Diabetes Care

Background:

The Military Health System Population Health Portal (MHSPHP) methodology is based on the 2010 Healthcare Effectiveness Data and Information Set (HEDIS®) criteria. These are a set of criteria used to benchmark medical treatment facilities (MTF) and Managed Care Support Contractors (MCSC) using a common methodology; and should not be confused with clinical practice guidelines. A set of comprehensive diabetes benchmarking measurements were selected for diabetic patients age 18-75. As a set they provide a comprehensive view of the clinical management of patients diagnosed with diabetes. The "action report" provided to MTFs and MCSCs on the MHSPHP includes information regarding annual A1c testing, A1c control, LDL screening and control, retinal eye exams, and monitoring of kidney disease for MTF enrollees, at least age 1, identified with diabetes, regardless of continuous enrollment.

Measure Definitions:

- Percent of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, with at least one A1c test during the past year.
- Percent of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, with A1c values > 9.0% or no A1c test during the past year.
- Percent of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, with A1c values <7.0%. **(*Selected population. See exclusions below*)**
- Percent of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, with A1c values <8.0%.
- Percent of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, who had their most recent LDL-C lab performed during the past year.
- Percent of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, who had an LDL-C with a value < 100 mg/dl. Enrollees with no test on record will be assumed to be above 100 mg/dl.

Benchmarks:

HEDIS® 50th-75th-90th percentiles: National Committee for Quality Assurance (NCQA), State of Health Care Quality, 2009.

Benchmark	HEDIS® Percentiles (50-75-90)
Annual A1c	89.0%---91.7%---93.7%
Annual LDL-C	85.1%---87.4%---89.8%
LDL-C < 100mg/dl	45.3%---50.6%---53.9%
A1c < 7.0	43.7%-48.8%-54.3%
A1c < 8.0	63.3%--67.5%--71.5%
A1c > 9.0 or No Annual Exam *A lower rate indicates better performance (i.e., low rates of poor control indicate better care).Therefore, the **10th percentile is a better performing level than the 90th percentile for this measure**. This runs in the*	**HEDIS® Percentiles (10-25-50)** 18.7%---22.6%---27.8%

opposite direction of all other measures.	

Numerators (A1c):

- Number of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, who had at least one A1c test during the past year
- Number of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, with A1c values > 9.0% or no A1c test in the past year
- Number of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age ***18-64***, with their most recent A1c values < 7.0%, performed sometime during the past year. (Note***: Denominator is different from the other control measures. Patients must "not" meet certain criteria to be included in this measure. See A1c<7% exclusion criteria below.)***
- Number of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, with their most recent A1c value <8.0%, performed sometime during the past year.

Numerators (LDL-C):

- Number of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, with at least one LDL-C test and lab value recorded during the past year
- Number of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75, with their most recent LDL-C lab value < 100 mg/dl (performed sometime during the past year)

Numerators (Retinal Eye Exams):

The aggregate measure represents the number of diabetics that have had a retinal eye exam in the last 24 months.

The MHSPHP retinal eye exam measure is not HEDIS® based. HEDIS® requires a negative result for diabetic retinopathy in order for a case to count in the numerator. The M2 does not capture this information via administrative data. Retinal eye exam dates are included in the Action List (see Notes). The date reflects the most recent exam in the last 24 months. If a retinal exam date could not be found, or the exam is older than 24 months, the date field will be blank.

Only retinal exams with provider specialty codes of (120, 121, 510, 708) (Direct Care) or (18, 98) (Purchased Care Claims) will be counted. Exams coded with a CPT Category II code do not need to be limited to optometrists or ophthalmologists. These codes indicate an exam was performed by an eye care professional. CPT Category II codes are applicable to *Network encounters only*.

Numerators (Nephropathy Screening):

Number of patients enrolled to TRICARE Prime/Plus with Type 1 or Type 2 diabetes, age 18-75 who had at least one microalbuminuria lab test completed in the last year and documented test value.

Denominator:

Number of patients, age 18-75, who were continuously enrolled in TRICARE Prime/Plus during the past 12 months with Type 1 or Type 2 diabetes. Two types of data are used to identify members with diabetes, pharmacy data and claims/encounter data. A patient only needs to be identified by one source, pharmacy data or encounter/claims data, to be included in the measure. A patient whose enrollment lapses for more than two months (60 days) during each previous 12-month period of enrollment is not considered continuously enrolled.
Note: *Lab values are not used to identify diabetics, because of the high false positive rate associated with this method.*
Note: *The A1c <7.0 measure has a separate denominator. Diabetics in this denominator will not meet any of the following exclusion criteria:*

A1c<7% exclusion criteria: ***To be evaluated against the A1c values <7.0% control indicator, patients must NOT fall into one or more of the following categories:***

- 65years of age and older as of the last day of the measurement period.
- Discharged following coronary artery bypass graft (CABG) in the measurement year or the year prior to the measurement year. Inpatient cases only.
- Discharged following percutaneous transluminal coronary angioplasty (PTCA) in the measurement year or the year prior to the measurement year. Include all cases of PTCA, regardless of setting (e.g., inpatient, outpatient, ED).
- Ischemic vascular disease (IVD). Enrollees who met at least one of the following criteria during ***both*** the measurement year and the year prior to the measurement year. Criteria need not be the same across both years.
    - At least one outpatient visit with an IVD diagnosis ***or***
    - At least one acute inpatient visit with an IVD diagnosis
- For the following conditions patients must have had at least one encounter, in any setting with any code, to identify the condition. The diagnosis can occur at any time during the patient's history, through the last day of the measurement period.
    - Chronic Heart Failure (CHF)
    - Prior myocardial infarction (MI)
    - Chronic Renal Failure/End Stage Renal Disease (CRF/ESRD)
    - Dementia
    - Blindness
    - Amputation – lower extremity

Criteria to identify patients with diabetes via encounter data (within the past 24 months):

- Two or more face to face encounters with different dates of service in an outpatient setting
- Two or more face to face encounters in a non-acute inpatient setting
- One acute inpatient visit
- One Emergency Department (ED) visit

Pharmacy Data Criteria: Prescription medications will also be used to identify diabetics. These include ambulatory prescriptions dispensed during the past 24 month period for any of the following:

Description	Prescription		
Alpha-glucosidase inhibitors	• acarbose	• miglitol	
Amylin analogs	• pramlinitide		
Antidiabetic combinations	• glimepiride-pioglitazone • glimepiride-rosiglitazone • glipizide-metformin • glyburide-metformin	• metformin-pioglitazone • metformin-repaglinide • metformin-rosiglitazone • metformin-sitagliptin	
Insulin	• insulin aspart • insulin aspart-insulin aspart protamine • insulin detemir • insulin glargine • insulin glulisine • insulin inhalation • insulin isophane beef-pork • insulin isophane human • insulin isophane pork	• insulin isophane-insulin regular • insulin lispro • insulin lispro-insulin lispro protamine • insulin regular beef-pork • insulin regular human • insulin regular pork • insulin zinc beef-pork • insulin zinc extended human • insulin zinc human • insulin zinc pork	
Meglitinides	• nateglinide	• repaglinide	
Miscellaneous antidiabetic agents	• exenatide	• saxagliptin	• sitagliptin
Sulfonylureas	• acetohexamide • chlorpropamide • glimepiride	• glipizide • glyburide	• tolazamide • tolbutamide
Thiazolidinediones	• pioglitazone	• rosiglitazone	

Note: *Glucophage/metformin is not included because it is used to treat conditions other than diabetes; patients with diabetes on these medications are identified through diagnosis coding only.*

6.5

Exclusions

- Exclude patients with a diagnosis of polycystic ovaries if they did not have any face-to-face encounters that were coded for diabetes, in any setting, in the past 2 years. A diagnosis of polycystic ovaries can occur at any time in the patient's history, but must have occurred by the last day of the measurement period.

- Exclude patients with steroid induced diabetes, gestational diabetes, prediabetes, or metabolic syndrome if they did not have any face-to-face encounters that were coded for diabetes, in any setting, in the past 2 years. A diagnosis of steroid induced diabetes gestational diabetes, prediabetes, or metabolic syndrome can occur any time during the past 2 years, but must have occurred by the last day of the measurement period.

Data Sources:

- Defense Eligibility Enrollment Registration System (DEERS)
- Standard Inpatient Data Record (SIDR) (M2)
- Standard Ambulatory Data Record (SADR) (M2
- Purchased Care Claims Data (NETWORK) (M2)
- Composite Health Care System (CHCS) Managed Care Platform National Enrollment Database (NED) module
- MHS CHCS laboratory module
- Pharmacy Data Transcription Service (PDTS) (M2) (Includes prescriptions received from MTF, network and mail order pharmacies)

Methodology:

- Use DEERS to identify patients enrolled to specific MTFs and MCSCs
- Use M2 (SADR, SIDR, PDTS and Network) data to identify patients with diabetes via diabetes-related visits and medications
- Use M2 (SADR, SIDR, PDTS and Network) data to identify diabetes-related visits, retinal eye exams, and number of prescriptions
- Use CHCS Lab ad hocs to identify diabetes-related labs in direct care
- Use M2 Network data to identify diabetes-related labs in network
- Use CHCS Managed Care Platform NED module ad hoc report to identify Primary Care Manager (PCM) in direct care

Data Sources and Codes

Numerator Sources

Identifying A1c Tests:

CHCS Laboratory extract to identify patients with the above diabetes codes who had at least one A1c test completed in the past 12 months, in direct care, and value of the test documented. CPT codes *and lab test names* are used to find individuals with A1c tests performed. Purchased care claims are used to identify A1c test performed in purchased care.

CPT Codes	CPT Category II*
83036, 83037	3044F, 3045F, 3046F

**Applies to Network exams only*

Identifying A1c Levels >9%

Description	CPT Category II*
Numerator compliant (HbA1c >9.0%)	3046F
Numerator non-compliant (HbA1c ≤9.0%)	3044F, 3045F

**Applies to Network exams only*

Identifying A1c Levels <7%

Description	CPT Category II*
Numerator compliant (HbA1c <7.0%)	3044F
Not numerator compliant (HbA1c ≥7.0%)	3045F, 3046F

**Applies to Network exams only*

Identifying LDL-C Lab Tests:
CHCS Laboratory extract to identify diabetic patients with the specified diabetes codes who had at least one LDL-C screening test completed in the past 12 months and value of test documented. CPT *and lab test names* were used to find individuals with LDL-C labs performed.

CPT Codes	CPT Category II*
80061, 83700, 83701, 83704, 83721	3048F, 3049F, 3050F

**Applies to Network exams only*

Codes to identify eye exams using Network (M2) and SADR (M2) claims data:

CPT Codes	CPT Category II*	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure
67028, 67030, 67031, 67036, 67038-67043,67101, 67105, 67107, 67108, 67110, 67112, 67113, 67121, 67141, 67145, 67208, 67210, 67218, 67220, 67221, 67227, 67228, 92002, 92004, 92012, 92014, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260, 99203-99205, 99213- 99215, 99242-99245	2022F, 2024F, 2026F, 3072F***	S0620, S0621, S0625**, S3000	V72.0	14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16

** CPT Category II codes do not need to be limited to optometrist or an ophthalmologist. These codes indicate and exam was performed by an eye care professional. Applicable to Network encounters only*

*** HCPCS S0625 does not need to be limited to an optometrist or ophthalmologist. These codes indicate an eye exam was performed by an eye care professional.*

****CPT Category II code 3072F can only be used if the claim/encounter was during the measurement year because it indicates the patient had "no evidence of retinopathy in the prior year." Additionally, because the code definition itself indicates results were negative, an automated result is not required.*

Codes to identify Microalbuminuria Tests:
CHCS Laboratory extract to identify patients who had at least one microalbuminuria lab test completed in the past 12 months and value of test documented. CPT *and lab test names* were used to find individuals with microalbuminuria labs performed.

Description	CPT Codes	CPT CategoryII*
Microalbuminuria	82042, 82043, 82044, 84156	3060F, 3061F

** Applicable to Network exams only*

Denominator Sources

Codes to identify diabetics:

Description	ICD-9-CM Codes
Diabetes Mellitus	250, 357.2, 362.0, 366.41, 648.0

Codes to identify Diabetic Visits:

Description	CPT Codes
Outpatient	92002, 92004, 92012, 92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404, 99411,99412, 99420, 99429, 99455, 99456
Nonacute inpatient	99304-99310, 99315, 99316, 99318, 99324-99328, 99334-99337
Acute Inpatient	99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99291
Emergency Dept	99281-99285

Codes to ***exclude*** patients for secondary diabetes and other conditions requiring diabetic medications:

Description	ICD-9-CM Codes	Notes
Polycystic Ovarian Syndrome	256.4	Occurring anytime during the member's history with no face to face encounters for diabetes, in any setting, during the past 24 months.
Steroid-Induced Diabetes	249, 251.8, 962.0	Occurring during the past 24 months with no face to face encounters for diabetes, in any setting, during the past 24 months.
Gestational Diabetes	648.8	Occurring during the past 24 months with no face to face encounters for diabetes, in any setting, during the past 24 months.
Prediabetes	790.29	Occurring during the past 24 months with no face to face encounters for diabetes, in any setting, during the past 24 months.

Metabolic Syndrome	277.7	Occurring during the past 24 months with no face to face encounters for diabetes, in any setting, during the past 24 months.

Codes to identify required ***exclusions*** for A1c < 7.0 measure***:***

Description	CPT	HCPCS	ICD-9-CM Diagnosis	ICD-9-CM Procedure	POS
MI			410, 412		
CRF/ESRD	36145, 36800-36821, 36831-36833, 90919-90921, 90923-90925, 90935, 90937, 90940, 90945, 90947, 90957-90962, 90965, 90966, 90969, 90970, 90989, 90993, 90997, 90999, 99512	G0257, G0311-G0319, G0321-G0323, G0325-G0327, G0392, G0393, S9339	585.4, 585.5, 585.6, V42.0, V45.1, V56	38.95, 39.27, 39.42, 39.43, 39.53, 39.93, 39.94, 39.95, 54.98	65
Blindness			369.0, 369.1, 369.2, 369.4, 369.6, 369.7		
Amputation (lower extremity)	27290, 27295, 27590-27592, 27594, 27596, 27598, 27880, 27881, 27882, 27884, 27886, 27888, 27889, 28800, 28805, 28810, 28820, 28825			84.1	

Action Report:

List of TRICARE Prime/Plus enrolled diabetics, at least age 1, by PCM.[2] The action list is based on current DEERS enrollment, in contrast to the HEDIS® aggregate report which specifies continuous enrollment and age constraints.

Action Report Data Elements:

- Patient's Name
- Sponsor's Social Security Number
- Family Member Prefix (FMP)
- Date of Birth
- Age
- Gender
- Beneficiary Category (BENCAT)
- PCM
- Provider Group**
- PCM ID*
- PCMID Type*
- Number of Diabetic Outpatient Visits

- Number of Diabetic Hospitalizations
- Number of Diabetic ED Visits
- Rx Count
- Insulin
- Test Name
- A1c Date, last known
- A1c Result[3]
- Retinal Exam Date[4]
- Retinal Source
- Retinal System
- LDL Date
- LDL Sign???
- LDL Result
- LDL Source
- LDL System
- Cholesterol Date
- Cholesterol Sign
- Cholesterol Result
- Cholesterol Source
- Cholesterol System
- HDL Date
- HDL Sign??
- HDL Result
- HDL Source
- HDL System
- CHOL/HDL Ratio
- Comorbid
- Comorbid Date???
- HGA1c Screen
- LDL Screen
- Contact Information**
- Defense Medical Information System (DMIS)
- TRO*
- Service*

*TRO Action List only
**Direct Care Action Lists only
For known diabetics, if microalbumin results can be found in CHCS lab data, those results are displayed in a separate file.

Recommended Action:

- Review chronic disease burden data to project provision of health care services and exams.
- Consider implementation of DoD/VA (or other) clinical practice guidelines.[5]

- Review medical records of the patients that need to have an HbA1c, LDL or retinal exam and arrange to have a member of the health care team schedule the test.
- Consider case management for patients with HbA1c >9.0, or LDL >100.

Notes:

[1] Lab values cannot be obtained from purchased care data. Only the exam date will be displayed.

[2] Due to the record reporting lag time, not all of the previous months' records may be included in this reporting period.

[3]A1c values are not available for tests accomplished in purchased care.

[4] Retinal exam dates are provided as supplemental information only. HEDIS® now requires a negative result for diabetic retinopathy in order for a case to count in the HEDIS® numerator. Since we are unable to capture this information via administrative data, the retinal exam numerator/denominators on the MHSPHP represent the number of patients that had an exam in the last 24 months.

[5] DoD/VA guidelines can be located at: https://www.qmo.amedd.army.mil/pguide.htm