NATIONAL QUALITY FORUM

Measure Evaluation 4.1
January 2010

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The sub-criteria and most of the footnotes from the evaluation criteria are provided in Word comments and will appear if your cursor is over the highlighted area (or in the margin if your Word program is set to show revisions in balloons). Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each sub-criterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the* sub-criteria *(yellow highlighted areas)*.

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the sub-criterion, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few sub-criteria as indicated)

(for NQF staff use) **NQF Review** #: PSM-020-10 **NQF Project:** Patient Safety Measures

MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Patient(s) with inflammatory bowel disease taking methotrexate, azathioprine or mercaptopurine that had serum ALT or AST test in last 6 reported months.
De.2 **Brief description of measure***:* This measure identifies individuals with inflammatory bowel disease, 12 years of age or older, taking taking methotrexate, azathioprine or mercaptopurine that had a serum ALT/AST test in last 6 months of the report period.
1.1-2 **Type of Measure:** process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** Does not apply
De.4 **National Priority Partners Priority Area:** safety De.5 **IOM Quality Domain**: safety De.6 **Consumer Care Need:** Staying Healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** proprietary measure A.3 **Measure Steward Agreement:** agreement signed and submitted	**A** **Y**☐ **N**☐

A.4 Measure Steward Agreement attached: Measure Steward Addendum_Ingenix 012010-633996687878207722.doc	
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** public reporting, quality improvement Payment Incentive, Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. *Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	Eval Rating
(for NQF staff use) **Specific NPP goal**:	
1a.1 Demonstrated High Impact Aspect of Healthcare: patient/societal consequences of poor quality **1a.2** **1a.3 Summary of Evidence of High Impact:** The treatment of inflammatory bowel diseases (IBD) commonly requires the use of immunomodulators. Immunomodulators include medications such as azathioprine(AZA), mercaptopurine (MP), and methotrexate (MTX). Although these medications have been shown to be effective, they have also been associated with significant adverse events. Liver toxicities have been reported with several disease modifying medications used to treat ulcerative colitis (1-5). For example, liver toxicity associated with MP and AZA (MP is metabolized to AZA) has ranged from 5 to 10 percent (1). Since these adverse events can be addressed through drug discontinuation, dose reduction, or other interventions, routine laboratory monitoring is recommended. This includes laboratory monitoring of serunm liver tests(1-5). **1a.4 Citations for Evidence of High Impact:** 1. Shaye OA,Yadegari M,Abreu MT, et.al. Hepatotoxicity of 6-Mercaptopurine (6-MP) and Azathioprine (AZA) in Adult IBD Patients. American Journal of Gastroenterology 2007(11):2488-94.	**1a** C☐ P☐ M☐ N☐

2. Aberra FN and Lichenstein GR. Review article: monitoring of immunomodulators in inflammatory bowel disease. Aliment Pharmacol Ther 2005;21:307–319.
3. Methotrexate. Drug Facts and Comparisons. eFacts [online]. 2009. Available from Wolters Kluwer Health, Inc. Accessed January 18, 2010.
4. Mercaptopurine. Drug Facts and Comparisons. eFacts [online]. 2009. Available from Wolters Kluwer Health, Inc. Accessed January 18, 2010.
5. Saag KG, Teng GG, Patkar NM, et.al. American College of Rheumatology 2008 Recommendations for the Use of Nonbiologic and Biologic Disease-Modifying Antirheumatic Drugs in Rheumatoid Arthritis. Arthritis and Rheumatism (Arthritis Care and Research)2008;59(6):762-84.

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: Serum ALT/AST monitoring can identify the presence of treatment related adverse events. Identification of an adverse event can be addressed through drug discontinuation, dose reduction, or other interventions. This can prevent more serious adverse events, improve medication compliance, and ultimately improve outcomes such as quality of life and disease control.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
Using a geographically diverse 15 million member benchmark database (this database represents predominately a commercial population less than 65 year of age) the compliance rate was 38.2 percent, indicating a clear gap in care and opportunity for care improvement.

1b.3 Citations for data on performance gap:
Ingenix EBM Connect benchmark results, September

1b.4 Summary of Data on disparities by population group:
None

1b.5 Citations for data on Disparities:

1b
C ☐
P ☐
M ☐
N ☐

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** The primary outcome is to improve the safety and efficacy of treatment with selected immunomodulators. Serum ALT/AST monitoring allows detection or adverse events that can be managed with drug discontinuation, dose reductions, or other interventions. This can prevent more serious adverse events and improve treatment outcomes.

1c.2-3. Type of Evidence: evidence based guideline, expert opinion, systematic synthesis of research, other (specify) pharmaceutical manufacturer

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Liver toxicities have been reported with several disease modifying medications used to treat ulcerative colitis (1-6). Since these adverse events can be addressed through drug discontinuation, dose reduction, or other interventions, routine laboratory monitoring is recommended. This includes laboratory monitoring of the serum ALT/AST (1-5).

The pharmaceutical manufacturers recommend monitoring for liver toxicities every one to two months for patients taking methotrexate (MTX) and weekly when beginning mercaptopurine (MP) therapy and then monthly thereafter (3,4). Since Azathioprine (AZA) is a metabolite of MP, the monitoring regimen for these two drugs would be the same.

Two recent articles have addressed serum ALT/ALT monitoring in an IBD population. Aberra et. al. recommended monitoring every 1-3 months in patients taking MTX and at least yearly in patients taking MP

1c
C ☐
P ☐
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N ☐

or AZA. Shaye et. al. concluded that monitoring of liver tests is required for IBD patients but did define a specific monitoring frequency.

Finally, since immunomodulator medications are often used in the management of rheumatologic condition, the American College of Rheumatology has published monitoring recommendations for selected medications. Although the 2008 ACR guidelines did not address the use of MP or AZA, they did address the use of MTX. According to these ACR 2008 recommendations, a serum ALT/ALT should be checked at least every 12 weeks when patients have been taking methotrexate for more than 6 months.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**
There is no strength of evidence provided with this recommendation. Recommendations are based on consensus expert opinion.

1c.6 Method for rating evidence:

1c.7 Summary of Controversy/Contradictory Evidence: No rigorous research has define the appropriate screening interval for these medications. Screening recommendations are based on consensus expert opinion. When the pharmaceutical manufacturer and the other recommendations differed, a more conservative timeframe for monitoring was used. This was most challenging for MP and AZA where there was tremendous differences in the monitoring timeframe. In this situation, the consensus of our external consultant panel and a subcommittee of AGA members was used to define the screening timeframe.

1c.8 Citations for Evidence (*other than guidelines***):** 1. Shaye OA,Yadegari M,Abreu MT, et.al. Hepatotoxicity of 6-Mercaptopurine (6-MP) and Azathioprine (AZA) in Adult IBD Patients. American Journal of Gastroenterology 2007(11):2488-94.
2. Aberra FN and Lichenstein GR. Review article: monitoring of immunomodulators in inflammatory bowel disease. Aliment Pharmacol Ther 2005;21:307–319.
3. Methotrexate. Drug Facts and Comparisons. eFacts [online]. 2009. Available from Wolters Kluwer Health, Inc. Accessed January 18, 2010.
4. Mercaptopurine. Drug Facts and Comparisons. eFacts [online]. 2009. Available from Wolters Kluwer Health, Inc. Accessed January 18, 2010.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
ACR 2008 (1): "Beyond 3 months of therapy with leflunomide, methotrexate,
or sulfasalazine, monitoring with complete blood count, a chemistry panel, and determination of the serum creatinine levels was recommended every 8–12 weeks. Beyond 6 months of therapy, the longer time interval (e.g., 12
weeks) of the monitoring recommendation was suggested." [page 775, also see table same page that summarizes these recommedations]

Note: Since MP and AZA are not used in the treatment of patients with rheumatoid arthritis, these guidelines did not address monitoring recommendations for these two medications.

1c.10 Clinical Practice Guideline Citation: 5. Saag KG, Teng GG, Patkar NM, et.al. American College of Rheumatology 2008
Recommendations for the Use of Nonbiologic and Biologic Disease-Modifying Antirheumatic Drugs in Rheumatoid Arthritis. Arthritis and Rheumatism (Arthritis Care and Research)2008;59(6):762-84.
1c.11 National Guideline Clearinghouse or other URL:
http://www.rheumatology.org/publications/guidelines/index.asp

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**
There is no strength of evidence provided with this recommendation. Recommendations are based on consensus expert opinion.

1c.13 Method for rating strength of recommendation (*If different from* USPSTF system, *also describe rating and how it relates to USPSTF)***:**

1c.14 Rationale for using this guideline over others:
The 2008 ACR guidelines are the only published guidelines that address the recommended monitoring of selected immunomodulators. Immunomodulators used in the treatment of IBD have tremendous overlap with those used to treat patients with rheumatologic conditions, such as rheumatoid arthritis. None of the national gastroenterology organizations have developed specific monitoring recommendations or guidelines for the monitoring of these medications.

TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria **for** *Importance to Measure and Report*?

1

Steering Committee: Was the threshold criterion, *Importance to Measure and Report***, met?**
Rationale:

1
Y☐
N☐

2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)

Eval Rating

2a. MEASURE SPECIFICATIONS

S.1 Do you have a web page where current detailed measure specifications can be obtained?
S.2 If yes, provide web page URL:

2a. Precisely Specified

2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):**
Patients who are diagnosed with inflammatory bowel disease and are taking methotrexate, azathioprine, or mercaptopurine, who have had serum ALT or AST testing during the following time period: last 180 days of the report period through 90 days after the end of the report period

2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator***):**
Last 180 days of the report period through 90 days after the end of the report period

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions***):**
Patients who have had a serum ALT/SGPT or AST/SGOT test (code sets PR0002, LC0051) during the following time period: last 180 days of the report period through 90 days after the end of the report period

Code Set	Code Set Description	Procedure Code
PR0002	ALT/SGPT or AST/SGOT	80050
PR0002	ALT/SGPT or AST/SGOT	80053
PR0002	ALT/SGPT or AST/SGOT	80076
PR0002	ALT/SGPT or AST/SGOT	84450
PR0002	ALT/SGPT or AST/SGOT	84460

Code Set	Code Set Description	LOINC Code
LC0051	ALT/SGPT or AST/SGOT	16325-3
LC0051	ALT/SGPT or AST/SGOT	1742-6
LC0051	ALT/SGPT or AST/SGOT	1743-4
LC0051	ALT/SGPT or AST/SGOT	1744-2
LC0051	ALT/SGPT or AST/SGOT	1916-6
LC0051	ALT/SGPT or AST/SGOT	1920-8
LC0051	ALT/SGPT or AST/SGOT	2325-9

2a-specs
C☐
P☐
M☐
N☐

LC0051	ALT/SGPT or AST/SGOT	27344-1
LC0051	ALT/SGPT or AST/SGOT	30239-8
LC0051	ALT/SGPT or AST/SGOT	44785-4
LC0051	ALT/SGPT or AST/SGOT	44786-2
LC0051	ALT/SGPT or AST/SGOT	48134-1
LC0051	ALT/SGPT or AST/SGOT	48136-6

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):**
Patients 12 years of age or older who are diagnosed with inflammatory bowel disease and who are being actively treated with methotrexate, azathioprine, or mercaptopurine

2a.5 Target population gender: Female, Male
2a.6 Target population age range: Patients 12 years of age or older at the end of the report period

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
The 24 months prior to the end of the report period for confirmation that the patient had inflammatory bowel disease; last 120 days of the report period through 90 days after the end of the report period for confirmation that the patient was actively taking methotrexate, azathoprine, or mercaptopurine

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
1. All males or females that are 12 years of age or older at the end of the report period
2. Patient must have been continuously enrolled in medical benefits throughout the 12 months prior to the end of the report period AND pharmacy benefit plan for 6 months prior to the end of the report period. The standard EBM Connect® enrollment break logic allows unlimited breaks in coverage of no more than 45 days and no breaks greater than 45 days.
3. The patient is listed in the Disease Registry Input File for this condition.

OR

Patients who fulfill either criteria A or criteria B (or both)

A. During the 24 months prior to the end of the report period, the patient has two or more of the following services or events, at least 14 days apart, with a diagnosis of ulcerative colitis (code set DX0197) or Crohn's disease (DX0289):

- Professional Encounter code set (PR0107 or RV0107)
- Professional Supervision code set (PR0108)
- Facility Event – Confinement/Admission (i.e., hospital admission)
- Facility Event – Emergency Room
- Facility Event – Outpatient Surgery

AND

During the 12 month report period, the patient has one or more of the following services or events, with a diagnosis of ulcerative colitis (code set DX0197) or Crohn's disease (DX0289):

- Professional Encounter code set (PR0107 or RV0107)
- Professional Supervision code set (PR0108)
- Facility Event – Confinement/Admission (i.e., hospital admission)
- Facility Event – Emergency Room
- Facility Event – Outpatient Surgery

B. During the 24 months prior to the end of the report period, the patient has one or more of the following services or events, with a diagnosis of ulcerative colitis (code set DX0197) or Crohn's disease (DX0289):

- Professional Encounter code set (PR0107 or RV0107)
- Professional Supervision code set (PR0108)
- Facility Event – Confinement/Admission (i.e., hospital admission)
- Facility Event – Emergency Room
- Facility Event – Outpatient Surgery

AND the patient has filled 2 or more prescriptions for the following medications during the 12 month report period: tumor necrosis factor inhibitors (code set RX-13), methotrexate (code set RX-75), sulfasalazine (code set RX-113), olsalazine (code set RX-207), oral mesalamine (code set RX-208), balsalazide (code set RX-209), mercaptopurine (code set RX-210), azathioprine (code set RX-211), cyclosporine (code set 212),

rectal mesalamine (code set RX-407)
4. The patient must have filled a prescription for one of the following medications during the last 120 days of the report period through 90 days after the end of the report period, with a duration of treatment greater than 180 days:

- methotrexate (code set RX-75)
- mercaptopurine (code set RX-210)
- azathioprine (code set RX-211)

Code Set	Code Set Description	Diagnosis Code	Diagnosis Code Description
DX0197	Ulcerative Colitis	556	ULCERATIVE COLITIS*
DX0197	Ulcerative Colitis	556.0	ULCERATIVE ENTEROCOLITIS
DX0197	Ulcerative Colitis	556.1	ULCERATIVE ILEOCOLITIS
DX0197	Ulcerative Colitis	556.2	ULCERATIVE PROCTITIS
DX0197	Ulcerative Colitis	556.3	ULCERATIVE PROCTOSIGMOIDITIS
DX0197	Ulcerative Colitis	556.4	PSEUDOPOLYPOSIS OF COLON
DX0197	Ulcerative Colitis	556.5	LEFT SIDED ULCERATIVE COLITIS
DX0197	Ulcerative Colitis	556.6	UNIVERSAL ULCERATIVE COLITIS
DX0197	Ulcerative Colitis	556.8	OTHER ULCERATIVE COLITIS
DX0197	Ulcerative Colitis	556.9	UNSPECIFIED ULCERATIVE COLITIS

Code Set	Code Set Descrp.	Dx Code	Diagnosis Code Description
DX0289	Crohn's Disease	555	REGIONAL ENTERITIS*
DX0289	Crohn's Disease	555.0	REGIONAL ENTERITIS OF SMALL INTESTINE
DX0289	Crohn's Disease	555.1	REGIONAL ENTERITIS OF LARGE INTESTINE
DX0289	Crohn's Disease	555.2	RGN ENTERITIS SM INTEST. W/LG INTESTINE
DX0289	Crohn's Disease	555.9	REGIONAL ENTERITIS OF UNSPECIFIED SITE

Code Set	Code Set Description	Procedure Code
PR0107	Professional encounter	99201
PR0107	Professional encounter	99202
PR0107	Professional encounter	99203
PR0107	Professional encounter	99204
PR0107	Professional encounter	99205
PR0107	Professional encounter	99211
PR0107	Professional encounter	99212
PR0107	Professional encounter	99213
PR0107	Professional encounter	99214
PR0107	Professional encounter	99215
PR0107	Professional encounter	99217
PR0107	Professional encounter	99218
PR0107	Professional encounter	99219
PR0107	Professional encounter	99220
PR0107	Professional encounter	99221
PR0107	Professional encounter	99222
PR0107	Professional encounter	99223
PR0107	Professional encounter	99231
PR0107	Professional encounter	99232
PR0107	Professional encounter	99233
PR0107	Professional encounter	99234
PR0107	Professional encounter	99235
PR0107	Professional encounter	99236
PR0107	Professional encounter	99238
PR0107	Professional encounter	99239
PR0107	Professional encounter	99241
PR0107	Professional encounter	99242
PR0107	Professional encounter	99243
PR0107	Professional encounter	99244
PR0107	Professional encounter	99245

PR0107	Professional encounter	99251
PR0107	Professional encounter	99252
PR0107	Professional encounter	99253
PR0107	Professional encounter	99254
PR0107	Professional encounter	99255
PR0107	Professional encounter	99261
PR0107	Professional encounter	99262
PR0107	Professional encounter	99263
PR0107	Professional encounter	99271
PR0107	Professional encounter	99272
PR0107	Professional encounter	99273
PR0107	Professional encounter	99274
PR0107	Professional encounter	99275
PR0107	Professional encounter	99281
PR0107	Professional encounter	99282
PR0107	Professional encounter	99283
PR0107	Professional encounter	99284
PR0107	Professional encounter	99285
PR0107	Professional encounter	99301
PR0107	Professional encounter	99302
PR0107	Professional encounter	99303
PR0107	Professional encounter	99304
PR0107	Professional encounter	99305
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PR0107	Professional encounter	99341
PR0107	Professional encounter	99342
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PR0107	Professional encounter	99385
PR0107	Professional encounter	99386
PR0107	Professional encounter	99387
PR0107	Professional encounter	99391
PR0107	Professional encounter	99392
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PR0107	Professional encounter	99394
PR0107	Professional encounter	99395
PR0107	Professional encounter	99396
PR0107	Professional encounter	99397
PR0107	Professional encounter	99401

PR0107	Professional encounter	99402
PR0107	Professional encounter	99403
PR0107	Professional encounter	99404
PR0107	Professional encounter	99411
PR0107	Professional encounter	99412
PR0107	Professional encounter	99420
PR0107	Professional encounter	99429
PR0107	Professional encounter	S0270
PR0107	Professional encounter	S0271
PR0107	Professional encounter	S0272
PR0107	Professional encounter	S0273

Code Set	Code Set Description	Procedure Code
PR0108	Professional supervision	99321
PR0108	Professional supervision	99322
PR0108	Professional supervision	99323
PR0108	Professional supervision	99324
PR0108	Professional supervision	99325
PR0108	Professional supervision	99326
PR0108	Professional supervision	99327
PR0108	Professional supervision	99328
PR0108	Professional supervision	99331
PR0108	Professional supervision	99332
PR0108	Professional supervision	99333
PR0108	Professional supervision	99334
PR0108	Professional supervision	99335
PR0108	Professional supervision	99336
PR0108	Professional supervision	99337
PR0108	Professional supervision	99339
PR0108	Professional supervision	99340
PR0108	Professional supervision	99371
PR0108	Professional supervision	99372
PR0108	Professional supervision	99373
PR0108	Professional supervision	99374
PR0108	Professional supervision	99375
PR0108	Professional supervision	99377
PR0108	Professional supervision	99378
PR0108	Professional supervision	99379
PR0108	Professional supervision	99380
PR0108	Professional supervision	99441
PR0108	Professional supervision	99442
PR0108	Professional supervision	99443
PR0108	Professional supervision	99444
PR0108	Professional supervision	G0179
PR0108	Professional supervision	G0180
PR0108	Professional supervision	G0181
PR0108	Professional supervision	G0182

Code Set	Code Set Description	Revenue Code
RV0107	Professional encounter	0510
RV0107	Professional encounter	0511
RV0107	Professional encounter	0512
RV0107	Professional encounter	0513
RV0107	Professional encounter	0514
RV0107	Professional encounter	0515
RV0107	Professional encounter	0516
RV0107	Professional encounter	0517
RV0107	Professional encounter	0519

RV0107	Professional encounter	0520
RV0107	Professional encounter	0521
RV0107	Professional encounter	0522
RV0107	Professional encounter	0523
RV0107	Professional encounter	0524
RV0107	Professional encounter	0525
RV0107	Professional encounter	0526
RV0107	Professional encounter	0528
RV0107	Professional encounter	0529
RV0107	Professional encounter	0981
RV0107	Professional encounter	0983

Rx code set	Code set description	ndc
RX-13	Tumor Necrosis Factor inhibitors	00074379901
RX-13	Tumor Necrosis Factor inhibitors	00074379902
RX-13	Tumor Necrosis Factor inhibitors	00074433902
RX-13	Tumor Necrosis Factor inhibitors	00074433906
RX-13	Tumor Necrosis Factor inhibitors	00074433907
RX-13	Tumor Necrosis Factor inhibitors	00074937402
RX-13	Tumor Necrosis Factor inhibitors	50474070062
RX-13	Tumor Necrosis Factor inhibitors	50474071079
RX-13	Tumor Necrosis Factor inhibitors	54569552400
RX-13	Tumor Necrosis Factor inhibitors	54868478200
RX-13	Tumor Necrosis Factor inhibitors	54868482200
RX-13	Tumor Necrosis Factor inhibitors	54868544400
RX-13	Tumor Necrosis Factor inhibitors	57894003001
RX-13	Tumor Necrosis Factor inhibitors	57894007001
RX-13	Tumor Necrosis Factor inhibitors	57894007002
RX-13	Tumor Necrosis Factor inhibitors	58406042534
RX-13	Tumor Necrosis Factor inhibitors	58406042541
RX-13	Tumor Necrosis Factor inhibitors	58406043501
RX-13	Tumor Necrosis Factor inhibitors	58406043504
RX-13	Tumor Necrosis Factor inhibitors	58406044501
RX-13	Tumor Necrosis Factor inhibitors	58406044504
RX-13	Tumor Necrosis Factor inhibitors	58406045501
RX-13	Tumor Necrosis Factor inhibitors	58406045504

Rx code set	Code set description	ndc
RX-75	Methotrexate	00005450704
RX-75	Methotrexate	00005450705
RX-75	Methotrexate	00005450707
RX-75	Methotrexate	00005450709
RX-75	Methotrexate	00005450723
RX-75	Methotrexate	00005450791
RX-75	Methotrexate	00005455426
RX-75	Methotrexate	00013222686
RX-75	Methotrexate	00013223686
RX-75	Methotrexate	00013224686
RX-75	Methotrexate	00013225686
RX-75	Methotrexate	00013226686
RX-75	Methotrexate	00013226691
RX-75	Methotrexate	00013227666
RX-75	Methotrexate	00013227686
RX-75	Methotrexate	00013227691
RX-75	Methotrexate	00013228686
RX-75	Methotrexate	00013228691
RX-75	Methotrexate	00013229686
RX-75	Methotrexate	00013229691

RX-75	Methotrexate	00015300620
RX-75	Methotrexate	00015300697
RX-75	Methotrexate	00015300720
RX-75	Methotrexate	00015300797
RX-75	Methotrexate	00015300820
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RX-113	Sulfasalazine	59762010414
RX-113	Sulfasalazine	59762500001
RX-113	Sulfasalazine	59762500002
RX-113	Sulfasalazine	60346081240
RX-113	Sulfasalazine	60346081294
RX-113	Sulfasalazine	61392014730
RX-113	Sulfasalazine	61392014731
RX-113	Sulfasalazine	61392014732
RX-113	Sulfasalazine	61392014739
RX-113	Sulfasalazine	61392014745
RX-113	Sulfasalazine	61392014751
RX-113	Sulfasalazine	61392014754
RX-113	Sulfasalazine	61392014760
RX-113	Sulfasalazine	61392014790
RX-113	Sulfasalazine	61392014791
RX-113	Sulfasalazine	68258908601

Rx code set	Code set description	ndc
RX-207	Olsalazine Sodium	00013010501
RX-207	Olsalazine Sodium	00013010520
RX-207	Olsalazine Sodium	00016010501
RX-207	Olsalazine Sodium	50474060001
RX-207	Olsalazine Sodium	50474060025
RX-207	Olsalazine Sodium	53014072671

RX-207	Olsalazine Sodium	53014072682
RX-207	Olsalazine Sodium	68220016010

Rx code set	Code set description	ndc
RX-208	Mesalamine (oral only)	00008201080
RX-208	Mesalamine (oral only)	00088201046
RX-208	Mesalamine (oral only)	00088201080
RX-208	Mesalamine (oral only)	00088201090
RX-208	Mesalamine (oral only)	00149075202
RX-208	Mesalamine (oral only)	00149075206
RX-208	Mesalamine (oral only)	00149075215
RX-208	Mesalamine (oral only)	00149078301
RX-208	Mesalamine (oral only)	49999096918
RX-208	Mesalamine (oral only)	54092018980
RX-208	Mesalamine (oral only)	54092018981
RX-208	Mesalamine (oral only)	54092019112
RX-208	Mesalamine (oral only)	54092019180
RX-208	Mesalamine (oral only)	54092047612
RX-208	Mesalamine (oral only)	54569479300
RX-208	Mesalamine (oral only)	54868251500
RX-208	Mesalamine (oral only)	54868251501
RX-208	Mesalamine (oral only)	54868251502
RX-208	Mesalamine (oral only)	54868251503
RX-208	Mesalamine (oral only)	54868251504
RX-208	Mesalamine (oral only)	54868251505
RX-208	Mesalamine (oral only)	54868530200
RX-208	Mesalamine (oral only)	54868530201
RX-208	Mesalamine (oral only)	55289083330
RX-208	Mesalamine (oral only)	65649010302
RX-208	Mesalamine (oral only)	67263005918
RX-208	Mesalamine (oral only)	67544054981
RX-208	Mesalamine (oral only)	67544054988
RX-208	Mesalamine (oral only)	67544054989
RX-208	Mesalamine (oral only)	68258912901

Rx code set	Code set description	ndc
RX-209	Balsalazide Disodium	00054007928
RX-209	Balsalazide Disodium	00054007929
RX-209	Balsalazide Disodium	00378675082
RX-209	Balsalazide Disodium	00591357035
RX-209	Balsalazide Disodium	54868485500
RX-209	Balsalazide Disodium	60505257507
RX-209	Balsalazide Disodium	65649010102
RX-209	Balsalazide Disodium	65649010150
RX-209	Balsalazide Disodium	67263044428

Rx code set	Code set description	ndc
RX-210	Mercaptopurine	00054458111
RX-210	Mercaptopurine	00054458127
RX-210	Mercaptopurine	00081080725
RX-210	Mercaptopurine	00081080765
RX-210	Mercaptopurine	00093551006
RX-210	Mercaptopurine	00173080725
RX-210	Mercaptopurine	00173080765
RX-210	Mercaptopurine	00378354725
RX-210	Mercaptopurine	00378354752
RX-210	Mercaptopurine	38779142703
RX-210	Mercaptopurine	38779142704

RX-210	Mercaptopurine	38779142706
RX-210	Mercaptopurine	49452261903
RX-210	Mercaptopurine	49452261904
RX-210	Mercaptopurine	49452446301
RX-210	Mercaptopurine	49452446302
RX-210	Mercaptopurine	49884092202
RX-210	Mercaptopurine	49884092204
RX-210	Mercaptopurine	51927200000
RX-210	Mercaptopurine	54868528200
RX-210	Mercaptopurine	54868528201
RX-210	Mercaptopurine	57844052206
RX-210	Mercaptopurine	57844052207
RX-210	Mercaptopurine	57844052252
RX-210	Mercaptopurine	57884052207
RX-210	Mercaptopurine	68084032511
RX-210	Mercaptopurine	68084032521
RX-210	Mercaptopurine	68258910301

Rx code set	Code set description	ndc
RX-211	Azathioprine	00054408425
RX-211	Azathioprine	00054808425
RX-211	Azathioprine	00081059655
RX-211	Azathioprine	00081059755
RX-211	Azathioprine	00081059756
RX-211	Azathioprine	00081059871
RX-211	Azathioprine	00173059755
RX-211	Azathioprine	00173059871
RX-211	Azathioprine	00378100501
RX-211	Azathioprine	00403455318
RX-211	Azathioprine	00406200301
RX-211	Azathioprine	00781105901
RX-211	Azathioprine	00781507501
RX-211	Azathioprine	23490511009
RX-211	Azathioprine	51309022720
RX-211	Azathioprine	52959007900
RX-211	Azathioprine	53002048600
RX-211	Azathioprine	54569216900
RX-211	Azathioprine	54569216901
RX-211	Azathioprine	54569517700
RX-211	Azathioprine	54868092101
RX-211	Azathioprine	54868092102
RX-211	Azathioprine	54868092104
RX-211	Azathioprine	54868531000
RX-211	Azathioprine	54868531001
RX-211	Azathioprine	54868531002
RX-211	Azathioprine	54868531003
RX-211	Azathioprine	54868531004
RX-211	Azathioprine	55390060020
RX-211	Azathioprine	57866902101
RX-211	Azathioprine	60976059755
RX-211	Azathioprine	60976059871
RX-211	Azathioprine	65483055101
RX-211	Azathioprine	65483059010
RX-211	Azathioprine	65649023141
RX-211	Azathioprine	65649024141
RX-211	Azathioprine	66479030110
RX-211	Azathioprine	66591022141
RX-211	Azathioprine	66591023141

RX-211	Azathioprine	66591024141
RX-211	Azathioprine	68084022901
RX-211	Azathioprine	68084022911
RX-211	Azathioprine	68382000301
RX-211	Azathioprine	68382000305
RX-211	Azathioprine	68462050201

Rx code set	Code set description	ndc
RX-212	Cyclosporine	00074646332
RX-212	Cyclosporine	00074647932
RX-212	Cyclosporine	00074726950
RX-212	Cyclosporine	00078010901
RX-212	Cyclosporine	00078011022
RX-212	Cyclosporine	00078024015
RX-212	Cyclosporine	00078024115
RX-212	Cyclosporine	00078024215
RX-212	Cyclosporine	00078024615
RX-212	Cyclosporine	00078024815
RX-212	Cyclosporine	00078027422
RX-212	Cyclosporine	00172731046
RX-212	Cyclosporine	00172731146
RX-212	Cyclosporine	00172731200
RX-212	Cyclosporine	00172731246
RX-212	Cyclosporine	00172731320
RX-212	Cyclosporine	00185093230
RX-212	Cyclosporine	00185093330
RX-212	Cyclosporine	00574086610
RX-212	Cyclosporine	00591222215
RX-212	Cyclosporine	00591222315
RX-212	Cyclosporine	00591222455
RX-212	Cyclosporine	50111088542
RX-212	Cyclosporine	50111090943
RX-212	Cyclosporine	50111092043
RX-212	Cyclosporine	54569256300
RX-212	Cyclosporine	54569287200
RX-212	Cyclosporine	54569287300
RX-212	Cyclosporine	54868552200
RX-212	Cyclosporine	55390011210
RX-212	Cyclosporine	55390012210
RX-212	Cyclosporine	60432014050
RX-212	Cyclosporine	60505013300
RX-212	Cyclosporine	60505013400
RX-212	Cyclosporine	60505035401
RX-212	Cyclosporine	62053053905
RX-212	Cyclosporine	62584082711
RX-212	Cyclosporine	62584082721

Rx code set	Code set description	ndc
RX-407	"Mesalamine (rectal only)"	00032192428
RX-407	"Mesalamine (rectal only)"	00032192482
RX-407	"Mesalamine (rectal only)"	00032192824
RX-407	"Mesalamine (rectal only)"	00032192846
RX-407	"Mesalamine (rectal only)"	00091725003
RX-407	"Mesalamine (rectal only)"	00093688871
RX-407	"Mesalamine (rectal only)"	00574725003
RX-407	"Mesalamine (rectal only)"	45802009828
RX-407	"Mesalamine (rectal only)"	45802009851
RX-407	"Mesalamine (rectal only)"	45802092341

RX-407	"Mesalamine (rectal only)"	54569174301
RX-407	"Mesalamine (rectal only)"	54868519900
RX-407	"Mesalamine (rectal only)"	54868531400
RX-407	"Mesalamine (rectal only)"	58914050018
RX-407	"Mesalamine (rectal only)"	58914050056
RX-407	"Mesalamine (rectal only)"	58914050118
RX-407	"Mesalamine (rectal only)"	58914050142
RX-407	"Mesalamine (rectal only)"	58914050156
RX-407	"Mesalamine (rectal only)"	66993095077
RX-407	"Mesalamine (rectal only)"	68220002207
RX-407	"Mesalamine (rectal only)"	68220002214
RX-407	"Mesalamine (rectal only)"	68220002228
RX-407	"Mesalamine (rectal only)"	68220006603
RX-407	"Mesalamine (rectal only)"	68220006605
RX-407	"Mesalamine (rectal only)"	68220006607
RX-407	"Mesalamine (rectal only)"	68220006628

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** Does not apply

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
Does not apply

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
Does not apply

2a.12-13 Risk Adjustment Type: no risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: rate/proportion
2a.20 Interpretation of Score: better quality = higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
1. Exclude members who meet denominator exclusion criteria
2. Assign a YES or NO result to remaining members based on numerator response
3. Rate = YES/[YES+NO]

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Over 3800 patients met the denominator from a geographically diverse 15 million member benchmark database. Approximately 2400 patients did not meet numerator compliance, indicating a significant population with patient safety gap in care. The subsequent compliance rate was 38.2 percent.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
A 15 million patient population sample was chosen to analyze the potential patient safety gap in care. The sample was derived from more than 60 million patients based on criteria including national geographic representation, commercial health coverage and patient age less than 65.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Electronic adminstrative data/claims, lab data, pharmacy data

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Our data source is a proprietary Ingenix provider database that includes more than 60 million patients, over

multiple years. It includes data from multiple payors. This measure specifically uses the following data from this database: member demographics, ICD-9 codes, revenue codes, CPT codes, place of service codes, pharmacy claims, and LOINC (lab results) codes.

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment: Attachment Input Guide_NQF-633991555278802814.doc

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group, Population: states, Population: counties or cities, Program: Disease management, Program: QIO, Facility/Agency, Health Plan, Integrated delivery system, Multi-site/corporate chain, Can be measured at all levels

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
nursing home (NH) /Skilled Nursing Facility (SNF), Rehabilitation Facility, Ambulatory Care: Clinic, Ambulatory Care: Emergency Dept, Ambulatory Care: Hospital Outpatient

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)***:** Reliability is tested by using multiple databases. There are three primary databases that we use: 1) a customer acceptance (CAT) database that includes approximately 4000 members who satisfy the condition confirmation criteria; 2) a one million member face validity testing (FVT) database that is geographically diverse; and 3) a 15 million member benchmark database that is geographically diverse. All databases represent predominately a commercial population less than 65 year of age.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)***:**
Quality assurance of each measure is accomplished through the testing using multiple methods and databases. Types of testing, data samples and volume vary to ensure the integrity of the measure. Rigorous development, analysis and testing processes are deployed for creating measure specifications. Software testing ensures the software is working as designed. Reliability and validity testing of measures is based on differing data samples and volume of members. National benchmarks are created on a large volume set of data representing members throughout the United States. All quality checks for all measure results must have consistent results and meet expected outcomes based on industry knowledge and experience.

Customer Acceptance Testing (CAT) is an important quality process. CAT ensures that the clinical measures are functioning as intended and that they generate accurate results for typical billing patterns. Using actual claims data a team of business analysts, nurses, and health services researchers conducts a detailed analysis of the output. For each clinical condition in the product (e.g., Diabetes Mellitus, Coronary Artery Disease, etc.) there is a set of CAT data with at least 4000 members who satisfy the condition confirmation criteria. This data is extracted from a large (50+ million member) multi-payer benchmark database and contains inpatient, outpatient, pharmacy, and laboratory data. The testing team analyzes claims from individual members and compares the creation of denominators (target population), numerators, and exclusions from this manual review process to output results from the quality measure.

Regression testing is the part of CAT that verifies the reliability of the product across software releases. For a new release the testing team confirms that every unchanged measure produces the same results as in previous releases, accounting for systematic changes to the software (e.g., code updates, logic changes, etc). Regression testing is conducted at multiple points throughout the software development cycle.

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2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
Given the size of our benchmark database, it is the most reliable source for compliance results. Over 3800 members from the benchmark database met the denominator definition for this measure. The overall compliance rate was 38.2 percent.

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*: Our data sample for face validity testing includes a geographically diverse one million member database. Our data sample for benchmark testing includes a geographically diverse 15 million member database. Both databases represent predominately a commercial population less than 65 year of age.

2c.2 Analytic Method *(type of validity & rationale, method for testing)*:
Face Validity Testing (FVT) is the final testing step in the software release cycle. One million members are randomly selected from the large multi-payer benchmark database and their claims data is processed through the software. The Medical Director reviews the results to verify that:
1. Prevalence rates for a condition are comparable to nationally published rates
2. Compliance rates for a measure are comparable to the rates reported in the published literature or by other national sources (e.g. HEDIS). If no comparable sources are available, the rates are judged based on what is clinically reasonable.
In addition, all results are reviewed for face validity by members of an external physician clinical consultant panel.

A similar review of benchmark test results occurs in conjunction with a software release. With benchmark testing, 15 million members are randomly selected from the large multi-payer benchmark database and their claims data is processed through the software.

Our claims-based measures have been validated using a chart review comparison process. This validation project is summarized below:
Goal: evaluate the reliability of claims-based measure results using chart review as the gold standard
Methods:
The charts of 100 members from two clinics in one city were reviewed. Results from our claims-based measures were compared to information present in the chart. During this process, 726 measures were evaluated.
Results:
The overall error rate was less than 5%. The error rate varied depending on the type of claim required for numerator compliance and is summarized as follows:
o The error rate was highest with medications, with an 11 percent error rate (2/18). From chart review, it was difficult to tell if this represented a real error, a medication sample was provided, or the prescription was never filled).
o The error rate was 4 percent (14/318) for measures that required labs for numerator compliance. It was noted that a claims-based measure approach sometimes identified labs that were missing in chart review.
o The error rate for office visit and specialty appointments was 2 percent (8/390). Of note, administrative claims was more likely than chart review to identify relevant office and specialty visits, particularly for appointments that occurred outside the clinic or network.
o Errors were found related to coding in claims data, not due to the claims-based measures or methodology. These errors were not quantified.

2c.3 Testing Results *(statistical results, assessment of adequacy in the context of norms for the test conducted)*:
Summarized in 2b3

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2d. Exclusions Justified

2d.1 Summary of Evidence supporting exclusion(s):
This measure does not include any exclusions.

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2d.2 Citations for Evidence: **2d.3 Data/sample** *(description of data/sample and size)***:** **2d.4 Analytic Method** *(type analysis & rationale)***:** **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)***:**	**NA☐**
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)***:** This measure does not include risk adjustment. **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)***:** **2e.3 Testing Results** *(risk model performance metrics)***:** **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** **C☐** **P☐** **M☐** **N☐** **NA☐**
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)***:** Our benchmark data sample includes a geographically diverse 15 million member benchmark database. The database represents predominately a commercial population less than 65 year of age. **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)***:** During benchmark testing, 15 million members are randomly selected from the large multi-payer benchmark database and their claims data is processed through the software. The Medical Director reviews the results to verify that: 1. Prevalence rates for a condition are comparable to nationally published rates 2. Compliance rates for a measure are comparable to the rates reported in the published literature or by other national sources (e.g. HEDIS). If no comparable sources are available, the rates are judged based on what is clinically reasonable. In addition, all results are systematically reviewed for face validity by members of an external physician clinical consultant panel. **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)***:** Summarized in 2b3	**2f** **C☐** **P☐** **M☐** **N☐**
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)***:** **2g.2 Analytic Method** *(type of analysis & rationale)***:** **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)***:**	**2g** **C☐** **P☐** **M☐** **N☐** **NA☐**
2h. Disparities in Care	**2h**

2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**C☐ P☐ M☐ N☐ NA☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria **for** *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, **met?** **Rationale:**	*2* **C☐ P☐ M☐ N☐**
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Eval Rating
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** in use 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** Health plans, physicians (individuals and groups), care management, and other vendors/customers are using this measure on a national level. However, we do not know if this specific measure is being used as part of a public reporting initiative. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** Health plans, physicians (individuals and groups), care management, and other vendors/customers use many of our measures on a national level for quality improvement, disease management, and physician sharing programs. Customers are able to select their measures depending on their business needs. As such, we do not know which specific measures are used by our customers. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)***:** Results are summarized and reported by users/customers depending on their business need - we do not have access to this information. Because of us my multiple users/customers, there is no single data sample, methodology, or public reporting format. 3a.5 **Methods** *(e.g., focus group, survey, QI project)***:** 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)***:**	**3a** **C☐ P☐ M☐ N☐**
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related** endorsed **or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** **C☐ P☐ M☐**

	N☐ NA☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 Competing Measures If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), describe why it is a more valid or efficient way to measure quality:**	**3c** **C☐** **P☐** **M☐** **N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria **for** *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, **met?** **Rationale:**	**3** **C☐** **P☐** **M☐** **N☐**
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** coding/abstraction performed by someone other than person obtaining original information,	**4a** **C☐** **P☐** **M☐** **N☐**
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** **C☐** **P☐** **M☐** **N☐**
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** **C☐** **P☐** **M☐** **N☐** **NA☐**
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** It is possible that some serum ALT/AST claims could be missed if obtained during a hospitalization. However, the guideline recommendation is for serum ALT/AST testing every 4-12 weeks at minimum and numerator compliance for our measure will be met if at least one test was done during the last 6 months of the report period through 90 days after the report period (a 9 month total time period). We believe that our 6 month timeframe minimizes the likelihood that this error would impact the compliance results.	**4d** **C☐** **P☐** **M☐** **N☐**
4e. Data Collection Strategy/Implementation	**4e** **C☐**

4e.1 Describe what you have 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: During our last maintenance review, the timeframe for this measure was changed from 3 months to 6 months. This change was based on a thorough review of the literature and review of the measure with an AGA subcommittee. In addition, due to the increasing availability of LOINC codes (lab results), a serum ALT/AST LOINC code set was recently added to this measure. These change has been tested using our CAT database - the compliance increased to 69.6 percent. Updated face validity and benchmark results that assess the impact of this change will be available September 2010. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** We do not have access to this information. This would vary based on the customer/vendor, patient population, and programs/interventions associated with measure use. **4e.3 Evidence for costs:** **4e.4 Business case documentation:**	**P☐ M☐ N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria **for** *Feasibility*?	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility***, met?** **Rationale:**	**4** **C☐ P☐ M☐ N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y☐ N☐ A☐**
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** Ingenix | 12125 Technology Drive | Eden Prairie | Minnesota | 55344 **Co.2 Point of Contact** Kay | Schwebke, Medical Director | kay.schwebke@ingenix.com | 952-833-7154	
Measure Developer If different from Measure Steward **Co.3 Organization** Ingenix | 12125 Technology Drive | Eden Prairie | Minnesota | 55344 **Co.4 Point of Contact** Kay | Schwebke, Medical Director | kay.schwebke@ingenix.com | 952-833-7154	
Co.5 Submitter If different from Measure Steward POC Kay | Schwebke, Medical Director | kay.schwebke@ingenix.com | 952-833-7154- |Ingenix	
Co.6 Additional organizations that sponsored/participated in measure development This measure has been reviewed and supported by an AGA subcommittee.	
ADDITIONAL INFORMATION	

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
We have an external consultant panel that participates in the original literature search process, measure development, code set review, testing review, and maintenance processes. Panel members include the following:

NAME & Title Employer/Position
Alexander, Beth Pharm D, BCPS Assistant Professor, Augsburg College
Ayenew, Woubeshet, MD Hennepin Faculty Associates; Hennepin County Medical Center
Becker, Keith, MD Fairview Medical Center
Betcher, Susan, MD Allina Medical Clinic
Bruer, Paul, MD Comprehensive Ophthamology, LLC
Capecchi, Joseph, MD Allina Medical Clinic
Giesler, Janell, MD Allina Medical Clinic
Grabowski, Carol, MD Allina Medical Clinic
Hansen, Calvin, MD Iowa Health Physicians
Hargrove, Jody, MD Arthritis and Rheumatology Consultants
Hermann, Richard, MD Tufts - New England Medical Center
Jemming, Brian, Pharm D CentraCare Health System
Kohen, Jeffrey, MD Veterans Affairs Medical Center
McCarthy, Teresa, MD University of Minnesota, Department of Family Medicine & Community Health
McEvoy, Charlene, MD, MPH HealthPartners & HealthPartners Research Foundation; Assistant Professor of Medicine, University of Minnesota
McGee, Deanna, Pharm D, BCPS Retail Pharmacy
Ogle, Kathleen, MD Hennepin Faculty Associates; Hennepin County Medical Center: Assistant Professor of Medicine, University of Minnesota Medical School
Peter, Kathleen, MD Park Nicollet Medical Center
Pieper-Bigelow, Christina, MD Allina Medical Clinic
Redmon, Bruce, MD University of Minnesota Physicians
Scharpf, Steven, MD Mountain Valleys Health Centers
Weitz, Carol, MD Independent

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 2006
Ad.7 Month and Year of most recent revision: 2009-04
Ad.8 What is your frequency for review/update of this measure? every 3 years at minimum
Ad.9 When is the next scheduled review/update for this measure? 2013-04

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Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 01/23/2010

INGENIX®

Input Guide

Release 7.0, Technical Guide for Windows, February 2008

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What Input Files to Prepare

The following list specifies what input files you prepare for processing:

- The claims data file (required)
- The member data file (required)
- The member term data file (required)

Field Type Definitions and Input File Requirements

This chapter lists the field requirements for your input files. One of the attributes listed among the requirements is defined as "Type". There are four field types used to describe a field's value, and they are defined below.

Field Type	Definition
AlphaNum	A value made of letters and/or numbers. If a value of this type is made of numbers only, it will not be a value that can be operated on mathematically. For example, it would be inappropriate to subtract one procedure code from another procedure code even though both values may contain only numbers.
Num	A value made of numbers only, and which can logically be operated on mathematically. Age is an example of this type. One particular field, while not used in mathematical calculations, is defined in the EBM Connect software as such that it accepts only numeric values. (To enter a non-numeric value would cause EBM Connect processing to stop.) Therefore, this field is defined as Num. It is the Case ID field in the optional disease registry input file.
Date	A value which can be interpreted as a date value. Values should always use four-digit years but the format may vary otherwise.
DecNum	A value made of numbers and a decimal point. These values can also logically be operated on mathematically.

Claims Input File

The claims file contains detailed information on services that were billed or performed or otherwise rendered. The claims file includes:

- Medical claims, including medical services, facility services and clinic services
- Pharmacy claims, including billed prescriptions and drugs
- Lab claims, including lab test and results information

Field Name	Type	Length	Required or Optional
Family ID	AlphaNum	1-30	Always required for all claims
Patient ID	AlphaNum	0-2	Optional
Amount Paid	DecNum	1-11	Required for all claims
Amount Allowed	DecNum	0-11	Required for all claims
Procedure Code	AlphaNum	5	Required if there is no revenue code, NDC, or LOINC® code
Procedure Code Modifier	AlphaNum	2	Required for medical claims
Revenue Code	AlphaNum	0 or 4	Optional (applies to medical claims when used)
First Diagnosis Code	AlphaNum	5 or 6	Required for medical claims
Second Diagnosis Code	AlphaNum	0, 5 or 6	Optional (applies to medical claims when used)
Third Diagnosis Code	AlphaNum	0, 5 or 6	Optional (applies to medical claims when used)
Fourth Diagnosis Code	AlphaNum	0, 5 or 6	Optional (applies to medical claims when used)
First Date of Service	Date	8 or 10	Always required for all claims
Last Date of Service	Date	8 or 10	Required for all claims

Paid Date	Date	0, 8 or 10	Optional
Type of Service	AlphaNum	0-10	Optional
Provider ID	AlphaNum	1-20	Required for medical claims
Ordering Provider ID	AlphaNum	0-20	Optional
Provider Type	AlphaNum	1-10	Required for medical claims
Provider Specialty Type	AlphaNum	1-10	Required for medical claims
Provider Key	AlphaNum	1-20	Required for medical claims
NDC	AlphaNum	0 or 11	Required for Rx claims
Day Supply	Num	0-4	Required for Rx claims
Quantity Count	DecNum	0-10	Required for Rx claims
LOINC®	AlphaNum	0 or 7	Required for lab claims
Lab Test Result	AlphaNum	0-18	Required for lab claims
Place of Service	AlphaNum	1-10	Required for medical claims
Unique Record ID	AlphaNum	1-28	Required for all claims
Claim Number	AlphaNum	1-28	Required for all claims
Bill Type Frequency Indicator	Num	0 or 1	Optional
Patient Status	AlphaNum	1-2	Required for facility claims (involving admission or confinement).
Facility Type	AlphaNum	0-2	Optional
Bed Type	AlphaNum	0-1	Optional
First ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional, but will impact results (applies to medical claims when used)
Second ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional (see above)
Third ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional (see above)
Fourth ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional (see above)

Field Descriptions

Instructions for each input field are as follows:

Family ID

This field identifies all members of a family and can be any alphanumeric string.

Note: Remember that each Family ID (and Patient ID) listed in your claims input file must have a corresponding record in your member input data file and your member term data file.

Patient ID

This field identifies individual members within a family. If present, this field must be sorted within Family ID, so that all records for an individual are contiguous. If the Family ID uniquely identifies an individual, this field need not be specified (that is, its length in the dictionary will be zero).

Amount Paid

The amount paid for this claim line.

Amount Allowed

The allowed amount for this claim line. This amount typically represents the total amount reimbursed including deductibles, copays, coinsurance, insurer paid, etc.

Procedure Code

The procedure code must be one of:

- A procedure code specified in the Physician's Current Procedure Terminology, 4th Edition (CPT®-4 codes) defined by the American Medical Association, for the years 1997 and later.
- A procedure code specified by the HCFA Common Procedure Coding System, Level II code (HCPCS) defined by the Centers for Medicare and Medicaid Services (CMS) for the years 1999 and later.
- A National Uniform Billing Committee (NUBC) revenue code.

Note: When the NUBC code is entered in the Procedure Code field, it should be padded to the right with blanks because the Procedure Code field always occupies five characters.

- If your organization defines its own procedure codes and/or revenue codes, they must be mapped to standard procedure and revenue codes.

Procedure Code Modifier

Use this field to specify any procedure code modifier that accompanies the procedure code.

Revenue Code

The revenue code, if one was entered for the claim. Supported values in this field are NUBC revenue codes. If your organization defines its own revenue codes, they must be mapped to standard revenue codes.

The revenue code is an optional field, allowing you to define your input records so that you can place an NUBC revenue code and a CPT/HCPCS procedure code on a single record line.

For claim records that do not have a revenue code, leave the revenue code field blank.

First Diagnosis Code Through Fourth Diagnosis Code

Up to four diagnoses may be entered for each claim, but only the first is required.

If your organization defines its own diagnosis codes, they must be mapped to standard ICD-9 diagnosis codes.

First Date of Service and Last Date of Service

The first date and last date represented by the claim line. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/ YYYY, and DD/MM/YYYY, where the separator can be any character.

Paid Date

This field is optional. This is the date the claim was paid. The format of the paid date must be the same as that used in the First and Last Date of Service.

Type of Service

This is an optional code which represents the type of service (TOS) performed for this claim. If no specific value is available for this field, it should be filled with blanks. If this field is not used (i.e., its length is set to zero in the configuration), non-pharmaceutical claims with no procedure code will be treated as ancillary records.

Provider ID

Provider identification number from the claim. Used to identify who performed the service.

Ordering Provider ID

This is an optional field. This is the identification number of the provider who ordered the service.

Provider Type

This code represents the type of provider who performed the service. Examples of provider types would be chiropractor, nurse practitioner, medical doctor, counselor, pharmacy, hospital or treatment facility.

Provider Specialty Type

This code represents the specialty of the provider who performed the service.

Provider Key

Unique number or code for a physician who has multiple provider IDs or specialties. A single health care provider may have multiple provider IDs in your input claims data, but this person or entity should have only one provider key.

NDC

If this is a pharmaceutical claim, this field should contain the drug's NDC code. For non-pharmaceutical claim records, the NDC field should be filled with blanks.

Day Supply

For pharmacy records, the number of days a filled prescription is expected to last. If you have no pharmacy records, the Days Supply is an optional field.

Quantity Count

Quantity of drug dispensed in metric units:

Each - solid oral dosage forms (tablet, capsule), powder filled (dry) vials, packets, patches, units of use packages, suppositories, bars.

Milliliter - (cc) liquid oral dosage forms, liquid filled vials, ampules, reconstituted oral products.

Grams - ointments, bulk powders (not IV).
If you have no pharmacy records, the Quantity Count is an optional field.

LOINC®

Logical Observation Identifiers Names and Codes (LOINC®). The LOINC Code is a universal identifier for a lab test for a particular analyte. The LOINC User's Guide and database can be found at www.regenstrief.org.

Enter a LOINC code if the record is a lab record. For non-lab records, leave the LOINC field blank.

If you have no lab records in your claims input, the LOINC code is optional.

Notes:

(1) When using lab results data that has not been mapped to a LOINC code, map the comparable vendor-specific test number provided by the laboratory vendor(s) to one of these default codes.

(2) This is a retired code which may be present on historical data, or which some laboratories may be continuing to use. Input record data with this code is included in the definition of this test.

Lab Test Result

If the record is a lab record, use this field to enter the result value of lab test. For non-lab records, this field should be blank.

If you have no lab records in your claims input, the Lab Test Result is optional.

Place of Service

Place of service (POS). You must map your internal POS codes to Centers for Medicare and Medicaid Services (CMS) standard POS codes.

Unique Record ID

This required field contains a unique identifier representing the service line from the claim. For medical services, this ID typically represents the service row from the CMS 1500 or CMS 1450/UB92 claim form.

Claim Number

A unique identifier used to link service lines for a specific claim submitted for a member. If a claim has multiple service lines, each service will have a unique record ID and the same claim number to represent the claim.

Bill Type Frequency Indicator

This optional field is used to indicate the disposition of confinements.

Patient Status

This field is required for facility claims. The contents will be the patient status indicator field from the NUBC UB-92 form. This field can denote whether the member died during a confinement.

Facility Type

This field is optional. Space for it is provided to allow for additional post grouping analysis. The contents will typically be the UB-92 facility type data value. This would allow records to be easily selected for diagnosis related grouping (DRG) based on the facility type.

Bed Type

If a value is present, this field acts as an additional discriminator in determining whether a Facility record extends an existing confinement or starts a new confinement.

First ICD-9 Procedure Code Through Fourth ICD-9 Procedure Code

If your claims have ICD-9 procedure codes, include them in your claims input file.

If a decimal point will appear in this field in your claim records, the length should be given as 5. If the decimal separator is not used, the length is 4. If these fields are unused, the length is zero.

Member Input File

The member data file contains the most current information about the member.

Field Descriptions

Field	Type	Length	Required or Optional
Family ID	AlphaNum	1-30	Required
Patient ID	AlphaNum	0-2	Optional
Patient Gender	AlphaNum	1	Required
Date of Birth	Date	8 or 10	Required
Member Beginning Eligibility Date	Date	0, 8 or 10	Optional
Member Ending Eligibility Date	Date	0, 8 or 10	Optional

Instructions for each input field are as follows:

Family ID

This field identifies all members of a family and can be any alphanumeric string. The records in the member file must be sorted first on the Family ID (together with Patient ID, if available) so that all records for an individual are contiguous.

Patient ID

This field identifies individual members within a family. If present, this field must be sorted within Family ID, so that all records for an individual are contiguous. If the Family ID uniquely identifies an individual, this field need not be specified (that is, its length in the dictionary will be zero).

Patient Gender and Date of Birth

The member's gender (F or M) and date of birth. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid date formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/YYYY, and DD/MM/YYYY, where the separator can be any character.

Member Beginning Eligibility Date and Ending Eligibility Date

The first date on which the member became covered under the plan and the last date of the member's coverage. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/YYYY, and DD/MM/YYYY, where the separator can be any character.

Member Term Input File

The member term data file contains member coverage and term activity information. Plan coverage begin and end dates are required in order to correctly calculate the other fields in the member term file. There may be more than one record per individual member.

Field Descriptions

Field	Type	Length	Required or Optional
Family ID	AlphaNum	1-30	Required
Patient ID	AlphaNum	0-2	Optional
Member Beginning Eligibility Date	Date	8 or 10	Required
Member Ending Eligibility Date	Date	8 or 10	Required
Primary Care Provider	AlphaNum	20	Required
Provider Specialty Type	AlphaNum	1-10	Required
Medical Flag	AlphaNum	1	Required
Pharmacy Flag	AlphaNum	1	Required

Instructions for each input field are as follows:

Family ID

This field identifies all members of a family and can be any alphanumeric string. The records in the member term file must be sorted first on the Family ID (together with Patient ID, if available) so that all records for an individual are contiguous.

Patient ID

This field identifies individual members within a family.

Member Beginning Eligibility Date and Member Ending Eligibility Date

The first date on which the member became covered under the plan and the last date of the member's coverage. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/YYYY, and DD/MM/YYYY, where the separator can be any character.

Primary Care Provider

The provider key for the member's primary care physician. A single health care physician may have multiple provider IDs in your input claims data, but this person should have only one provider key.

Provider Specialty Type

This code represents the specialty of the primary care physician.

Medical Flag

Identifies whether the member has medical coverage (Y or N).

Pharmacy Flag

Identifies whether the member has pharmacy coverage (Y or N).