



## Programme Report September 2018

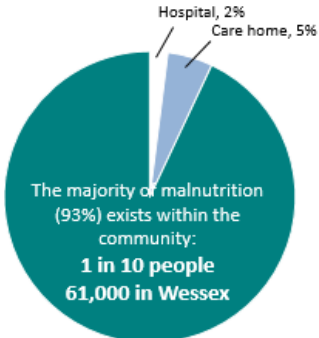
### Contents

Executive Summary	2
Background	7
Nutrition in Older People Programme	9
Timeline of projects	10
Project Overview	11
<i>Theme 1: Nutritional screening and care planning by integrated teams (health and social care) in the community</i>	11
<i>Theme 2: Innovative approaches for increased undernutrition awareness and identification by volunteers and carers</i>	18
<i>Theme 3: Resource development</i>	24
<i>Other Projects</i>	26
Nutrition in Older People Programme Conferences	28
Programme-wide publications and awards	29
Ongoing Work	29
Recommendations	30
Call to action	31
Acknowledgements	32
References	35

## Executive Summary

The Wessex Academic Health Science Network (Wessex AHSN) Nutrition in Older People Programme has run for four years (2014 – 2018) with a focus on reducing malnutrition (undernutrition) in older people within the community. Undernutrition is a growing issue, particularly in older people, and is a key factor in the onset and severity of frailty.

**Figure 1:** Summary of the prevalence, causes, consequences of undernutrition and how it can be addressed

<p><b>The scale of the issue in the UK</b></p> <ul style="list-style-type: none"> <li>• Affects 1 in 10 older people</li> <li>• Prevalence varies according to setting, e.g. 5% in GP practice, to &gt;40% in care homes</li> <li>• Majority of undernutrition (93%) occurs in the community</li> </ul> 	<p><b>Causes</b></p> <ul style="list-style-type: none"> <li>• Multiple and interlinking causes, which can make undernutrition a challenge to treat</li> <li>• Physical, e.g. appetite changes, disease, dementia, dry mouth, ill-fitting dentures, problems holding cutlery, preparing food</li> <li>• Social, e.g. loneliness, isolation, bereavement, lack of transport, poverty</li> <li>• Environmental, e.g. distractions, food presentation, food choice</li> <li>• Psychological, e.g. anxiety, depression</li> </ul>
<p><b>Consequences</b></p> <ul style="list-style-type: none"> <li>• 4 times more likely to have frailty</li> <li>• Reduced recovery &amp; body function</li> <li>• Increased nurse and GP visits</li> <li>• More frequent hospital admissions &amp; increased length of stay</li> <li>• Increased dependence</li> <li>• Financial implications – undernutrition cost the UK £19.6b in 2015</li> </ul>	<p><b>How it should be addressed in the community – from our work</b></p> <ul style="list-style-type: none"> <li>• Support from government and national level bodies including ownership and leadership</li> <li>• Commissioning good nutritional care</li> <li>• Whole system, integrated approach</li> <li>• Improved screening and care planning</li> <li>• Improved uptake of training</li> </ul>

A number of guidance documents have been published over the last decade (e.g. NICE clinical guidelines Nutritional Support in Adults CG32, 2006) which have included recommendations for regular screening of adults to identify those at risk of being undernourished and approaches for preventing and treating undernutrition. However, there has been limited uptake of these strategies in community settings due to other health and care priorities, a lack of data to support the effectiveness of adopted approaches, and a lack of knowledge and expertise within this care setting. As the majority (93%) of undernourished older people are living in their own homes and the prevention of undernutrition would prevent a number of health issues and costs including hospital admissions and length of stay, developing new approaches to identify and reduce the prevalence of undernutrition in the community would have the impact of improving the health and wellbeing of individuals, and reduce health and care costs across the whole system.

The Nutrition in Older People Programme has had three key themes, 1) Nutritional screening and care planning by integrated teams (health and social care) in the community, 2) Innovative approaches for increasing awareness and identification of people at risk of undernutrition by volunteers and carers, and 3) Resource development. This report summarises the programme's key impacts and outcomes, recommendations and vision going forward.

### *Impacts achieved by the programme*

- 7020 people screened for undernutrition (using the Malnutrition Universal Screening Tool ('MUST') or other methods, e.g. Nutrition Checklist). 22% (n=1539) of people screened were found to be undernourished or at increased risk of undernutrition, and were given advice and/or signposting to help reduce their risk (see figure 2). Prevalence of undernutrition ranged according to setting, from 6% in a GP surgery to 40% in domiciliary care, with prevalence figures being similar to data found in published research [1,2]
- Data from the Purbeck pilot, part of the Pan Dorset Malnutrition Project, found that providing advice and support to people at risk led to reduced 'MUST' score (improved nutritional status) and associated cost avoidance (see figure 3)
- Around 50% of people screened were screened by staff, volunteers or other community groups not screening or trained to screen prior to the programme, or those where screening was not previously part of their role
- 12% (n=815) of people were screened by those not in traditional health or social care roles, e.g. volunteers and domiciliary carers
- 1074 people have been trained (including a range of health and social care professionals, volunteers, care workers and other people working in the community)
- Research project to positively validate the four questions in the Nutrition Checklist against 'MUST' and the development and initial piloting of the Nutrition Wheel
- The programme has considered the financial implications of undernutrition for the Wessex region, which is estimated at £1.4 billion of health and social care costs per year (based on 2016 Local Authority District population data and extrapolating from 2015 estimates (Elia, 2015 [13]) with addition of inflation). Considering our ageing population, if continued to be left under-detected and under-treated, undernutrition, currently estimated to cost the UK around £30 billion (based on 2015 estimates (Elia, 2015 [13]) with addition of an estimation for inflation and population growth in the past three years) is likely to cost the UK over £70 billion in 25 years' time. There is currently no breakdown in costs available, however, we know that the majority is spent in secondary care, where a large proportion of patients are admitted from the community already undernourished (see figure 4)

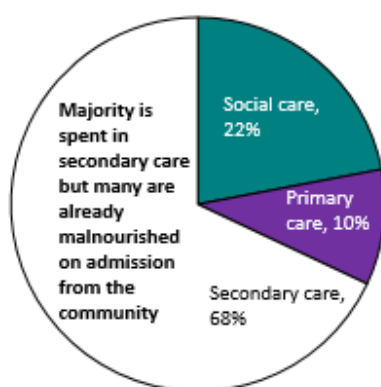
**Figure 2:** Impact of screening and treatment in Purbeck, as part of a 20-month pilot

No. of people screened at least once	No. of people at risk (raised score)	No. of people with improved score on review	Corresponding cost avoidance estimate
561	154 (27%)	60 (39%)	£51,545 / year

**Figure 3:** Advice and support given to people found to be undernourished or at risk of undernutrition

- Identifying reason(s) for undernutrition and establishing goals to address these
- Provision of dietary advice (e.g. nourishing snacks & drinks, food fortification, supplements)
- Signposting to other services, e.g. lunch clubs, befriending service, day centres
- Referral to specialist services, e.g. speech & language therapy, OT, dietitian
- Provision of written information (e.g. leaflet) to reinforce verbal advice
- Follow up within specific timeframe to review progress and plan

**Figure 4:** Pie chart showing the percentage of costs spent on undernutrition associated with primary care, secondary care and social care



**Key messages from the programme and how we are moving things forward**

<p>1. Integrated nutritional screening and care can be carried out in the community for older people living in their own homes. The improved nutritional status can lead to improvements in health, wellbeing and independence (as shown through the OPEN Eastleigh project, Dorset Malnutrition Programme, and Southern Health project)</p>	<ul style="list-style-type: none"> <li>• Communicating success and learning from integrated projects, to facilitate improved identification and care of older people at risk of undernutrition in other areas and settings</li> <li>• Completion of final INSCCOPE phase and dissemination of materials / toolkit (see section 1.3)</li> <li>• Partnering with the James Lind Alliance work on malnutrition to raise awareness and identify questions for future research</li> </ul>
<p>2. Appropriate tools and approaches can be used by people who would not traditionally screen (e.g. volunteers, care workers, fire service) to raise awareness and identify people likely to be at risk and provide signposting and advice (see figure 5)</p>	<ul style="list-style-type: none"> <li>• Planning the Nutrition Checklist and Wheel launch in partnership with the Patients Association, Age UK and Nutricia</li> <li>• Influence a national call to action through membership of Malnutrition Taskforce and BAPEN Malnutrition Action Group, including review of national malnutrition pathway to consider these innovative approaches (Nutrition Checklist and Wheel)</li> </ul>

3. Tried and proven resources have been produced to enable other people to implement these approaches, and these have been adopted across Wessex and wider	<ul style="list-style-type: none"> <li>• Further spread of the toolkit</li> <li>• Hydration in care homes and domiciliary care project, and the creation of hydration toolkit</li> </ul>
--	--

**Figure 5:** Types of people and numbers of people screened, along with the approach used and recommended approach going forward\*

Types of people screened	Approach tested as part of the programme	Approach recommended	No. people screened	No. people at risk
People seen by health & social care in their homes	Integrated screening and care planning (screening using the Malnutrition Universal Screening Tool, 'MUST') with / without use of an electronic form to record screening, care planning and facilitate referrals between teams (see sections 1.1, 1.2, 1.3)	Integrated screening* and care planning using electronic form	6060	1458 (24%)
People identified by voluntary sector	- PaperWeight Nutrition Armband (see section 2.1) - Standards questions to detect unintentional weight loss and awareness raising (see section 2.1)	Nutrition Checklist / Nutrition Wheel	669	58 (8.7%)
People screened in a GP practice (by volunteers)	Screening using 'MUST' (see section 2.4)	Nutrition Checklist / Nutrition Wheel	126	8 (6.3%)
People identified by domiciliary care	Nutrition Checklist (see section 2.2)	Nutrition Checklist	15	6 (40%)
People seen by the Fire Service	Nutrition Checklist (see section 2.2)	Nutrition Checklist / Nutrition Wheel	5	1

\* NICE clinical guideline 32 [11] states that 'screening' should be carried out for all people in care settings (e.g. hospitals and care homes). In the community, 'screening' should be carried out on initial registration to GP practice, at other clinic opportunities and wherever there is a clinical concern (e.g. unintentional weight loss, loose fitting clothes, poor appetite). Screening tools should assess body mass index (BMI) and percentage unintentional weight loss and should consider the time over which the nutrient intake has been unintentionally reduced and/or the likelihood of future impaired nutrient intake. 'MUST' is an example of a validated tool that can do this, and is widely used in the UK.

### Vision

As a result of the work undertaken as part of the programme, it is our hope that we are able to influence a call to action to increase the uptake of nutritional screening to identify undernutrition

early amongst older people living in the community and provide appropriate care to those identified, to help reduce their risk. In order to better identify and treat people at risk, we recommend that nutrition pathways are adapted (including current national malnutrition pathways) to incorporate some of the approaches and tools we have tested as part of the programme (e.g. the Nutrition Wheel and the Nutrition Checklist), and to include other groups (e.g. volunteers and carers) in this. Due to their simplicity and ease of use, these approaches and tools show potential for the early identification of undernutrition, and include signposting and advice to support people to access appropriate services, including services that can support people with social factors contributing to their undernutrition. These tools have the ability to highlight 'clinical concern' which could then act as a prompt to screening using 'MUST' (as per NICE guidelines [11]).

# Background

## *The prevalence and impact of malnutrition in older people*

Weight loss and frailty are not an inevitable or a natural component of the ageing process and malnutrition is largely preventable and treatable. Malnutrition refers to 'deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients' covering 'two broad groups of conditions': 'undernutrition', and 'overweight, obesity and diet-related non communicable diseases' [3]. This report focuses on malnutrition as 'undernutrition' [4], which continues to be a significant problem, in particular with respect to an ageing population [3]. Over the next 20 years, the numbers of people aged over 65 is projected to grow by 4.75 million, an increase of just under 50%. Moreover, it is the oldest part of our population, those aged over 85, which is rising the most rapidly and is most likely to be at risk of undernutrition. Undernutrition can stem from a series of interrelated medical (disease-related), physical and social factors.

It is estimated that 1 in 10 people aged over 65 years in the UK are undernourished or at risk, equating to around one million older people [7]. Over 2 million people aged over 75 years live alone and could be at increased risk of undernutrition, largely due to social factors [8]. Undernutrition has many negative consequences that both affect the individual, and impose a strain on healthcare resources through delayed recovery from illness, increased need for health care provision at home, more frequent visits by nurses, and a greater number of hospital admissions [4,9]. Undernourished adults account for about 30% of hospital admissions and with prolonged length of hospital stay, 35% of care home admissions [5,6]. Published data shows at least 10% of patients visiting their GP or outpatient departments could be at risk of undernutrition [5].

## *Cost implications of effective screening and treatment of undernutrition for older people in community settings*

The quality of nutritional care for older people across health and social care settings is key to maintaining health and enhancing recovery from illness. Over the last 10 years, a range of policies and guidance documents have been produced in the UK [4,10,11]. As nutritional status is a mediating factor of frailty in an ageing population, they have highlighted the need to ensure older people receive good quality, nutritious food and hydration and suggested pathways for good nutritional care [10].

Several key studies have made attempts to estimate the cost of undernutrition in the UK [5,12]. Most recently, Elia (2015) showed the estimated cost of undernutrition in England to be £19.6 billion [13]. This figure is likely to be higher now due to inflation and the increasing population of people over 65. Using population and inflation forecasts, undernutrition is likely to cost the UK over £70 billion in 25 years' time. This is more than 15% of the total public expenditure on health and social care, half of this cost being spent on the over 65s. Treating someone who is undernourished is two to three times more expensive than treating someone who is not undernourished (£2155 per year to care for a well-nourished person compared to £7408 for a undernourished person). Thus it is estimated that about £5000 could be saved per person through

better nutritional management. A review of the impact of undernutrition in older people and costs and benefits of interventions, indicated that we can prevent undernutrition through tackling both its causes and consequences by way of screening and early intervention, and that the benefits of treating undernutrition far outweigh the costs [14].

### ***Current issues in commissioning and prioritisation of nutritional services in the community***

Undernutrition remains under-detected, under-treated and under-resourced, and is often overlooked by those working with and for older people in the community [14]. Whilst the importance of screening for undernutrition has been emphasised by expert groups [10,11,15], nutritional care is generally not commissioned, and the responsibility for implementation often falls between many health and social care roles. Moreover social factors are more challenging to address. Isolation and poverty are most evident within the community so it is not so surprising that this is where the majority of undernutrition is seen. Whilst there is some support, information and guidance available to older people in the community, there is a lack of consistency in terms of the early identification of undernutrition and the support provided to people at risk.

In October 2015, NHS England published new guidance for service commissioners [16], to address these issues and develop strategies to make good nutritional care a high priority. It is vital to identify older people who are undernourished, as well as those at risk of undernutrition, at an early stage. A validated screening tool, such as the Malnutrition Universal Screening Tool ('MUST') should be used [17], endorsed by NICE (2006) and supported by the Royal College of Nursing and the British Dietetic Association. The aim of screening is to ensure that patients receive a more comprehensive nutritional assessment and appropriate referral for nutritional support. Therefore, timely identification of older people considered at risk for undernutrition as a result of screening should lead to appropriate action and management, and thus prevent further deterioration in nutritional status.

### ***Undernutrition linked to frailty***

Malnutrition has been shown to have an impact on the development of frailty syndrome, where people are more likely to develop frailty (and increase their level of frailty) if they are undernourished [18]. Boulos et al (2016) found that people with undernutrition were four times more likely to be frail [19]. Unintentional weight loss is considered one of the key indicators of frailty syndrome [20].



## Nutrition in Older People Programme

The Nutrition in Older People Programme has focused on the prevention and treatment of undernutrition in older people who are living in their own homes. The underlying causes of undernutrition could be due to physical, psychological and social factors requiring multi-agency integrated (health, social care and voluntary sector) approaches to resolve [21]. 14% of the >65s are undernourished [5,6] (estimated as 1 million older people undernourished in England, and extrapolated to 80,000 in Wessex), with 93% of these living in the community [7] (extrapolated from population figures as 73,000 in Wessex). The cost of treating an undernourished person is two to three times that of treating a non-undernourished person: these disproportional healthcare costs are due to increased hospital admissions and re-admissions, increased length of stay, increased dependence and care requirement, and increased number of GP visits and prescriptions [13].

All of the local Sustainability and Transformation Partnerships (STPs) highlight the challenges presented by the growing older population particularly with a view of slowing down / preventing the onset of frailty, and approaches for providing integrated care in the community. The identification, prevention and treatment of undernutrition in older people are key factors for the onset and severity of frailty, and for some of the causative elements of frailty, for example falls prevention, reduced susceptibility to infection, and general improvement in wellbeing.

The Nutrition in Older People Programme has had three key themes:

- 1) Nutritional screening and care planning by integrated teams (health and social care) in the community setting
- 2) Innovative approaches for increased awareness and identification of people at risk of undernutrition by volunteers and carers
- 3) Resource development

## Timeline of projects

Theme	Project	2013	2014	2015	2016	2017	2018	
Nutritional screening & care planning by integrated community teams	Wool pilot	Creation of material / approach	Pilot / research project / training					
	Pan Dorset Malnutrition Programme	Purbeck pilot		Pilot / research project / training	Analysis			
		Christchurch pilot				Pilot / research project / training	Analysis	
	Dorset roll out					Implementation & spread	Analysis	
	OPEN Eastleigh		Creation of material / approach	Pilot / research project / training	Analysis			
	Southern Health & INSCCOpe					Creation of material / approach	Pilot / research project / training	Implementation & spread
Innovative approaches for volunteers & carers	PaperWeight nutrition armband pilot				Creation of material / approach	Pilot / research project / training	Analysis	
	Volunteers in GP practice				Creation of material / approach	Pilot / research project / training	Analysis	
	Community Pharmacies			Creation of material / approach	Pilot / research project / training	Analysis		
Resource development	OPEN toolkit		Creation of material / approach	Pilot / research project / training	Analysis	Creation of material / approach	Implementation & spread	
	Nutrition Checklist	Pramacare				Creation of material / approach	Analysis	
		Age UK / HFRS					Creation of material / approach	Pilot / research project / training
		Validation					Creation of material / approach	Pilot / research project / training
Nutrition Wheel					Creation of material / approach	Pilot / research project / training		
Other projects	Food is a MUST		Creation of material / approach	Pilot / research project / training	Analysis	Implementation & spread	Implementation & spread	
	Coloured glasses				Creation of material / approach	Pilot / research project / training	Analysis	
Events	Programme conference			Conference	Conference		Conference	

Creation of material / approach
Pilot / research project / training
Implementation & spread
Analysis
Conference

# Project Overview

## *Theme 1: Nutritional screening and care planning by integrated teams (health and social care) in the community*

### **1.1 Pan Dorset Malnutrition Programme**

In 2013, the Dorset-wide Nutritional Care Strategy was published through partnership between Dorset County Council, Dorset HealthCare, Dorset CCG, Public Health Dorset and third sector agencies. Based on NICE guidelines [10,11], the strategy highlighted the need for integrated working to reduce undernutrition in Dorset. An initial pilot was carried out at Wellbridge GP Practice, Wool, for six months starting in November 2013; if visited in their own home by health or social care staff, patients were screened for undernutrition and relevant care pathways were followed. The success of this pilot led to the approach being piloted across Purbeck locality from the end of 2014, with funding being provided by Wessex AHSN to test whether the new integrated approach could work. This pilot also became a Malnutrition Task Force Pilot area and involved:

- Implementing new nutritional care pathways (screening, treatment guidelines, referral routes)
- Developing a novel electronic system to record screening data and care plans and facilitate information-sharing between teams
- Providing training to Tricuro Reablement, Respite Care and Day Services, Dorset County Council social care staff, Dorset HealthCare community teams, community hospital discharge teams and GP staff about nutritional screening, effective care pathway implementation, and use of the electronic system

Positive results from the Purbeck pilot led to the approach being rolled out to the Christchurch locality in 2016, and then to the rest of Dorset in 2017. Wessex AHSN funded the employment of a part-time project manager for 18 months to facilitate this wider roll out. Plans to expand to Poole and Bournemouth localities in 2018 are being discussed.

The Nutritional Care Strategy and accompanying resources can be downloaded from: <https://www.dorsetforyou.gov.uk/care-and-support-for-adults/information-for-professionals/nutritional-care-strategy-and-malnutrition-programme-resources.aspx>

**Project lead** - Sue Hawkins, Malnutrition Programme Manager

#### **Collaborators / Partners**

- Dorset County Council
- Dorset HealthCare University NHS Foundation Trust
- Dorset CCG
- Public Health Dorset
- Tricuro

- Third sector agencies (Age UK, Dorset POPP, Dorset LINK, Dorset Age Partnership, Dorset Carers Partnership)

### **Key Results**

- A total of 3586 adults have been screened across Dorset, with 886 at medium or high risk (prevalence of undernutrition 24.7%)
- A total of 631 health and social care staff have been trained in undernutrition screening, care planning and use of the electronic form. Data from the Purbeck pilot showed that 83% of staff experienced increased knowledge and awareness of undernutrition, 98% had a clearer understanding of the importance of their role in identifying people at risk, and 93% felt confident to undertake 'MUST' screening
- 69% (n=703) of people screened during the Purbeck and Christchurch pilots were screened by staff who would not have previously carried out screening
- Data from the 20-month Purbeck pilot showed that 60 people (39% of those found to be at medium or high risk of undernutrition) were rescreened and improved their 'MUST' score. Taking into account the estimated cost of screening (£1.84 per patient [10]), and the cost avoidance of £1449 per person when patients at risk of undernutrition are given appropriate advice to prevent them from seeing their GP or other healthcare service as a consequence of improved nutritional status [10], this translates to a cost avoidance figure of £85,908
- Translating the cost avoidance figures from Purbeck to the figures from the Pan Dorset Malnutrition project, the cost of screening the 3586 people would be estimated at £6598, and assuming 345 people had improved (39% of 886 people), a potential cost avoidance of £493,307 could be assumed for the project to date
- Based on population data, the population of people over 65 in Dorset CCG in 2016 was 188,433. Assuming that 10% were risk of undernutrition, 18,843 people would be at risk of undernutrition. If 39% of these people then reduced their risk due to implement of appropriate nutritional care pathways, the potential cost avoidance would be £10.3 million (this includes subtracting £346,717 as the estimated cost to screen all 188,433 people).

### **Discussion: challenges, learning and recommendations**

- This project demonstrates the first county-wide implementation of integrated nutritional screening, and screening by these teams is now considered 'business as usual' across Dorset
- The use of an electronic form (to record screenings, care planning and facilitate referrals between teams), and the implementation of a Dorset-wide nutritional care strategy (to obtain multi-agency support at the outset) have been particular strengths of the project
- The cost avoidance figures obtained from the Purbeck pilot show the huge potential that identifying and treating undernutrition can have
- Key challenges included engaging with GP practices (due to nutrition not being a high priority), merging the electronic form with SystemOne meaning Dorset HealthCare staff had to enter data in twice, and challenges demonstrating cost savings and improved general health outcomes due to improved nutrition as most patients have complex health needs
- A sustainability plan has been written to ensure long term embedding of the project and 'business as usual' across Dorset. This includes the appointment of Systems Administrators in each organisation who are responsible for maintaining the electronic system and the merging of the electronic form with SystemOne to remove the need for double-entry of data

- Next steps include the expansion of the project into Poole and Bournemouth localities
- A report summarising the lessons learnt can be found here:  
<http://wessexahsn.org.uk/img/projects/Lessons%20learnt%20from%20community%20integrated%20projects%20v0.2.pdf>

### Outputs

- **June 2018:** Awarded 'highly commended' for the HSJ Value Awards in the category 'improving value in the care of frail older patients' for our work with the Pan Dorset Malnutrition Programme
- **November 2017:** Abstract accepted and poster displayed and presented (oral poster presentation) at the BAPEN conference in November 2017. Title of the abstract and poster: A new integrated approach using an electronic system across health and social care to improve nutritional care for adults across Dorset by A.J. Aburrow, K. Wallis, S. Hawkins, M. Smith, L.Gentle and J.L. Murphy. Available to view as a PDF from:  
<http://wessexahsn.org.uk/img/projects/Dorset%20poster%20v5.pdf>
- **July 2017:** Poster displayed at the Patient Safety Congress, in the category of 'Best practice to reduce risks of harm', entitled 'Improving the nutritional care and health and wellbeing of adults within Dorset'. Poster is available to view as a PDF from:  
<http://wessexahsn.org.uk/img/projects/Dorset%20Nutrition%20Poster%20Patient%20Safety%20Congress.pdf>
- **March 2017:** Article in the Journal of General Practice Nursing, volume 3, number 1, entitled 'Reducing undernutrition in older people' which included our work on the Pan Dorset malnutrition programme and OPEN Eastleigh. Available to view as a PDF from:  
<http://wessexahsn.org.uk/img/projects/General%20Practice%20Nursing%20Article.pdf>
- **February 2017:** Along with the OPEN Eastleigh project (*see section 1.2*), the Pan Dorset Malnutrition Programme has been featured in a Public Health England review, entitled 'Helping older people maintain a healthy diet: A review of what works', which is available from: <https://www.gov.uk/government/publications/helping-older-people-maintain-a-healthy-diet-a-review-of-what-works/helping-older-people-maintain-a-healthy-diet-a-review-of-what-works>
- **March 2016:** The Dorset Nutrition Care Partnership was shortlisted for the Cross Sector Catering Awards 2016 ('Innovation Award' category)
- **July 2015:** Article in Complete Nutrition magazine entitled 'Dorset takes action to combat malnutrition in the community' by Sue Hawkins. This article covered the initial Wool and Purbeck pilots, as part of the early work for the Pan Dorset Malnutrition Programme. Available to view as a PDF from: <http://wessexahsn.org.uk/img/projects/Malnutrition.pdf>
- **2015:** Malnutrition Task Force (MTF) Report on the Purbeck pilot, available from: <http://wessexahsn.org.uk/img/projects/MTF%20Final%20REPORT.pdf>

### 1.2 OPEN Eastleigh

The OPEN Eastleigh project was a quality improvement programme for reducing undernutrition in older people; facilitating the implementation of NICE guidelines [8,9] and other national guidelines for nutritional support (which highlight the need for screening, individualised care and documenting the nutritional support plan [4,7,16]).

A review was carried out in 2014 with dietetic and nutritional experts and interested parties from across Wessex to reach a better understanding of the reasons why the existing national guidelines for nutritional care were inconsistently implemented in the community setting. The OPEN initiative was designed to address these issues. The aim of OPEN was to develop and evaluate an integrated approach for the provision of good nutritional care for older people within the community setting so that other areas across Wessex, and nationally, can use the learning and either replicate or adopt it in their local area and context. The approach built on the original pilot in Purbeck (part of the Pan Dorset Malnutrition Programme - *see section 1.1*).

Whilst many projects have been carried out to evaluate 'MUST' training in the community, the OPEN Eastleigh project considered undernutrition awareness training across a range of different teams and sectors (spanning healthcare, social care and the voluntary sector) in a defined geographical area where no specific input around reducing undernutrition had been previously been received by these teams / sectors.

Preliminary work commenced in 2014, which involved engagement meetings with key teams and stakeholders and establishing a nutritional 'steering group'. A training toolkit, evaluation framework, and new resources were developed, based on those used by Dorset and Hampshire dietetic teams. Undernutrition awareness training was delivered in 2015 to a range of health and social care professionals as well as a care home, voluntary sector organisation and community pharmacy. Training on 'MUST' was included in the nursing, care home and social care sessions.

Screening data (using 'MUST') was collected from May 2015 to April 2016 by health and social care teams and care home staff. Follow up by a Wessex AHSN dietitian was offered to all teams to support screening and care planning and help embed good practice.

**Project lead** - Wessex AHSN Nutrition in Older People Team

#### **Collaborators / Partners**

- Southern Health NHS Foundation Trust (Community Care Team and Older People's Mental Health)
- Hampshire County Council (Wellbeing Team, Adult social services, Community Independence Team)
- Eastleigh North Test Valley South GP practices (St Andrew's, Parkside, Boyatt Wood)
- Fleming House (care home)
- Eastleigh Borough Council
- One Community (voluntary sector)
- West Hampshire CCG
- Public Health Hampshire
- Sainsbury's Pharmacy

#### **Key Results**

- 375 older people were screened (undernutrition prevalence was 20%), with 142 being screened more than once (of which n=61 were at risk). Across the year of data collection, of the 61 people found to be at risk, 51% (n=31) had an improved nutritional status reflected by decreased 'MUST' score and/or increased weight

- 190 staff were trained from health (n=48), social care (n=48), care home (n=50) and voluntary sector workers (n=44), representing over 80% of the health and social care workforce in the pilot area. A total of 27 training sessions were delivered
- Increased awareness was evident across all staff groups from analysis of pre- and post-session knowledge assessment

### *Discussion: challenges, learning and recommendations*

- This approach demonstrated that the range of health and social care settings could engage in the project. However, introducing such a whole system change has required significant cultural change, e.g. extension of roles and new participants. Significant time was required to ensure engagement of the participants, and it took time for this change to be adopted and owned by the teams
- Various projects, e.g. work with Southern Health NHS Foundation Trust (*see section 1.3*), work with volunteers in a GP practice (*see section 2.4*) and the development of the OPEN toolkit (*see section 3.1*) have come out of this work
- Key challenges to the project and how the project sought to overcome these (where applicable) included:
  - Use of paper recording forms did not enforce data entry, leading to incomplete / inaccurate records, and did not facilitate Information sharing between teams - use of an electronic form (e.g. as used in the Dorset project) would be recommended
  - Lack of organisational support partly due to the project not being driven by senior management within the organisations involved - a project steering group was set up but membership of this group reduced over time as other conflicting priorities came along
  - Enthusiasm waned over time as other priorities and organisational changes took place - follow up support was offered to all teams to try and keep undernutrition a priority but this relied on engagement of teams
  - Due to the challenges in engaging GPs (reportedly due to multiple issues such as lack of time, lack of expertise, not seeing it as a priority (possibly due to lack of financial incentive and not understanding the links between undernutrition and worsening of other conditions), and the perception that malnourished patients get seen at home rather than in the practice), alternative roles were provided with training, e.g. transformation group and care navigators, to help support the workload. Practice Nurse forums were attended to try to better understand the challenges around screening and care planning by GPs and Practice Nurses
  - Staff acceptance of new roles, e.g. social care teams did not feel it was their role to screen using 'MUST' and conflicting clinical priorities - the programme has been looking at novel approaches to identifying undernutrition which might better suit this group (e.g. Nutrition Checklist - *see section 2.2*)
- A report summarising the lessons learnt can be found here: <http://wessexahsn.org.uk/img/projects/Lessons%20learnt%20from%20community%20integrated%20projects%20v0.2.pdf>

### *Outputs*

- The OPEN Eastleigh project has been evaluated through the creation of four reports; 1) lessons learnt from community integrated project, 2) Scoping and set up, 3) Training, 4)

Data. Each report is available to download from the resources section at:

<http://wessexahsn.org.uk/projects/60/past-projects-our-lessons-learnt>

- **March 2017:** Article in the Journal of General Practice Nursing, volume 3, number 1, entitled 'Reducing undernutrition in older people' which included our work on the Pan Dorset Malnutrition Programme and OPEN Eastleigh. Available to view as a PDF from: <http://wessexahsn.org.uk/img/projects/General%20Practice%20Nursing%20Article.pdf>
- **February 2017:** Along with the Pan Dorset Malnutrition Programme (*see section 1.1*), the OPEN Eastleigh project has been featured in a Public Health England review, entitled 'Helping older people maintain a healthy diet: A review of what works', which is available from: <https://www.gov.uk/government/publications/helping-older-people-maintain-a-healthy-diet-a-review-of-what-works/helping-older-people-maintain-a-healthy-diet-a-review-of-what-works>
- **November 2016:** Abstract accepted and poster displayed and presented (oral poster presentation) at the annual BAPEN conference, entitled 'Older People's Essential Nutrition (OPEN): an integrated approach for malnutrition screening awareness, identification and care planning' by A.J. Aburrow, E.L. Parsons, R. Jones, K. Wallis, J.L. Murphy. Poster available to view from: <http://wessexahsn.org.uk/img/projects/OPEN%20Poster%20AA%20PDF.pdf>

### **1.3 Implementation of undernutrition screening and treatment in a community setting procedure**

This project is a service improvement project for integrated community teams (ICTs) within Southern Health NHS Foundation Trust, to implement a new procedure for nutritional screening and care for older people. The project came from the learning from the OPEN Eastleigh project (*see section 1.2*). The new procedure was implemented by ICTs in Andover, Winchester and Basingstoke, with plans to further roll out across the Trust if successful. The project involved the following elements:

- Development of a care pathway (developed through consultation with a multidisciplinary team) to bring more of a community focus, better suited to screening and treating patients living in their own homes
- Development of an electronic form (on existing electronic recording system) to enable staff to enter screening data, care plan and monitor when follow up is due
- Development of bespoke undernutrition leaflet based on the OPEN undernutrition leaflet from the OPEN toolkit
- Training was developed and delivered to staff in each of the three locations by dietitians (one hour sessions over lunchtime on a variety of days)
- A baseline questionnaire to gauge knowledge and confidence around screening and care planning was administered before and after the training sessions

In addition to understanding the effectiveness of the model with respect to staff knowledge and patient outcomes, it is also important to understand factors that may help or hinder implementation of the new model, and embedding it as a routine aspect of care. Funded by the Burdett Trust for Nursing and led by Bournemouth University, the 'Implementing Nutritional Screening in Community Care for Older People' (INSCOPE) project explores the implementation



and embedding of the new model, informed by Normalization Process Theory (NPT, <http://www.normalizationprocess.org/>). The ambition of the project is to maximise the potential for scalability and cost effectiveness of this new model, by providing a recommended structure and approach to support implementation across diverse settings in the health service. The work will provide a new toolkit that will encompass training for wider rollout across the organisation and wider adoption and spread nationally.

**Project leads** - Kathy Steward (Area Matron) and Jane Murphy (Bournemouth University)

#### **Collaborators / Partners**

- Southern Health NHS Foundation Trust
- Bournemouth University
- North and West Hampshire CCG Medicine Optimisation Teams (prescribing support dietitian input)
- University of Southampton (Faculty of Health Sciences)
- Centre for Implementation Science (CIS), Wessex AHSN

#### **Key Results**

- 118 staff were trained between May and July 2017
- Between June 2017 and February 2018 screening was documented on 2837 older people. Of these, 675 people had 'MUST' scores (or categories) recorded. Of those with a recorded 'MUST' score or category, 26.4% were at medium or high risk of undernutrition.
- Initial results from the baselining data collected as part of the INSCCOPE research project (through staff questionnaires and interviews) revealed the following:
  - Staff already saw the value in nutrition screening and care planning, and did not view it as disruptive to other work. However there were concerns around time and resource implications of screening and care planning
  - Staff had concerns around lack of the wider organisational support (leadership support and lack of perceived importance) for nutrition screening and care planning, lack of access to dietetic support and lack of resources. Several staff felt that having a link person to provide advice and support would be beneficial as well as management support

#### **Discussion: challenges, learning and recommendations**

Work is ongoing to understand reasons for incomplete data on the electronic form, and investigating whether the electronic form could be amended to support more effective inputting of the data by teams.

The initial findings from the INSCCOPE project generated some key recommendations, including a) the appointment of nutrition champions within teams to monitor adherence to the new procedure, staff training and provide a link between teams and management, b) engaging organisational leadership on the importance and benefits of supporting screening and care planning, and c) the adoption of an e-learning training programme. To address these recommendations and implement the appropriate plan, a dietitian project lead was employed for a six month period. The effectiveness of the new procedure will then be re-assessed in October

2018 as part of the Healthy Ageing programme, and the potential to roll out the new procedure to the rest of the Trust will be considered. The project dietitian is carrying out the following actions:

- Establishing (and training) nutrition champions within teams
- Providing training updates to staff, and looking at the use of existing Trust-wide e-learning, and where this can be developed (including use of the electronic form)
- Applying for undernutrition training to be made mandatory for all staff
- Setting up and manning a telephone nutrition advice line
- Developing a communications plan
- Regularly attending Trust Nutrition and Hydration meetings, to provide a link to senior management, and using this to influence change in the perceived importance of nutritional screening and care

### **Outputs**

- Creation of an adapted version of the OPEN undernutrition leaflet for use by the project, which contains a bespoke final page where the staff member can enter the patient's weight, BMI and goals and the staff contact details
- Creation of a new page on the Southern Health intranet to host the information for staff about the new procedure, patient resources and useful links (accessed through staff log in)
- A video (of a nurse visiting a patient at home) to demonstrate how to embed the new nutritional care process into a patient visit
- Abstract accepted and poster displayed and presented (oral poster presentation) at the annual BAPEN conference (November 2017). Title of the abstract and poster: Exploring community healthcare staff experiences of current screening and treatment practices for malnutrition by M. Bracher, J. Murphy, K. Wallis, K. Steward, C.R. May and C.B. Matheson

## ***Theme 2: Innovative approaches for increased undernutrition awareness and identification by volunteers and carers***

### **2.1 Piloting the PaperWeight Nutrition Armbands the Voluntary Sector**

A project was run with Age Concern Hampshire (ACH) volunteers and with Dorset Partnership for Older People Programme (POPP) to raise awareness of undernutrition identification and signposting. The project aimed to evaluate the usability and effectiveness of the 'PaperWeight Nutrition Armband' (PWA) as a tool for identifying undernutrition in community dwelling older people. The PWA was developed by Age UK Salford and Salford Royal NHS Foundation Trust ([www.ageuk.org.uk/salford/about-us/preventing-malnutrition-in-salford/the-paperweight-armband](http://www.ageuk.org.uk/salford/about-us/preventing-malnutrition-in-salford/the-paperweight-armband)), and is designed to measure if someone's mid upper arm is below 23.5cm (indicating that their BMI is likely to be below 20). Questions should be asked alongside the PWA to determine recent unintentional weight loss.

Training on undernutrition (including recognising signs of weight loss, dietary advice for undernutrition and signposting) and use of the PWA was provided to 24 ACH volunteers. Meetings were held with the Dorset POPP community development worker (CDW) who agreed to use the PWA and provided associated advice / signposting on behalf of Dorset POPP. Data collection sheets, PWAs and undernutrition leaflets (OPEN leaflet) were provided to enable them to carry out the project, and they were asked to use the PWA on older people they saw as part of their role. Following a three-month period of data collection, data collection sheets were analysed. Additional information on usability and effectiveness was obtained through recorded interviews and paper surveys with the ACH volunteers.

**Project lead** - Wessex AHSN Nutrition in Older People Team

### **Key Results**

- Training provided to ACH volunteers increased the knowledge of attendees by 36%, and increased perceived confidence in talking to older people about nutrition and giving nutritional advice by 51%
- *Screening by ACH volunteers:*
  - 44 older people were screened (by seven volunteers) at locations including homes and clinics, with 18% of people (n=8) found to be at increased risk of undernutrition by being underweight using the PWA and/or had experienced recent unintentional weight loss. All people at increased risk of undernutrition received an OPEN undernutrition leaflet (<http://wessexahsn.org.uk/open-leaflet.pdf>) and n=6 received signposting or advice. The PWA was used with all people screened, whilst the questions to identify recent unintentional weight loss were only used with 64% of people
  - All volunteers questioned found the PWAs and questions very easy to use
  - Interviews held with ACH revealed that they found the PWAs a useful tool to initiate conversations around nutrition; however, misuse of the PWA was evident, e.g. using them over clothes, and it was apparent that volunteers tended to use the PWAs in isolation rather than in conjunction with the questions
- *Screening by Dorset POPP CDW:*
  - 634 people were screened at community events, with 7% (n=44) found to be at increased risk of undernutrition due to experiencing recent unintentional weight loss. Questions to identify recent unintentional weight loss were asked to all people, whilst the PWA was only used with four people as the stand itself generated interest and acted as the conversation starter
  - 12 of the people identified as 'at increased risk' were not under the care of a healthcare professional for this and were signposted accordingly.

### **Discussion: challenges, learning and recommendations**

The results of the project with ACH suggest the PWA was being used as a practical and visual tool by volunteers to discuss nutrition with their clients. However the PWA was also being used in isolation, without the weight loss questions, meaning those at risk of becoming undernourished may not be identified. As a result, the Wessex AHSN started working with the Patients Association to develop a Nutrition Checklist and interactive tool (the Nutrition Wheel - see section 2.3) to identify undernutrition by non-professionals and volunteers.

## Outputs

- Use of PWA with Age Concern Hampshire report can be accessed online using the link: <http://wessexahsn.org.uk/img/projects/Nutritional%20Screening%20by%20ACH%20Evaluation%20Report%20May%202017.pdf>
- Use of PWA with Dorset POPP report can be accessed online using the link: <http://wessexahsn.org.uk/img/projects/Dorset%20POPP%20Evaluation%20Report%20v0.1.pdf>
- Abstract accepted and poster displayed and presented (oral poster presentation) at the annual BAPEN conference (November 2017). Title of the abstract and poster: Evaluation of the use of PaperWeight Armband in screening for malnutrition among older adults by Benjamin Till, Kathy Wallis and Penny Nestel. Poster available to view from: <http://wessexahsn.org.uk/img/projects/Poster%20for%20BAPEN%20Conference%2012.11.17%20V5%20AA.pdf>

## 2.2 Patients Association Nutrition Checklist

We have been working with the Patients Association (<https://www.patients-association.org.uk>) to further develop their original Nutrition Checklist (published in November 2016). The original checklist was developed for use by patients in hospital discharge lounges, and provided patients with advice on visiting their GP to discuss further if the checklist flagged up nutritional issues. The modified checklist consists of:

- Part A - four key questions to focus discussions around weight and nutrition, aiming at identifying whether someone is 'at risk' of undernutrition
- Part B - to be completed for people who are identified at at risk from Part A. Part B consists of additional focussed questions on nutrition and eating and provides clear advice and signposting to appropriate support for older people living in the community.

The following projects were carried out to develop the checklist:

**April - July 2017** - three-month project with Pramacare, a domiciliary care company in Dorset, aiming to understand how the checklist could be used by care locality managers and other staff to identify clients who may be at risk of undernutrition and put appropriate care plans in place, as well as assessing the barriers and facilitators to using the checklist. For this project, the original checklist was shortened, and a section on advice / signposting and follow up was added in to allow carers to action a nutritional plan.

**December 2017 - February 2018** - three-month project with Hampshire Fire and Rescue Service and Age UK Southampton (AUKS), to understand how the checklist could be used by Fire Officers during Safe & Well checks ([www.hantsfire.gov.uk/keeping-safe/loveyourhome/safeandwell/](http://www.hantsfire.gov.uk/keeping-safe/loveyourhome/safeandwell/)) and those found to be at risk of undernutrition referred to AUKS, a local voluntary sector organisation whose service navigator and volunteers could carry out visits to people found to be at risk to give them appropriate advice, signposting and follow up.

**January - May 2018** - research project to validate the four initial questions of the Nutrition Checklist (Part A) against 'MUST', a clinically validated screening tool. 21 lunch clubs / activity groups were visited across Hampshire and Dorset, with a total of 312 older people being screened using both 'MUST' and the Nutrition Checklist. Results were as follows:

- Prevalence of undernutrition was 9.9% using 'MUST' and 21.8% using the Nutrition Checklist
- Agreement between 'MUST' and the Nutrition Checklist showed a moderate level of agreement between the two tools (sensitivity 85.4%, specificity 87.1%;  $\kappa = 0.47$  (SE = 0.064), 95% CI [0.349, 0.599],  $P < 0.001$ )
- There were four people who were identified as at risk using 'MUST' but were not identified using the Nutrition Checklist, and the reasons were attributed to participants having no change in weight and that they had always been slim according to the Checklist
- For the people identified as at risk using the Nutrition Checklist but not with 'MUST', reasons included unintentional weight loss (less than the 5% required to score with 'MUST' and recent loss of appetite), i.e. the Nutrition Checklist may have a role in identifying people likely to become at risk of undernutrition early

It has been concluded that the Nutrition Checklist has acceptable sensitivity and specificity when compared with 'MUST', and has potential for early identification of undernutrition risk and signposting to basic dietary advice and appropriate health and social care support. Further work is required to understand how the Nutrition Checklist could be effectively used by other people with care responsibilities, e.g. volunteers, community workers and home care staff to help reduce the growing health and social care costs, and improve quality of life for older people. This further work will be taken forward into the Healthy Ageing programme.

**Project lead** - Wessex AHSN Nutrition in Older People Team

### **Outputs**

- A version of the checklist for use by volunteers, care workers and community workers (non-traditional health or social care workers) where screening using 'MUST' is not necessarily appropriate
- Ongoing working with the Patients Association to develop and publish appropriate versions of the Checklist
- An abstract on the research project to validate the Part A questions against 'MUST' has been submitted for the BAPEN 2018 conference

## **2.3 Nutrition Wheel**

Following on from the work with Age Concern Hampshire and Dorset POPP around the use of the PaperWeight Nutrition Armband, it became apparent that there was a need for an interactive tool to act as a conversation starter, help to identify people at risk of undernutrition and provide some simple advice and signposting. A team of students from Bournemouth University developed an initial prototype (based on the four questions from the Patients Association Nutrition Checklist) and carried out some initial testing as part of their Service Improvement Project. The prototype

was further developed and a tear-off advice pad designed to reinforce the advice and signposting. Nutricia agreed to print a small quantity of Nutrition Wheels as part of an educational grant to enable further testing. Ethics permission (from Bournemouth University) was received in May 2018 to enable the Wheel to be tested and evaluated with voluntary sector organisations, and a researcher from Bournemouth University was appointed to carry out this evaluation. Ongoing development of the Nutrition Wheel will be carried out within the Healthy Ageing Programme.

## **2.4 One Community volunteer in GP Practice**

This six month project was developed in response to the evaluation of the OPEN Eastleigh project, where the GP practices involved felt they did not see undernourished people in their practice, and did not feel that they had the time or expertise to address undernutrition. The project was run in conjunction with One Community (a voluntary sector organisation in Eastleigh) and St Andrews GP Practice in Eastleigh to evaluate the potential and effectiveness of using volunteers to carry out nutritional (undernutrition) screening in a GP Practice.

Training was provided by a dietitian to the volunteers to provide them with the appropriate knowledge and skills to carry out the project. Training was also provided by One Community to ensure the volunteers had the appropriate knowledge of local services available for signposting to. Once trained, the volunteer(s) spent one morning a week at the GP practice, where they aimed to see all patients over 65 years of age who were visiting the practice on that morning. They carried out nutritional screening using 'MUST' and provided advice and signposting around nutrition and wellbeing as guided by a care pathway.

**Project lead** - Wessex AHSN Nutrition in Older People Team with support from Jean Roberts-jones (CEO of One Community) and Dr Dina Foy and Dr Craig Revill (GPs at St Andrews GP Practice)

### **Key Results**

- A total of three volunteers carried out screening in the practice
- 121 older people were screened, with seven people at medium or high risk of undernutrition ('prevalence' of undernutrition was 5.8%)
- Three of the people at medium risk ('MUST'=1), were followed up in a month and their risk had improved from medium to low. The remaining people either declined follow up (n=2) or no follow up was planned for an unknown reason (n=2)
- Feedback from the volunteers and GP practice staff has helped identify the value of the project, and also improvements which could be made if a similar project was run in another GP practice
- Cost avoidance figures were calculated for the three people who had a reduced 'MUST' as determined through follow up as £4101.12 (taking account of the cost for screening). Using data from Hampshire Health Record (2013-14) on the total number of older people registered at St Andrews GP Practice, assuming that 5% of this population are at increased risk of undernutrition, and 80% of them were screened using 'MUST' with 50% of them reducing their 'MUST' score, a cost avoidance of £42,021 would be achieved. This project demonstrates the potential significant cost saving that could be made if the project was continued or rolling out wider.

### ***Discussion: challenges, learning and recommendations***

This project highlights the potential for significant financial impact to be made through nutritional screening and provision of appropriate advice and signposting (even with the relatively small numbers screened as part of this project). It also highlights the potential benefit of having a volunteer from a local voluntary sector organisation, who is aware of the different services that older people can access to address the many non-medical causes of undernutrition. Whilst the volunteers were trained to screen using 'MUST', use of the Nutrition Checklist or Nutrition Wheel would enable volunteers to do similar projects without the need for additional training on 'MUST', which some volunteers found challenging to learn and understand. Going forward, One Community are looking to extend the project into more GP practices, and intend to use the project report as a business case to support this.

### ***Outputs***

- Report for this project published online: <http://wessexahsn.org.uk/img/projects/One-Community%20Evaluation%20report%20FINAL.pdf>

## **2.5 Raising awareness in community pharmacies**

A project to raise awareness of undernutrition in older people accessing community pharmacies was run in conjunction with NHS Portsmouth Clinical Commissioning Group, and working with Portsmouth City Council and Portsmouth Hospital Community Dietitians. Evidence shows that community pharmacies can be actively involved in the development and delivery of public health services [22], and that visitors to community pharmacies come from all sectors of the population and they are often patients' first point of contact, and, for some, their only contact with a healthcare professional [23]. Hence it was suggested that community pharmacies could be an ideal setting to identify people at risk of undernutrition and to provide some practical advice to eat better.

Training was provided by a dietitian and the Independence and Wellbeing team (who provided information on activities and interest groups in the city focussing on keeping older people fit and well) to 12 members of staff from ten different pharmacies in Portsmouth, Hampshire. Following training, the pharmacy staff who attended were encouraged to cascade their learning to other staff in their pharmacy. Four of the ten pharmacies then took part in a health promotion campaign, lasting three months, which involved pharmacy staff talking to older people about their weight, eating habits, recent weight loss, and then providing some basic information, signposting and resources to support people to maintain a healthy weight using a structured questionnaire. Data from the questionnaires was entered onto a web-based system called PharmOutcomes for analysis. Informal interviews were held with the pharmacies following the project, to obtain qualitative data on the strengths, weaknesses, recommendations and other insights.

***Project lead*** - Janet Bowhill, Portsmouth CCG

### ***Key Results***

- The pharmacy staff valued the training, finding it useful, easy to understand and reported a poor knowledge of undernutrition prior to the training session



- A total of 260 questionnaires were completed across the four pharmacies
- At least 46 older people (65+) were at risk of undernutrition (19% based on 241 people over 65); having either experienced recent unexplained weight loss and/or being underweight. Others were unsure so the risk could be higher
- Follow up interviews suggested that taking part in this project has increased general awareness about undernutrition and the scale of the problem

### *Discussion: challenges, learning and recommendations*

This health promotion initiative demonstrated that training can improve undernutrition awareness in community pharmacy staff and lead to conversations with their customers about nutrition and provision of support around eating. The number of conversations held (reflected by the number of questionnaires completed) suggested concurrence with existing research that community pharmacies can actively be involved in delivering public health services [22]. Results suggest that tools to support how to start conversations around nutrition may help improve the number and quality of conversations. The Patients Association Nutrition Checklist could be used in pharmacies in the future.

### *Outputs*

- Project report is available online:  
<http://wessexahsn.org.uk/img/projects/Portsmouth%20Pharmacies%20Evaluation%20Report%20v4.pdf>
- Abstract accepted and poster presented at the annual BAPEN conference (November 2016). Title of the abstract and poster: Role of community pharmacies in raising awareness of malnutrition in older people by A.J. Aburrow, J. Micklam, J. Bowhill, K. Wallis, E.L. Parsons. Poster available to view from:  
<http://wessexahsn.org.uk/img/projects/Community%20Pharmacy%20Poster%20AA%20PDF-1480456210.pdf>

## *Theme 3: Resource development*

### **3.1 OPEN Toolkit**

The OPEN toolkit is a major output from the Nutrition in Older People Programme, resulting from the materials developed as part of the programme's projects. The toolkit has been endorsed by the British Dietetic Association (BDA). Below is a summary of the contents of the toolkit and how they were developed:

#### **Bespoke training packages that could be used for different roles working within the community**

- A multi-disciplinary task to finish group was set up in 2015 to develop training packages, which were then piloted with healthcare, social care and voluntary sector workers during the OPEN Eastleigh project through face-to-face delivery by a dietitian. Packages were evaluated through feedback (comparison of pre vs post session questionnaires, session evaluations, numbers trained and nutritional screenings following training) and updated. They have since been tested on a



variety of groups including Hampshire reablement, Eastleigh transformation teams, Southern Parishes Care Navigators and COPD nurses.

**Online Training Videos** - Two videos have been developed - a general awareness video on undernutrition (which has been split into smaller sections) and a training video on how to screen using 'MUST'.

**Resources suitable for the general public** - The task to finish group helped develop and review new resources, which were piloted during training and with the general public at events during 2015-2017. The 'OPEN Undernutrition leaflet' is our flagship resource, an A6 concertina leaflet, which is brightly coloured and attractively designed (<http://wessexahsn.org.uk/open-leaflet.pdf>). Three posters have also been published, which are ideal for use in public areas to raise awareness. We have published a carer's A4 leaflet for COPD (informed by the Malnutrition Care Pathway (<https://www.malnutritionpathway.co.uk/>)) and another for those caring for people living with dementia. This leaflet, entitled 'Eating and Drinking Well - Supporting People Living with Dementia' has been informed by research (funded by the Burdett Trust for Nursing) undertaken at Bournemouth University (<http://www.bournemouth.ac.uk/nutrition-dementia>). In April 2018, a double-sided A4 print-friendly version of the OPEN Undernutrition Leaflet was published for use and has been adopted across Hampshire dietetic departments and in General Practice.

**Generic nutritional care pathways** - were produced to guide the person carrying out the screening on appropriate advice to give, actions to take and how to refer on to other services. Local pathways were developed as part of the Purbeck and OPEN Eastleigh projects, which were subsequently 'genericised' for the toolkit. These pathways were used and localised for the project with Southern Health NHS Foundation Trust.

**Hydration toolkit** - developed through collaboration between Kent Surrey Sussex AHSN and Wessex AHSN, building on original work by North East Hampshire and Farnham CCG. It has been designed for staff in care homes and carers in the community, providing a practical guide to help them assist older people in their care to achieve optimum hydration.

**Evaluation framework** - designed to help teams consider how to do a robust evaluation of nutrition interventions. It has been developed by the Wessex AHSN in collaboration with multidisciplinary partners from within the Wessex region and further afield.

**Tools for people not traditionally screening using 'MUST'** - the Patients Association Nutrition Checklist was modified (*see section 2.2*) and the Nutrition Wheel (*see section 2.3*) was developed, as tools to enable people with care responsibilities working with older people (e.g. volunteers and carers) to identify undernutrition and signpost / advise accordingly.

**Project lead** - Wessex AHSN Nutrition in Older People Team

### Outputs

- Publication of the OPEN toolkit in July 2017. The toolkit is published on the Wessex AHSN website using the links: <http://wessexahsn.org.uk/OPEN-toolkit>

- **July 2017:** Training and Education category winner for the Patient Safety Congress poster competition for our poster entitled 'The development of a toolkit and training package for health, social care and voluntary sector teams working with older people in the community to reduce undernutrition'. Available to view as a PDF from:  
<http://wessexahsn.org.uk/img/projects/Undernutrition%20Training%20PSC%20poster%20FINALIST.pdf>
- The Hydration Toolkit can be downloaded by accessing Slideshare, using the following link:  
<https://www.slideshare.net/WessexAHSN/toolkit-improving-hydration-among-older-people>
- For the year's period 3rd June 2017 to 3rd June 2018, we have collated the following data about the nutrition pages of the Wessex AHSN website:
  - 914 page views, with the average time spent on the page being almost nine minutes
  - OPEN undernutrition leaflet received 1794 views, 997 embeds and 81 downloads
  - Dementia specific leaflet received 349 views, 52 downloads
  - COPD specific leaflet received 443 views, 52 downloads
  - Downloading of the role specific training toolkits have varied from 14 downloads for the pharmacy training toolkit to 119 for the care home training toolkit

## *Other Projects*

### **4.1 Food is a MUST**

Food is a MUST (FiaM) was a South Wiltshire initiative centred on locally agreed, evidence-based pathways to identify and manage undernutrition in community settings. It involved providing training for care home staff following by a six-month audit which included reviewing the impact of training, number of people screened, 'MUST' scores and proxy outcome measures.

In South Wiltshire, a care home pilot was carried out, which provided more intensive support to care home team following training, based on written agreement between the dietitians and the care home management to meet the objectives of the project. A follow up review and visit one month post-implementation showed that training and use of documentation enabled the care home staff to develop effective care plans which met best practice recommendations for identifying and managing malnutrition.

*Project lead* - Anna Cable, Integrated Community Health Division Community Dietitian - Promoting Health, South Wiltshire

### **4.2 Coloured glasses**

Following a presentation at our 2016 conference about the use of coloured glasses on a hospital ward in the region, a literature review was carried out to review what evidence existed to support the use of coloured glasses/cups in improving hydration. The literature review revealed insufficient evidence to confirm whether coloured cups worked to improved hydration. Due to multifactorial reasons for dehydration and the challenges of obtaining data in the community, work in various settings in the region (including care homes and hospital wards) has not been able

to conclude whether the use of coloured glasses leads to improved hydration. However, there have been several anecdotal reports regarding improved hydration from using coloured glasses locally, which has led to coloured glasses being adopted widely across Wessex.

***Project lead*** - Toni Kingston, Staff Nurse, Queen Alexandra Hospital

## Nutrition in Older People Programme Conferences

The programme has held three conferences, which were a chance to share learning from the programme as well as raising the profile of undernutrition in the community. In total, our conferences have attracted over 300 delegates, 28 posters on display, 23 talks / presentations and nine workshops. Copies of the presentations and posters, and videos of the presentations can all be found on the website at

<http://wessexahsn.org.uk/projects/88/nutrition-events-in-wessex>.

1. *'Perspectives on malnutrition' conference, 29th September 2015*, which saw 120 delegates gather to hear guest speakers give their perspective on the issues caused by undernutrition in older people from health, social care, voluntary sector and commissioning viewpoints. Two workshops were held, one investigating the challenges facing people involved in implementing good nutritional care in older people, and the second exploring the NHS England commissioning guidance [16] which had been recently launched at the time
2. *'Reducing undernutrition - Spreading the responsibility' conference, 17th November 2016*, which saw over 100 commissioners, managers and care providers gather to focus on the successful implementation of integrated nutritional care for older people living in the community, and how everyone can work together, spreading the responsibility, to reduce undernutrition. Keynote speakers were Dr Rachel Pryke (RCGP Clinical Lead for Nutrition) and Dr Trevor Smith (BAPEN Lead on data and measurement). Afternoon workshops were run on the topics of 'getting undernutrition on the commissioning agenda', 'providing good community nutritional care' and 'raising awareness in carers and domiciliary care'.
3. *'Making undernutrition in older people everyone's responsibility' conference, 6th March 2018* again saw over 100 commissioners, managers and care providers gather to celebrate the success of the Programme and focus on how everyone needs to get involved to address the growing problem of undernutrition. Keynote speaker Mike Wallace (Strategic Affairs Director and Health Economist for Nutricia), spoke on the growing cost of undernutrition and how we can't afford not to get it right, and Dr Liz Weekes (Consultant Dietitian from King's College London), shared findings from her research. Afternoon workshops were held around the OPEN toolkit resources, new tools (Patients Association Nutrition Checklist and the Nutrition Wheel), how nutrition care pathways can be embedded into community care and how to present a business case for undernutrition identification and care.

## Programme-wide publications and awards

In addition to the publications and awards listed in relation to our individual projects, the following publications and awards are in relation to programme-wide activities:

- **June 2018:** Awarded Highly Commended for the HSJ Value Awards in the category 'improving value in the care of frail older patients' for our work with the Pan Dorset Malnutrition Programme
- **May 2018:** The programme was shortlisted for the Complete Nutrition Awards in the category 'Community Nutrition Professional of the Year'
- **April 2017:** Article in Complete Nutrition magazine entitled 'The need for an integrated approach for reducing undernutrition in older people living in the community' by Annemarie Aburrow. This article featured our work on the Pan Dorset malnutrition programme, the OPEN Eastleigh project and the publication of the OPEN toolkit. Available to view as a PDF from:  
<http://wessexahsn.org.uk/img/projects/Reducing%20Undernutrition-Complete%20Nutrition%20Focus%20Article.pdf>
- **December 2016:** Article in Nursing in Practice, Invited Review Part 1, volume 92, entitled 'Identifying and managing malnutrition in older people living in the community: the role of primary care nurses' by J. Holmes and J.L Murphy. Available from:  
<https://www.nursinginpractice.com/article/identifying-and-managing-malnutrition-older-person>
- **December 2016:** Article in Nursing in Practice, Invited Review Part 2, entitled 'Managing malnutrition in older people' by J.L Murphy. Available from:  
<https://www.nursinginpractice.com/article/managing-malnutrition-older-people>

## Ongoing Work

Following the close of the Nutrition in Older People Programme, the following work will be carried into the Health Ageing Programme, and be ongoing:

1. Further work to validate the Nutrition Wheel, including conducting research on the feasibility of using the Nutrition Wheel with volunteers and other non-traditional care roles in the community
2. Further work to validate the use and effectiveness of the Nutrition Checklist, which will lead to the formal launch and publishing of both the Checklist and the Nutrition Wheel
3. Continuation of work with Southern Health NHS Foundation Trust - following collection of T2 data for the INSCCOPE research project (in October 2018), this work will be evaluated and recommendations will be made by early 2019.

## Recommendations

The following recommendations have been made in light of the work and findings of the Nutrition in Older People Programme:

- Call to action nationally - particularly around the importance of having an integrated approach to the identification and treatment of undernutrition (see call to action, pg. 29). Consideration of using the frailty agenda to bring attention to the growing issues around undernutrition, and opportunities for STPs
- Increased identification and improved care of older people at risk of being undernourished by integrated care teams (health and social care) using appropriate undernutrition care pathways. Having shared records will facilitate the sharing of care plans and referrals between teams (learning from Dorset work)
- Call for a review of the national malnutrition care pathway to consider approaches for early identification and care in the community across different sectors, through use of innovative tools (Nutrition Checklist and Nutrition Wheel). Due to the successful validation of the questions from Part A of the Patient Association Nutrition Checklist, there is potential to influence national guidelines with the recommendation that in certain community settings, the four questions in Part A can be used for an initial triage to identify people who may be at risk of undernutrition and for where there should be a 'clinical concern' (NICE guidelines state that screening should be carried out where there is a clinical concern [11]). Screening using 'MUST' could then be carried out for those people identified through the Checklist questions. Currently there is limited use of 'MUST' in GP practices and by community health teams due to reasons including competing clinical priorities and lack of training. Since undernutrition is a key contributory factor for frailty and other health conditions, this approach offers a practical solution for increasing the identification of those at risk
- Continue to promote increased awareness about the scale of the problem of undernutrition across diverse community groups (including voluntary sector organisations and care workers), through use of training resources such as those published as part of the OPEN toolkit, and innovative tools (such as the Nutrition Checklist and Nutrition Wheel). Through wider awareness and earlier identification of older people at risk of undernutrition who are living in their own homes, it is predicted that there will be a significant effect on improving the health of individuals, extending the length of time they remain independent and hence reducing their care needs. This will result in cost avoidance for both health and care needs across the system.
- Learning from the programme will be fed into the James Lind Alliance work ([www.jla.nihr.ac.uk/priority-setting-partnerships/nutritional-screening-and-malnutrition/](http://www.jla.nihr.ac.uk/priority-setting-partnerships/nutritional-screening-and-malnutrition/)) to raise awareness of undernutrition in the community and identify questions for future research.

## Call to action

STPs		Explore and enforce the importance of system-wide nutritional screening for people at risk of undernutrition and provision of appropriate care and advice
Commissioners		Commission integrated nutritional care within the community, including within non-healthcare roles and the third sector
Provides	Acute	Improved communication with community services around nutritional care on discharge
	Community healthcare and care homes	<ul style="list-style-type: none"> <li>• Increased uptake of training around undernutrition awareness, screening and care planning</li> <li>• Improved integrated nutritional care within and between community teams</li> <li>• Early identification through use of Nutrition Checklist</li> </ul>
	Social care and carers	<ul style="list-style-type: none"> <li>• Increased uptake of training around undernutrition awareness, screening and care planning</li> <li>• Earlier identification - use of Nutrition Checklist/Wheel</li> <li>• Widespread use of awareness materials, e.g. OPEN undernutrition leaflet</li> </ul>
Third sector		<ul style="list-style-type: none"> <li>• Increased uptake of training, e.g. OPEN toolkit resources</li> <li>• Earlier identification - use of Nutrition Checklist/Wheel</li> </ul>

## Acknowledgements

### *Wessex AHSN Nutrition in Older People Programme Team:*

- Kathy Wallis, Programme Manager
- Jane Murphy, Clinical Lead
- Annemarie Aburrow, Dietitian
- Emma Parsons, Dietitian
- Jenny Davies (Clinical Lead; 2015)
- Rhiannon Jones (Dietitian; 2015-2016)
- Diana O’Grady (Programme Co-ordinator; 2016-2017)
- Rosie Cadogan (Research Assistant; 2016)

### *Members of key groups / workstreams*

<b>Nutrition Steering Group</b>	<b>Awareness &amp; Training Task Group Workstream</b>	<b>Nutrition Outcomes Measurement Workstream</b>
Kathy Wallis, Programme Manager, Wessex AHSN		
Emma Parsons, Teaching Fellow, Biomedical Research Centre, Southampton		
Jane Murphy, Bournemouth University		Ali Hill, Clinical Lecturer in Nutrition, University of Southampton
Annemarie Aburrow, Dietitian, Wessex AHSN		Michelle Smith, Health Programme Advisor, Public Health, Dorset County Council
Sue Green, Senior Lecturer, University of Southampton		Mike Stroud, Consultant Gastroenterologist, UHS
Bill Gillespie, CEO, Wessex AHSN	Aude Cholet, Prescribing Support Specialist Dietitian for North & West Hampshire CCGs	Caroline Powell, Director, Centre for Implementation Science (CIS), Wessex AHSN
Sue Hawkins, Dorset Malnutrition Programme	Sally Ann Denton, Chief Dietitian, Portsmouth Hospitals	Sydney Anstee, Senior Research Fellow, CIS, Wessex AHSN
Nicki Rodgers, Nurse Facilitator, Mid Hampshire CCG	Karen Ashbolt, Chief Community Dietitian, UHS	Jeanette Keyte, Senior Public Health Practitioner for Nutrition, Hampshire County Council
Hilary Rivers, Chief Dietitian, Salisbury District Hospital	Sarah Dinenage, Community Dietitian, UHS	
Kathy Steward, Area Matron, Southern Health NHS Foundation Trust	Sarah Colson, Prescribing Support Dietitian, North East Hants and Farnham	



Helen Roberts, Consultant for Older People, UHS / NIHR CLAHRC (Wessex)	Anna Cable, Prescribing Support Dietitian, Great Western Hospital NHS Foundation Trust	
Claire Wood, Head of Dietetics and Nutrition, UHS	Denise Thomas, Head of Dietetics, Portsmouth Hospitals	
Maria Garrett-Marley, Nurse Facilitator, West Hants, CCG	Alison McGinley, Community Dietitian, Dorset HealthCare	
Sian Robinson, Healthy Ageing Lead, BRC	Claire Cheminade, Public Health Wider Workforce Lead, Health Education Wessex	
Lesley Carter, Senior Health Influencing Manager – Professionals and Practice, Age UK		
Trevor Smith, Consultant Gastroenterologist, UHS		
Gary Finch, Dorset Help and Care		

***Collaborators / partners involved in our project work, listed alphabetically***

- Age Concern Hampshire
- Age UK (national)
- Age UK Southampton
- Bournemouth University (Faculty of Health and Social Sciences)
- Centre for Implementation Science, Wessex AHSN
- City Pharmacy, North End, Portsmouth
- Dorset Age Partnership
- Dorset Carers Partnership
- Dorset County Council
- Dorset Clinical Commissioning Group
- Dorset HealthCare University NHS Foundation Trust
- Dorset LINK
- Dorset POPP
- Eastleigh Borough Council
- Eastleigh North Test Valley South GP practices (St Andrew’s Practice, Parkside, Boyatt Wood)
- Everetts Pharmacy, Cosham
- Fleming House (care home)
- Goldchem Pharmacy, Southsea
- Great Western Hospitals NHS Foundation Trust (Swindon Dietitians Community Nutrition Support Team)
- Hampshire County Council (Wellbeing Team, Adult social services and Community Independence Team)
- Hampshire Fire & Rescue Service (and St Mary’s Fire Station, Southampton)

- Health Education England, Wessex
- NHS Portsmouth Clinical Commissioning Group
- NIHR Southampton Biomedical Research Centre
- North and West Hampshire CCG Medicine Optimisation Teams (Prescribing Support Dietitian)
- Nutricia
- One Community
- Portsmouth County Council
- Portsmouth Hospitals NHS Trust (Community Dietitians)
- Public Health Dorset
- Public Health Hampshire
- Rowlands Pharmacy, North End, Portsmouth
- Sainsburys Pharmacy, Eastleigh
- Southern Health NHS Foundation Trust (Eastleigh Community Care Team and Older People's Mental Health; Business Unit 3)
- The Burdett Trust for Nursing
- The Patients Association
- Tricuro
- University of Southampton (Faculty of Health Sciences)
- University of Southampton NHS Foundation Trust (Dietetic Department)
- West Hampshire Clinical Commissioning Group (Nurse Facilitators)

## References

1. Russell CA, Elia M. Nutrition Screening Survey in the UK in 2008. [Internet]. 2009. Available from: [http://www.bapen.org.uk/pdfs/nsw/nsw\\_report2008-09.pdf](http://www.bapen.org.uk/pdfs/nsw/nsw_report2008-09.pdf)
2. Elia M, Stratton R. Geographical inequalities in nutrient status and risk of malnutrition among English people aged 65y and older. 2005. *Nutrition*; 21:1100-1106.
3. WHO. What is malnutrition? [Internet]. 2016 [cited 2017 Sep 29]. Available from: <http://www.who.int/features/qa/malnutrition/en/>
4. BAPEN. Malnutrition Matters - Meeting Quality Standards in Nutritional Care [Internet]. Bapen. 2010. Available from: <http://www.bapen.org.uk/pdfs/toolkit-for-commissioners.pdf>
5. Elia M, Russell CA. Combating Malnutrition : Recommendations For Action. *Russell J. Bertrand Russell Arch.* 2009;1–7.
6. Russell C, Elia M. Screening for malnutrition in sheltered housing. A Report from BAPEN with the Group on Nutrition in Sheltered Housing (GNASH). *Br. Assoc. Parent. Enter. Nutr.* 2009
7. BAPEN. Malnutrition among Older People in the Community: Policy Recommendations. *Br. J. Community Nurs.* [Internet]. 2006; Available from: [http://www.bapen.org.uk/pdfs/malnut\\_in\\_the\\_community.pdf](http://www.bapen.org.uk/pdfs/malnut_in_the_community.pdf)
8. Hill K, Sutton L, Hirsch D. Living on a low income in later life. *Age UK.* 2011.
9. Edington J, Barnes R, Bryan F, Dupree E, Frost G, Hickson M, et al. A prospective randomised controlled trial of nutritional supplementation in malnourished elderly in the community: clinical and health economic outcomes. *Clin. Nutr.* [Internet]. Elsevier; 2017;23:195–204. Available from: [http://dx.doi.org/10.1016/S0261-5614\(03\)00107-9](http://dx.doi.org/10.1016/S0261-5614(03)00107-9)
10. NICE. Nutrition support in adults. 2007;1–26. Available from: <http://www.nice.org.uk/nicemedia/live/10978/29978/29978.pdf%5Cnpapers3://publication/uuid/48F2C672-83ED-4CAB-9BDC-BB22A7C7D3A1>
11. NICE. Nutrition support for adults : oral nutrition support, enteral tube feeding and parenteral nutrition. 2006;
12. Guest JF, Panca M, Baeyens J-P, de Man F, Ljungqvist O, Pichard C, et al. Health economic impact of managing patients following a community-based diagnosis of malnutrition in the UK. *Clin. Nutr.* [Internet]. Elsevier; 2017;30:422–9. Available from: <http://dx.doi.org/10.1016/j.clnu.2011.02.002>
13. Elia M. The cost of malnutrition in England and potential cost savings from nutritional interventions (full report) A report on the cost of disease-related malnutrition in support in adults. 2015
14. Wilson L, Health RP. A review and summary of the impact of malnutrition in older people and the reported costs and benefits of interventions. 2013;1–30.
15. MAG (Malnutrition Advisory Group). The “MUST” explanatory booklet. 2011.
16. NHS England. Guidance – Commissioning Excellent Nutrition and Hydration. 8 Oct. 2015. 2015;1:29.
17. Green SM, James EP, Latter S, Sutcliffe M, Fader MJ. Barriers and facilitators to screening for malnutrition by community nurses: a qualitative study. *J. Hum. Nutr. Diet.* [Internet]. 2014;27:88–95. Available from: <http://dx.doi.org/10.1111/jhn.12104>

18. Lorenzo-López L, Maseda A, de Labra C, Regueiro-Folgueiro L, Rodriguez-Villamil JL, Milan-Calenti JC. Nutritional determinants of frailty in older adults: a systematic review. *BMG Geriatrics*. 2017; 17(1): 108
19. Boulos C, Salameh P, Barberger-Gateau P. Malnutrition and frailty in community dwelling older adults living in a rural setting. *Clin Nutr*. 2016. 35(1): 138-43.
20. Fried LP, Tangen CM, Watson J, Newman AB, Hirsch C, Gottdiener J, et al. Frailty in older adults: evidence for a phenotype. *J Gerontol A Biol Sci Med Sci*. 2001. 56(3): M146-56.
21. Wilson L. A review and summary of the impact of malnutrition in older people and the reported costs and benefits of interventions, 2011. London: Malnutrition Task Force.
22. Department of Health. Healthy Lives, Healthy People – our strategy for public health in England. The Stationary Office. [Internet]. 2010. Available from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/216096/dh\\_127424.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216096/dh_127424.pdf)
23. Pharmaceutical Services Negotiating Committee, National Pharmaceutical Association, Royal Pharmaceutical Society of Great Britain, PharmacyHealthLink. Public Health – a practical guide for community pharmacists. [Internet]. Available from: [http://psnc.org.uk/wpcontent/uploads/2013/07/public\\_health\\_book\\_all.pdf](http://psnc.org.uk/wpcontent/uploads/2013/07/public_health_book_all.pdf) [Accessed 6 April 2016].