What tools are required facilitate the maintenance of a current, valid and complete problem list in the EMR?

By James L. Holly, MD

1. Electronic Access to a robust diagnostic list which is intuitively organized.

a. Remember, the ICD-9 Codes were created for billing purposes not for precision in diagnosis. That means that insurance companies and particularly Medicare did not care whether a patient had hypermagnesemia or hypomangnesemia, they just cared whether or not there was a legitimate reason for paying for the performance of a mangnesium. Therefore, the ICD-9 Code for "hyper" and "hypomagnesemia" are the same. Clinically, the distinction is critical. With ICD-10, the specificity and lateralization of diagnoses are enhanced.

b. One last principle, SETMA's EMR has been evolving.

   1) We have been doing charge posting from the examination rooms since 2001.
   2) Prior to that both the ICD-9 code number and description appeared in the Chronic Problem list.
   3) In order for charge posting to work, however, the ICD-9 Code number cannot appear in the Chronic Problem List.
   4) If it does, the ICD-9 Code needs to be updated to the new method.
   5) All Chronic Problems which have both an ICD-9 Code description and an ICD-9 Code number must be changed to where only the ICD-9 Code description appears.

c. The deficiencies of ICD-9 are going to be solved by ICD-10. Here are a few facts about the World Health Organization's ICD-10 tool:

   1) The International Classification of Diseases, Tenth Revision, (ICD-10) was endorsed by the 43rd World Health Assembly in May 1990 and came into use in World Health Organization (WHO) States in 1994. ICD-10, Clinical Modification (ICD-10-CM) was developed by the U.S. National Center for Health Statistics (NCHS) along with an advisory panel to ensure accuracy and utility in 1993. In the United States, we will use the clinically modified version, as we did with ICD-9.

      On January 5, 2009, the U.S. Department of Health & Human Services (HHS) announced that ICD-9-CM would be replaced by the ICD-10 system (ICD-10-CM and ICD-10-PCS) on October 1, 2013.

      All HIPAA covered entities must comply with this date. The final rule to update the current 4010 electronic transaction standard to the new 5010 electronic transaction format for electronic health care transactions was also published with an implementation of January 1, 2012. Version 5010 provides

the framework needed to support ICD-10 diagnosis and procedure codes and is the prerequisite to implementing ICD-10.

2) CMS reports the following benefits of converting to the ICD-10 coding system in the United States;

    a) Improving payment systems and reimbursement accuracy
    b) Measuring the quality, safety and efficacy of care
    c) Conducting research, epidemiogical studies, and clinical trials
    d) Setting health policy
    e) Monitoring resource utilization
    f) Preventing and detecting healthcare fraud and abuse

2. A Means for reorganizing the display of the chronic problem list.

a. The strength of the EHR is that it is a continuous and a longitudinal record. Yet that strength creates one of its weaknesses. As a patient's health evolves, there are often important but relatively trivial diagnoses at the top of the Chronic Problem list and critical issues, which recently developed, at the bottom of it.
b. Without requiring the recreation of the list, the EHR must allow for the moving of important and relatively new diagnoses to the top of the list and moving important to remember but trivial issues to the bottom.
c. It is possible to do this with EHR. SETMA has created the ability for the provider to click a button which then displays the Chronic Problem List. In this view, it is possible to click on each diagnosis in the order to place them in the order you wish them to appear. When all diagnoses have been clicked, the provider deploys another button which creates a new problem list in the order selected by the provider. This process takes less than one minute, even if the patient has 20 or more diagnoses.

3. A means for archiving, in a retrievable fashion, a diagnosis in the Chronic Problem List, which, while it is no longer needed, may need to be accessed in the future.

a. This functions allows the archiving in a retrievable fashion any diagnoses which will then disappear from the Chronic Problem list which can be restored to the acute assessment and/or to the Chronic Problem list with the click of a button
b. The archived Chronic Problem List needs to be accessible by the click of a button.
c. The date on which the problem was archived needs to be stored also.

4. The Chronic Problem list needs the ability for for each diagnosis to be highlighted if it has not been reviewed in a pre-determined amount of time.

a. For instance, those diagnoses which are HCC and/or RxHCC diagnosis must be reviewed annually, if payment is to be received.

b. The Chronic Problem List must highlight those diagnoses in red until they have been evaluated to alert the provider that the diagnosis needs to be reviewed.

5. A means for copying a diagnosis from the Chronic Problem List to the Acute Assessment List for the current visit

a. Once an accurate diagnosis has been established in the Chronic Problem List and because a robust ICD-9 code list and certainly an ICD-10 code list with its 150,000 options can require unnecessary review to make sure that the diagnosis in the Acute Assessment correlates with the diagnosis in the Chronic Problem List, there must be a means for moving diagnoses from the Chronic Problem list to the Acute Assessment for the current encounter.
b. SETMA accomplished this by placing buttons next to each space for the acute assessment. When the button is deployed, the Chronic Problem list appears in a new window. When the Chronic Problem being evaluated is highlighted by the provider, a copy of it is moved to the Acute Problem. This allows for consistency in what is being evaluated thus preventing the duplication of diagnoses, or the changing of a precise diagnoses to a more generic one.

6. Rules for creating and using an effective Chronic Problem List

a. Diagnoses cannot be typed into the Chronic Problem List, they must be chosen from an electronically created list which then interacts with other part of the EHR particularly the billing and coding functions.
b. The list must be reviewed periodically for accuracy. Generally, that periodicity will be at each encounter.
c. Duplications and particularly contradictions in the problem list must be corrected, i.e.., if the patent has an above knee amputation on the right and the record says that it is on the left, that must be corrected. This is what we call "chart maintenance." It is no shame for an imprecise or incorrect diagnosis to be in the record; the shame is if the record is not regularly reviewed in order for such errors to be caught and/or for the record not to be corrected when the error is discovered.
d. The reality is that because it is a function of human effort, medical records are only asymptotically approaching perfection. That is the goal and it should be continually pursued as the ideal. Imperfection must never be accepted or tolerated, even though we know that perfection is rarely achieved.
e. The creation, maintenance and reconciliation of a complete, valid and current Chronic Problem List is a team effort.

Principles of maintaining an accurate, up-to-date and valid problem list:

The two most difficult, chronic problems in medical recording keeping are valid, complete medication records and valid, complete problem list. Unfortunately, they just happen to be the two most important parts of the record. Both issues are foundational to the fulfillment of the Triple Aim and to patient safety.

Because the chronic problem list is also critical for reimbursement, the sustainability of excellence in care, which is fundamentally an economic issue, the list is critical to quality outcomes. This is particularly related to HCC and RxHCC values which are not important not only in Medicare Advantage, but also in ACO work with Fee-for-Service Medicare and for Patient-Centered Medical Home.

The critical issues with problems list are:

1. A robust ICD-9 and soon ICD-10 deployment from which diagnoses can be entered into the problem list, the assessment and referrals.
2. The typing in of diagnoses, which will not work with billing and coding or with sharing of data and analytics, is lethal to maintaining a problem list.
3. The nice thing about upgrades to ICD-9 and certainly to ICD-10 is that there are many social codes such as “lives alone”, “Military Recently Deployed”< etc. There are also codes for such things as “Elevated CRP, etc, which allows you to maintain surveillance on conditions which are not presently under treatment but which need not to be forgotten and which need follow-up.

We started with spaces for 12 diagnoses and are up to 18 now. When a diagnoses is in the problem list and needs periodic review, we make those diagnoses turn red until they are reviewed. This reminds the provider not to overlook the condition.

Principles of maintaining an accurate, up-to-date and valid problem list:

1. **Chart Maintenance** – this is part of ever visit and every review of the patient’s chart.

    a. When the patient is seen the provider needs to review the problem list, as she/he must review the medication list. It is as if you have a “reconciled” medication list and a “reconciled” problem list at each visit.
    b. When data, information, tests, procedures, etc., are received on a patient from another provider or organization the clerk has to be given the authority to add diagnoses to the chronic problem list. Then when the patient is seen the provider reviews the diagnoses and determines whether is should remain in the list or not.
    c. It is ideal if it is possible to reorganize the chronic problem list in order of priority. SETMA has designed a system where it is easy to do this in a matter of seconds even with 18 diagnoses. Thus, the most important diagnoses can appear at the top of the list such as Diabetes, Renal Disease, Prostate Cancer and less critical but important diagnoses can appear last such as “Elevated Sed Rate”, “Hx of Tobaccoism”, Family History of Diabetes”, etc./ .

2. **Chart Reviews** – nurses charged with going through charts

   a. Making certain that for important diagnoses that there is history, physical, testing, etc., information to support the diagnoses and calling it to the provider's attention if there is not.
   b. Reviewing consultations, procedure, etc., to make sure that all valid and accurate diagnoses have been entered into the chronic problem list so that they can be brought to the attention of the provider.
   c. Making sure that all diagnoses are entered electronically and not by typing so that they interact with the disease functions of the system.

3. **Quality Improvement** – healthcare providers reviewing the charts of other providers

   a. The same kind of review done by the provider during a patient encounter and the nurse with chart reviews, but is more focused on the quality of care based on the documentation of the record and the completeness of the chronic problem list. This is most often done with ne providers or with providers having problems.
   b. After these reviews a face-to-face or a written conversation is had with the provider to address deficiencies.

Reconciliation of medications or of chronic problem lists is hard work and must be a priority if it is going to be done well and consistently. I hope this helps and I would be glad to discuss it more if it would help.