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A Guide to HSMR and Coding

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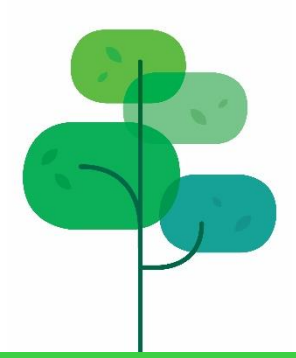

Coding- what's it all about?

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- Information (written patient notes) is translated to coded data
  - Occurs post discharge (or death) and completed to strict deadlines.
  - Dependent on clear, accurate information about all diagnoses and procedures.
    - **Coding rules are COMPLEX**
    - **STRICT ADHERENCE** to methodology and rules.
- The coded data is **important**, and is used for:
  - Research and the monitoring of health trends and variations
  - NHS planning (including activity / financial)
  - Local and national clinical audit and case-mix analysis
  - Clinical governance

Finished Consultant Episodes and Spells

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- Data represents **FCE** (Finished Consultant Episode), grouped and attributed to a single consultant (or team)
- **Consultant episodes** (continuous period during which the patient is under the care of one consultant) linked into admissions (or “spells”).
  - Spells ending in transfer are linked together as a “superspell”.
- Each **spell** is assigned a diagnosis (ICD-10 code) based on the primary diagnosis in the first episode of care.

Charlson comorbidity conditions

(taken from Dr Foster HIP presentation)

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Condition No.	Condition Name	New Coding	Weight
1	Acute myocardial infarction	I21, I22, I23, I252, I258	5
2	Cerebral vascular accident	G450, G451, G452, G454, G458, G459, G46, I60-I69	11
3	Congestive heart failure	I50	13
4	Connective tissue disorder	M05, M060, M063, M069, M32, M332, M34, M353	4
5	Dementia	F00, F01, F02, F03, F051	14
6	Diabetes	E101, E105, E106, E108, E109, E111, E115, E116, E118, E119, E131, E131, E136, E138, E139, E141, E145, E146, E148, E149	3
7	Liver disease	K702, K703, K717, K73, K74	8
8	Peptic ulcer	K25, K26, K27, K28	9
9	Peripheral vascular disease	I71, I739, I790, R02, Z958, Z959	6
10	Pulmonary disease	J40-J47, J60-J76	4
11	Cancer	C00-C76, C80-C97	8
12	Diabetes complications	E102, E103, E104, E107, E112, E113, E114, E117, E132, E133, E134, E137, E142, E143, E144, E147	-1
13	Paraplegia	G041, G81, G820, G821, G822	1
14	Renal disease	I12, I13, N01, N03, N052-N056, N072-N074, N18, N19, N25	10
15	Metastatic cancer	C77, C78, C79	14
16	Severe liver disease	K721, K729, K766, K767	18
17	HIV	B20, B21, B22, B23, B24	2

Examples:

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- **Co-morbidities and impact (including example)**
  - OA + THR + Obesity+ T2DM – HRG- HN12E - £5652
  - OA + THR + Obesity+ T2DM + **HT+ Anaemia**– HRG- HN12D - £6195
  - OA + THR + Obesity+ T2DM + HT+ Anaemia **+H/O MI**– HRG- HN12C - £7434
- **Example of transfer of care:**
  - Care of Elderly patient –bronchoscopy whilst an inpatient:
    - Geriatrician – Respiratory – Geriatrician = 3 FCE
    - Geriatrician - Bronchoscopy (remains under geriatrician) – Geriatrician = 1 FCE

The importance of good documentation

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- **Patient notes are the source document for clinical coding-**
  - Accurate and clear documentation
- **NOT JUST CODING but clinical quality and safety**
  - Documentation:
    - Diagnosis and co-morbidities
    - Decisions for management and rationale
    - Detail
    - Transfers of care
    - “Treated as” v “possible / ?”

HSMR, SMR and SHMI

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- **Crude Rate-** How hospital / Trust mortality rate changes over time
- **Adjusted Rate-** How hospital / Trust mortality compares (incl. national)

- **HSMR- Hospital Standardised Mortality Ratio:**
  - Subset of diagnoses (56 groups) - 80% in-hospital deaths (25-30% admissions).
- **SMR- Standardised Mortality Ratio:**
  - As above but based on 100% of in hospital activity (incl. 100% hospital deaths)
- **SHMI- Standardised Hospital Mortality Index**
  - Used to monitor mortality rates within trusts but, unlike HSMR & SMR, includes all deaths 30 days post discharge.

HSMR:

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- **HSMR = observed : expected deaths (x100) (specific period)**
  - **Casemix** adjustment- sex, age deprivation etc…
  - **Palliative care episodes** - included in the risk adjustment model.
    - If an episode has treatment function code 315 or contains Z515 in any of the diagnosis fields, then it is defined as “Palliative”.
    - *SFH= one of lowest nationally (1.59% v 3.60% (peer) v 4.54% (nat))*
  - **Comorbidities**- Charlson index- sum of the scores for each condition in the diagnosis dominant episode
    - *Acute MI (14) v Non-specific chest pain (0) = 27% v 0.1% Risk Mortality*
  - “**Expected**” figure relies on complete or accurate:
    - Patient data, diagnosis, co-morbidities and palliative care recording
- HSMRs should not be used in isolation.
  - Higher HSMR does NOT necessarily mean high mortality
  - Possible indication of problem and trigger for investigation

Mortality SFH - Headlines

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(Nov 2021 – Oct 2022 data)

- **HSMR**
  - Although a monthly figure, reports on 12m rolling data
- **HSMR 122.1 (117.2 ex-covid)-**
  - Above Expected (previous report 124.2 (120.4))
  - HSMR October 2022 = *101.75 (within expected) but 12.3% R69 codes
- **SMR 128.5 (122.1 ex-covid)- High (previous report 130.4 (123.1))**
  - SMR for October 2022 = 118.2 (within expected)
- **SHMI (Aug 2022) = 102.73**
  - As Expected (July 2022 = 101.91)

Highlights:

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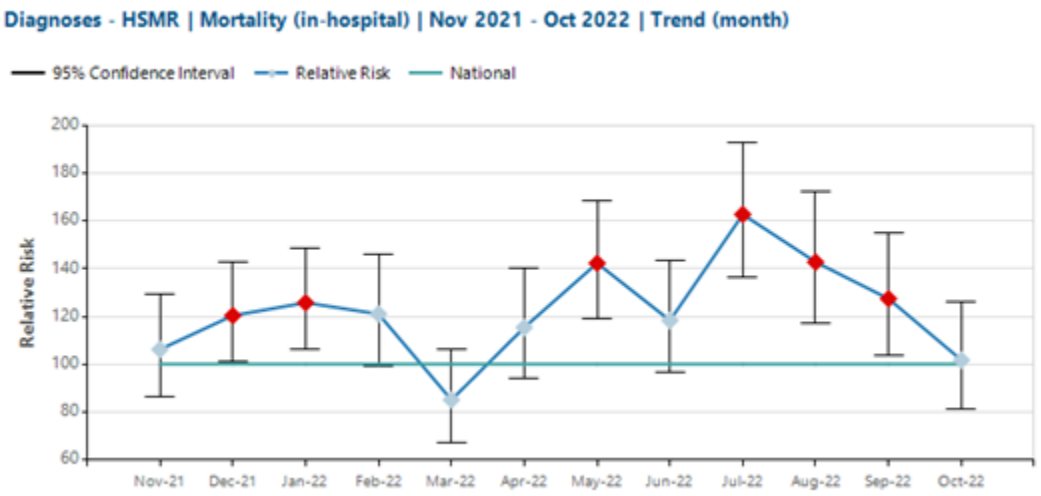
- **HSMR-** crude and expected convergence; “bucks” national trend.
- **CUSUM alerts-** a diagnosis group “breaches”
- **Coding-** R69; increased uncoded activity (?increased low risk)
- **Co-morbidities-** improvement seen
- **Palliative care-** Specialist Palliative Care…. Key influence, LOW



What are we doing about it?

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What are we doing about it?

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- **Regular monitoring through Learning from Deaths**
  - Triangulation, triangulation, triangulation
    - PSC, QC
    - Cardiac arrest, ART calls, deteriorating patient, harm reviews, sepsis, #NOF, service deep dives, quality reviews
    - Medical Examiner intelligence, M&M, SI, speciality curiosity, crude mortality
    - External assurance GiRFT, Clinical senate, Tumour site reviews, peer assurance, accreditation
    - Patient experience; role of NEDs, Governors
- **Intimate relationship working with Dr Foster to comprehend trends**
- **Identification & Agreed escalation pathway for outliers-**
  - Targeted case reviews
  - External review
  - Bench mark peer challenge
- **T&F Working group (under DMD):**
  - Documentation (accurate, clear)
  - Co-morbidity capture
  - CFE
- **Palliative Care**
  - Front door, early recognition, documentation
  - Increased Specialist Palliative Care resource for advice and support
  - Pathway alignment

External understanding

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- Trust Board
- CQC
- ICB QC
- Review of contract/ provider
- Longevity of lag