

PMRI Terminologies

McKesson's Perspective

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Summary Statement - Outline

- **Background for McKesson (2 slides)**
- **What we would ask of CMS and the eGov/CHI process esp. wrt SNOMED CT**

McKesson Corporation

- Fortune 30 company with 24,000 employees touching millions of lives
- \$50 billion in revenues around the world
- **Supply Solutions:** from retail pharmacy (#1) and med-surg distribution, to robotics and med supply scanning, to medical management (#1)
- **McKesson Information Solutions:** from revenue cycle software to Expert Orders -- both products and services. More than $\frac{3}{4}$ of payors and $\frac{1}{2}$ of US hospitals > 200 beds rely on MIS.

Clinical Terminologies at McKesson

- **Special domains: NIC, NOC, NANDA, PNDS, proprietary concept collections**
- **LOINC: test results**
- **NDDF Plus: used with FDB's Drug Information Framework (DIF)**
- **SNOMED CT: new development and as a convergent terminology (PNDS, NIC, NOC, NANDA, LOINC, PNDS)**

NDDF Plus

- **Interact with NDDF Plus via FDB's "Drug Information Framework" (API)**
- **Customer focused and responsive to our needs – rich knowledge set built atop NDDF Plus.**
- **Continue to use NDDF Plus for medication allergies, medication history, dispensing and distribution, and order entry**
- **Use SNOMED CT, not ICD-9-CM, to pass indications/contraindication data to DIF**

SNOMED CT

- **Why SNOMED?**
- **Nursing and allied healthcare – convergent terminology approach**
- **ICD-10 and PCS cost-benefit analysis**
- **Rx-Norm and SNOMED CT meds/allergies**
- **Life with administrative code sets**

Why SNOMED for McKesson

- **Designed for growth and maintenance**
 - a “best of breed” or “federated” approach to PMRI may be hard to maintain ... concepts cross boundaries -> concept duplication
- **Mappings** to administrative code sets and potentially to NDDF-Plus conditions
- **Healthcare coverage: nursing (NANDA/NIC/NOC/PNDS), allied healthcare, settings of care, medical specialties**
- ***Expectation* of US contract and UK adoption: improvement, integration, products, longevity, tools, customer acceptance, affordable**

Nursing and Allied Healthcare

- **SNOMED convergent terminology effort is impressive**
 - **SNOMED *and* distinct terminologies and structures (ex: NIC)**
 - **SNOMED contains the core concepts, mapping is guaranteed to work bi-directionally.**
- **A good approach that should be encouraged and supported**

SNOMED + ICD-10-CM/PCS: Cost benefit analysis?

- **How does deployment of a clinical terminology affect cost/benefit calculations for replacement of ICD-9-CM and/or CPT-4?**
 - **Success of clinical terminologies will be affected by cost of integrating with reimbursement and regulatory mandates.**
- **CMS should cost/benefit analyses to consider impact of the PMRI terminologies**

Rx-Norm and SNOMED

- **No-one wants two non-communicating systems medications and medication allergies**
- **Strongly encourage unification, integration or coordination**
 - **at least interoperability with guaranteed bidirectional mappings and translations**
 - **Better: single open medication terminology**

Reimbursement/Regulation vs. Clinical Applications

- Reimbursement needs and regulatory mandates will trump clinical needs
- When writing software, “native” codes work best
 - if rules are written using ICD and CPT then s/w will use ICD and CPT
- Standard mapping doesn't close the gap.
- We *can* eliminate the “clinical penalty”.

Mappings are usually imperfect

- **translation is imperfect, esp. between very rich and very sparse languages**
- **SNOMED vs. ICD – terminology vs. a limited classification**
- **SNOMED vs. CPT – terminology vs. a work description**
- **consider medical necessity ...**

Medical Necessity: A Reimbursement Example

- **Typical rule: for a given CPT (ex: 82728 - Ferritin), these are the accepted ICD-9 codes (ex: 115 ICD-9 codes)**
- **Usually underlying clinical logic is often straightforward, but *expression* using ICD is complex and tedious**
- **SNOMED CT may be an *easier* way to represent underlying clinical reasoning.**

Medical Necessity: Ferritin Level (82728)

ICD9	FullName
250.81	DIABETES MELLITUS WITH OTHER SPECIFIED MANIFESTATIONS, TYPE I NOT STATED AS UNCONTROLLED
250.83	DIABETES MELLITUS WITH OTHER SPECIFIED MANIFESTATIONS, TYPE I, UNCONTROLLED
250.82	DIABETES MELLITUS WITH OTHER SPECIFIED MANIFESTATIONS, TYPE II OR UNCONTROLLED
250.71	DIABETES MELLITUS WITH PERIPHERAL CIRCULATORY DISORDERS, TYPE I NOT STATED AS UNCONTROLLED
250.73	DIABETES MELLITUS WITH PERIPHERAL CIRCULATORY DISORDERS, TYPE I, UNCONTROLLED
250.72	DIABETES MELLITUS WITH PERIPHERAL CIRCULATORY DISORDERS, TYPE II OR UNCONTROLLED
250.41	DIABETES MELLITUS WITH RENAL MANIFESTATIONS, TYPE I NOT STATED AS UNCONTROLLED
250.43	DIABETES MELLITUS WITH RENAL MANIFESTATIONS, TYPE I, UNCONTROLLED
250.42	DIABETES MELLITUS WITH RENAL MANIFESTATIONS, TYPE II OR UNSPECIFIED
250.91	DIABETES MELLITUS
250.93	DIABETES MELLITUS WITH ABNORMAL METABOLIC STATE
250.92	DIABETES MELLITUS BRITTLE
250.01	DIABETES MELLITUS AND INSIPIDUS WITH OPTIC ATROPHY AND DEAFNESS
250.03	DIABETES MELLITUS ASSOCIATED WITH GENETIC SYNDROME
250.02	DIABETES MELLITUS DUE TO STRUCTURALLY ABNORMAL INSULIN
250.2	DIABETES MELLITUS DURING PREGNANCY, CHILDBIRTH AND THE PUERPERIUM
250.1	DIABETES MELLITUS NOS WITH NO MENTION OF COMPLICATION
250.6	DIABETES MELLITUS TYPE 1
250.5	DIABETES MELLITUS TYPE 2
250.3	DIABETES WITH OTHER COMPLICATIONS
250.8	DIABETES WITH OTHER SPECIFIED MANIFESTATIONS
250.7	DIABETES WITH PERIPHERAL CIRCULATORY DISORDERS
250.4	DIABETES WITH RENAL MANIFESTATIONS

**115 ICD
vs.
@ 10
SNOMED**

Medical Necessity: An interim solution

- 1. CMS uses SNOMED CT internally to represent medical necessity rules**
- 2. CMS defines and uses “approved” ICD-9 mappings to generate published ICD-9 codes**
- 3. Vendors using SNOMED CT use the “approved” mappings to support medical necessity rules and transaction generation.**

Building the clinical knowledge marketplace - Why

- **Exciting applications come from relationships between concepts: FDB's DIF built on NDDF-Plus**
- **Rich opportunities to share knowledge atop SNOMED concepts**
 - **medical necessity, guidelines, rules, alerts**
 - **order entry: "prompts" – allowed values, expected values, classes of orderables**
 - **documentation: allowed values, expected values, "normal values"**

Building the clinical knowledge marketplace – How?

- **Standards for transactions and for building higher level constructions out of SNOMED base concepts**
 - encourage continued collaboration between SNOMED and HL-7 vocabularies (relating SNOMED concepts to HL-7 “slots”)
- **Manage liability issues for vendors entering this market?**
 - Medical devices vs. texts.
- **Intellectual property issues will arise and should be anticipated (patents on anti-fungal treatments for sinusitis)**

What we would ask of our Government

- 1. Decrease the costs of integrating clinical terminologies and administrative code sets. Ex: Medical Necessity.**
- 2. Cost/benefit calculations on alternative administrative code sets should assume integration of a PMRI terminology.**
- 3. Encourage Rx-Norm and SNOMED collaboration and integration/interoperability.**
- 4. Consider the hidden costs of a “best of breed” domain-specific terminologies approach.**
- 5. A chance to say **thank you** to all the people who have poured many hours of work into the effort that has brought us new opportunities.**

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