



History of SETMA's Preparation for ICD-10

By James L. Holly, MD

October 1, 2015

SETMA's three partners attended the MGMA meeting in Washington DC in October, 1997. At that time, SETMA finalized the decision to adopt the electronic medical record. In March, 1998, SETMA purchased the NextGen EMR and Enterprise Practice Management System (EPM). In May, 1999, SETMA would adopt the concept of Electronic Patient Management and use the acronym (EPM) for that function.

After ten months of development, on January 26, 1999, SETMA began using the EMR in the clinic. In May, 1999, SETMA experienced four seminal events which are described in the following link: <http://www.setma.com/Your-Life-Your-Health/pdfs/may-1999-four-seminal-events-in-setmas-history.pdf>. One of those events which guided our development was the identification of ten principles of how to develop an EMR and a 21st Century medical practice. Those principles are:

1. Pursue Electronic Patient Management rather than Electronic Patient Records
2. Bring to every patient encounter what is known, not what a particular provider knows
3. Make it easier to do "it" right than not to do it at all
4. Continually challenge providers to improve their performance
5. Infuse new knowledge and decision-making tools throughout an organization instantly
6. Promote continuity of care with patient education, information and plans of care
7. Enlist patients as partners and collaborators in their own health improvement
8. Evaluate the care of patients and populations of patients longitudinally
9. Audit provider performance based on endorsed quality measurement sets
10. Integrate electronic tools in an intuitive fashion giving patients the benefit of expert knowledge about specific conditions

Charge Posting by the Provider in the Examination Room -- 2002

In May, 1999, we began building clinical decision support and disease management tools which transformed the EMR from a documentation device into a patient management tool. By 2002, SETMA realized that the value of the electronic functions of the EMR would be enhanced if we were able to complete the entire visit in the patient examination room including:

1. Encounter
2. Referrals
3. Medications
4. Charge posting

The idea of completing charge posting in the examination room was new. The association of ICD-9 codes with CPT codes by the provider in the examination room and the submission of that documentation to our Central Billing Office for brief review and electronic transmission through a clearing house to the insurance company was a major step forward. Coupling the ICD-9 and CPT with the ordering of testing or procedures with CPT codes meant that there was no additional work for the provider. They had to order the test from a laboratory and/or procedures anyway, now we just accomplish a charge posting function at the same time. When providers became familiar with this function, it essentially added no time to the providers' workflow.

SETMA designed the function for charge posting but initially, it was not a huge success. Because the ICD-9 Code lists were in almost incomprehensible abbreviations and because most medical practices including SETMA were using a small number of ICD-9 Codes, the attempt to do this electronically was very frustrating. In January, 2003, both our providers and our central billing office were complaining that the new process was more time consuming because many diagnoses had to be type into the EMR eliminating the value of an electronic function. Rather than giving up, SETMA decided to build our own ICD-9 tool.

To solve this problem, I asked for an ICD-9 code book to be brought to me. As I look through it, marking all of the diagnoses which I thought we needed, I finished going through the entire book in one afternoon, evening and night. The following steps were included in the building of an intuitive (easy to access), complete and accessible code list for use in charge posting:

1. Going through the entire ICD-9 Code book as above.
2. Dividing the code book into 20-page sections and giving each section to a different provider. They then marked all of the codes, they wanted included in an ICD-9 Code list.
3. Obtaining the specialty code lists from 29 specialty groups and marking all of those codes which we would need.

Because the organization of this list had to be consistent and intuitive, the entry of these codes into our EMR had to be done by one person. It took six months to complete the task but at the end of that time, and increasingly during that time, the charge posting function in the examination room by the provider became a superior way of eliminating "coding guesses" by our CBO. Charge posting became a reality and ALL patient care functions were completed and/or ordered in the examination room before the provider completed the encounter.

Hierarchical Code Categories (HCC) and Treatment HCC Codes (RxHCC) -- 2007

The next major step in the systematizing of our coding process was the identification and displaying of the diagnoses which were HCC and RxHCC so that the provider did not have to memorize them. (for the full description see: <http://www.setma.com/epm-tools/Tutorial-HCC->

[RxHCC-Risk](#)) One Thursday in 2007, Jon Owens, SETMA's Chief Clinical Systems Engineer, called me and said, "I think I know how to display the HCC/RxHCC in the EMR, but I'm afraid to show it to you." I was at home and told him to bring it to me immediately. That was Thursday, on Monday all HCC and RxHCCs were identified in SETMA's ICD-9 Code list.

Eventually, as shown in the tutorial reference above, SETMA would display the Risk Stratification Coefficient Aggregate for the Acute Diagnosis, for the Chronic Diagnoses, for the Diagnoses which have not been evaluated that year, for the Demographic Diagnoses which includes Gender/Age, Disability/Poverty, Conditions Interaction and the Coefficient Aggregate summary for all of these. Almost all of the value-enhanced care options provided to our patients by SETMA are made possible by this work.

ICD-10 and its early effects – 2010

In 2009, it was anticipated that ICD-10 adoption would be required by 2011, but it would continue to be delayed. As news of ICD-10 continued to circulate, it was apparent to SETMA that what we had done in building our own list of 8,000 ICD-9 Codes would not be possible with the 150,000 ICD-10 Codes. In addition the complexity of the diagnostic requirements for ICD-10 would make a "home-grown" product impractical if not impossible. It was obvious we would have to adopt a commercial product. We previewed the *Intelligent Medical Objects, Inc (IMO)* and bought it immediately. Few times does a customer tell a vendor that their product is underpriced but that is what SETMA told IMO.

IMO had gone a step beyond SETMA in an intuitively designed ICD-9 product. One of the limitations of ICD-9 is that most codes had more than one description but our EMR did not allow assignment of the same code to different diagnoses. IMO expanded the ICD-9 code list (15,000) to almost 100,000 codes with their use of multiple names for the same code to allow for easy access through multiple descriptions.

Immediately, SETMA providers experienced the benefit of IMO and with the searching of 100,000 codes for their diagnoses, it prepared SETMA providers for the searching of 150,000 codes for ICD-10 codes. Having used IMO for over five years before making the transition to ICD-10 was a great benefit to SETMA. IMO had deployed not only ICD-9 but in the background had ICD-10 and SNOMED built into their system. This helped prepared us for October 1, 2015 and the switch to ICD-10.

Modifying SETMA's Use of NextGen for Meaningful Use 2

In 2013, SETMA discovered that our deployment of NextGen, having been started in 1998, meant that our customized version did not qualify for the use of NextGen's certification for Meaningful Use 2. All early adapters had this problem. Because we did not want to fall behind, SETMA determined to spend the money and to make the effort to modify our use of NextGen so we could use their EMR Certification.

This meant we had to make a number of decisions. Should we simply abandon our 15 years of customized development of clinical decision support and disease management tools and other

electronic functions and start anew with NextGen's data base which did not exist in 1998? Or, should we make the changes necessary to meeting Meaningful Use 2 standards – none of which enhanced our use of EMR -- but simply met the unique requirements of the Office of National Coordinator (ONC) for Meaningful Use 2? Should we adopt NextGen's design of those tools or should we adapt them to our design but simply make them compatible with Meaningful Use 2 standards? The decision was not as easy as you might think.

Finally, in collaboration with NextGen and Ciscen, Inc., SETMA began this process. It took ten months and over \$400,000 to make the changes, but we completed it in the early fall of 2014. The good news is that this process solved 80+% of the problems which faced SETMA in making the upgrade to ICD-10 for the many unique deployments of electronic patient management tools which we had developed. We still had work to do but this task made the remainder easier and possible.

Mapping ICD-10 Codes to ICD-9 Codes – 2014

When the upgrade of our use of NextGen was completed, the next major hurdle we faced was mapping ICD-10 to ICD-9. This means that we had to go through our entire 17-year-old data base and upgrade all ICD-9 codes to ICD-10 code descriptions. Our biggest problem had been created by the changes we made in 2003. While SETMA's work with ICD-9 codes in 2003 had made it possible for us to complete charge posting in the examination room with an intuitively designed ICD-9 code list, it made the mapping of ICD-10 codes to ICD-9 more difficult.

Most of the mapping was done electronically. Initially, over 590,000 codes were electronically mapped, but that still left over 21,000 patient records and 41,000 diagnoses which needed to be mapped manually. The mapping process was time consuming and "back breaking" but SETMA's entire team contributed to the effort. There were stars in the process and by March, 2015, it was done.

The following is the process which we used:

If the note "ICD10/SNOMED Mapping Needed" appeared on the Assessment template, the patient had one or more chronic problems that need to be manually mapped to ICD10/SNOMED. (see outlined in green below)

PDM NURSE HISTORIES HEALTH QUIZES HPI ROS P.E. X-RAY **ASSESS** PLAN PROCS

Acute Assessments

Add
Sort

#	Diagnosis	Code	Status	C
	CVA Hemiplegia Dominant Side (438.21)	438.2		N
2	Alcoholic cirrhosis (571.2), chronic	571.2		Y
3	Diabetes mellitus (250.00), chronic	250.0		Y
4	Hemiplegia of dominant side (342.91), chronic	342.9		Y
5	Hyperlipidemia (272.4), chronic	272.4		Y

Acute HCC Score
1.4420

Acute RxHCC Score
0.5630

Total Acute Score
2.0050

Chronic HCC Score
1.0050

Chronic RxHCC Score
0.4900

Total Chronic Score
1.4950

HCC Not Assessed This Year
0.0000

RxHCC Not Assessed This Year
0.0000

Total Not Assessed This Year
0.0000

Age and Gender Score
0.6560

Disease Interaction Score
0.0000

Disability/Poverty Score
0.0000

Total Risk Adjustment Factor
2.1510

Master GP

Nursing	<input checked="" type="checkbox"/>
Histories	<input checked="" type="checkbox"/>
Health	<input checked="" type="checkbox"/>
Questionnaires	
HPI Chief	<input checked="" type="checkbox"/>
System Review	<input checked="" type="checkbox"/>
Physical Exam	<input checked="" type="checkbox"/>
Radiology	
Plan	<input checked="" type="checkbox"/>
Procedures	
Chart Note	

Chronic Conditions

Add To Acute

ICD10/SNOMED Mapping Needed

#	Diagnosis	Hcc	RxH	Last Addressed
1	Hemiplegia of dominant side	Y		08/25/2014
2	Alcoholic cirrhosis	Y		08/25/2014
3	Diabetes mellitus	Y	Y	08/25/2014
4	Hypertension		Y	08/25/2014
5	Hyperlipidemia		Y	08/25/2014
6	Disorder of plasma protein metabolism			08/03/2006
7	Osteoarthritis of spine			02/03/2014
8	Nocturia			
9	History of malignant neoplasm of prostate			
10	Hemangioma of liver			
11	History of esophageal varices			
12	Screening for iron deficiency anemia			

Risk Adjusted Chronic Conditions Not Assessed This Year

Add To Acute

Diagnosis	Hcc	RxH	Last Addressed

General Comments

Chronic Condition Comments

HPI Detail

To map ICD-10, the provider would go into IMO as normal to add new diagnoses and then click on the link outlined in green entitled “Click Here to address ICD10/SNOMED mapping”. This link will only show on patients that require manual mapping.

Mapping Chronic Conditions

Chronic Conditions from Previous KBM Show: **Not mapped** Practice: **All**

Description	Code	SNOMED Description	SNOMED Code	Disp
Stenosis Carotid Artery	43310			

Map to Existing Problem Map to New Problem Resolve Condition

Clinical Problems

SNOMED Description	Onset Date	Notes
Alcoholic cirrhosis		Converted note: Last addressed on 02/03/2014. BroughtForward8.3KBMUPgrade. Problem automatically mapped to IMO description "Alcoholic cirrhosis" / SNOMED CT concept "Alcoholic cirrhosis (420054005)" from KBM Chronic Conditions table on 08/22/2014.
Diabetes mellitus		Converted note: Last addressed on 05/02/2014. BroughtForward8.3KBMUPgrade. Problem automatically mapped to IMO description "Diabetes mellitus" / SNOMED CT concept "Diabetes mellitus (73211009)" from KBM Chronic Conditions table on 08/22/2014.
Disorder of plasma protein metabolism		Converted note: Last addressed on 08/03/2006. BroughtForward8.3KBMUPgrade. Problem automatically mapped to IMO description "Disorder of plasma protein metabolism" / SNOMED CT concept "Metabolic disease (75934005)" from KBM Chronic Conditions table on 08/22/2014.
Hemangioma of liver		Converted note: BroughtForward8.3KBMUPgrade. Problem automatically mapped to IMO description "Hemangioma of liver" / SNOMED CT concept "Hemangioma of liver (93469006)" from KBM Chronic Conditions table on 08/22/2014.
Hemioleia of dominant side		Converted note: Last addressed on 05/02/2014. BroughtForward8.3KBMUPgrade.

Close

Next, highlight the diagnosis that you would like to map. Once you select a diagnosis, a button will appear below the grid that says “Map Using IMO.”

Mapping Chronic Conditions

Chronic Conditions from Previous KBM Show: Practice:

Description	Code	SNOMED Description	SNOMED Code	Disp
History of SCC (squamous cell carcinoma) of skin	V1083			

Map Using IMO

Map to Existing Problem Map to New Problem Resolve Condition

Clinical Problems

SNOMED Description	Onset Date	Notes
Gastroesophageal reflux disease		Converted note: Last addressed on 04/07/2014. BroughtForward8.3KBMUPgrade. Problem automatically mapped to IMO description "Gastroesophageal reflux disease" / SNOMED CT concept "Gastroesophageal reflux disease (235595009)" from KBM Chronic Conditions table on 08/22/2014.
Osteoarthritis of knee		Converted note: BroughtForward8.3KBMUPgrade. Problem automatically mapped to IMO description "Osteoarthritis of knee" / SNOMED CT concept "Osteoarthritis of knee (239873007)" from KBM Chronic Conditions table on 08/22/2014.
Rotator cuff tear arthropathy		Converted note: Last addressed on 04/07/2014. BroughtForward8.3KBMUPgrade. Problem automatically mapped to IMO description "Rotator cuff tear arthropathy" / SNOMED CT concept "Rotator cuff tear arthropathy (415352004)" from KBM Chronic Conditions table on 08/22/2014.

Close

When you click the “Map Using IMO” button, a new IMO search window will appear with the text of the unmapped problem already pasted into the search window for you and, if possible, it will have already returned the results of possible matches for you.

If one of the results is the diagnosis that you want, just click the plus sign next the diagnosis and it will be mapped and updated on the patient’s problem list. Once you have click the plus sign you are done mapping the problem.

Note that you may have to modify the search text to get results or a better result for the problem you are trying to map.

IMO Search ProblemIT Plus

Powered by IMO[®]Problem IT Terminology

History of SCC (squamous cell carcinoma) Search 20 Hide filter options

☒ Filter by patient age | ☒ Filter by patient gender

+ History of SCC (squamous cell carcinoma) of skin (V10.83)

[Search Help](#)

IMO[®] Version: IMOProblemIT2014_R2.3-Professional © 2014

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[Click Here to Address ICD10/SNOMED Mapping](#) [Save & Close](#)

By December, 2014, all charts for patients seen in the past 36 months had been mapped. We then started on the charts of patient seen between 36 months and 72 months and all of the charts for these patients were mapped by the end of March, 2015.

Continuing Audit of Patients with Scheduled Appointments for ICD-10 Codes needed mapping

Every day, an automated audit is sent to a SETMA provider for patients who have appointments and who need to have ICD-10 Codes Mapped. Typically, there are one to five. These then have the mapping done before the patient is seen.

SETMA's Central Billing Office Continues to Test Interface, Clearing House and Insurance Preparation

Beginning in 2014, SETMA's CBO began testing their ability to transmit ICD-10 codes and charges through interfaces, clearing houses to insurance companies. This was done repetitively over the eighteen months before we transferred to ICD-10. Because of SETMA's provider charge posting function, the transition for our CBO was easier. They are monitoring the progress but they do not have to go through every chart and every diagnoses to correct problems. As of today, March 5th, the CBO is experiencing no problems.

The Great Benefit of ICD-10 and IMO's Solution

The following examples of diagnoses in the IMO solution. When a diagnoses is made and additional information is required for ICD-10, the system alerts you to what is needed and allows you, with the click of a button, to complete the task successfully and simply.

The screenshot displays the IMO Problem IT Terminology interface. At the top, it says "Powered by IMO Problem IT Terminology". Below this is a navigation bar with "Add to:" followed by "Assessments" (highlighted), "Problems", and "Both". A search bar contains the text "copd" and a "Search" button. To the right of the search bar is a dropdown menu set to "20" and a link "Hide filter options". Below the search bar, there are two checked filters: "Filter by patient age" and "Filter by patient gender". The main content area shows a search result for "COPD (chronic obstructive pulmonary disease) (J44.9) .346". This result is expanded, showing a table of subtypes. The table has two columns: "COPD TYPE" and "CHRONIC BRONCHITIS TYPE". Under "COPD TYPE", there are checkboxes for "chronic bronchitis", "emphysema", "COPD with acute exacerbation", "COPD with acute lower respiratory infection", and "unspecified COPD". Under "CHRONIC BRONCHITIS TYPE", there are checkboxes for "simple", "mucopurulent", "mixed simple and mucopurulent", and "unspecified". Below these columns, there is a section for "EMPHYSEMA TYPE" with checkboxes for "centrilobular", "panlobular", "unilateral", "other", and "unspecified". At the bottom of the expanded result, there are five expandable items, each with a plus icon and a description: "Simple chronic bronchitis (J41.0)", "Mucopurulent chronic bronchitis (J41.1)", "Mixed simple and mucopurulent chronic bronchitis (J41.8)", "Chronic bronchitis, unspecified chronic bronchitis type (J42)", and "Unilateral emphysema (J43.0)". Below these, there are two more search results, each with a plus icon and a description: "COPD (chronic obstructive pulmonary disease) with acute bronchitis (J44.0) .346" and "COPD (chronic obstructive pulmonary disease) with chronic bronchitis (J44.9) .346".

COPD TYPE	CHRONIC BRONCHITIS TYPE
<input type="checkbox"/> chronic bronchitis	<input type="checkbox"/> simple
<input type="checkbox"/> emphysema	<input type="checkbox"/> mucopurulent
<input type="checkbox"/> COPD with acute exacerbation	<input type="checkbox"/> mixed simple and mucopurulent
<input type="checkbox"/> COPD with acute lower respiratory infection	<input type="checkbox"/> unspecified
<input type="checkbox"/> unspecified COPD	

EMPHYSEMA TYPE

- ☐ centrilobular
- ☐ panlobular
- ☐ unilateral
- ☐ other
- ☐ unspecified

+ Simple chronic bronchitis (J41.0)

+ Mucopurulent chronic bronchitis (J41.1)

+ Mixed simple and mucopurulent chronic bronchitis (J41.8)

+ Chronic bronchitis, unspecified chronic bronchitis type (J42)

+ Unilateral emphysema (J43.0)

+ COPD (chronic obstructive pulmonary disease) with acute bronchitis (J44.0) .346

+ COPD (chronic obstructive pulmonary disease) with chronic bronchitis (J44.9) .346

Powered by IMO[®] Problem (IT) Terminology

Add to: **Assessments** Problems Both

20

☒ Filter by patient age | ☒ Filter by patient gender

☒ **R Rx** COPD (chronic obstructive pulmonary disease) (J44.9) .346

COPD TYPE	CHRONIC BRONCHITIS TYPE
<input type="checkbox"/> chronic bronchitis	<input type="checkbox"/> simple
<input checked="" type="checkbox"/> emphysema	<input type="checkbox"/> mucopurulent
<input type="checkbox"/> COPD with acute exacerbation	<input type="checkbox"/> mixed simple and mucopurulent
<input type="checkbox"/> COPD with acute lower respiratory infection	<input type="checkbox"/> unspecified
<input type="checkbox"/> unspecified COPD	

EMPHYSEMA TYPE

☐ centrilobular

☒ **unilateral**

☐ other

☐ unspecified

+ Unilateral emphysema (J43.0)

+ R Rx COPD (chronic obstructive pulmonary disease) with acute bronchitis (J44.0) .346

+ R Rx COPD (chronic obstructive pulmonary disease) with chronic bronchitis (J44.9) .346

Powered by IMO[®] Problem (IT) Terminology

Add to: **Assessments** Problems Both

20

☒ Filter by patient age | ☒ Filter by patient gender

☒ **Rx** Hypertension (I10)

HYPERTENSION TYPE

- ☐ essential hypertension
- ☐ secondary to endocrine disorders
- ☐ secondary to other renal disorders
- ☐ renovascular hypertension
- ☐ other secondary hypertension
- ☐ unspecified secondary hypertension

- ☒ Essential hypertension (I10)
- ☒ Renovascular hypertension (I15.0)
- ☒ Hypertension secondary to other renal disorders (I15.1)
- ☒ Hypertension due to endocrine disorder (I15.2)
- ☒ Other secondary hypertension (I15.8)
- ☒ Secondary hypertension, unspecified (I15.9)

☒ **Rx** Hypertension after donor nephrectomy requiring medication (Z90.5) *(specify)*

☒ **R Rx** Hypertension associated with chronic kidney disease due to type 1 diabetes mellitus (E10.22) *(specify)* .368

☒ **R Rx** Hypertension associated with chronic kidney disease due to type 2 diabetes mellitus

Powered by IMO*Problem (IT) Terminology

Add to: **Assessments** Problems Both

20

☒ Filter by patient age | ☒ Filter by patient gender

☒ **Rx** Hypertension (I10)

HYPERTENSION TYPE

☐ essential hypertension

☐ secondary to endocrine disorders

☐ secondary to other renal disorders

☒ **renovascular hypertension**

☐ other secondary hypertension

☐ unspecified secondary hypertension

☒ **+** Renovascular hypertension (I15.0)

☒ **R Rx** Hypertension after donor nephrectomy requiring medication (Z90.5) *(specify)*

☒ **R Rx** Hypertension associated with chronic kidney disease due to type 1 diabetes mellitus (E10.22) *(specify)* .368

☒ **R Rx** Hypertension associated with chronic kidney disease due to type 2 diabetes mellitus (E11.22) *(specify)* .368

☒ **R Rx** Hypertension associated with diabetes (E11.69) *(specify)* .368

☒ **R Rx** Hypertension associated with stage 2 chronic kidney disease due to type 2 diabetes mellitus (E11.22) *(specify)* .368

☒ **R Rx** Hypertension associated with stage 3 chronic kidney disease due to type 2 diabetes mellitus (E11.22) *(specify)* .368

☒ **R Rx** Hypertension associated with stage 4 chronic kidney disease due to type 2 diabetes mellitus (E11.22) *(specify)* .368

Powered by IMO*Problem (IT) Terminology

Add to: **Assessments** Problems Both

chf Search 20 Hide filter options

☒ Filter by patient age | ☒ Filter by patient gender

☒ CHF (congestive heart failure) (I50.9) .368

CONGESTIVE HEART FAILURE TYPE

☐ systolic

☐ diastolic

☐ combined

☐ unspecified congestive heart failure type

CONGESTIVE HEART FAILURE CHRONICITY

☐ acute

☐ chronic

☐ acute on chronic

☐ unspecified congestive heart failure chronicity

☐ Systolic congestive heart failure, unspecified congestive heart failure chronicity (I50.20)

☐ Acute systolic congestive heart failure (I50.21)

☐ Chronic systolic congestive heart failure (I50.22)


☐ Acute on chronic systolic congestive heart failure (I50.23)

☐ Diastolic congestive heart failure, unspecified congestive heart failure chronicity (I50.24)

☒ CHF (congestive heart failure), NYHA class I (I50.9) .368

☒ CHF (congestive heart failure), NYHA class II (I50.9) .368

☒ CHF (congestive heart failure), NYHA class III (I50.9) .368

Powered by IMO[®] Problem  Terminology

Add to: **Assessments** Problems Both

20

☒ Filter by patient age | ☒ Filter by patient gender

☒ **R Rx** CHF (congestive heart failure) (I50.9) .368

CONGESTIVE HEART FAILURE TYPE

☒ systolic

☐ diastolic

☐ combined

☐ unspecified congestive heart failure type

CONGESTIVE HEART FAILURE CHRONICITY

☒ acute

☐ chronic

☐ acute on chronic

☐ unspecified congestive heart failure chronicity

☒ **+** Acute systolic congestive heart failure (I50.21)

☒ **R Rx** CHF (congestive heart failure), NYHA class I (I50.9) .368

☒ **R Rx** CHF (congestive heart failure), NYHA class II (I50.9) .368

☒ **R Rx** CHF (congestive heart failure), NYHA class III (I50.9) .368

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Add to: **Assessments** Problems Both

20

☒ Filter by patient age | ☒ Filter by patient gender

☒ **R Rx** Bipolar affective (F31.9) .330

ACTIVE/REMISSION STATUS	CURRENT BIPOLAR EPISODE TYPE
<input type="checkbox"/> in full remission	<input type="checkbox"/> depressed
<input type="checkbox"/> in partial remission	<input type="checkbox"/> hypomanic
<input type="checkbox"/> in remission of unspecified degree	<input checked="" type="checkbox"/> manic
<input checked="" type="checkbox"/> currently active	
<input type="checkbox"/> remission status unspecified	

CURRENT EPISODE SEVERITY
<input type="checkbox"/> mild
<input checked="" type="checkbox"/> severe

PSYCHOTIC FEATURES	MOST RECENT BIPOLAR EPISODE TYPE
<input checked="" type="checkbox"/> with psychotic features	<input type="checkbox"/> depressed
<input type="checkbox"/> without psychotic features	<input type="checkbox"/> hypomanic
	<input type="checkbox"/> manic
	<input type="checkbox"/> mixed
	<input type="checkbox"/> most recent episode unspecified type

+ Bipolar affective disorder, currently manic, severe, with psychotic features (F31.2)

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Add to: **Assessments** Problems Both

20

☒ Filter by patient age | ☒ Filter by patient gender

☒   Diabetes (E11.9) .118

DIABETES MELLITUS TYPE

- ☐ type 1
- ☐ type 2
- ☐ due to underlying condition
- ☐ drug or chemical induced
- ☐ other specified (including MODY)

DIABETES MELLITUS COMPLICATION STATUS

- ☐ without complication
- ☐ with circulatory complication
- ☐ with diabetic arthropathy
- ☐ with hyperglycemia
- ☐ with hyperosmolarity
- ☐ with hypoglycemia
- ☐ with ketoacidosis
- ☐ with kidney complications
- ☐ with neurologic complications
- ☐ with ophthalmic complications
- ☐ with oral complications
- ☐ with skin complications
- ☐ with other specified complication
- ☐ with unspecified complications

DIABETES MELLITUS COMPLICATION DETAIL

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Add to: Assessments Problems Both

diabetes Search 20 Hide filter options

☒ Filter by patient age | ☒ Filter by patient gender

☒ **R Rx** Diabetes mellitus type 2 with retinopathy (E11.319) .368

DIABETIC RETINOPATHY SEVERITY

☐ with mild nonproliferative retinopathy

☒ with moderate nonproliferative retinopathy

☐ with severe nonproliferative retinopathy

☐ with proliferative retinopathy

☐ with unspecified retinopathy severity

DIABETES MELLITUS MACULAR EDEMA

☐ without macular edema

☒ without macular edema

☐ macular edema presence unspecified

+ Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy and without macular edema (E11.339)

+ R Rx Diabetes mellitus type 2 without retinopathy (E11.9) .118

> R Rx Type 2 diabetes mellitus with retinopathy and macular edema (E11.311) .368

> R Rx Type 2 diabetes mellitus with retinopathy and without macular edema

ICD-10 – Day 1 and following

As of 12:37 AM, October 1, 2015, SETMA was functioning with ICD-10 in all seven clinics, in all three hospitals, in all 29 nursing homes, and in every patient encounter. An explanation of ICD-10 can be quickly reviewed at the following link:

<http://www.setma.com/Your-Life-Your-Health/pdfs/icd-10-its-here-what-does-it-mean-and-why-does-it-matter.pdf>

At 5:30 AM, Dr. Holly completed an encounter in a real patient well known to him with multiple complex diagnoses. The system works like a dream:

1. When I diagnosed Diabetes Type 2 with Renal complications, the system alerted me to the need to designate specifically “renal disease,” the options appeared and with a click of a button, that was done.

2. When I diagnosed Bipolar Disease, the system alerted me to the need to designate whether the patient was in full or partial remission, or not, and whether the patient was depressed or manic. With two clicks of a button, the correct ICD-10 Code was selected.
3. When I diagnosed “Peripheral Neuropathy” options for mono or polyneuropathy was offered about 18 other options were presented and quickly the right choice was made.
4. The diagnosis of “Hypertension” gave several options which were quickly specified.
5. Moving from ICD-9 with 15,000 diagnoses and SETMA’s deployment of ICD-9 with 100,000 options created out of them, to ICD-10 with 150,000 diagnoses was simple and required only seconds of additional time.

After completing the diagnoses, I submitted the ICD-10 charges with associated CPT Codes where indicated – on a capitated patient no charges will be paid by the insurance company, The interface and the clearing house worked perfectly. As with ICD-9, all **Hierarchical Conditional Codes** (HCC) and **Pharmaceutical HCC Codes** (RxHCC) were displayed on the EMR and on the ICD-10 selection options, and they were all captured in the charge posting.

The switch to ICD-10 may cost you another 10 seconds on a complex case with multiple (4 or more) complicated diagnoses but you will like:

1. The ease with which you create the specificity required for success with ICD-10
2. The precision and the clarity of the diagnostic coding which appears on your chart note. The communication with other providers will be greatly improved.
3. The value of all of the work which you and IT have done in the past two years to make this day simple and successful.

Soon we will be switching to SNOMED – no work required – and in several years we will make the transition to ICD-11 – again no work required and seamless updating to new versions and iterations of the ICD nomenclature.

Conclusion

You will like ICD-10 and you will be glad that we made this transition. And, it has been the case that all of SETMA’s providers and staff are pleased that we made the transition and are experiencing the benefit of this new tool.