THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

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

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

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

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

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

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

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

THE NATIONAL QUALITY FORUM

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August 2008

	(for NQF staff use) **NQF Review #:** EC-093-08 **NQF Project:** National Voluntary Consensus Standards for Ambulatory Care Using Clinically Enriched Administrative Data
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	**Information current as of** *(date- MM/DD/YY)*: 10/22/08
2	**Title of Measure:** Adult(s) with frequent use of acute medications that also received prophylactic medications.
3	**Brief description of measure [1]:** This measure identifies adults with migraines who are frequently taking acute (abortive) medications and are also taking a prophylactic medication for migraine control.
4 (2a)	**Numerator Statement:** If YES to any of the following: 9, or 12, or 15, or 18 where: 9 states: Did the patient fill a prescription for an anticonvulsant (code set RX-12) during the following time period: last 120 days of the report period through 90 days after the end of the report period? 12 states: Did the patient fill a prescription for a Beta-Blocker-containing medication (code set RX-23) during the following time period: last 120 days of the report period through 90 days after the end of the report period? 15 states: Did the patient fill a prescription for a Calcium Channel Blocker-containing medication (code set RX-31) during the following time period: last 120 days of the report period through 90 days after the end of the report period? 18 states: Did the patient fill a prescription for a tricyclic antidepressant (code set RX-119) during the following time period: last 120 days of the report period through 90 days after the end of the report period? **Time Window:** 120 days prior to the end of the report period through 90 days after the end of the report period **Numerator Details** (Definitions, codes with description): see attached "Migraine ebm Alg" document
5 (2a)	**Denominator Statement:** See attached "Migraine ebm Alg" document for member demographics, member enrollment, and condition confirmation criteria for denominator migraine definition. In addition, for this measure, the patient must be 18 years of age or older at the end of the report period and must meet the following criteria: Identify patients with frequent headache, as defined in Appendix 1 Are any of the following equal to YES: 1,2,3,4,5,6,7 1: Was the sum of the Equivalent Doses (EqDose) for triptan (oral only) (code set RX-122) greater than a Threshold of 36 tablets, during the following time period: last 120 days of the report period? EqDose is a defined determination function. Note: Exclude the last claim within this time period. 2: Was the sum of the Equivalent Doses (EqDose) for triptan (subcutaneous only) (code set RX-123) greater than a Threshold of 24 dose equivalents, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period. 3: Was the sum of the Equivalent Doses (EqDose) for triptan (nasal only) (code set RX-121) greater than a Threshold of 24 spray bottles, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period. 4: Was the sum of the Equivalent Doses (EqDose) for Butorphanol Tartrate (nasal only) (code set RX-29) greater than a Threshold of 12.5 ml, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period. 5: During the following time period: last 120 days of the report period Was the sum of the Equivalent Doses (EqDose) for Dihydroergotamine Mesylate (nasal only) (code set RX-

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

	42) greater than a Threshold of 12 ml? OR Was the sum of the Equivalent Doses (EqDose) for dihydroergotamine mesylate (injection only) (code set RX-174) greater than a Threshold of 12 ml? Calculate EqDose for pharmacy claims. OR Were there more than 12 procedures for dihydroergotamine mesylate (injection only) (code set RX-174)? Calculate the total number of procedures in medical claims. Note: Exclude the last claim within this time period. 6: Was the sum of the Equivalent Doses (EqDose) for butalbital containing medication (code set RX-28) greater than a Threshold of 100 tablets/capsules, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period. 7: Was the sum of the Equivalent Doses (EqDose) for midrin type medication (code set RX-76) greater than a Threshold of 150 capsules, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period. **Time Window:** 120 days prior to the end of the report period for identification of frequent medication use (Note: migraine condition confirmation requires a time period of up to 24 months or use of a disease registry) **Denominator Details** (Definitions, codes with description): see attached "Migraine ebm Alg" document
6 (2a, 2d)	**Denominator Exclusions:** Patients were excluded from this measure if they were less than 18 years of age at the end of the report period since there is insufficient data in this population to recommend prophylactic therapy. **Denominator Exclusion Details** (Definitions, codes with description): see attached "Migraine ebm Alg" document
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? No ► If "other" describe: **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8 (2a, 2e)	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? (select one) **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9 (2a)	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☒ **OR** Web page URL: **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*) Better quality = Higher score ► If "Other", please describe:
10 (2a. 4a, 4b)	**Identify the required data elements**(e.g., primary diagnosis, lab values, vital signs)**:** ICD-9 codes, CPT, Revenue codes (alternatively, a disease registry can be used for this condition to identify patients with migraines), and NDC/Pharmacy data **Data dictionary/code table** attached ☒ **OR** Web page URL: **Data Quality** (2a) *Check all that apply* ☐ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel) ☒ Data are coded using recognized data standards ☒ Method of capturing data electronically fits the workflow of the authoritative source ☐ Data are available in EHRs ☒ Data are auditable

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

(2a, 4b)

- ☐ Electronic Health/Medical Record
- ☐ Electronic Clinical Database, Name:
- ☐ Electronic Clinical Registry, Name:
- ☒ Electronic Claims
- ☒ Electronic Pharmacy data
- ☐ Electronic Lab data
- ☐ Electronic source – other, Describe:
- ☐ Paper Medical Record
- ☐ Standardized clinical instrument, Name:
- ☐ Standardized patient survey, Name:
- ☐ Standardized clinician survey, Name:
- ☐ Other, Describe:

Instrument/survey attached ☐ **OR** Web page URL:

12 **Sampling** *If measure is based on a sample, provide instructions and guidance on sample size.*

(2a) **Minimum sample size:** not applicable

Instructions:

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

(2a) ► If part of a composite or paired with another measure, please identify composite or paired measure Not applicable

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

(2a)

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

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

(2a)

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

IMPORTANCE TO MEASURE AND REPORT

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

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

(1a)

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

(1a) **Summary of Evidence:**

Citations[2] for Evidence:

18 **Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.*

(1b) **Summary of Evidence:** Using a geographically diverse 12 million member benchmark database (this database represents predominately a commercial population less than 65 year of age) the compliance rate was 62 percent, indicating a clear gap in care and opportunity for care improvement.

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

	Citations for Evidence: Ingenix EBM Connect benchmark results, December 2007
19 (1b)	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure focus among populations.* **Summary of Evidence:** Not applicable **Citations for evidence:**
20 (1c)	**If measuring an Outcome** Describe relevance to the national health goal/priority, condition, population, and/or care being addressed: not applicable **If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence** *Summarize the evidence (including citations to source) supporting the focus of the measure as follows:* • Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit. • Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s). • Structure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit. • Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public. • Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care. • Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality. **Type of Evidence** *Check all that apply* ☒ Evidence-based guideline ☐ Quantitative research studies ☐ Meta-analysis ☐ Qualitative research studies ☐ Systematic synthesis of research ☐ Other (*Please describe*): **Overall Grade for Strength of the Evidence**[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)*: The threshold for frequent acute migraines is based on consensus panel statements from ICSI and American Academy of Neurology guidelines; the recommended migraine prophylactic agents have Class A and C strengths of evidence (ICSI), defined below. These recommendations are equivalent to the USPSTF grade A and B classifications. **Summary of Evidence** (*provide guideline information below*)**:** The goals of migraine prophylactic therapy are to: 1) reduce the frequency, severity, and duration of acute attacks; 2) improve responsiveness to acute medication treatment; and 3) improve function and reduce disability (1). Patients with frequent migraines would benefit from prophylactic medication treatment (1,2). ICSI specifically recommends a threshold for prophylactic migraine treatment as three or more severe migraines per month that fail to respond adequately to abortive treatment (2). Consistent with these guidelines, this measure identifies patients who might benefit from prophylactic medications where frequent migraine headache is defined as 4 or more migraines per month during the last 120 days that result in treatment with a prescription abortive medication. Since it is not possible to directly quantify migraines, quantification of acute migraine medications against a threshold is used as a proxy for frequent migraines.

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

	Commonly used prophylactic medications include anticonvulsants, beta-blockers, calcium channel blockers, and tricyclic antidepressants. Recommended first-line prophylactic agents include propranolol, timolol, amitriptyline, and valproic acid derivatives; however, other medications from these therapeutic classes may be appropriate (1,3). **Citations for Evidence:** 1. American Academy of Neurology. Practice parameter: evidence-based guidelines for migraine headaches (an evidence-based review). Report on the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2000;55:754-63. 2. Institute for Clinical Systems Improvement (ICSI). Health Care Guideline: Diagnosis and Treatment of Headache (Released January 2007). Accessed August 2, 2007. URL: http:www.icsi.org 3. Snow V, Weiss K, Wall EM, et al. Pharmacologic management of acute attacks of migraine and prevention of migraine headache. Ann Int Med 2002;137(10):840-52.
21 (1c)	**Clinical Practice Guideline** *Cite the guideline reference; quote the specific guideline recommendation related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.* **Guideline Citation:** 1. American Academy of Neurology. Practice parameter: evidence-based guidelines for migraine headaches (an evidence-based review). Report on the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2000;55:754-63. 2. Institute for Clinical Systems Improvement (ICSI). Health Care Guideline: Diagnosis and Treatment of Headache (Released January 2007). Accessed August 2, 2007. URL: http:www.icsi.org **Specific guideline recommendation:** AAN (1): Preventive treatment.The goals of migraine preventive therapy are to: 1) reduce attack frequency, severity, and duration; 2) improve responsiveness to treatment of acute attacks; and 3) improve function and reduce disability. One or more of the following helps guide management decisions on the use of preventive therapies: recurring migraines that, in the patients' opinion, significantly interfere with their daily routines, despite acute treatment; frequent headaches; contraindication to or failure or overuse of acute therapies; adverse events with acute therapies; the cost of both acute and preventive therapies ; patient preference; presence of uncommon migraine conditions, including hemiplegic migraine, basilar migraine, migraine with prolonged aura, or migrainous infarction (to prevent neurologic damage—as based on expert consensus). ICSI (2): Appropriate pharmacological or analgesic treatment of acute headache should generally not exceed more than two days per week on a regular basis. More treatment other than this may result in medication- overuse chronic daily headaches. The guideline work group presumes most mild migraine headaches will be managed by self-care, which implies an emphasis on over-the-counter medications. Criteria for Prophylactic Treatment: - Three or more severe migraine attacks per month that fail to respond adequately to symptomatic therapy. - Less frequent but protracted attacks that impair the patient's quality of life. - Patient is interested in prophylactic treatment. {Note: First line prophylactic medications are then summarized in appendix B with class A (Randomized, controlled trial) and C (Non-randomized trial with concurrent or historical controls, Case-control study, Study of sensitivity and specificity of a diagnostic test, Population-based descriptive study) grades of evidence. Medications include: Divalproex Sodium, Gabapentin, Topiramate, several beta-blockers, Verapamil, tricyclics, and Tizanidine (a muscle relaxant). **Guideline author's rating of strength of evidence** (*If different from USPSTF, also describe it and how it relates to USPSTF)***:** The threshold for frequent acute migraines is based on consensus panel statements from ICSI and American Academy of Neurology guidelines; the recommended migraine prophylactic agents have Class A and C strengths of evidence (ICSI). These recommendations are equivalent to the USPSTF grade A and B classifications.

	Rationale for using this guideline over others: These two guidelines represent a comprehensive summary of migraine management. AAN is a well recognized, respected national organization with expertise in the evaluation and treatment of this condition. ICSI guideline recommendations include and are consistent with AAN recommendations.
22 (1c)	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or contradictory guidelines and provide citations.* **Summary:** The use of prophylactic migraine treatment does need to be individualized (1,2). This measure uses claims-based data to use only one criteria, the frequency of acute migraine episodes based on the use of abortive medications, to identify patients who might benefit from a prophylactic medication. The migraine severity, response to abortive medications, patient preference, and other criteria are not addressed by this measure. **Citations:** 1. American Academy of Neurology. Practice parameter: evidence-based guidelines for migraine headaches (an evidence-based review). Report on the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2000;55:754-63. 2. Institute for Clinical Systems Improvement (ICSI). Health Care Guideline: Diagnosis and Treatment of Headache (Released January 2007). Accessed August 2, 2007. URL: http:www.icsi.org
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** This measure will facilitate identication and management of patient who might benefit from recommended prophylactic migraine medications. Prophylactic treatment can: 1) reduce migraine attack frequency, severity, and duration; 2) improve responsiveness to treatment of acute attacks; and 3) improve function and reduce disability.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☒ **OR** Web page URL:
25 (2b)	**Reliability Testing** **Data/sample:** description attached, see "Testing" document **Analytic Method:** description attached, see "Testing" document **Testing Results:** see attached document, "Benchmark test results"
26 (2c)	**Validity Testing** **Data/sample:** description attached, see "Testing" document **Analytic Method:** description attached, see "Testing" document **Testing Results:** see attached document, "Benchmark test results"
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.* **Summary of Evidence supporting exclusion(s):** not applicable **Citations for Evidence:** **Data/sample:** **Analytic Method:**

	Testing Results:
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** not applicable **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:**
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** description attached, see "Testing" document **Analytic Method:** **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** Results from testing **Data/sample:** see attached document, "Benchmark test results" **Methods to identify statistically significant and practically/meaningfully differences in performance:** **Results:**
31 (2h)	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender, SES, health literacy), **provide stratified results:** not applicable ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:
	USABILITY
32 (3)	**Current Use** In use **If in use, how widely used** Other ► If "other," please describe: Health plans, physicians (individuals and groups), care management, and other vendors/customers are using this on a national level. ☐ Used in a public reporting initiative, name of initiative: Sample report attached ☐ **OR** Web page URL:
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** Results are summarized and reported by users/customers depending on their business need. Therefore, this is no single public reporting format. **Methods:** **Results:**
34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☐ Other measure(s) on same topic

	☐ Other measure(s) for same target population ☒ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):** **Are the measure specifications harmonized with existing NQF-endorsed™ measures?** (select one) ►If not fully harmonized, provide rationale: **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:**
	FEASIBILITY
35 (4a)	**How are the required data elements generated?** *Check all that apply* ☐ Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment) ☐ Data elements are generated from a patient survey (e.g., CAHPS) ☒ Data elements are generated through coding performed by someone other than the person who obtained the original information (e.g., DRG or ICD-9 coding on claims) ☐ Other, Please describe:
36 (4b)	**Electronic Sources** All data elements ►**If all data elements are not in electronic sources, specify the near-term path to electronic collection by most providers:** ►**Specify the data elements for the electronic health record:** none are specific to nor dependent on EHR
37 (4c)	**Do the specified exclusions require additional data sources beyond what is required for the other specifications?** No ►**If yes, provide justification:**
38 (4d)	**Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure:** It is not possible to directly quantify migraines; therefore, quantification of acute migraine medications against a threshold is used as a proxy in this measure for frequent migraines. **Describe how could these potential problems be audited:** We used our 12 million benchmark testing database to determine what percent of migraine patients (based on our migraine condition confirmation criteria) met our definition of frequently taking abortive medications for migraine management. **Did you audit for these potential problems during testing?** Yes **If yes, provide results:** Using our 12 million benchmark testing database, we found that 4 percent of migraine patients met our definition of frequently taking abortive medications for migraine management. Our consultant panel experts reviewed this data and determined this was a reasonable percent, possibly lower than expected. Since our goal is to minimize false positive identification of members who would benefit from prophylactic treatment, we accepted a threshold of abortive medication use that might fail to identify some patients who might be candidates for prophylactic treatment.
39 (4e)	**Testing feasibility** Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues: Testing of this measure did not identify any concerns that would cause us to modify code sets or overall logic. Also, cutomers have not notified us of any concerns about the performance of this measure.
	CONTACT INFORMATION
40	**Web Page URL for Measure Information** *Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* **Web page URL:** To be defined

41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Cheri **MI:** **Last Name:** DiGiovanni **Credentials (MD, MPH, etc.):** **Organization:** Ingenix **Street Address:** 1050 Carol Street **City:** Downers Grove **State:** IL **ZIP:** 60516 **Email:** cheri.digiovanni@ingenix.com **Telephone:** 602-276-8913 ext:
42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** Kay **MI:** E **Last Name:** Schwebke **Credentials (MD, MPH, etc.):** MD, MPH **Organization:** Ingenix **Street Address:** 12125 Technology Drive **City:** Eden Prairie **State:** MN **ZIP:** 55344 **Email:** kay.schwebke@ingenix.com **Telephone:** 952-833-7154 ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** Kay **MI:** E **Last Name:** Schwebke **Credentials (MD, MPH, etc.):** MD, MPH **Organization:** As above **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** Kay **MI:**E **Last Name:**Schwebke **Credentials (MD, MPH, etc.):** MD, MPH **Organization:** As above **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext
	ADDITIONAL INFORMATION
45	**Workgroup/Expert Panel involved in measure development** Workgroup/panel used ►If workgroup used, describe the members' role in measure development: Reviewed relevant research/guideline, participated in the development of measure logic, reviewed code sets, reviewed benchmark results ►Provide a list of workgroup/panel members' names and organizations: see document, "Consultant panel members"
46	**Measure Developer/Steward Updates and Ongoing Maintenance** Year the measure was first released: May 2004 Month and Year of most recent revision: August 2007 What is the frequency for review/update of this measure? Consultant panel review due 2010, and then every 3 years When is the next scheduled review/update for this measure? 2010
47	**Copyright statement/disclaimers:** see attached "Migraine ebm Alg" document
48	**Additional Information:** In addition to the attachments referenced above, the following documents are attached. 1. EBM70Technical document 2. EBM70Concepts document Also, our next EBM Connect release, scheduled for November 2008, will include annual code set updates. Therefore, code sets submitted October 2008 might change slightly due to this routine maintenance process. The anticipated impact is minimal.
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.** ☒
50	**Date of Submission** (*MM/DD/YY*)**:** 10/30/08

PATIENT & FAMILY ENGAGEMENT

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

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

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

POPULATION HEALTH

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

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

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

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

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

SAFETY

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

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

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

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

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

PALLIATIVE CARE

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

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

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

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

CARE COORDINATION

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

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

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

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

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

PATIENT-FOCUSED CARE

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

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

OVERUSE

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

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

INGENIX®

Algorithm

Migraine Headache

Report Case ID: 104000

November 21, 2008

INGENIX

Migraine Headache
Table of Contents
Report Case ID: 104000

Code Sets Utilized

Diagnosis Code Sets	DX0101	Migraine
Procedure and Revenue Code Sets	PR0107	Professional Encounter
	RV0107	Professional Encounter
	PR0108	Professional Supervision
Rx Code Sets	RX-12	Anticonvulsant
	RX-23	Beta-Blocker-containing medication
	RX-28	Butalbital Containing Medication
	RX-29	Butorphanol Tartrate (nasal only)
	RX-31	Calcium Channel Blocker-containing medication
	RX-42	Dihydroergotamine Mesylate (nasal only)
	RX-76	Midrin-type medication
	RX-119	Tricyclic antidepressant
	RX-121	Triptan (nasal only)
	RX-122	Triptan (oral only)
	RX-123	Triptan (subcutaneous only)
	RX-174	Dihydroergotamine Mesylate (injection only)

Study Population

Time Frame Requirements

Period	Backward	Forward
Report Period	12m	
Minimum Medical Coverage	12m	
Minimum Pharmacy Coverage	6m	
Medical Claims Extraction	24m	3m
Pharmacy Claims Extraction	12m	3m
Determine Condition (Denom)	24m	
Determine Treatment (Num)	12m	
Physician Attribution	12m	

Rules

Report Rule ID	Rule Stmnt	Headings, Rules & Detail Description
Member Demographics		
1101001	A	All males or females that are 6 years or older at the end of the report period
Member Enrollment		
1102002	A B	Patient must have been continuously enrolled: ▪ 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 *Note: The standard EBM Connect® enrollment break logic allows unlimited breaks of no more than 45 days and no breaks greater than 45 days.*
Condition Confirmation		
3128001	A	The patient is listed on the Disease Registry Input File for this condition, if a Disease Registry Input File is available. *Note: Disease Registry is NOT a required Input File.*

Report Rule ID	Rule Stmnt	Headings, Rules & Detail Description
3109002	A	During the 24 months prior to the end of the report period, patient has 2 or more, that are at least 14 days apart, of the following services, where the diagnosis is Migraine (refer to diagnosis code set DX0101): ▪ Professional Encounter (code set PR0107, RV0107) ▪ Professional Supervision (code set PR0108) ▪ Facility Event – Confinement/Admission ▪ Facility Event – Emergency Room ▪ Facility Event – Outpatient Surgery
		AND
	B	During the 12 months report period, patient has 1 or more of the following services where the diagnosis is Migraine (code set DX0101): ▪ Professional Encounter (code set PR0107, RV0107) ▪ Professional Supervision (code set PR0108) ▪ Facility Event – Confinement/Admission ▪ Facility Event – Emergency Room ▪ Facility Event – Outpatient Surgery
3109003	A	During the 24 months prior to the end of the report period, patient has1 or more of the following services where the diagnosis is Migraine (code set DX0101): ▪ Professional Encounter (code set PR0107, RV0107) ▪ Professional Supervision (code set PR0108) ▪ Facility Event – Confinement/Admission ▪ Facility Event – Emergency Room ▪ Facility Event – Outpatient Surgery
		AND
	B	Patient has 1 or more prescriptions for the following medications during 12 month report period: ▪ Dihydroergotamine Mesylate (nasal only) (code set RX-42) ▪ Midrin-type medication (code set RX-76) ▪ Triptan (nasal only) (code set RX-121) ▪ Triptan (oral only) (code set RX-122) ▪ Triptan (subcutaneous only) (code set RX-123) ▪ Dihydroergotamine Mesylate (injection only) (code set RX-174)
Condition Exclusions		
		None

Intervention Rules

Report Rule ID	Rule Type & Task No.	Headings, Rules & Detail Description
Patients with frequent headaches.		
Candidates 1-7 identify patients with frequent headaches		
7123001 ℞	A	Was the sum of the Equivalent Doses (EqDose) for triptan (oral only) (code set RX-122) greater than a Threshold of 36 tablets, during the following time period: last 120 days of the report period? EqDose is a defined determination function. Note: Exclude the last claim within this time period. Refer to Appendix 1 for detailed methodology.
7123002 ℞	A	Was the sum of the Equivalent Doses (EqDose) for triptan (subcutaneous only) (code set RX-123) greater than a Threshold of 24 dose equivalents, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period.
7123003 ℞	A	Was the sum of the Equivalent Doses (EqDose) for triptan (nasal only) (code set RX-121) greater than a Threshold of 24 spray bottles, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period.
7123004 ℞	A	Was the sum of the Equivalent Doses (EqDose) for Butorphanol Tartrate (nasal only) (code set RX-29) greater than a Threshold of 12.5 ml, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period.
7123005	A B C	During the following time period: last 120 days of the report period Was the sum of the Equivalent Doses (EqDose) for Dihydroergotamine Mesylate (nasal only) (code set RX-42) greater than a Threshold of 12 ml? **OR** Was the sum of the Equivalent Doses (EqDose) for dihydroergotamine mesylate (injection only) (code set RX-174) greater than a Threshold of 12 ml? Calculate EqDose for pharmacy claims. **OR** Were there more than 12 procedures for dihydroergotamine mesylate (injection only) (code set RX-174)? Calculate the total number of procedures in medical claims. Note: Exclude the last claim within this time period.
7123006 ℞	A	Was the sum of the Equivalent Doses (EqDose) for butalbital containing medication (code set RX-28) greater than a Threshold of 100 tablets/capsules, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period.
7123007 ℞	A	Was the sum of the Equivalent Doses (EqDose) for midrin type medication (code set RX-76) greater than a Threshold of 150 capsules, during the following time period: last 120 days of the report period? Note: Exclude the last claim within this time period.
7123008	A	*Identify patients with frequent headache, as defined in Appendix 1* Are any of the following equal to YES: 1,2,3,4,5,6,7

Migraine Headache Intervention Rules

Report Case ID: 104000

Report Rule ID	Rule Type & Task No.	Headings, Rules & Detail Description
Patients with frequent use of acute medications benefit from prophylactic medications.		
9000006	**CP-I (139)**	**Adult(s) with frequent use of acute medications that also received prophylactic medications.**
▪ **Result Flag (RF):** IF 30 = Y, set RF to NA1, else (IF 8=Y and 21=Y), set RF to Y, else IF NoRx, set RF to NRX, else IF 8 = N set RF to NA2, else if MCE met, set RF to N, else set RF to Q ▪ **EBM Flag (EF):** IF RF = N, set EF = 1, else set EF = 0 **MCE-Med: NA** **MCE-Rx: 120 Days**		
7123030	A	Did the patient meet the following criteria: age < 18 years at the end of the report period?
7123009	A	Did the patient fill a prescription for an anticonvulsant (code set RX-12) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123012	A	Did the patient fill a prescription for a Beta-Blocker-containing medication (code set RX-23) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123015	A	Did the patient fill a prescription for a Calcium Channel Blocker-containing medication (code set RX-31) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123018	A	Did the patient fill a prescription for a tricyclic antidepressant (code set RX-119) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123021	A	If **YES** to any of the following: 9, or 12, or 15, or 18

Diagnosis Code Sets

The following tables represent the applicable diagnosis code sets for each condition referenced in the Migraine Headache rules.

DX0101 MIGRAINE

ICD-9 Code	Description
346	MIGRAINE
346.0	CLASSICAL MIGRAINE
346.00	CLASSICAL MIGRAINE W/O MENTION INTRACT MIGRAINE
346.01	CLASSICAL MIGRAINE W/INTRACT MIGRAINE SO STATED
346.1	COMMON MIGRAINE
346.10	COMMON MIGRAINE WITHOUT MENTION INTRACT MIGRAINE
346.11	COMMON MIGRAINE W/INTRACTABLE MIGRAINE SO STATED
346.2	VARIANTS OF MIGRAINE
346.20	VARIANTS MIGRAINE W/O MENTION INTRACT MIGRAINE
346.21	VARIANTS MIGRAINE W/INTRACT MIGRAINE SO STATED
346.8	OTHER FORMS OF MIGRAINE
346.80	OTH FORMS MIGRAINE W/O MENTION INTRACT MIGRAINE
346.81	OTH FORMS MIGRAINE W/INTRACT MIGRAINE SO STATED
346.9	UNSPECIFIED MIGRAINE
346.90	UNSPEC MIGRAINE WITHOUT MENTION INTRACT MIGRAINE
346.91	UNSPEC MIGRAINE W/INTRACTABLE MIGRAINE SO STATED

Procedure and Revenue Code Sets

The following tables represent the applicable code sets for each procedure that is referenced by the Migraine Headache rules.

PR0107 PROFESSIONAL ENCOUNTER		
CPT® Code	**Specific Encounter Type**	**General Encounter Category**
99201-99215	Office Visit	Outpatient Professional
99217-99220	Observation Care	Observation Care
99221-99239	Inpatient Visit	Inpatient Visit
99241-99245	Office Consult	Outpatient Professional
99251-99263	Inpatient Consult	Inpatient Consult
99271-99275	Confirmatory Consultation	Confirmatory Consultation
99281-99285	ER Physician Visit	ER Professional Visit
99301-99318	Nursing Facility Services	Nursing Facility Services
99341-99350	Home Visit	Outpatient Professional
99381-99397	Preventive Medicine Visit	Outpatient Professional
99401-99429	Counseling/Risk Factor Visit	Counseling/Risk Factor Visit
RV0107 PROFESSIONAL ENCOUNTER		
Rev Code	**Specific Encounter Type**	**General Encounter Category**
0510-0526, 0528-0529	Clinic Visit (Facility Component)	Clinic Visit (Facility Component)
0981	ER Visit (Professional Component)	ER Professional Visit
0983	Clinic Visit (Professional Component)	Outpatient Professional

PR0108 PROFESSIONAL SUPERVISION		
CPT Code	**Specific Encounter Type**	**General Encounter Category**
99321 - 99337	Domiciliary or Rest Home Visit	Rest Home Visit
99339 - 99340	Physician Supervision of Rest Home Patient	Rest Home Supervision
99371 - 99373	Telephone call for consultation or medical management or coordination	Telephonic service
99374 - 99375	Supervision of Home Health Care	Home Care Supervision
99377 - 99378	Physician Supervision of Hospice Care	Hospice Care Supervision
99379 - 99380	Physician Supervision of Nursing Facility Patient	Nursing Facility Supervision
HCPCS Code	**Specific Encounter Type**	**General Encounter Category**
G0182	Physician Supervision of Hospice Care	Hospice Care Supervision

Pharmacy Code Sets

The following tables provide the generic ingredients for drugs and other pharmaceuticals referenced in the Migraine Headache rules.
HCPCS codes are not used in possession ratio or equivalent dose calculations. Only pharmacy records which use National Drug Codes (NDC) to identify the specific medication are used in these calculations.

RX-12: ANTICONVULSANTS

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Phenytoin Sodium - Prompt	Oral		
NDC		Phenytoin Sodium - Extended	Oral		
NDC		Phenytoin - Chewable / Suspension	Oral		
NDC		Mephenytoin	Oral		
NDC		Ethotoin	Oral		
NDC		Paramethadione	Oral		
NDC		Trimethadione	Oral		
NDC		Ethosuximide	Oral		
NDC		Methsuximide	Oral		
NDC		Phensuximide	Oral		
NDC		Lamotrigine	Oral		
NDC		Topiramate	Oral		
NDC		Primidone	Oral		
NDC		Valproic Acid	Oral		
NDC		Divalproex Sodium / Valproate Sodium	Oral		
NDC		Carbamazepine	Oral		
NDC		Felbamate	Oral		
NDC		Gabapentin	Oral		
NDC		Tiagabine	Oral		
NDC		Phenacemide	Oral		
NDC		Phenytoin / Phenobarbital	Oral		
NDC		Levetiracetam	Oral		
NDC		Oxcarbazepine	Oral		
NDC		Zonisamide	Oral		

RX-23: BETA-BLOCKER-CONTAINING MEDICATION

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Acebutolol HCl			
NDC		Penbutolol Sulfate			
NDC		Pindolol			
NDC		Atenolol			
NDC		Betaxolol HCl			

NDC		Bisoprolol Fumarate			
NDC		Esmolol HCl			
NDC		Metoprolol Tartrate			
NDC		Metoprolol Succinate, sustained-release			
CPT	0007F	BETA-BLOCKER THERAPY PRESCRIBED			
NDC		Carteolol HCl			
NDC		Propranolol HCl			
HCPCS	J1800	INJECTION PROPRANOLOL HCL UP TO 1 MG			
NDC		Propranolol HCl - long acting			
NDC		Nadolol			
NDC		Sotalol HCl			
NDC		Timolol Maleate			
NDC		Labetalol HCl			
NDC		Carvedilol			
NDC		Labetalol / Hydrochlorothiazide			
NDC		Bisoprolol Fumarate / Hydrochlorothiazide			
NDC		Metoprolol Tartrate / Hydrochlorothiazide			
NDC		Propranolol / Hydrochlorothiazide			
NDC		Timolol Maleate / Hydrochlorothiazide			
NDC		Nadolol / Bendroflumethiazide			
NDC		Atenolol / Chlorthalidone			

RX-28: BUTALBITAL-CONTAINING MEDICATION

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Butalbital			
NDC		Acetaminophen / Butalbital			
NDC		Acetaminophen / Butalbital / Caffeine			
NDC		Aspirin / Butalbital / Caffeine			
NDC		Butalbital / Acetaminophen / Caffeine / Codeine			
NDC		Butalbital / Aspirin / Caffeine / Codeine			
NDC		Aspirin / Butalbital			

RX-29: BUTORPHANOL TARTRATE (NASAL ONLY)

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Butorphanol Tartrate	Nasal		
HCPCS	S0012	BUTORPHANOL TARTRATE NASAL SPRAY 25 MG	Nasal		

RX-31: CALCIUM CHANNEL BLOCKER-CONTAINING MEDICATION

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength

NDC		Diltiazem HCl / IV			
NDC		Verapamil HCl / IV			
NDC		Amlodipine Besylate			
NDC		Felodipine			
NDC		Isradipine			
NDC		Nicardipine HCl			
NDC		Nicardipine HCl SR			
NDC		Nicardipine HCl IV			
NDC		Nifedipine immediate- release			
NDC		Nifedipine sustained-release			
NDC		Nimodipine			
NDC		Nisoldipine			
NDC		Bepridil HCl			
NDC		Mibefradil Dihydrochloride			
NDC		Diltiazem HCl sustained-release			
NDC		Verapamil HCl sustained- release			
NDC		Isradipine sustained-release			
NDC		Amlodipine Besylate / Benazepril			
NDC		Trandolapril / Verapamil HCl			
NDC		Enalapril Maleate/ Diltiazem Maleate			
NDC		Enalapril Maleate / Felodipine			
NDC		Valsartan / Amlodipine			

RX-42: DIHYDROERGOTAMINE MESYLATE (NASAL ONLY)

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Dihydroergotamine Mesylate	Nasal		

RX-76: MIDRIN-TYPE MEDICATION

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Isometheptene / Dichloralphenazone / Acetaminophen			

RX-119: TRICYCLIC ANTIDEPRESSANTS

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Doxepin HCl - oral			
NDC		Amitriptyline HCl			
HCPCS	J1320	INJECTION AMITRIPTYLINE HCL UP TO 20 MG			
NDC		Clomipramine HCl			
NDC		Imipramine HCl			
HCPCS	J3270	INJ IMIPRAMINE HCL TO 20 MG			
NDC		Imipramine Pamoate			

NDC		Trimipramine Maleate			
NDC		Amoxapine			
NDC		Desipramine HCl			
NDC		Nortriptyline HCl			
NDC		Protriptyline HCl			
NDC		Maprotiline HCl			
NDC		Chlordiazepoxide / Amitriptyline			
NDC		Perphenazine / Amitriptyline HCl			

RX-121: TRIPTAN (NASAL ONLY)

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Sumatriptan Succinate	Nasal		
NDC		Zolmitriptan	Nasal		

RX-122: TRIPTAN (ORAL ONLY)

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Sumatriptan Succinate	Oral		
NDC		Zolmitriptan	Oral		
NDC		Naratriptan	Oral		
NDC		Rizatriptan Benzoate	Oral		
NDC		Almotriptan Malate	Oral		
NDC		Frovatriptan Succinate	Oral		
NDC		Eletriptan HBr	Oral		

RX-123: TRIPTAN (SUBCUTANEOUS ONLY)

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Sumatriptan Succinate	Subcutaneous		
HCPCS	J3030	INJECTION SUMATRIPTAN SUCCINATE 6 MG	Subcutaneous		

RX-174: DIHYDROERGOTAMINE MESYLATE (INJECTION ONLY)

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Dihydroergotamine Mesylate	Injectable		
HCPCS	J1110	INJECTION DIHYDROERGOTAMINE MESYLATE PER 1 MG	Injectable		

Migraine Headache
Glossary

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>℞</td><td>The presence of ℞ in the Report Rule ID column indicates that the rule candidate is exclusively or primarily dependent on pharmacy claims information. Members who do not have a managed pharmacy benefit, as determined from the Member Term input data file, will be assigned a default value of ‘N’ for these rule candidates, thus eliminating unnecessary processing time.</td></tr>
<tr><td>Result Flag ‘Y’</td><td>A Result Flag of ‘Y’ is assigned to indicate that the result of the rule is affirmative; the treatment was provided, the diagnostic test was performed, the lab value was normal, etc. If a rule has an affirmative result, the result flag of Y will be assigned regardless of the patient’s length of eligibility.</td></tr>
<tr><td>Result Flag ‘N’</td><td>A Result Flag of ‘N’ is assigned to indicate that the result of the rule is negative AND the patient met the minimum eligibility requirements for that particular rule. For example, if the rule is looking for a drug within the last 120 days, the patient must be enrolled in a drug benefit for at least the last 120 days.</td></tr>
<tr><td>Result Flag ‘Q’</td><td>A Result Flag of ‘Q’ is assigned to indicate that there was no claim record indicating that the patient received a particular test or treatment, but there may be data incompleteness due to lack of continuous enrollment. If a patient is not continuously enrolled in medical or pharmacy benefits throughout the window of time during which the service was being evaluated, there is no way to know whether the test was performed or not. The absence of a claim record for the test might be due to data incompleteness prior to the onset of medical benefits, or it might reflect the fact that the patient did not actually receive the test.</td></tr>
<tr><td>Result Flag ‘NA’</td><td>A Result Flag of ‘NA’ is assigned to indicate that the member has clinical characteristics or contraindications that render a particular rule “not applicable” to that particular member. There are seven (7) breakdowns of the NA result flag, which provide a method for further identification and clarification of this flag:
<table>
<tr><th>FLAG</th><th>DESCRIPTION</th></tr>
<tr><td>NA1</td><td>Patient did not meet the age or gender criteria.</td></tr>
<tr><td>NA2</td><td>Patient was not currently taking the medication in question or had not taken it for the required duration.</td></tr>
<tr><td>NA3</td><td>Patient was taking the medication, but a possession ratio could not be computed [less than two prescriptions during the rule time window].</td></tr>
<tr><td>NA4</td><td>Patient did not meet the rule specific criteria [e.g., co-morbidity, complexity (diagnosis and medication), intervention not warranted].</td></tr>
<tr><td>NA5</td><td>No lab result record or insufficient information.</td></tr>
<tr><td>NA6</td><td>Patient admitted to long term care facility or hospital which might cause data incompleteness</td></tr>
<tr><td>NA7</td><td>Patient who did not receive treatment or medication had a contraindication or other justification.</td></tr>
</table></td></tr>
<tr><td>Result Flag ‘NRX’</td><td>A Result Flag of ‘NRX’ is assigned under the following circumstances to the rule types noted below: 1) the member did not have a pharmacy benefit at the end of the report period (applies to chronic and some preventive cases (case ID = 1xxxxx or 3xxxxx)) or 2) the member did not have a pharmacy benefit throughout the duration of episodic condition (case ID = 2xxxxx).

Research Based rules (R-1, R-2)
Medication Adherence rules (A)
Patient Safety rules (S-M, S-DI)

These rule types are exclusively or primarily dependent on pharmacy claims. For Care Pattern rules (CP-I, CP-R, CP-E), a Q flag will be assigned if the patient does not meet the minimum pharmacy eligibility requirements for the particular rule. In addition to the above, some national standard rules may also have NRX flags assigned if the member did not have pharmacy benefit at the end of the report period.</td></tr>
<tr><td>MCE</td><td>In order to assign a Result Flag of 'Q', each rule has a specific Minimum Continuous Enrollment (MCE) period for medical and pharmacy benefits which reflects the time frame of the recommended services (e.g., if the rule is looking for a test within 12 months the medical MCE is 12 months). When a test or treatment is absent, the MCE is used to determine whether to assign a result flag of ‘N’ or ‘Q’. A Result Flag of ‘N’ is assigned when the patient meets the MCE requirements. A Result Flag of ‘Q’ is assigned when the patient does not meet the MCE requirements.</td></tr>
</table>

Appendix
Frequent Migraine Headaches

The purpose of the following methodology is to identify patients that have frequent migraine headaches. It is not possible to directly identify headaches; therefore, quantification of acute migraine medications against a threshold is used as a proxy for frequent headaches. Frequent migraine headaches are defined as 4 per month. Five types of migraine headache medications will be analyzed separately to determine whether or not a patient has frequent migraine headaches.

Thresholds were defined based on 12 headaches during a 90-day period

1. Triptan contain medications
   - Oral – 36 tablets within 90 days
   - Subcutaneous – 24 dose equivalents within 90 days
   - Nasal spray – 24 spray bottles within 90 days

2. Butorphanol Tartrate (e.g., Stadol NS)
   - Nasal Squeeze Bottle – 12.5 mL within 90 days

3. Dihydroergotamine Mesylate
   - Ampule – 12 mL within 90 days

4. Butalbital (e.g., Fioricet and Fiorinal)
   - Oral – 100 tablets or capsules within 90 days

5. Midrin type medication
   - Oral – 150 capsules within 90 days

1. ORAL TRIPTAN

a. Quantity count for this drug is in tablets
b. Two-three tablets treat one headache. For the purpose of calculation, assume three tablets per headache.
c. <u>Threshold: 36 tablets Oral Triptan</u>
d. Methodology:
   i. Sum Quantity Count where Drug Concept ID = 122
   ii. Compare the result from i to threshold of 36 tablets

2. SUBCUTANEOUS TRIPTAN

i. Create a SUMATRIPTAN SUCCINATE dose equivalent

A. SUMATRIPTAN SUCCINATE KIT PACKAGES

a. Quantity count for this drug is in kits
b. One kit contains two single dose syringe cartridges
c. Two single dose syringes are used to treat one headache
d. <u>One kit SUMATRIPTAN SUCCINATE = 2 SUMATRIPTAN SUCCINATE dose equivalent</u>

B. SUMATRIPTAN SUCCINATE VIAL PACKAGES

a. Quantity count for this drug is in mLs
b. Packed in 0.5 mL single dose vials in cartons of 5 vials. Each vial contains 6 mg of active ingredient.
c. One – two 0.5 mL vials are used to treat one headache.
d. <u>1 mL SUMATRIPTAN SUCCINATE = 2 SUMATRIPTAN SUCCINATE dose equivalent</u>

ii. **Threshold: 24 dose equivalents SUMATRIPTAN SUCCINATE**

iii. Methodology:
   a. Sum Quantity Count where Drug Concept ID = 123
   b. Multiply Sum of Quantity Count by 2
   c. Compare to threshold of 24 dose equivalents

3. NASAL TRIPTAN (SUMATRIPTAN Nasal Spray)
a. Quantity count for this drug is in bottles
b. Packed in six single use spray bottles
c. Two spray bottles are used to treat one headache
d. Threshold: 24 spray bottles SUMATRIPTAN
e. Methodology:
   i. Sum Quantity Count where Drug Concept ID = 121
   ii. Compare the result from i to threshold of 24 spray bottles

4. **BUTORPHANOL TARTRATE (e.g., Stadol NS)**
a. Quantity count for this drug is in mLs
b. Packed in 2.5 ml squeeze bottles
c. One 2.5 mL squeeze bottle is used to treat 2 to 3 headaches.
d. Threshold: 12.5 mL BUTORPHANOL TARTRATE
e. Methodology:
   i. Sum Quantity Count where Drug Concept ID = 29
   ii. Compare the result from i to threshold of 12.5 mL

5. DIHYDROERGOTAMINE MESYLATE NASAL SPRAY (e.g., Migranal)
a. Quantity count for this drug is in mLs
b. Packed in 4 mL kits
c. One 4 mL kit is used to treat 4 headaches.
d. Threshold: 12 mL DIHYDROERGOTAMINE MESYLATE NASAL SPRAY
e. Methodology:
   i. Sum Quantity Count where Drug Concept ID = 42
   ii. Compare the result from i to threshold of 12 mL

6. DIHYDROERGOTAMINE MESYLATE INJECTION (e.g., D.H.E.45)
a. Quantity count for this drug is in mLs
b. Packed in 1 mL ampules
c. One 1 ml ampule is used to treat 1 headache.
d. Threshold: 12 mL DIHYDROERGOTAMINE MESYLATE INJECTION
e. Methodology:
   i. Sum Quantity Count where Drug Concept ID = 174
   ii. Compare the result from i to threshold of 12 mL

7. BUTALBITAL containing Medication (e.g., Fioricet and Fiorinal)
a. Quantity count for this drug is in tablets/capsules
b. 8 tablets/capsules are used to treat one headache
c. Threshold: 100 tablets/capsules BUTALBITAL
d. Methodology:
   i. Sum Quantity Count where Drug Concept ID = 28
   ii. Compare the result from i to threshold of 100 tablets/capsules

8. Midrin-type Medication

a. Quantity count for this drug is in capsules
b. 12 capsules are used to treat one headache
c. <u>Threshold: 150 capsules Midrin-type Medication</u>
d. Methodology:
   i. Sum Quantity Count where Drug Concept ID = 76
   ii. Compare the result from i to threshold of 150 capsules

Acute Migraine Medications

No.	Code Set Name	Drug Concept ID	Conversion Factor (ConFactor)	Conversion Formula (1, 2, 3)	Threshold
1.	Oral Triptan	122	1.0	Qty Ct * ConFactor = Eq Dose	36
2.	Subcutaneous Triptan	123	2.0	Qty Ct * ConFactor = Eq Dose	24
3.	Nasal Triptan	121	1.0	Qty Ct * ConFactor = Eq Dose	24
4.	BUTORPHANOL TARTRATE	29	1.0	Qty Ct * ConFactor = Eq Dose	12.5
5.	DIHYDROERGOTAMINE MESYLATE NASAL SPRAY	42	1.0	Qty Ct * ConFactor = Eq Dose	12
6.	DIHYDROERGOTAMINE MESYLATE INJECTION	174	1.0	Qty Ct * ConFactor = Eq Dose	12
7.	BUTALBITAL containing Medication	28	1.0	Qty Ct * ConFactor = Eq Dose	100
8.	Midrin-type Medication	76	1.0	Qty Ct * ConFactor = Eq Dose	150

1. Qty Ct - Quantity Count, a field on the pharmacy claim record
2. ConFactor - Conversion Factor, a value defined in the Clinical Definition Library (CDL)
3. Eq Dose - Equivalent Dose, a computed value

i. Include pharmacy claims, as defined by the above code set(s), with a fill date during the last 120 days of the report period. (Note: Use 120 days rather than 90 days, because the last script is excluded.)
ii. Within each code set, exclude the last (most current) script (Rationale: Each subsequent script indicates the patient has used the medication from the previous script. This methodology strengthens the likelihood that patients identified are frequent users.) Note: If there is only one eligible script within a code set, that drug will be excluded.
iii. Within each code set, compute TOTAL Equivalent Dose by summing the Equivalent Dose across all eligible claims within that code set. Compare TOTAL Equivalent Dose for this code set to the corresponding Threshold.
iv. Repeat for each code set.

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Quality Processes

10/27/08

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Table of Contents

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Section 1 - Overview

1.1 Purpose of Document

This document describes the quality processes from clinical measure creation to final product delivery. These processes ensure that the information provided to our clients has maximum quality and integrity.

1.2 Overview

Evidence-based treatment guidelines have been developed with the belief that adherence to them lowers costs, increases quality of care, or both. Health service organizations, payers, and employers want to provide the best care at the best cost. By integrating clinically relevant research evidence with actual care patterns, as evidenced through claims and other administrative data, gaps in care can be identified and interventions can be targeted to improve outcomes (cost and quality).

Measures are created through a well-defined process involving careful review at every step. Quality checks are performed in five different phases of development:

1. Clinical Measure Creation
2. Conversion of Clinical Measures to Machine Code
3. Clinical Measures Processing Engine (i.e., component-ware)
4. End to End Testing (Customer Acceptance Testing)
5. Validation of Results

1.3 Testing Through Multiple Methods

Quality assurance of each measure is accomplished through the testing using multiple methods. 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 of the 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.

Section 2 - Quality Processes

2.1 Creation of Clinical Measures

2.1.1 Literature Review

The process of measure creation begins with the clinician, who reviews published literature on evidence-based medicine. Various resources are examined, including but not limited to:

- MEDLINE
- Professional and specialty organization (e.g. ADA, ACC/AHA) guidelines
- Agency for Healthcare Research and Quality (AHRQ) including national clearinghouse guidelines
- National standards (e.g. HEDIS, AMA PCPI, AQA, NQF)
- Institute for Clinical Systems Improvement (ICSI)
- Food and Drug Administration (FDA) Advisories
- Published clinical trials and other relevant articles

- Pharmaceutical manufacturer's recommendations

Based upon the supporting literature and the ability to adequately define and measure care using electronic claims data, proposed new measures are developed. Note: this same process is employed when deciding whether to update or retire an existing measure.

2.1.2 Expert Panel Review

The proposed measures and current treatment guidelines are then reviewed by the Clinical Consultant Panel. This expert panel plays a critical role in the creation and maintenance of measures. The panel is currently comprised of 21 clinicians, including 18 physicians and 3 Pharmacologists. Each physician is board certified in their area of specialty and has more than 15 years of clinical practice.

The specialties / sub-specialties represented on the panel are:

Specialty	
Cardiology (2)	Oncology
Endocrinology	Ophthalmology
Family Practice	Orthopedics
Gastrointestinal	Otolaryngology
Geriatrics	Pediatrics
Hematology	Psychiatry (2)
Infectious Disease	Pulmonary
Internal Medicine	Rad Oncology
Nephrology	Rheumatology
Neurology (4)	Surgery
OB/GYN	

The physicians on the panel are practicing physicians in settings such as a university hospital, VA hospital, medical center, clinic, independent or group practice. The Pharmacologists have more than 10 years of clinical practice. All clinicians, with the exception of the Medical Director, have no affiliation with UnitedHealth Group outside of their responsibilities on the Clinical Consultant Panel. An annual training session is held for all panel members to provide updates on future product enhancements.

2.1.3 Summary of Evidence Basis

When the expert panel has reached consensus on the proposed measures, a synopsis of the evidence basis for each measure is developed. This synopsis includes citations for published research and guidelines that support the measure, as well as strength of evidence ratings when these rankings are available.

2.1.4 Clinical Algorithms

In conjunction with the synopsis a clinical algorithm is developed which indicates how to define and evaluate the clinical measures. This document includes condition confirmation criteria, exclusion rules, intervention rules, and compliance criteria, as well as high-level details of diagnostic, procedural, revenue, pharmaceutical, and laboratory code sets. These code sets are defined and maintained in a secure product database.

2.1.5 Maintenance Review Cycle

Existing measures are reviewed every 12-24 months as part of an ongoing product maintenance cycle. Any member of the expert panel may suggest changes to a measure at any point, even outside of the regular review cycle, if new evidence is published which relates to the measure.

2.2 Conversion of Clinical Measures into Software Code

The clinical algorithms are converted into software code. A team of business analysts, nurses, and health services researchers translates the words from the clinical algorithm into machine readable language. The team members independently peer review and sign off on each measure to ensure that the software code accurately reflects the original measure specifications.

2.3 Testing of Engine Software Code

The software code from is processed to produce compliance results. Per the product development life cycle there are multiple types of testing activities associated with this component-ware engine. Security requirements, performance requirements, legal requirements (e.g. HIPAA), content requirements, and usability are all tested and verified.

2.3.1 Unit and Integration Testing

During unit and integration testing each engine component is tested discretely by the developer or software engineer who programmed it. In unit testing the developer tests functional features, environmental requirements, system behavior and performance aspects. When the software moves into integration testing, the developer performs positive and negative testing of system interfaces to verify that the functions which were tested at the unit level perform correctly in a full system build and deployment.

2.3.2 Functional Testing

Functional testing is conducted at the end of each software iteration to test the alignment of the product to the functional requirements. The QA team performs positive and negative testing of product requirements and architecture. At the end of functional testing, the decision is made either to move on to the next iteration or to move the software into system testing.

2.3.3 System Testing

There are three types of system testing initiatives which are conducted using sample data to simulate business processes. The table below describes the purpose of each type of system test.

Test Type	Description
Volume testing	Determine whether the engine can handle the required volume of data
Performance testing	Determine whether the engine meets its performance requirements
Platform testing	Ensure that the component-ware works appropriately for all supported operating systems

2.4 Reliability Testing

Customer Acceptance Testing (CAT) is another 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 rigorously checks the creation of denominators (target population), numerators, and exclusions from both.

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.

2.5 Validity 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:

- Prevalence rates for a condition are comparable to nationally published rates
- 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 to be clinically reasonable by practicing physicians and health services researchers
- There are no significant, unexplained variations when looking at results from different health plans and different geographic areas

2.6 Creation of National Benchmarks

National benchmarks are on a population no less than 12 million members. Prevalence is calculated doe each condition. Compliance rates are calculated for each measure.
The Medical Director reviews the results to verify that:

- Prevalence rates for a condition are comparable to nationally published rates
- 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 to be clinically reasonable by practicing physicians and health services researchers
- There are no significant, unexplained variations when looking at results from different health plans and different geographic areas

Section 3 - Summary

Ensuring quality in the product requires expertise from a variety of disciplines across each step in the development process. These efforts, which are designed to minimize the risk of producing inaccurate results, are particularly important for an application which assesses clinical care and identifies gaps in care. Errors cannot be completely eliminated due to the inherent limitations of administrative and claims data (e.g., incomplete data due to coverage and benefit limitations, coordination across multiple insurers, or complimentary care). None-the-less, administrative and claims data offer a cost effective means of identifying gaps in care, so that limited resources can be directed to the areas most likely to generate a return on investment, either through improved outcomes, reduced costs, or both.

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2007 Benchmarks

									Result Flag Distribution				
Report Case ID	Case Description	Summary Rule ID	Rule Cat. Desc.	Rule Type	Rule Description	Compliance Rate	Non-Compliance Rate	Yes Rate	Y	N	Q	NRX	NA (total)
0	Global Rules	9179002	Global Encounter	CP-C	Patient(s) currently taking a COX-2 inhibitor without a documented indication.	46	54	54	54	46	0	0	0
0	Global Rules	9180015	Global Drug Monitoring	S-M	Adult patient(s) taking warfarin that had three or more prothrombin time tests in last 6 reported months.	69	31	69	69	31	0	0	0
0	Global Rules	9180016	Global Drug Monitoring	S-M	Adult patient(s) taking a statin-containing medication nicotinic acid or fibric acid derivative that had an annual serum ALT	81	19	81	81	19	0	0	0
100311	Diabetes	9000023	Patient Safety	S-M	Patient(s) taking a biguanide (e.g. metformin) ACE-inhibitor or angiotensin II receptor antagonist that had a serum	80	20	80	50	12	0	0	38
100311	Diabetes	9000027	Care Pattern	CP-I	Patient(s) that had an office visit for diabetes care in last 6 reported months.	78	22	78	78	22	0	0	0
100311	Diabetes	9000043	Disease Management	R-2	Adult(s) that had a serum creatinine in last 12 reported months.	76	24	76	75	24	0	0	2
100404	Asthma	9000007	Care Pattern	CP-I	Patient(s) that had an office visit for asthma care in last 6 reported months.	58	42	58	58	42	0	0	0
102500	HTN	9000011	Care Pattern	CP-I	Patient(s) that had an annual physician	82	18	82	82	18	0	0	0
102500	HTN	9000012	Care Pattern	CP-I	Patient(s) that had a serum creatinine in last 12 reported months.	68	32	68	68	32	0	0	0
103300	COPD	9000003	Care Pattern	CP-I	Patient(s) that had an annual physician	81	19	81	81	19	0	0	0
103300	COPD	9000006	Disease Management	R-1	Patient(s) with frequent short-acting inhaled bronchodilator use who are also using a long-acting inhaled bronchodilator.	64	36	64	2	1	0	0	97
103500	Hyperlipidemia	9000006	Care Pattern	CP-I	Patient(s) with a LDL cholesterol test in last 12 reported months.	80	20	80	80	20	0	0	0
103500	Hyperlipidemia	9000012	Care Pattern	CP-I	Patient(s) with a HDL cholesterol test in last 12 reported months.	80	20	80	80	20	0	0	0
103500	Hyperlipidemia	9000014	Care Pattern	CP-I	Patient(s) with a triglyceride test in last 12 reported months.	80	20	80	80	20	0	0	0
104000	Migraine	9000006	Care Pattern	CP-I	Adult patient(s) with frequent use of acute medications that also received prophylactic medications.	62	38	62	2	1	0	0	96
104200	CKD	9000027	Disease Management	R-1	Patient(s) with proteinuria currently taking an ACE-inhibitor or angiotensin II receptor	69	31	69	19	9	0	0	72
104700	Prostate CA - I	9000006	Care Pattern	CP-I	Patient(s) that had a prostate specific antigen test in last 12 reported months.	80	20	80	80	20	0	0	0

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2007 Benchmarks

									Result Flag Distribution				
Report Case ID	Case Description	Summary Rule ID	Rule Cat. Desc.	Rule Type	Rule Description	Compliance Rate	Non-Compliance Rate	Yes Rate	Y	N	Q	NRX	NA (total)
104700	Prostate CA -	9000007	Care Pattern	CP-I	Patient(s) that had an annual physician	87	13	87	87	13	0	0	0
201200	Sinusitis Acute	9000002	Care Pattern	CP-I	Patient(s) treated with an antibiotic for acute sinusitis that received a first line	62	38	62	31	19	0	0	50
201500	Pregnancy Management	9000001	Care Pattern	CP-N	Pregnant women that had HIV testing.	66	34	66	66	34	0	0	0
201500	Pregnancy Management	9000003	Care Pattern	CP-I	Pregnant women less than 25 years of age that had chlamydia screening.	67	33	67	8	4	0	0	88
201500	Pregnancy Management	9000005	Care Pattern	CP-N	Pregnant women that had ABO and Rh blood type testing.	82	18	82	82	18	0	0	0
201500	Pregnancy Management	9000006	Care Pattern	CP-I	Pregnant women that had syphilis screening.	84	16	84	84	16	0	0	0
201500	Pregnancy Management	9000007	Care Pattern	CP-I	Pregnant women that had urine culture.	59	41	59	59	41	0	0	0
201500	Pregnancy Management	9000008	Care Pattern	CP-I	Pregnant women that had HBsAg testing.	83	17	83	83	17	0	0	0
201500	Pregnancy Management	9000009	Disease Management	R-2	Pregnant women that received Group B Streptococcus testing.	71	29	71	69	28	0	0	4

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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).

INGENIX

Overview of Facility Event Methodology

A Facility Event is a unique collection of services performed for a particular member by one to many providers, representing an admission, emergency department visit, or outpatient surgery. There are four types of Facility Events:

1. Confinement/Admission (FIP)
2. Outpatient Surgery (FOS)
3. Emergency Room (FER)
4. Other (OTH)

Each Facility Event Type has a unique set of rules to identify claim detail records as trigger records. A trigger record is a record that meets the criteria for the basis of an event. A trigger record, in turn, serves as a sort of "magnet" for associating additional related claim detail records.

Claim data elements required to trigger specific event types and service date time period:

1. Confinement/Admission (FIP)
   - A confinement record (created by the Confinement/Admission methodology described below) with a revenue code representing inpatient accommodation room and board (revenue code of 0100-0219) triggers a Confinement/Admission (FIP) Event Type.
     - Confinement/Admission Methodology:
       - Confinement/Admission definition: Confinement/Admission represents a member's uninterrupted stay for a defined period of time in a hospital, skilled nursing facility, or other approved health care facility or program, followed by discharge from that same facility or program.
       - A confinement is assigned to a set of one or more medical claim records on which there is:
         1. The same unique patient ID
         2. The same unique provider ID
         3. An inpatient accommodation room and board revenue code of 0100-0219
         4. No gap in dates of service
       - The beginning and the ending dates of the confinement period are identified using the **From** and **Through** dates from the facility claim.
       - In order for multiple inpatient accommodation room and board records to be regarded as one confinement, the following condition must be met:
         - The difference between the **Through date** of the first accommodation room and board revenue code record and the **From date** of the next accommodation room and board revenue code record must be less than or equal to 1 day. The beginning of the confinement represents the earliest **From date** and the ending of the confinement represents the latest **Through date**. If a record has overlapping dates, the record will be included in the confinement for which the record's **From date** and **Through date** are between the dates of the confinement inclusive. If the difference between the **Through date** and the **From date** is > 1, then the next record represents a new confinement.

   - The timeframe for claims included in a Confinement/Admission Facility Event is one day prior to the Confinement admission date through the discharge date of the confinement.

2. Outpatient Surgery (FOS)
   - A claim record based on a CMS Place of Service code representing an outpatient acute care facility or office/clinic, and a Procedure Code Service Type of Surgical Procedures or a Revenue Code representing operating room or ambulatory surgery services triggers an Outpatient Surgery Event.
     - A POS code of 05, 06, 07, 08, 22, or 24 AND a procedure code (CPT or HCPCS) with a Service_Type_High_Code='SURG' (there are 5808 CPT codes and 341 HCPCS codes that fall into this category—see attached list of codes)

FOS_procedure codes.xls

     - **OR** a POS code of 05, 06, 07, 08, 11, 22, 24, 25, 26, 49, 50 or 72 AND a Revenue Code of 0360, 0361, 0369, 0490, 0499.

   - The service date timeframe for claims included in an OP Surgery event is up to +/- 2 days of the service date on the trigger record.
   - To create an Outpatient Surgery event, the claim detail must *not* meet the coding conditions listed for an Admission/Confinement (FIP) event.

3. Emergency Room (FER)
   - An Emergency Room Event is identified on a claim record in which the CPT code or revenue code stands for emergency room or emergency evaluation and management, and the provider specialty represents General Hospital, Psychiatric Hospital or Emergency Care Center.
     - A revenue code of 0450-0452 or 0459
     - **OR** CPT procedure code 99281-99285, 99288 or HCPCS procedure code G0380-G0384 AND a Detail Level Provider Category of General Hospital, Psychiatric Hospital or Emergency Care Center.
     - **OR** CPT procedure code 99281-99285, or 99288 or HCPCS procedure code G0380-G0384 AND [there is at least one other claim detail record which will be associated with the trigger record with a revenue code that is *not* 0456 (Urgent Care) AND a Detail Level Provider Category of General Hospital, Psychiatric Hospital or Emergency Care Center].
   - The service date timeframe for claims included in an Emergency Room (FER) event are up to +/- 2 days of the service date on the trigger record.
   - To create an Emergency Room event, the claim detail must *not* meet any of the coding conditions for an Admission/Confinement (FIP) or Outpatient Surgery (FOS) event.

4. Other (OTH)
   - All service records that are not assigned FIP, FOS, or FER are assigned OTH

Result/EBM/Compliance Flags

Result Flags and Values

The Result flag provides a status for each clinical rule in any condition for which the member has qualified. The five possible Result flag values are described below.

- Yes means the answer to the clinical question is yes.
- No means the answer to the clinical question is no.
- NA (not applicable) means the rule is not applicable to the member. A rule may not be applicable for a number of reasons. The third character of the NA flag contains a number which further defines the reason (see below).
- NRX (no RX benefit) indicates that the member did not have any pharmacy benefit during the reporting period. The NRX value is only applicable to certain rules that are pharmacy dependent.
- Q (questionable) indicates that the member has no claim record for the particular test or treatment during the time window of the rule, but the member did not have coverage throughout the time window or there was insufficient time range of input claims data, and hence, there may be data incompleteness. The Q value is applied only for certain rules and certain setup configurations.

Result Flag Value	Description
NA1	Member did not meet the age or gender criteria.
NA2	Member was not currently taking the medication in question or had not taken it for the required duration.
NA3	Member was taking the medication, but a possession ratio could not be computed [less than two prescriptions during the rule time window].
NA4	Member did not meet the rule specific criteria [e.g., co-morbidity, complexity (diagnosis and medication), intervention not warranted].
NA5	No lab result record or insufficient information.
NA6	Member admitted to a hospital or long term care facility which might cause data incompleteness.
NA7	Member who did not receive treatment or medication had a contraindication or other justification.

EBM Flag

The EBM flag provides a counter for rules in which the result is NOT consistent with evidence based guidelines. There are two possible results for the EBM flag counter:

- 1 when a result is ***not*** consistent with the EBM Connect software's evidence based guidelines, and
- 0 when any of the following are true:
  - the member's care is consistent with the software's evidence based guidelines
  - the rule is not relevant to the member
  - there is insufficient information in the database to analyze the rule
  - the rule is informational only, and does not reflect appropriateness of care

Compliance Flag

The Compliance flag provides a counter for cases in which the result ***is*** consistent with evidence based guidelines. There are two possible results for the Compliance flag counter:

- 1 when a result ***is*** consistent with the EBM Connect software's evidence based guidelines, and
- 0 when any of the following are true:
  - the member's care is not consistent with the software's evidence based guidelines
  - the rule is not relevant to the member
  - there is insufficient information in the database to analyze the rule
  - the rule is informational only, and does not reflect appropriateness of care