied considerably depending upon the type of HCV diagnosis:

Acute HCV with Coma: ALOS = 2.3, Average Charge = \$4,099

Chronic HCV with Coma: ALOS = 8.0, Average Charge = \$14,998

Acute HCV without Coma: ALOS = 4.0, Average Charge = \$9,684

Chronic HCV without Coma: ALOS = 5.6, Average Charge = \$8,531

- With respect to the coinfection of HCV and HIV, there were no cases with a principal diagnosis of HCV and a secondary diagnosis of HIV. On the other hand, there were 5 patients who had a principal diagnosis of HIV and a secondary diagnosis of HCV.

Outpatient Surgery Statistics from COMPdata

A primary reason for focusing on outpatient surgery for HCV patients is due to the importance of liver biopsies to the diagnosis and treatment for these patients. There were 233 outpatient surgery patients in 2003 with a principal or secondary diagnosis of HCV. HCV was the principal diagnosis for 115 of these patients. Of these 115 patients, 98.3% underwent a liver biopsy. All of these were closed percutaneous (needle) biopsy procedures (ICD-9 code 5011). The majority of the liver biopsy patients had chronic HCV (without coma) as the principal diagnosis (82.3%) compared to only 16.8% who were acute HCV (without coma) patients.

The following statistics represent the characteristics of the 115 outpatient surgery patients with HCV as the principal diagnosis.

- Four-fifths of these patients had a diagnosis of chronic HCV without coma (80.9%) compared to acute HCV without coma patients (18.3%).
- About three out of four (76.5%) patients were between the ages of 40 and 64.
- Unlike the distribution among inpatients, there were many more men (60.9%) among the outpatient surgery patients than women (39.1%).
- There was a somewhat different distribution with respect to primary payer for HCV outpatient surgery patients compared to HCV inpatients. Most outpatient surgery patients (39.1%) were covered by a commercial insurer compared to 15.7% by Medicaid, 15.7% were self-pay, and just 8.7% were covered Medicare.
- The hospital urban/rural location also differed somewhat for outpatients versus inpatients. Over half (51.3%) were from rural hospitals, a greater percentage of outpatients versus inpatients were from other urban hospitals (48.7%).

Montana Statistics from COMPdata

All of the Montana inpatient and outpatient surgery statistics were derived from MHA's COMPdata. We encourage you to use COMPdata to examine your hospital community area(s) regarding Hepatitis C patients so that you might better understand the impact of these patients on your care and treatment of your changing patient population and the resources needed to diagnose, treat, and manage the Hepatitis C population.

The COMPdata graphing feature can be utilized to examine in a pictorial fashion trends in your state and hospital community area(s) regarding Hepatitis C. Click here to obtain a graph that illustrates the change in the distribution of HCV inpatient cases by principal diagnosis in Montana between 2000 and 2003: <http://www.ihatoday.org/compdata/mthcvgraph.pdf>.

Additional Information

If you would like to develop the COMPdata reports that will provide similar statistics for your hospital or community, a training tool is available to guide you through the process. Click here to obtain the tool: <http://www.ihatoday.org/compdata/mthcvtool.pdf>. For additional assistance on using the COMPdata system, contact the COMPdata Hotline at compdata@ihastaff.org.

Each month COMPdata will focus on the diseases and environmental issues impacting our members. In this issue you will find:

- Readily available information on national and Montana trends on conditions affecting hospitals
- Montana specific information derived from MHA's COMPdata
- References to a variety of background information sources in assembling the reports that hospitals can draw upon for their own community health communication
- Detailed information through COMPdata on how hospitals can prepare the same reports and information for your own community and hospital analysis

Next Month's Topic: Pediatric Behavioral Health If your hospital has any special services or programs in this area and would like to share information with us about those, please send that by e-mail to Tanya Ternes at tternes@ihastaff.org. If the information is on your web site, your welcome to point us there. Thank you!

Additional Information

If you would like to develop the COMPdata reports that will provide similar statistics for your hospital or community, a training tool is available to guide you through the process. Click here to obtain the tool: <http://www.ihatoday.org/compdata/news/mthcvtool.pdf>. For additional assistance on using the COMPdata system, contact the COMPdata Hotline at compdata@ihastaff.org.

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APPENDIX

Additional Statistics and Trends

In the U.S. HCV accounts for approximately 15% of all acute viral hepatitis, 60% to 70% of chronic hepatitis, and as much as 50% of cirrhosis, end-stage liver disease, and liver cancer.⁸ A characteristic unique to HCV is its tendency to cause chronic liver disease. At least 75% of patients with acute HCV ultimately develop chronic infection, and most of these patients have accompanying chronic liver disease.

According to a CDC hepatitis surveillance report released in September 2004, the incidence of acute HCV (i.e., a newly acquired symptomatic HCV infection) has been declining since the late 1980s.⁹ The decline is attributed to a decrease in cases reported among injecting drug users. However, the majority of HCV cases continue to occur in adult age groups with injecting drug use still the most commonly identified risk factor for infection. The year 1992 was the first period where the reporting of HCV cases was deemed reliable. In that year there were 6,010 cases of acute HCV reported or 2.4/100,000 persons. The rate declined steadily from 1992 to 2002, when the number of reported cases was 1,223 or a rate of 0.5/100,000.

In Montana, the reported incidence of acute HCV in 1992 was 3.4/100,000 persons compared to 0.1/100,000 in 2002.

Historically, national surveillance has been conducted on cases of acute disease only. In 2002, HCV infection (past or present) was added to the list of nationally notifiable diseases and a case definition was approved. Since January 2003, many states have begun reporting these cases to the CDC.⁹

References

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- 2 CDC National Center for Infectious Diseases. Viral Hepatitis C: Fact Sheet. (<http://www.cdc.gov/ncidod/diseases/hepatitis/c/fact.htm>) Date accessed: 11/13/2004.
- 3 CDC National Center for Infectious Diseases. Viral Hepatitis Surveillance. (http://www.cdc.gov/ncidod/diseases/hepatitis/resource/dz_burden02.htm) Date accessed: 11/13/2004.
- 4 World Health Organization. Communicable Disease Surveillance & Response: Hepatitis C. (<http://www.who.int/csr/disease/hepatitis/whocdscsrlyo2003/en/>) Date accessed: 12/20/2004.
- 5 National Institute of Allergy and Infectious Diseases. What You Should Know About Hepatitis C. (<http://www.niaid.nih.gov/dmid/hepatitis/hepcfacts.htm>) Date accessed: 12/15/2004.
- 6 CDC National Center for HIV, STD and TB Prevention-Division of HIV/AIDS Prevention. Frequently Asked Questions and Answers About Coinfection with HIV and Hepatitis C Virus. (http://www.cdc.gov/hiv/pubs/facts/HIV-HCV_Coinfection.htm) Date accessed: 12/13/2004.

7 National Alliance of State And Territorial AIDS Directors. An Overview of Hepatitis C Care and Treatment. July 14, 2004. (http://www.nastad.org/pro_viral_hepatitis.asp?menu=pro)
Date accessed: 12/14/2004.

8 National Digestive Diseases Information Clearinghouse. Chronic Hepatitis C: Current Disease Management. (<http://digestive.niddk.nih.gov/ddiseases/pubs/chronichepc/index.htm>)
Date accessed: 12/15/2004.

9 Centers for Disease Control and Prevention. Hepatitis Surveillance Report No. 59. Atlanta, GA. September, 2004
(http://www.cdc.gov/ncidod/diseases/hepatitis/resource/PDFs/hep_surveillance_59.pdf) Date last accessed: 12/17/2004.

Current and Future Activities

The CDC responded to a 1998 request from the Secretary of the Department of Health and Human Services to develop a comprehensive plan to address the prevention and control of HCV infection and its consequences by developing the National Hepatitis C Prevention Strategy (<http://www.cdc.gov/ncidod/diseases/hepatitis/c/plan/index.htm>). The strategy includes partnerships with various federal, state, and private sector agencies. CDC's implementation plan includes:

- Communication of information about Hepatitis C to health care providers, the public, and persons at risk for infection.
- Integration of Hepatitis C prevention and control activities into State and local public health programs.
- Surveillance to monitor acute and chronic disease trends.
- Epidemiologic and laboratory investigations.

The Hepatitis C Caring Ambassadors Program (HCCAP) is an example of a non-profit organization dedicated to improving the lives of people with chronic HCV. One of the more significant accomplishments of HCCAP is the publication of Hepatitis C Choices, a book authored by a diverse group of health care professionals. The book is intended to provide information about various treatments currently being used by people living with chronic HCV. The book can be browsed or downloaded free of charge at their website: <http://www.hepcchallenge.org>.

For those patients who are interested in alternatives to conventional HCV treatments, an excellent resource is NIH's National Center for Complementary and Alternative Medicine (<http://nccam.nih.gov/health/hepatitisc/index.htm>). The wide range of information includes details on the variety of CAM therapies that are available, the reason why patients may want to try these alternatives, and scientific research findings for select CAM treatments. While trials are being undertaken the Center is quick to point out that no CAM treatment has been proven safe and effective for treating Hepatitis C.

Resources for Additional Information

FOR HOSPITALS

One of the two best resources for hospital staff to consult on HCV issues is the CDC website:

<http://www.cdc.gov/ncidod/diseases/hepatitis/c/index.htm>. Among the more valuable resources are American Association for the Study of Liver Diseases Practice Guideline: Diagnosis, Management, and Treatment of Hepatitis C; a complete Hepatitis C Toolkit with online training, reference guides for test results and diagnoses, patient information documents, and more; and a Resource Center with links to dozens of educational materials, training and counseling resources, surveillance forms, and much more.

The other key resource for hospital staff is the NIH website devoted to HCV. The main page for the site can be found at <http://health.nih.gov/result.asp/323>. If that link doesn't work, the site can also be found by starting at the main NIH website (<http://www.nih.gov>) and searching for "Hepatitis C." Of particular interest to practitioners will be "Chronic Hepatitis C: Current Disease Management," "Management of Hepatitis C: 2002," and "Hepatitis C: Information Resources." The "Management of Hepatitis C: 2002" is a consensus statement based on a 3-day conference and prepared by a panel of nonadvocate, non-Federal experts.

Additional information especially for physicians and other health care professionals from The Hepatitis Information Network is found at <http://www.hepnet.com/doctors.html>. The site includes a newsletter, conference updates, hepatitis updates, and interactive learning modules.

FOR PATIENTS AND THE COMMUNITY

An interactive health tutorial especially for the public is provided by the National Library of Medicine and Medline Plus. The link to all of the tutorials is <http://www.nlm.nih.gov/medlineplus/tutorials.html>. The tutorial for Hepatitis C is found under "Diseases and Conditions."

The NIH National Digestive Diseases Information Clearinghouse provides two educational sites for patients, families, and others. The first is a general overview of Hepatitis C, entitled "What I need to know about Hepatitis C" (http://digestive.niddk.nih.gov/ddiseases/pubs/hepc_ez/). For those who want to more about the process of a liver biopsy, the following site is a brief, easy to understand explanation: <http://digestive.niddk.nih.gov/ddiseases/pubs/liverbiopsy/index.htm>.

Patients and families searching for support groups may find value in the Organizations and Support Groups section of the Hepatitis C Caring Ambassadors Program. The link is <http://hepcchallenge.org/organizations.htm>.

Another organization that offers education, materials, support, and much more for patients and families is the Hepatitis C Association (<http://www.hepcassoc.org/>).

Patients searching for clinics offering free or low-cost vaccinations can search for them at <http://www.hepclinics.com/templates/0/hepclinic/index.html>. Links to state immunization program websites can be found at <http://www.immunize.org/states/index.htm>.