On the Near Horizon: ICD-10
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One-Minute Summary
On October 1, 2013, health care and insurance organizations across the United States will switch from the ICD-9 coding scheme to ICD-10.

The ICD-10 has two parts, ICD-10-CM which covers diagnoses (equivalent to Volumes 1 & 2 of the ICD-9), and ICD-10-PCS which covers hospital procedures (equivalent to Volume 3 of ICD-9).

Comparison & Contrast

A New Format

ICD-9
ICD-10

• Extension codes describe encounters
  A = Initial encounter
  D = Subsequent encounter
  S = Sequelae

• Laterality can be specified

• Fewer codes per event – ICD-10 combines diagnoses and associated symptoms, and commonly co-occurring diagnoses into single codes

Background

Why the change? A huge driver is that the ICD-9 system has run out of diagnosis codes and so is unable to keep up with changes in medical care. For example, ICD-9 does not handle newly defined diseases, like SARS or HIV, very well.

Further, 140 countries are using ICD-10, many for several years already. The US is not able to share data well internationally, which is especially concerning for managing global public health issues.

Advantages

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• Fewer codes per event – ICD-10 combines diagnoses and associated symptoms, and commonly co-occurring diagnoses into single codes

What does this mean for us now?

• When planning projects, include additional time for programming and biostatistics for projects that will use ICD-10 data. Expect that projects using both ICD-9 and ICD-10 data (that is, projects with data points both before and after October 2013) may need as much as 25% more programmer and biostat time.

• When planning projects, include additional time for investigators and project teams to plan how to work with data from two coding systems, to interpret codes and to guide decisions.

• Expect that we will need to spend extra time to include additional time for

• Data from two coding systems, to interpret codes and to guide decisions.

• Investigator and project teams


An Analytic Challenge

Death Certificate Experience
The United States began using ICD-10’s to code mortality data in January, 1999. To help analysts manage the data transition, the National Center for Health Statistics double-coded a large sample of the 1998 national mortality file, once by ICD-9, and once by ICD-10. They then created a comparability ratio: the number of deaths for a cause per ICD-10 divided by the number of deaths for the same cause per ICD-9. This ratio can then be used to adjust mortality statistics. This guidance is kept on our GHRI Data Wiki, and will be promoting this more widely as we get closer to 2015.

GEMs: General Equivalency Mappings
To help with the transition between coding systems, the Centers for Medicare & Medicaid Services (CMS) and the Centers for Disease Control (CDC) have developed General Equivalency Mappings, or GEMs. There are four GEMs:

- ICD-9 diagnoses to ICD-10 diagnoses
- ICD-9 diagnoses to ICD-10 procedures
- ICD-10 diagnoses to ICD-10 procedures
- ICD-10 diagnoses to ICD-9 procedures

A GEM is comprised of a Source Code, a Target Code and a set of five flags. The flags describe the nature of the match:

Flag 1: Identical match vs. approximate match
Flag 2: Plausible match found? Yes/no
Flag 3: Maps to one code vs. multiple codes
Flag 4: Scenarios codes for one-to-many mappings
Flag 5: Choice codes for one-to-many mappings

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• When planning projects, include additional time for investigators and project teams to plan how to work with data from two coding systems, to interpret codes and to guide decisions.

• Expect that we will need to spend extra time to upgrade the Virtual Data Warehouse (VDW) and the GHRI Data Warehouse to include the new coding scheme and to develop macro and other help.

• Expect that programmers and biostatisticians will need to spend time learning how to use the new system.