

Abstract 77 Table 1

Patient no.	Age	Type implant	of Proposed Score	CC	Trust score	CC	Proposed Cost	Trust cost
1	82	DDD	3		6+		£2,909	£2,909
2	81	VVI	7		0-2		£2,909	£2,909
3	63	VVI	2		3 - 5		£2,906	£2,909
4	88	DDD	12		3 - 5		£9,022	£2,909
5	87	ILR	3		3+		£3,982	£3,982
6	73	DDD	6		3 - 5		£2,909	£2,909

linked to the number of treatments provided, each having a nationally set average tariff. The tariff is based on healthcare resource groups (HRG), which are a method of classifying patients by diagnosis (ICD10 codes) and/or procedure (OPCS codes). The main element of an HRG is the procedure but comorbidities, complications, age, gender, length of stay, legal status etc are taken into account when compiling a tariff. Following discharge, the coding department uses the above information to calculate the HRG tariff for that patient's episode of care. [1,2] This relies on the information being entered correctly and the coding department/software assigning the right codes for that episode. Therefore, a major consequence of incomplete information and/or incorrect coding is loss of funds to the hospital.

The aim of this study was to audit the coding of elective device implants at Lister hospital

**Methods** The audit included a cohort of patients admitted for an elective device implant at Lister hospital in September 2019. Age, comorbidities and type of implant were recorded. These were used to calculate a proposed complexity and comorbidity (CC) score and a cost based on the NHS England National Tariffs for Cardiac Rhythm and Heart Failure (CRHF). The scores and costs were then compared to those calculated by the Trusts coding department.

**Results** 14 patients in total. Only 6 patients had a full list of comorbidities and trust CC and procedure scoring. 5 of the 6 patients were correctly coded and costed. 1 patient had an incorrect CC score and consequently the trust lost £6113.

Results summarised in table 1 below.

**Discussion** The aim of PBR was to provide a transparent and fair payment system that provides incentives to efficient providers. Implementation of PbR schemes has however not been without controversy. Reviews have shown that PbR has

to be part of a package of technical support, training, new management and monitoring systems. [5] A relevant example is Cambridge University Hospitals who were awarded the national data quality award in 2017, years after the implementation of EPIC, an electronic patient record system that allowed more accurate and efficient coding [3]. The cost incurred put the trust in financial strain, however, currently being offset by reimbursements from Clinical Commissioning Groups (CCGs). [4]

The main limitation in this audit was the difficulty in obtaining clinical notes. Paper case notes slow down coders due to difficulties with extracting the right information and with deadline pressures and staff shortages, data quality is affected. This challenge is echoed by CAPITA PbR data assurance reports. [6] The quality of coded data could be improved by increasing engagement between coders and clinicians, IT systems that allow coding in line with national guidelines and improving staff training in clinical coding.

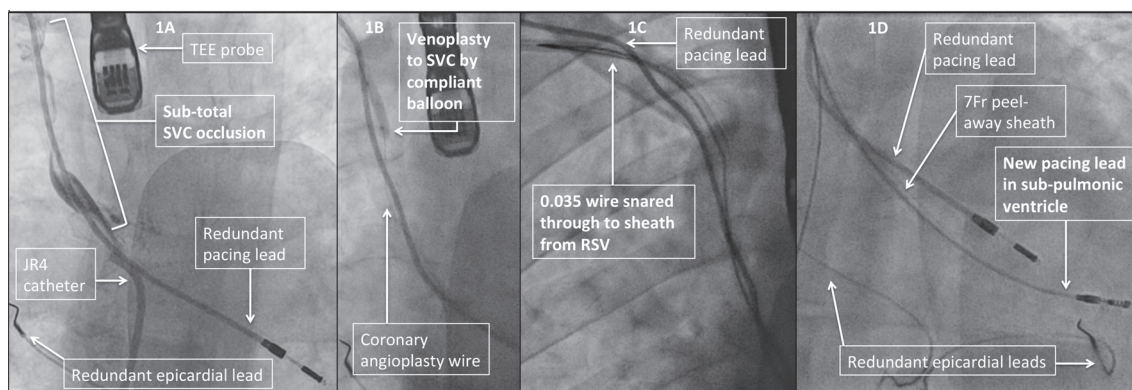
**Conclusion** Inaccurate complexity and comorbidity scoring can lead to significant under-costing of procedures and hospital funding losses.

**Conflict of Interest** None

## 78 RETROGRADE VENOPLASTY TO FACILITATE ANTEGRADE PACEMAKER IMPLANT POST-SENNING PROCEDURE FOR TRANSPOSITION OF GREAT ARTERIES

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**Abstract 78 Figure 1** Stages of the procedure. 1A: Venogram of SVC occlusion. 1B: Venoplasty via RFV. 1C: Snaring and externalization of 0.035 wire. 1D: Implantation of new pacing lead. Transesophageal echocardiogram (TEE). Judkins right size 4 (JR4)

**Background** A 31 year old male with a history of Senning repair for transposition of the great arteries, coarctation repair and conduction system disease with right pre-pectoral single chamber PPM implanted to sub-pulmonic left ventricle in 2009 presented with generator battery depletion. Attempts to replace the existing generator failed due to a damaged screw set, and antegrade implantation of a new system failed due to subclinical SVC obstruction.

**Objective** Implant a new system and avoid the need to perform lead extraction.

**Methods** N/A

**Results** Retrograde venoplasty to the SVC was performed via a right femoral vein (RFV) approach using a coronary angioplasty wire and serial balloon inflation up to 4.5mm with compliant and non-compliant balloons. This allowed delivery of a guide extension catheter beyond the occluded segment and the wire was up-sized to 0.035 guidewire. Concurrent access was obtained via the right subclavian vein (RSV). The 0.035 guidewire from the RFV was snared from the RSV and externalized, and a stiffer guidewire exchanged. A long 7Fr ARROW sheath was passed over the wire from the RSV, a second stiff guidewire was added, and an IMA catheter was passed over this wire through the baffle to allow a SAFARI wire to be safely placed within the sub-pulmonic ventricle. This allowed the sheath to be safely exchanged for a long 7Fr peel-away sheath directly into the sub-pulmonic ventricle to deliver a pacing electrode. This was connected to a new generator.

**Conclusion** The old generator was cut from the old lead and the exposed end capped. The patient was discharged the next day. Cross-pollination between cardiology sub-specialties will likely become more common during complex procedures.

**Conflict of Interest** None

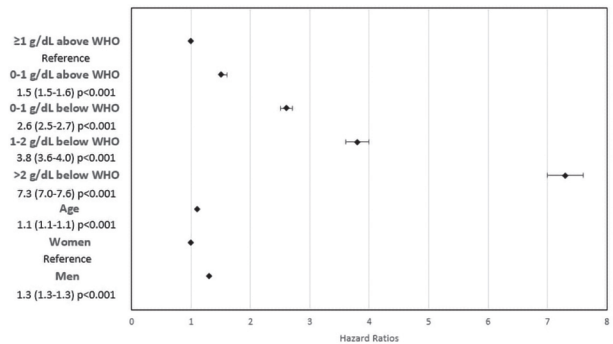
## Heart Failure

### 79 HAEMOGLOBIN AND SERUM MARKERS OF IRON DEFICIENCY IN PEOPLE WITH OR AT INCREASED RISK OF HEART FAILURE

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**Background** Anaemia and iron deficiency (ID) are common and associated with adverse outcomes. Guidelines suggest that iron indices should be checked at diagnosis and annually thereafter in patients with heart failure whether or not they are anaemic. Clinical experience suggests this is seldom done. We investigated how often haemoglobin (Hb) and iron indices were checked and in whom in a large cohort of patients with or at increased risk of heart failure. We also investigated the association between anaemia and mortality.



Abstract 79 Figure 1

**Abstract 79 Table 1** Characteristics of patients with confirmed or at increased risk of heart failure or on loop diuretics according to quintiles of haemoglobin with the lowest result taken (n=181,368). World Health Organisation (WHO) definition: Haemoglobin <13g/dL in men and <12g/dL in women. Presented as count and (%).

Hb Category	Hb >1g/dL above WHO (n=)	Hb 0-1g/dL above WHO (n=)	Hb 0-1g/dL below WHO (n=)	Hb 1-2g/dL below WHO (n=)	Hb >2g/dL below WHO (n=)
Variable/Test	46,838; 26%	36,719; 20%	26,147; 14%	20,704; 12%	50,960; 28%
Age at Hb test (years)	64 (58-72)	68 (60-76)	72 (63-80)	75 (66-82)	77 (68-84)
Sex (men)	23,797 (51)	15,288 (42)	10,424 (40)	8,254 (40)	24,051 (47)
Heart Failure at reference Hb (n=19,586; 11%)	2,084 (4)	2,315 (6)	2,648 (10)	2,836 (14)	9,703 (19)
Loop diuretic only at reference Hb (n=26,842; 15%)	3,285 (7)	3,809 (10)	3,385 (15)	3,990 (19)	11,923 (23)
Ferritin within 1-year of Hb (n=60,116; 33%)	8,314 (18)	7,855 (21)	8,562 (33)	9,108 (44)	26,236 (51)
<30ng/mL (% = of all ferritin tests in Hb stratum)	626 (8)	1,273 (16)	2,191 (26)	2,915 (32)	6,617 (25)
30-100ng/mL (% = of all ferritin tests in Hb stratum)	3,140 (38)	3,217 (41)	3,095 (36)	2,277 (30)	6,675 (25)
TSAT within 1-year of Hb (n=19,149; 11%)	1,137 (2)	1,280 (3)	1,747 (7)	2,586 (12)	12,399 (24)
<20% (% = of all TSATs in Hb stratum)	282 (25)	551 (43)	978 (56)	1,681 (65)	8,696 (70)
Dead within 3-years of Hb (n=41,773; 23%)	2,414 (5)	3,426 (9)	4,702 (18)	5,830 (28)	25,401 (50)