

# An Undeniable truth

## The Future Cost of Malnutrition

### – Predictions for the Next 25 Years

Mike Wallace,  
Strategic Affairs Director,  
Nutricia Advanced Medical Nutrition

# What do we know about the costs of Disease Related Malnutrition

- **DRM is common**

1 in 20 subjects of the general population,

about 1 in 3 in care homes and hospitals

about 1 in 10 among those visiting their GP

- **DRM is costly**

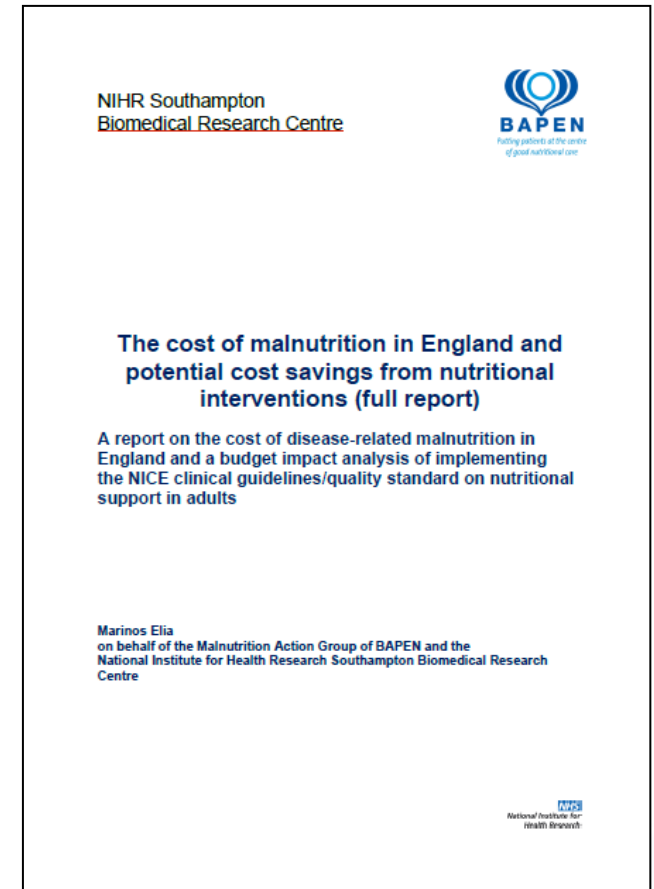
Increased hospital admissions / readmissions and length of stay

Increased risk of dependency / becoming a permanent care home resident

Increased GP visits and prescriptions

# £19.6bn - The most recent estimate of the cost of DRM

- 2015 BAPEN / NIHR report
- For England
- In 2011-12
- **£5239** more per person.
- Built from age based analysis



# The age based analysis allows extrapolation

**Table A.9** Distribution of expenditure on disease-related malnutrition according to type of care and age group

Type of care purchased	Older adults (≥65 years)		Younger adults (18–64 years)		Children <18 years)		Total	
	£bn	%	£bn	%	£bn	%	£bn	%
Proportions between age groups								
<i>Type of care</i>								
Health care	7.709	50.5	6.736	44.1	0.826	5.4	15.271	100.0
Social care	2.562	58.8	1.517	34.8	0.279	6.4	4.358	100.0
Total	10.271	52.3	8.253	42.0	1.105	5.6	19.629	100.0
2011								
Population (Eng)	8,729,600		33,036,900		11,340,600		53,107,100	
2011								
Cost per person	£1,176.57		£249.81		£97.4		£369.61	

“Expressed per capita population the estimated annual cost of malnutrition is £370”  
BAPEN/NIHR 2015 report

# What could that look like today?

2 key factors

1. Population changes
2. Healthcare inflation

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## 1. Population changes

### UK POPULATION

	2011	2017	
Under 18	13,446,200	13,909,160	+3.4%
18-64	39,380,800	40,090,715	+1.8%
Over 65	10,458,200	12,030,053	+15.0%

**£23.5bn\***

\*UK wide cost estimate for 2011 applying age based costs across UK pop.

# The impact of healthcare inflation

## Inflation

This table sets out our latest assumptions for annual increases in unit costs:

Element	2016/17	2017/18	2018/19	2019/20	2020/21
Pay and pensions (including drift and mix effects)	3.3%	2.0%	1.6%	1.6%	2.9%
Drugs	4.5%	4.6%	3.6%	4.1%	4.1%
Capital costs	3.1%	3.2%	3.2%	3.1%	3.1%
Other operating costs	1.7%	1.8%	2.1%	1.9%	2.0%
Overall	3.1%	2.3%	2.0%	2.0%	2.9%

*Low = 2.0%*

*Range*

*High = 3.1%*

**Average = 2.46%**

# What could that look like today?

2 key factors

1. Population changes
2. Healthcare inflation @2.46% pa

	Over 65	18-64	Under 18
2011 Cost per person	£1,176.57	£249.81	£97.4
2017 Cost per person	£1,362.17	£289.03	£112.73



# What could that look like today?

## UK POPULATION COST OF DRM in 2017

	2011	2017
Under 18	13,446,200	13,909,160
18-64	39,380,800	40,090,715
Over 65	10,458,200	12,030,053

**£23.5bn**

**£29.5bn\***

\*UK wide cost estimate for 2017 using 2017 population and 2.5% HC inflation

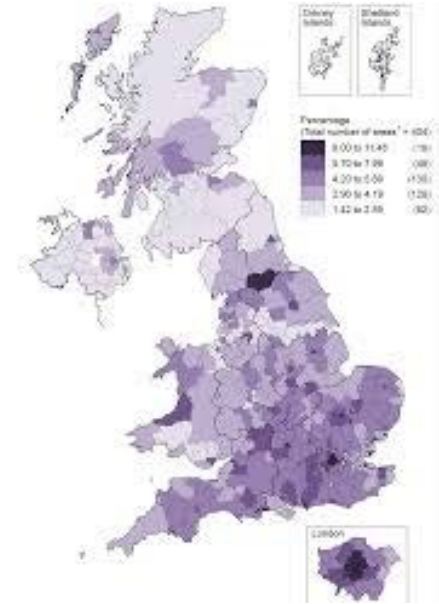
**2017 COSTS AT CONSTANT  
(2011) PRICES**

**£25.5bn**

**9%**

# A big number is difficult to interpret – breaking it down for today

- Local Authority Districts detailed population data available for 2016
- LAD for England, Health boards for Wales, N. Ireland and Scotland



## 2 ANALYSES

1. Cost of malnutrition per local authority (UK wide)
2. The impact of deprivation (England only)



Localising the costs of DRM



Deprivation Adj local costs

# Localising the Analysis...

**The total projected cost for the UK in 2016 is £28.6bn.** This is split across England, Scotland, Wales and Northern Ireland as follows.

<b>England</b>	<b>£23,951,747,888</b>
<b>Scotland</b>	<b>£2,397,045,773</b>
<b>Wales</b>	<b>£1,437,092,724</b>
<b>Northern Ireland</b>	<b>£763,430,950</b>
<b>TOTAL UK</b>	<b>£28,549,317,335</b>

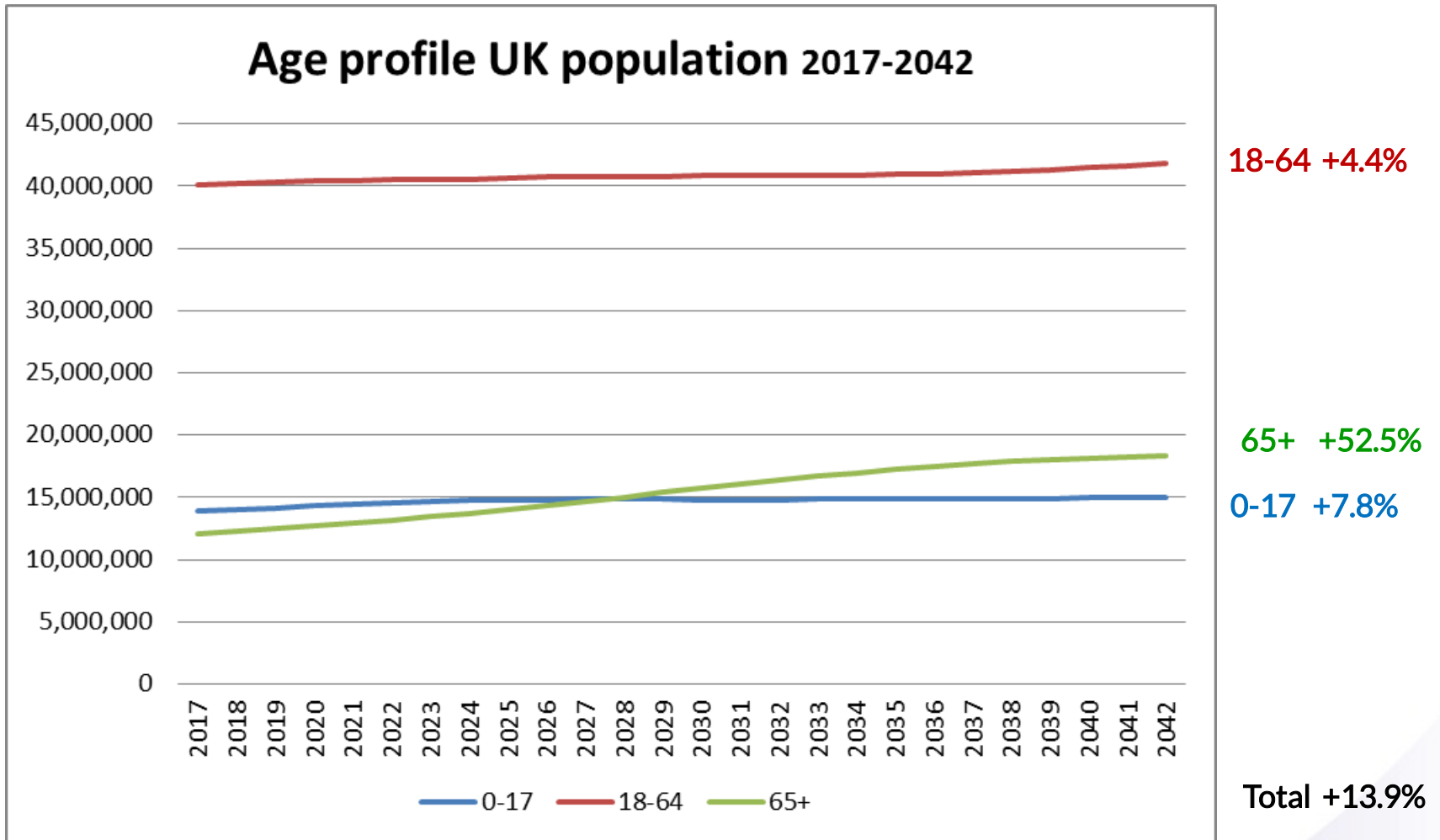
# Localising the Analysis...

Country	Local Authority District	Population	Cost of Main
ENGLAND	Adur	63,506	£31,185,419
	Allerdale	96,956	£48,370,324
	Amber Valley	124,645	£59,433,435
	Arun	156,997	£86,333,596
	Ashfield	124,482	£55,161,046
	Ashford	126,151	£55,894,699
	Aylesbury Vale	193,113	£80,372,785
	Babergh	89,498	£46,159,935
	Barking and Dagenham	206,460	£68,456,232
	Barnet	386,083	£150,395,195
	Barnsley	241,218	£107,473,771
	Barrow-in-Furness	67,321	£31,714,402
	Basildon	183,378	£77,608,589
	Basingstoke and Deane	174,588	£73,235,501

# Localising the Analysis...Accounting for deprivation

Local Authority District	Population	Cost of Maln	IMD - Rank of average rank	Deprivation adjusted malnutrition cost (same total)
Adur	63,506	£31,185,419	150	£30,901,138
Allerdale	96,956	£48,370,324	114	£50,823,759
Amber Valley	124,645	£59,433,435	162	£57,706,196
Arun	156,997	£86,333,596	174	£82,102,590
Ashfield	124,482	£55,161,046	70	£61,993,122
Ashford	126,151	£55,894,699	173	£53,248,338
Aylesbury Vale	193,113	£80,372,785	283	£61,872,339
Babergh	89,498	£46,159,935	200	£41,902,892
Barking and Dagenham	206,460	£68,456,232	3	£84,558,612
Barnet	386,083	£150,395,195	157	£147,274,353
Barnsley	241,218	£107,473,771	37	£126,680,207
Barrow-in-Furness	67,321	£31,714,402	44	£37,013,023
Basildon	183,378	£77,608,589	113	£81,674,041
Basingstoke and Deane	174,588	£73,235,501	275	£57,351,768

# Taking the long view – what could this look like in 25 years time



# What could that look like today?

2 key factors

1. Population changes
2. Healthcare inflation @2.46% pa

	Over 65	18-64	Under 18
2011 Cost per person	£1,176.57	£249.81	£97.4
2017 Cost per person	£1,362.17	£289.03	£112.73
2042 Cost per person	£2,499.21	£530.64	£206.97

# By 2042, the costs of Disease related malnutrition

## UK POPULATION AND COST OF DRM IN 25 YEARS

	2017	2042
Under 18	13,909,160	14,994,473
18-64	40,090,715	41,845,008
Over 65	12,030,053	18,340,255
	<b>£29.5bn</b>	<b>£71.1bn*</b>
	(£447 per capita)	(£946 per capita)

\*UK wide cost estimate for 2042 using 2042 population projections and 2.5% HC inflation rate



# At constant prices – the impact of demographics

## UK POPULATION AND COST OF DRM IN 25 YEARS

	2017	2042
Under 18	13,909,160	14,994,473
18-64	40,090,715	41,845,008
Over 65	12,030,053	18,340,255

**£29.5bn**

**£38.8bn\***

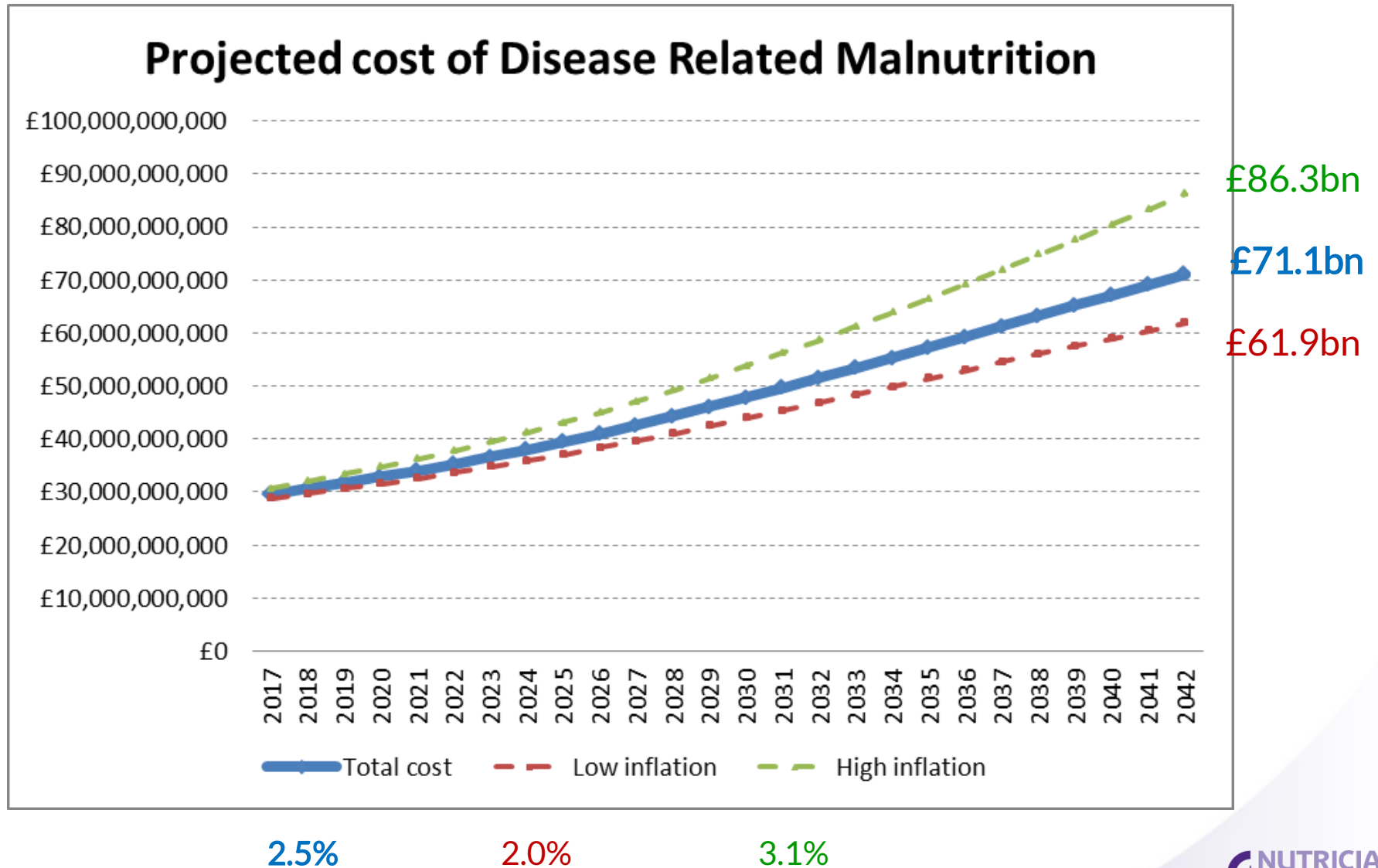
**31%**

\*UK wide cost estimate for 2042 using 2042 population projections and 0% HC inflation rate (post 2017)

# Key sensitivities

## 1. Healthcare inflation rate

# Adding the impact of inflation

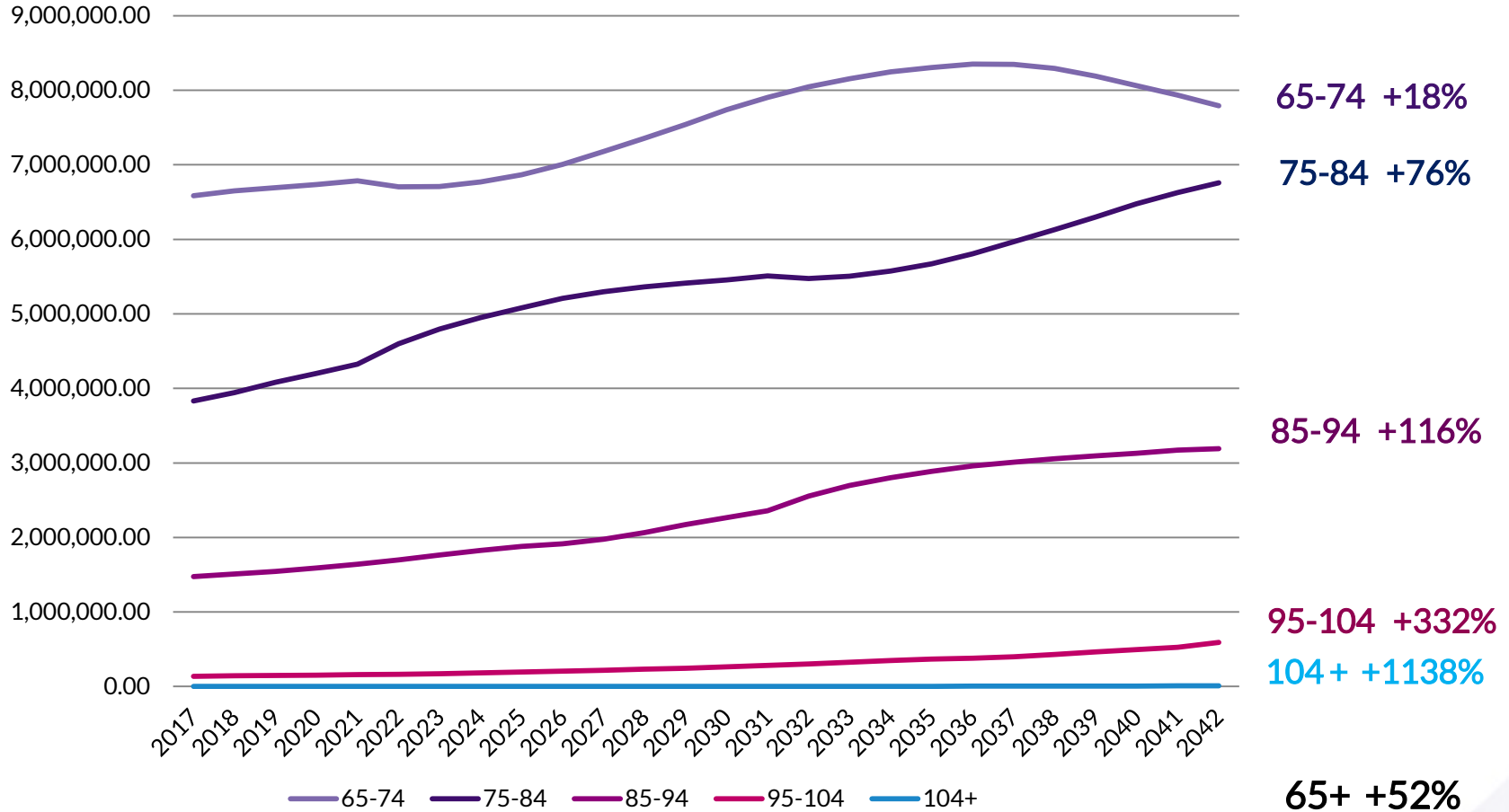


# Key sensitivities

1. Healthcare inflation rate
2. Changing burden of DRM as the profile of ageing changes

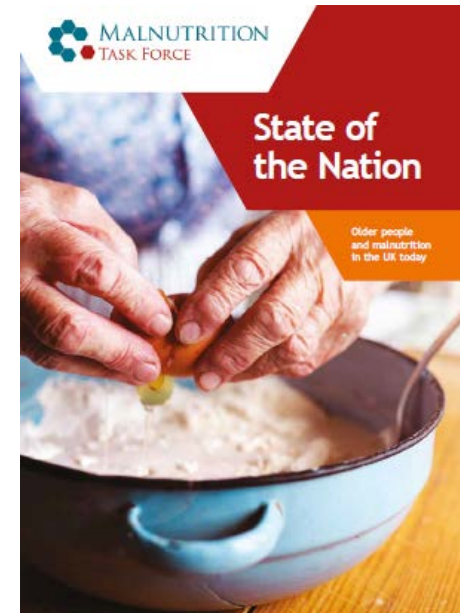
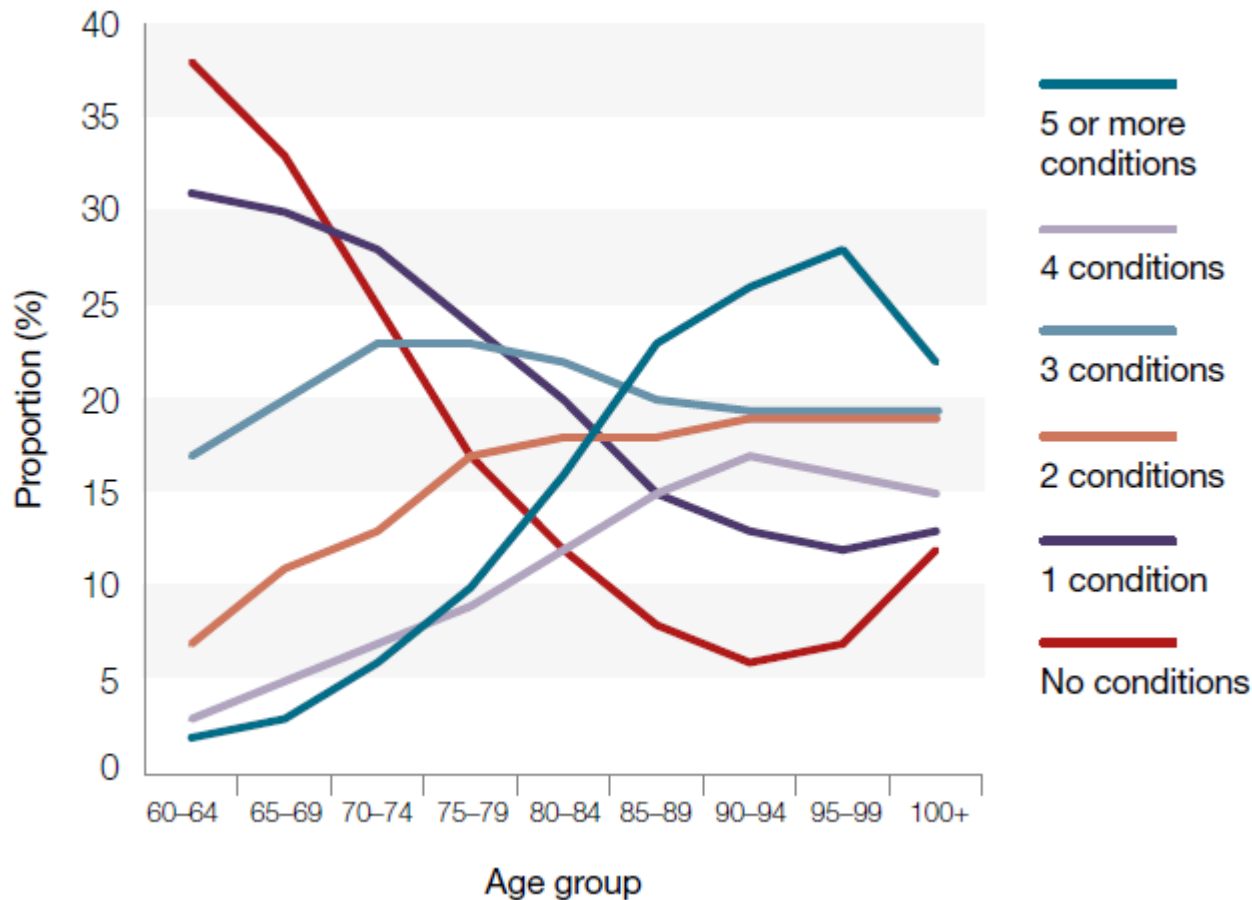
# The impact of a more aged population

## Age profile of over 65's 2017-2042



# More health problems in later life

## Number of health problems by age group in England, 2014



Source: Age UK and University of Exeter Medical School, 2015<sup>26</sup>

[http://www.malnutritiontaskforce.org.uk/wp-content/uploads/2017/10/AW-5625-Age-UK-MTF\\_Report.pdf](http://www.malnutritiontaskforce.org.uk/wp-content/uploads/2017/10/AW-5625-Age-UK-MTF_Report.pdf)

The impact of a more aged population...by 2012,  
what if.....

Core estimate = £71,144,143,434

Costs of managing malnutrition in elderly (+65's)  
increased by.....

1%	£71,602,505,483
5%	£73,435,953,680
10%	£75,727,763,927
25%	£82,603,194,665

# Key sensitivities

1. Healthcare inflation rate
  2. Changing burden of DRM as the profile of ageing changes
- + Changing burden of disease
  - + Demographic changes (births / immigration / life expectancy)
  - + **MOST IMPORTANT OF ALL.....**



# Are we able to cope?

Given current standards of care....

- Next year DRM will cost the UK more than £30bn
- In 15 years time this cost will breach the £50bn mark
- Over the next 25 years the changing population could increase costs in real terms by over 30%
- In 25 years time DRM could cost the UK over £70bn

The most important factor is how well we can improve the detection, prevention & management of Disease Related Malnutrition.

# Thank you

Mike.Wallace@Nutricia.com

## KEY REFERENCES

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