

Dietitians in Primary care

Aim of this paper

To propose the creation of a recognised role for primary care ‘expert generalist’ dietitians who are included as essential members of the general practice team and to develop the dietetic workforce to take on this new role.

Objectives: This paper will:

- 1) Describe the primary care context and summarise its influence on the proposal of this paper
- 2) Discuss the proposal by:
 - a. Describing how dietitians can contribute to solving the problems faced by GPs in primary care
 - b. Describing how a primary care ‘expert generalist’ dietitian would work
- 3) Discuss how to make it happen

The context

Several important health service documents have defined the challenges facing the health service and general practice. Several solutions have been proposed.

The challenges facing the health service and in particular general practice (Primary Care Workforce Commission 2015) include:

- Increasing and rapidly ageing population
- Rising demand for care with increasing number of primary care visits per year
- Increasing numbers of complex patients with multiple long term conditions
- A need for increased time with patients to support self-management
- Progressive move of health services from secondary to primary care
- A need to provide care closer to patients’ homes
- Poor coordination between general practice, community health and hospitals
- The need to find £22 billion of efficiency savings in the NHS by 2020 (NHS 2014)

The Five Year Forward View (NHS England 2014) proposes several solutions that affect the way in which general practice is set up and provided i.e. Multispecialty Community Providers (MCPs) and Primary and Acute Care Systems. It also goes on to suggest a ‘radical upgrade in prevention and public health’.

The primary care home model (NAPC 2015) is a form of multispecialty community provider that aims to re-shape the way primary care services are delivered, based on local population needs. Primary care home sites provide care to a defined population of between 30,000 and 50,000 people. They focus on healthcare teams working together from all disciplines and encouraging partnerships across primary, secondary and social care.

NHS England published a paper entitled 'Delivering the Forward View: NHS planning guidance 2016/17 – 2020/21' (NHS England 2015) requiring the health and care sector to come together to develop 44 locally based Sustainability Transformation Plans. These plans aim to bring the prevention agenda to the fore as well as getting the health care community (including GPs and hospital services) to work more effectively with the social care sector.

The GP Forward View (NHS England 2016) builds on the Five Year Forward View with general practice in mind. It describes the extra money going into training more GPs but goes on to suggest the need to make better use of the wider primary care workforce and other measures, such as:

- MCPs should have a much stronger focus on population health, prevention and supporting communities.
- GPs should make better use of the talents of the wider workforce e.g. integrated teams including therapists (a term usually referring to the allied healthcare professionals that include dietitians).
- More should be done to support patients to manage their conditions themselves
- GPs should utilise technology better e.g. apps, phone and email consultations and webcam links

The additional challenges facing general practice (Primary Care Workforce Commission 2015):

- Declining number of GPs (problems with recruitment and retention and also retirement)
- Declining number of nurses due to an aging workforce and increasing retirement

To address all the issues impacting on the general practice service, the Primary Care Workforce Commission (2015) describe a vision in which the primary care workforce is expanded. A new 'expert generalist' healthcare professional role will emerge that will assist with:

- managing significant parts of the primary care workload
- enabling people with long term conditions to maintain independence

The NHS Operational Guidance 2017/18 (NHS England and NHS Improvement 2016) specifically recommends GPs redesign services for improved outcomes, including considering ways in which to make greater use of self-care, technology and the wider workforce. This will mean that will have the time to operate 'at the top of their license' and 'only do what only they can do' as they say in Wales (Public Health Wales 2014).

Of the '10 high impact actions' for General Practice (NHS England 2017) the following two are relevant to this paper and will help GPs to 'release time for care':

- Develop the team to reduce demand for GP time and connect the patient directly with the most appropriate professionals.
- Support self-care: e.g. signposting people to sources of information, advice and community support.

The NHS is facing times of austerity in which Clinical Commissioning Groups (CCGs) are seeking to make cost savings. Spending by GPs in primary care is being cut in particular for products not deemed to be 'effective' or useful. Many CCGs are consulting publicly over decisions to cut the funding for ACBS products such as gluten free foods for people with coeliac disease and specialist infant formulae. Dietitians are experts in the use of these products and can help GPs to manage and use in a cost efficient and effective way.

In summary:

The situation described above highlights the need other healthcare professionals, including dietitians, to work alongside GPs in primary care in order to:

- 1) Enable patients to self-manage their conditions
- 2) Reduce demand on GP time
- 3) Make 'prevention' possible in primary care
- 4) Manage medicines effectively and efficiently
- 5) Manage ACBS products effectively and efficiently
- 6) Reduce the need for expensive referrals to secondary care and the need for hospitalisation
- 7) Utilise technology effectively
- 8) Be part of the multidisciplinary primary care home team

The Proposal

This paper proposes expanding the role for dietitians in primary care by developing a 'primary care dietitian' role. Dietitians in this role would specialise to become 'expert generalists'. They would be included as essential members of the general practice team.

The primary care 'expert generalist' dietitian would:

1. Enable patients to self-manage their conditions

Diet and obesity are the main factor or one of the main factors in the aetiology of many long-term conditions (LTCs) or Ambulatory Care Sensitive conditions (ACS) including diabetes, hyperlipidaemia, hypertension, stroke, heart disease and mental health conditions. This means that dietary treatment is key to the management of these conditions.

Food related ill health is responsible for approximately 10% of all morbidity and mortality in the UK and this costs the NHS £6 billion annually (Rayner and Scarborough 2005).

Dietitians are trained in behaviour modification methods and motivational interviewing. Using these skills dietitians enable patients to manage their own conditions (Hall 2017) and so have a significant impact on clinical outcomes e.g. obesity (Chief Allied Health Professionals Officer, 2017), cardiovascular disease and diabetes (Howaston, 2015) (Lemon et al. 2004).

Patients who are able to manage their own conditions at home are likely to experience better quality of life and satisfaction with the GP service. Whighams (2015) showed that dietary treatment of patients with IBS using the low FODMAPs approach administered by a dietitian is effective. Williams (2013) demonstrated that low FODMAP dietary advice given by a dietitian to patients with IBS resulted in 65% of patients reporting significant symptom relief and 74% had an improved quality of life.

As the emphasis in health care is shifting from secondary to primary care, GPs are looking after more patients with complex and multiple conditions. These patients would previously have been cared for in hospital e.g. patients with renal disease, liver disease, pancreatic disease and inflammatory bowel disease. Dietitians are integral to the treatment of these conditions and can help these patients manage their diseases at home.

Service Example 1: Somerset Partnership NHS Foundation Trust: an NHS primary care dietetic-led gastroenterology clinic set up in 2011

The clinic specialises in IBS, the Low FODMAP Diet, food allergy, coeliac disease and gluten sensitivity. The pathway created to help IBS patients in Somerset was incorporated into the UK NICE Guidelines in June 2015 as a 'Shared Learning Example'.

Audit figures for the clinic show that over 70% of patients improve with dietary intervention. 65% of patients experienced satisfactory relief of symptoms and 75% had an improved quality of life score. Between 2011 and 2014 there was a 5% reduction in new and expensive outpatient slots in secondary care in which the patients had no red flags and this equated to a cost saving of £120,000 per annum.

Those living in Somerset can either obtain an NHS referral via their GP to the NHS dietetic-led gastroenterology clinic, or alternatively the dietitian runs a private practice clinic held face to face or via Skype or Facetime consultations.

The IBS pathway in Somerset has been awarded several awards including:

- 2016 Winner of the National Institute for Health & Care Excellence Award (NICE)
- 2015 Finalist in the prestigious Health Service Journal Awards
- 2012 Highly Commended in the UK Care Integration Award

Above is an example of a successful primary care based service for gastroenterology patients which has been shown to reduce the need for referral to secondary care.

Below are two patient (Maria) stories describing the treatment of a patient with gastrointestinal symptoms: one suboptimal and one optimal. The optimal story illustrates how involving the dietitian at an earlier stage of the pathway results in the patient being able to manage their own condition sooner, symptom relief sooner and a reduction on the frequency of visits to the GP.

Reducing visits to the GP and secondary care.

Suboptimum story: Maria

Maria, 37 years old with 2 children under 10 years old. Part time job as a teaching assistant in a primary school.

Maria visits her GP: For the past 3 weeks Maria is experiencing symptoms of diarrhoea, and stomach cramping. She feels lethargic and worried. GP orders a blood test for Haemoglobin and recommends 2 weeks off for stress.

Symptoms continue for another month. Maria is worried and not sleeping

GP visit: Haemoglobin comes back as normal. The GP prescribes antidepressants and sleeping tablets

Symptoms persist for 6 months. Maria tries removing dairy products from her diet. Symptoms persist for the next month.

GP visits: Maria continues to experience episodes of diarrhoea and stomach pain but is also anxious and worried. GP signs Maria off work for a month for stress related illness.

Maria's symptoms persist for a further 4 months. Maria tries removing gluten from her diet for a further three months. No symptom relief.

GP visit. GP refers to gastroenterology specialist for possible coeliac disease.

Visit to consultant. 4 months later Coeliac tests done. Colonoscopy done/ referral to the dietitian at the hospital

One month later Maria gets results for Coeliac disease back – normal. Symptoms persisting

Visit to dietitian: (2 years after first visit to the GP): After dietary and lifestyle assessment first line IBS dietary advice is given

Return appointment to dietitian: FODMAP diet given: restriction phase taking 4 – 6 weeks.

2 Follow up appointments with the dietitian: Food triggers are reintroduced one by one until the triggers for Maria are identified. Following identification of triggers the diet is personalized for Maria to ensure that she is eating a well-balanced diet. Maria's symptoms disappear.

Bills:

- Cost of 4 GP appointments
- Cost of referral to consultant at the hospital
- Drugs: antidepressants and sleeping tablets
- Investigations: colonoscopy, biopsy, Blood tests:
- Patient quality of life: poor for 2 years
- Days off work: 6 weeks

Optimal care for Maria

Maria, 37 years old with 2 children under 10 years old. Part time job as a teaching assistant in a primary school.

Maria visits her GP: For the past 3 weeks Maria is experiencing symptoms of diarrhea, and stomach cramping. She feels lethargic and worried.

First GP visit: Carry out faecal calprotectin and antiTtg tests to exclude coeliac disease and IBD. HB test.

GP visit one month later: All results come back normal. Results discussed with patient and a referral is made to the primary care dietitian for further in depth advice for IBS.

Dietitian appointment: Following a in-depth diet and lifestyle assessment the dietitian advises first line dietary advice for IBS.

Dietitian appointment: Maria's symptoms persist. A low FODMAP diet is started: restriction phase 4 – 6 weeks.

Dietitian appointment Reintroduction phase of the diet is started. Trigger foods are identified. Personalization phase of the diet is started in which the trigger foods are avoided and the diet is assessed for completeness for Maria.

Bills:

- Cost of 2 GP visits
- Cost of 3 dietitian visits
- Investigations: Tests:
- Patient quality of life: poor for 4 months
- Days off work: None
- Visits to secondary care : none

2. Reduce demand on GP time

Dietitians have the potential to reduce the demand on GP time by patients because their services are effective.

Patients with undiagnosed IBS see GPs 10 times more frequently than matched patients and one in 12 GP consultation are for gastro symptoms – 46% of which were diagnosed as IBS (NICE, 2017). A new IBS pathway for a dietetic led gastro clinic has demonstrated that dietitians can reduce symptoms (and therefore reasons to see the GP) in 70% of patients (Williams 2013).

Advanced dietitians can now train to become supplementary prescribers. This means that dietitians can provide primary care diabetic services that include dietary, lifestyle and medication modification. As a result patients do not need to see their GP for insulin and antidiabetic agent modification.

Through dietetic led community initiatives for people with type 2 diabetes (such as Eat Smart Think Active (ESTA) in Bedfordshire), dietitians have been shown to be effective at achieving significant reductions in body weight, BMI, glycosylated haemoglobin, total cholesterol and triglycerides as well as self-management behaviours and days off work (Lemon et al. 2004).

Greater numbers of complex patients are being discharged from hospital into the care of the GP e.g. patients with kidney disease, pancreatic disease and gastrointestinal diseases such as inflammatory bowel disease. Dietitians are skilled at treating such patients from a dietary point of view but advanced dietitians trained in how to prescribe would also be able to change medications reducing the need for patients to see the GP.

Focus on Undernutrition a dietetic programme in County Durham (see service example 2) has shown that dietitian can reduce the incidence of pressure sores in patients in nursing homes and in the community by treating malnutrition appropriately. This logically means that the need to see the GP is reduced for these patients.

Dietitians are effective at obesity management, and in a meta-analysis, have been shown to achieve better weight loss than non-dietitians (Sun et al. 2017) A dietitian led group for overweight and obese patients in Leicestershire has delivered significant weight loss as well as a reduction in depression and an improvement in quality of life scores (BDA 2014). These patients are less likely to need to see their GP.

Below is an example of a successful service for patients with or at risk of malnutrition in the community and in nursing homes.

Service Example 2: County Durham and Darlington NHS Foundation Trust: Focus on Undernutrition

This dietetic led service:

- ensures adult patients in County Durham and Darlington are screened and treated for undernutrition wherever they are being treated
- provides accredited training and support on identifying and treating undernutrition which is linked to national standards and guidelines
- promotes the treatment of undernutrition by a food first approach including nourishing drinks, snacks and multivitamin mineral tablet, followed by appropriate prescribing and monitoring of oral nutritional supplements
- promotes 'MUST' (Malnutrition Universal Screening Tool) in all care settings in both hospitals, care homes and other community settings
- promotes the treatment of undernutrition by a food first approach
- promotes the appropriate prescribing and monitoring of oral nutritional supplements

Implementing Focus on Undernutrition service has resulted in:

- Reduced prevalence of 11% between 2000 and 2011 of undernutrition in County Durham and Darlington
- Reduced use of oral nutritional supplements
- 89% reduction in incidence of pressure sores
- Significantly improved weight gain in undernourished residents in care homes
- Increased prevalence of nutritional screening
- Increased cost savings
- Improved patient outcomes

Quote from a care home: Manager, Newton Aycliffe Care Home.

- “Focus on Undernutrition makes a great difference in care homes. The staff embrace the FoU training and understand the importance of nutrition. It makes a huge difference to the life of the residents. My statistics on the number of residents losing weight are reducing as a result of the FoU training”.

Below are two stories of a frail patient, Dorothy, one of which is optimal and the other suboptimal. The optimal story includes the referral to a primary care dietitian.

Reducing the need for unnecessary hospitalisation

Sub-optimum Patient Story: Dorothy

Dorothy (Dot) is a 79 year old, recently widowed, retired school teacher living in her own home. Dot becomes unhappy and starts finding it difficult to look after herself (including eating) and her home. Her family ask the GP for advice and decide to move Dorothy to a residential home. Dot doesn't want to move.

At the residential home Dot continues to be unhappy. One Thursday evening, she trips and falls and fractures an arm. She visits A and E and is found to have a urinary tract infection and dehydration. She is admitted to a ward for older adults.

After 2 weeks and despite successful treatment for the UTI she falls again on the ward. Dot is diagnosed with early stage dementia.

Dot is discharged to a nursing home where she rapidly declines. She falls again fracturing her neck of femur and is admitted to ICU, where after 8 days she dies aged 80 years.

Optimum Patient Story: Dorothy

Dorothy (Dot) is a 79 years old, recently widowed, retired school teacher living in her own home. Dot is unhappy and does not feed herself very well losing weight. Her family are concerned recommend that she talks to his doctor GP.

The GP refers her to the Primary care dietitian in the GP practice. The dietitian makes a visit to Dot in her home and makes a nutritional assessment. She discusses with Dot and her family the following recommendations:

- Join a regular local lunch club – for social interaction and a good meal each day
- Join a local walking club – for social interaction and some regular exercise
- For the interim to gain weight and improve nutritional status dot should fortify her normal foods with cream and butter and drink 6 -8 cups of fluid a day including one portion of an over the counter nutritional supplement fortified with vitamins and minerals
- Referral to OT at the GP practice for trip hazards assessment
- Follow up with the Primary care dietitian

Dot enjoys the lunch club and walking clubs. She starts to feel an interest in life and so looks after herself better including cooking for and feeding herself. She gains weight and reaches target of BMI 22. Dot's family are very pleased.

Two years later aged 81 Dot starts to decline and falls in her home. She is bruised but does not fracture a bone. At A and E she is assessed as having early stage dementia and so is discharged into a nursing home.

The dietitian and nurses in the nursing home keep a careful eye on Dot's weight as well as her food and fluid intake. The MDT encourage Dot to take part in exercise and social activities in the home. Meal times are difficult for Dot and although she loses a little weight it is managed by fortifying her meals and offering regular snacks and drinks.

A year later Dot falls in the home. Her dementia has progressed and she dies aged 84 years.

3. Make 'prevention' possible in primary care

Dietitians have been involved in public health and prevention of illness for many years. This work includes work with pregnant women, young children, workplace health, people with mental health conditions and the elderly (malnutrition being a public health issue). The behaviour modification and motivational interviewing skills of dietitians to promote healthier diet and lifestyles and thus prevent ill-health can be used to good effect in primary care.

Dietitians are currently involved in the NHS Making Every Contact Count initiative and so are using every opportunity to have healthy conversations with patients. This includes modifiable lifestyle factors that contribute to the prevention of ill health e.g. smoking, alcohol, physical activity, falls, mental health etc.

A good example of dietitians being effective at 'prevention' is the Moving Away from Pre-diabetes (MAP) programme in Brent. This is a dietitian-led diet and lifestyle programme developed and run by dietitians and exercise specialists in the community. An evaluation has shown that this 12 week programme focussing on behaviour change for patients identified as having 'pre-diabetes' has resulted in 60% of participants moving out of 'prediabetes'. 81% report having better glycaemic control body weight and waist circumference after 6 months, and, after 12 months, 43% remaining out of prediabetes (Hamid 2016).

In primary care, dietitians can work with pregnant mothers; NICE recommend that evidence based dietary advice should be given to mothers by dietitians to improve their own and their children's long term health. (NICE 2010) NICE further recommends that women with a BMI of 30+ should be offered a referral to a dietitian at the booking appointment. Meta analyses by Thangaratinam (2012) found that dietary intervention in pregnant women was associated with reduced gestational weight gain and the incidence of preeclampsia and shoulder dystocia.

Malnutrition is a public health issue that results in clinical ill health (See Appendix 2) Dietitians are experienced in the effective training of other health care professionals to help both identify patients at risk of malnutrition and deliver first line advice to these patients (Focus on Undernutrition 2017).

4. Manage medicines effectively and efficiently

Due to the complex interaction between nutrition and drugs; in sickness and in health, dietitians have a high level of pharmaceutical knowledge regarding the impact of a wide range of medications on nutritional status and the medical conditions they are used to treat. A dietitian is skilled at managing a patient's dietary intake alongside their prescribed medication. Diabetes, kidney disease and cystic fibrosis are only three

examples of conditions where this interaction between dietary intake and medication is key to optimising treatment.

Through combining their professional expertise and pharmacological knowledge, advanced primary care generalist dietitians who have trained to become supplementary prescribers would be able to work in partnership with other members of the multi-disciplinary team to optimise medicines usage, reduce unnecessary handoffs to the GP (which take time) and therefore improve patient safety.

5. Manage Advisory Committee of Borderline substances (ACBS) products effectively and efficiently

Dietitians have been shown to make significant cost savings through rationalising the prescription of ACBS products such as infant formulae and oral nutritional products. Evaluation of implementing Focus on Undernutrition (Case study 2 in Appendix 4) into surgeries identified an average 30% reduction of inappropriate prescriptions for nutritional supplements, resulting in savings of over £5,000 within 6 months.

Dietitians are experts in the management of patients on enteral feeds at home and as such help to use these products appropriately and effectively. This optimises quality of life for the patients and preventing complications that are costly and may require hospitalisation.

Patients with diagnosed coeliac disease and dermatitis herpetiformis require a gluten free diet and may be prescribed gluten free products. Dietitians are expert in advising patients on how to achieve a diet naturally free of gluten and thus how to minimise the use of prescribable gluten free foods. By regular reviewing of these patients dietitians can make sure that they adhere to their diets and so do not develop long term complications such as osteoporosis, infertility and cancer which are costly to the NHS and adversely impact quality of life.

Dietitians in South West Essex and Bedfordshire have implemented training schemes for GPs on the appropriate use of special infant formulae for babies with cow's milk protein allergy and inherited metabolic disease. These programmes have resulted in more effective use of these products and resulted in cost savings.

6. Reduce the need for expensive referrals to secondary care and the need for hospitalisation

A primary care dietetic led clinic for patients with IBS demonstrated improvements in overall symptoms and quality of life in 70% of their patients (Thompson 2000) as well as a 5% reduction in new outpatient slots in secondary care which equated to cost savings of £102,000 per annum. (Williams 2013. See Case Study1.)

The appropriate treatment of malnutrition in primary care results in reduced GP visits by patients and therefore has the potential to release GP time (BDAa 2014) as well as reduced hospital admission (Nash 2017).

7. Utilise technology effectively

Dietitians are embracing technology and developing services that utilise a variety of different technologies including Skype interviews with patients in prison (Dietetics Today), telephone follow ups of malnourished patients on oral nutritional supplements, text messaging services for weight management (Donaldson 2013) and mobile phone coaching apps for weight management (BDA 2017).

8. Be part of the multidisciplinary primary care home team.

In primary care and the community, dietitians already work closely with their allied health professional colleagues such as Speech and Language Therapists and Occupational Therapists, but also with pharmacists and community nurses (not an exclusive list). Therefore, dietitians will fit into the transformed state primary care home model described by the NAPC.

Dietitians could be directed by a care navigator to see the dietitian, as a first port of call, for any health issues relating to diabetes, body weight (over or under weight problems), gastrointestinal conditions (such as coeliac disease, food allergies, IBS and IBD). The dietitian would agree with the GPs any red flags that would result in a referral to a GP and consequently the GP would only do what only they can do.

Below are two patient stories describing the treatment of a frail elderly patient called Dorothy: one suboptimal and one optimal. The optimal story illustrates how the earlier involvement of a dietitian results in the patient being able to enjoy life for longer and avoid hospitalisation.

Why employ a Registered Dietitian rather than a 'nutritionist' or nutritional therapist?

Registered dietitians are the only qualified health professionals that assess, diagnose and treat diet and nutrition problems at an individual and wider public health level.

Dietitians are statutorily regulated, with a protected title and governed by an ethical code, to ensure that they always work to the highest standard. This means that dietitians can be 'struck off' for malpractice and therefore offers some protection to patients. Employing organisations can be reassured that dietitians deliver evidence based services and face severe consequences for malpractice.

The title 'dietitian' can only be used by those appropriately trained professionals who have registered with the Health Care Professions Council and whose details are on the HCPC website.

No matter what setting (healthcare or otherwise) , dietitians use the most up-to-date public health and scientific research on food, health and disease, which they translate into practical guidance to enable people to make appropriate lifestyle and food choices.

In contrast nutritionists and nutritional therapists are not registered with the HCPC.

Dietitians undergo degree or Masters level education prior to registration. They also have to complete pre-registration placements in the NHS in order to be eligible for HCPC registration. The curriculum is rigorously monitored and includes clinical and public health elements that are essential for practicing in both primary and secondary care settings. The HCPC demand that dietitians undergo continuous professional development throughout their careers so that they remain fit to practice.

How would a primary care 'expert generalist' dietitian work?

It is proposed that dietitians would:

- 1) see patients with a wide range of different conditions (see Appendix 1.) via a range of different means i.e. one to one consultations in clinics (e.g. diabetes clinic) or via email, telephone, or Skype, domiciliary visits and visits to care homes
- 2) see patients from primary care who self-refer with a predetermined and agreed range of symptoms / conditions. The dietitian would be trained to make initial assessments and refer on the GP according to red flags symptoms
- 3) receive and respond to patient referrals from GPs, practice nurses, Health Visitors, District Nurses, nursing home nurses and allied health professionals including Speech and Language Therapists.
- 4) prescribe appropriately for management of long term conditions e.g. Diabetes, renal disease and pancreatic disease
- 5) manage appropriate use of nutrition supplements and feeds, from commencement to review to discontinuation
- 6) undertake health promotion activities such as Health Check and would be able to add value by utilising behaviour change skills and follow up patients when deemed necessary
- 7) deliver patient education sessions (often jointly with other healthcare professionals) e.g. for diabetes, weight management
- 8) deliver nutrition training for primary care and nursing home staff e.g. malnutrition screening, making an appropriate referral etc.
- 9) evaluate the dietetic service provided regularly

How to make it happen

Currently, most NHS dietitians are employed in the secondary care setting although a significant proportion are already working in the community or primary care setting. In the latter settings they are usually employed by community NHS Trusts.

Anecdotally, we have been made aware that GPs are reluctant to refer to dietitians because they perceive that there is no availability or that referral processes are slow. This situation is likely to become a self-fulfilling prophecy as dietetic managers require evidence of referral and 'demand' to generate a business case for more dietetic time. In the meantime, patients who would benefit from dietetic intervention go without resulting in suboptimal care and poorer outcomes.

Proposed transformation actions for GPs:

Create roles for primary care expert generalist dietitians in GP practices or GP Federations in the following ways:

- GPs or federations of GP Practices could employ dietitians directly as one of the practice team. If GP practices are designed around the NAPC's Primary Care Home (transformed state) model than dietitians would become easily integrated into the practice team and could see patients who self-refer or who are directed to them by the care navigator in the first instance rather than the GP, thus relieving pressure on GPs.
- GPs or GP federations could contract with dietetic services based in community NHS Trusts. The advantage of this option is that the employing costs (pension, insurance, continuing professional development costs etc.) would be covered by the employing organisation and not the GP practice / federation.
- Encourage GPs to refer their patients to dietitians according to clinical need rather than according to perceived availability of dietitians.
- Make GPs aware of the conditions for which it would be clinically effective to refer their patients to a dietitian. This would be an education / marketing exercise that could be undertaken by the BDA and RCGP.

Proposed transformation actions for dietitians:

- Dietitians already working in primary care can be upskilled to be able to deliver appropriate care to the complex cases (such as renal, liver and gastroenterology patients) being discharged from hospitals. A successful modular programme has been developed by University Hospitals Leicester NHS Trust to do this.

- Existing advanced primary care dietitians can be upskilled to become supplementary prescribers
- Dietitians wishing to become a primary care 'expert generalist' dietitian can undertake relevant training. This will require the creation of a master's level module aimed at post registration, Band 6 dietitians. The module will include clinical placement in primary care setting and marked assignments. This training will cover all conditions in Appendix 1.
- Preregistration training will be needed at university so that student dietitians are equipped with better knowledge and skills to work in primary care and also can see that working in primary care is a positive career choice.
- Undertake a communication/transformation campaign to persuade dietitians working in the acute sector that working in primary care is a valid and enticing career choice. This can be done by the British Dietetic Association.

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APPENDICES

Appendix 1:

Long Term Conditions and Ambulatory Care Sensitive (ACS) conditions that diet and nutrition play a part in the aetiology of or impact adversely on nutritional status:

The following is a list of the conditions that diet and nutrition play a major role in the development of or that adversely impact on the ability of patients to achieve a healthy diet and hence impact adversely on the nutritional status of the patients

- Obesity
- Diabetes (ACS)
- Gastrointestinal disease e.g. irritable bowel syndrome, coeliac disease, inflammatory bowel disease
- Dementia
- Neurological diseases such as MND and MS
- Cardiovascular disease e.g. heart disease and stroke (ACS)
- Hyperlipidaemia (ACS)
- Hypertension (ACS)
- Cancer
- Disease related malnutrition e.g. enteral feeding , food first approaches
- Faltering growth in children
- Inherited metabolic diseases
- Food allergy e.g. Cow's Milk Protein Allergy
- Renal and liver disease
- Pancreatic disease

Appendix 2:

Effects of poor nutritional status / malnutrition:

The following lists state the effects of malnutrition on health and the need for healthcare. (BDA 2014))

Clinical effects:

- Impaired immune function and increased susceptibility to infection and sepsis
- Delayed wound healing and increased risk of pressure sores

- Muscle wasting and weakness that can affect: respiration and cardiac function
- Altered gastrointestinal structure and function resulting in malabsorption
- Apathy and depression
- General sense of weakness and illness
- Adverse effects on learning and behaviour in children
- Poor pregnancy outcomes

Effects of malnutrition on the need for health services (BDA 2014):

- Increased mortality and complications during and after hospitalisation
- Greater requirement for healthcare post discharge
- Increased risk of admission to hospital
- More visits to the GP

Prepared April 2017

BDA