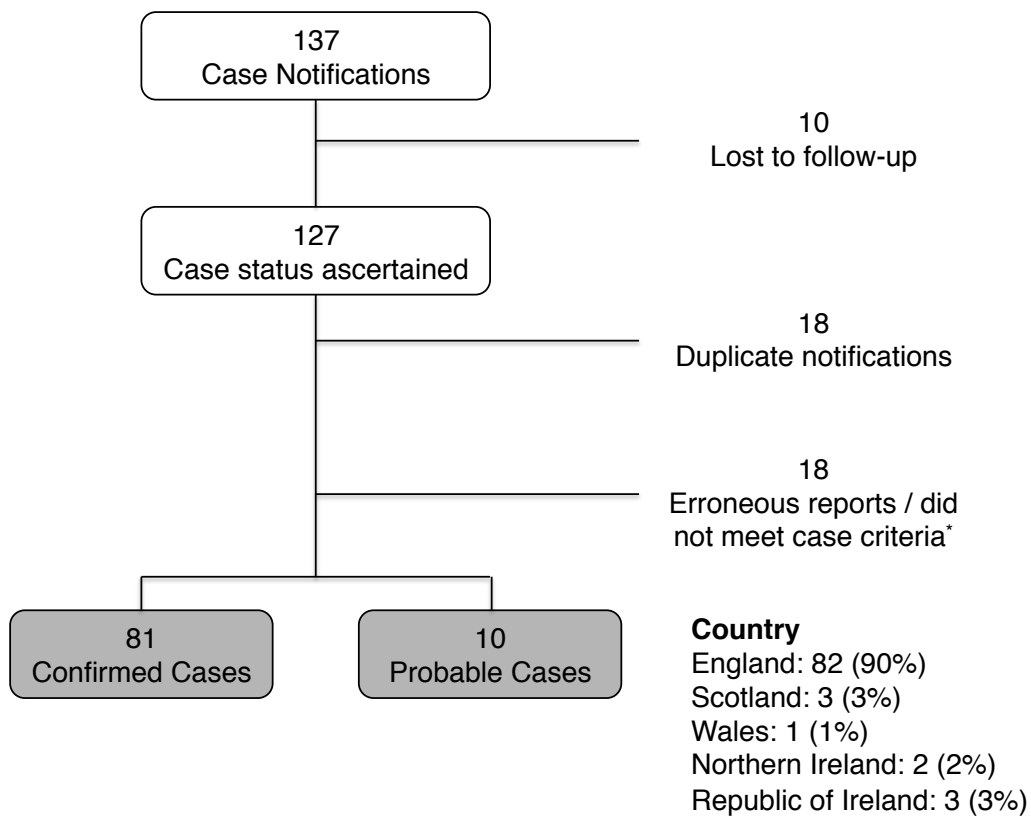
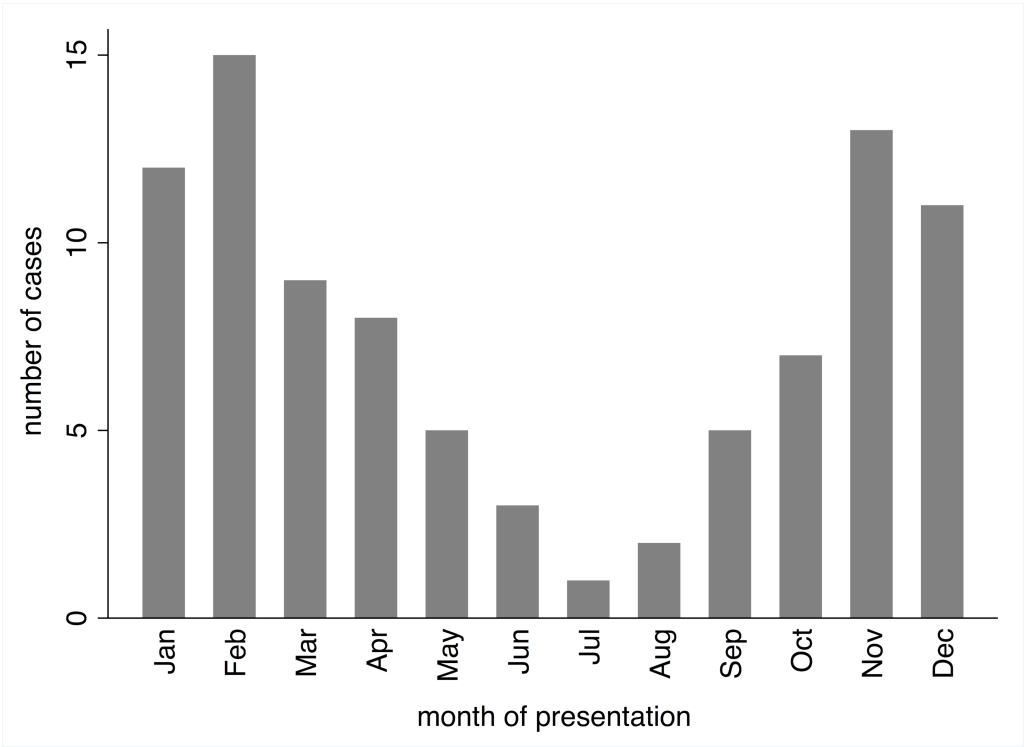


Supplementary Figure 1. Flow diagram of study case notifications.

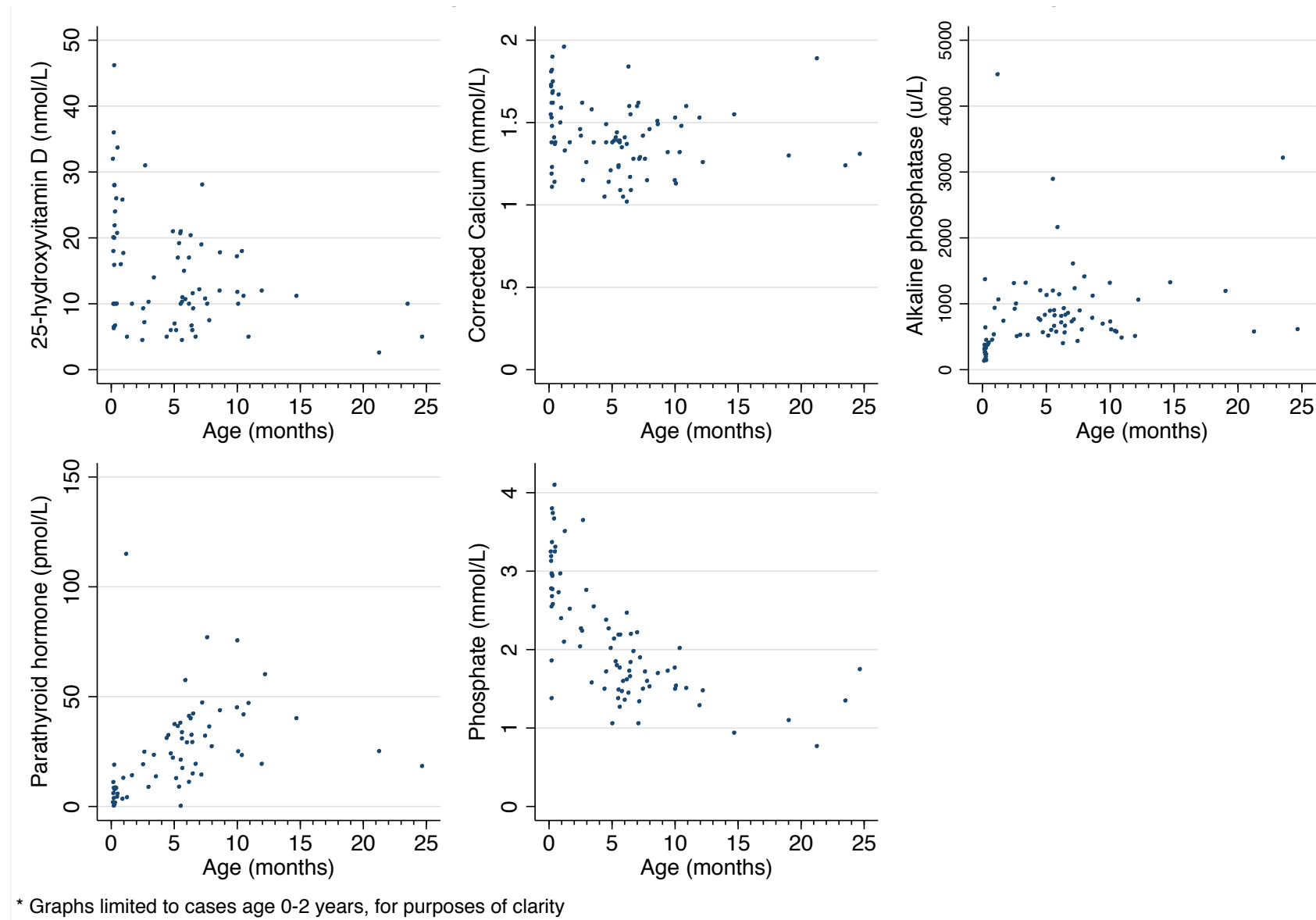


* 7 cases occurred prior to the study surveillance period, 3 had tetany rather than seizures, 2 did not have a serum 25-OH-D available and did not meet the criteria for a probable case, 1 was age 17 at the time of the seizure, 1 had a previous hypocalcaemic seizure due to vitamin D deficiency, 1 was an overseas patient not resident in the UK, and 1 child was known to have velocardiofacial syndrome and hypoparathyroidism which was an alternative explanation for the hypocalcaemia. In 2 cases, the paediatrician did not intend to report a case for the study (the notification was in error).

Supplementary Figure 2. Distribution of cases by month of presentation.



Supplementary Figure 3. Scatterplots of biochemical test results by age*.



Supplementary Table 1. Differences in biochemical parameters between neonates and older children.

Test	Age < 1 month	Age > 1 month	p-value*
	Median (95% CI)	Median (95% CI)	
25-OH-D (nmol/l) (n=81)	20.1 (13.9 – 25.9)	10.3 (10 – 11.7)	<0.001
Alkaline phosphatase (iu/l) (n=89)	351 (256 – 406)	816 (719 – 922)	<0.001
Parathyroid hormone (pmol/l) (n=72)	5.9 (2.8 – 8.6)	28.3 (22.4 – 33.6)	<0.001
	Mean (95% CI)	Mean (95% CI)	p-value†
Corrected calcium (mmol/l) (n=91)	1.54 (1.44 – 1.63)	1.38 (1.33 – 1.43)	0.002
Phosphate (mmol/l) (n=86)	2.97 (2.71 – 3.24)	1.82 (1.69 – 1.96)	<0.001

* p-value for no difference using Wilcoxon rank sum test.

† p-value for no difference using independent t-test.