November 2000's Advocate:

Non-Liver Related Conditions Associated With Hepatitis C

Studies have demonstrated that people with chronic hepatitis C infection have a reduced quality of life, which improves again following antiviral therapy.

HealthWise: Surfs the Net

Some Recommended Health-Related Websites

Australia's 2000 Report on Hepatitis C

HIV/AIDS, Hepatitis C & Sexually Transmissible Infections in Australia

We've Got Hep C and We're Mad As Hell!

Is There A Connection Between Anger and Hepatitis C?

California's Governor Signs Hep C Legislation

This legislation authorizes $1.5 million for outreach, education and testing

November 2000's Advocate:

Non-Liver Related Conditions Associated With Hepatitis C

By Dr Ed Gane
Hepatologist
New Zealand Liver Transplant Unit

Introduction Recent studies have clearly demonstrated that people with chronic hepatitis C infection have a reduced health-related quality of life, which improves again following successful antiviral therapy. In addition, non-liver manifestations of hepatitis C infection have been observed in almost every body system including skin, kidney, blood, lymphatic system, nervous system, salivary gland, thyroid and lung (see Table 1).

In a recent French study of 321 patients attending Hepatitis C clinic, one third of patients had at least one of these conditions. The onset of these extrahepatic conditions is unrelated to severity of liver damage, duration of infection, mode of transmission, HCV genotype, or age. Interestingly, thyroid disease is more common in women, reflecting the female preponderance in the general population.

Causes
The mechanisms of the non-liver tissue damage are either direct effects of the HCV infection or indirect effects of the body's immune response to HCV. Examples of direct infection by HCV include Porphyria cutanea tarda (PCT), Sicca syndrome and cryoglobulinaemia. PCT is a blistering skin condition, caused by a direct blocking effect of HCV on enzyme pathways within the liver cell. The dry mouth seen in HCV-induced Sjogren's syndrome is a direct effect of the HCV infection of the lining of salivary gland ducts, leading to salivary gland injury. Chronic infection of lymphoid tissue is thought to be the initial step in the development of the lymphoproliferative complications of HCV- cryoglobulinaemia (common) and lymphoma (very rare).

Indirect effects of the body's immune response include both autoimmune and immune-complex diseases. Examples of autoimmune diseases associated with chronic Hepatitis C infection include haemolytic anaemia, thrombocytopaenia (low platelets), lichen planus (a rare skin rash usually on the forearms and inside the mouth) and thyroiditis. In these conditions the body can no longer distinguish between viral proteins and our own tissue proteins. HCV-induced antibodies target our own own tissue proteins, leading to tissue injury rather than viral inactivation. This confusion arises either because viral proteins are identical to our own tissue proteins (so-called "molecular mimicry"), or because the virus itself alters the infected tissue's proteins so that our immune system no longer recognises them as "self" but sees them as foreign, leading to an immune response. In immune complex disease, excess levels of HCV-specific antibodies complex together with their target viral proteins. These complexes are circulating within the bloodstream which may injure skin, nerves, kidneys and other organs by occluding (blocking) or causing inflammation in small blood vessels which supply these tissues.

Cryoglobulinaemia
The most common extrahepatic manifestation (illness occuring outside of the liver) of hepatitis C infection is essential mixed cryoglobulinaemia (EMC). This syndrome presents as a red, raised, skin rash, which usually appears first on the shins and feet. The rash fluctuates but is usually worse in winter. Other commonly associated symptoms include sore joints and fever. Less commonly, the rash may occur in the kidney (glomerulonephritis) leading to loss of protein in the urine and occasionally kidney failure (see below) or in the gut, causing severe pain requiring emergency surgery.

The rash and other problems of EMC are caused by cryoglobulins, which are immune complexes of HCV proteins and anti-HCV antibodies bound together by Rheumatoid factor, which is a special protein produced by lymphocytes infected with HCV. They clump together when the blood temperature falls below normal and dissolve again at body temperature. In the small superficial blood vessels of the skin, the blood slows down and cools. This causes the cryoglobulins to clump together and block the blood vessels, thus leading to inflammation and the development of skin rash characteristic of EMC. First described in 1966, EMC was

initially associated with chronic non-A, non-B hepatitis.

However, the introduction of reliable HCV serological testing in 1990 demonstrated that most (between 50% and 98%) patients with EMC had chronic HCV infection. The typical symptoms of essential mixed cryoglobulinaemia (EMC) occur in around 5% of patients with chronic HCV infection. Other common symptoms of EMC include fever and sore joints. Diagnosis of EMC is based on the detection of cryoglobulins in the blood in someone with rash or other features of EMC. Occasionally, biopsy of the skin rash, kidney or other affected organs is also required to confirm the diagnosis, prior to treatment.

To ensure accurate determination of cryoglobulins in the blood, special collection of the blood sample is necessary: it must be placed immediately into a thermos heated to body temperature (37C) and kept at this temperature until separated in the laboratory centrifuge. Using such techniques, circulating cryoglobulins will be found in almost 30% of patients with chronic HCV infection - i.e. most patients with cryoglobulins will have EMC without any symptoms of the condition. Cryoglobulins are more common in patients with long-standing HCV infection and in those with cirrhosis. This is because clearance of circulating immune complexes by the liver macrophage cells is reduced in cirrhosis.

Treatment of EMC (skin rash, arthritis, etc) is treatment of the underlying HCV infection i.e. antiviral therapy with interferon with or without ribavirin. The HCV eradication rates achieved with antiviral therapy are similar to those in patients without cryoglobulins. Eradication of the HCV is accompanied by reduction in the cryoglobulins and resolution of the skin rash.

In patients who have ongoing complications of cryoglobulins and who have not responded to antiviral therapy, other treatments may be necessary, including cyclophosphamide and prednisone. These drugs are “immunosuppressants” which work by either reducing the production of the cryoglobulins or suppressing the local inflammation in the tissues caused by the cryoglobulins. Unfortunately, they increase the amount of circulating HCV. Therefore, they should be used after rather than before antiviral therapies, because their use will prevent later response to interferon and ribavirin. Cryoglobulinaemia should be considered a mild form of abnormal lymphocyte proliferation. Sometimes the abnormal lymphocytes have a specific DNA mutation, which is also found in certain types of low-grade lymphomas. In those countries with high rates of HCV infection, an increased rate of lymphoma is observed in patients with HCV infection, suggesting a definite but rare link between these 2 conditions.

Kidney disease

HCV is found in 2-10% of people on long-term haemodialysis and in 2-5% of those who received kidney transplants prior to 1990. This is not because HCV caused the kidney disease, but because these patients with severe kidney disease became infected through exposure to blood products or kidneys from HCV+ donors (prior to 1990 when routine screening for HCV was introduced). Rarely is HCV the cause of the kidney disease. In these cases, the kidney disease results from precipitation of circulating immune complexes in the small blood vessels of the filtering units of the kidney (glomeruli), leading to leaky kidneys which lose protein into the urine. Cryoglobulins are present in about half the cases. Interferon monotherapy, aimed at clearing the HCV infection, is the best treatment for this kidney disease. HCV clearance reduces protein loss and improves kidney function. Ribavirin must not be used as it causes severe anaemia in people with kidney disease.

Porphyria cutanea tarda

Porphyria cutanea tarda is a skin condition where the face, hands, neck blister after either minor trauma or exposure to sunlight.

Unlike the rash associated with cryoglobulinaemia, the rash of PCT is usually worse in the summer months and less in winter, related to the amount of sunlight. The skin sensitivity is because of build-up of porphyrins in the blood. Porphyrins are by-products of haemoglobin production, which are usually present in the body in only minute quantities. They accumulate only when the enzyme pathway which breaks down porphyrins is insufficient. Total lack of this enzyme is a very rare inherited disorder. Much more common is an inherited partial deficiency of the enzyme which only becomes apparent when the liver is further damaged by another

disease such as alcohol, iron overload (due to another inherited gene mutation), or chronic viral hepatitis.

In countries with high rates of HCV infection (Italy, Japan, Spain), 70-90% of people with PCT are HCV positive, whilst in countries with low rates of HCV (Ireland, Australia and New Zealand), 10-30% of people with PCT have hepatitis C. Heavy alcohol use may aggravate this condition by further damaging the liver cell enzyme pathways. Management of PCT involves simple measures designed to protect the fragile skin, from sunlight and from trauma. Oestrogen-containing medications (increase porphyrin production) and heavy alcohol use (reduce porphyrin breakdown) should be avoided. The mainstay of PCT treatment in HCV+ patients should be antiviral therapy with interferon and ribavirin. Successful HCV clearance is associated with long-term remission of the skin disorder.

Sicca syndrome

Almost 50% of patients with chronic HCV will have HCV detectable in saliva [though not in sufficient quantity to allow transmission], many of whom will complain of dry eyes or a dry mouth (with taste disturbance). Laboratory tests demonstrate reduced rates of tear and saliva production and biopsy of the salivary glands show a characteristic picture of inflammation, attributable to the local HCV infection. The mouth dryness is exacerbated by the side-effects of methadone maintenance. It is very important for such patients to be meticulous with regards to dental hygiene, in order to prevent severe dental caries (tooth decay) and gingivitis (inflammation of gums). Symptomatic relief can be obtained by using artificial tears and saliva. In one study of 8 HCV patients with Sicca syndrome, eradication of HCV with interferon was accompanied by increase of saliva production back to normal.

Thyroid disease

Thyroid hormone is responsible for maintaining the normal metabolic rate. Thyroid diseases can be divided into hyperthyroidism when the thyroid is overactive (often resulting in sweating, weight loss, anxiety and diarrhoea) and hypothyroidism when the thyroid is underactive (often resulting in weight gain, tiredness, dry skin and constipation).

Both hyperthyroidism and hypothyroidism are much more common in women than men and are usually preceded by the development of anti-thyroid antibodies. Although anti-thyroid antibodies are more common in women with HCV (25 - 30%) compared to women without HCV infection (10 - 15%), there is no associated increase in the rate of thyroid disease in the absence of Interferon therapy. However, Interferon (with or without ribavirin) is associated with the onset of hypothyroidism in 20% of HCV+ women. The reason for this interferon effect is probably two-fold: an indirect effect of interferon, enhancing our immune responses (thereby triggering previously latent autoimmune thyroid disease) and a direct toxic effect on the thyroid gland (blocking formation of the normal thyroid hormones). Risk factors for developing thyroid disease during interferon therapy are: female, age > 50 years, pre-existing antithyroid antibodies (of whom 75% will develop thyroid disease during interferon). Antithyroid antibodies should be checked in all patients prior to commencing interferon and thyroid function tests should be tested before starting at 6 months and 12 months therapy. Usually, if hypothyroidism develops, interferon can be continued with addition of thyroxine tablets. Most, but not all, cases of thyroid disease improve after completion of therapy. Summary Around one third of people with chronic hepatitis C infection will develop some extrahepatic condition of HCV infection, which is either a direct result of HCV infection of that organ or is caused by the body's immune response to HCV.

These extrahepatic conditions progress independently of the liver disease. People with minimal liver disease may have severe extrahepatic disease. Most of these conditions will improve following eradication of HCV with antiviral therapy, with the exception of thyroid disease, which may first develop during Interferon therapy. Extrahepatic conditions should be regarded as indications for starting antiviral therapy.

Reprinted with permission from the Hep C Review, New South Wales, Australia, Ed 30, Sept 2000.

November 2000's Advocate:

HealthWise: Surfs the Net
Some Recommended Health-Related Websites

By Lucinda K. Porter, RN

First, my profound apologies to those of you who do not have access to the Internet. If you are not connected to the Internet, the information in this article will take a little effort to access. Libraries, Cyber Cafe's , community organizations, and friends are some examples of potential ways to gain entrance to the Internet.

Second, if your favorite web site is not on the list, please do not be offended. This article is very general and every great web site could not be included. Also, one web site opens the door to many others. These web sites are stepping-stones to more information. Some very popular sites have been omitted, including the American Liver Foundation and Hepatitis Foundation International sites. It is assumed that you will find these and other well-known sites easily.

Third, a caveat. Some of these web sites have advertising and some may be passing information on to other sources. If you are concerned about your privacy, do not give information about yourself unless you are sure the web site is truly safe.

http://www.consumerlab.com - This company tests popular supplements to verify that the amounts in the supplements match the amounts stated on the label. For anyone taking or considering supplements, this site is a must.

http://www.planetbotanic.com - This web site is owned by prominent herbalist Douglas Schar, DipPhyt, MCPP. Make sure you go to the section "For Prevention Readers" and read about milk thistle.

http://www.vrg.org/index.htm - This is an excellent resource for those wanting to know more about vegetarian eating.

http://www.americanhs.org- A web site concentrating on hemochromatosis and related issues. A must for those of you who have "iron overload".

http://www.merck.com - General medical information. www.realage.com - This can be a fun and eye opening journey into finding out how old you really are.

http://www.thriveonline.com - Lots of advertising and little on HCV, but still valuable for general health and fitness www.drweil.com - Andrew Weil, MD is one of the founding fathers in "alternative medicine".

http://www.prevention.com - Brought to us by Prevention magazine

http://www.womenshairinstitute.com -Although obviously a pharmaceutical company, this site has some good ideas on how to deal with hair thinning and loss (sometimes an unwanted event during interferon therapy).

http://www.ncbi.nlm.nih.gov/PubMed- "PubMed is the National Library of Medicine's search service that provides access to over 11 million citation in MEDLINE, PreMEDLINE, and other related databases, with links to participating online journals."

http://www.jacksonwalter.com/hcv/comboguide.htm - Although I do not agree with all of it, it is the most thorough guide of its kind. I am very impressed with the effort behind it and it has been professionally reviewed. The humor is an added bonus.

http://www.scn.org/health/hepatitis - Hepatitis Education Project - This is a great web site, especially for those interested in starting a support group.

http://members.bellatlantic.net/~clotho - Peppermint Patti's Junk Drawer - This was the main web site I used when I was first diagnosed. The information is first rate and easy to understand.

http://hepatitis-central.com- Reliable information and easy to use.

http://hivandhepatitis.com - This web site is extremely well done.

http://www.hcvadvocate.org - This list would not be complete without mentioning "our own" web site.

November 2000's Advocate:

Australia’s 2000 Report on Hepatitis C

2000 Annual Surveillance Report, HIV/AIDS, Hepatitis C & Sexually Transmissible Infections in Australia, produced by the National Centre in HIV Epidemiology and Clinical Research and HIV/AIDS, Hepatitis C and Related Diseases in Australia: Annual Report of Behaviour 2000, produced by the National Centre in HIV Social Research

Hepatitis C infection

Hepatitis C continues to be the most frequently reported notifiable infection in Australia. During 1999, 21,409 cases were reported, bringing the total number of notified cases of hepatitis C in Australia to more than 140,000 since antibody testing became available in 1990. The number of notifications over the period 1995 - 1999 has remained relatively stable in the range 18,000 - 22,000 per year. The total number of notified hepatitis C cases represents 60 - 70% of an estimated 210,000 people who had been exposed to hepatitis C at the end of 1999, although the true proportion of diagnosed cases may differ from the estimate, depending on the extent of multiple notification, or underreporting. It is likely, however, that many people with hepatitis C infection remain undiagnosed. The vast majority of notifications have been of hepatitis C infection of unknown duration. Prior to 1997, less than 100 notifications of newly acquired hepatitis C infection were made per year. State/Territory health authorities have recently increased their efforts to monitor newly acquired hepatitis C infection. In 1998 and 1999, the number of reported cases was more than 350, which is still only a small fraction of the estimated 10,000 - 11,000 cases of newly acquired hepatitis C infections that currently occur in Australia each year. Most hepatitis C notifications in the period 1995 - 1999 were in the 20 - 29 and 30 - 39 year age groups, although an increasing percentage of cases were aged 15 - 19 years and 40 years or older (Figure 9). There was an almost three fold increase in the annual number of notifications in the 15 - 19 year age group over the period 1995 - 1999. The rise in the percentage of hepatitis C notifications in the older age groups may be partly due to increasing numbers of people presenting with symptomatic liver disease.

Overall, the male to female ratio of hepatitis C notifications remained stable at 1.7:1. In the 15 - 19 year age group, however, approximately equal numbers of male and female cases were reported. The increasing number of hepatitis C notifications in the 15 - 19 year age group is consistent with the increase in hepatitis C prevalence observed among injecting drug users with a history of injecting of less than three years, seen at needle and syringe programs. Blood donors and entrants into the Australian Defence Force are considered at low risk for hepatitis.

November 2000's Advocate:

We've Got Hep C and We're Mad As Hell!
Is There A Connection Between Anger and Hepatitis C?

By Joan King
President HepCBC

I don't know about you, but I've never run into a group of "unreasonably" angry people in my life like some of those I have encountered in Hep C support groups, both "live" and on the internet. Don't get me wrong. Some of these people are my best friends, but I can't but help feeling there is some sort of physiological connection there. And to be fair, I'll even include myself. Have you felt yourself reacting in a way that you know is illogical? I sure have, especially before treatment. I did a search on the internet to see what I could find. Indeed, I found several sources that linked anger with a diseased liver, and the sources were both holistic and medical. The holistic view is that anger is a negative emotion that can get stuck in the liver, especially a liver that isn't functioning well.

The medical point of view is that hepatic encephalopathy, or brain and nervous system damage caused by liver disorders, can cause changes in consciousness, behaviour, and personality. It can even cause coma. It can also cause forgetfulness, confusion, disorientation, delirium, dementia, loss of memory, intellect, reasoning, changes in mood, decreased alertness, daytime sleepiness, progressive stupor, decreased ability to care for oneself, loss of small hand movements, muscle tremors, seizures, speech impairment, a strange musty odour to the breath and urine, and, well, you get the idea. An EEG will show characteristic abnormalities, and blood tests can confirm this phenomenon. No, it's not your imagination.

No wonder we're angry! The severe symptoms are usually experienced only with cirrhosis, but two research groups have recently reported that HCV can affect the brain in people with less advanced disease, even with mild fibrosis. This disorder was not just related to hepatic encephalopathy. In an Austrian test comparing 58 healthy subjects to 58 subjects with HCV patients without cirrhosis, all of the HCV patients showed a "subclinical neurophysiological impairment." So maybe my observations aren't a figment of my imagination. The other study, done in the UK, reported that those with HCV scored worse in "physical and social functioning, energy and fatigue, and other measures," and ruled out any effect of previous IV drug use. Interestingly, the researchers found that patients with mild Hep C were slower in memory tests, but just as accurate as healthy subjects. A test was done in the US on both HCV positive and negative drug users, and those with Hep C scored higher for depression.

So what causes the anger? Is it all physiological? Maybe some of it is related to dealing with a possibly deadly disease. It may be related to the fatigue or depression caused by Hep C.

What is the mechanism that allows the brain to be affected in liver disease? In the case of people with cirrhosis, the liver can no longer convert ammonia, so it collects in the brain. Ammonia is produced by the body when protein is digested. The blood no longer circulates through a diseased liver where it would usually be filtered and detoxified. Toxins can damage the brain and spinal cord. Encephalopathy can be triggered in people with stable liver disease by several things: loss of blood, too much protein, electrolyte imbalances, especially low potassium levels caused by vomiting or diuretics (eat your bananas!), draining of abdominal fluid, anything that causes alkaline blood pH, low oxygen levels in the body, medications such as barbiturates, tranquilizers, surgery, or any illness.

There is a theory that hepatitis C virus may actually invade our central nervous system. Some brain cells normally die and are replenished by circulating monocytes (a type of white blood cell), as many as 30% a year. These monocytes can possibly by infected with Hep C and make their way into the brain, attacking the brain cells and causing neuropsychiatric symptoms. Scary! But this is just a theory. Post-mortem tests are now being done in London on brain tissue. Researchers also suggest that the virus may hide in the brain,

where it is safe from attack by antiviral therapy. There seems to be no relationship between the severity of hepatitis and the cerebral symptoms.

All this sounds very discouraging. So what can we do? If we are constantly exploding with rage, we will alienate our family members, friends, co-workers.... First of all, when we are dealing with our friends with Hep C, we can try to be patient. We can show this article to our significant others, and hope they will understand better. People usually are more prone to anger than usual when taking interferon. Information can help arm us. Then we can start to take action.

Watch your diet:

First of all, don't drink alcohol! Watch your proteins, especially if you have cirrhosis. A high protein diet may cause increased levels of ammonia. Try to get your protein from vegetable rather than animal sources. Keep your blood alkalized and blood sugar levels stable by eating a high carbohydrate, low fat and protein diet. Eating bananas and whole grain foods promote relaxation and sleep. Foods with soy protein and eggs lead to alertness.

Eat your biggest meal in the early part of the day to avoid restlessness and insomnia. It's good to keep a journal to see how your eating habits relate to your emotions, moods, and physical health. Avoid preservatives, additives, colours and illegal drugs or legal drugs, or at least use the smallest dose possible. Sugar is a drug which leads to fat storage. Fructose may be a better choice. Eliminate white flour products, fried foods, processed or fast foods, pasteurized and homogenized dairy products, antibiotic and hormone fed animals, addictive substances of all types, and chlorinated or fluoridated water.

Alter your lifestyle:

Smoking by the patient, or even smoke in the atmosphere, will increase measured levels of ammonia. Did you know that one cigarette smoked 1 hour before a blood test will increase the blood ammonia?

Avoid all toxins, antacids, any medication with ammonium, and if possible, sedatives and tranquilizers. Things like chiropractic, acupuncture, yoga, breathing exercises, visualisation, and/or meditation can help ease your stress levels. Just like your mother said: Get as much exercise, fresh air and sunshine as you can.

Calming audiotapes or CDs can help, and there are some good ones with positive self-talk. It's important to maintain a positive, happy attitude. Try stress-reducing herbs such as chamomile, thyme, lavender, lemon balm, calendula, marjoram, peppermint, rosemary, and St. John's Wort, (there are warnings about taking St. John's Wort with other anti-depressants) in reasonable amounts, and after consulting with your doctor.

Channel your anger into something positive, like letter campaigns for more clinical trials, and volunteer work.

Get medical help. At present there is not much the medical profession will do to help with subclinical neuropsychiatric complications of HCV, since many doctors do not recognize them as such. If, however, you are suffering from clinical (more serious) encephalopathy, your doctor can be of immense help. What can a doctor do to treat encephalopathy? Lots! Blood loss can trigger brain fog. The doctor can stop blood loss from gastrointestinal bleeds with endoscopy and cauterization. To get rid of the toxins like ammonia that collect, the physician can prescribe laxatives, such as Lactulose, and enemas. A reduced- or no-protein diet may help, but this is not for everyone. Tube feedings may be necessary, and Neomycin can reduce ammonia production by intestinal bacteria. If the Hep C is "cured" with interferon or interferon plus ribavirin, this stops the inflammation and fibrosis, and, of course, the brain fog. (It can even clear up early cirrhosis.) Yes, the side effects are uncomfortable, but so is end stage liver disease. Even if you don't get rid of the virus, the interferon can slow the progression of cirrhosis. Brain function seems to normalize with antiviral treatment. In the meantime, the doctor can prescribe antidepressants for those on treatment, where absolutely necessary, since the treatment itself can cause emotional disorders. Successful transplantation will take care of brain fog, but the anti-rejection medications can cause mood swings and anger. Get counselling.

One last note: Please, if you notice any change in your mental state, or in any of your neurological functions, call your doctor. Hepatic encephalopathy can rapidly become an emergency condition!

References:

HEPATIC ENCEPHALOPATHY
http://members.aol.com/HCVWD/he.html

HCV and Brain Dysfunction, by Jules Levin
http://thelab.upmc.edu/UTSO/A/ammonia.htm

Hepatic Encephalopathy
http://accessatlanta.adam.com/ency/article/000302trt.htm

Healing Sounds
http://thelab.upmc.edu/UTSO/A/ammonia.htm

Healing the Liver (Anger)
http://www.theflow.org/qigong/liver.htm
http://www.ncbi.nlm.nih.gov/

From Martial Arts of China presents Chi Kung Issue 1, 1991, Page 17 Courtesy of Shaolin Brand
http://infinite.org/library/pages/SBMACCK-17.html

PROMOTING HEALTH AND VITALITY THROUGH FOOD
http://community-2.webtv.net/essentialhealth/EMOTIONALHEALTH/

Your Body's Wisdom, by Teshna Beaulieu, DC
http://www.newvis.net/f99-9.htm

November 2000's Advocate:

California’s Governor Signs Hep C Legislation
This legislation authorizes $1.5 million for outreach, education and testing efforts aimed at veterans.

On September 25, 2000, California Governor Davis signed SB 1256 - Hepatitis C Education, Screening, and Treatment Act, which appropriates $1.5 million towards hepatitis C prevention and control in California. The California legislative approved $2 million, but was reduced to $1.5 million by Governor Davis. Below is a letter from Governor Davis to the members of the California State Senate explaining the reduction and re-allocation of funds.

To Members of the California State Senate:

On this date I have signed Senate Bill 1256 with a reduction. This bill requires (1) the State Department of Health Services to develop and implement a public education and outreach program to raise awareness of Hepatitis C, (2) an annual report to the Legislature by the California Department of Corrections on the prevalence of Hepatitis C in correctional facilities, and (3) a report to the Legislature by the Department of Veterans Affairs regarding the use of funds earmarked by the federal Veterans Administration to regional offices in CA to educate, screen and treat veterans with the Hepatitis C virus.

This bill addresses a growing public health concern, with as many as 500,000 Californians affected by the virus. This problem is particularly acute among veterans, with 20% of veterans tested nationally since 1998 testing positive for Hepatitis C. For this reason, I am directing the Department of Health Services to allocate at least 50% of the funds made available by this bill to outreach, education and testing efforts targeted at veterans. I am alsoreducing the appropriation contained in the bill by $500,000. The revised appropriation shall be $1,500,000.

Sincerely,

GRAY DAVIS