THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0
August 2008

The measure information you submit will be shared with NQF's Steering Committees and Technical Advisory Panels to evaluate measures against the NQF criteria of importance to measure and report, scientific acceptability of measure properties, usability, and feasibility. Four conditions (as indicated below) must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards. Not all acceptable measures will be strong—or equally strong—among each set of criteria. The assessment of each criterion is a matter of degree; however, all measures must be judged to have met the first criterion, importance to measure and report, in order to be evaluated against the remaining criteria. References to the specific measure evaluation criteria are provided in parentheses following the item numbers. Please refer to the *Measure Evaluation Criteria* for more information at *www.qualityforum.org* under Core Documents. Additional guidance is being developed and when available will be posted on the NQF website.

Use the tab or arrow (↓→) keys to move the cursor to the next field (or back ←↑). There are three types of response fields:

- drop-down menus - select one response;
- check boxes – check as many as apply; and
- text fields – you can copy and paste text into these fields or enter text; these fields are not limited in size, but in most cases, we ask that you summarize the requested information.

Please note that URL hyperlinks do not work in the form; you will need to type them into your web browser.

Be sure to answer all questions. Fields that are left blank will be interpreted as no or none. Information must be provided in this form. Attachments are not allowed except when specifically requested or to provide additional detail or source documents for information that is summarized in this form. If you have important information that is not addressed by the questions, they can be entered into item #48 near the end of the form.

For questions about this form, please contact the NQF Project Director listed in the corresponding call for measures.

	CONDITIONS FOR CONSIDERATION BY NQF
	Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards.
A (A)	**Public domain or Intellectual Property Agreement signed:** IP Agreement signed and submitted (If no, do not submit) *Template for the Intellectual Property Agreement is available at* **www.qualityforum.org** *under Core Documents.*
B (B)	**Measure steward/maintenance:** Is there an identified responsible entity and process to maintain and update the measure on a schedule commensurate with clinical innovation, but at least every 3 years? Yes, information provided in contact section (If no, do not submit)
C (C)	**Intended use:** Does the intended use of the measure include BOTH public reporting AND quality improvement? Yes (If no, do not submit)
D (D)	**Fully developed and tested:** Is the measure fully developed AND tested? Yes, fully developed and tested (If not tested and no plans for testing within 24 months, do not submit)

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

	(for NQF staff use) **NQF Review #:** **NQF Project:**
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	**Information current as of** *(date- MM/DD/YY)*: 10/31/08
2	**Title of Measure:** Hepatitis C: Viral Load Test
3	**Brief description of measure** [1]**:** This measure identifies the percentage of patients with Hepatitis C (HCV) who began HCV antiviral therapy during the measurement year and had HCV Viral Load testing prior to initiation of antiviral therapy.
4 (2a)	**Numerator Statement:** Patients in the denominator who had an HCV Viral Load test prior to the initiation of antiviral therapy **Time Window:** See below **Numerator Details** (Definitions, codes with description): >=1 claim for 'HCV viral load testing' (see applicable procedure codes below) prior to the initiation of antiviral therapy HCV Viral Load Test (Procedure) ========== Type Code Description ------- ------- ---------- CPT4 87522 INF AGT-DNA/RNA; HEP C-QUAN
5 (2a)	**Denominator Statement:** HCV patients who started HCV antiviral therapy during the measurement year **Time Window:** See below **Denominator Details** (Definitions, codes with description): - Age >=18 years as of the end of the measurement year - And >=2 claims from the outpatient setting or >=1 claims from an inpatient setting with a diagnosis of 'Hepatitis C_chronic' (see disease codes below) in which the earliest claim occurs before the start of the measurement year - Have >=1 Rx claim for 'Peg-Interferons/Ribavirin' or 'Peg-Interferons' or 'Ribavirin' (see list of drugs below) during the measurement year, in which the earliest Rx claim during the measurement year is considered to be the initiation of antiviral therapy - Have eligibility for medical services from the start of the analysis period to the initiation of antiviral therapy Hepatitis C_chronic (Diagnosis) ========== Type Code Description ------- ------- ---------- ICD9 07044 CHRONIC HEPATITIS C W/HEPATIC COMA ICD9 07054 CHRONIC HEP C W/O MENTION HEP COMA ICD9 07070 UNS VIRAL HEPATITIS C W/O HEP COMA ICD9 07071 UNS VIRAL HEPATITIS C W/HEP COMA ICD9 V0262 HEPATITIS C CARRIER

[1] Example of measure description: Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year.

	Peg-interferons (Medispan Drug) ========== Type GPI Code Description ----- ---------- ---------- GPI 12353060052020 Peginterferon alfa-2a Inj 180 MCG/ML GPI 12353060056440 Peginterferon alfa-2a Inj Kit 180 MCG/0.5ML GPI 12353060106424 Peginterferon alfa-2b For Inj Kit 120 MCG/0.5ML GPI 12353060106430 Peginterferon alfa-2b For Inj Kit 150 MCG/0.5ML GPI 12353060106410 Peginterferon alfa-2b For Inj Kit 50 MCG/0.5ML GPI 12353060106416 Peginterferon alfa-2b For Inj Kit 80 MCG/0.5ML
	Ribavirin (Medispan Drug) ========== Type GPI Code Description ----- ---------- ---------- GPI 12353070000120 Ribavirin Cap 200 MG GPI 12353070002020 Ribavirin Soln 40 MG/ML GPI 12353070000320 Ribavirin Tab 200 MG GPI 12353070000340 Ribavirin Tab 400 MG GPI 12353070006320 Ribavirin Tab 400 MG & Ribavirin Tab 600 MG Dose Pack GPI 12353070000360 Ribavirin Tab 600 MG
6 (2a, 2d)	**Denominator Exclusions:** none **Denominator Exclusion Details** (Definitions, codes with description):
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? No ► If "other" describe: **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8 (2a, 2e)	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? (select one) **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9 (2a)	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☐ **OR** Web page URL: **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*) Better quality = Higher score ► If "Other", please describe:
10 (2a. 4a,	**Identify the required data elements**(e.g., primary diagnosis, lab values, vital signs)**:** diagnosis, pharmacy claims **Data dictionary/code table** attached ☒ **OR** Web page URL: **Data Quality** (2a) *Check all that apply*

4b)	☐ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel) ☐ Data are coded using recognized data standards ☐ Method of capturing data electronically fits the workflow of the authoritative source ☐ Data are available in EHRs ☒ Data are auditable
11 (2a, 4b)	**Data Source and Data Collection Methods** *Identifies the data source(s) necessary to implement the measure specifications. Check all that apply* ☐ Electronic Health/Medical Record ☐ Electronic Clinical Database, Name: ☐ Electronic Clinical Registry, Name: ☒ Electronic Claims ☐ Electronic Pharmacy data ☐ Electronic Lab data ☐ Electronic source – other, Describe: ☐ Paper Medical Record ☐ Standardized clinical instrument, Name: ☐ Standardized patient survey, Name: ☐ Standardized clinician survey, Name: ☒ Other, Describe: It is reasonable to allow physicians to submit definitive evidence that a particular service was provided to a patient. For example, a lab result from a testing facility would indicate that that lab test was performed. A notation in a patient chart that the test was ordered, in contrast, would not provide definitive evidence that the test was performed. Instrument/survey attached ☐ **OR** Web page URL:
12 (2a)	**Sampling** *If measure is based on a sample, provide instructions and guidance on sample size.* **Minimum sample size:** 10 **Instructions:** We have developed a hierarchical logistic regression model with expert biostatisticians at the Johns Hopkins School of Public Health that enables one to produce a probability distribution around a point estimate of the "quality score" for a given physician. This model has shown that there is no minimum sample size that is required to produce a quality score which has a comparatively "tight" probability distribution. Rather, the number of required observations depends on how a given physician performs on particular measures compared to how all other MDs perform on those measures. We recommend that a minimum of 10 observations be required, however, because of the normality assumptions that underlies the model and for public "face validity". Alternatively, to satisfy current NCQA standards, a minimum of 30 observations could be required.
13 (2a)	**Type of Measure:** Process ► If "Other", please describe: ► If part of a composite or paired with another measure, please identify composite or paired measure
14 (2a)	**Unit of Measurement/Analysis** (*Who or what is being measured*) *Check all that apply.* ☐ Can be measured at all levels ☒ Individual clinician (e.g., physician, nurse) ☒ Group of clinicians (e.g., facility department/unit, group practice) ☐ Facility (e.g., hospital, nursing home) ☒ Integrated delivery system ☒ Health plan ☒ Community/Population ☐ Other (*Please describe*):
15 (2a)	**Applicable Care Settings** *Check all that apply* ☐ Can be used in all healthcare settings ☒ Ambulatory Care (office/clinic) ☐ Behavioral Healthcare ☒ Community Healthcare ☐ Dialysis Facility ☐ Emergency Department ☐ EMS emergency medical services ☒ Health Plan ☐ Home Health ☐ Hospice ☐ Hospital ☐ Long term acute care hospital ☐ Nursing home/ Skilled Nursing Facility (SNF) ☐ Prescription Drug Plan ☐ Rehabilitation Facility ☐ Substance Use Treatment Program/Center ☐ Other (*Please describe*):

	IMPORTANCE TO MEASURE AND REPORT
	Note: This is a threshold criterion. If a measure is not judged to be sufficiently important to measure and report, it will not be evaluated against the remaining criteria.
16 (1a)	**Addresses a Specific National Priority Partners Goal** *Enter the numbers of the specific goals related to this measure (see list of goals on last page)*: 6.1
17 (1a)	**If not related to NPP goal, identify high impact aspect of healthcare** (select one) **Summary of Evidence:** **Citations[2] for Evidence:**
18 (1b)	**Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.* **Summary of Evidence:** Numerator denominator proportion --- 0 12 0.00% 62 206 30.10% 1 3 33.33% 17 38 44.74% 15 25 60.00% 50 75 66.67% 181 260 69.62% 12 17 70.59% 15 21 71.43% 73 99 73.74% 253 342 73.98% 14 18 77.78% 248 308 80.52% 9 11 81.82% 13 15 86.67% 7 8 87.50% 14 16 87.50% 48 51 94.12% **Citations for Evidence:** RHI client experience
19 (1b)	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure focus among populations.* **Summary of Evidence:** Not applicable **Citations for evidence:**
20 (1c)	**If measuring an Outcome** Describe relevance to the national health goal/priority, condition, population, and/or care being addressed: **If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence** *Summarize the evidence (including citations to source) supporting the focus of the measure as follows:* • Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit. • Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s).

[2] Citations can include, but are not limited to journal articles, reports, web pages (URLs).

	• Structure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit. • Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public. • Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care. • Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality. **Type of Evidence** *Check all that apply* ☒ Evidence-based guideline ☐ Quantitative research studies ☐ Meta-analysis ☐ Qualitative research studies ☐ Systematic synthesis of research ☐ Other (*Please describe*): **Overall Grade for Strength of the Evidence**[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)*: See below **Summary of Evidence** (*provide guideline information below*): **Citations for Evidence:** See question #21 below
21 (1c)	**Clinical Practice Guideline** *Cite the guideline reference; quote the specific guideline recommendation related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.* **Guideline Citation:** Dienstag, JL, McHutchison, JG. American Gastroenterological Association medical position statement on the management of hepatitis C. Gastroenterology. 2006; 130:225. Strader DB, Wright T, Thomas DL, Seeff LB; American Association for the Study of Liver Diseases. Diagnosis, management, and treatment of hepatitis C. Hepatology. 2004;39(4):1147-71. **Specific guideline recommendation:** HCV RNA testing using a quantitative assay should be performed in patients for whom antiviral treatment is being considered (Grade II-2 - evidence based upon cohort/ case control analytic studies); **Guideline author's rating of strength of evidence** (*If different from USPSTF, also describe it and how it relates to USPSTF)*: See above **Rationale for using this guideline over others:**
22 (1c)	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or contradictory guidelines and provide citations.* **Summary:** **Citations:**
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** By identifying specific patients in whom care is not consistent with the clinical practice guideline underlying the measure, the measure will facilitate improvement in the care for those patients by highlighting the patient-specific QI

[3]The strength of the body of evidence for the specific measure focus should be systematically assessed and rated, e.g., USPSTF grading system www.ahrq.gov/clinic/uspstmeth.htm: A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. C - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

	opportunity for the patient's physician(s). In addition, the feedback physicians will receive on their overall performance on this measure will help focus their attention on the underlying care issue and improve their performance on that issue across all of their patients. If performance measurement is combined with some sort of financial incentive, such as in a pay for performance program, the QI impact may be increased.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☐ **OR** Web page URL:
25 (2b)	**Reliability Testing** **Data/sample:** We have tested this measure on several patient populations, including, in total, more than 30 million people enrolled in 18 different health plans. In addition, we have used analogous computer algorithms to identify patient-specific QI opportunities in more than 5 million health plan members and have sent messages regarding those opportunities to either the member or the member's physician or both. **Analytic Method:** The validity of a physician quality score describes how accurately it estimates the true value. Reliability is the stability or consistency of an estimator from one data set to the next. Both are important in assessing the performance of the quality score. We have used the following measure as an indication of the reliability of each of our measures: 1 minus [(the variance of the posterior distribution of the physician quality score) divided by (the variance of the true physician quality score)], which is the reduction in the variance of a doctor's performance score (posterior distribution) obtained by using his or her performance data, expressed as a fraction of the total variance before any data is collected. **Testing Results:** The reliability of a physician quality score depends on the number of observations available for a given physician, how the physician performs relative to all other physician, and the overall variance in physician quality scores. As a result, reliability varies with the population of MDs in whom the measure is used. In our experience, reliability is in the range of 0.5 to >0.7.
26 (2c)	**Validity Testing** **Data/sample:** We have tested this measure on several patient populations, including, in total, more than 30 million people enrolled in 18 different health plans. In addition, we have used analogous computer algorithms to identify patient-specific QI opportunities in more than 5 million health plan members and have sent messages regarding those opportunities to either the member or the member's physician or both. **Analytic Method:** We have employed several approaches to ensure the validity of this measure: 1) we've ensured that the technical specifications for this measure are valid reflections of the underlying clinical practice guideline; 2) we have obtained feedback on the validity of the measure from several physician panels that were assembled by either Care Focused Purchasing or the Massachusetts Group Insurance Commission Clinical Performance Improvement Initiative, or both, and 3) we have systematically collected feedback from physicians and health plan members to whom we have sent messages regarding this measure. **Testing Results:** This measure is considered to be valid by the physician panels that have reviewed it. (More information regarding the panels is provided elsewhere in this document.) In addition, the measure has been considered to be valid by the medical directors of 17 different health plans. In addition, the fact that thousands of physicians have received results based on this measure without indicating that they don't believe the measure is valid attests to its validity.
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.*

	Summary of Evidence supporting exclusion(s): n/a **Citations for Evidence:** **Data/sample:** **Analytic Method:** **Testing Results:**
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:** There is no need to risk adjust results from this measure. To the extent that the measure applies only to patients in a particular risk category, that has been taken into account in the specifications for the denominator or exclusions for this measure.
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** **Analytic Method:** **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** Results from current use **Data/sample:** Group Insurance Commission (GIC): In 2003, the Massachusetts Group Insurance Commission GIC launched the Clinical Performance Improvement initiative, requiring health plans under contract with the GIC to incorporate provider "tiering"—differential payments based on value—into their GIC product. For this initiative, RHI evaluates physician performance on a set of quality measures using administrative claims data from approximately 2.2 million health plan members. Care Focused Purchasing (CFP) Care Focused Purchasing, Inc. (CFP) is the largest private or public clinical performance measurement initiative in the nation, representing a coalition of major insurance carriers and more than 50 national self-insured employers. Since CFP's incorporation in 2005, RHI has analyzed medical and pharmacy claims data to assess the quality of care provided by physicians to 29 million CFP employees and members. Methods to identify statistically significant and practically/meaningfully differences in performance: We have developed a hierarchical logistic regression model with expert biostatisticians at the Johns Hopkins School of Public Health that enables one to produce a probability distribution around a point estimate of the "quality score" for a given physician. This model has shown that there is no minimum sample size that is required to produce a quality score which has a comparatively "tight" probability distribution. Rather, the number of required observations depends on how a given physician performs on particular measures compared to how all other MDs perform on those measures. We recommend that a minimum of 10 observations be required, however, because of the normality assumption that underlies the model and for public "face validity". We have employed this statistical approach in the MD quality profiling we performed on the experience of more than 2 million members of 6 health plans participating in the Massachusetts Group Insurance Commission Clinical Performance Improvement Initiative in 2008.

	Methods to identify statistically significant and practically/meaningfully differences in performance: We have developed a hierarchical logistic regression model with expert biostatisticians at the Johns Hopkins School of Public Health that enables one to produce a probability distribution around a point estimate of the "quality score" for a given physician. This model has shown that there is no minimum sample size that is required to produce a quality score which has a comparatively "tight" probability distribution. Rather, the number of required observations depends on how a given physician performs on particular measures compared to how all other MDs perform on those measures. We recommend that a minimum of 10 observations be required, however, because of the normality assumption that underlies the model and for public "face validity". We have employed this statistical approach in the MD quality profiling we performed on the experience of more than 2 million members of 6 health plans participating in the Massachusetts Group Insurance Commission Clinical Performance Improvement Initiative in 2008. **Results:** Pooled results: numerator denominator proportion --- 1,032 1,525 67.67%
31 (2h)	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender, SES, health literacy), **provide stratified results:** Not applicable ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:
	USABILITY
32 (3)	**Current Use** In use **If in use, how widely used** Nationally ► If "other," please describe: ☒ Used in a public reporting initiative, name of initiative: Group Insurance Commission of Massachusetts, Clinical Performance Improvement Initiative Focused Care Purchasing Sample report attached ☐ **OR** Web page URL:
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** We have tested this measure on several patient populations, including, in total, more than 30 million people enrolled in 18 different health plans. **Methods:** The results have been provided to the medical directors of the 18 health plans, all of whom have indicated that they understand the particular aspect of care that the measure addresses and how to interpret the result for a physician. In addition, results have been presented to HR directors from >60 national employers. **Results:** Both the health plan medical directors and the HR personnel from the employers have indicated that they understand the particular aspect of care that the measure addresses and how to interpret the result for a physician. We do not have data on the extent to which individual physicians understand the measure result, but we presume that, since health plan medical directors and non-medical personnel from employers understand the result, that physicians and lay people will also so long that adequate explanation is provided.
34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☐ Other measure(s) on same topic ☐ Other measure(s) for same target population ☒ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):**

	Are the measure specifications harmonized with existing NQF-endorsed™ measures? (select one) ►If not fully harmonized, provide rationale: **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** This measure can be used exclusively with enriched administrative data
	FEASIBILITY
35 (4a)	**How are the required data elements generated?** *Check all that apply* ☐ Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment) ☐ Data elements are generated from a patient survey (e.g., CAHPS) ☒ Data elements are generated through coding performed by someone other than the person who obtained the original information (e.g., DRG or ICD-9 coding on claims) ☐ Other, Please describe:
36 (4b)	**Electronic Sources** All data elements ►**If all data elements are not in electronic sources, specify the near-term path to electronic collection by most providers:** ►**Specify the data elements for the electronic health record:**
37 (4c)	**Do the specified exclusions require additional data sources beyond what is required for the other specifications?** No ►**If yes, provide justification:**
38 (4d)	**Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure:** As with any type of clinical performance measure, and with any source of data used to operationalize the measure, there will be some instances in which the data used to compute the measure are incomplete or inaccurate. We try to minimize the impact of such errors or omissions through the way we have constructed the technical specifications for the measure. There is no data source for performance measurement that is completely accurate. Two studies have shown that physician performance tends to be better when assessed using claims data compared to via chart abstraction. **Describe how could these potential problems be audited:** Potential data errors of omission or commission could be audited through chart abstraction, or feedback from physicians and patients. However, as mentioned above, each of these alternative sources of information also are susceptible to error and thus are not true gold standards. **Did you audit for these potential problems during testing?** Yes **If yes, provide results:** Through feedback from physicians whose performance has been evaluated
39 (4e)	**Testing feasibility** Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:
	CONTACT INFORMATION
40	**Web Page URL for Measure Information** *Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* **Web page URL:** *www.resolutionhealth.com*
41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Alan **MI:** **Last Name:** Lefkowitz **Credentials (MD, MPH, etc.):** **Organization:** Resolution Health **Street Address:** 10490 Little Patuxent Parkway **City:** Columbia **State:** MD **ZIP:** 21044 **Email:** alefkowitz@resolutionhealth.com **Telephone:** 240-295-5834 ext:

42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** Darren **MI:** M **Last Name:** Schulte **Credentials (MD, MPH, etc.):** MD, MPP **Organization:** Resolution Health **Street Address:** 10490 Little Patuxent Parkway **City:** Columbia **State:** MD **ZIP:** 21044 **Email:** dschulte@resolutionhealth.com **Telephone:** 650-773-3308 ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** Darren **MI:** M **Last Name:** Schulte **Credentials (MD, MPH, etc.):** MD, MPP **Organization:** Resolution Health **Street Address:** 10490 Little Patuxent Parkway **City:** Columbia **State:** MD **ZIP:** 21044 **Email:** dschulte@resolutionhealth.com **Telephone:** 650-773-3308 ext:
44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** Darren **MI:** M **Last Name:** Schulte **Credentials (MD, MPH, etc.):** MD, MPP **Organization:** Resolution Health **Street Address:** 10490 Little Patuxent Parkway **City:** Columbia **State:** MD **ZIP:** 21044 **Email:** dschulte@resolutionhealth.com **Telephone:** 650-773-3308 ext:
	ADDITIONAL INFORMATION
45	**Workgroup/Expert Panel involved in measure development** Workgroup/panel used ►If workgroup used, describe the members' role in measure development: Over the past several years, two formal workgroups -- one organized by the Care Focused Purchasing initiative and one organized by the Massachusetts Group Insurance Commission Clinical Performance Improvement Initiative -- and several ad hoc experts have provided useful input to our measure development and refinement processes. In each case, we have provided the Work Group Members with details regarding each of our performance measures and members of the work group (not always all members) have provided feedback on the validity of the clinical practice guideline underlying the measure and suggestions regarding potential ways to improve the technical specifications for the measure. In some instances, we have eliminated measures based on feedback from the work groups. In other instances, work group members have proposed new measures. We try to get feedback from work group members and selected clinical experts on an annual basis. ►Provide a list of workgroup/panel members' names and organizations: Care Focused Purchasing Clinical Advisory Panel Bobbie Berg -BCBS -IL Dow Briggs - BCBS- AL Joe Calderella - Cigna Carl Cameron - Preferred Care Steven Goldberg – Humana Tom James – Humana Don Liss – Aetna Catherine MacLean – WellPoint Zak Ramadan-Jradi – Regence Fred Volkman – Avidyn Health Constance Hwang – Resolution Health Darren Schulte - Resolution Health Earl Steinberg – Resolution Health Massachusetts Group Insurance Commission Physician Advisory Panel Jim Glauber – Neighborhood Health Plan Lyn Laurenco - Neighborhood Health Plan Anton Dodek - Tufts Barbara Chase - Fallon Jonathan Scott Coblyn – Brigham and Women's Hospital Tom Ebert - Health New England

	Elaine Wilson - Harvard Pilgrim Health Care Jennifer St. Thomas – Tufts Jennifer Lavigne – Fallon Michael O'Shea - Baycare Health Neil Minkoff - Harvard Pilgrim Health Care Paul Mendis- Neighborhood Health Plan Bob Jordan - Neighborhood Health Plan Bob Sorrenti – Unicare Constance Williams – Unicare Laura Syron - Neighborhood Health Plan Susan Tiffany – Unicare Constance Hwang – Resolution Health Darren Schulte - Resolution Health Earl Steinberg – Resolution Health David Gregg – Mercer Russ Robinson - Mercer
46	**Measure Developer/Steward Updates and Ongoing Maintenance** Year the measure was first released: 2006 Month and Year of most recent revision: October 2008 What is the frequency for review/update of this measure? Annual Review When is the next scheduled review/update for this measure? Summer 2009
47	**Copyright statement/disclaimers:** Copyright © 2008 – Resolution Health, Inc. All rights reserved. The material submitted is confidential and proprietary. No use of this material is permitted other than in accordance with the Agreement with Measure Stewards between National Quality Forum and Resolution Health, Inc.
48	**Additional Information:** None
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.** ☒
50	**Date of Submission** (*MM/DD/YY*)**:** 11/20/08

PATIENT & FAMILY ENGAGEMENT

PRIORITY STATEMENT: Engage Patients and Their Families in Managing Their Health and Making Decisions About Their Care

1.1. All providers will routinely solicit and publicly report on their patients' perspectives of care

1.2. All providers will work collaboratively with their patients to assist them in making informed decisions about treatment options consistent with their values and preferences

POPULATION HEALTH

PRIORITY STATEMENT: IMPROVE THE HEALTH OF THE U.S. POPULATION

2.1. The population will be up to date on all high-priority age- and gender-appropriate evidence-based clinical preventive services

2.2. The population will receive recommended evidence-based interventions to improve targeted healthy lifestyle behaviors

2.3. All communities will demonstrate a 10% improvement in their community index of health

2.4. Americans will have all recommended high priority healthy lifestyle behaviors under control

SAFETY

PRIORITY STATEMENT: IMPROVE THE SAFETY OF THE U.S. HEALTH CARE SYSTEM

3.1. All providers will drive all preventable healthcare-associated infections (HAI) to zero

3.2. All providers will drive the incidence of preventable NQF Serious Reportable Events (SRE) to zero

3.3. All hospitals will reduce preventable and premature mortality rates to best-in-class

3.4. All hospitals and their community partners will reduce 30-day mortality rates following hospitalization for select conditions to best-in-class

PALLIATIVE CARE

PRIORITY STATEMENT: GUARANTEE APPROPRIATE AND COMPASSIONATE CARE FOR PATIENTS WITH LIFE-LIMITING ILLNESSES

4.1. All providers will identify, document, and effectively treat physical symptoms (e.g. pain, shortness of breath, constipation, others) at levels acceptable to patients with a life-limiting illness

4.2. All providers will effectively address the psychosocial and spiritual needs of patients with life-limiting illnesses and their families according to their preferences

4.3. All eligible patients will receive high quality palliative care and hospice services

CARE COORDINATION

PRIORITY STATEMENT: ENSURE PATIENTS RECEIVE WELL-COORDINATED CARE ACROSS ALL PROVIDERS, SETTINGS, AND LEVELS OF CARE

5.1. All providers will accurately and completely reconcile medications across the continuum of care (i.e. admission, transfer within and between care providers, discharge, and outpatient appointments) and ensure communication with the next provider of services

5.2. All inpatient and outpatient providers will assess the patient's perspective of the coordination of their care using a validated care coordination survey tool

5.3. All providers will reduce 30-day all-cause readmission rates resulting from poorly coordinated care to best-in-class

5.4. All providers will reduce preventable emergency department (i.e. those that could be avoided with timely access to primary care) visits resulting from poorly coordinated care by 50%

PATIENT-FOCUSED CARE

PRIORITY STATEMENT: GUARANTEE HIGH VALUE CARE ACROSS ACUTE AND CHRONIC EPISODES

6.1. All patients will receive high-value care over the course of their acute or chronic illness

OVERUSE

PRIORITY STATEMENT: ELIMINATE WASTE WHILE ENSURING THE DELIVERY OF APPROPRIATE CARE

7.1. Reduce wasteful and inappropriate care for the top ten targeted areas by 50%

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0
August 2008

The measure information you submit will be shared with NQF's Steering Committees and Technical Advisory Panels to evaluate measures against the NQF criteria of importance to measure and report, scientific acceptability of measure properties, usability, and feasibility. Four conditions (as indicated below) must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards. Not all acceptable measures will be strong—or equally strong—among each set of criteria. The assessment of each criterion is a matter of degree; however, all measures must be judged to have met the first criterion, importance to measure and report, in order to be evaluated against the remaining criteria. References to the specific measure evaluation criteria are provided in parentheses following the item numbers. Please refer to the *Measure Evaluation Criteria* for more information at *www.qualityforum.org* under Core Documents. Additional guidance is being developed and when available will be posted on the NQF website.

Use the tab or arrow (↓→) keys to move the cursor to the next field (or back ←↑). There are three types of response fields:

- drop-down menus - select one response;
- check boxes – check as many as apply; and
- text fields – you can copy and paste text into these fields or enter text; these fields are not limited in size, but in most cases, we ask that you summarize the requested information.

Please note that URL hyperlinks do not work in the form; you will need to type them into your web browser.

Be sure to answer all questions. Fields that are left blank will be interpreted as no or none. Information must be provided in this form. Attachments are not allowed except when specifically requested or to provide additional detail or source documents for information that is summarized in this form. If you have important information that is not addressed by the questions, they can be entered into item #48 near the end of the form.

For questions about this form, please contact the NQF Project Director listed in the corresponding call for measures.

	CONDITIONS FOR CONSIDERATION BY NQF
	Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards.
A (A)	*Public domain or Intellectual Property Agreement signed: IP Agreement signed and submitted (If no, do not submit)* *Template for the Intellectual Property Agreement is available at www.qualityforum.org under Core Documents.*
B (B)	*Measure steward/maintenance: Is there an identified responsible entity and process to maintain and update the measure on a schedule commensurate with clinical innovation, but at least every 3 years? Yes, information provided in contact section (If no, do not submit)*
C (C)	*Intended use: Does the intended use of the measure include BOTH public reporting AND quality improvement? Yes (If no, do not submit)*
D (D)	*Fully developed and tested: Is the measure fully developed AND tested? Yes, fully developed and tested (If not tested and no plans for testing within 24 months, do not submit)*

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0
August 2008

	(for NQF staff use) NQF Review #: EC-285-08 NQF Project: *National Voluntary Consensus Standards for Ambulatory Care Using Clinically Enriched Administrative Data*
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	*Information current as of (date- MM/DD/YY):* 06/25/09
2	*Title of Measure:* Chronic Liver Disease - Hepatitis A Vaccination
3	**Brief description of measure [1]:** Percentage of patients with chronic liver disease who have received a hepatitis A vaccine
4 (2a)	**Numerator Statement:** All patients with chronic liver disease who have received a hepatitis A vaccine **Time Window:** Past 12 months **Numerator Details** (Definitions, codes with description): see attached
5 (2a)	**Denominator Statement:** All patients, ages 18 and older, diagnosed with chronic liver disease **Time Window:** Past 12 months **Denominator Details** (Definitions, codes with description): see attached
6 (2a, 2d)	**Denominator Exclusions:** Previous history of viral hepatitis A **Denominator Exclusion Details** (Definitions, codes with description): see attached
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? No ► If "other" describe: **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8 (2a, 2e)	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? (select one) **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☒ **OR** Web page URL:

[1] Example of measure description: Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year.

(2a) **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*)
Better quality = Higher score ► If "Other", please describe:

10 **Identify the required data elements**(e.g., primary diagnosis, lab values, vital signs)**:** ICD9, CPT, pharmacy claims, lab values, patient-derived data

(2a. 4a, 4b) **Data dictionary/code table** attached ☒ **OR** Web page URL:
Data Quality (2a) *Check all that apply*
☒ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel)
☒ Data are coded using recognized data standards
☒ Method of capturing data electronically fits the workflow of the authoritative source
☐ Data are available in EHRs
☐ Data are auditable

11 **Data Source and Data Collection Methods** *Identifies the data source(s) necessary to implement the measure specifications. Check all that apply*

(2a, 4b)
☐ Electronic Health/Medical Record
☐ Electronic Clinical Database, Name:
☐ Electronic Clinical Registry, Name:
☒ Electronic Claims
☒ Electronic Pharmacy data
☒ Electronic Lab data
☐ Electronic source – other, Describe:
☐ Paper Medical Record
☐ Standardized clinical instrument, Name:
☐ Standardized patient survey, Name:
☐ Standardized clinician survey, Name:
☐ Other, Describe:
Instrument/survey attached ☐ **OR** Web page URL:

12 **Sampling** *If measure is based on a sample, provide instructions and guidance on sample size.*
Minimum sample size:
(2a)
Instructions:

13 **Type of Measure:** Process ► If "Other", please describe:

(2a) ► If part of a composite or paired with another measure, please identify composite or paired measure

14 **Unit of Measurement/Analysis** (*Who or what is being measured*) *Check all that apply.*

(2a)
☒ Can be measured at all levels
☐ Individual clinician (e.g., physician, nurse)
☐ Group of clinicians (e.g., facility department/unit, group practice)
☐ Facility (e.g., hospital, nursing home)
☐ Integrated delivery system
☐ Health plan
☐ Community/Population
☐ Other (*Please describe*):

15 **Applicable Care Settings** *Check all that apply*

(2a)
☐ Can be used in all healthcare settings
☒ Ambulatory Care (office/clinic)
☐ Behavioral Healthcare
☒ Community Healthcare
☒ Dialysis Facility
☐ Emergency Department
☐ EMS emergency medical services
☒ Health Plan
☐ Home Health
☐ Hospice
☐ Hospital
☐ Long term acute care hospital
☒ Nursing home/ Skilled Nursing Facility (SNF)
☐ Prescription Drug Plan
☐ Rehabilitation Facility
☐ Substance Use Treatment Program/Center
☐ Other (*Please describe*):

IMPORTANCE TO MEASURE AND REPORT

Note: This is a threshold criterion. If a measure is not judged to be sufficiently important to measure and report, it will not be evaluated against the remaining criteria.

16 **Addresses a Specific National Priority Partners Goal** *Enter the numbers of the specific goals related to this measure (see list of goals on last page)*: 2.1,2.2,6.1
(1a)

17 **If not related to NPP goal, identify high impact aspect of healthcare** (select one)

(1a)	**Summary of Evidence:** **Citations[2] for Evidence:**
18 (1b)	**Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.* **Summary of Evidence:** The NIDDK recommends several higher-risk groups as candidates for Hepatitis A Vaccination, including those in areas with high incidence, travelers, men who have sex with men, illegal drug users, people with chronic liver disease, and people who may be exposured to hepatitis A virus at work. Tedaldi et al. (2004) have noted that despite national reccomendations existing for years, adherence remains poor. In a trospective review of data from 9 clinic sites in 7 US cities, in the HIV Outpatient Study (HOPS), among 716 patients eligible for HAV vaccination, only 23.3% had received at least one dose. The study also examined hepatitis B vaccination and found only 32% of 612 patients eligible for HBV vaccination had received at least 1 dose. An related study by Pathman et al. (1996), based on questionnaires to over 3,000 family physicians in 9 states, suggested that adherence to hepatitis B vaccination in infants was around 30%, despite seemingly high awareness of guidelines (98.4%), agreement (70.4%), and adoption (77.7%). The American College for Gastroenterology notes the following recommendations for vaccination: American College of Gastroenterology. Chronic Liver Disease: A Primer for Vaccinations. • Fifty to 60% of chronic liver disease is due to chronic hepatitis C (HCV), approximately 30% is caused by alcohol, around 10% can be attributed to hepatitis B, and up to 5% is cause by autoimmune hepatitis and primary biliary cirrhosis…Superinfection of hepatitis C with hepatitis A may cause fulminant liver failure; superinfection of hepatitis C with hepatitis B increases the rate of progression of liver disease. Due to the shared risk factors among people acquiring hepatitis A, B, and C and the serious consequences of superinfection, the NIH and the US Veterans Health Administration have recommended that all current chronic hepatitis C patients that have not shown immunity to hepatitis A or B be vaccinated. • Several studies have determined that fulminant hepatitis A is more common in patients with pre-existing chronic liver disease, especially in those patients with chronic hepatitis B or C. • Likewise, hepatitis B is thought to be more problematic in chronic liver disease patients especially those with chronic hepatitis C. In the chronic hepatitis C patient, superinfection with hepatitis B is thought to accelerate the course of disease. In a prospective study of hepatitis B vaccination in patients with hepatitis C, Wong et al. (1996) found that, in a study of 126 consecutive patients with hepatitis C attending a hepatology clinic, the majority (75) had not been offered hepatitis B vaccination -- despite having been seen by an average of two doctors. Only nine of the 126 patients said that they had been advised to be vaccinated against hepatitis B, and of these, only seven had followed that advice. In another study of a methadone clinic population, Carter et al. (2001) found 84% of the studied patients positive for antibody to hepatitis C, and 49.7% having evidence of dual exposure. This dual exposure suggests that, for patients with hepatitis C due to IV drug use, they remain at particularly high risk of exposure to hepatitis B. The NIDDK recommends the following as candidates for Hepatitis A Vaccination: • Candidates for Hepatitis A Vaccination • Children living in areas with high incidence rates of hepatitis A (above the national average). Check with your health department to see if this applies to your area. • High-Risk Populations • Travelers to developing countries with high rates of hepatitis A, including Mexico • Men who have sex with men • Users of illegal drugs • People who work with hepatitis A virus in research settings • People who work with infected nonhuman primates

[2] Citations can include, but are not limited to journal articles, reports, web pages (URLs).

	• Recipients of clotting factor concentrates • People with chronic liver disease (because of risk of fulminant hepatitis A) **Citations for Evidence:** 1. ACG Chronic Liver Disease: A Primer for Vaccinations www.acg.gi.org (accessed January 2005) 2. N Engl J Med Prevention of Hepatitis A with the Hepatitis A Vaccine 2004;350:476-481 3. NIDDK Vaccinations for Hepatitis A and B www.digestive.niddk.nih.gov 4. Wong V, Wreghitt TG, Alexander GJ. Prospective study of hepatitis B vaccination in patients with chronic hepatitis C. BMJ. 1996 May 25;312(7042):1336-7.
19 (1b)	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure focus among populations.* **Summary of Evidence:** Disparities for vaccination specifically for patients with viral hepatitis appear to be poorly-studied, as for vaccination for patients with any chronic liver disease. Still, Wooten et al. (2007) note, in an analysis of the National Immunization Survey data, significant dispairties in childhood vaccination, especially with respect to mother's education and household income. More generally, the Health People 2010 initiative has also noted that while disparities have historically existed for hepatitis A infection, these disparities, with respect to race and ethnicity, appear to be closing thanks to childhood immunization. What remains less clear, however, are potential disparities for immunization of at-risk adults, who have already passed the age for routine childhood immunization, prior to the introduction of the guideline/practice in 1999. **Citations for evidence:** 1. Wooten et al., Am J Health Behav 2007;31(4):434-45. 2. Healthy People 2010 Mid-Course Review. Accessed at http://www.healthypeople.gov/data/midcourse/html/focusareas/FA14ProgressDisparities.htm on 10/24/2008.
20 (1c)	**If measuring an Outcome** Describe relevance to the national health goal/priority, condition, population, and/or care being addressed: **If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence** *Summarize the evidence (including citations to source) supporting the focus of the measure as follows:* • Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit. • Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s). • Structure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit. • Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public. • Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care. • Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality. **Type of Evidence** *Check all that apply* ☐ Evidence-based guideline ☐ Quantitative research studies ☐ Meta-analysis ☐ Qualitative research studies ☐ Systematic synthesis of research ☐ Other (*Please describe*):

Overall Grade for Strength of the Evidence[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)*: Equivalent to USPSTF B grade
Summary of Evidence (*provide guideline information below*): The evidence from vaccination against hepatitis A in chronic liver disease can drawn largely from the body of literature for vaccination against superinfection in the context of existing viral Hepatitis B or C, which represent major causes of chronic liver disease in the U.S..

In a 2001 review, Koff notes that "because of common risk factors, people with HCV are at risk for exposure to hepatitis A virus (HAV) or hepatitis B virus (HBV)." Koff goes on to cite two seminal articles by Keefe (1999, 1995) noting that " underlying chronic liver disease caused by HBV and HCV infection has been reported to predispose patients to an increased risk of complications from HAV infection. These complications are more severe and more likely to be fatal than those in individuals without preexisting hepatic damage." Particularly concern is the devastation of coinfection with an additional viral hepatitis on existing hepatitis C. Koff cites two studies of hepatitis A superinfection that describe "the deleterious effects of acquiring HAV in the presence of underlying HCV or chronic liver disease" -- namely, a much higher prevalence fatal hepatic failure, with the potential for raid hepatic decompensation -- in these cases, less than 6 weeks after exposure.

In the case of Hepatitis B superinfection in patients with Hepatitis C, Koff also notes that the literature supports worse outcomes for hepatitis B superinfection of Hepatitis C. Co-infection appears, across several studies, to be correlated with significantly more complications (e.g. bleeding varices, encephalopathy, hepatocellular carcinoma, spontaneous bacterial peritonitis) than with hepatitis C infection alone.

Vaccination appears to be effective in Hepatitis B patients as well. Koff notes that "Hepatitis A vaccine (inactivated) (Havrix; SmithKline Beecham Biologicals, Rixensart, Belgium) and hepatitis B vaccine (recombinant) (Engerix-B; SmithKline Beecham Biologicals) have been evaluated in patients with chronic liver disease. A multicenter study compared the safety and immunogenicity of hepatitis A vaccine in 46 subjects with chronic HBV infection, 67 subjects with chronic HCV infection, 60 subjects with nonviral chronic liver disease, and 104 healthy control subjects. A total of 800 doses of hepatitis A vaccine, 1,440 enzyme-linked immunosorbent assay units, were administered intramuscularly at months 0 and 6. Hepatitis A vaccine was highly immunogenic, with seroconversion (defined as previously seronegative patients who achieved HAV antibody titers >=33 mIU/mL) occurring in 94.3% to 97.7% of the subjects with chronic liver disease of all types and in 98.2% of the healthy subjects. Measurable geometric mean antibody titers were achieved in all subjects, and, although mean titers were significantly lower in subjects with chronic hepatitis than in controls, an adequate response was observed for most subjects."

Beyond this, Koff suggests that prevaccination and postvaccination testing are warranted, though evidence is indirect (e.g. seroprotection may be achieved in only 75% of subjects with endstage liver disease with standard vaccine dosage and regimens).

More recently, Jakiche et al. (2007) completed a cost-effectiveness analysis of strategies for vaccinating U.S. veterans with hepatitis C virus against hepatitis A and hepatitis B viruses. Notwithstanding that a cost-effectiveness study itself implies some degree of effectiveness of the intervention, Jakiche found that a selective vaccination strategy was most cost-effective -- that is, based on immunity determined by blood testing first -- but that universal vaccination is more effective overall and the incremental cost-effectiveness ratio is minimal (154 dollars per additional patient immune to HAV and HBV).

Citations for Evidence: Koff RS. Risks associated with hepatitis A and hepatitis B in patients with hepatitis C. J Clin Gastroenterol. 2001 Jul;33(1):20-6.
Keeffe EB. Vaccination against hepatitis A and B in chronic liver disease. Viral Hepatitis Rev 1999; 5: 77–88.
Keeffe EB. Is hepatitis A more severe in patients with chronic hepatitis B and other chronic liver diseases? Am J Gastroenterol 1995; 90: 201–5.
Jakiche R, Borrego ME, Raisch DW, Gupchup GV, Pai MA, Jakiche A. The cost-effectiveness of two strategies for vaccinating US veterans with hepatitis C virus infection against hepatitis A and hepatitis B

[3]The strength of the body of evidence for the specific measure focus should be systematically assessed and rated, e.g., USPSTF grading system

	viruses. Am J Med Sci. 2007 Jan;333(1):26-34.
21 (1c)	**Clinical Practice Guideline** *Cite the guideline reference; quote the specific guideline recommendation related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.* **Guideline Citation:** CDC Hepatitis A Vaccination Guidelines (accessed on 10/24/2008 at http://www.cdc.gov/hepatitis/HAV/HAVfaq.htm#vaccine) and NIDDK Vaccinations for Hepatitis A and B www.digestive.niddk.nih.gov ACG Chronic Liver Disease: A Primer for Vaccinations www.acg.gi.org (accessed January 2005 **Specific guideline recommendation:** The American College for Gastroenterology notes the following recommendations for vaccination: American College of Gastroenterology. Chronic Liver Disease: A Primer for Vaccinations. • Fifty to 60% of chronic liver disease is due to chronic hepatitis C (HCV), approximately 30% is caused by alcohol, around 10% can be attributed to hepatitis B, and up to 5% is cause by autoimmune hepatitis and primary biliary cirrhosis…Superinfection of hepatitis C with hepatitis A may cause fulminant liver failure; superinfection of hepatitis C with hepatitis B increases the rate of progression of liver disease. Due to the shared risk factors among people acquiring hepatitis A, B, and C and the serious consequences of superinfection, the NIH and the US Veterans Health Administration have recommended that all current chronic hepatitis C patients that have not shown immunity to hepatitis A or B be vaccinated. • Several studies have determined that fulminant hepatitis A is more common in patients with pre-existing chronic liver disease, especially in those patients with chronic hepatitis B or C. • Likewise, hepatitis B is thought to be more problematic in chronic liver disease patients especially those with chronic hepatitis C. In the chronic hepatitis C patient, superinfection with hepatitis B is thought to accelerate the course of disease The CDC has maintained largely similar recommendations since 1999 for Hepatitis A vaccination. Currently, the groups who should be vaccinated against Hepatitis A are as follows: - All children at age 1 year (i.e., 12–23 months). Children who have not been vaccinated by age 2 can be vaccinated at subsequent visits. -- Children and adolescents ages 2–18 who live in states or communities where routine hepatitis A vaccination has been implemented because of high disease incidence.Before 2006, when hepatitis A vaccination was first recommended for all children at age 1 year, vaccination had been targeted to children living in states or communities that had historically high rates of hepatitis A. States, counties, and communities with existing hepatitis A vaccination programs for children aged 2–18 years are encouraged to maintain these programs. In those communities, new efforts focused on routine vaccination of children at age 1 year should enhance, not replace, ongoing programs directed at a broader population of children. - Persons traveling to or working in countries that have high or intermediate rates of hepatitis A. Persons from developed countries who travel to developing countries are at high risk for hepatitis A. The risk for hepatitis A exists even for travelers to urban areas, those who stay in luxury hotels, and those who report that they have good hygiene and that they are careful about what they drink and eat (see Hepatitis A and International Travel for more information). - Men who have sex with men. Sexually active men (both adolescents and adults) who have sex with men should be vaccinated. Hepatitis A outbreaks among men who have sex with men have been reported frequently. Recent outbreaks have occurred in urban areas in the United States, Canada, and Australia.

www.ahrq.gov/clinic/uspstmeth.htm: A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. C - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

	Users of illegal injection and noninjection drugs. During the past two decades, outbreaks of hepatitis A have been reported with increasing frequency among users of both injection and noninjection drugs (e.g., methamphetamine) in North America, Europe, and Australia. - Persons who have occupational risk for infection. Persons who work with HAV-infected primates or with HAV in a research laboratory setting should be vaccinated. No other groups have been shown to be at increased risk for HAV infection because of occupational exposure. - Persons who have chronic liver disease. Persons with chronic liver disease who have never had hepatitis A should be vaccinated, as they have a higher rate of fulminant hepatitis A (i.e., rapid onset of liver failure, often leading to death). Persons who are either awaiting or have received liver transplants also should be vaccinated. - Persons who have clotting-factor disorders. Persons who have never had hepatitis A and who are administered clotting-factor concentrates, especially solvent detergent-treated preparations, should be vaccinated. Notably, the CDC has specifically cited "chronic liver disease" in its recommendations: "Vaccination of Persons with Chronic Liver Disease: Susceptible persons with chronic liver disease should be vaccinated. Available data do not indicate a need for routine vaccination of persons with chronic HBV or HCV infections without evidence of chronic liver disease. Susceptible persons who are either awaiting or have received liver transplants should be vaccinated." The NIDDK recommends the following as candidates for Hepatitis A Vaccination: • Candidates for Hepatitis A Vaccination • Children living in areas with high incidence rates of hepatitis A (above the national average). Check with your health department to see if this applies to your area. • High-Risk Populations • Travelers to developing countries with high rates of hepatitis A, including Mexico • Men who have sex with men • Users of illegal drugs • People who work with hepatitis A virus in research settings • People who work with infected nonhuman primates • Recipients of clotting factor concentrates • People with chronic liver disease (because of risk of fulminant hepatitis A) **Guideline author's rating of strength of evidence** (*If different from USPSTF, also describe it and how it relates to USPSTF)***:*** No explicit rating. Consensus opinion based on randomized controlled trials and epidemiological studies, depending on the group at risk. **Rationale for using this guideline over others:** Nationally recognized guidelines in immunization and in hepatology
22 (1c)	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or contradictory guidelines and provide citations.* **Summary:** **Citations:**
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** Patients with chronic liver disease are at high risk for liver failure and tolerate additional insults, such as Hepatitis A infection, poorly. The increased use of Hepatitis A vaccination in these patients with chronic liver disease may decrease the risk and reduce subsequent complications and cost.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☐ **OR** Web page URL:

25 (2b)	**Reliability Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
26 (2c)	**Validity Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.* **Summary of Evidence supporting exclusion(s):** **Citations for Evidence:** **Data/sample:** **Analytic Method:** **Testing Results:**
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:**
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** **Analytic Method:** **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** Results from testing **Data/sample:** We measured a commercial population of 459,196 members. **Methods to identify statistically significant and practically/meaningfully differences in performance:** Compliance to the performance measure is measured using an analysis of the claims data; in this case looking for evidence of hepatitis vaccination or immunity. In addition, where appropriate we analyze patient data collected either from the patient's PHR or during a disease management program. **Results:** We found that of the 290 members who satisfied the denominator, 100 were in the numerator, indicating a compliance rate of 34%.
31	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender,

(2h)	SES, health literacy), **provide stratified results:** ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:
	USABILITY
32 (3)	*Current Use Testing completed If in use, how widely used Health plan or sytem ► If "other," please describe:* ☐ *Used in a public reporting initiative, name of initiative:* *Sample report attached* ☐ *OR Web page URL:*
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** Administrative claims database from health plans; lab results data; patient derived data. **Methods:** The performance measure is similar in message to a clinical alert that has been operational since 2005. Compliance to the clinical alert is measured using an analysis of subsequent claims, in this case the appearance of claims for vaccination. In addition, a feedback tool accompanies every clinical alert message, and includes options indicating agreement or disagreement with the message. **Results:** In practice, fewer than 1% of the respondents disagreed with the medical literature. Roughly 6% showed objective evidence of compliance with the clinical alert.
34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☐ Other measure(s) on same topic ☐ Other measure(s) for same target population ☒ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):** **Are the measure specifications harmonized with existing NQF-endorsed™ measures?** (select one) ►If not fully harmonized, provide rationale: **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:**
	FEASIBILITY
35 (4a)	*How are the required data elements generated? Check all that apply* ☒ *Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment)* ☐ *Data elements are generated from a patient survey (e.g., CAHPS)* ☒ *Data elements are generated through coding performed by someone other than the person who obtained the original information (e.g., DRG or ICD-9 coding on claims)* ☒ *Other, Please describe: Data obtained through electronic personal health records and telephonic, nurse-driven disease management programs*
36 (4b)	*Electronic Sources All data elements* ►*If all data elements are not in electronic sources, specify the near-term path to electronic collection by most providers:* ►*Specify the data elements for the electronic health record:*
37 (4c)	*Do the specified exclusions require additional data sources beyond what is required for the other specifications? No*

	►*If yes, provide justification:*
38 (4d)	*Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure:* *Generally, the use of claims data has inherent errors and inaccuracies related to incorrect coding, or missing data, which can result in less specificity in the definition of denominator and /or the numerator. To minimize these errors and inaccuracies, we use clinically enriched data (laboratory results, medication lists) to augment the claims data. In addition where possible, to corroborate the claims data, we solicit feedback from both providers via a feedback form and patients from a personal health record or from a disease management program.* *We do not anticipate significant unintended consequences from the implementation of the measure. Our measures are all developed from evidence-based literature or from clinical guidelines and are designed to encourage appropriate care of the patient.* *Describe how could these potential problems be audited: The inclusion of patient-derived data from a personal health record or through a disease management program may be used to confirm the presence or absence of a medication; ultimately the data sources may be tested against a sample of medical charts.* *Did you audit for these potential problems during testing? No If yes, provide results:*
39 (4e)	*Testing feasibility Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:* *Multiple sources of corroborating clinical data are necessary to correctly identify patients in the denominator. Earlier testing efforts using specifications similar to HEDIS were more sensitive yet nonspecific. The additional of supporting information for certain diagnostic conditions (e.g., diabetic medications and supplies in addition to ICD9 codes for diabetes) significantly decreased the number identified in the denominator, yet the analysis led to a much higher compliance rate, likely because of the exclusion of fewer false positives in the denominator.*
	CONTACT INFORMATION
40	*Web Page URL for Measure Information Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* *Web page URL: www.activehealth.net*
41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Madhavi **MI:** **Last Name:** Vemireddy **Credentials (MD, MPH, etc.):** MD **Organization:** ActiveHealth Management **Street Address:** 102 Madison Avenue **City:** New York **State:** NY **ZIP:** 10016 **Email:** mvemireddy@activehealth.net **Telephone:** 212-651-8200 ext:
42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):**

	Organization: **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext
	ADDITIONAL INFORMATION
45	**Workgroup/Expert Panel involved in measure development** No workgroup or panel used ►If workgroup used, describe the members' role in measure development: ►Provide a list of workgroup/panel members' names and organizations:
46	*Measure Developer/Steward Updates and Ongoing Maintenance* *Year the measure was first released: 2005* *Month and Year of most recent revision: October 2008* *What is the frequency for review/update of this measure? Biennially* *When is the next scheduled review/update for this measure? 2010*
47	**Copyright statement/disclaimers:** This information, including any attachments hereto, is the sole, exclusive, proprietary and confidential property of Active Health Management, Inc., and is for the exclusive use of The National Quality Forum. Any use, copying, disclosure, dissemination or distribution by anyone other than the National Quality Forum is strictly prohibited.
48	**Additional Information:**
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.**☒
50	**Date of Submission** (*MM/DD/YY*)**:** 02/09/09

PATIENT & FAMILY ENGAGEMENT

PRIORITY STATEMENT: Engage Patients and Their Families in Managing Their Health and Making Decisions About Their Care

1.1. All providers will routinely solicit and publicly report on their patients' perspectives of care

1.2. All providers will work collaboratively with their patients to assist them in making informed decisions about treatment options consistent with their values and preferences

POPULATION HEALTH

PRIORITY STATEMENT: IMPROVE THE HEALTH OF THE U.S. POPULATION

2.1. The population will be up to date on all high-priority age- and gender-appropriate evidence-based clinical preventive services

2.2. The population will receive recommended evidence-based interventions to improve targeted healthy lifestyle behaviors

2.3. All communities will demonstrate a 10% improvement in their community index of health

2.4. Americans will have all recommended high priority healthy lifestyle behaviors under control

SAFETY

PRIORITY STATEMENT: IMPROVE THE SAFETY OF THE U.S. HEALTH CARE SYSTEM

3.1. All providers will drive all preventable healthcare-associated infections (HAI) to zero

3.2. All providers will drive the incidence of preventable NQF Serious Reportable Events (SRE) to zero

3.3. All hospitals will reduce preventable and premature mortality rates to best-in-class

3.4. All hospitals and their community partners will reduce 30-day mortality rates following hospitalization for select conditions to best-in-class

PALLIATIVE CARE

PRIORITY STATEMENT: GUARANTEE APPROPRIATE AND COMPASSIONATE CARE FOR PATIENTS WITH LIFE-LIMITING ILLNESSES

4.1. All providers will identify, document, and effectively treat physical symptoms (e.g. pain, shortness of breath, constipation, others) at levels acceptable to patients with a life-limiting illness

4.2. All providers will effectively address the psychosocial and spiritual needs of patients with life-limiting illnesses and their families according to their preferences

4.3. All eligible patients will receive high quality palliative care and hospice services

CARE COORDINATION

PRIORITY STATEMENT: ENSURE PATIENTS RECEIVE WELL-COORDINATED CARE ACROSS ALL PROVIDERS, SETTINGS, AND LEVELS OF CARE

5.1. All providers will accurately and completely reconcile medications across the continuum of care (i.e. admission, transfer within and between care providers, discharge, and outpatient appointments) and ensure communication with the next provider of services

5.2. All inpatient and outpatient providers will assess the patient's perspective of the coordination of their care using a validated care coordination survey tool

5.3. All providers will reduce 30-day all-cause readmission rates resulting from poorly coordinated care to best-in-class

5.4. All providers will reduce preventable emergency department (i.e. those that could be avoided with timely access to primary care) visits resulting from poorly coordinated care by 50%

PATIENT-FOCUSED CARE

PRIORITY STATEMENT: GUARANTEE HIGH VALUE CARE ACROSS ACUTE AND CHRONIC EPISODES

6.1. All patients will receive high-value care over the course of their acute or chronic illness

OVERUSE

PRIORITY STATEMENT: ELIMINATE WASTE WHILE ENSURING THE DELIVERY OF APPROPRIATE CARE

7.1. Reduce wasteful and inappropriate care for the top ten targeted areas by 50%

PERFORMANCE MEASURE RULE:
Chronic Liver Disease - Hepatitis A Vaccination

DENOMINATOR

All of the Following are correct:

1. Age >= 18 Years
2. Presence of at least 4 LIVER DISEASE CHRONIC (EXCL HEP A & C) diagnosis in the past 12 months at least 1 month apart

DENOMINATOR EXCLUSIONS

One of the following is correct:

1. Presence of at least 1 HEPATITIS A INFECTION diagnosis in the past
2. If Pregnancy Exclusion Validation is confirmed (see below)

NUMERATOR

One of the following is correct:

1. Presence of at least 1 VACCINE-HEPATITIS A procedure in the past
2. Presence of at least 1 Refill VACCINE-HEP A in the past
3. Presence of patient data confirming at least 1 PDD- HEPATITIS A VAC OBSERVED result in the past
4. Presence of at least 1 HEPATITIS A LABS result in the past
5. Presence of at least 1 HEPATITIS A TESTING procedure in the past

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Pregnancy Exclusion Validation

One of the following is correct:

1. Presence of at least 1 HCG (LOINC) > 100 in the past 6 months
2. Presence of patient data confirming at least 1 PDD- PREGNANCY in the past 6 months
3. Presence of at least 1 PREGNANCY diagnosis in the past 6 months
4. Presence of at least 1 PREGNANCY RELATED PROCEDURE procedure in the past 6 months

Pregnancy Exclusion Validation Exclusion

One of the following is correct:

1. Presence of at least 1 DELIVERY AND ABORTION (ICD9) diagnosis in the past 3 months
2. Presence of at least 1 HYSTERECTOMY procedure in the past 3 months
3. Presence of at least 1 DELIVERY AND ABORTION (CPT) procedure in the past 3 months
4. Presence of at least 1 refill UTEROTONICS exists in the past 3 months
5. Presence of at least 1 NONVIABLE PREGNANCY diagnosis in the past 3 months

Note: A 3 month time window has been added to certain timeframes in order to account for the inherent delay in the acquisition of administrative claims data.

Note: A current refill is defined as a refill in which the day supply of a drug extends into the end of the measurement window plus a grace period of 30 days.