Quality ID #516: Hepatitis C Virus (HCV): Sustained Virological Response (SVR)

2026 COLLECTION TYPE:
MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) CLINICAL QUALITY MEASURE (CQM)

MEASURE TYPE:
Outcome – High Priority

DESCRIPTION:
Percentage of patients aged >= 18 years with active hepatitis C (HCV) with negative/undetectable HCV ribonucleic acid (RNA) at least 20 weeks to 12 months after positive/detectable HCV RNA test result.

INSTRUCTIONS:

Reporting Frequency:
This measure is to be submitted a minimum of once per performance period for denominator eligible cases as defined in the denominator criteria.

Intent and Clinical Applicability
This measure is intended to reflect the quality of services provided for patients aged 18 years and older with active hepatitis C (HCV). This measure may be submitted by Merit-based Incentive Payment System (MIPS) eligible clinicians who perform the quality actions as defined by the numerator based on the services provided and the measure-specific denominator coding.

Measure Strata and Performance Rates:
This measure contains one strata defined by a single submission criteria.
This measure produces a single performance rate.

Implementation Considerations
For the purposes of MIPS implementation, this patient-process measure is submitted a minimum of once per patient for the performance period. The most advantageous quality data code will be used if the measure is submitted more than once.

The CPT codes 87522 and 87521 can be used to determine if a Hepatitis C Virus Quantitative or Qualitative RNA Test was performed to support both denominator and numerator identification.

Telehealth:
TELEHEALTH ELIGIBLE: This measure is appropriate for and applicable to the telehealth setting. Patient encounters conducted via telehealth using encounter code(s) found in the denominator encounter criteria are allowed for this measure. Therefore, if the patient meets all denominator criteria for a telehealth encounter, it would be appropriate to include them in the denominator eligible patient population. Telehealth eligibility is at the measure level for inclusion within the denominator eligible patient population and based on the measure specification definitions which are independent of changes to coding and/or billing practices.

Measure Submission Type:
The quality data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third party intermediaries that utilize this collection type for submissions; however, these codes may be submitted for those third party intermediaries that utilize Medicare Part B claims data. The coding provided to identify the measure criteria: Denominator or Numerator, may be an example of coding that could be used to identify patients that meet the intent of this clinical topic. When implementing this measure, please refer to the 'Reference Coding' section to determine if other codes or code languages that meet the intent of the criteria may also be used within the medical record to identify and/or assess patients. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

DENOMINATOR:
All patients aged >= 18 years at the time of the eligible encounter within the denominator identification period.

Definition:
Denominator Identification Period – The twelve-month period in which eligible patients have an eligible encounter and have a positive HCV RNA test result. The denominator identification period is defined as 01/01/2025 – 12/31/2025.

Denominator Criteria (Eligible Cases):
All patients aged greater than or equal to 18 years at the time of the eligible encounter within the denominator identification period
AND
Diagnosis for active Hepatitis C Virus (HCV) (ICD-10-CM): B18.2, B19.20, B19.21, Z22.52
AND
Patient encounter during the denominator identification period (CPT): 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215
AND
Hepatitis C Virus Quantitative or Qualitative RNA Test Completed during the denominator identification period (CPT): 87522, 87521
AND
Positive/Detectable Hepatitis C Virus Quantitative or Qualitative RNA Test Result during the denominator identification period: M1482
AND NOT
DENOMINATOR EXCLUSION:
Patients receiving hospice or palliative care or who died during the measurement period): M1481

NUMERATOR:
All patients aged >= 18 years at the time of the eligible encounter with an eligible encounter and positive/detectable HCV RNA test result in the denominator identification period who have a subsequent negative/undetectable HCV RNA test result 20 weeks to 12 months after first positive/detectable HCV RNA test result identified in the denominator identification period.

Definition:
Patient with Limited Life Expectancy – Recommendation is that HCV treatments be given to those patients with a life expectancy of greater than 1 year. Therefore, for the purposes of the denominator exception, limited life expectancy would less than or equal to 1 year.

NUMERATOR NOTE:
Patient must have an initial positive HCV RNA test followed by a negative HCV RNA test from 20 weeks to 12 months to confirm SVR.

Numerator Options:

Performance Met:	Patients who achieve sustained virological response as identified by an HCV RNA test (CPT 87522) or (CPT 87521) with a negative/undetectable HCV RNA result that occurred 20 weeks to 12 months after the first positive/detectable HCV RNA test result within the denominator identification period. (M1483)

OR

Denominator Exception:	Patients who did not have a repeat HCV RNA labs performed for medical reasons documented by clinician (e.g., patient with limited life expectancy, delay in treatment of HCV related to treatment of HIV, HBV, hepatocellular carcinoma, decompensated cirrhosis). (M1484)

OR

Performance Not Met:	Patients who did not achieve sustained virological response as identified by an HCV RNA test (CPT 87522) or (CPT 87521) with a negative/undetectable HCV RNA result that occurred 20 weeks to 12 months after the first positive/detectable HCV RNA test result within the denominator identification period. (M1485)

RATIONALE:

Achieving SVR is the first step toward reducing future HCV morbidity and mortality. Once achieved, 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 SVR usually have improvement in liver histology and clinical outcomes. American Association for the Study of Liver Diseases (AASLD) guidelines state that the shortest treatment is 8 weeks and SVR is measured 12 weeks after completing treatment.

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 studies (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. (AHRQ 2013)

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. (AHRQ 2013)

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., 2015)

CLINICAL RECOMMENDATION STATEMENTS:

With the advent of new direct acting antiviral treatments, SVR can be as high as 90-95% for most patients. However, adherence to recommended treatment is crucial to ensure the high rate of response. Emerging data from clinical practice show variation in SVR rate across different institutions, ranging from 65 to 87% for the most widely used combination in 2014. This wide variation provides an opportunity to improve the care of HCV patients. (Yehia, B, et al, 2014)

REFERENCES:

Agency for Healthcare Research and Quality. (2013). *Comparative effectiveness review: Treatment of hepatitis C virus infection in adults*. (Report No. 13EHC068EF). Rockville, MD: AHRQ. Retrieved from https://effectivehealthcare.ahrq.gov/sites/default/files/pdf/hepatitis-c_research.pdf

Chou R, Hartung D, Rahman B, Wasson N, Cottrell EB, Fu R. Comparative effectiveness of antiviral treatment for hepatitis C virus infection in adults: a systematic review. Ann Intern Med. 2013 Jan 15;158(2):114-23. doi:

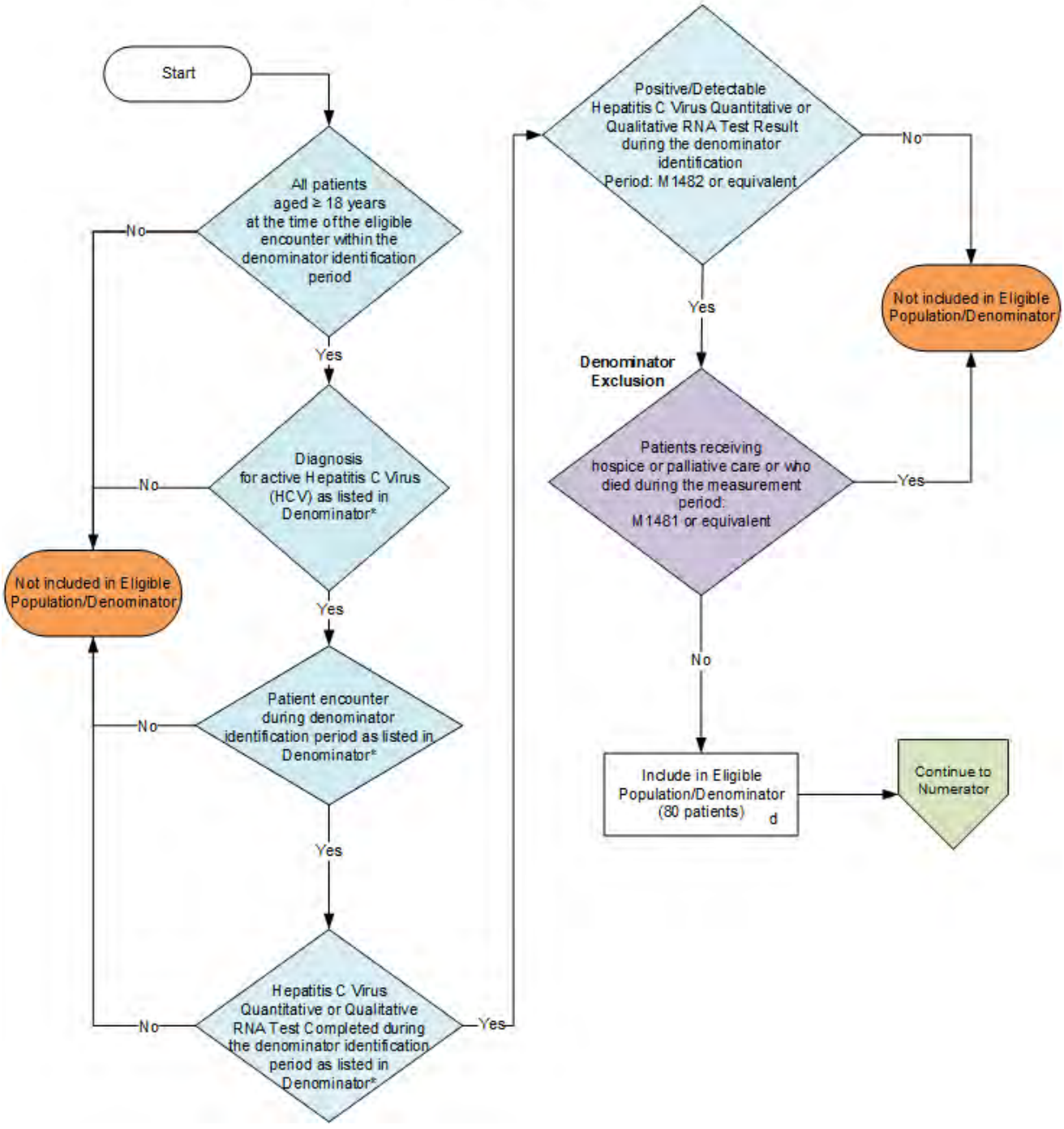
10.7326/0003-4819-158-2-201301150-00576. PMID: 23437439.

Yehia B, Schranz A, Umscheid C, and Lo Re V. The Treatment Cascade for Chronic Hepatitis C Virus Infection in the United Stated: A Systematic Review and Meta-Analysis. PLoS ONE 9(7), July 2014. https://doi.org/10.1371/journal.pone.0101554

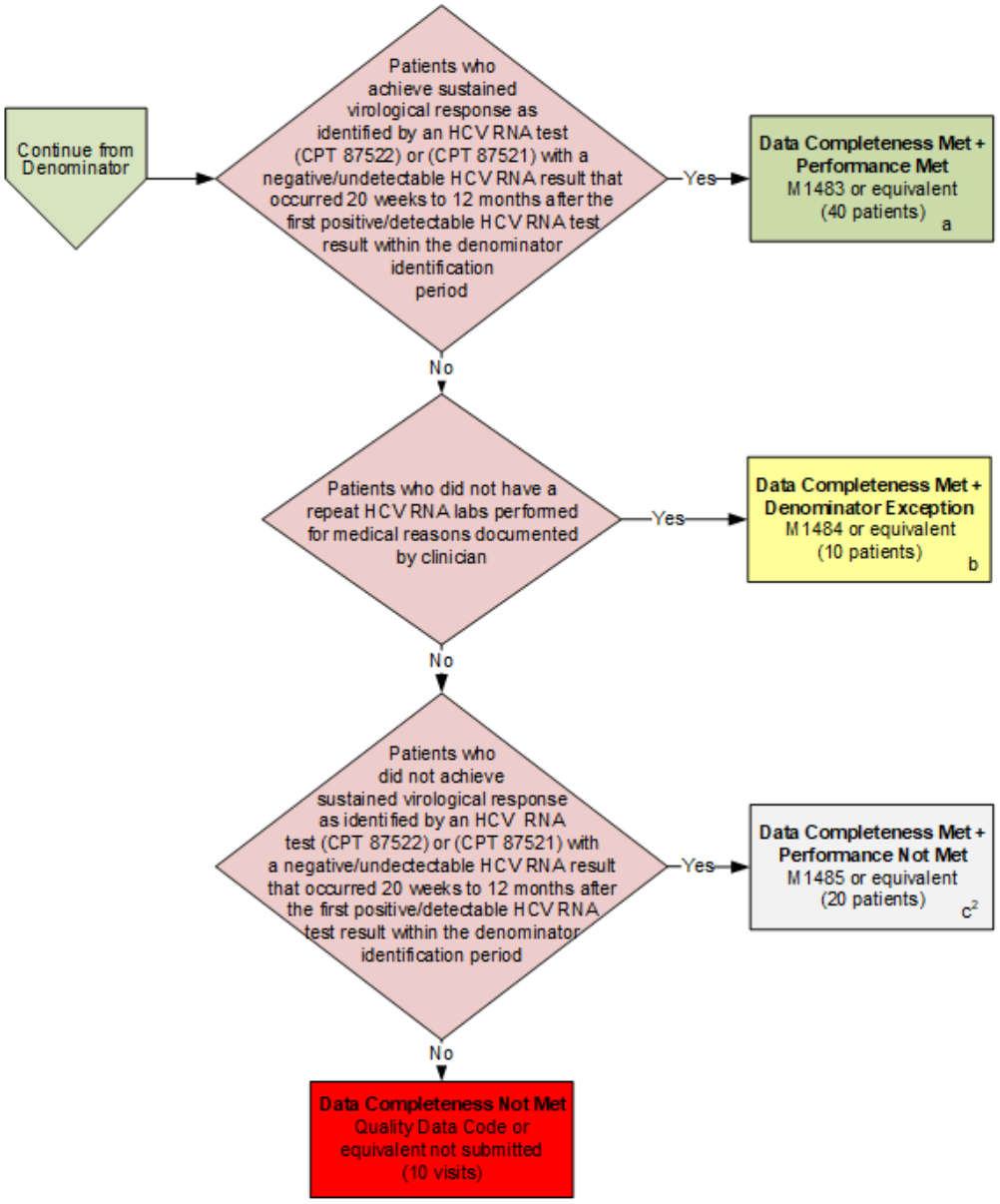
2026 Clinical Quality Measure Flow for Quality ID #516
Hepatitis C Virus (HCV): Sustained Virological Response (SVR)

Disclaimer: *Refer to the measure specification for specific coding and instructions to submit this measure.*

Denominator



Numerator



SAMPLE CALCULATIONS

Data Completeness=

Performance Met (a=40 patients) + Denominator Exception (b=10 patients) + Performance Not Met (c=20 patients) = 70 patients = **87.50%**

Eligible Population / Denominator (d=80 patients**) = 80 patients

Performance Rate=

Performance Met (a^1+a^2=80 patients) = 80 patients = **66.67%**

Data Completeness Numerator (140 patients) – Denominator Exception (b^1+b^2=20 patients) = 120 patients

*See the posted measure specification for specific coding and instructions to submit this measure.
NOTE : Submission Frequency: Patient-Process

2026 Clinical Quality Measure Flow Narrative for Quality ID #516: Hepatitis C Virus (HCV): Sustained Virological Response (SVR)

Disclaimer: Refer to the measure specification for specific coding and instructions to submit this measure.

1. Start with Denominator
2. *All patients aged greater than or equal to 18 years at the time of the eligible encounter within the denominator identification period.*
3. Check *Diagnosis for active Hepatitis C Virus (HCV) as listed in Denominator*:*
    a. If *Diagnosis for active Hepatitis C Virus (HCV) as listed in Denominator** equals No, do not include in *Eligible Population/Denominator.* Stop processing.
    b. If *Diagnosis for active Hepatitis C Virus (HCV) as listed in Denominator** equals Yes, proceed to check *Patient encounter during the performance period as listed in Denominator**.
4. Check *Patient encounter during the denominator identification period as listed in Denominator**:
    a. If *Patient encounter during the denominator identification period as listed in Denominator** equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Patient encounter during the denominator identification period as listed in Denominator** equals Yes, proceed to check *Hepatitis C Virus Quantitative or Qualitative RNA Test Completed during the denominator identification period.*
5. Check *Hepatitis C Virus Quantitative or Qualitative RNA Test Completed during the denominator identification period:*
    a. If *Hepatitis C Virus Quantitative or Qualitative RNA Test Completed during the denominator identification period* equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Hepatitis C Virus Quantitative or Qualitative RNA Test Completed during the denominator identification period* equals Yes, proceed to check *Positive/Detectable Hepatitis C Virus Quantitative or Qualitative RNA Test Result during the denominator identification period*.
6. Check *Positive/Detectable Hepatitis C Virus Quantitative or Qualitative RNA Test Result during the denominator identification period:*
    a. If *Positive/Detectable Hepatitis C Virus Quantitative or Qualitative RNA Test Result during the denominator identification period* equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Positive/Detectable Hepatitis C Virus Quantitative or Qualitative RNA Test Result during the denominator identification period* equals Yes, proceed to check *Patients receiving hospice or palliative care or who died during the measurement period*.
7. Check *Patients receiving hospice or palliative care or who died during the measurement period:*
    a. If *Patients receiving hospice or palliative care or who died during the measurement period* equals Yes, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Patients receiving hospice or palliative care or who died during the measurement period* equals No, include in *Eligible Population/Denominator*.
8. Denominator Population:

- Denominator Population is all Eligible Patients in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 patients in the Sample Calculation.

9. Start Numerator

10. Check *Patients who achieve sustained virological response as identified by an HCV RNA test (CPT 87522) or (CPT 87521) with a negative/undetectable HCV RNA result that occurred 20 weeks to 12 months after the first positive/detectable HCV RNA test result within the denominator identification period*:

    a. If *Patients who achieve sustained virological response as identified by an HCV RNA test (CPT 87522) or (CPT 87521) with a negative/undetectable HCV RNA result that occurred 20 weeks to 12 months after the first positive/detectable HCV RNA test result within the denominator identification period* equals Yes, include in *Data Completeness Met and Performance Met*.

        - *Data Completeness Met and Performance Met* is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 40 patients in Sample Calculation.

    b. If *Patients who achieve sustained virological response as identified by an HCV RNA test (CPT 87522) or (CPT 87521) with a negative/undetectable HCV RNA result that occurred 20 weeks to 12 months after the first positive/detectable HCV RNA test result within the denominator identification period* equals No, proceed to check *Patients who did not have a repeat HCV RNA labs performed for medical reasons documented by clinician*.

11. Check *Patients who did not have a repeat HCV RNA labs performed for medical reasons documented by clinician*:

    a. If *Patients who did not have a repeat HCV RNA labs performed for medical reasons documented by clinician* equals Yes, include in *Data Completeness Met and Denominator Exception*.

        - *Data Completeness Met and Denominator Exception* is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter b equals 10 patients in the Sample Calculation.

    b. If *Patients who did not have a repeat HCV RNA labs performed for medical reasons documented by clinician* equals No, proceed to check *Patients who did not achieve sustained virological response as identified by an HCV RNA test (CPT87522) or (CPT 87521) with a negative/undetectable HCV RNA result that occurred 20 weeks to 12 months after the first positive/detectable HCV RNA test result within the denominator identification period*.

12. Check *Patients who did not have a repeat HCV RNA labs performed for medical reasons documented by clinician equals No, proceed to check Patients who did not achieve sustained virological response as identified by an HCV RNA test (CPT 87522) or (CPT 87521) with a negative/undetectable HCV RNA result that occurred 20 weeks to 12 months after the first positive/detectable HCV RNA test result within the denominator identification period*:

    a. If *Patients who did not have a repeat HCV RNA labs performed for medical reasons documented by clinician equals No, proceed to check Patients who did not achieve sustained virological response as identified by an HCV RNA test (CPT87522) or (CPT 87521) with a negative/undetectable HCV RNA result that occurred 20 weeks to 12 months after the first positive/detectable HCV RNA test result within the denominator identification period* equals Yes, include in *Data Completeness Met and Performance Not Met*.

- *Data Completeness Met and Performance Not Met* is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 20 patients in the Sample Calculation.

b. If *Patients who did not have a repeat HCV RNA labs performed for medical reasons documented by clinician equals No, proceed to check Patients who did not achieve sustained virological response as identified by an HCV RNA test (CPT87522) or (CPT 87521) with a negative/undetectable HCV RNA result that occurred 20 weeks to 12 months after the first positive/detectable HCV RNA test result within the denominator identification period* equals No, proceed to check *Data Completeness Not Met*.

13. Check *Data Completeness Not Met*:

- If *Data Completeness Not Met*, the Quality Data Code or equivalent was not submitted. 10 patients have been subtracted from the Data Completeness Numerator in the Sample Calculation.

Sample Calculations

Data Completeness equals Performance Met (a equals 40 patients) plus Denominator Exception (b equals 10 patients) plus Performance Not Met (c equals 20 patients) divided by Eligible Population/Denominator (d equals 80 patients). All equals 70 patients divided by 80 patients. All equals 87.50 percent.

Performance Rate equals Performance Met (a equals 40 patients) divided by Data Completeness Numerator (70 patients) minus Denominator Exception (b equals 10 patients). All equals 40 patients divided by 60 patients. All equals 66.67 percent.

*See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Patient-Process

The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification.