# March 18, 2015

## Estimating the Impact of the Transition to ICD-10 on Medicare Inpatient Hospital Payments

# Objective

- To estimate the impact on aggregate Inpatient Prospective Payment System (IPPS) Medicare Severity Diagnosis Related Group (MS-DRG) payments to hospitals due to the transition to ICD-10 on October 1, 2015

# Disclaimer

- MS-DRG v33 for FY 2016 using ICD-10 is going through the rule-making process

- These estimates are based on
  - MS-DRG v32
  - FY 2015 weights

# Terminology

- “Grouper”
  - The software that assigns a MS-DRG based on coded diagnoses, procedures, sex. and discharge status
- “DRG shift”
  - When the MS-DRG from a record coded in ICD-9 is different from the MS-DRG from the same record coded in ICD-10
- “MCC” or “CC”
  - Secondary diagnosis designated (major) complication/co-morbidity

# **Results** (Using about 10 million FY 2013 MedPAR records)

- 0.41% had DRG shift to higher paying DRG
  - $13 more per $10,000 (+0.13%)
- 0.66% had DRG shift to lower paying DRG
  - $17 more per $10,000 (-0.17%)
- Net: 1.07% with a DRG shift
  - $4 less per $10,000 (-0.04%)
- Statistically zero

# More good news…

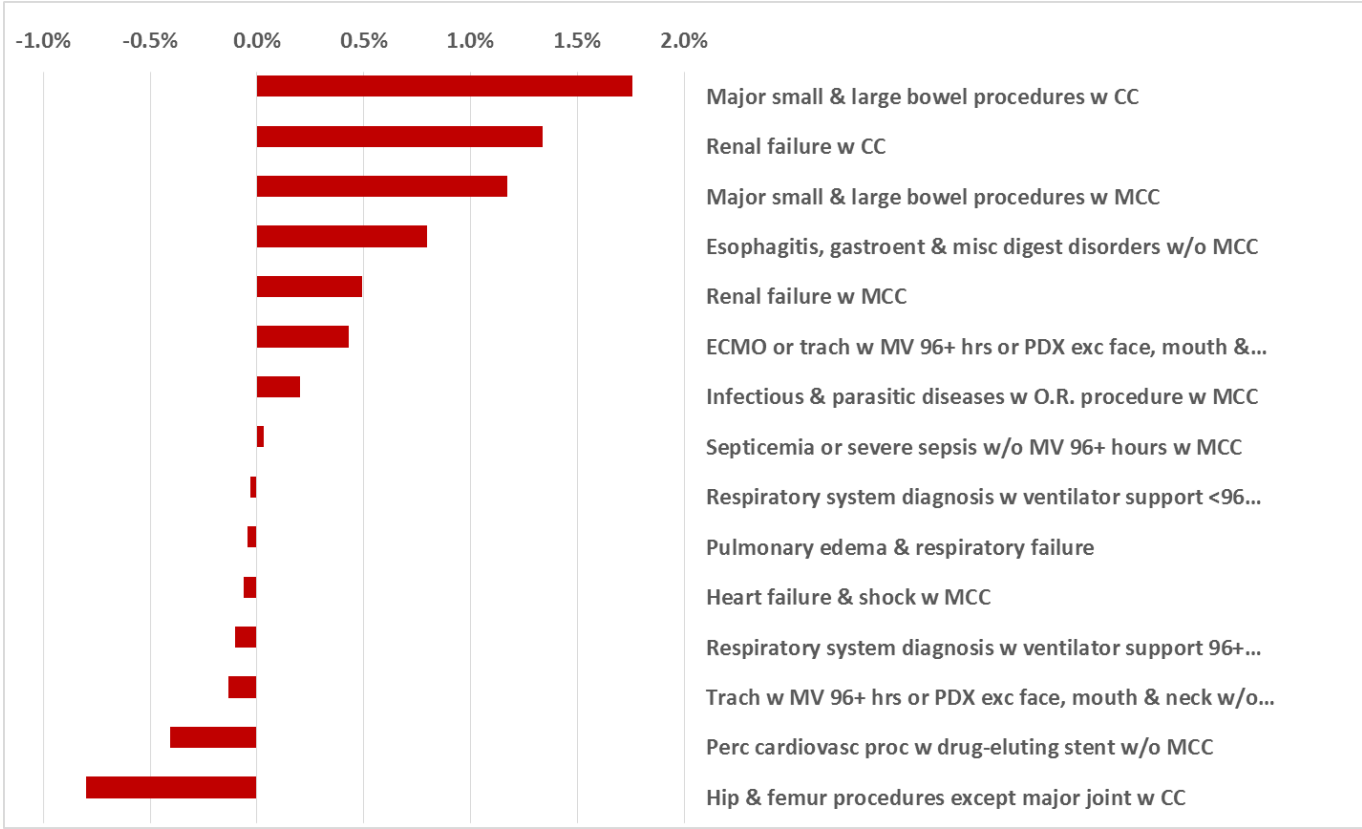
- Anecdotal evidence from some institutions which have dual coded ICD-9 and ICD-10 or have re-coded ICD-10 records with apparent MS-DRG shifts:
  - Coder coded records are less likely to change their MS-DRG from ICD-9 to ICD-10
  - Actual net reimbursement impact may be even less than that estimated here

# Impact by hospital type

| Hospital type | Hospitals | Avg reimb | DRG shifts | Net reimb change |
|---|---|---|---|---|
| All | 3,205 | 10,678 | 1.07% | -0.04% |
| Indirect Medical Education | | | | |
| Top 10% | 103 | 20,993 | 1.25% | -0.01% |
| All others | 3,102 | 9,993 | 1.06% | -0.05% |
| Disproportionate Share Hospitals | | | | |
| To 20% | 641 | 13,186 | 1.22% | -0.05% |
| Middle 60% | 1,923 | 10,146 | 1.05% | -0.04% |
| Bottom 20% | 641 | 9,716 | 0.98% | -0.02% |
| Location | | | | |
| Large Urban | 1,340 | 11,908 | 1.13% | -0.04% |
| Other Urban | 1,084 | 10,112 | 1.02% | -0.04% |
| Rural | 781 | 7,081 | 1.00% | -0.06% |
| Size | | | | |
| Top 10% | 320 | 12,757 | 1.08% | -0.02% |
| All others | 2,885 | 9,676 | 1.07% | -0.05% |

All statistically zero

# Estimated % change for top 25 MS-DRGs by expected reimbursement



# Unavoidable differences

- Myth:
  - ICD-10 just adds detail to ICD-9

- Reality:
  - Distinctions no longer in common use have been removed from ICD-10
  - Some areas (e.g. OB) use a different approach to classification
  - ICD-10-PCS procedure codes have no diagnostic content
  - Some coding guidelines have changed

# Replicating the MS-DRG grouper for ICD-10

- Distinctions made by ICD-10 not available in ICD-9?
  - No problem.
  - 130,000 out of 140,000 codes (93%)

- Distinctions made by ICD-9 (and used by grouper) no longer available in ICD-10?
  - Presents challenges that must be handled individually

# How shifts were minimized

- When an ICD-10 code contains conditions previously classified in different ICD-9 codes:
  - Treat the ICD-10 code like the more frequently occurring ICD-9 code
  - Cases coded with the less frequent ICD-9 code, when re-coded in ICD-10 may go into a different MS-DRG

# Example – reconciling differences

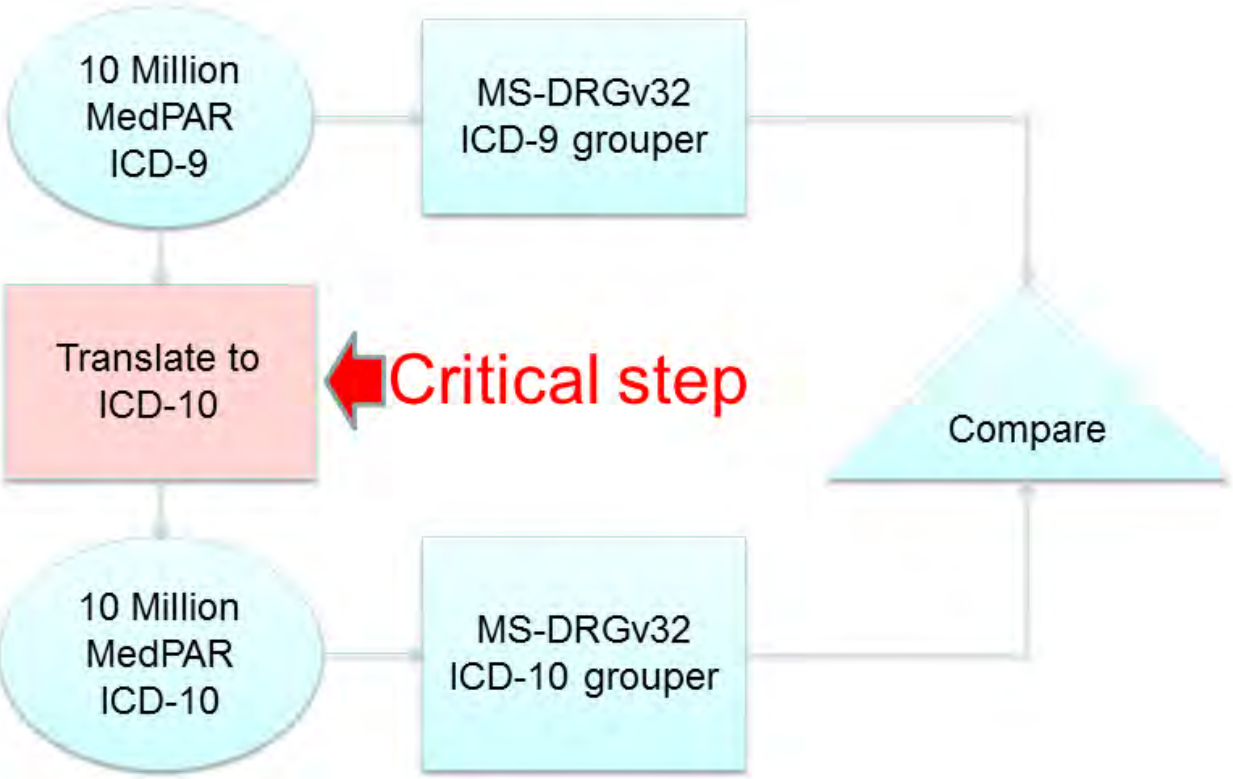
- Two codes different in ICD-9
  - 311, Depressive disorder, NEC
    - Not a CC. About 50 per 1,000 records
  - 296.20, Major depression, unspecified
    - A CC. About 5 per 1,000 records

- Both translate to F32.9 in ICD-10
  - Must make F32.9 like 311 (a non-CC)
  - Records with 296.20 in ICD-9 but F32.9 in ICD-10 will shift to a lower paying MS-DRG

# How our estimates were made

1. Start with 10 million FY 2013 MedPAR records coded in ICD-9
2. Group them using ICD-9 MS-DRG v32
3. Mechanically convert the records to ICD-10
4. Group those using ICD-10 MS-DRG v32 grouper
5. Compare results using FY2015 weights

# How our estimates were made



# Mechanical translation

- Using only the information in the ICD-9 codes, correctly code the record in ICD-10
- Ask “What would the coder do?”
- Using the General Equivalence Mappings (GEMs) requires careful logic

# Translating procedures

- Groups of ICD-9 procedure codes may translate into single ICD-10-PCS codes.
  - Example: PTCAs
    - Up to 5 codes in ICD-9, one code in ICD-10

- ICD-10 does not include procedure information in diagnoses
  - Example: Obstetrics codes
    - Imply delivery in ICD-9 but need explicit procedure in ICD-10

# Using clusters

- One ICD-9 code sometimes translates into more than one ICD-10 code in order to convey the same meaning. Example:

- ICD-9:
  - 241.11, Secondary diabetes with ketoacidosis, uncontrolled

- ICD-10
  - E08.10 Diabetes … with ketoacidosis
  - E08.65 Diabetes …with hyperglycemia

# Using the GEMs

- A careful interpretation of the flow of meaning between codes in the GEMs is required to use them effectively
- Explanation of GEMs formation is provided on the CMS site where GEMs are found
- Much written about this elsewhere

# When these techniques aren't used…

| Translation technique | DRG shifts |
|---|---|
| Translation as performed. | 1.07% |
| Not using procedure translation logic | 3.5% |
| Not using clusters | 4.5% |
| Using I9-to-I10 GEM only<br>• Eight DRGs disappear (100% shift)<br>• Forty DRGs have 50% or higher shift | 6.5% |

# Common MS-DRG shifts

- 40% of shifts to lower weight MS-DRGs come from losing a CC or MCC

- 75% of shifts to higher weight MS-DRGs come from gaining a CC or MCC

# Dual coding study

A coder with access to the original medical record will create more accurate codes than mechanical translation

- Coders code in ICD-9
- Group the ICD-9 coded records
- Coders code the same records in ICD-10
- Group the ICD-10 coded records
- Compare

# Cautionary example

- 100 cases (a pilot study)

- 20 of them appeared to have a DRG shift but further analysis showed:
  - In 9 of these the ICD-10 coder found clinical facts the ICD-9 coder missed
  - In 9 others the ICD-9 coder found clinical facts the ICD-10 coder missed
  - Only 2 cases out of the 100 actually had DRG shifts due to differences between ICD-9 and ICD-10

# First year documentation improvement

- Documentation improvement targeted only on new ICD-10 detail may be useful in the long run, but may not impact the first year MS-DRG reimbursement

- Areas where ICD-10 no longer works like ICD-9:
  - Code procedures. Do not rely on diagnoses
  - “Malignant” hypertension
  - “Unspecified” diagnoses accepted as CC/MCC

# Summary

- For a typical case mix, expect
  - About 1% of the cases shift MS-DRG
  - Net impact statistically zero

- Coding issues can have a greater impact than the differences between ICD-9 and ICD-10

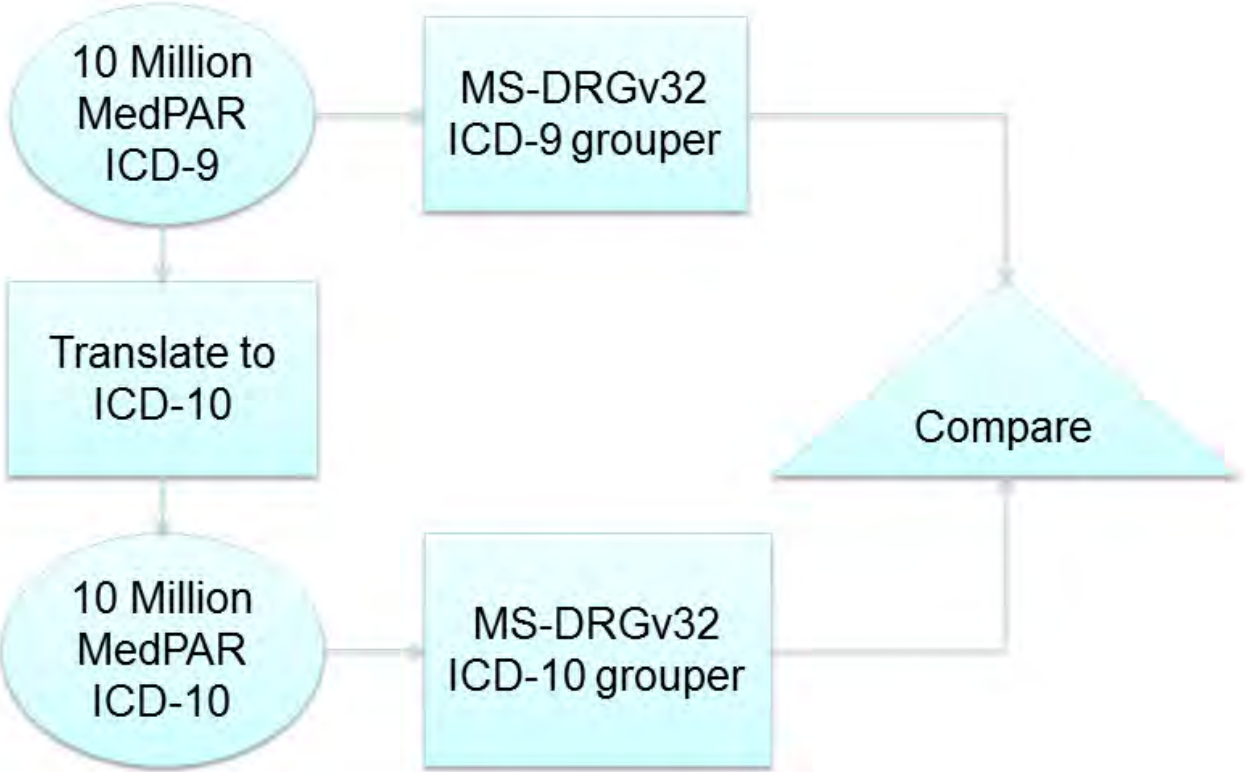
- If you do an analysis like this with your own data, pay close attention to the mechanism you use to translate from ICD-9 to ICD-10

# Article Describing Impact

- Estimating the Impact of the Transition to ICD-10 on Medicare Inpatient Hospital Payments

- http://www.cms.gov/Medicare/Coding/ICD10/ICD-10-MS-DRG-Conversion-Project.html (First zipped documents under Downloads)

# Questions


10 Million MedPAR ICD-9
MS-DRGv32 ICD-9 grouper
Translate to ICD-10
Compare
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