



***ABIM Hepatitis C PIM™
Practice Improvement Module
Measures Catalogue***

**Hepatitis C PIM
Measures Catalogue
September 2010**

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Introduction

This catalogue provides information related to the American Board of Internal Medicine's Hepatitis C Practice Improvement Module[®]. It is written in language that addresses the physician who might choose to complete this module, and it details the specifics of the module. Included is information regarding:

- Purpose and structuring of the module
- Patient inclusion criteria
- Detailed description of the measures

This PIM examines the care you provide to your patients by addressing key processes related to infection with hepatitis C. These are based primarily on guidelines from the American Association for the Study of Liver Disease, the American Gastroenterological Association, and the National Institutes of Health.

The PIM is divided into three parts, with multiple sections in each part.

Part 1 - Performance Data

Provide baseline data about your practice's current performance by...

- Reviewing your charts
- Assessing your practice systems

The 41 chart review measures are summarized below. **ABIM recommends a minimum of 25 chart reviews.** If it is not feasible for your practice to see 25 patients (who meet the sample criteria) in a reasonable time frame, you may satisfy this requirement with only ten charts.

The practice systems assessment comprises questions covering various aspects of practice structure and protocols.

Patients can be **included** in this module if **all** of the following are true:

1. They are between the ages of 15 and 90 (inclusive);
2. They have a diagnosis of chronic hepatitis C;
3. Management decisions regarding hepatitis C are made primarily by providers in the practice;

4. They have been patients in the practice for at least six months; *AND*
5. They have been seen by the practice within the past 12 months.

Patients should be **excluded** from this module if HCV RNA testing has been performed and is negative (patients with false-positive anti-HCV antibody status).

Part 2 - Quality Improvement (QI) Plan

Develop a plan for improving one aspect of your practice after reviewing the analysis of your current performance data. The analysis will include many aspects of care you provide to your patients. Ultimately, you will target only one of these to use in this quality improvement (QI) cycle.

Part 3 - Remeasurement

Remeasure your performance data after you have implemented your QI plan to see if you achieved your goal. Then, you will reflect on the process of developing and implementing a QI plan.

You may claim CME credit for completing this activity. The University of Pennsylvania School of Medicine designates this educational activity for a maximum of 20 *AMA PRA Category 1 Credit(s)*TM.

HEPATITIS C - PROCESSES OF CARE

Diagnostic Testing				
Measure Title	Description	Numerator	Denominator	Rationale
Positive anti-HCV antibody test documented	Patients in the sample who had documentation of a positive anti-HCV antibody test	Number of patients in the sample who had documentation of a positive anti-HCV antibody test	Number of patients in the sample	Testing for antibodies to hepatitis C (anti-HCV) can be used in screening and diagnosis. Current assays have a specificity of greater than 99%.
Quantitative HCV RNA testing	Patients in the sample who were documented as having had quantitative HCV RNA testing	Number of patients in the sample who were documented as having had quantitative HCV RNA testing	Number of patients in the sample	Quantitative RNA testing (viral load) is helpful in predicting the likelihood of response to and the optimal duration of therapy, including when to discontinue treatment. The specificity of current assays is approximately 98%.
HCV genotyping	Patients in the sample who were documented as having had HCV genotyping	Number of patients in the sample who were documented as having had HCV genotyping	Number of patients in the sample	HCV genotype predicts the likelihood of treatment response and, in many cases, is important in determining the duration of a course of treatment. Currently available tests can identify the genotype in over 90% of patients with Hepatitis C.
Liver biopsy results available	Patients in the sample who have had liver biopsy and for whom results (Activity Score [Grade] or Fibrosis Score [Stage]) are documented	Number of patients in the sample who have had liver biopsy and for whom biopsy results (Activity Score [Grade] or Fibrosis Score [Stage]) are documented	Number of patients in the sample who have had liver biopsy	In early treatment trials, liver biopsy was viewed as important in helping guide management and treatment of patients with hepatitis; more recently, however, its role has been questioned. Some experts suggest that because of the risks of the procedure and the problem of sampling error, it may not be necessary before treatment. Others disagree, preferring to use biopsy results as a way to identify those individuals for whom treatment can safely be deferred. All agree that if a biopsy is done, the results should serve as an important guide in therapeutic decision-making.

Treatment and Monitoring				
Measure Title	Description	Numerator	Denominator	Rationale
Discussion of interferon-based treatment documented	Patients in the sample who have documentation of discussion of interferon-based treatment	Number of patients in the sample who have documentation of discussion of interferon-based treatment	Number of patients in the sample	The natural history of HCV infection is variable. Studies show that 15% - 45% of patients with acute infection recover and are not at risk for the long-term consequences. The majority, however, remain infected. Within 20 - 25 years, 5% - 20% of patients with persistent infection develop cirrhosis; some experience complications of cirrhosis, including esophageal varices and hepatocellular carcinoma. Thus, some patients diagnosed with HCV infection need no treatment. For others, it is essential. For still others, the risks and benefits must be carefully weighed, as adverse effects of treatment can be significant and the likelihood of benefit is variable. Discussion between the patient and the physician about these issues is a cornerstone of treatment. Careful documentation in the medical record assists both the treating physician and other members of the healthcare team.
Patients receiving hepatitis C antiviral treatment	Patients in the sample who were reported as having received hepatitis C antiviral treatment	Number of patients in the sample who were reported as having received hepatitis C antiviral treatment	Number of patients in the sample	The natural history of hepatitis C infection is variable. Studies show that 15% - 45% of patients with acute infection recover and are not at risk for the long-term consequences. The majority, however, remain infected. Within 20 - 25 years, 5% - 20% of patients with persistent infection develop cirrhosis; some experience complications of cirrhosis, including esophageal varices and

Treatment and Monitoring				
Measure Title	Description	Numerator	Denominator	Rationale
				hepatocellular carcinoma. Thus, some patients diagnosed with HCV infection need no treatment. For others, it is essential. For still others, the risks and benefits must be carefully weighed, as adverse effects of treatment can be significant and the likelihood of benefit is variable. Discussion between the patient and the physician about these issues is a cornerstone of treatment. Careful documentation in the medical record assists both the treating physician and other members of the healthcare team.

Appropriate HCV RNA Testing Done During Treatment: Genotype 1 or 4, and Other				
Measure Title	Description	Numerator	Denominator	Rationale
Genotype 1, 4, and Other: Pretreatment	Patients with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment and for whom treatment-related quantitative HCV RNA testing was done prior to antiviral treatment	Number of patients with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and for whom treatment-related quantitative HCV RNA testing was done prior to antiviral treatment	Number of patients in the sample with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice	Clinical trials have clarified treatment parameters for patients with hepatitis C. Those with genotype 1 can receive therapy for 48 weeks or as long as 72 weeks. HCV RNA testing should be done before treatment, at 12 and 24 weeks, at the end of treatment, and 24 weeks after treatment.
Genotype 1, 4, and Other: 12 Weeks	Patients with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment and for whom treatment-related quantitative HCV RNA testing was done 12 weeks after treatment began	Number of patients in the sample with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and for whom treatment-related quantitative HCV RNA testing was done 12 weeks after treatment began	Number of patients in the sample with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this	Clinical trials have clarified treatment parameters for patients with hepatitis C. Those with genotype 1 can receive therapy for 48 weeks or as long as 72 weeks. HCV RNA testing should be done before treatment, at 12 and 24 weeks, at the end of treatment, and 24 weeks after treatment.

Appropriate HCV RNA Testing Done During Treatment: Genotype 1 or 4, and Other				
Measure Title	Description	Numerator	Denominator	Rationale
			practice, and who are eligible for treatment-related quantitative HCV RNA testing 12 weeks after treatment began	
Genotype 1, 4, and Other: 24 Weeks	Patients with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment and for whom treatment-related quantitative HCV RNA testing was done 24 weeks after treatment began	Number of patients in the sample with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and for whom treatment-related quantitative HCV RNA testing was done 24 weeks after treatment began	Number of patients in the sample with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who are eligible for treatment-related quantitative HCV RNA testing 24 weeks after treatment began	Clinical trials have clarified treatment parameters for patients with hepatitis C. Those with genotype 1 can receive therapy for 48 weeks or as long as 72 weeks. HCV RNA testing should be done before treatment, at 12 and 24 weeks, at the end of treatment, and 24 weeks after treatment.
Genotype 1, 4, and Other: 48 weeks	Patients with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment and for whom treatment-related quantitative HCV RNA testing was done 48 weeks after treatment began	Number of patients in the sample with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and for whom treatment-related quantitative HCV RNA testing was done 48 weeks after treatment began	Number of patients in the sample with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who are eligible for treatment-related quantitative HCV RNA testing 48 weeks after treatment began	Clinical trials have clarified treatment parameters for patients with hepatitis C. Those with genotype 1 can receive therapy for 48 weeks or as long as 72 weeks. HCV RNA testing should be done before treatment, at 12 and 24 weeks, at the end of treatment, and 24 weeks after treatment.

Appropriate HCV RNA Testing Done During Treatment: Genotype 1 or 4, and Other				
Measure Title	Description	Numerator	Denominator	Rationale
Genotype 1, 4, and Other - 6 Months post treatment	Patients with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment and for whom treatment-related quantitative HCV RNA testing was done six months after treatment ended	Number of patients in the sample with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who are eligible for treatment-related quantitative HCV RNA testing six months after treatment ended	Number of patients in the sample with genotype 1, 4, or "Other" who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who are eligible for treatment-related quantitative HCV RNA testing six months after treatment ended	Clinical trials have clarified treatment parameters for patients with hepatitis C. Those with genotype 1 can receive therapy for 48 weeks or as long as 72 weeks. HCV RNA testing should be done before treatment, at 12 and 24 weeks, at the end of treatment, and 24 weeks after treatment.

Appropriate HCV RNA Testing Done During Treatment: Genotype 2 and 3				
Measure Title	Description	Numerator	Denominator	Rationale
Genotype 2 and 3: Pretreatment	Patients with genotype 2 or 3 who received hepatitis C antiviral treatment and for whom treatment-related quantitative HCV RNA testing was done prior to antiviral treatment	Number of patients with genotype 2 or 3 who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and for whom treatment-related quantitative HCV RNA testing was done prior to antiviral treatment	Number of patients with genotype 2 or 3 who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice	Clinical trials have clarified treatment parameters for patients with hepatitis C. Those with genotypes 2 and 3 can receive a 24-week course. HCV RNA testing should be done before treatment, at 12 weeks, at the end of treatment, and 24 weeks after treatment.
Genotype 2 and 3: 24 Weeks	Patients with genotype 2 or 3 who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and for whom treatment-related quantitative HCV RNA testing was done 24 weeks after treatment began	Number of patients with genotype 2 or 3 who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and for whom treatment-related quantitative HCV RNA testing was done 24 weeks after treatment began	Number of patients in the sample with genotype 2 or 3 who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who	Clinical trials have clarified treatment parameters for patients with hepatitis C. Those with genotypes 2 and 3 can receive a 24-week course. HCV RNA testing should be done before treatment, at 12 weeks, at the end of treatment, and 24 weeks after treatment.

Appropriate HCV RNA Testing Done During Treatment: Genotype 2 and 3				
Measure Title	Description	Numerator	Denominator	Rationale
			are eligible for treatment-related quantitative HCV RNA testing 24 weeks after treatment began	
Genotype 2 and 3: 6 Months post treatment	Patients with genotype 2 or 3 who received hepatitis C antiviral treatment and for whom treatment-related quantitative HCV RNA testing was done six months after treatment ended	Number of patients in the sample with genotype 2 or 3 who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and for whom treatment-related quantitative HCV RNA testing was done six months after treatment ended	Number of patients in the sample with genotype 2 or 3 who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who are eligible for treatment-related quantitative HCV RNA testing six months after treatment ended	Clinical trials have clarified treatment parameters for patients with hepatitis C. Those with genotypes 2 and 3 can receive a 24-week course. HCV RNA testing should be done before treatment, at 12 weeks, at the end of treatment, and 24 weeks after treatment.

Other Tests and Assessments				
Measure Title	Description	Numerator	Denominator	Rationale
Patients having TSH testing prior to treatment	Patients who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who had serum TSH testing done prior to treatment	Number of patients who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who had serum TSH testing done prior to treatment	Number of patients in the sample who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice	Treatment with interferon-alfa or peginterferon-alfa is associated with both hypo- and hyperthyroidism. Serum thyroid-stimulating hormone should be measured to screen for abnormal thyroid function prior to the start of interferon-based treatment.
Patients having CBC testing during treatment	Patients who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who had CBC testing done during	Number of patients who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who had CBC testing done	Number of patients in the sample who received hepatitis C antiviral treatment, with the most recent	Treatment with interferon-alfa and peginterferon-alfa is associated with neutropenia and thrombocytopenia; ribavirin is associated with hemolytic anemia. Experts

Other Tests and Assessments				
Measure Title	Description	Numerator	Denominator	Rationale
	treatment	during treatment	course of therapy given by this practice	therefore advise that patients receiving antiviral treatment for HCV have CBC testing done during the course of treatment.
Patients assessed for depression prior to treatment	Patients who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who were assessed for depression prior to initiation of interferon-based treatment	Number of patients who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice, and who were assessed for depression prior to initiation of interferon-based treatment	Number of patients in the sample who received hepatitis C antiviral treatment, with the most recent course of therapy given by this practice	Treatment with interferon-alfa or peginterferon-alfa is associated with a risk of suicide in patients with pre-existing major depression. Experts therefore advise that patients be assessed for depression prior to the start of interferon-based treatment.

Antiviral Treatment Received in Another Practice				
Measure Title	Description	Numerator	Denominator	Rationale
Nature of response to therapy documented	Patients for whom the most recent course of antiviral therapy was given by another practice and whose response to that therapy was documented	Number of patients in the sample for whom the most recent course of antiviral therapy was given by another practice and whose response to that therapy was documented (sustained responder, responded then relapsed, or non-responder)	Number of patients in the sample who received hepatitis C antiviral treatment, with the most recent course of therapy given by another practice	For patients who were treated by another practice, it is important to obtain documentation regarding response to treatment. Measuring the rate at which antiviral therapy clears HCV RNA from the serum is helpful in predicting the likelihood of a response to therapy, determining the optimal duration of therapy, including when to discontinue treatment.

Preventive Care				
Measure Title	Description	Numerator	Denominator	Rationale
Baseline hepatitis B status documented	Patients in the sample whose baseline hepatitis B status was documented	Number of patients in the sample whose baseline hepatitis B status was documented	Number of patients in the sample	Persons who are coinfectd with HCV and HBV have a worse prognosis than those with HCV alone. Thus, vaccination should be offered to all patients with chronic hepatitis C.
Baseline hepatitis A status documented	Patients in the sample whose baseline hepatitis A status was documented	Number of patients in the sample whose baseline hepatitis A status was documented	Number of patients in the sample	Acute hepatitis A infection in patients with chronic HCV has been associated with fulminant hepatitis. Thus, vaccination should be offered to all patients with chronic hepatitis C.

Immunizations				
Measure Title	Description	Numerator	Denominator	Rationale
Hepatitis B vaccine given to non-immune patients	Patients in the sample who were not immune to hepatitis B and who received hepatitis B vaccine	Number of patients in the sample who were not immune to hepatitis B and who received hepatitis B vaccine	Number of patients in the sample who were not immune to Hepatitis B	Persons who are coinfectd with HCV and HBV have a worse prognosis than those with HCV alone. Thus, vaccination should be offered to all patients with chronic hepatitis C.
Hepatitis A vaccine given to non-immune patients	Patients in the sample who were not immune to hepatitis A and who received hepatitis A vaccine	Number of patients in the sample who were not immune to hepatitis A and who received hepatitis A vaccine	Number of patients in the sample who were not immune to Hepatitis A	Acute hepatitis A infection in patients with chronic HCV has been associated with fulminant hepatitis. Thus, vaccination should be offered to all patients with chronic hepatitis C.

Medications				
Measure Title	Description	Numerator	Denominator	Rationale
Over-the-counter medications within past 12 months	Patients in the sample whose use of over-the-counter medications was documented within the past 12 months	Number of patients in the sample whose use of over-the-counter medications was documented within the past 12 months	Number of patients in the sample	Many over-the-counter medications are metabolized by the liver. Thus, it is important that physicians know the types and quantities of these medications taken by their patients with chronic hepatitis C.
Complementary/alternative medication	Patients in the sample whose use of complementary or alternative medication was documented	Number of patients in the sample whose use of complementary or alternative medication was documented	Number of patients in the sample	Studies indicate that one-third to one-half of persons in the United States use complementary or alternative therapies. Some treatments, particularly some herbal remedies, have the potential for adverse effects on the liver. It is important that physicians know the types and quantities of complementary/alternative therapies taken by their patients with chronic hepatitis C.

Screening				
Measure Title	Description	Numerator	Denominator	Rationale
Patients with stage 3 or 4 disease assessed for hepatocellular cancer	Patients in the sample whose liver biopsy shows stage 3 or 4 disease, according to the METAVIR staging system (fibrosis with portal-central septae or cirrhosis), and who have been assessed for hepatocellular cancer	Number of patients in the sample whose liver biopsy shows stage 3 or 4 disease, according to the METAVIR staging system (fibrosis with portal-central septae or cirrhosis), and who have been assessed for hepatocellular cancer	Number of patients in the sample whose liver biopsy shows stage 3 or 4 disease, according to the METAVIR staging system (fibrosis with portal-central septae or cirrhosis)	Patients with cirrhosis and viral hepatitis are at high risk for hepatocellular cancer. Many experts recommend periodic surveillance with ultrasonography and serum alpha-fetoprotein measurement, beginning at advanced stages of fibrosis.
Patients with stage 4 disease assessed for esophageal varices	Patients in the sample whose liver biopsy shows stage 4 disease, according to the METAVIR staging system (cirrhosis), and who have been	Number of patients in the sample whose liver biopsy shows stage 4 disease, according to the METAVIR staging system (cirrhosis), and who have been	Number of patients in the sample whose liver biopsy shows stage 4 disease, according to the	Patients with cirrhosis are at high risk for bleeding from esophageal varices. Many experts recommend periodic surveillance with upper endoscopy in patients with hepatitis

Screening				
Measure Title	Description	Numerator	Denominator	Rationale
	assessed for esophageal varices	assessed for esophageal varices	METAVIR staging system (cirrhosis)	C and cirrhosis.
Tested for HIV infection	Patients in the sample who have been tested for HIV infection	Number of patients in the sample who have been tested for HIV infection	Number of patients in the sample	Patients with hepatitis C should be screened for HIV. Overall HIV-HCV co-infection rates are 25%-30%; significantly higher rates (72%-95%) are seen in injection-drug users.

Counseling				
Measure Title	Description	Numerator	Denominator	Rationale
Documented counseling on reducing transmission by not sharing personal items (e.g., razor, toothbrush, needle/syringe) that might have blood on them	Patients in the sample who were reported as being counseled on reducing transmission by not sharing personal items (e.g., razors, toothbrushes, needles/syringes) that might have blood on them	Number of patients in the sample who were reported as being counseled on reducing transmission by not sharing personal items (e.g., razors, toothbrushes, needles/syringes) that might have blood on them	Number of patients in the sample	Patients who have hepatitis C should be counseled about reducing the risk for HCV transmission. In addition to sharing needles or syringes, household activities that might result in blood exposure can place individuals at risk for hepatitis C infection. These include sharing a razor or toothbrush with an HCV-infected person.
Documented counseling on issues related to sexual transmission	Patients in the sample who were reported as being counseled on issues related to sexual transmission	Number of patients in the sample who were reported as being counseled on issues related to sexual transmission	Number of patients in the sample	The prevalence of HCV infection is higher in persons who have multiple sexual partners. However, the risk of transmission between monogamous partners is low (1% - 5%). Experts generally do not recommend the use of barrier protection for monogamous couples.
Documented level of alcohol use	Patients in the sample whose level of alcohol use was documented	Number of patients in the sample whose level of alcohol use was documented	Number of patients in the sample	Alcohol has many potentially harmful effects for patients with chronic liver disease due to hepatitis C. These include the development or progression of fibrosis and, subsequently, of hepatocellular cancer. Some

Counseling				
Measure Title	Description	Numerator	Denominator	Rationale
				studies indicate that excess alcohol intake increases HCV RNA replication and can interfere with antiviral treatment. Heavy drinkers should be offered assistance to reduce their alcohol use. Physicians should assess the level of alcohol intake in all patients, advising patients to limit intake to an occasional drink during the course of treatment and to avoid potentially hazardous drinking at all times.
Patients counseled on limiting alcohol use	Patients in the sample who were reported as being counseled on limiting alcohol use	Number of patients in the sample who were reported as being counseled on limiting alcohol use	Number of patients in the sample	Alcohol has many potentially harmful effects for patients with chronic liver disease due to hepatitis C. These include the development or progression of fibrosis and, subsequently, of hepatocellular cancer. Some studies indicate that excess alcohol intake increases HCV RNA replication and can interfere with antiviral treatment. Heavy drinkers should be offered assistance to reduce their alcohol use. Physicians should assess the level of alcohol intake in all patients, advising patients to limit intake to an occasional drink during the course of treatment and to avoid potentially hazardous drinking at all times.
Patients asked about prior or current illicit drug use	Patients in the sample who were reported as having been asked about prior or current illicit drug use	Number of patients in the sample who were reported as having been asked about prior or current illicit drug use	Number of patients in the sample	Injection drug use is the most common mode of hepatitis C transmission in the United States; thus, many patients undergoing treatment for HCV will have a history of illicit drug use. For some, the history is remote. Other patients will have ongoing or intermittent

Counseling				
Measure Title	Description	Numerator	Denominator	Rationale
				use. Because of the many adverse health consequences of illicit drug use, it is important to identify patients who actively use drugs and refer them for appropriate treatment programs.
Patients counseled about weight control to prevent NAFLD	Patients in the sample who were reported as being counseled about weight control to prevent NAFLD	Number of patients in the sample who were reported as being counseled about weight control to prevent NAFLD	Number of patients in the sample	The most common risk factors for nonalcoholic fatty liver disease (NAFLD) are obesity, diabetes mellitus, and hypercholesterolemia. Weight control is important in preventing and managing all three of these conditions.
Patients counseled about contraceptive use before starting ribavirin therapy	Patients in the sample who are being treated with ribavirin and who have been counseled about the use of contraceptives before starting ribavirin therapy	Number of patients in the sample who are being treated with ribavirin and who have been counseled about the use of contraceptives before starting ribavirin therapy	Number of patients in the sample who are being treated with ribavirin (i.e., type of antiviral treatment given during most recent course of therapy is interferon plus ribavirin or pegylated interferon plus ribavirin)	Ribavirin is contraindicated during pregnancy. HCV-infected women of childbearing age and their sexual partners, as well as HCV-infected men and their female partners of childbearing age, should be counseled about contraceptive use before starting ribavirin therapy. Counseling should be reinforced throughout therapy and for six months afterward.
Patients asked about cigarette smoking status, with smoking-cessation counseling provided to smokers	Patients in the sample with documentation of smoking status AND, for smokers, with documentation of smoking-cessation counseling or treatment during the specified abstraction period (within 12 months of the visit date, with a three-month grace period)	Number of patients in the sample with documentation of smoking status AND, for smokers, with documentation of smoking-cessation counseling or treatment during the specified abstraction period (within 12 months of the visit date, with a three-month grace period)	Number of patients in the sample	A number of large randomized clinical trials have demonstrated the efficacy and cost-effectiveness of smoking cessation counseling in changing smoking behavior and reducing tobacco use. The routine and thorough assessment of tobacco use is important as a means of preventing smoking or encouraging cessation.
Patients counseled about smoking	Patients in the sample who are smokers and who received	Number of patients in the sample who are smokers and who	Number of patients in the sample who	A number of large randomized clinical trials have demonstrated the

Counseling				
Measure Title	Description	Numerator	Denominator	Rationale
cessation within the past 12 months	smoking-cessation counseling or treatment during the 12-month period prior to the visit date, with a three-month grace period	received smoking-cessation counseling or treatment during the 12-month period prior to the visit date, with a three-month grace period	are smokers	efficacy and cost-effectiveness of smoking cessation counseling in changing smoking behavior and reducing tobacco use. The routine and thorough assessment of tobacco use is important as a means of preventing smoking or encouraging cessation.

General Health (as sole source of usual care)				
Measure Title	Description	Numerator	Denominator	Rationale
Screening mammography done, within past 12 months, for women age 50 and over	Female patients age 50 and over in the sample, with no other usual source of care, who have had screening mammography done within the past 12 months	Number of female patients age 50 and over in the sample, with no other usual source of care, who have had screening mammography done within the past 12 months	Number of female patients age 50 and over in the sample, with no other usual source of care	The proportion of patients who seek subspecialty care for a chronic condition and have no other usual source of care (excluding episodic emergency or urgent care) is unknown. Such patients may or may not receive appropriate preventive care for issues that do not relate directly to the chronic condition. It is important that subspecialists identify patients who do not have another usual source of care, then work to ensure that appropriate preventive care is received. One such preventive service is screening mammography for women age 50 and older. Studies have shown that women who receive screening mammography are less likely to die from breast cancer than those who are not screened.
Colon cancer screening up-to-date for patients age 50 and over	Patients age 50 and over in the sample, with no other usual source of care, who have had colon cancer screening done	Number of patients age 50 and over in the sample, with no other usual source of care, who have had colon cancer screening	Number of patients age 50 and over in the sample, with no other usual source of	The proportion of patients who seek subspecialty care for a chronic condition and have no other usual source of care (excluding episodic

General Health (as sole source of usual care)				
Measure Title	Description	Numerator	Denominator	Rationale
		done	care	emergency or urgent care) is unknown. Such patients may or may not receive appropriate preventive care for issues that do not relate directly to the chronic condition. It is important that subspecialists identify patients who do not have another usual source of care, then work to ensure that appropriate preventive care is received. One such preventive service is colon cancer screening for patients age 50 and older. Studies indicate that screened individuals are less likely to die from colon cancer than those who do not undergo screening.
Blood pressure at goal level	Patients in the sample who have no other usual source of care and whose blood pressure is at goal level	Number of patients in the sample who have no other usual source of care and who have documentation of blood pressure at goal level within the past 12 months	Number of patients in the sample who have no other usual source of care	For many patients, chronic hepatitis C has become a manageable disease. Thus, the need for routine preventive health care becomes more important. Randomized controlled trials conclusively demonstrate the benefit of lowering blood pressure to less than 140 mm Hg systolic and less than 80 mm Hg diastolic in all patients. Epidemiologic studies show that the risk of CVD begins at blood pressures of greater than 115/75 mm Hg. Experts therefore have agreed that less than 130/80 mm Hg is a reasonable target for control.
Serum lipids at goal level	Patients in the sample with no other usual source of care and who were reported as having serum lipids at goal level	Number of patients in the sample with no other usual source of care and who were reported as having serum lipids at goal level	Number of patients in the sample with no other usual source of care	The proportion of patients who seek subspecialty care for a chronic condition and have no other usual source of care (excluding episodic emergency or urgent care) is

General Health (as sole source of usual care)				
Measure Title	Description	Numerator	Denominator	Rationale
				unknown. Such patients may or may not receive appropriate preventive care for issues that do not relate directly to the chronic condition. It is important that subspecialists identify patients who do not have another usual source of care, then work to ensure that appropriate preventive care is received. One such preventive service is the detection and treatment of abnormal serum lipid levels, appropriate management of which can reduce the risk of morbidity and mortality from coronary heart disease.
Diet and exercise counseling done	Patients in the sample with no other usual source of care and who were reported as having received diet and exercise counseling	Number of patients in the sample with no other usual source of care and who were reported as having received diet and exercise counseling	Number of patients in the sample with no other usual source of care	The proportion of patients who seek subspecialty care for a chronic condition and have no other usual source of care (excluding episodic emergency or urgent care) is unknown. Such patients may or may not receive appropriate preventive care for issues that do not relate to the chronic condition. It is important that subspecialists identify patients who do not have another usual source of care, then work to ensure that appropriate preventive care is received. One such preventive service is counseling about diet and exercise; healthy diet and adequate exercise reduce the risk for hypertension and diabetes, and are cornerstones in the treatment of these conditions, as well as lipid disorders.

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