Accessible, Responsive Community Healthcare

Birmingham Community Healthcare NHS
NHS Trust

Birmingham Community Nutrition

Service evaluation of a dietitian-led community gastroenterology service

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Introduction

Birmingham Community Nutrition's (BCN) Gastroenterology Nutrition Team (GNT) was established in 2014. An 18 month pilot was used to establish clinical effectiveness, and the requirement for continuation of such services. The service incorporates the Low FODMAP Diet, as per NICE Guideline CG61 2015. The diet is implemented by a specialist Dietitian with accredited Kings College London training, and post graduate training in gastroenterology. Birmingham is a socially diverse, multi-cultural city, and The Low FODMAP Diet is individualised to meet nutritional requirements, and to suit each individual's lifestyle. Further to this, the diet is adapted according to the condition and level of symptom control that is required. In addition to facilitating improved symptom control in IBS[1], quiescent Inflammatory Bowel Disease [2], and High Output Stoma[3] (colostomy/ileostomy) the Low FODMAP Diet can also be beneficial in the following conditions; Diverticulosis, Gastro-Oesophageal Reflux Disorder. There is a limited evidence base to support use of The Low FODMAP Diet to support such conditions at present, therefore more research would benefit here.

Method

This service evaluation summarises outcome data from 97 patients seen within the service between June 2014 and October 2015. Data collection was completed post-intervention using outcome measures from patient records at the point of discharge. Data collection focuses on symptom improvement, pharmacological changes, and qualitative data, with a focus on quality of life and patient experience.

Collection of symptom change data
To capture symptom change the Kings College London individual symptom evaluation was adapted. This uses likert scaling, and patients were asked to rate15 symptoms ; abdominal pain, abdominal bloating, wind, stomach gurgling, burping, heart burn, gastro-oesophageal reflux, nausea, vomiting, urgency, mucus in stool, incomplete evacuation, bone pain, mouth ulcers and tiredness. The ratings none, mild, moderate and severe were used and each assigned with a score 0, 1, 2, 3 respectively. The scores were totalled, and this enables a percentage global symptom improvement score to be calculated. To capture data on stool frequency and consistency the patients were asked if they felt their stool frequency and consistency had improved on their final appointment. Data collected to indicate symptom change is subjective, as this is a measure of the impact on a patients quality of life which is very individual.

Collection of pharmalogical change
Medication type and dose was recorded on initial and final appointment with the service. The British National Formulary was used to identify expenditure on medication before and after dietetic intervention. These figures were then compared to identify cost savings.

Collection of qualitative data
Patient experience questionnaires were used to capture, statements of the impact dietetic intervention with the GNT had on their quality of life.

Results

Table 1

Symptom Improvement	Yes	No
	% (n)	% (n)
SF	96 (87)	4 (10)
SC	96 (88)	4 (9)

Table 1. Displays patient reported symptom improvement for stool frequency (SF), and stool consistency (SC). 96% of patients experienced an improvement in both SF and SC. Those not included in (n) SF/SC not applicable outcome measures.

Table 2

Global Symptom Improvement (%)	% (n)
< 50	10 (10)
50-70	35 (34)
>70	55 (53)

Table 2. Displays percentage global symptom improvement.
This demonstrates >50% global symptom improvement in 90% patients seen.

Table 3

	Medication costs (£ per year)		Annual saving made (£)
	Pre-intervention	Post-intervention	
Total cost (n26)	£2,662.83	£194.29	£2,468.54

Table 3. Highlights improved efficiency in use of pharmacological intervention.
100% patients (26/26) prescribed medication prior to commencing dietary intervention showed a reduction in the medication required for symptom control. Data has been extrapolated from dose to cost per year. This identifies a total annual saving of 92.7% on medical management for this patient group, through use of dietetic intervention.

Discussion & Conclusion:

Results highlight that dietetic intervention for the management of gastrointestinal symptoms is highly effective in clinical practice, within a socially diverse, multicultural setting. The Low FODMAP Diet was used routinely with this patient group, in addition to other evidence based dietary changes to support functional symptoms; increasing dietary fibre, the use of linseeds, the use of probiotics. In addition to focusing on dietary intervention there is a large focus on wellbeing, and a large part of dietetic intervention within the service is addressing health anxiety often experienced by this patient group. Education on the following is provided to support patients in this way; what functional symptoms are and how visceral hypersensitivity leads to worsened symptoms, digestive transit times, causes of functional symptoms, the link with the sympathetic nervous system stress response.

This service evaluation highlights further research would be beneficial in the following areas:

- Patient experience of the Low FODMAP Diet in different cultural settings
- The impact addressing symptom related health anxiety vs. dietary intervention alone
- Traditional complete use of The Low FODMAP Diet vs. a broken down

With Gastroenterology Nutrition Team can demonstrate clinical effectiveness in improving symptom control and efficiencies in prescribing, in addition to ultimately improving the quality of life for many. Pilot results led to continuation of The GNT, and BCN works towards securing further funding to increase capacity of this service.

Comments from Service Users

"Now able to focus on weight management as IBS was previous stopping me increasing my activity levels"

"Very happy with service provided, information provided was well paced over appointments attended."

"This has changed my life; it's overwhelming how greatly my symptoms have improved."

"Feel completely normal now - absolutely wonderful"

"I used to experience daily faecal incontinence; this has dramatically improved my life."

"I am extremely thankful, the service I have received was excellent, and the diet has changed my life."

"This has completely changed my life and my family's life for the better. I now enjoy my food, my diet is now finally varied, and I can still have control over my symptoms."

References:

1. Staudacher H M, Whelan K, Irving P M, Lomer C E. 2011. Comparison of symptom response following advice for a diet low in fermentable carbohydrates (FODMAPs) versus standard dietary advice in patients with irritable bowel syndrome. Journal of Human Nutrition and Dietetics **24**, 487-495.
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3. Barrett J S, Gearry R B, Muir J G, Irving P M, Rose R, Rosella O, Haines M L, Shepherd S J, Gibson P R. 2010. Dietary poorly absorbed, short-chain carbohydrates increase delivery of water and fermentable substrates to the proximal colon. Alimentary Pharmacology & Therapeutics **31**, 874-882.