PERCUTANEOUS ENDOSCOPIC GASTROSTOMY (PEG) IN DISABLED CHILDREN – A BENCH MARKING EXERCISE

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Background The Paediatric Gastroenterology Unit based at the Royal Shrewsbury Hospital provides a service for two hospitals. Its subsequent management is supported by the Community Paediatric Nurses.

A benchmarking exercise of the PEG Service was undertaken and audited against the European Society for Parenteral and Enteral Nutrition (ESPEN) Guidelines.

Methods All children with a PEG in-situ were identified from the Community Nurses PEG database. The electronic records of these patients were accessed for relevant data and input into a Microsoft Excel 2010 database by a single researcher. The ESPEN standards were used to audit the service in the relevant domains.

Results 53 children with a PEG were identified. There was a clearly documented indication for a PEG in 96%, with neurologically disabled children at risk of aspiration comprising the largest group (47%). Feeding difficulties and Failure to thrive (FTT) made up 30% while other indications were Sensory Feeding Disorder in combination with other primary disorders (13%) dysmotility (4%) and metabolic causes (2%). The primary diagnosis was neurological in 55%, gastrointestinal 11%, renal 4% and cardiovascular, respiratory and endocrine 2% each. There were multiple diagnoses in 11%

Nasogastric feeds were instituted and documented prior to the PEG in 94% and may have been used in a further 2% but not documented.

More then half the children had their PEG sited at the age of 13–36 months (52%), a further 15% under 13 months while 20% were after the age of 36 months. Almost one third of the children (29%) had no complications from the PEG. Localised infection was the commonest complication (28%) with granulation tissue (13%), mechanical problems (dislodgement 8%, blockage 4%), skin ulceration (10%) and leakage (8%) as other complications.

PEG feeds were successful in improving the weight centiles of these patients.

Parental satisfaction with the service could not be evaluated retrospectively.

Conclusions The PEG Service at the Shrewsbury and Telford Hospitals NHS Trust adheres to ESPEN standards in the majority of patients and is associated with a low complication rate. Parental Satisfaction with the service should be sought prospectively.
THE MAJORITY OF REFERRALS FROM GP TO GENERAL
PAEDIATRIC OUTPATIENT CLINIC COULD BE MANAGED
BY ALTERNATIVE METHODS

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Aim
1. Audit 100 referrals made to a hospital general paediatric outpatient clinic from General Practice to assess (i) Appropriateness (ii) Possible alternative methods of management
2. Implement alternative and innovative methods of management using a multi-professional approach
3. Improve quality of care for patients

Methods
Using a proforma, each referral was assessed by 3 people: A Paediatrician (taken from a pool of 3 Consultants), A GP physician (taken from a pool of 2) and A Paediatric nurse specialist

Results
76–97% of patients seen in paediatric general outpatients could have been managed with at least one alternative method. The range reflects variation in assessor’s opinions (Figure 1 and Table 1).

Conclusions
The majority of cases seen in general paediatric outpatients in this sample did not require secondary care. Importantly, this study suggests that, with the support and partnership of secondary care, General Practice has the potential to be able to provide a safe, more rapidly accessible and cost-effective paediatric service than that currently being offered at the level of a general paediatric outpatient clinic.

In terms of our progress: (i) Telephone hotline will be rolled out shortly (ii) Rapid access clinic opens in April 2015 (iii) Roll out of Community nurses (multi-professional approach) (iv) Development of email service and virtual clinic (v) Increased support for GPs

EFFECTIVENESS OF A NOVEL PATHWAY TO REDUCE
VITAMIN D DEFICIENCY IN A HIGH RISK POPULATION

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Aim
To evaluate whether we have been successful in reducing Vitamin D deficiency in non-ambulant children in a Special School

Background
Vitamin D is derived from exposure to UVB light, and from dietary sources, it plays a vital role in calcium homeostasis. Consequences of vitamin D deficiency include; osteopenia, rickets, poor growth and muscle weakness. There is also the risk of not achieving maximal bone mineral density, with subsequent long-term consequences for adult bone health.

We investigated a group of children attending a special educational needs school; with a diagnosis of cerebral palsy or neuromuscular disorder.

These children are categorised as high risk for vitamin D deficiency. The aim was to assess vitamin D status and determine whether levels improved with supplementation.

Method
25–Hydroxyvitamin D levels were analysed from blood tests for 52 children collected from 2010–2014.

Standards
Optimal >75nmol/L
Normal >50nmol/L
Insufficient 25 >50 nmol/L
Deficient <25 nmol/L

Results
44 children had >1 vitamin D blood test result available. 20–35% of children had insufficient or deficient levels detected during screening.

Deficient vitamin D levels
None remained deficient on final blood testing.
50% improved to normal/optimal levels with supplementation.

Insufficient vitamin D levels
77% remained insufficient on final blood testing.
23% improved to normal or optimal.

Of the 44 children: 45% had optimal/normal vitamin D levels throughout.

Conclusion
In a cohort of 44 children undergoing surveillance for vitamin D levels, 55% had insufficient or deficient levels during the screening process.

All of the children diagnosed with Vitamin D Deficiency had increased levels on subsequent screening, 50% improved to normal or optimal levels.

However 77% of children with insufficient Vitamin D levels on screening remained insufficient.

From our experience lack of compliance in supplementation was evident in the ‘Insufficient’ group. This subgroup of at risk children and their caregivers require further information regarding the benefits of normal/optimal vitamin D levels and subsequent bone health. We are offering alternative supplementation regimes to try and improve compliance.