

Packaging Taskforce Handbook

Why and How Purchasers and Suppliers of Single Portion
Packaged Food and Drink Products in Hospitals
Can Make a Difference.

Introducing the International Standard ISO17480
'Guidelines for Accessible Packaging'



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1. The Ambition

“Fundamentally this is about empowering patients to eat and drink well. This in turn could help reduce the risk of malnutrition, supporting nurses, hospital caterers and dieticians be even more effective in their complex and demanding environments”

Caroline Lecko

The Taskforce’s ambition:

To get

Suppliers and manufacturers of individually portioned, pre-packed, ready to consume products

Who currently

May or may not provide products that meet the NHS patient food packaging requirements

To provide

Hospital caterers with **easy to open consumer product packaging**

By

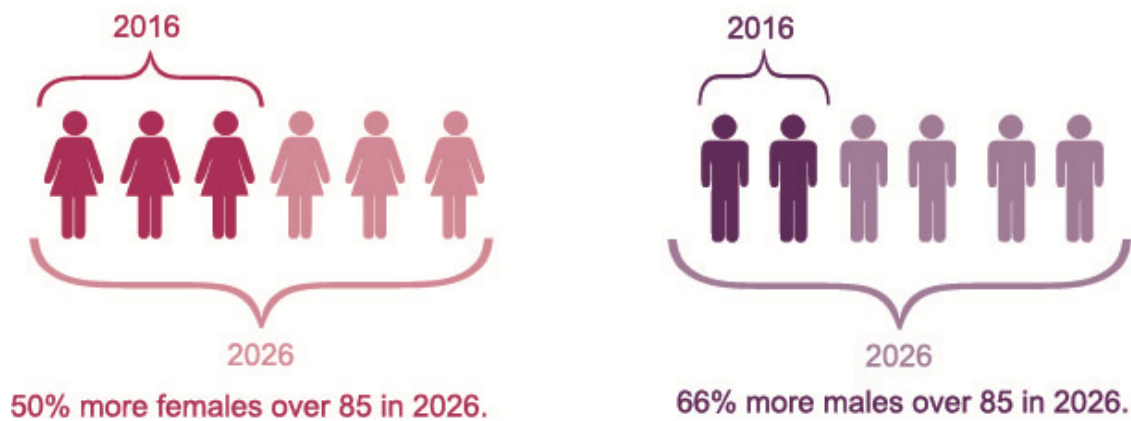
Testing packaging to comply with ISO17480 guidelines

So that

The product is easy to consume and individual nutritional needs are met

2. Background

Society is ageing, it is estimated that by 2020 half the adult UK population will be over 50. This ageing of society is a major public health success story. Life expectancy prior to WWI in 1914, was 49 for a man and 53 for a woman. Fast forward a hundred years and life expectancy has increased to 79 years for a man and 83 years for women.



Ageing results in a general loss of strength, dexterity and a reduction in visual acuity and some cognitive functionality. Basically, we're not as strong, less able to manipulate things and generally don't remember things as quickly or as well as we age. Also, despite this increase in longevity, the age at which we're likely to develop some form of chronic illness such as arthritis hasn't risen in line with longevity.

So we're living longer, and we may spend a considerable time in poor or declining health. This is a huge issue for the NHS and other healthcare systems in the World.

Reduced Capability

As we age strength, dexterity and cognition generally decline and there are differences between men and women. Men are generally twice as strong as women and women's strength tends to decline earlier than men.

Strength is usually measured using some form of grip device such as a Jamar Dynamometer and a number of researchers have produced data for measured grip pinch, pull and twist strength. Typically an older adult over 75 is half as strong as 20 year old.

Dexterity or the ease with which we can manipulate objects has also been measured by a number of researchers. This is often done using some form of test where pegs are placed into holes and the number of pegs in a set time is used as a dexterity measure. Again, there is significant data on dexterity change as we age and there is a difference between men and women with men being marginally less dextrous than women.

From the age of 60 onwards the rate of decline is typically between 1.1% and 1.7%, so an 80 year old woman is a third less dextrous than a 60 year old woman.

Strength



Women are half as strong as men and their strength declines rapidly after the age of 70.

Dexterity



Dexterity decreases so that an 80 year old is typically 1/3rd less dextrous than a 60 year old.

Cognition or our ability to understand the world around us is extremely complex. For example memory is not one single entity but can be based around recent events, episodes in our life or more long term events.

There is gradual decline in spatial orientation, inductive and perceptual reasoning along with verbal memory from the age of 25 onwards. This decline increases significantly from the age of 60 onwards.

Visual acuity also declines as we age and care should be taken on font choice and contrast.

Cognition



Spatial orientation, inductive and perceptual reasoning and verbal memory all decline from 60 onwards.

3. Current Single Portion Packaging in Hospitals

Cheese, biscuits, milk, jam, juices, cereals and condiments are often typical items served in single portion packaging in hospitals. Packaged food has many roles and advantages for example; provide access to and preserve the contents, control portion size, be stored easily especially where storage space is limited.

The challenge: Can patients easily open single portion packs?

Work by researchers at the University of Wollongong in Australia identified that **40% of patients in their study were unable to open some of the packaging** they were presented with on a typical meal tray. A similar proportion of were staff also unable to open some of the packaging.

Researchers identified **unopened packaging as a possible source of malnutrition in older people whilst staying in hospital.** Issues regarding unopened packing and malnutrition have also been identified in the UK.

An Australian study found that 40% of patients struggled to open a number of packaged food and beverage items and a similar proportion of staff were unable to open the pack.

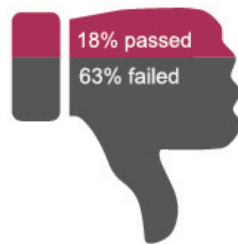
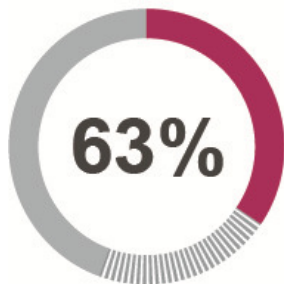
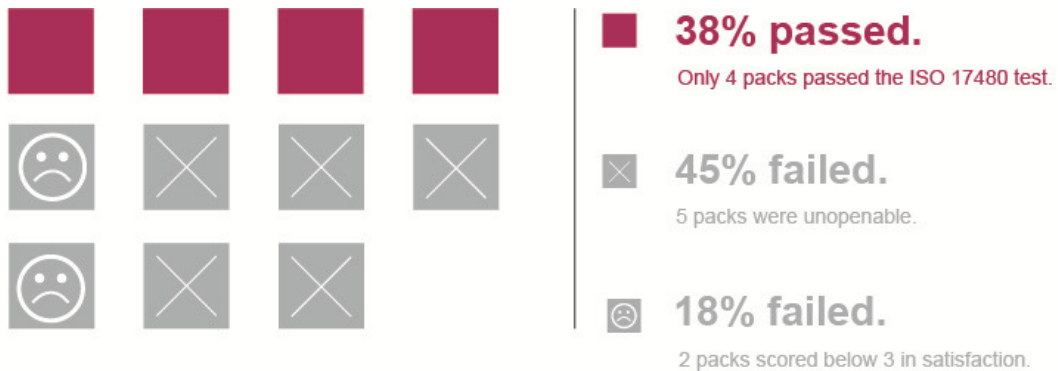


A packaging taskforce of brand owners, packaging designers, packer-fillers, academics and NHS professionals has been formed to look at the issue and develop strategies for change. Part of this work was to understand current 'state of the art' with single portion hospital packaging.



An initial study was undertaken testing the packaging as per Annex D of the international standard ISO17480 'Guidelines for Accessible Packaging'.

This found that **45% of the eleven, packs tested could not be opened, whilst a further 18% failed because of a low satisfaction score.** That is a staggering 63% of the packaging tested would fail the standard is likely to be un-openable by a proportion of hospital patients.



FAILED
7 packs failed the ISO 17480 test.

What does the NHS need?

We are working to eliminate poorly performing packaging from the supply chain through working with suppliers about ISO17480 and encouraging packaging to be tested.

Various organisations exist for testing of the packs and information on the best performing packs will be made available via the Hospital Caterers Association website.

Initially we're prioritising products that fall under the following categories:

- Preserve portions
- Biscuits/Crackers (individual/twin/3's)
- Juice/water cuplets/small cartons
- Jellies/desserts/yogurts (pots/pouches)
- Condiments (individual packets)
- Milk/cream/soya Jiggers
- Cake/flapjack/cereal bars
- Cheese portions
- Butter/spread portions
- Sandwich packs

These items have been chosen as they have been generally identified as problematic, used in significant quantities or provide essential nutritional value to patients.

4. Introducing ISO 17480: What It Is and How It Works

The international standard, ISO 17480 'Guidelines for Accessible Packaging' was launched in early 2015 after several years of development. The guideline outlines useful information for packaging designers and manufacturers about font size and type, contrast, reductions in strength, dexterity and cognition along with a designer checklist.

Annex D of the standard describes a user panel test method for testing packaging accessibility. This panel test is a modified version following experience on an earlier European Technical Specification CEN15945. Both standards use a similar protocol to that used for child resistant packaging testing.

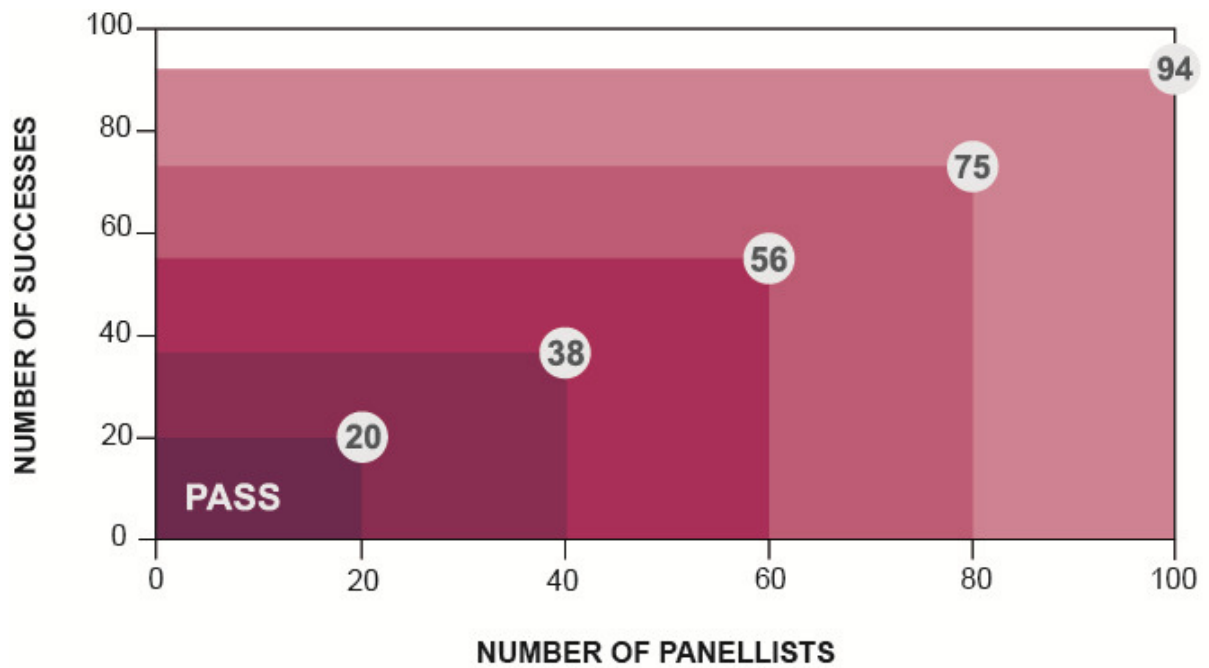
Basically, an older cohort of 20 people, as defined by table D.1 in the standard, are asked to open a pack and rate that packaging on a series of smiley face scales and give an overall satisfaction rating.

The pack fails the test if a participant is unable to open the pack or the satisfaction rating by the participant is either 'dissatisfied' or extremely dissatisfied.'

At this stage the test can be stopped if it is unlikely that the pack will pass testing on a further 20 people or the test can be repeated.



Table D.2 in the standard outlines the number of permitted failures allowed as the cohort size increases. The test is stopped completely when the number of participants reaches 100.

Once a pack has been tested a report should be produced that details what packs were tested, which failed (if any) and why the packs failed. This report should inform the supplier of the issues surrounding the packaging and aid with future development of that product.



Secondly a certificate should be produced detailing which packs passed or failed and this should be sent to NHS supply chain. A sample certificate is shown below. The essential information is what packs were tested, when the pack was tested, opening times and overall satisfaction score.

EXAMPLE CERTIFICATE

<p>Date/Period Tested: 4/04/16-8/04/16 Location Tested: Cantor Building, Sheffield Hallam University</p>	<p>Sheffield Hallam University Design Futures</p>
<p>Ref: DF/17480/Baillies/01</p>	
<p>To whom it may concern,</p> <p>This is to certify that the following items have passed testing as per Annex D of ISO17480.</p> <ul style="list-style-type: none">- Baillie's Strawberry Jam preserve - Individual 14g portion – Manufacturers Item code: ABC123- Baillie's Marmalade preserve - Individual 14g portion – Manufacturers Item code: ABC124 <p>Insert Image If Available</p> <p>Tested by: Alaster Yoxall Title: Principal Research Fellow</p>  <p>Date: 08/04/16</p> <p>Disclaimer: This certificate relates to the items as listed. Subsequent changes to the manufacture, materials or packaging design will require re-testing.</p>	
<p>Average time taken to open: 6.4s</p> <p>Average satisfaction score: 4.1/ 5</p> <p>Number of failures: 0/ 20</p>	

How much does it cost?

This will depend on the company undertaking the testing and how many products requiring testing. It is usually cheaper to have multiple products tested. It should be noted that it is the packaging being tested and not the contents, so if say a strawberry jam and marmalade are in the same pack the packaging only has to be tested once.

5. What You Can Do

a) SUPPLIERS & MANUFACTURERS

Initially, manufacturers, distributors, etc., should identify if any of their products fall into the categories outlined above.

If they do, then they should be proactive in getting the packs tested to the ISO 17480 standard and there are a number of organisations with experience in undertaking this test.

If a pack passes, they should identify this to the Purchasing organisation by supplying a 'Pass Certificate' from the test organisation.

The supplier should promote the pack compliance and communicate this to other bodies such as the Hospital Caterers Association.

Where a pack fails, the company should either withdraw that pack from supply or make changes identified by the test organisation and have the pack re-tested. Again, there are a number of organisations that can help with the pack re-design.

b) PURCHASERS & HOSPITAL CATERERS

Purchasers should work with their suppliers to promote the existence of the ISO standard and the need for improved accessibility and usability of single portion food and drink products.

Purchasers should indicate that they wish to move to buying products that have passed the test and these products will be chosen in preference to packs that have not been tested or have been shown to fail.

“It is only by suppliers and purchasers working together in this area that we can achieve real and lasting change and make a significant impact on patient experience. Further, by removing poorly performing packaging we have the potential to reduce, waste, improve efficiency and most importantly facilitate improved nutrition and hydration.”

Andy Jones, Former Chair Hospital Caterers Association.

6. Useful Contacts



For Further Information Contact:

Caroline Lecko

Initial Project Lead

Partner Nutrition and Hydration Associates

caroline@nutritionandhydrationassociates.com

Andy Jones

Initial Project Lead

Partner Nutrition and Hydration Associates

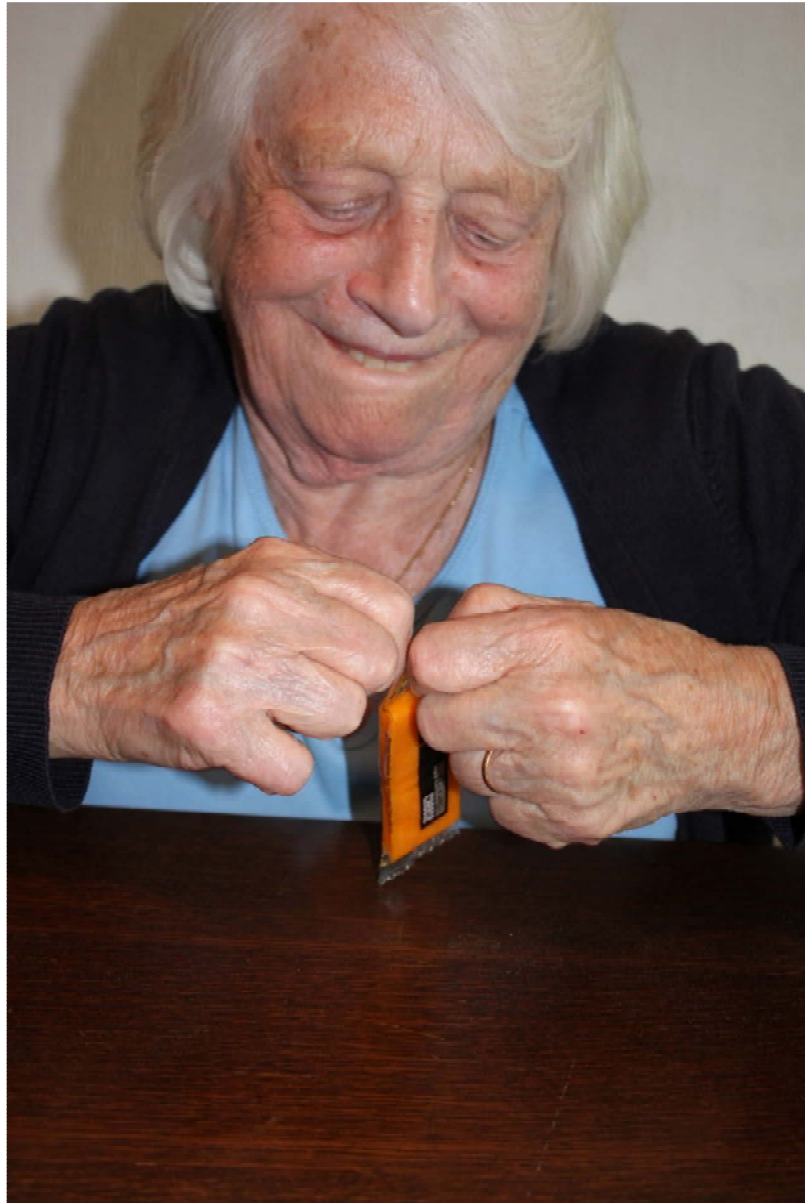
AJAssociates@consultant.com

Alaster Yoxall

Principal Research Fellow

Sheffield Hallam University

a.yoxall@shu.ac.uk



Handbook prepared by: Alaster Yoxall and Eve Baillie, Sheffield Hallam University

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University** | Design
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