SECTION L BONE MINERAL METABOLISM

This section's data are available on-line in Tableau format which enables interaction with the data: http://www.srr.scot.nhs.uk/publications/Dashboards/Census-May-2017.html.

The laboratory data relating to bone mineral metabolism were audited in May 2018 for all prevalent patients receiving hospital or home haemodialysis. Pre-dialysis blood samples were collected after a short interdialytic gap. Any samples marked 'post-haemodialysis' were excluded.

As recommended by the Working Group of Senior Scottish Clinical Biochemists on bone biochemistry targets in the management of renal failure, the PTH data in this report are presented according to the recommended assay specific targets appropriate to each renal unit.

The working group's recommendations which have been adopted across Scotland are available on the SRR website:

http://www.srr.scot.nhs.uk/Projects/Projects1.html#calc

L1 Achievement of guideline targets for phosphate (PO4), corrected calcium (cCa) and PTH in haemodialysis patients by renal unit May 2018

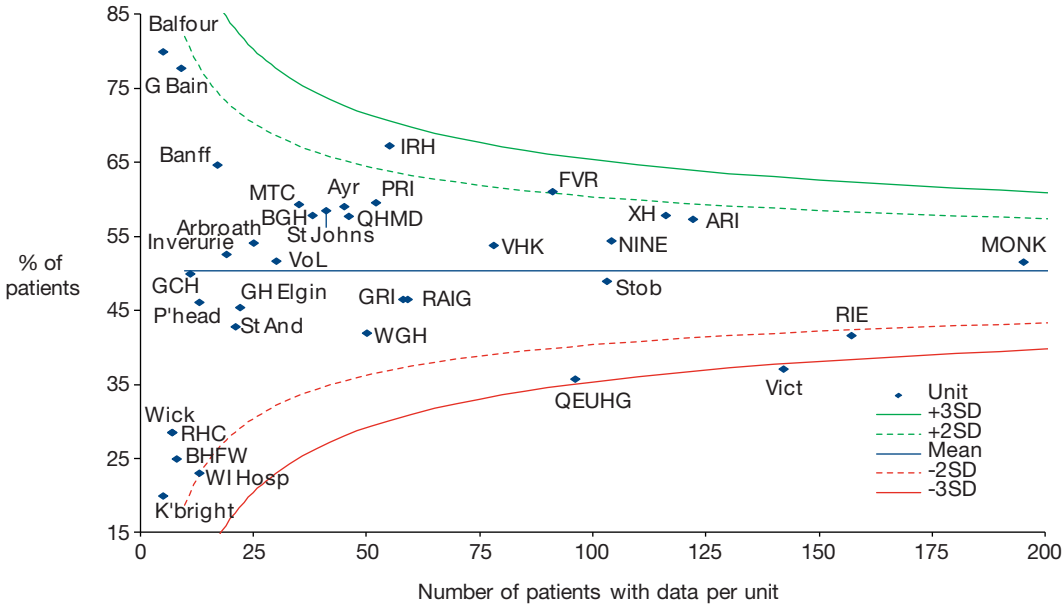
Renal Unit	Number of patients	% with PO4 result	% on PO4 Binders	Mean PO4 mmol/L	% with result 1.1-1.7 mmol/L	% with cCa result	% with cCa in normal range	% with PTH result	% PTH result 2-9x UL* normal
ARI	222	100.0	58.6	1.46	56.8	100.0	82.0	92.8	50.5
XH	166	98.8	30.7	1.40	59.1	99.4	83.0	94.0	36.5
DGRI	53	92.5	37.7	1.56	53.1	94.3	78.0	94.3	62.0
GLAS	594	96.8	77.3	1.71	47.1	97.6	82.6	91.4	57.1
MONK	195	96.4	57.4	1.42	51.6	97.4	88.9	97.9	57.1
NINE	181	97.8	57.5	1.63	54.2	98.3	79.8	87.8	57.9
RAIG	90	98.9	62.2	1.82	39.3	98.9	76.4	94.4	41.2
RHC	10	100.0	50.0	1.24	30.0	100.0	90.0	80.0	62.5
RIE	298	99.3	59.1	1.68	45.9	99.7	80.2	93.6	60.2
VHK	141	99.3	58.9	1.63	53.6	99.3	72.1	96.5	60.3
Scotland	**1950**	**97.9**	**61.3**	**1.61**	**50.4**	**98.5**	**81.4**	**93.0**	**54.8**

* UL - upper limit of normal

Analytical methods for phosphate are standard across Scotland and results are comparable both between units, and against the UKRA recommended guideline (Pre-dialysis PO4 between 1.1 and 1.7 mmol/L).

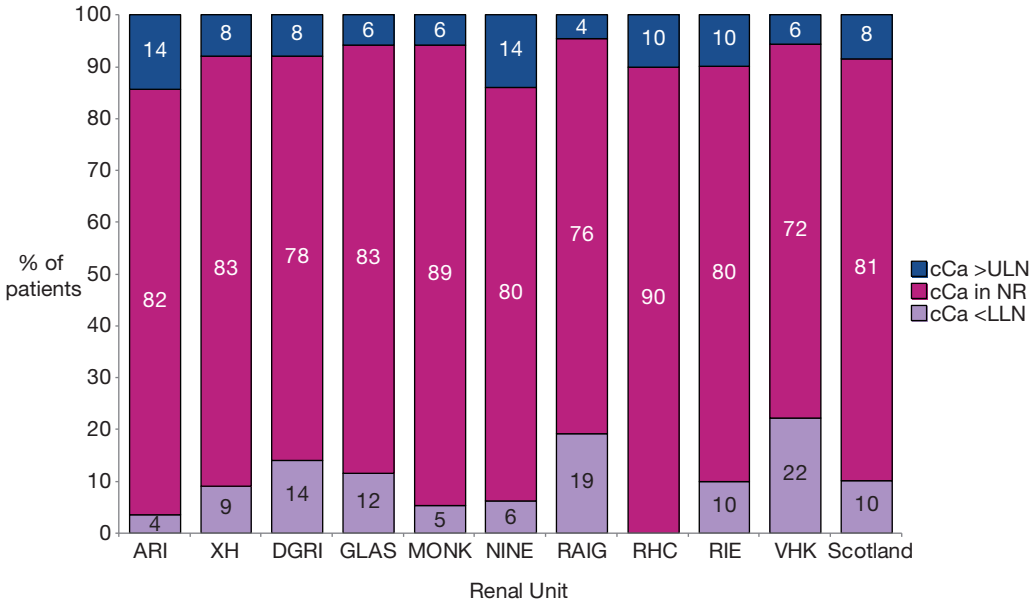
Information on use of phosphate binders is based on what the patients were receiving on the census date. If someone had these medicines stopped just before the census (or started just after) we will not have captured this.

L2 Percentage of hospital HD patients achieving pre-dialysis PO4 target of 1.1-1.7 mmol/L by dialysis unit May 2018



1910 (97.9%) patients had phosphate results. 242 (12.7%) had a phosphate <1.1 mmol/L, 962 (50.4%) achieved the UKRA standard and 706 (37.0%) had phosphate >1.7 mmol/L. All units lie within 3 standard deviations of the national average achieving target (50.4%) with the exception of Vict which falls more than 3SD below this.

L3 Distribution of pre-dialysis corrected serum calcium in haemodialysis patients by renal unit May 2018



The graph shows the percentage of patients within each unit, who were hypocalcaemic (cCa< lower limit of normal range (LLN)), normocalcaemic (cCa in normal range (NR)) and

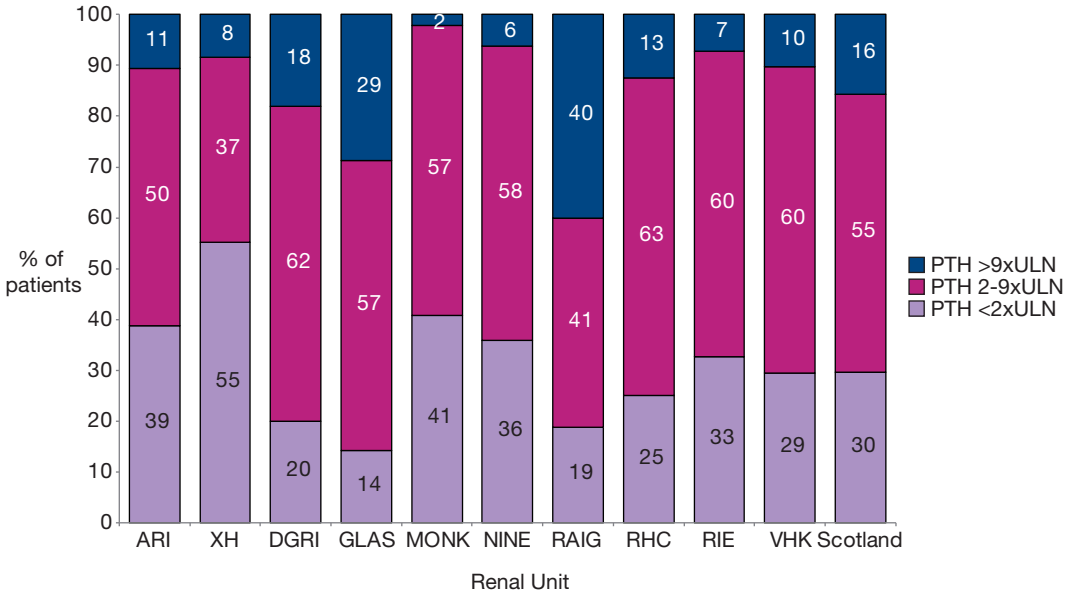
hypercalcaemic (cCa>upper limit of normal range (ULN)) according to the local assay ranges for the biochemistry laboratory serving each dialysis unit.

The UKRA guideline suggests that corrected calcium should be maintained within the local normal range, the normal range differs between renal units, therefore actual calcium values are not shown.

The local ranges for corrected calcium for the biochemistry laboratories that serve each dialysis unit are available on the SRR website:

http://www.srr.scot.nhs.uk/Projects/Projects1.html#calc

L4 Distribution of pre-dialysis serum PTH in haemodialysis patients by renal unit May 2018



The UKRA guideline suggests that PTH levels should be maintained between 2 and 9 times the upper limit of normal (ULN) for the assay used.

Assay specific PTH ranges are available on the SRR website:

http://www.srr.scot.nhs.uk/Projects/Projects1.html#calc