<table>
<thead>
<tr>
<th>Measure Number</th>
<th>Measure Name</th>
<th>Measure Description</th>
<th>NQS Domain</th>
<th>Measure Type</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>PQRS #84 NQF 0395</td>
<td>Hepatitis C: Ribonucleic Acid (RNA) Testing Before Initiating Treatment</td>
<td>Percentage of patients aged 18 years and older with a diagnosis of chronic hepatitis C who started antiviral treatment within the 12 month reporting period for whom quantitative hepatitis C virus (HCV) ribonucleic acid (RNA) testing was performed within 12 months prior to initiation of antiviral treatment</td>
<td>Effective Clinical Care</td>
<td>Process</td>
<td>Measure Group Only</td>
</tr>
</tbody>
</table>

**Measure Denominator**

Patients aged 18 years and older
AND
One of the following diagnosis codes indicating chronic hepatitis C: ICD-10-CM: B18.2
AND
One of the following patient encounter codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, 99406, 99407

**Measure Numerator**

Patients for whom quantitative HCV RNA testing was performed within 12 months prior to initiation of antiviral treatment
RNA testing for hepatitis C documented as performed within 12 months prior to initiation of antiviral treatment for hepatitis C (G9203)
AND
Patient starting antiviral treatment for hepatitis C during the measurement period (G9205)

**Measure Exclusions**

Patient did not start or is not receiving antiviral treatment for hepatitis C during the measurement period (G9499)

**Measure Performance NOT Met**

RNA testing for hepatitis C was not documented as performed within 12 months prior to initiation of antiviral treatment for hepatitis C, reason not given (G9204)
AND
Patient starting antiviral treatment for hepatitis C during the measurement period (G9205)

**Measure Rationale**

A sensitive quantitative HCV RNA assay is recommended prior to initiating treatment because it provides information on the level of virus which is helpful in management. Establishment of the baseline viral RNA level is very important in interpreting the response to therapy. Use of this measure should help to guide treatment decisions regarding duration of therapy and likelihood of response, which should improve outcomes.
### Hepatitis C (HCV) Digestive Health Recognition Program

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<thead>
<tr>
<th>Measure Number</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PQRS #85 NQF 0396</td>
<td>Hepatitis C: HCV Genotype Testing Prior to Treatment</td>
<td>Percentage of patients aged 18 years and older with a diagnosis of chronic hepatitis C who started antiviral treatment within the 12 month reporting period for whom hepatitis C virus (HCV) genotype testing was performed within 12 months prior to initiation of antiviral treatment</td>
<td>Effective Clinical Care</td>
<td>Process</td>
<td>Measure Group Only</td>
</tr>
</tbody>
</table>

#### Measure Denominator
Patients aged 18 years and older
AND
One of the following diagnosis codes indicating chronic hepatitis C: ICD-10-CM: B18.2
AND
One of the following patient encounter codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, 99406, 99407

#### Measure Numerator
Patients for whom HCV genotype testing was performed within 12 months prior to initiation of antiviral treatment.
Hepatitis C genotype testing documented as performed within 12 months prior to initiation of antiviral treatment for hepatitis C (G9207)
AND
Patient starting antiviral treatment for hepatitis C during the measurement period (G9206).

#### Measure Exclusions
Clinician documented that patient is not an eligible candidate for genotype testing; patient not receiving antiviral treatment for hepatitis C during the measurement period (e.g. Genotype test done prior to the reporting period, patient declines, patient not a candidate for antiviral treatment) (G8458)

#### Measure Performance NOT Met
Hepatitis C genotype testing was not documented as performed within 12 months prior to initiation of antiviral treatment for hepatitis C, reason not given (G9208)
AND
Patient starting antiviral treatment for hepatitis C during the measurement period (G9206).

#### Measure Rationale
The rationale for the measure is to guide treatment decisions regarding duration of therapy and likelihood of response, which should improve outcomes. There are 6 HCV genotypes and more than 50 subtypes. These genotypes differ by as much as 31 to 34 percent in their nucleotide sequences, whereas subtypes differ by 20 to 23 percent based on full-length genomic sequence comparisons. Genotype determinations influence treatment decisions. Patients with genotypes 2 or 3 have better response rates to re-treatment than those with genotype 1. (NIH) More recently, treatment of genotype 1b has shown the most favorable outcomes leading to differences in the licensure and use of new therapies by sub-genotype.
### Measure Number and Information

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>PQRS #87</td>
<td>Hepatitis C: Hepatitis C Virus (HCV) Ribonucleic Acid (RNA) Testing Between 4-12 Weeks After Initiation of Treatment</td>
<td>Percentage of patients aged 18 years and older with a diagnosis of chronic hepatitis C who are receiving antiviral treatment for whom quantitative hepatitis C virus (HCV) ribonucleic acid (RNA) testing was performed between 4-12 weeks after the initiation of antiviral treatment</td>
<td>Effective Clinical Care</td>
<td>Process</td>
<td>Measure Group Only</td>
</tr>
</tbody>
</table>

#### Measure Denominator

- Patients aged 18 years and older
- One of the following diagnosis codes indicating chronic hepatitis C: ICD-10-CM: B18.2
- One of the following patient encounter codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, 99406, 99407
- Measure #87 only needs to be reported if initiation of antiviral treatment took place before October of the measurement year (12 weeks before the end of the measurement period)

#### Measure Numerator

- Patients for whom quantitative HCV RNA testing was performed at no greater than 12 weeks from the initiation of antiviral treatment.
- Hepatitis C quantitative RNA testing documented as performed between 4-12 weeks after the initiation of antiviral treatment (G9209)
- Patient receiving antiviral treatment for hepatitis C during the measurement period (G8461)

#### Measure Exclusions

- Hepatitis C quantitative RNA testing not performed between 4-12 weeks after the initiation of antiviral treatment for documented reason(s) (e.g., patients whose treatment was discontinued during the testing period prior to testing, other medical reasons, patient declined, other patient reasons) (G9210)
- Patient receiving antiviral treatment for hepatitis C during the measurement period (G8461)
- Clinician documented that patient is not an eligible candidate for quantitative RNA testing; patient not receiving antiviral treatment for Hepatitis C (G8460)

#### Measure Performance NOT Met

- Hepatitis C quantitative RNA testing was not documented as performed between 4-12 weeks after the initiation of antiviral treatment, reason not given (G9211)
- Patient receiving antiviral treatment for hepatitis C during the measurement period (G8461)

#### Measure Rationale

Monitoring effectiveness of antiviral therapy is essential to effective treatment. An early virologic response (EVR), during the first 12 weeks of therapy, is a valuable clinical milestone. Patients should be monitored during therapy to assess the response to treatment and for the occurrence of side effects. A reasonable schedule would be monthly visits during the first 12 weeks of treatment followed by visits at 8 to 12 week intervals thereafter until the end of therapy. At each visit the patient should be questioned regarding the presence of side effects and depression. They should also be queried about adherence to treatment. Laboratory monitoring should include measurement of the complete blood count, serum creatinine and ALT levels, and HCV RNA by a sensitive assay at weeks 4, 12, 24, 4 to 12 week intervals thereafter, the end of treatment, and 24 weeks after stopping treatment. (AASLD, 2009)
**Hepatitis C (HCV)**
**Digestive Health Recognition Program**

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>PQRS #130</td>
<td>Documentation of Current Medications in the Medical Record</td>
<td>Percentage of visits for patients aged 18 years and older for which the eligible professional attests to documenting a list of current medications using all immediate resources available on the date of the encounter. This list must include ALL known prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND must contain the medications’ name, dosages, frequency and route of administration</td>
<td>Patient Safety</td>
<td>Process</td>
<td>Registry Measure Group Claims EHR GPRO</td>
</tr>
</tbody>
</table>

**Measure Denominator**
- Patients aged 18 years and older
- AND
- Patient encounter during the reporting period (CPT or HCPCS): 90791, 90792, 90832, 90834, 90837, 90839, 90957, 90958, 90959, 90960, 90962, 90965, 90966, 92002, 92004, 92012, 92014, 92507, 92508, 92526, 92541, 92542, 92544, 92545, 92547, 92548, 92557, 92567, 92568, 92570, 92585, 92588, 92626, 96116, 96150, 96151, 96152, 97001, 97002, 97003, 97004, 97532, 97802, 97803, 97804, 98960, 98961, 98962, 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99221, 99222, 99223, 99324, 99325, 99326, 99327, 99332, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99345, 99347, 99349, 99350, 99495, 99496, G0101, G0108, G0270, G0402, G0438, G0439

**Measure Numerator**
- Eligible professional attests to documenting, updating or reviewing a patient’s current medications using all immediate resources available on the date of encounter. This list must include ALL known prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND must contain the medications’ name, dosages, frequency and route of administration.

- Eligible professional attests to documenting in the medical record they obtained, updated, or reviewed the patient’s current medications (G8427).

**Measure Exclusions**
- Eligible professional attests to documenting in the medical record the patient is not eligible for a current list of medications being obtained, updated, or reviewed by the eligible professional (G8430)

**Measure Performance NOT Met**
- Current list of medications not documented as obtained, updated, or reviewed by the eligible professional, reason not given (G8428).

**Measure Rationale**
In the American Medical Association’s (AMA) Physician’s Role in Medication Reconciliation (2007), critical patient information, including medical and medication histories, current medications the patient is receiving and taking, and sources of medications, is essential to the delivery of safe medical care. However, interruptions in the continuity of care and information gaps in patient health records are common and significantly affect patient outcomes. Consequently, clinical judgments may be based on incomplete, inaccurate, poorly documented or unavailable information about the patient and his or her medication.

Medication safety efforts have primarily focused on hospitals; however, the majority of health care services are provided in the outpatient setting where two-thirds of physician visits result in writing at least one prescription (Stock et al., 2009). Chronically ill patients are increasingly being treated as outpatients, many of whom take multiple medications requiring close monitoring (Nassaralla et al., 2007).
Adverse drug events (ADEs) prove to be more fatal in outpatient settings (1 of 131 outpatient deaths) than in hospitals (1 of 854 inpatient deaths) (Nassaralla et al., 2007). According to The Commonwealth Fund report (2010) about 11 to 15 of every 1,000 Americans visit a health care provider because of ADEs in a given year, representing about three to four of every 1,000 patient visits during 1995 to 2001. The total number of visits to treat ADEs increased from 2.9 million in 1995 to 4.3 million visits in 2001. ADEs in the ambulatory setting substantially increased the healthcare costs of elderly persons and estimated costs were $1,983 per case. Further findings of The Commonwealth Fund studies additionally identified 11% to 28% of the 4.3 million visit related ADEs (VADEs) in 2001 might have been prevented with improved systems of care and better patient education, yielding an estimate of 473,000 to 1.2 million potentially preventable VADEs annually and potential cost-savings of $946 million to $2.4 billion.

In the Institute for Safe Medication Practices, The White Paper on Medication Safety in the U.S. and the Roles of Community Pharmacists (2007), the American Pharmaceutical Association identified that Americans spend more than $75 billion per year on prescription and nonprescription drugs. Unnecessary costs include: improper use of prescription medicines due to lack of knowledge costs the economy an estimated $20-100 billion per year; American businesses lose an estimated 20 million workdays per year due to incorrect use of medicines prescribed for heart and circulatory diseases alone; failure to have prescriptions dispensed and/or renewed has resulted in an estimated cost of $8.5 billion for increased hospital admissions and physician visits, nearly one percent of the country's total health care expenditures.

In 2005, the rate of medication errors during hospitalization was estimated to be 52 per 100 admissions, or 70 per 1,000 patient days. Emerging research suggests the scope of medication-related errors in ambulatory settings is as extensive as or more extensive than during hospitalization. Ambulatory visits result in a prescription for medication 50 to 70% of the time. One study estimated the rate of ADEs in the ambulatory setting to be 27 per 100 patients. It is estimated that between 2004 and 2005 in the United States, 701,547 patients were treated for ADEs in emergency departments, and 117,318 patients were hospitalized for injuries caused by an ADE. Individuals aged 65 years and older are more likely than any other population group to require treatment in the emergency department for ADEs (AMA, 2007).

A Systematic Review on “Prevalence of Adverse Drug Events in Ambulatory Care” finds that “The median ADE prevalence rate for retrospective studies was 3.3% (interquartile range [IQR] 2.3–7.1%) vs 9.65% (IQR 3.3–17.35%) for prospective studies. Median preventable ADE rates in ambulatory care-based studies were 16.5%, and 52.9% for hospital-based studies. Median prevalence rates by age group ranged from 2.45% for children to 5.27% for adults, 16.1% for elderly patients, and 3.45% for studies including all ages (Tache et al., 2011).

The Agency for Healthcare Research and Quality’s (AHRQ) The National Healthcare Disparities Report (2011) identified the rate of adverse drug events (ADE) among Medicare beneficiaries in ambulatory settings as 50 per 1,000 person-years. In 2005, AHRQ reported data on adults age 65 and over who received potentially inappropriate prescription medicines in the calendar year, by race, ethnicity, income, education, insurance status, and gender. The disparities were identified as follows: older Asians were more likely than older whites to have inappropriate drug use (20.3% compared with 17.3%); older Hispanics were less likely than older non-Hispanic Whites to have inappropriate drug use (13.5% compared with 17.6%); older women were more likely than older men to have inappropriate drug use (20.2% compared with 14.3%); there were no statistically significant differences by income or education.

Weeks et al. (2010) noted that fragmented medication records across the health care continuum, inaccurate reporting of medication regimens by patients, and provider failure to acquire all of the necessary elements of medication information from the patient or record, present significant obstacles to obtaining an accurate medication list in the ambulatory care setting. Because these obstacles require solutions demonstrating improvements in access to information and communication, the Institute of Medicine and others have encouraged the incorporation of IT solutions in the medication reconciliation process. In a survey administered to office-based physicians with high rates of EMR use, Weeks, et al. found there is an opportunity for universal medication lists utilizing health IT.
Hepatitis C (HCV)  
Digestive Health Recognition Program

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</tr>
</thead>
<tbody>
<tr>
<td>PQRS #183 NQF 0399</td>
<td>Hepatitis C: Hepatitis A Vaccination</td>
<td>Percentage of patients aged 18 years and older with a diagnosis of chronic hepatitis C who have received at least one injection of hepatitis A vaccine, or who have documented immunity to hepatitis A</td>
<td>Community/Population Health</td>
<td>Process</td>
<td>Measure Group Only</td>
</tr>
</tbody>
</table>

**Measure Denominator**
- Patients aged 18 years and older
  AND
  One of the following diagnosis codes indicating chronic hepatitis C: ICD-10-CM: B18.2
  AND
  One of the following patient encounter codes: 99201, 99202, 99203, 99204, 99205, 99213, 99214, 99215, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, 99406, 99407

**Measure Numerator**
- Patients who have received at least one injection of hepatitis A vaccine, or who have documented immunity to hepatitis A.
- Hepatitis A vaccine injection administered or previously received (4148F)
  OR
  Patient has documented immunity to hepatitis A (3215F).

**Measure Exclusions**
- Documentation of medical reason(s) for not administering at least one injection of hepatitis A vaccine (e.g., allergy or intolerance to a known component of the vaccine, other medical reasons) (4148F with 1P)
  OR
  Documentation of patient reason(s) for not administering at least one injection of hepatitis A vaccine (e.g., patient declined, insurance coverage, other patient reasons) (4148F with 2P).

**Measure Performance NOT Met**
- Hepatitis A vaccine not received, reason not otherwise specified (4148F with 8P).

**Measure Rationale**
The hepatitis A vaccination decreases the potential for a patient acquiring hepatitis A which would contribute to further liver damage. A single report has suggested that superimposition of hepatitis A virus infection in persons with chronic liver disease, particularly those with hepatitis C, was associated with fulminant hepatitis. Therefore, it is recommended that persons with chronic HCV infection who lack evidence of preexisting antibody to hepatitis A be administered the hepatitis A vaccine.
## Measure Number

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<tr>
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<tbody>
<tr>
<td>PQRS #226 NQF 0028</td>
<td>Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention</td>
<td>Percentage of patients aged 18 years and older who were screened for tobacco use one or more times within 24 months AND who received cessation counseling intervention if identified as a tobacco user</td>
<td>Community/Population Health</td>
<td>Process</td>
<td>Registry Measure Group Claims EHR GPRO</td>
</tr>
</tbody>
</table>

### Measure Denominator

Patients aged ≥ 18 years on date of encounter AND
Patient encounter during the reporting period (CPT or HCPCS): 90791, 90792, 90832, 90834, 90837, 90845, 92002, 92004, 92012, 92014, 92521, 92522, 92523, 92524, 92540, 92557, 92625, 96150, 96151, 96152, 97003, 97004, 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99406, 99407, G0438, G0439

### Measure Numerator

Patients who were screened for tobacco use at least once within 24 months AND who received tobacco cessation counseling intervention if identified as a tobacco user.
Patient screened for tobacco use AND received tobacco cessation intervention (counseling, pharmacotherapy, or both), if identified as a tobacco user (4004F) OR
Current tobacco non-user (1036F).

### Measure Exclusions

Documentation of medical reason(s) for not screening for tobacco use (eg, limited life expectancy, other medical reasons) (4004F with 1P).

### Measure Performance NOT Met

Tobacco screening OR tobacco cessation intervention not performed, reason not otherwise specified (4004F with 8P).

### Measure Rationale

This measure is intended to promote adult tobacco screening and tobacco cessation interventions for those who use tobacco products. There is good evidence that tobacco screening and brief cessation intervention (including counseling and/or pharmacotherapy) is successful in helping tobacco users quit. Tobacco users who are able to stop smoking lower their risk for heart disease, lung disease, and stroke.
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<tbody>
<tr>
<td>PQRS #390</td>
<td>Discussion and Shared Decision Making Surrounding Treatment Options</td>
<td>Percentage of patients aged 18 years and older with a diagnosis of hepatitis C with whom a physician or other qualified healthcare professional reviewed the range of treatment options appropriate to their genotype and demonstrated a shared decision making approach with the patient. To meet the measure, there must be documentation in the patient record of a discussion between the physician or other qualified healthcare professional and the patient that includes all of the following: treatment choices appropriate to genotype, risks and benefits, evidence of effectiveness, and patient preferences toward treatment.</td>
<td>Person and Caregiver-Centered Experience and Outcomes</td>
<td>Process</td>
<td>Registry Measure Group</td>
</tr>
</tbody>
</table>

**Measure Denominator**

- Patients aged 18 years and older
- AND
- One of the following diagnosis codes indicating chronic hepatitis C: ICD-10-CM: B18.2
- AND
- One of the following patient encounter codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215

**Measure Numerator**

- Patients with whom a physician or other clinician reviewed the range of treatment options appropriate to their genotype and demonstrated a shared decision making approach with the patient. Documentation in the patient record of a discussion between the physician/clinician and the patient that includes all of the following: treatment choices appropriate to genotype, risks and benefits, evidence of effectiveness, and patient preferences toward the outcome of the treatment (G9399).

**Measure Exclusions**

- Documentation of medical or patient reason(s) for not discussing treatment options. Medical reasons: Patient is not a candidate for treatment due to advanced physical or mental health comorbidity (including active substance use); currently receiving antiviral treatment; successful antiviral treatment (with sustained virologic response) prior to reporting period; other documented medical reasons. Patient reasons: Patient unable or unwilling to participate in the discussion or other patient reasons (G9400).

**Measure Performance NOT Met**

- No documentation of a discussion in the patient record of a discussion between the physician or other qualified healthcare professional and the patient that includes all of the following: treatment choices appropriate to genotype, risks and benefits, evidence of effectiveness, and patient preferences toward treatment (G9401).

**Measure Rationale**

- Shared decision making has the potential to provide numerous benefits for patients, clinicians, and the health care system, including increased patient knowledge, less anxiety over the care process, improved health outcomes, reductions in unwarranted variation in care and costs, and greater alignment of care with patients' values (Lee, E., & Emanuel, E., 2013). In hepatitis C, the decision about whether to initiate treatment is sensitive to patient preferences about achieving cure and limiting symptoms versus tolerating side effects of medications (Colter, et. al., 2001). It is also intuitive that patients are more likely to be adherent to treatment if they are engaged in the decision to start. Numerous studies have documented problems with patient-physician communication in this population (Zickmund, et. al., 2004), and patient misperceptions and lack of education have been implicated as barriers to treatment (Zickmund & Bielefeldt, 2007; Richmond, et. al., 2007; McNally’s, et. al., 2006). For these reasons, it is likely that shared decision making would improve decision quality, result in more effective antiviral therapy, and better patient health outcomes.
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>PQRS #401</td>
<td>Screening for Hepatocellular Carcinoma (HCC) in Patients with Hepatitis C Cirrhosis</td>
<td>Percentage of patients aged 18 years and older with a diagnosis of chronic hepatitis C cirrhosis who underwent imaging with either ultrasound, contrast enhanced CT or MRI for hepatocellular carcinoma (HCC) at least once within the 12 month reporting period</td>
<td>Effective Clinical Care</td>
<td>Process</td>
<td>Registry Measure Group</td>
</tr>
</tbody>
</table>

**Measure Denominator**

Patients aged 18 years and older  
AND  
One of the following diagnosis codes indicating chronic hepatitis C: ICD-10-CM: B18.2  
AND  
ICD-10-CM: K70.30, K70.31, K74.60, K74.69  
AND  
One of the following patient encounter codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215

**Measure Numerator**

Patients who underwent abdominal imaging with either ultrasound, contrast enhanced CT or MRI.  
Patient underwent abdominal imaging with ultrasound, contrast enhanced CT or contrast MRI for HCC (G9455)

**Measure Exclusions**

Documentation of medical or patient reason(s) for not ordering or performing screening for HCC. Medical reason: Comorbid medical conditions with expected survival <5 years, hepatic decompensation and not a candidate for liver transplantation, or other medical reasons. Patient reasons: Patient declined or other patient reasons (e.g., cost of tests, time related to accessing testing equipment) (G9456).

**Measure Performance NOT Met**

Patient did not undergo abdominal imaging and did not have a documented reason for not undergoing abdominal imaging in the reporting period (G9457)

**Measure Rationale**

HCC (hepatocellular carcinoma) is the fourth most common cancer in the world and is the fastest rising cause of cancer-related deaths in the United States. HCV is the leading cause of HCC and the risk of developing HCC is highest in patients with established HCV cirrhosis. Several potentially curative treatments are available for patients with early-stage HCC. These include surgical resection, liver transplantation, and local ablation. Long-term survival of patients who have liver resection or transplantation for HCC can be high (40% to 70% for resection and 52% to 81% for transplant patients after 5 years) (Kansagara 2014). A recent systematic review of 18 nonrandomized studies found that screened patients had early-stage HCC than clinically diagnosed patients. More screened patients received potentially curative treatment. However, these studies were limited by their observational nature (including lead time bias) and thus the effect on overall mortality was unclear. There are no randomized controlled trials that evaluated the impact of HCC screening versus no screening on survival in patients with cirrhosis. A randomized trial of HCC screening is not forthcoming because, even in the absence of high quality data, most informed patients and their clinicians consider randomization unethical and prefer surveillance (Poustchi 2011). In a recent modeling based study (that corrected for lead time bias), US based screening for HCC in compensated HCV cirrhosis patients reduced mortality compared to no screening (Mourad 2014). Collectively, these data suggest that screening has a potential to produce benefits in the highest-risk patients, such as those with HCV cirrhosis who are good candidates for potentially curative treatment (Atkins AIM 2014).
Hepatitis C (HCV)  
Digestive Health Recognition Program

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</tr>
</thead>
<tbody>
<tr>
<td>PQRS #TBD</td>
<td>Hepatitis C: Sustained Virological Response (SVR)</td>
<td>Percentage of Patients aged 18 years and older with a diagnosis of hepatitis C who have completed a full course of antiviral treatment with undetectable hepatitis C virus (HCV) ribonucleic acid (RNA) 11 weeks after cessation of treatment.</td>
<td>Community/ Population Health</td>
<td>Outcome</td>
<td>DHRP Only</td>
</tr>
</tbody>
</table>

**Measure Denominator**
All patients aged 18 years and older with a diagnosis of hepatitis C who are initiating or receiving antiviral treatment during the measurement period AND 
One of the following diagnosis codes indicating chronic hepatitis C: ICD-10-CM: B18.2 AND 
One of the following patient encounter codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215

**Measure Numerator**
Patients with undetectable HCV RNA 11 weeks after cessation of treatment

**Measure Exclusions**
Measure only needs to be reported if initiation of antiviral treatment took place before October of the measurement year (11 weeks before the end of the measurement period)

**Measure Performance NOT Met**
None

**Measure Rationale**
Achieving SVR is the first step toward reducing future HCV morbidity and mortality. Once achieved, an SVR is associated with long-term clearance of HCV infection, which is regarded as a virologic "cure," as well as with improved morbidity and mortality. Patients who achieve an SVR usually have improvement in liver histology and clinical outcomes.

Nineteen cohort studies (n=105 to 16,864) evaluated the association between SVR after antiviral therapy and mortality or complications of chronic HCV infection. Duration of follow-up ranged from 3 to 9 years. Ten studies were conducted in Asia (60, 67-72, 75, 77, 78). Eight (64-66, 72, 75-78) were rated as poor-quality and the remainder as fair quality. Although all studies reported adjusted risk estimates, only 8 (60, 61, 63, 67-70, 73) evaluated 5 key confounders (age, sex, genotype, viral load, and fibrosis stage). No study clearly described assessment of outcomes blinded to SVR status.

The largest study (n=16,864) had the fewest methodologic shortcomings (61). It adjusted for multiple potential confounders, including age, sex viral load, presence of cirrhosis, multiple comorbid conditions, aminotransferase levels, and others. In a predominantly male, Veterans Affairs population, SVR after antiviral therapy was associated with lower risk for all-cause mortality than was SVR, after median of 3.8 years (adjusted hazard ration, 0.71 [CI, 0.60 to 0.861], 0.62[CI, 0.44 to 0.87], and 0.51 [CI, 0.35 to 0.75] for genotypes 1, 2, and 3 respectively). Mortality curves began to separate as soon as 3 to 6 months after SVR assessment.

Eighteen other cohort studies also found SVR to be associated with decreased risk for all-cause mortality (adjusted hazard rations, 0.07 to 0.39)(60, 69, 72, 73, 75-78), liver-related mortality (adjusted hazard rations, 0.12 to 0.46)(60, 62, 63, 67, 68, 71, 73-76, 78), and other complications of end-stage liver disease versus no SVR, with effects larger than in the Veterans Affairs study. The subgroup of studies that focused on patients with advanced fibrosis or cirrhosis at baseline (60, 67-72, 75, 77, 78) reported similar risk estimates. (Chou et. al., 2013)
Hepatitis C (HCV)  
Digestive Health Recognition Program

<table>
<thead>
<tr>
<th>Measure Number</th>
<th>Measure Name</th>
<th>Measure Description</th>
<th>NQS Domain</th>
<th>Measure Type</th>
<th>Options</th>
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</thead>
<tbody>
<tr>
<td>PQRS #184</td>
<td>Hepatitis C: Hepatitis B Vaccination in Patients with HCV</td>
<td>Percentage of patients aged 18 years and older with a diagnosis of hepatitis C who received at least one injection of hepatitis B vaccine, or who have documented immunity to hepatitis B</td>
<td>Community/ Population Health</td>
<td>Process</td>
<td>DHRP Only</td>
</tr>
</tbody>
</table>

**Measure Denominator**

Patients aged 18 years and older  
AND  
One of the following diagnosis codes indicating chronic hepatitis C: ICD-10-CM: B18.2  
AND  
One of the following patient encounter codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215

**Measure Numerator**

Patients who have received at least one injection of hepatitis B vaccine or who have documented immunity to hepatitis B.  
Hepatitis B vaccine injection administered or previously received (4149F)  
OR  
Patient has documented immunity to Hepatitis B (3216F).

**Measure Exclusions**

Documentation of patient reason(s) for not administering at least one injection of hepatitis B vaccine (eg, patient declined, insurance coverage, other patient reasons) (4149F with 2P).

**Measure Performance NOT Met**

Hepatitis B vaccine not received, reason not otherwise specified (4149F with 8P).

**Measure Rationale**

Although no specific recommendation has been advanced for vaccination against hepatitis B, the evidence that persons co-infected with hepatitis B and C have a worse prognosis than those with HCV infection alone suggests that hepatitis B vaccination should be offered to persons who are at risk for exposure to hepatitis B if they lack preexisting antibody to hepatitis B. (AASLD, 2009).