



With a little
help from
my friends

HCA NATIONAL LEADERSHIP AND DEVELOPMENT FORUM 2016

14 - 15 APRIL 2016 | ACC LIVERPOOL



Packaging Usability

Dr Alaster Yoxall

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**Over 10 years experience
understanding packaging
accessibility**

**UK technical expert for
CEN15945 and ISO 17480**

**Over 40 peer reviewed research
papers and significant
industrial collaboration**



a) 1951

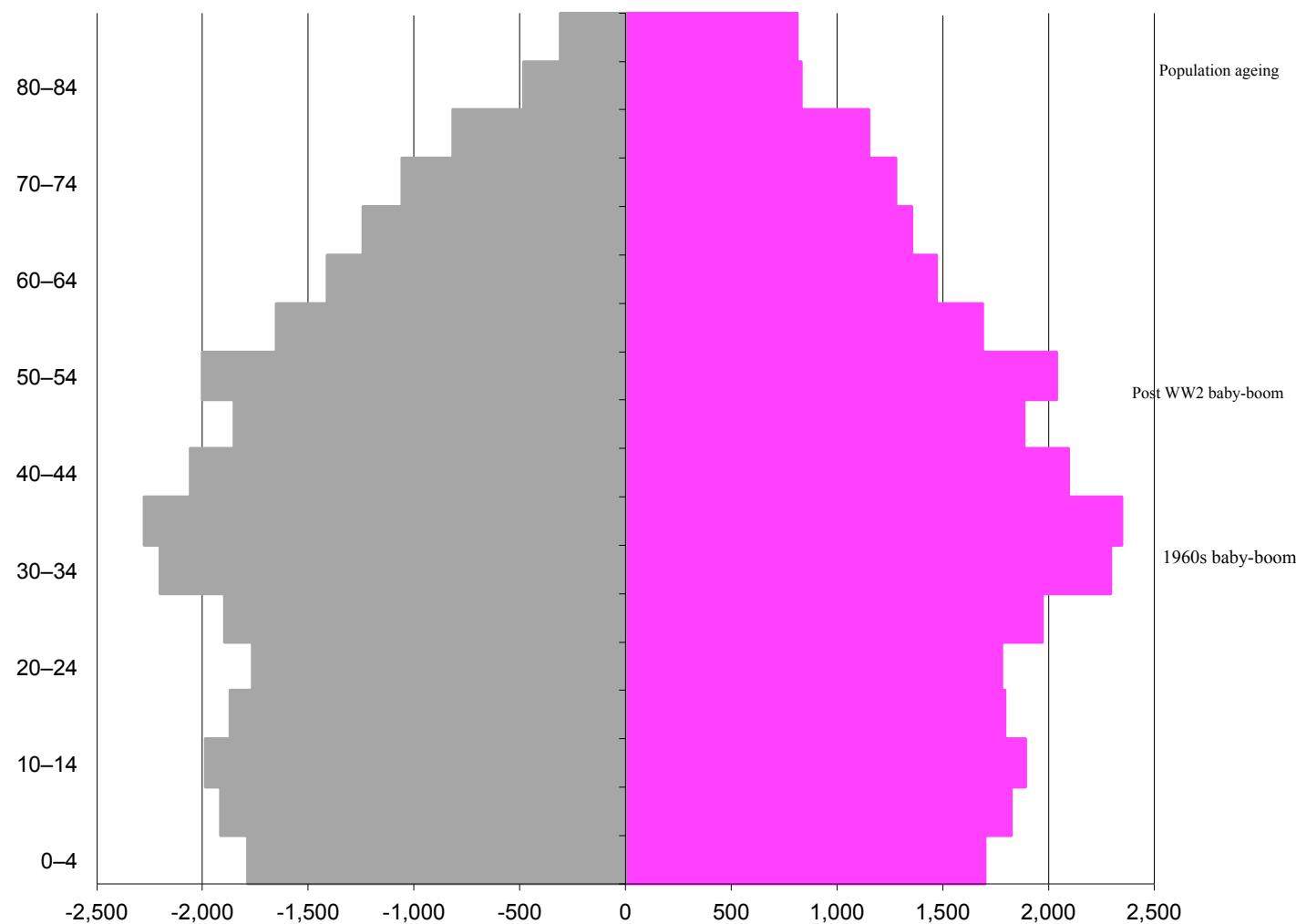


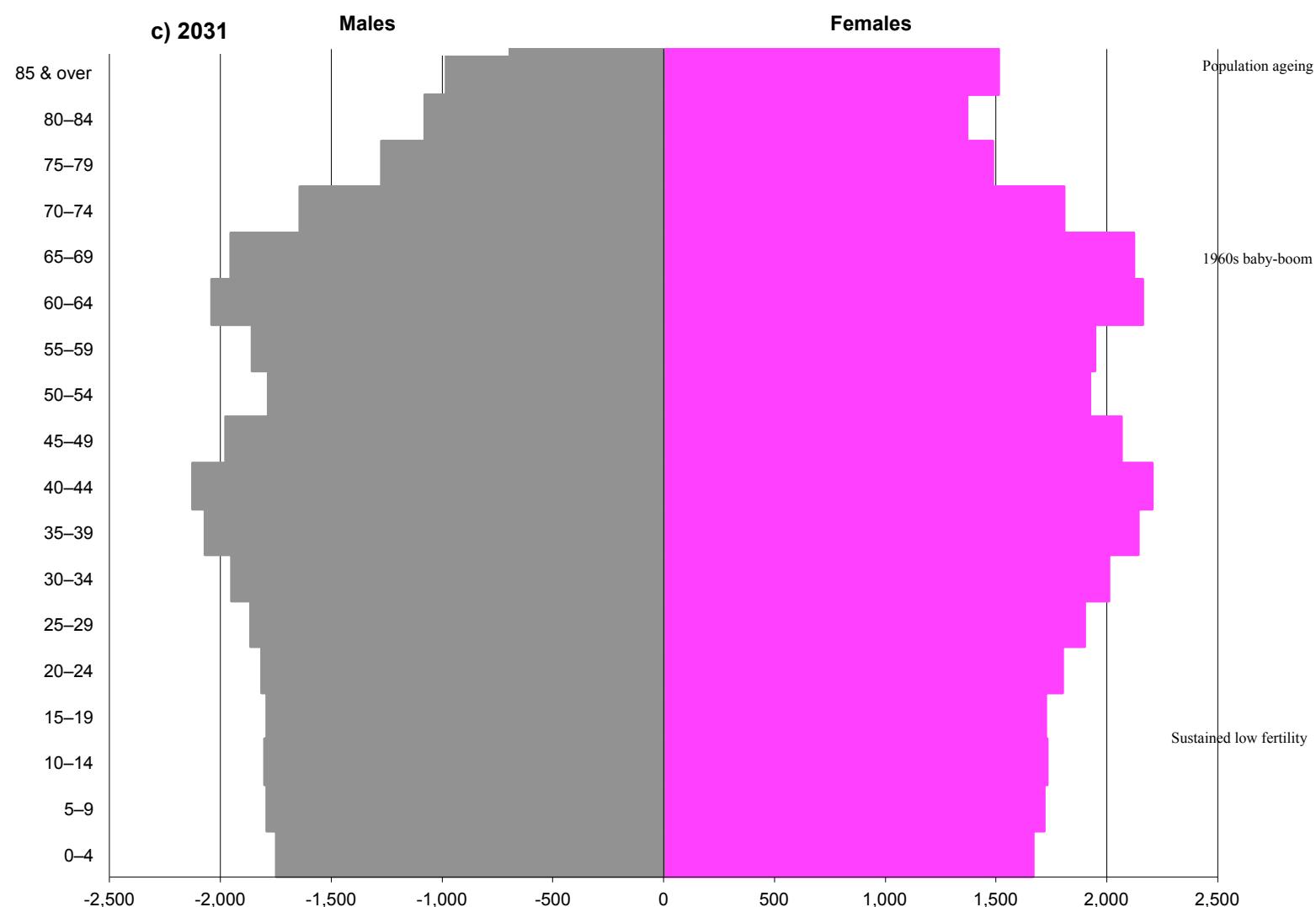


b) 2001

Males

Females







In twenty years time there will be nearly twice the number of over 85 year old females and three times the number of 85 year old males as now

the guardian weekly



Global views on world events | guardianweekly.co.uk | 24-30 July 2009

Global greying will test rich and poor nations

1.3 billion pensioners expected by 2040

Structure of the family



World diary

Iraqis look for a payoff from foreign oil companies » page 9

Culture

Armour, the original power suit » page 34



Ageing results in loss of strength, dexterity and cognition



YOURS
MAGAZINE

Packaging Survey



Pack it in!

*Just say no to
impossible packaging*



JUST to open in the past ten years



What's the worst thing to open?

You said:

- 1 Tops of bleach bottles
- 2 Jars
- 3 Shrink-wrapped cheese and ham and sealed sandwich packets
- 4 Ring-pull cans
- 5 Tins of meat/fish

- 6 Milk cartons and juice cartons (including milk and cream pots for coffee)
- 7 Child-proof tops on medicines
- 8 The Cellophane on microwave ready-meals
- 9 Soap powder boxes
- 10 Biscuits

WRAP RAGE

Two thirds of you get frustrated trying to get into everyday packaging. Our expert panel lifts the lid on the packaging types that cause the most injuries and irritation

Four in 10 people say they have hurt themselves while trying to open packaging in the last two years, according to a Which? survey of more than 2,000 members of the public in May 2013. If we scale that up to the UK population, it would mean a staggering 25 million people hurt themselves opening packaging over that period.

Perhaps that's not surprising considering people regularly feel the need to use a range of implements to tear their way into everyday packaging, employing everything from scissors (89%) and knives (66%) to Stanley knives (8%) and screwdrivers (6%). A tiny but worrying minority are even resorting to using razor blades (4%) and hammers (2%) to get to their goods.

Surprisingly, the biggest offender for injuries is the humble tin can. If we applied our figures for this to the general population, that would mean more than one million people UK-wide are going to their GP or A&E in a two-year period, simply as the result of opening a tin. Of the more than 2,000 'wrap rage' tip-offs that you gave us, the traditional key-opened corned beef tin also featured prominently.

PLAGUED BY PLASTIC

Moulded plastic packaging is the leading cause of frustration, irritating more than half of the people in our survey, and it's also the biggest bugbear for causing discomfort. One Which? member described the 'gargantuan struggle' needed to get through the packaging on an Oral-B Vitality electric toothbrush, wielding a Stanley knife to 'prise it open. This

experience is not uncommon, according to packaging expert Mark Shaylor: 'Heat-sealed PVC clam shells are the most hated packaging and should be avoided by manufacturers at all costs. There are so many other design options that still provide security.'

Although opening packaging can become more difficult as we get older – due, for example, to reduced strength or flexibility in the hands – our research shows that inaccessible packaging affects all of us.

Your comments ranged in tone from anger to humour. One Which? member told us: 'I'm a 30-year-old male who goes to the gym a lot... but trying to open the plastic wrapping on these [Warburtons] crumpets just ends up in frustration.'

Our panel agreed. Warburtons confirmed that it constantly considers its packaging and is currently reviewing the crumpets.

HELPING HAND

A quarter of people regularly need help to open packaging, and the same proportion have to rely on others more than they would like to. That's a worry with the number of people aged 60-plus due to pass the 20 million mark by 2031, and 3.8 million older people living alone.

So why, when three quarters of people say that everyday packaging is harder to open than it needs to be, does packaging continue to be such a stumbling block for manufacturers and retailers?

To find out, we recruited an expert panel to examine more than 200 items, most



suggested by you. Our panel includes packaging principal research fellow, Dr Alister Yoxall; innovation and eco-innovation consultancy director Mark Shaylor and senior design lecturer Dr Hui Dong.

Dr Yoxall said: 'There have been competing priorities for companies – the need for packaging to keep food fresh, to keep the contents secure and tamper-proof, and to use less packaging (sustainability). But there are too many excuses for poor design and lack of thought.'

Companies and manufacturers are starting to take the issue of accessibility more seriously, and to see packaging as an important part of the product rather than

www.which.co.uk

YOU SAY...

You've told us about the fiddly packets that you have found near impossible to get into, causing you nothing but grief!

Camera card
Recently I found my camera card was full and bought a spare. I could not open it without scissors so bought a pair from WH Smith. I then found that I could not get the scissors out of their packaging because of a

nylon cable tie. An electrician lent me a pair of cutters so that I could remove the scissors and then unpack the memory card.

New Covent Garden Soup
I am not elderly but I have rheumatoid arthritis. I have reasonable movement and ability with my hands, but I find Covent Garden soups are a complete nightmare! Often I have thought of throwing the pack at the wall, but I'm frightened that might do the trick! Why can't they have

just a pouring spout like some juices or some simple way of being opened?

Cleaning products
I struggle with opening bottles of toilet cleaner and bleach. I just don't have the strength required anymore – and I'm only in my mid-50s! If I lived on my own I fear I would probably have to give up cleaning the toilet as a consequence.

Razors
I find these are the worst.

The manufacturers are so paranoid about theft of their product that it doesn't occur to them that people actually want to get into the package. I have to use scissors to get in to them, which is how I cut myself on a sharp trailing edge.

Jars
I find it hard and painful in my wrists to open jars.

www.which.co.uk

Examples chosen by you

1 MOULDED PLASTIC 'CLAMSHELL' Oral-B Vitality White & Clean electric toothbrush

EXPERT VIEW 'Horrific to open as the moulded plastic packaging is a very difficult shape. You have to cut across the front – risking sharp edges – but miss the brush. Could it not have a clip opening?'

2 PEEL-OFF COVERING Brillo Mr Muscle 10 Soap Pads

EXPERT VIEW 'It's not clear where you peel from. It's an awful hard-to-peel lid as the laminate is under the foil finish which makes it hard to open cleanly-style over openability. You'll have to decant them to store them too.'

3 TAMPER-PROOF CAP Listerine Total Care Enamel Guard mouthwash (500ml)

EXPERT VIEW 'Squeezing and turning is a difficult enough action, without having to break the tamper-proof plastic seal at the same time. And the instruction diagrams is hard to see as it's black text on a black lid.'

4 PULL-APART PACK Warburtons crumpets

EXPERT VIEW 'Over heat-sealed: the whole panel were red-faced with exertion trying to grip the pack and pull it apart.'

5 MOULDED PLASTIC ON CARD WH Smith rounded blade scissors

EXPERT VIEW 'They're held in place under the moulded plastic by a cable tie, which means you will actually need to use scissors to cut your scissors free!'





Hospital Packaging Accessibility



INTERNATIONAL
STANDARD

ISO
17480



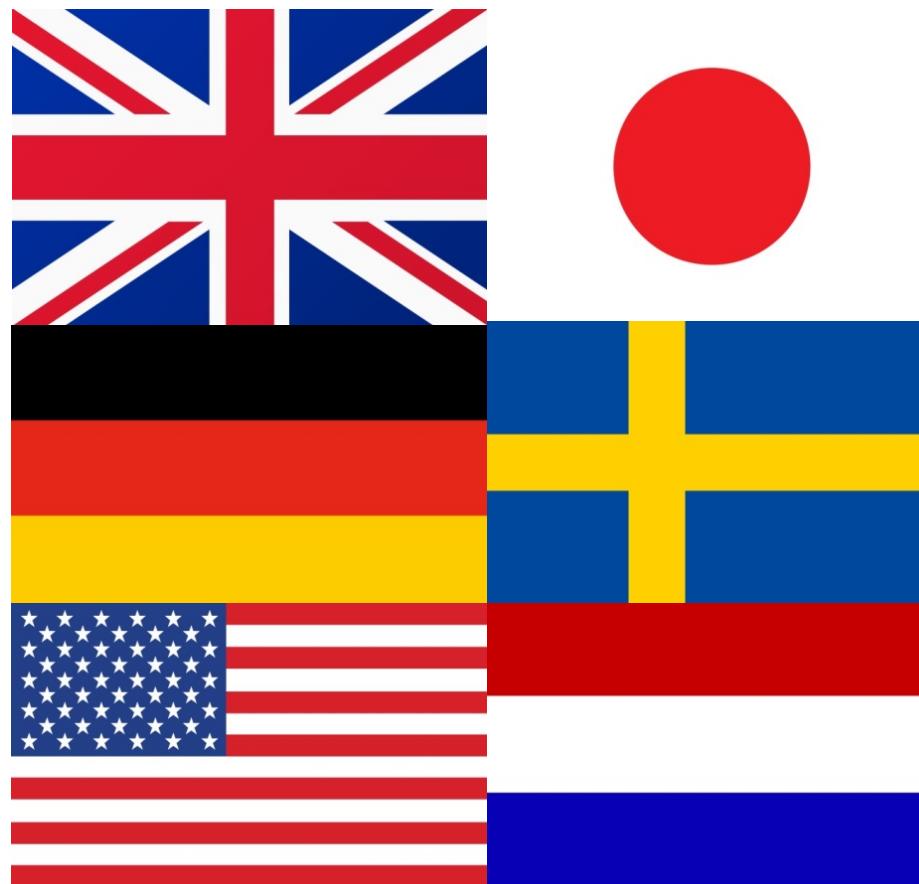
First edition
2015-03-01

**Packaging — Accessible design —
Ease of opening**

Emballages — Conception accessible — Facilité d'ouverture



Why ISO17480 ?





ISO 17480 Participant make-up

Table D.1 — Composition of the test group for sequential testing

Age range (years)	Male %	Female %	Total %
65 to 69	10	25	35
70 to 74	10	25	35
75 to 80	10	20	30
Total	30	70	100



Permitted failures

Table D.2 — Sequential test method

Number of panellists	Number of successes recorded	Number of failures recorded	Confidence intervals (%)
20	20	0	85 to 100
40	38	2	82 to 99
60	56	4	83 to 97
80	75	5	85 to 97
100	94	6	87 to 97

NOTE The confidence interval gives an indication of the reliability of the test and has been determined assuming a 95 % confidence level. Detailed analysis of how these confidence intervals have been determined is outlined in References [18] and [19].



Rank Packaging





Twenty four subjects tested over three sites





Measured Participants Strength





Measured Participants Dexterity







**Of the eleven items tested across all sites
five failed with a further two scoring badly**





Failed Items

Cheese, crackers, jam, fruit
pot, biscuits





Passed Items

Flora, spread, orange Juice
and jelly





Milk and sandwiches whilst openable scored below 3





Summary

Use of ISO 17480 has identified issues with single portion packaging in the NHS

It is likely that much of the packaging used by the NHS is currently not fit for purpose





How will it work ?





Date/Period Tested: 4/04/16-8/04/16 Location Tested: Cantor Building, Sheffield Hallam University	Sheffield Hallam University Design Futures
Ref: DF/17480/Baillies/01	
<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>Tested by: Alaster Yoxall Title: Principal Research Fellow</p> <p></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>	
Average time taken to open: 6.4s Average satisfaction score: 4.1 / 5 Number of failures: 0 / 20	
DF/ISO17480	



There is an opportunity to develop
'world-class' single portion
packaging that meets the
requirements of the customer (the
NHS) and the consumer



Thanks to:

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Taskforce, Howard Cartledge,
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