What is SNOMED CT?

- A national vocabulary of ‘Clinical phrases’ for electronic systems
- Has content for all clinical professions and specialties e.g. general practice, mental health, SLT, emergency care, renal …
- dm+d is a separate product (dictionary of medicines and devices) but also uses SNOMED CT
- To be used to record clinical terms relevant to the care of the patient in all systems.

Examples:
- Depression
- Thoughts of self harm
- Cognitive behavioral therapy
- Referral to mental health team
- Body weight
- Serum lithium level
- No speech problem
- Family history: Schizophrenia
- Suspected drug abuse
Fundamental to Interoperability

- Reduce Burden
- Improve care
Why SNOMED CT - Benefits

**Benefits**

- **Consistent Data Entry**
  - e.g. Record Once, Easier to see clinical information

- **Improved Analysis of Data**
  - e.g. Clinical audit, care improvements

- **Enables Data Sharing**
  - e.g. Discharge Summary

- **Enables Decision Support**
  - e.g. Allergy Alerts
SNOMED CT in systems

### Current Problems
- 29-Aug-2012: Osteoporosis
- 02-Jul-2012: Referral for further care
- 29-Oct-2010: Ischaemic optic neuropathy
- 2008: Myeloproliferative disorder
- 28-Apr-1995: Backache NOS

### Past Problems
- 26-Sep-2014: Postoperative wound infection, unspecified
- 29-Jul-2014: Total prosthetic replacement of hip joint NOS
- 11-Jun-2014: Hip pain
- 07-Feb-2013: Diagnostic colonoscopy
- 31-May-2012: [D] Pelvic pain
- 31-May-2012: Hip pain
- 26-Aug-2011: Myeloproliferative disorder
- 14-Jun-2011: Posterior vitreous detachment
- 22-Mar-2010: Raised bp (without diagnosis of hypertension)
- 06-Jan-2010: Other retinal disorders
- 13-Nov-2009: Essential thrombocytosis
- 06-Nov-2008: Essential thrombocytosis
Analysis of data in SNOMED CT

Analysis can improve care

This analysis was undertaken once they adopted SNOMED, they discovered things about their patients they didn’t know.

Resulted in simple service changes that improved care

Karen Horridge et. al.
City Hospitals Sunderland
NHS Foundation Trust
SNOMED CT Use Case Benefits

**CONSISTENT DATA ENTRY**
Record once, use many times

- Reduced duplication of data entry: removes the need to keep re-entering the same data helped by consistent use of terms.

- Quicker selection of diagnoses/procedures through pre-defined lists for specialist areas.

- Comprehensive clinical data capture = increased depth of coding for patient episodes - increase in the average income (11.8%) for each FCE.
**SNOMED CT Use Case Benefits**

**IMPROVED ANALYSIS OF DATA**
e.g. clinical audit, care improvements

Clinical and management audits are quicker, easier and more comprehensive. Audits of C-sections before 39 weeks now takes senior midwife two hours instead of several days

[Oxford University Hospitals NHS Foundation Trust]

Extensive data analysis on data not previously recorded resulted in service re-organisation and better care of the patients

[City Hospitals Sunderland NHS Foundation Trust]

As research centre: important to quickly identify patients suitable for clinical trials and thus gain trial contracts

[Moorfields Eye Hospital NHS Foundation Trust]

Reports available for each clinician to support their clinical audit work: a clinician can quickly identify patients relevant for audit, saving over a day per month per clinician

[University Hospitals of Morecambe Bay NHS Foundation Trust]
SNOMED CT Use Case Benefits

- Facilitates Integrated care models e.g. care planning
- Public Health England take an automatic feed of diagnoses in SNOMED CT for infection surveillance
- Discharge Summaries are automatically generated from the data recorded in the patient record in SNOMED CT; such as symptoms, diagnoses and operations
- Reduced effort to extract data for national data sets e.g. CIDS, CYPHS, MHSDS, HARS, COSD, ECDS, CTAD, FGMED
SNOMED CT Use Case Benefits

Increase in the recording of allergies within the EPR; this doubled between September and December 2014. The number of clinical alerts increased five-fold over the same three months.

Systems using SNOMED CT include:
- Multilex DDF from First Data Bank
- British National Formulary
- Map of medicine
- DialeCT encoder from 3M
- BMJ Evidence

NICE Interventional procedure guidance references
SNOMED CT diagnosis and procedure codes

Enable decision support & knowledge linkage
- e.g. Allergy Alerts

Oxford University Hospitals
NHS Foundation Trust
NHS Informatics Strategy (England)

The requirement has been re-iterated in all national policy and strategy for many years!

Required implementation dates now exist via an Information Standards Notice!

- Secondary Care, Acute Care, Mental Health, Community systems, Dentistry and other systems used in the direct management of care of an individual must use SNOMED CT as the clinical terminology before 1 April 2020.
Where are we now?

SNOMED CT in:

- General Practice: EMIS, Microtest, TPP, Vision (2019)
- Cerner Millennium, Lorenzo, Rio, MediTech, Allscripts, EPIC

- Summary Care Record
- e-Referral, Electronic Prescription Service
- National datasets: e.g. Emergency Care Data Set, Mental Health Service Data Set
What would compliance incorporate?

• Key data items can be sent/received/recorded using terms from SNOMED CT:
  – Diagnosis/symptoms
  – Procedures
  – Allergies
  – Medicines
  – Observables, Assessment scores

• Increasingly clinical data requested for MHSDS or in relation to national guidelines and processes will be for SNOMED CT e.g.
  – Reason for referral
  – Family history
  – test results
  – Smoking status
What do we want to achieve

- EPR procurements require SNOMED CT
- Appropriate data items **required** to be entered in SNOMED (e.g. diagnosis, procedures, allergies)
- Clinical data items **can** be entered in SNOMED e.g. observations, symptoms, family history
- Supplier solutions support entering clinical terms from SNOMED CT; can receive/ send SNOMED CT and process extracts specified in SNOMED
Now is the time to reflect

- Are all clinical EPR systems you procure or develop currently SNOMED CT enabled?
- What’s your plan to becoming compliant by 2020?
- What help, if any, do you need to get there?

Central resources:
- Introduction to SNOMED – live webinar
- SNOMED CT ISN Implementation Guide
- SNOMED CT Implementation Requirements
- See web resources and discussion forum for mental health
- See case studies
Adoption of SNOMED CT in mental health systems and provider organisations is to be undertaken by April 2020 (ISN). Data submitted to MHSDS has been acceptable in SNOMED CT since 2016; and is to be provided in SNOMED CT by, at the latest, 2020.

A collaborative project within NHS Digital is coordinating activity to achieve SNOMED CT adoption. Further resources will be added to this website as the project progresses. This workspace aims to provide the following:
Assessing a patient for antipsychotic side effects: EPSE’s are often treated with an antimuscaric like Procyclidine and determining the presence of EPSE’s requires a brief physical examination. This ‘intervention’ could occur up to 3 times per day. For a patient who is with us for 200 days (quite a short spell sadly) would we be expected to see this code assigned up to 600 times, plus the medication codes, plus the EPSE symptoms? Assuming there is only one observable symptom of EPSE that is 1800 codes.
Shift in perception …

- Conversation with a trust: the problem is you only count the episode when the mother has been in the maternity unit for over 4 hours, so we end up recording that information on paper because we can't count it.

- The EPR should primarily support the business and secondary is providing Management Information.

- ‘Coding’ is not primarily a way of providing others data but is about using the system to help manage the care of the patient e.g. a drug alert, alerting to a planned intervention that hasn’t taken place, linking to NICE guidelines. Secondary is data extraction.
Any Questions?
Information and technology for better health and care