Survey of Malnutrition and Nutritional Care in Adults

UK Malnutrition Awareness Week, October 2021

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On behalf of the Malnutrition Action Group of BAPEN.

MAG

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Key points

This BAPEN survey of malnutrition and nutritional care, undertaken as part of the UK Malnutrition Awareness Week (October 2021), included 1299 adults from hospitals and a variety of community settings across England (917 adults) and Wales (382 adults).

Patients (51% female; mean age 70 (18-101) years, mean BMI 25.4 (SD 6.9) kg/m^2) had a range of primary diagnoses, including cancer (11%), frailty (15%), neurological diseases (15%), gastrointestinal (10%) and a variety of other conditions (cardiovascular, respiratory (including COVID-19), falls and fractures). Around one fifth of patients were underweight (BMI < 20kg/m^2), 20% were obese (BMI > 30kg/m^2) and 21% had unplanned weight loss.

Overall, 39% of adults were at risk of malnutrition (10% medium and 29% high risk) using the 'Malnutrition Universal Screening Tool' ('MUST'). Malnutrition prevalence was highest in individuals with gastrointestinal conditions (48%), respiratory conditions (45%), cancer (45%) and neurological diseases (44%). In hospitals, 40% of patients were at risk of malnutrition, and in community settings, there was a higher malnutrition prevalence in those in their own homes (51%) and residents in care homes (60%), with the lowest prevalence in mental health units (14%). These findings were similar to previous years surveys.

However, the use of nutritional care plans was lower this year than in previous years. There were fewer nutritional care plans in place overall (for 50% of all patients), and for both medium risk (66%) and high risk patients (76%), There was a also a greater use of enteral tube feeding in those that had a care plan in place (from 13% to 24% in 2020 vs 2021) and an increase in PN use (from 2% to 4%). It is impossible with this survey to ascertain the reasons why there are such differences in use of nutritional care, although it is likely to be related to the impact of the pandemic on the ability to deliver certain health (including nutritional) care and on the demand for artificial nutritional support as systems 'catch up'. Further research is needed. The use of food based interventions (78% had at least one food-based intervention) and oral nutritional supplements (57%) remained relatively constant as a proportion of those with a care plan in place.

Purpose & Methods

This annual survey aimed to gain a better understanding of the prevalence of malnutrition according to the Malnutrition Universal Screening Tool ('MUST')(1) and the use of nutritional care across the UK in 2021 across any setting.

BAPEN has regularly undertaken surveys to assess the extent of malnutrition in different health care settings across the UK (2-5). Similar to the 2019 and 2020 surveys (2,3), this survey of the prevalence of malnutrition and nutritional care, used the BAPEN online portal (https://data.bapen.org.uk/maw/maw-home) to collect survey data. The designated period of data collection coincided with UK Malnutrition Awareness Week 2021 (1st – 31st October 2021). An invitation letter was sent out in September 2021 to invite organisations and individuals across health and social care settings to register to participate in the survey (see Appendix A).

Non identifiable data were entered by health or social care professionals for each individual screened as follows (and see Appendix B for the questions)

Individual Descriptive Data

The following information was collected for each individual:
- Location of residence (Hospital, Community Hospital/Rehabilitation Unit, Own Home, Care Home, Other)
- Length of stay in the location they resided (if applicable)
- Age
- Gender
- Primary diagnosis (choice of 1): Cancer, Cardiovascular (e.g. cardiovascular disease, coronary artery disease), COVID-19, Dermatology, Endocrinology (e.g. diabetes), Falls/Fracture, Frailty, Genito/renal, Gastrointestinal (e.g. Crohn's, colitis) Mental health (e.g. depression, anxiety), Musculoskeletal (e.g. arthritis), Neurological (e.g. stroke, motor neurone disease, dementia, Alzheimer's), Respiratory (e.g. chronic obstructive pulmonary disease, cystic fibrosis), Surgical, Wounds, Vascular, No disease or Other (free text)
- Profession of the individual who inputted the data

A paper version was also available for users if needed to capture information to input into the portal (Appendix B)

'MUST'

Data required to complete the Malnutrition Universal Screening Tool ('MUST', see Appendix C) for each individual were entered by the health care professional in either metric or imperial units (e.g. weight, height, previous weight or weight lost over 3-6 months). There was a question to confirm if the weight loss was unintentional or not.

Body mass index and percentage unintentional weight loss were automatically calculated as were the BMI and weight loss scores (**Steps 1 and 2 of 'MUST'**) in the online portal.

The presence of an acute disease effect (**Step 3 of 'MUST'**; 'if the individual was acutely ill and there has been or is likely to be no nutritional intake for more than 5 days') was answered by health care professionals and the relevant score generated.

The overall calculation of the 'MUST' score (0 to 6) and 'MUST' category (low, medium, high) (**Step 4 of 'MUST'**) were automated within the online portal.

The portal could generate for health care professionals an email record of each individual 'MUST' screen.

Nutritional care

The survey also asked if there was a malnutrition management plan in place for each individual and if so, the treatment options that were part of the care plan (See Table 1), which could include

- food based interventions and dietary counselling

- oral nutritional supplements (ONS)

- enteral tube feeding (ETF)

- parenteral nutrition (PN)

Table 1: Nutritional care plan treatment options

Food based intervention	Snacks Diet sheet Fortified foods with food ingredients Fortified foods with modular feeds Dietary counselling by dietitian Other (please specify)
Oral nutritional supplements	Ready-made liquid 1.0kcal/ml Ready-made liquid 1.5kcal/ml Ready-made liquid 1.6kcal/ml Ready-made liquid > 2kcal/ml Pre thickened Dessert style Powder Other (please specify)
Enteral Tube feeding	Continuous Bolus Energy density < 1kcal/ml Energy density 1-1.5kcal/ml Energy density 1.6-2kcal/ml Energy density >2kcal/ml Fibre containing High protein Peptide/amino acid Blenderised diet Other (please specify)
Parenteral Nutrition (PN)	Yes No
If yes, is PN managed by a nutrition support team	Yes No
PN Route	Cannula Central Line Peripheral Line Other (please specify)

Results

Individual descriptive data

The survey included a total of 1299 individuals whose anonymised data were entered into the online portal. The majority of individuals were screened by a Dietitian (92%) or a Dietetic Assistant (4%).

Location

Three quarters of the individuals in the survey were in hospital (74%). The remaining 26% were based in community settings, including mental health units (MHU) (9%), a community hospital/rehabilitation unit (8%), their own home (6%) or a care home (3%). For those in institutions, there was a wide-ranging length of stay (range from 0-761 days were reported).

Table 2: Setting of individuals screened and length of stay

Setting	n	%	Length of stay mean (range) days
Hospital	955	74	19.1 (0-293) ^
Community Hospital / Rehab	102	8	53.1 (1 - 316)
Own Home	84	6	-
Care Home	45	3	180.8 (6-761)*
Mental Health Unit	113	9	86.4 (1-614)
TOTAL	**1299**	**100**	-

^n=884; *n=8

Most of the individuals screened were resident in England (71%; n 917), with the remaining 29% (n382) living in Wales. There was no data from Northern Ireland or Scotland.

Table 3: Country of individuals screened

Country	Frequency	%
England	917	71
Wales	382	29
Northern Ireland	0	0
Scotland	0	0
Total	**1299**	**100%**

In England, the data was predominantly collected from the West Midlands (57%), the South East (18%) and the South West (16%). In Wales the data was mostly collected in Pembrokeshire (34%), Cardiff (30%) and Carmarthenshire (20%) (Table 4).

Table 4: County of individuals screened (England & Wales)

County	Frequency	%
Bristol	113	8.7
Buckinghamshire	119	9.2
Cardiff*	113	8.7
Carmarthenshire*	78	6.0
Ceredigion*	59	4.5
Dorset	33	2.5
Greater London	1	0.1
Merseyside	35	2.7
Pembrokeshire*	129	9.9
Staffordshire	520	40.0
Surrey	35	2.7
Tyne & Wear	42	3.2
Vale of Glamorgan*	3	0.2
West Midlands	6	0.5
West Sussex	13	1.0
Total	**1299**	**100.0**

*Wales

For a summary of data for those counties that had more than 40 individuals in the survey, see Appendix D-O.

Age, gender and primary diagnosis

There was an even split of gender (female 51%; male 49%) with a broad age range (mean 70, range 18 – 101 years). The majority of individuals (68%, n885) were aged 65 years and over (19% 65-74 years; 26% 75-84 years; 23% 85 years and over) with 32% aged <65years.

Although there were a variety of primary diagnostic categories, the most common ones were neurological conditions (15%), frailty (15%), cancer (11%) and gastrointestinal (10%) conditions. COVID-19 as a primary diagnosis accounted for 5% (n 68) of individuals in the survey (Table 5).

Table 5: Primary diagnosis of individuals screened

Primary diagnosis	Frequency	%
Cancer	148	11.4
Cardiovascular (e.g. ischaemia, coronary artery disease)	81	6.3
COVID-19	68	5.3
Dermatological	7	0.5
Endocrinology (e.g. diabetes)	15	1.2
Falls & Fracture	12	0.9
Frailty	194	15.0
Gastrointestinal (includes liver)	128	9.9
Genito/renal	64	4.9
Mental health	87	6.7
Musculoskeletal	34	2.6
Neurological (e.g. stroke, MND, dementia)	197	15.2
Respiratory (e.g. COPD, cystic fibrosis)	97	7.5
Surgical	40	3.1
Other*	85	6.6
No disease	36	2.8
Total	**1293**	**100.0**

*'Other' largely comprises of non-specified trauma or general medicine

'MUST'

For individuals included in the survey who had weight and height data, mean weight was 71.4 (SD 21.5) kg, mean height was 1.67 (SD 0.1) m and the mean BMI was 25.4 (SD 6.9) kg/m^2. One fifth of individuals were underweight (8% BMI

18.5-20kg/m^2 (BMI score 1); 13% BMI < 18.5kg/m^2 (BMI score 2)) but most individuals (79%, n 968) had a BMI >20kg/m^2 (BMI score 0), including 20% (n 248) who were obese (BMI >30kg/m^2).

Around one fifth (21%) of individuals had unplanned weight loss of 5% or more, with 10% having 5-10% unplanned weight loss (n 120, weight loss score 1) and 11% having >10% weight loss (n 138, weight loss score 2). Most individuals (79%) did not have unplanned weight loss (n 985, weight loss score 0).

Ten per cent of individuals scored an acute disease effect (step 3 of MUST) (n 123).

In terms of 'MUST' risk category, 39% were at medium or high risk of malnutrition (n 503; 10% medium (n 131), 29% high risk (n 372)) and two thirds were at low risk of malnutrition (see Figure 1).

**Figure 1: Proportion of individuals according to malnutrition risk ('MUST')**
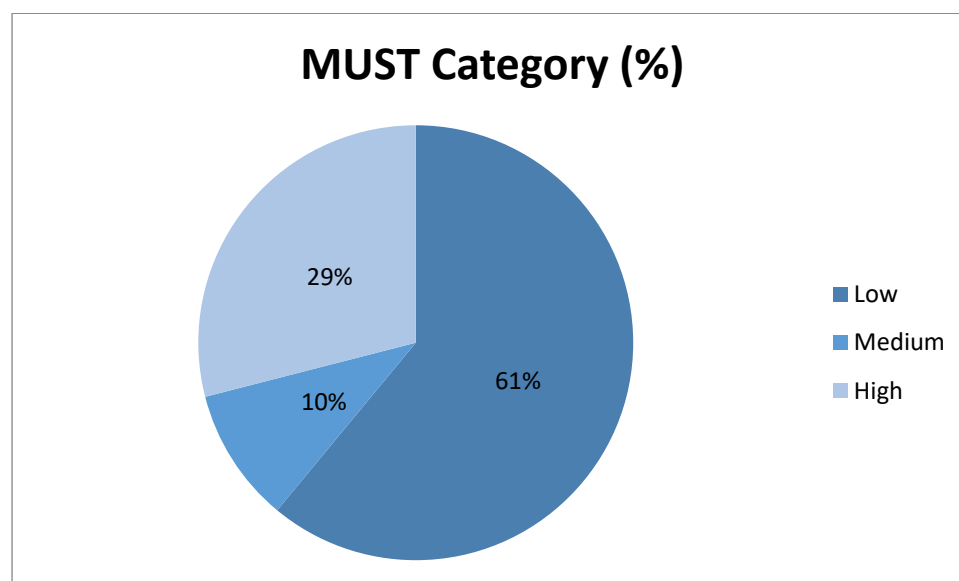
The proportion of patients at risk of malnutrition was higher in those aged 65 years and above (41%; 11% medium, 30% high) compared to those aged under 65 years (35%; 9% medium, 26% high).

'MUST' by Setting

Malnutrition risk varied by setting (see Figure 2). Overall, the prevalence of those 'at risk' of malnutrition (medium and high risk with 'MUST') was highest in care homes (60%) although this was a relatively small number of individuals (n45). In other community settings, one half of individuals in their own home (51%) and one third in community hospital/rehabilitation units (30%) were at risk. In the MHU's the vast majority (86%) were at low risk of malnutrition. In hospitals, where most of the individuals in the survey were screened, 40% were at risk of malnutrition.

Figure 2: Prevalence of malnutrition by setting
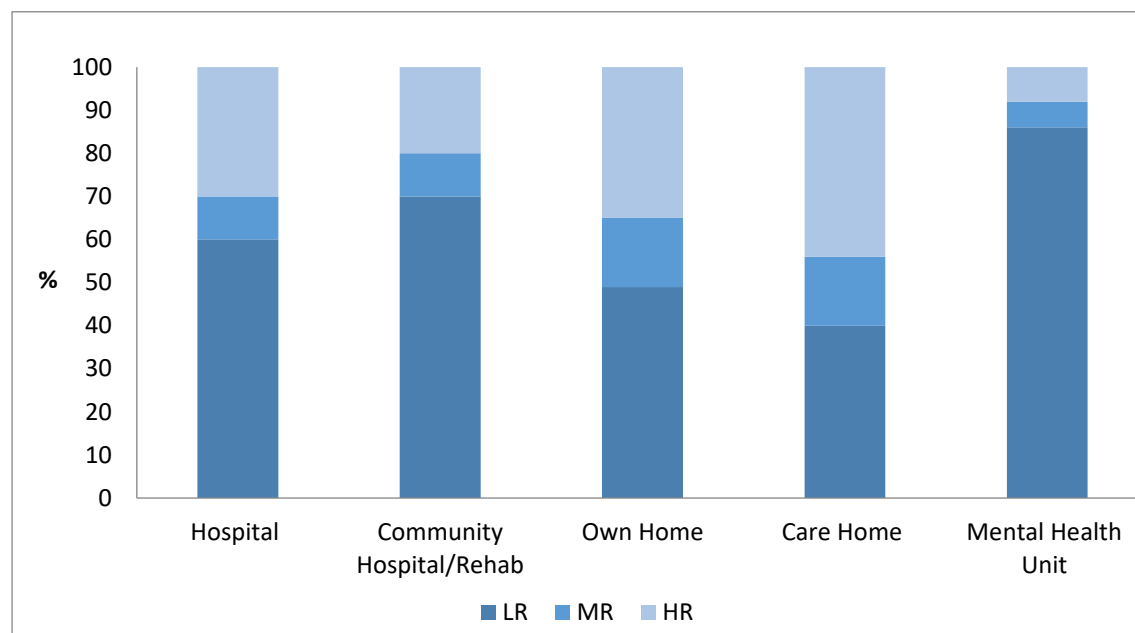
LR=Low Risk, MR = Medium Risk, HR = High Risk

'MUST' by Disease State

Malnutrition prevalence differed across the various diagnostic categories of patients in the survey (Table 6). The highest prevalence of individuals at risk of malnutrition (medium and high risk with 'MUST') was in those with gastrointestinal diseases (48%), respiratory diseases (45%), cancer (45%) and neurological diseases (44%). The diagnostic categories with the lowest prevalence were cardiovascular disease (26%) and mental health (16%). The proportion of patients at risk of malnutrition with COVID-19 as a primary diagnosis was 43% (n68),

For 'other' primary diagnostic categories, there were a limited number of patients included within the survey (n<30), so the data on malnutrition prevalence was not presented as it is unlikely to be representative.

Table 6: Prevalence of malnutrition according to classification of primary diagnosis

Primary diagnostic category	Low risk (%)	At risk (%) (Medium + High risk)
Cancer (n 148)	55	45
Cardiovascular diseases (n 81)	74	26
COVID-19 (n 68)	57	43
Frailty (n 194)	62	38
Gastrointestinal diseases (n 128)	52	48
Genito/Renal (n 64)	63	37
Mental Health (n 87)	84	16
Musculoskeletal (n 34)	68	32
Neurological diseases (n 197)	56	44
Other (n85)	62	38
Respiratory (n 97)	55	45
Surgical (n 40)	60	40

NOTE: Falls, Endocrine, Dermatology not included as n<30.

Nutritional Care Plans
- All patients combined

Overall, half of patients had a nutritional care plan in place (50%; n 643). The majority of patients at medium (66%; 86/131) and high (76%; 283/372) risk of malnutrition had a nutritional care plan in place (Figure 3).

Figure 3: Proportion of patients with a nutritional care plan according to 'MUST' category
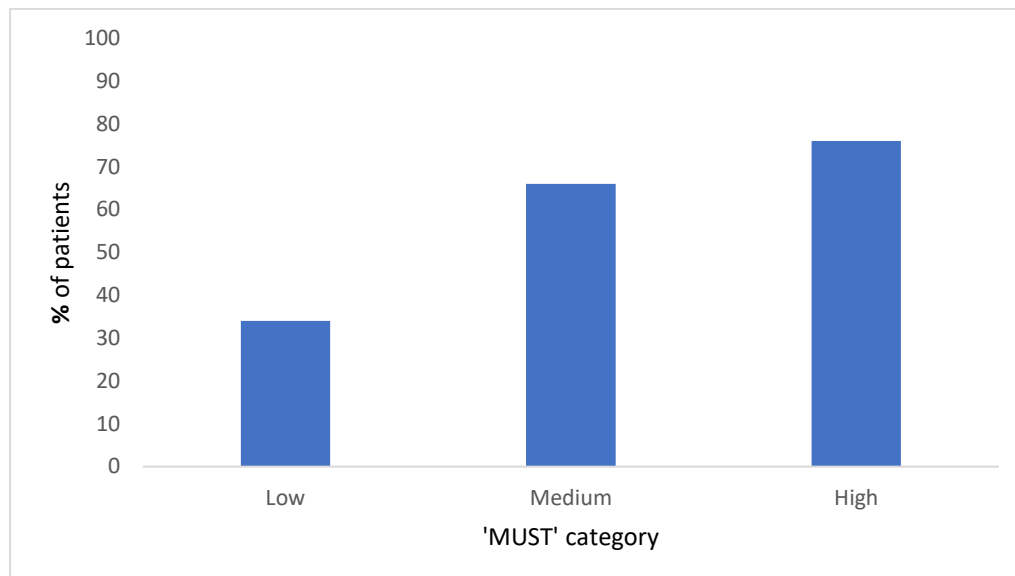
Overall, of those that had a care plan in place (n 643), most (78%; n 499) included food-based interventions (snacks, fortified foods with food ingredients, dietary counselling). Just over half (57%; n367) had oral nutritional supplements (ONS) (mostly ready-made liquid ONS >2kcal/ml and 1.5kcal/ml) and around 24% (n152) had enteral tube feeding (predominantly continuous feeding regimens with 1-1.5kcal/ml feeds). Four percent had parenteral nutrition in their care plan (see Figure 4 for a summary). Of note, individuals could have more than one intervention in their care plans.

Figure 4: Summary of care plans*

Food Based Intervention

78% (n 499) had at least 1

food-based intervention

Top 3

- snacks (75%)
- dietary counselling by Dietitian (71%)
- foods fortified with ingredients (31%)

Oral Nutritional Supplements (ONS)

57% (n 367) had at least 1

ONS-based intervention

Top 3

- ready-made liquid ONS >2kcal kcal/ml (45%)
- ready-made liquid ONS 1.5kcal/ml (35%)
- dessert style ONS (9%)

Enteral Tube Feed

24% (n 152) had at least 1 ETF-based intervention

Top 3

- continuous feed (74%)
- enteral feed 1-1.5kcal/ml (58%)
- high protein enteral feed (27%)

Parenteral Nutrition

4% (n 24) received PN-based intervention

Managed by Nutrition Support Team

- yes (n20/24) 83%

* from n 643 patients who were recorded as having a nutritional care plan in place

Food Based Interventions

Overall, 78% of those that had a nutritional care plan in place received a food-based intervention (n 499). Figure 5 shows that, of those receiving food-based interventions, 75% had snacks and almost three quarters were seen by a Dietitian (71%). The use of fortified diets (33%) and diet sheets (29%) were also common. 'Other' less commonly listed components of the care plan included: texture modified diet, milky drinks, alternate menu options, oral rehydration, clear fluids and food charts.

Figure 5: Food based interventions in nutritional care plans for all patients
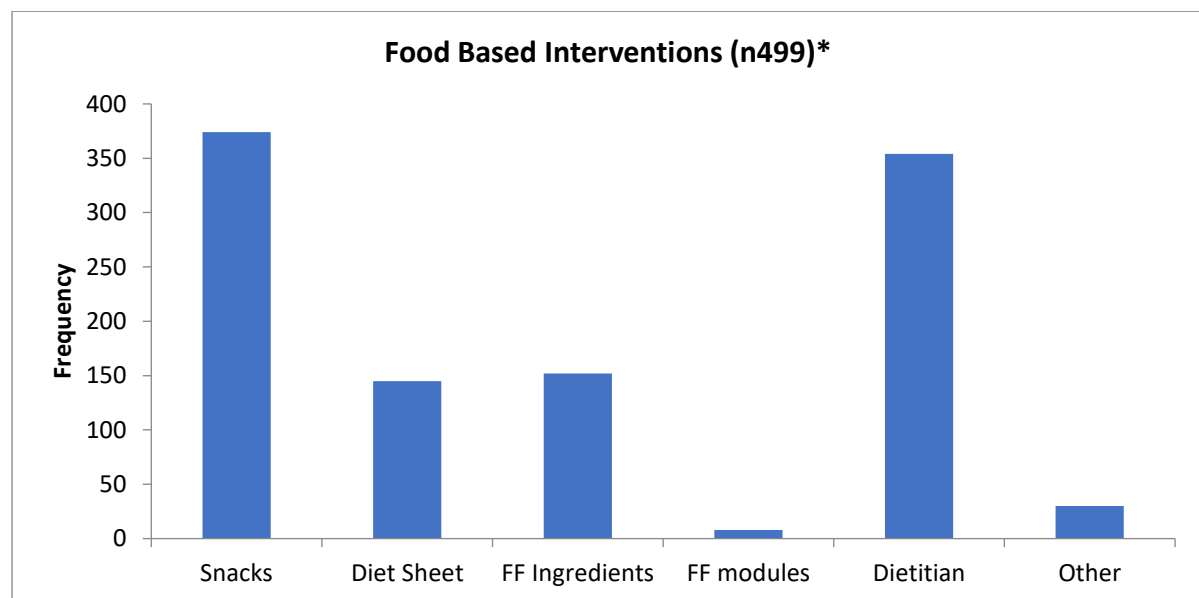
Key: FF = Fortified Food; * patients may have had more than one intervention

Oral nutritional supplements (ONS)

Just over half of the patients that had a care plan received oral nutritional supplements (n 367, 57%). Of those receiving ONS, ready-made liquid (RML) feeds were most commonly used, with the highest proportion of care plans including >2kcal/ml ONS (45%) and 1.5kcal/ml ONS (35%) (see Figure 6). Other types of ONS included in care plans included dessert style (9%), powdered (6%) and pre-thickened (3%) ONS. 'Other' largely consisted of very high energy supplements ('shot' style) and protein 'shots'.

Figure 6: Oral nutritional supplements in nutritional care plans for all patients
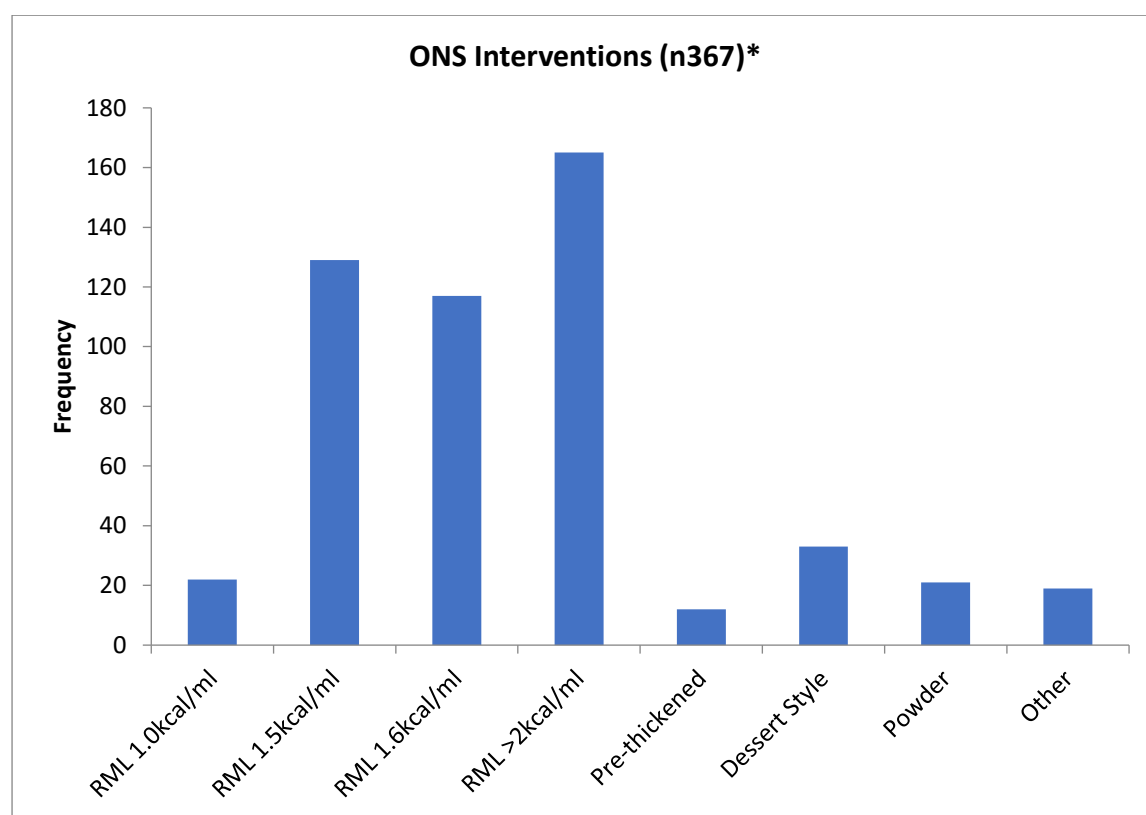
RML = ready-made liquid ONS; * patients may have had more than one intervention

Enteral Tube Feeding and Parenteral Nutrition

Twenty four percent (n 152) of patients who had a nutritional care plan had enteral tube feeding included. Where recorded in the survey, continuous regimens were more frequent (74%) than bolus feeding regimens (10%).

Tube feed energy density ranged from <1kcal/ml (2%) to >2kcal/ml (10%) (Figure 7), though by far the most common energy density used was 1-1.5kcal/ml (58%). High protein feeds were used in nearly one third (27%) of care plans, fibre containing feeds were used in 18% of care plans and peptide or amino acid tube feeds were recorded in 6%. No blenderised diets were recorded.

Figure 7: Enteral tube feeds in nutritional care plans for all patients
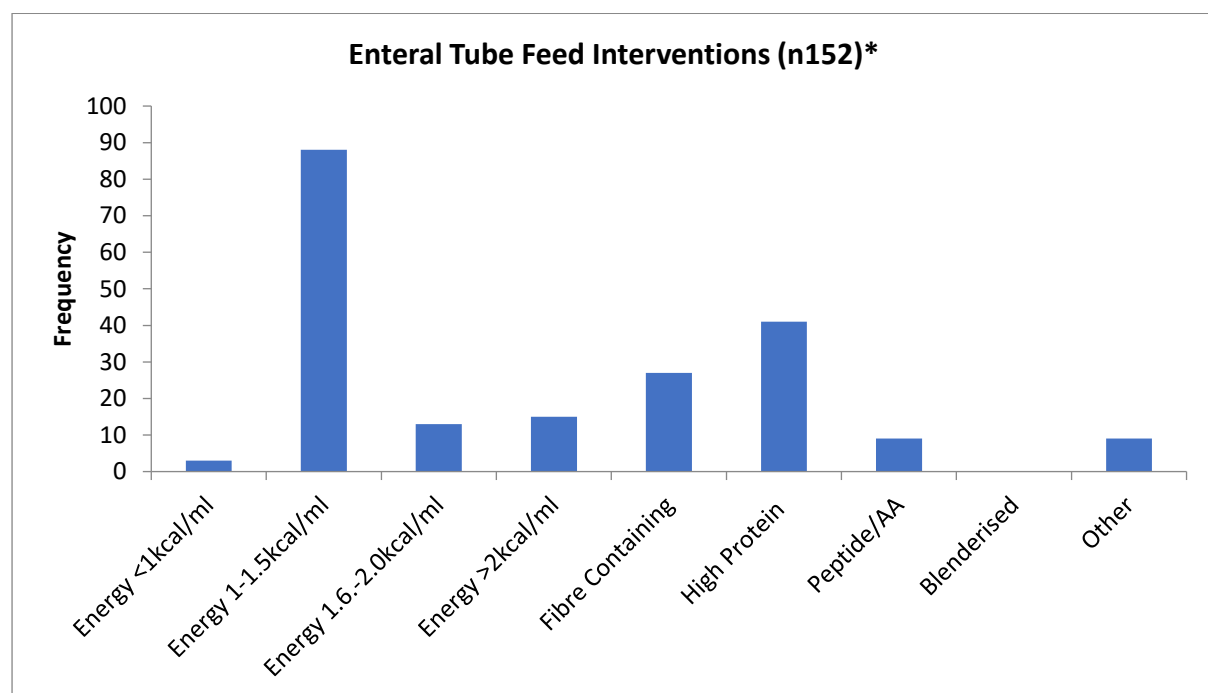
* patients may have had more than one intervention

Four percent of patients' care plans included parenteral nutrition (n 24), mostly fed via the central route (92%; n22/24). Eighty three percent (20/24) of patients on parenteral nutrition were managed by a Nutrition Support Team.

Nutritional Care plans
- according to malnutrition risk

For the care plans of those patients at medium (n 86) and high (n 283) malnutrition risk with 'MUST', around three quarters received at least one food-based intervention, nearly two thirds received ONS and one quarter received enteral tube feeding.

Table 7: Nutritional care according to malnutrition risk

Malnutrition risk	Food-based intervention	Oral nutritional supplements	Enteral tube feeding
Medium (M)	82%	59%	11%
High (H)	75%	62%	29%
At risk (M+H) (n369)	77%	61%	25%

Results expressed as a percent of all medium and /or high-risk patients. Only 24 patients were recorded receiving PN, 14 were high risk, 1 medium risk, 9 low risk. Patients could have more than one intervention in their care plan.

Food Based Interventions in those at risk of malnutrition

The majority of patients at risk of malnutrition received at least one food-based intervention and the proportion was similar for both medium and high-risk patients (see Table 7).

The food-based interventions most used were:
- dietetic counselling (77%)
- snacks (76%)
- fortified diet using food ingredients (33%)
- diet sheet (29%)

Note: more than one option could be given to patients.

Less commonly used were modular feeds to fortify the diet, a texture modified diet and milky drinks.

There were also 251 patients at low risk of malnutrition receiving a food-based intervention.

Oral nutritional supplements in those at risk of malnutrition

Over half of all medium and high-risk patients (n 226) were recorded as receiving ONS (59% of medium risk, 62% of high risk). The most commonly used ONS were:

- >2kcal/ml ready-made liquids (47%)
- 1.5kcal/ml ready-made liquids (32%)
- dessert-style (10%)
- 1kcal/ml ready-made liquids (8%)
- powders to be reconstituted (7%)
- pre-thickened (4%)

Note: more than one option could be given to patients.

There were 141 patients in the survey at low risk of malnutrition receiving ONS.

Enteral tube feeding and parenteral nutrition in those at risk of malnutrition

One quarter of patients at risk of malnutrition were recorded as receiving enteral tube feeding (n 91), with 11% of medium risk patients and 29% of high risk patients tube fed. Some patients receiving tube feeding (n 61) were at low risk of malnutrition.

Where recorded, most patients at risk of malnutrition were fed using a continuous feeding regimen (77%, n 70), with very few being bolus fed (7%, n 6).

A range of tube feeds were recorded as being used in those at risk of malnutrition, with the most common being 'standard' tube feeds of differing energy density (ranging from 1kcal/ml through to >2kcal/ml; the most common (57%) being 1-1.5kcal/ml). Approximately one quarter of patients used either a high protein feed (29%) or a fibre containing feed (22%). Other tube feed types (e.g. low energy density <1kcal/ml and peptide or amino acid feeds) were used in ~10% of patients at risk of malnutrition. There were no records of use of a blenderised tube feed.

Of the 24 patients recorded as receiving PN, 14 were at high risk of malnutrition, 1 at medium risk and 9 were at low risk. Of the at-risk patients (medium and high), most (n 13/15, 87%) were centrally fed and 12/14 (86%) were managed by a nutrition support team.

Conclusions

This third BAPEN Malnutrition and Nutritional Care survey, undertaken in conjunction with the UK Malnutrition Awareness Week in October 2021, suggests that disease-related malnutrition continues to be common across health care settings in England and Wales. As in recent years, this survey showed that a significant proportion of individuals (39%) were at risk of malnutrition (using 'MUST') (as in 2020 (40%) and 2019 (42%)) (2, 3), remaining higher than past, earlier surveys undertaken by BAPEN (4,5). Whilst around one fifth of patients were underweight (BMI < 20kg/m^2), 20% were obese (BMI > 30kg/m^2) and around one fifth had unplanned weight loss.

Adults of all ages and from a range of settings, were included in the survey, with many different diagnoses. In this survey, all adults were residing in either England or Wales and as in previous surveys, the majority (74%) of individuals were in hospital, where 40% were at risk of malnutrition. Malnutrition prevalence in the community varied considerably, depending on the setting (lowest prevalence in mental health units, highest prevalence in care homes) although larger sample sizes may be needed to fully ascertain the true picture across settings.

For primary diagnoses, malnutrition prevalence was highest in those with gastrointestinal diseases (48%), respiratory conditions (45%), cancer (45%) and neurological conditions (44%). Around 5% of individuals had a primary diagnosis of COVID-19, and the malnutrition prevalence was also high (43%) and similar to that observed the year before.

In addition to exploring the prevalence of malnutrition, this survey also aimed to assess the use of nutritional care. There were a few notable differences observed in this year's survey around nutritional care worth highlighting. First, there was an apparent drop in the presence of nutritional care plans in place overall (from 62% in 2020 to 50% in 2021) and for both medium risk patients (from 80% to 66%) and high risk patients (from 97% to 76%), Second there was a greater use of enteral tube feeding in those that had a care plan in place (from 13% to 24% in 2020 vs 2021) and an increase in PN use (from 2% to 4%). It is difficult to ascertain from the survey results the reasons why there are such differences in use of nutritional care, although it has certainly been observed by clinicians working in BAPEN that the demand for artificial nutritional support (e.g. tube feeding and parenteral nutrition) has increased in recent times, potentially due to a 'catch up' in clinical nutrition services to make up for delays

and the backlog in the diagnosis and treatment of many acute and chronic conditions due to the impact of COVID 19. Similarly, the challenges in continuing to deliver health (including nutritional) care during a pandemic, with infection control demands, staffing challenges etc, may partly explain the apparent reduction in care plans being in place overall. However, further validation is required to understand these complexities. Overall, however, the use of food based interventions (78% had at least one food-based intervention) and oral nutritional supplements (57%) remained relatively constant as a proportion of those with a care plan in place (noting that patients may have had more than one intervention). The use of snacks (75%), dietetic counselling (71%) and fortified foods (31%) remained key parts of food based nutritional care plans and ready-made liquid oral nutritional supplements were also commonly used (with an increase in use of >2kcal/ml supplements compared to last year from 39% to 45% of those receiving an ONS).

As in previous surveys (2,3), several individuals at low risk of malnutrition had nutritional interventions in their care plan, including food-based intervention and nutritional support. It is likely that these interventions were to maintain nutritional status in individuals, including preventing any future nutritional decline with disease or treatment. However, there was insufficient detail in the survey to assess the reasons for specific nutritional care plans. The survey also did not look at patient outcomes in relation to malnutrition or the different nutritional support interventions. However, a large evidence base, together with national and international guidelines clearly highlight the importance of prompt identification of malnutrition and timely nutritional support to improve patient outcomes (6-12).

We hope in future BAPEN surveys to have a greater participation from all four nations in the UK to make sure the data is more representative by country, setting and diagnostic group. Furthermore, most of the survey data was submitted by dietitians and dietetic assistants, which may mean that the individuals included in our survey were more likely to be malnourished and receiving nutritional care. A wider contribution from other health and social care professionals in these surveys in the future would be welcomed.

By continuing to undertake these surveys we endeavour to help build a clearer, more up to date picture of the prevalence of malnutrition and use of nutritional care in different settings, patient groups and in different regions/nations of the UK. We hope that this data helps assess locally and nationally changes over time, highlight potential areas for improvement, and where guidance, education and training, or policy change is required. The data will also help decision makers to

focus on where resources are most needed to support those with malnutrition in need of the right nutritional care.

References

1. M Elia. The 'MUST' Report. *Nutritional screening of adults: a multidisciplinary responsibility. Development and use of the 'Malnutrition Universal Screening Tool' ('MUST') for adults*. BAPEN 2003. (www.bapen.org.uk for more information and resources on 'MUST')
2. RJ Stratton and T Smith. *National Survey of Malnutrition and Nutritional Care in Adults, UK Malnutrition Awareness Week 2019*. BAPEN: 2020.
3. RJ Stratton, E Beggs, E Holmes, S Burden, A Cawood. *National Survey of Malnutrition & Nutritional care in adults, UK Malnutrition Awareness Week 2020*. BAPEN: 2021.
4. C A Russell and M Elia. *Nutrition screening surveys in hospitals in the UK, 2007-2011* A report based on the amalgamated data from the four Nutrition Screening Week surveys undertaken by BAPEN in 2007, 2008, 2010 and 2011. BAPEN 2014
5. C A Russell and M Elia. *Nutrition screening surveys in care homes in the UK.* A report based on the amalgamated data from the four Nutrition Screening Week surveys undertaken by BAPEN in 2007, 2008, 2010 and 2011 on behalf of BAPEN and collaborators. BAPEN 2015
6. Elia et al. *A report on the cost of disease-related malnutrition in England and a budget impact analysis of implementing the NICE clinical guidelines/quality standard on nutritional support in adults*. BAPEN and National Institute for Health Research Southampton Biomedical Research Centre, 2015.
7. National Institute for Health and Clinical Excellence (NICE). Nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition CG32. NICE 2006 (Updated 2017)
8. National Institute for Health and Clinical Excellence (NICE). Cost saving guidance London: NICE; 2009.
9. National Institute for Health and Clinical Excellence (NICE). Quality Standard for Nutrition Support in Adults. NICE Quality Standard 24. London: National Institute for Health and Clinical Excellence (NICE); 2012.
10. RJ Stratton, T Smith and S Gabe. *Managing malnutrition to improve lives and save money*. BAPEN, 2018.
11. NHS England. Guidance - Commissioning excellent nutrition and hydration 2015-2018. Leeds; 2015.
12. European Society for Clinical Nutrition and Metabolism (ESPEN) Guidelines: https://www.espen.org/guidelines-home.

Acknowledgements

Potential conflicts of interest

Appendices

APPENDIX A
Invitation letter to participate in a National Survey of Malnutrition and Nutritional Care

September 2021

Dear Sir/Madam,

Re: Invitation to participate in a national survey of malnutrition and nutritional care during UK Malnutrition Awareness Week (October 2021)

Please join BAPEN in undertaking the next national survey of malnutrition and nutritional care during Malnutrition Awareness Week (#UKMAW2021, 11th-17th October 2021).

We are asking for your help to get as many individuals working in health and social care settings to screen for malnutrition using 'MUST' and to record any nutritional care a person is given during UK MAW2021.

The survey will be undertaken online through a secure link on the BAPEN website (https://data.bapen.org.uk/maw/maw-home; **ready from 1st October for the whole month**) for individual professionals and organisations to use. The system allows you to quickly and easily input the screening results of each person in your care and information on the nutritional care they receive. There is a simple registration process, so that the system can then give you a summary of your own local data. The survey will also help us understand the national picture on malnutrition and nutritional care across the UK in 2021. There will be a small prize for the top screener from England, Scotland, Wales and N Ireland.

Wherever you work, please join us in this national initiative. For more information, and to register and take part, please see our page on the BAPEN website: https://data.bapen.org.uk/maw/maw-home

Thanks so much for your support and we really look forward to working with you.

Yours faithfully,

Dr Rebecca Stratton, Chair, Malnutrition Action Group (MAG)
Dr Trevor Smith, President, British Association for Parenteral and Enteral Nutrition (BAPEN)

APPENDIX B
Questionnaire 2021

Paper form for the National Survey of Malnutrition and Nutritional Care
Please complete each section and transfer to the electronic portal.

Part 1- Background Information

Where does the individual currently reside?

Hospital	
Community Hospital/Rehab Unit	
Own Home	
Care Home	
Mental Health Unit	
Other (Please state)	

Length Of Stay (**days**) (if applicable)	
Age	
Gender	

Disease category of primary diagnosis (choose 1)

Cancer	
Cardiovascular e.g. CVD,CAD	
COVID-19	
Frailty	
Gastrointestinal e.g. Crohns, Colitis (excluding cancer)	
Genito / Renal	
Musculoskeletal e.g. arthritis	
Neurological e.g. stroke, MND	
Respiratory e.g. COPD, CF	
No disease	
Other (please state)	

Part 2 – 'MUST' (all calculations of MUST will be automatic when this data is transferred to the portal)

Current Weight *(metric or imperial)*		
Current Height *(metric or imperial)*		
Has the individual recently lost weight without trying?	Yes	No
If yes to unintentional weight loss: **What was their previous weight or How much weight have they lost** *over the last 3-6 months (metric of imperial)*		
Is the individual acutely ill and has had (or likely to have) no nutritional intake for more than 5 days?	Yes	No

Part 3 – Malnutrition Management Plan

Is there a care plan in place for the management of malnutrition?	Yes No Other – Please state

If Yes: please mark all treatment options that apply

Food based intervention	Snacks Diet sheet Fortified foods with food ingredients Fortified foods with modular feeds Dietary counselling by dietitian Other (please specify)
Oral nutritional supplements	Ready-made liquid 1.0kcal/ml Ready-made liquid 1.5kcal/ml Ready-made liquid 1.6kcal/ml Ready-made liquid > 2kcal/ml Pre thickened Dessert style Powder Other (please specify)
Enteral Tube feeding	Continuous Bolus Energy density < 1kcal/ml Energy density 1-1.5kcal/ml Energy density 1.6-2kcal/ml Energy density >2kcal/ml Fibre containing High protein Peptide/amino acid Blenderised diet Other (please specify)
Parenteral Nutrition	Yes No
If Yes: **Is PN managed by a nutrition support team**	Yes No
Parenteral Nutrition route	Cannula Central Line Peripheral Line Other (please specify)
Other nutrition support option in care plan	
General comments on screening and management of malnutrition	

'MUST' (see www.bapen.org.uk to download, and for full resources)

Step 1 + Step 2 + Step 3
BMI score — **Weight loss score** — **Acute disease effect score**

BMI kg/m²	Score
>20 (>30 Obese)	= 0
18.5-20	= 1
<18.5	= 2

Unplanned weight loss in past 3-6 months

%	Score
<5	= 0
5-10	= 1
>10	= 2

If patient is acutely ill **and** there has been or is likely to be no nutritional intake for >5 days

Score 2

If unable to obtain height and weight, see reverse for alternative measurements and use of subjective criteria

Acute disease effect is unlikely to apply outside hospital. See 'MUST' Explanatory Booklet for further information

Step 4
Overall risk of malnutrition

Add Scores together to calculate overall risk of malnutrition
Score 0 Low Risk   Score 1 Medium Risk   Score 2 or more High Risk

Step 5
Management guidelines

0
Low Risk
Routine clinical care

- Repeat screening
  Hospital – weekly
  Care Homes – monthly
  Community – annually
  for special groups
  e.g. those >75 yrs

1
Medium Risk
Observe

- Document dietary intake for 3 days
- If adequate – little concern and repeat screening
  - Hospital – weekly
  - Care Home – at least monthly
  - Community – at least every 2-3 months
- If inadequate – clinical concern – follow local policy, set goals, improve and increase overall nutritional intake, monitor and review care plan regularly

2 or more
High Risk
Treat*

- Refer to dietitian, Nutritional Support Team or implement local policy
- Set goals, improve and increase overall nutritional intake
- Monitor and review care plan
  Hospital – weekly
  Care Home – monthly
  Community – monthly

* Unless detrimental or no benefit is expected from nutritional support e.g. imminent death.

All risk categories:
- Treat underlying condition and provide help and advice on food choices, eating and drinking when necessary.
- Record malnutrition risk category.
- Record need for special diets and follow local policy.

Obesity:
- Record presence of obesity. For those with underlying conditions, these are generally controlled before the treatment of obesity.

Re-assess subjects identified at risk as they move through care settings
See The 'MUST' Explanatory Booklet for further details and The 'MUST' Report for supporting evidence.

© BAPEN

APPENDIX D
Bristol MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	January 2022
Prepared locality:	Bristol (Mental Health Unit)
Data collected:	October 2021
Number of individuals screened*:	n113

Background Information

Age[1]:	52.9 (18-86) years
Gender:	F n48 (43%)
	M n65 (57%)
Setting:	
-hospital	/
-community hospital	113 (100%)
-own home	/
-care home	/
Length of Stay[1]:	86 (1-614) days
Weight[1]:	74.5 (40.0-115.5) kg
BMI[1]:	26.3 (16.9-40.6) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n113)
-Mental Health	82
-Neurological	18
-Other	13

Malnutrition Screening ('MUST') Data

'MUST' Criteria	
BMI Score	
>20kg/m^2 (score 0)	100
18.5-20kg/ m^2 (score 1)	5
<18.5kg/ m^2 (score 2)	8
% Weight loss score	
<5% (score 0)	108
5-10% (score 1)	4
>10% (score 2)	1
Acute disease effect score	
No (score 0)	108
Yes (score 2)	1

'MUST' Classification	(n113)
Malnutrition Risk	
-Low (total score = 0)	97 (86%)
-Medium (total score =1)	7 (6%)
-High (total score ≥ 2)	9 (8%)

'Low risk' of malnutrition 86% (n97)

'At risk' of malnutrition   14% (n16)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n11 (90%)
	NO n102 (10%)
Of those that had a care plan in place[2]	
-Food Based plan	10
-ONS based plan	4
-Enteral feed	1

'At risk' individuals only (n16)	
Care Plan in place? (%):	YES n9 (56%)
	NO n7 (44%)
Of those that had a care plan in place[2]:	
-Food Based plan	9
-ONS based plan	3
-Enteral feed	0

[2] it is possible to have more than 1 type of care plan
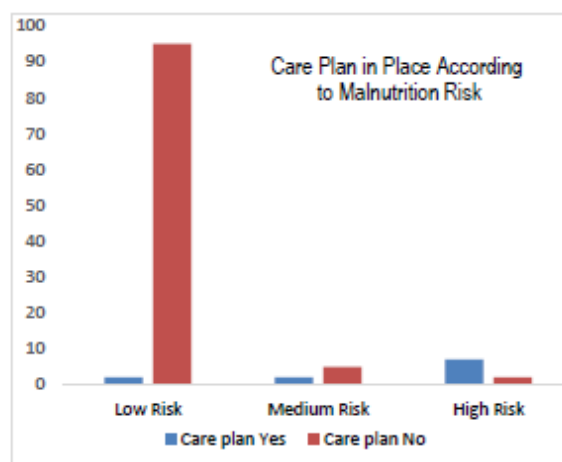
Care Plan in Place According to Malnutrition Risk

*Please consider the sample size in relation to your total population before drawing specific conclusions.
If the sample size is small, it is probable that this data may not be representative of your area.

Buckinghamshire MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Buckinghamshire
Data collected:	October 2021
Number of individuals screened*:	n119

Background Information

Age[1]:	73.7 (18-99) years
Gender:	F n54 (45%)
	M n65 (55%)
Setting:	
-hospital	119 (100%)
-community hospital	/
-own home	/
-care home	/
Length of Stay[1]:	16 (1-98) days
Weight[1]:	67.9 (37.7-120.9) kg
BMI[1]:	24.1 (14.6-41.5) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n119)
-Neurological	27
-Genito/Renal	9
-Gastroenterology	15
-Frailty	23
-Respiratory	8
-COVID-19	5
-Cardiovascular	4
-Musculoskeletal	6
-Cancer	7
-Other / No disease	11 / 4

Malnutrition Screening ('MUST') Data

'MUST' Criteria	
BMI Score	
>20kg/m^2 (score 0)	88
18.5-20kg/ m^2 (score 1)	16
<18.5kg/ m^2 (score 2)	14
% Weight loss score	
<5% (score 0)	91
5-10% (score 1)	11
>10% (score 2)	17
Acute disease effect score	
No (score 0)	88
Yes (score 2)	23

'MUST' Classification	(n119)
Malnutrition Risk	
-Low (total score = 0)	62 (52%)
-Medium (total score =1)	11 (9%)
-High (total score ≥ 2)	46 (39%)

'Low risk' of malnutrition 52% (n62)

'At risk' of malnutrition   48% (n57)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n48 (41%)
	NO n70 (59%)
Of those that had a care plan in place[2]	
-Food Based plan	38
-ONS based plan	33
-Enteral feed (PN)	10 (2)

'At risk' individuals only (n57)	
Care Plan in place? (%):	YES n20 (36%)
	NO n36 (64%)
Of those that had a care plan in place[2]:	
-Food Based plan	28
-ONS based plan	24
-Enteral feed (PN)	9 (2)

[2]it is possible to have more than 1 type of care plan
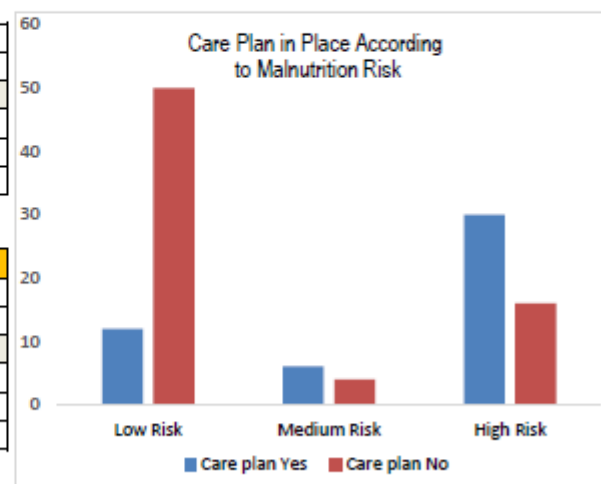
*Please consider the sample size in relation to your total population before drawing specific conclusions.
If the sample size is small, it is probable that this data may not be representative of your area.*

Cardiff MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Cardiff
Data collected:	October 2021
Number of individuals screened*:	n113

Background Information

Age[1]:	67.8 (20-98) years
Gender:	F n51 (45%)
	M n62 (55%)
Setting:	
-hospital	90 (79%)
-community hospital	3 (3%)
-own home	20 (18%)
-care home	/
Length of Stay[1]:	27 (0-114) days
Weight[1]:	68.9 (35.0-143.0) kg
BMI[1]:	24.1 (14.8-51.5) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n113)
-Neurological	20
-COVID-19	11
-Gastrointestinal	20
-Frailty	4
-Respiratory	16
-Genito/Renal	9
-Cardiovascular	4
-Cancer	23
-Other	6

Malnutrition Screening ('MUST') Data

'MUST' Criteria	
BMI Score	
>20kg/m^2 (score 0)	82
18.5-20kg/m^2 (score 1)	9
<18.5kg/m^2 (score 2)	22
% Weight loss score	
<5% (score 0)	72
5-10% (score 1)	14
>10% (score 2)	23
Acute disease effect score	
No (score 0)	96
Yes (score 2)	14

'MUST' Classification	(n113)
Malnutrition Risk	
-Low (total score = 0)	49 (43%)
-Medium (total score =1)	12 (11%)
-High (total score ≥ 2)	52 (46%)

'Low risk' of malnutrition 43% (n49)

'At risk' of malnutrition   57% (n64)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n110 (97%)
	NO n3 (3%)
Of those that had a care plan in place[2]	
-Food Based plan	79
-ONS based plan	64
-Enteral feed (PN)	25 (12)

'At risk' individuals only (n64)	
Care Plan in place? (%):	YES n63 (98%)
	NO n1 (2%)
Of those that had a care plan in place[2]:	
-Food Based plan	44
-ONS based plan	37
-Enteral feed (PN)	16 (5)

[2] it is possible to have more than 1 type of care plan
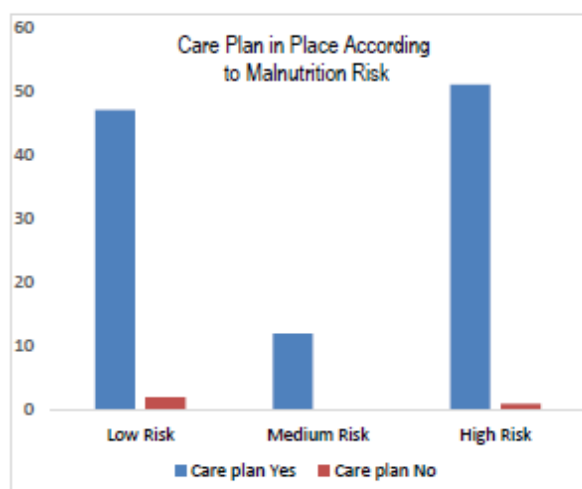
Care Plan in Place According to Malnutrition Risk

■ Care plan Yes ■ Care plan No

Please consider the sample size in relation to your total population before drawing specific conclusions.
If the sample size is small, it is probable that this data may not be representative of your area.

APPENDIX G
Carmarthenshire MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Carmarthenshire
Data collected:	October 2021
Number of individuals screened*:	n78

Background Information

Age[1]:	81.2 (39-99) years
Gender:	F n44 (56%)
	M n34 (44%)
Setting:	
-hospital	44 (56%)
-community hospital	34 (44%)
-own home	/
-care home	/
Length of Stay[1]:	43 (1-316) days
Weight[1]:	64.0 (36.1-112.6) kg
BMI[1]:	23.2 (12.8-40.3) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n78)
-Neurological	5
-Genito/Renal	6
-Falls/Fracture	1
-Frailty	21
-Respiratory	15
-Gastrointestinal	2
-Cardiovascular	12
-Musculoskeletal	5
-Cancer	7
-Other	4

Malnutrition Screening ('MUST') Data

'MUST' Criteria	(n)
BMI Score	
>20kg/m^2 (score 0)	46
18.5-20kg/ m^2 (score 1)	6
<18.5kg/ m^2 (score 2)	9
% Weight loss score	
<5% (score 0)	61
5-10% (score 1)	10
>10% (score 2)	0
Acute disease effect score	
No (score 0)	77
Yes (score 2)	0

'MUST' Classification	(n78)
Malnutrition Risk	
-Low (total score = 0)	55 (70%)
-Medium (total score =1)	13 (17%)
-High (total score ≥ 2)	10 (13%)

'Low risk' of malnutrition 70% (n55)

'At risk' of malnutrition 30% (n23)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n36 (46%)
	NO n42 (54%)
Of those that had a care plan in place[2]	
-Food Based plan	30
-ONS based plan	12
-Enteral feed	2

'At risk' individuals only (n23)	
Care Plan in place? (%):	YES n15 (65%)
	NO n8 (35%)
Of those that had a care plan in place[2]:	
-Food Based plan	13
-ONS based plan	9
-Enteral feed	2

[2] it is possible to have more than 1 type of care plan
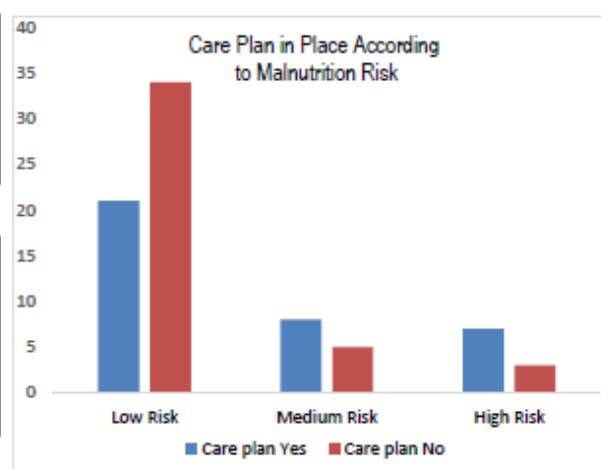
Care Plan in Place According to Malnutrition Risk

Please consider the sample size in relation to your total population before drawing specific conclusions.
If the sample size is small, it is probable that this data may not be representative of your area.

Ceredigion MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Ceredigion
Data collected:	October 2021
Number of individuals screened*:	n59

Background Information

Age[1]:	79.4 (48-101) years
Gender:	F n33 (56%)
	M n26 (44%)
Setting:	
-hospital	35 (59%)
-community hospital	24 (41%)
-own home	/
-care home	/
Length of Stay[1]:	26 (1-171) days
Weight[1]:	68.8 (38.5-128.1) kg
BMI[1]:	24.7 (14.6-43.0) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n59)
-Neurological	10
-No disease	3
-Gastrointestinal	3
-Frailty	28
-Respiratory	2
-COVID-19	1
-Cardiovascular	1
-Musculoskeletal	1
-Cancer	4
-Other	6

Malnutrition Screening ('MUST') Data

'MUST' Criteria	
BMI Score	
>20kg/m^2 (score 0)	38
18.5-20kg/ m^2 (score 1)	2
<18.5kg/ m^2 (score 2)	9
% Weight loss score	
<5% (score 0)	43
5-10% (score 1)	4
>10% (score 2)	3
Acute disease effect score	
No (score 0)	58
Yes (score 2)	

'MUST' Classification	(n59)
Malnutrition Risk	
-Low (total score = 0)	44 (75%)
-Medium (total score =1)	4 (7%)
-High (total score ≥ 2)	11 (18%)

'Low risk' of malnutrition 75% (n44)

'At risk' of malnutrition   25% (n15)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n31 (53%)
	NO n28 (47%)
Of those that had a care plan in place[2]	
-Food Based plan	31
-ONS based plan	12
-Enteral feed (PN)	28 (2)

'At risk' individuals only (n15)	
Care Plan in place? (%):	YES n8 (53%)
	NO n7 (47%)
Of those that had a care plan in place[2]:	
-Food Based plan	8
-ONS based plan	4
-Enteral feed (PN)	8 (0)

[2] it is possible to have more than 1 type of care plan
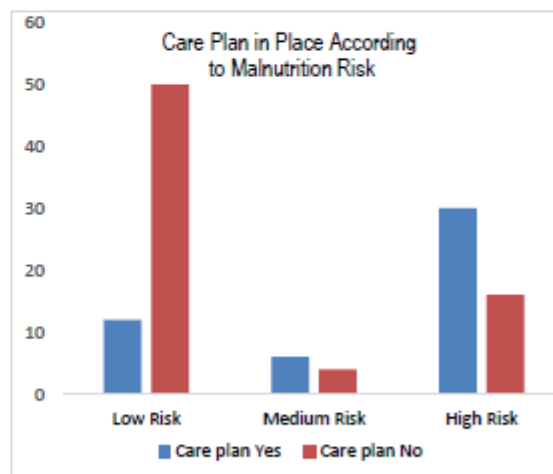
Care Plan in Place According to Malnutrition Risk

*Please consider the sample size in relation to your total population before drawing specific conclusions.
If the sample size is small, it is probable that this data may not be representative of your area.

Dorset MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Dorset
Data collected:	October 2021
Number of individuals screened*:	n33

Background Information

Age[1]:	78.9 (32-94) years
Gender:	F n13 (39%)
	M n20 (61%)
Setting:	
-hospital	33 (100%)
-community hospital	/
-own home	/
-care home	/
Length of Stay[1]:	34 (1-145) days
Weight[1]:	65.9 (38.0-113.0) kg
BMI[1]:	23.1 (15.2-35.2) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n33)
-Neurological	3
-No disease	4
-Falls/Fracture	1
-Frailty	8
-Respiratory	1
-Gastrointestinal	10
-COVID-19	1
-Musculoskeletal	1
-Other	4

Malnutrition Screening ('MUST') Data

'MUST' Criteria	
BMI Score	
>20kg/m^2 (score 0)	20
18.5-20kg/ m^2 (score 1)	5
<18.5kg/ m^2 (score 2)	8
% Weight loss score	
<5% (score 0)	18
5-10% (score 1)	4
>10% (score 2)	11
Acute disease effect score	
No (score 0)	30
Yes (score 2)	1

'MUST' Classification	(n33)
Malnutrition Risk	
-Low (total score = 0)	10 (30%)
-Medium (total score =1)	3 (9%)
-High (total score ≥ 2)	20 (61%)

'Low risk' of malnutrition 30% (n10)

'At risk' of malnutrition 70% (n23)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n11 (33%)
	NO n22 (67%)
Of those that had a care plan in place[2]	
-Food Based plan	10
-ONS based plan	10
-Enteral feed	3

'At risk' individuals only (n23)	
Care Plan in place? (%):	YES n9 (39%)
	NO n14 (61%)
Of those that had a care plan in place[2]:	
-Food Based plan	8
-ONS based plan	8
-Enteral feed	3

[2] it is possible to have more than 1 type of care plan
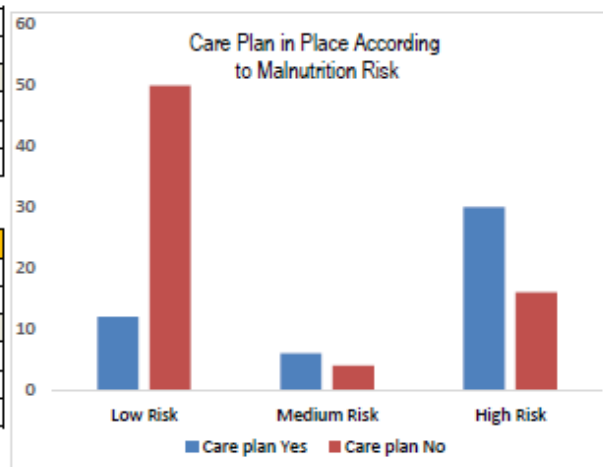
Care Plan in Place According to Malnutrition Risk

*Please consider the sample size in relation to your total population before drawing specific conclusions.
If the sample size is small, it is probable that this data may not be representative of your area.

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Merseyside
Data collected:	October 2021
Number of individuals screened*:	n35

Background Information

Age[1]:	68.3 (19-98) years
Gender:	F n24 (69%)
	M n11 (31%)
Setting:	
-hospital	/
-community hospital	/
-own home	28 (80%)
-care home	7 (20%)
Length of Stay[1]:	N/a
Weight[1]:	62.0 (29.9-112.0) kg
BMI[1]:	24.4 (13.3-42.9) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n35)
-Neurological	4
-No disease	2
-Gastrointestinal	3
-Frailty	2
-Respiratory	2
-Genito/Renal	1
-Endocrine	1
-Cancer	17
-Other	3

Malnutrition Screening ('MUST') Data

'MUST' Criteria	
BMI Score	
>20kg/m^2 (score 0)	24
18.5-20kg/m^2 (score 1)	3
<18.5kg/m^2 (score 2)	8
% Weight loss score	
<5% (score 0)	24
5-10% (score 1)	4
>10% (score 2)	6
Acute disease effect score	
No (score 0)	28
Yes (score 2)	3

'MUST' Classification	(n35)
Malnutrition Risk	
-Low (total score = 0)	14 (40%)
-Medium (total score =1)	5 (14%)
-High (total score ≥ 2)	16 (46%)

'Low risk' of malnutrition 40% (n14)

'At risk' of malnutrition 60% (n21)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n24 (67%)
	NO n11 (31%)
Of those that had a care plan in place[2]	
-Food Based plan	23
-ONS based plan	13
-Enteral feed	3

'At risk' individuals only (n21)	
Care Plan in place? (%):	YES n21 (100%)
	NO nil
Of those that had a care plan in place[2]:	
-Food Based plan	18
-ONS based plan	12
-Enteral feed	2

[2] it is possible to have more than 1 type of care plan
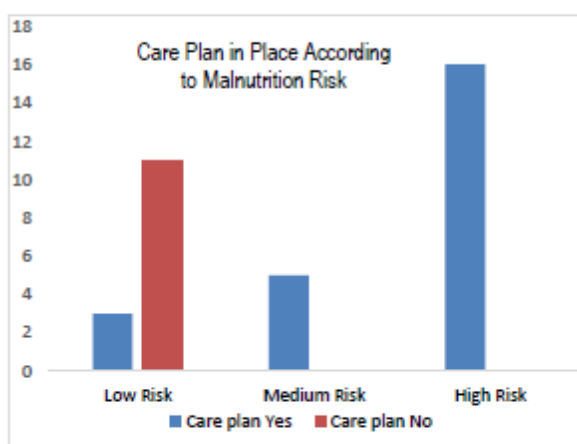
Care Plan in Place According to Malnutrition Risk

*Please consider the sample size in relation to your total population before drawing specific conclusions.
If the sample size is small, it is probable that this data may not be representative of your area.*

APPENDIX K
Pembrokeshire MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Pembrokeshire
Data collected:	October 2021
Number of individuals screened*:	n129

Background Information

Age[1]:	75 (18-97) years
Gender:	F n71 (55%)
	M n58 (45%)
Setting:	
-hospital	81 (63%)
-community hospital	37 (29%)
-own home	11 (8%)
-care home	/
Length of Stay[1]:	37.5 (1-247) days
Weight[1]:	72.0 (31.2-155.0) kg
BMI[1]:	25.5 (13.7-50.3) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n129)
-Neurological	25
-Genito/Renal	5
-COVID-19	3
-Frailty	22
-Respiratory	2
-Gastrointestinal	20
-Cardiovascular	10
-Musculoskeletal	13
-Cancer	19
-Other	10

Malnutrition Screening ('MUST') Data

'MUST' Criteria	
BMI Score	
>20kg/m^2 (score 0)	104
18.5-20kg/m^2 (score 1)	7
<18.5kg/m^2 (score 2)	18
% Weight loss score	
<5% (score 0)	93
5-10% (score 1)	16
>10% (score 2)	14
Acute disease effect score	
No (score 0)	107
Yes (score 2)	18

'MUST' Classification	(n129)
Malnutrition Risk	
-Low (total score = 0)	76 (59%)
-Medium (total score =1)	7 (5%)
-High (total score ≥ 2)	46 (36%)

'Low risk' of malnutrition 59% (n76)

'At risk' of malnutrition   41% (n53)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n75 (58%)
	NO n54 (42%)
Of those that had a care plan in place[2]	
-Food Based plan	63
-ONS based plan	40
-Enteral feed (PN)	17 (3)

'At risk' individuals only (n53)	
Care Plan in place? (%):	YES n46 (87%)
	NO n7 (13%)
Of those that had a care plan in place[2]:	
-Food Based plan	37
-ONS based plan	26
-Enteral feed (PN)	14 (3)

[2] it is possible to have more than 1 type of care plan
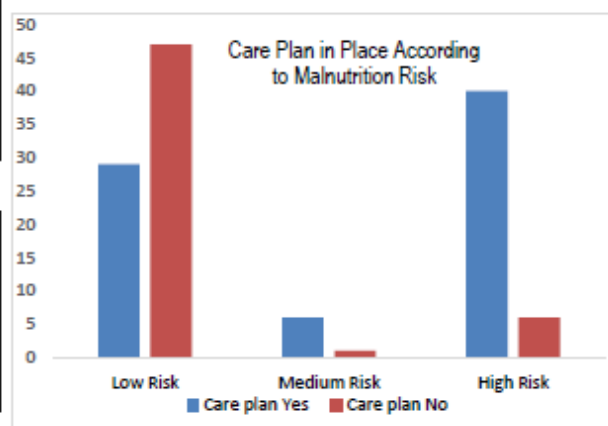
Care Plan in Place According to Malnutrition Risk

*Please consider the sample size in relation to your total population before drawing specific conclusions.
If the sample size is small, it is probable that this data may not be representative of your area.

Staffordshire MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Staffordshire
Data collected:	October 2021
Number of individuals screened*:	n520

Background Information

Age[1]:	66.7 (18-99) years
Gender:	F n249 (48%)
	M n271 (52%)
Setting:	
-hospital	496 (95%)
-community hospital	2 (1%)
-own home	17 (3%)
-care home	5 (1%)
Length of Stay[1]:	15 (0-293) days
Weight[1]:	76.1 (30.0-173.5) kg
BMI[1]:	26.8 (12.4-62.2) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n516)
-Neurological	49
-No disease	19
-COVID-19	46
-Frailty / Falls	49 / 9
-Respiratory	48
-Surgical	40
-Cardiovascular	46
-Gastrointestinal	50
-Genito/Renal	32
-Cancer	67
-Other	61

Malnutrition Screening ('MUST') Data

'MUST' Criteria	
BMI Score	
>20kg/m^2 (score 0)	404
18.5-20kg/m^2 (score 1)	32
<18.5kg/m^2 (score 2)	45
% Weight loss score	
<5% (score 0)	402
5-10% (score 1)	42
>10% (score 2)	49
Acute disease effect score	
No (score 0)	451
Yes (score 2)	60

'MUST' Classification	(n520)
Malnutrition Risk	
-Low (total score = 0)	338 (65%)
-Medium (total score =1)	53 (10%)
-High (total score ≥ 2)	129 (25%)

'Low risk' of malnutrition 65% (n338)

'At risk' of malnutrition 35% (n182)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n228 (44%)
	NO n289 (56%)
Of those that had a care plan in place[2]	
-Food Based plan	152
-ONS based plan	132
-Enteral feed (PN)	83 (5)

'At risk' individuals only (n182)	
Care Plan in place? (%):	YES n121 (67%)
	NO n58 (32%)
Of those that had a care plan in place[2]:	
-Food Based plan	77
-ONS based plan	70
-Enteral feed (PN)	42 (5)

[2] it is possible to have more than 1 type of care plan
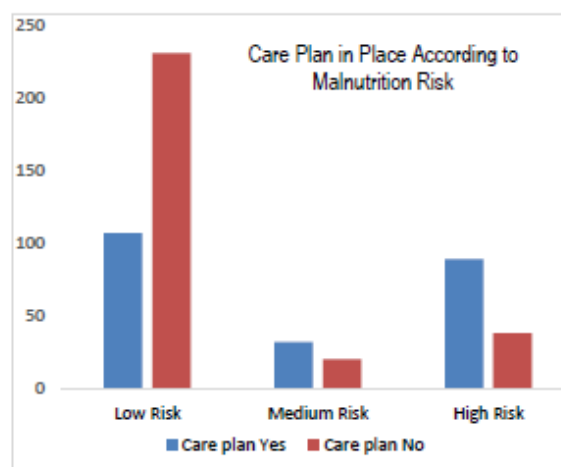
Care Plan in Place According to Malnutrition Risk

*Please consider the sample size in relation to your total population before drawing specific conclusions.
If the sample size is small, it is probable that this data may not be representative of your area.*

APPENDIX M
Surrey MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Surrey
Data collected:	October 2021
Number of individuals screened*:	n35

Background Information

Age[1]:	75.9 (31-94) years
Gender:	F n19 (54%)
	M n16 (46%)
Setting:	
-hospital	35 (100%)
-community hospital	/
-own home	/
-care home	/
Length of Stay[1]:	24 (1-109) days
Weight[1]:	68.9 (37.7-117.2) kg
BMI[1]:	24.2 (13.4-34.7) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n35)
-Neurological	33
-Endocrine	1
-Mental Health	1

Malnutrition Screening ('MUST') Data

'MUST' Criteria	
BMI Score	
>20kg/m^2 (score 0)	27
18.5-20kg/ m^2 (score 1)	2
<18.5kg/ m^2 (score 2)	6
% Weight loss score	
<5% (score 0)	28
5-10% (score 1)	2
>10% (score 2)	4
Acute disease effect score	
No (score 0)	31
Yes (score 2)	3

'MUST' Classification	(n35)
Malnutrition Risk	
-Low (total score = 0)	22 (63%)
-Medium (total score =1)	4 (11%)
-High (total score ≥ 2)	9 (26%)

'Low risk' of malnutrition 63% (n22)

'At risk' of malnutrition   37% (n13)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n12 (34%)
	NO n23 (66%)
Of those that had a care plan in place[2]	
-Food Based plan	9
-ONS based plan	4
-Enteral feed	3

'At risk' individuals only (n13)	
Care Plan in place? (%):	YES n6 (46%)
	NO n7 (54%)
Of those that had a care plan in place[2]:	
-Food Based plan	4
-ONS based plan	3
-Enteral feed	2

[2] it is possible to have more than 1 type of care plan
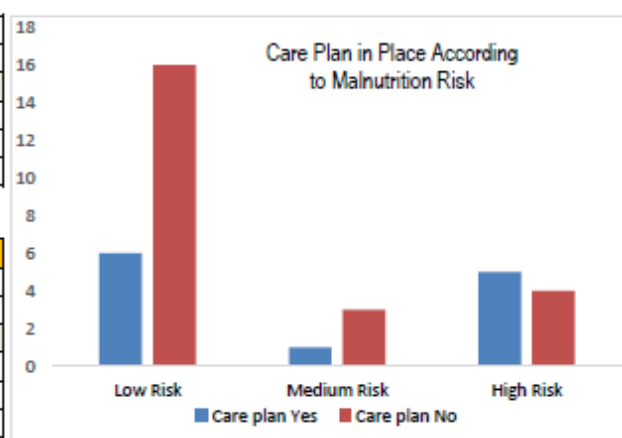
Care Plan in Place According to Malnutrition Risk

Tyne and Wear MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	February 2022
Prepared locality:	Tyne & Wear
Data collected:	October 2021
Number of individuals screened*:	n42

Background Information

Age[1]:	84.1 (53-97) years
Gender:	F n33 (79%)
	M n9 (21%)
Setting:	
-hospital	/
-community hospital	1 (2%)
-own home	8 (19%)
-care home	33 (79%)
Length of Stay[1]:	N/a
Weight[1]:	51.4 (31.0-100.0) kg
BMI[1]:	20.5 (15.4-45.7) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n42)
-Neurological	2
-Frailty	33
-Cardiovascular	2
-Musculoskeletal	1
-Cancer	4

Malnutrition Screening ('MUST') Data

'MUST' Criteria	(n42)
BMI Score	
>20kg/m^2 (score 0)	20
18.5-20kg/ m^2 (score 1)	7
<18.5kg/ m^2 (score 2)	15
% Weight loss score	
<5% (score 0)	33
5-10% (score 1)	4
>10% (score 2)	5
Acute disease effect score	
No (score 0)	42
Yes (score 2)	nil

'MUST' Classification	(n42)
Malnutrition Risk	
-Low (total score = 0)	18 (43%)
-Medium (total score =1)	7(17%)
-High (total score ≥ 2)	17(40%)

'Low risk' of malnutrition 43% (n18)

'At risk' of malnutrition   57% (n24)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n42 (100%)
	NO nil
Of those that had a care plan in place[2]	
-Food Based plan	42
-ONS based plan	28
-Enteral feed	5

'At risk' individuals only (n24)	
Care Plan in place? (%):	YES n24 (100%)
	NO nil
Of those that had a care plan in place[2]:	
-Food Based plan	24
-ONS based plan	19
-Enteral feed	1

[2] it is possible to have more than 1 type of care plan
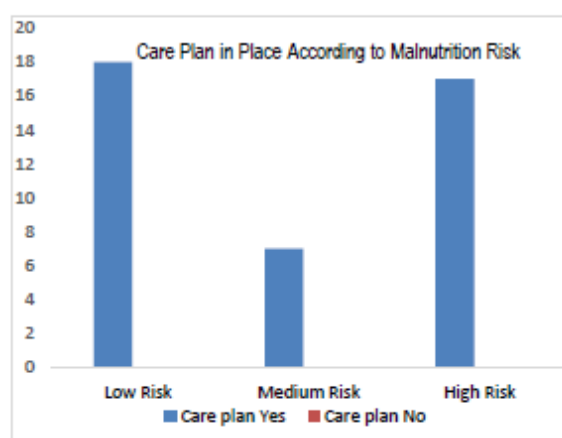
Care Plan in Place According to Malnutrition Risk

Please consider the sample size in relation to your total population before drawing specific conclusions. If the sample size is small, it is probable that this data may not be representative of your area.

APPENDIX O
All Wales MAW Data Oct 2021

UK Malnutrition Awareness Week 2021

Date of report:	January 2022
Prepared locality:	Wales
Data collected:	October 2021
Number of individuals screened*:	n382

Background Information

Age[1]:	74.8 (18-101) years
Gender:	F n200 (52%)
	M n182 (48%)
Setting:	
-hospital	253 (66%)
-community hospital	98 (26%)
-own home	31 (8%)
-care home	/
Length of Stay[1]:	33.7 (0-316) days
Weight[1]:	69.2 (31.2-155.0) kg
BMI[1]:	24.6 (12.8-51.5) kg/m^2

[1] mean (range)

Primary Diagnosis:	(n382)
-Neurological	60
-Genito/Renal	21
-COVID 19	15
-Frailty	75
-Respiratory	36
-Gastrointestinal	47
-Cardiovascular	27
-Musculoskeletal	19
-Other (No disease)	24 (5)
-Cancer	53

Malnutrition Screening ('MUST') Data

'MUST' Criteria	(n)
BMI Score	
>20kg/m^2 (score 0)	272
18.5-20kg/ m^2 (score 1)	24
<18.5kg/ m^2 (score 2)	59
% Weight loss score	
<5% (score 0)	271
5-10% (score 1)	45
>10% (score 2)	40
Acute disease effect score	
No (score 0)	341
Yes (score 2)	32

'MUST' Classification	(n)
Malnutrition Risk	
-Low (total score = 0)	226 (59%)
-Medium (total score =1)	36 (9%)
-High (total score ≥ 2)	120 (32%)

'Low risk' of malnutrition 59% (n226)

'At risk' of malnutrition   41% (n156)

('At risk' is medium and high combined)

Care Plans

Care Plan in place? (%):	YES n255 (67%)
	NO n127 (33%)
Of those that had a care plan in place[2]	
-Food Based plan	206
-ONS based plan	131
-Enteral feed (PN)	44 (17)

'At risk' individuals only (n156)	
Care Plan in place? (%):	YES n133 (85%)
	NO n23 (15%)
Of those that had a care plan in place[2]:	
-Food Based plan	103
-ONS based plan	77
-Enteral feed (PN)	32 (8)

[2]it is possible to have more than 1 type of care plan

Care Plan in Place According to Malnutrition Risk

Please consider the sample size in relation to your total population before drawing specific conclusions. If the sample size is small, it is probable that this data may not be representative of your area.

BAPEN

*Putting patients at the centre
of good nutritional care*