Seizing the Digital Challenge
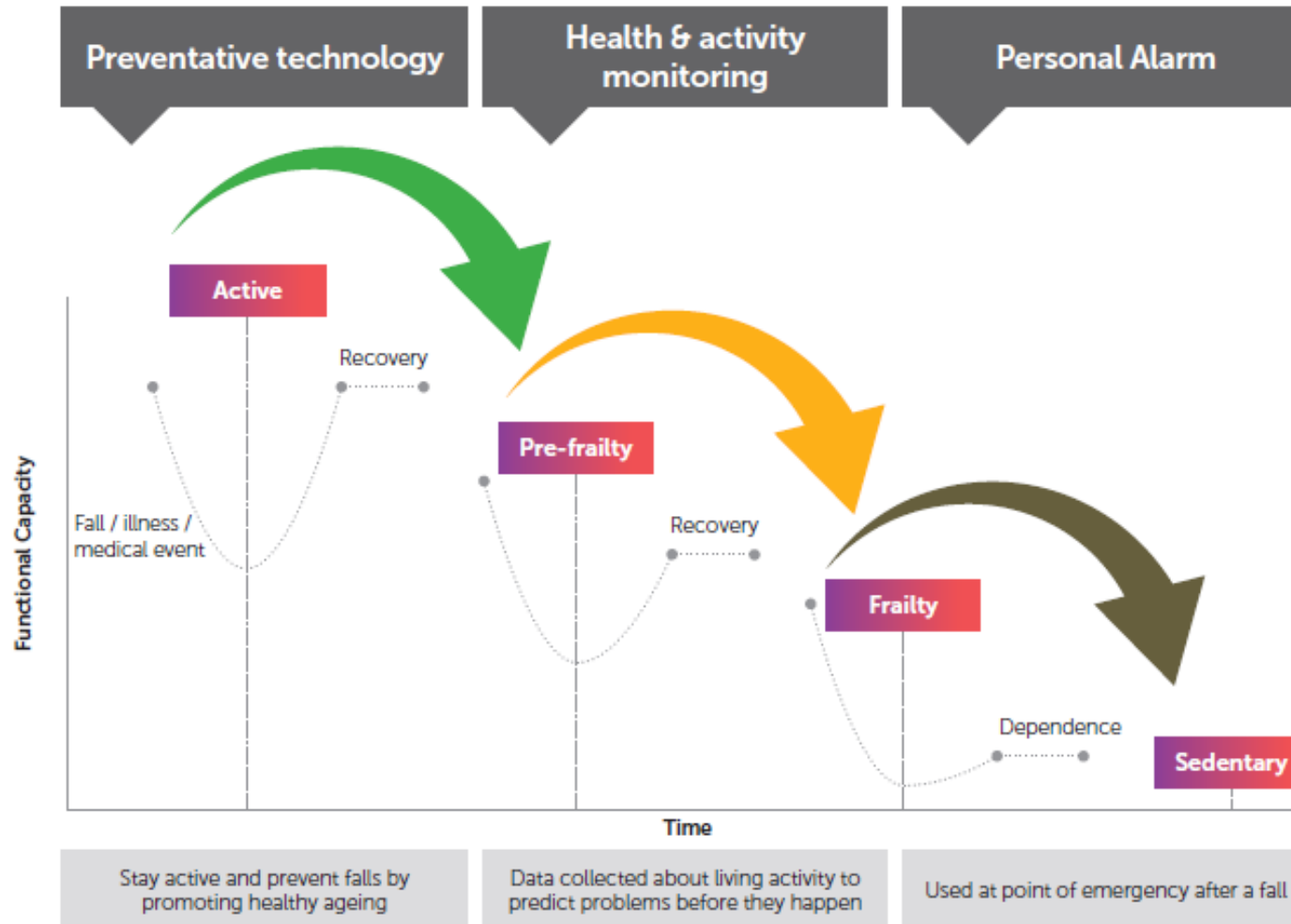## *"Maximising digital opportunities"*

Steve Gates – Managing Director

Agenda

- Taking a risk-based approach

- Current digital challenges

- Seizing digital opportunities

How are **you** looking to use TEC for the benefit of residents?

How Technology Enabled Care can help predict, delay or reduce frailty.

Preventative technology	Health & activity monitoring	Personal Alarm

Active

Recovery

Pre-frailty

Fall / illness / medical event

Functional Capacity

Recovery

Frailty

Dependence

Sedentary

Time

Stay active and prevent falls by promoting healthy ageing	Data collected about living activity to predict problems before they happen	Used at point of emergency after a fall

Based on 'The cascade of functional decline in older adults from independence, through to frailty and disability' Dapp et al. (34) Hoogendijk et al. (35), Clegg et al. (36) and Fried et al. (37) Physical Frailty: ICFSR International Clinical Practice Guidelines for Identification and Management.

Dealing with A2D challenge across a range of different channels

Proposition

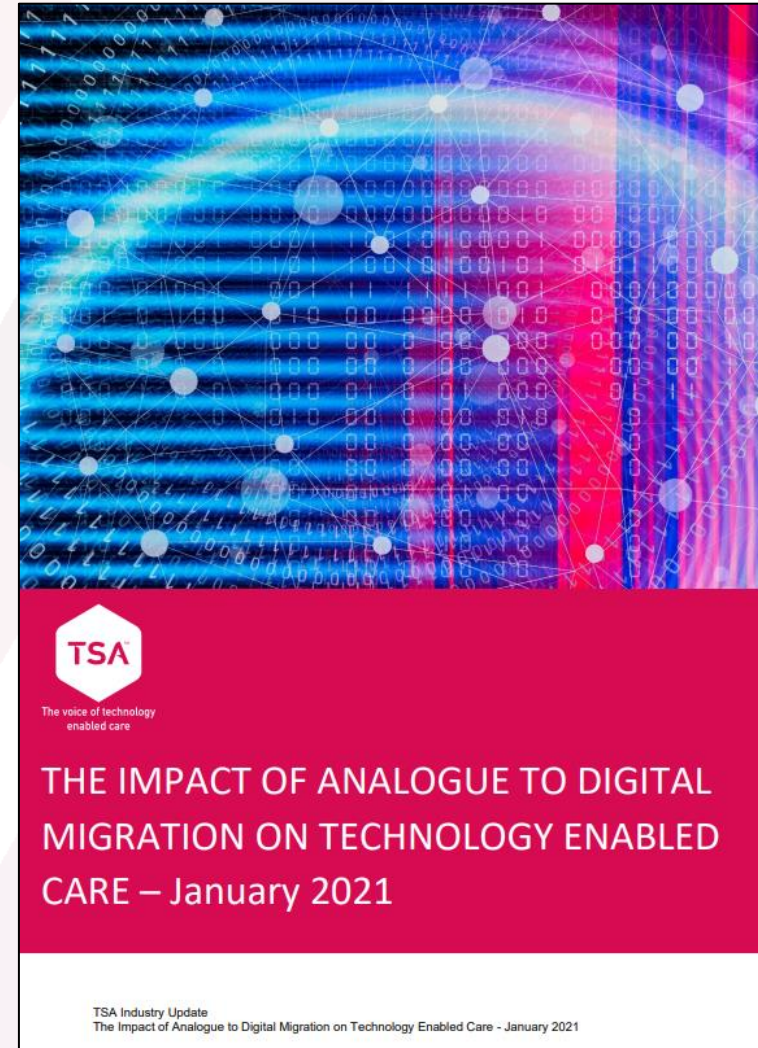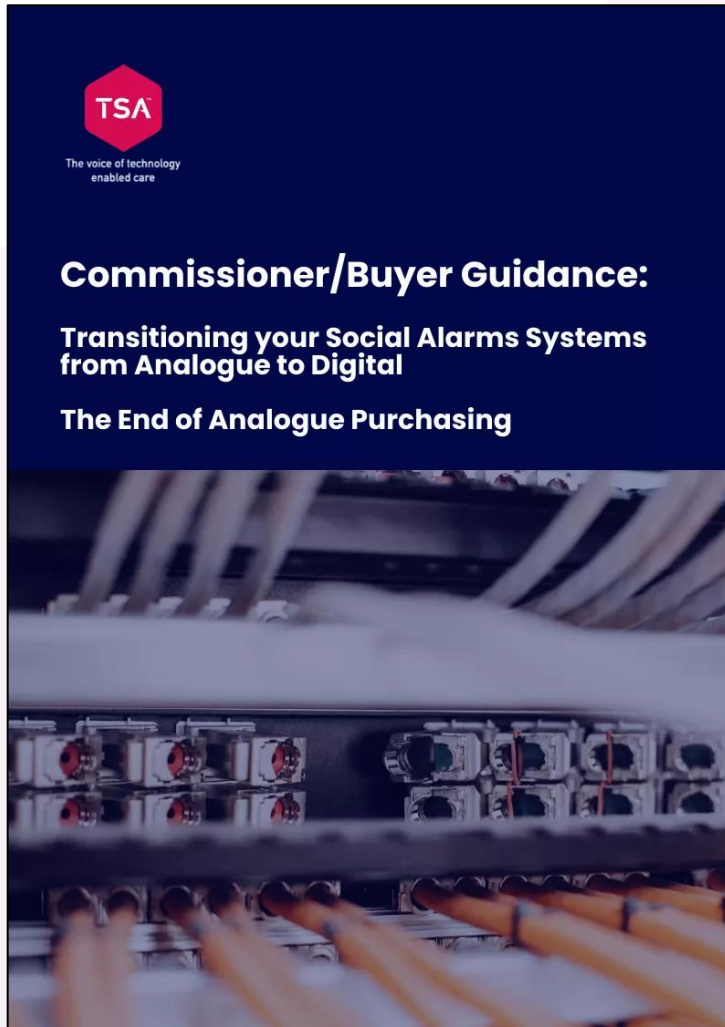| Channel	Proposition	Partners
Consumer/Individual/ B2C	Full Service; • Marketing • Install • 24/7 monitoring • Faults/Repairs • Reverse supply chain	age CO (Owned by Age UK), age NI, Which? Trusted Trader, TEC Quality, St John Ambulance, Royal Air Force Benevolent Fund, braininhand
Local Authority/Housing Association/B2B	Variety; • Full Service (inc. integration with Social Care) • Monitoring Only • Night Owl	ARUN District Council, East Devon District Council, London Borough of Bexley, Welwyn Hatfield, Hyde, Home Instead Senior Care, A&W Adur & Worthing Councils, Guildford Borough, Chichester District Council, Stonewater, Freemont Property Managers, aster living, PA, Hartlepool Borough Council, Winchester City Council, Cognatum, Saxon Weald, NRS Healthcare, Waverley Borough Council, North Tees and Hartlepool NHS Foundation Trust
AXA Health Corporates	Employee Benefits proposition; • Benefits Platform • Employee discounted access to alarms • Information and support • Fully integrated online journey	Edenred, SCOR The Art & Science of Risk, McDonald's, British Chambers of Commerce, BA Clubs, Blue Light Card

We have some guidance as to how to approach this issue

TSA
The voice of technology enabled care

Commissioner/Buyer Guidance:

Transitioning your Social Alarms Systems from Analogue to Digital

The End of Analogue Purchasing

TSA
The voice of technology enabled care

THE IMPACT OF ANALOGUE TO DIGITAL MIGRATION ON TECHNOLOGY ENABLED CARE – January 2021

TSA Industry Update
The Impact of Analogue to Digital Migration on Technology Enabled Care - January 2021

It's all about the RISK!

Imperial College London

News

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Winter viruses and COVID-19 could push NHS to breaking point, warns new report

by Stephen Johns
15 July 2021
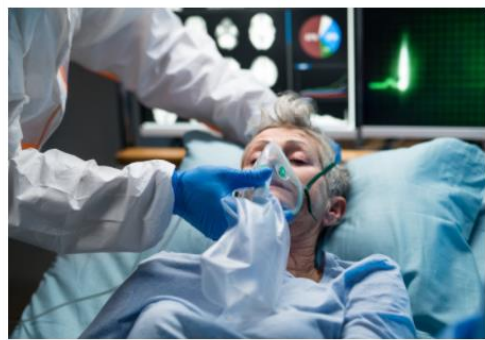
COVID-19, influenza, and the respiratory virus Respiratory Syncytial Virus (RSV), could push the NHS to breaking point this winter, a new report says.

The report from the Academy of Medical Sciences, draws on expertise from Imperial academics including Professors Azra Ghani, Wendy Barclay and Peter Openshaw, among leading researchers from other institutions and members of the public.

The report, *COVID-19: Preparing for the future, looking ahead to winter*

LATEST NEWS

MARTIAN RIVERS
First images from latest Mars rover show ancient river delta in Jezero crater

COVID-19 ORPHANHOOD
Children orphaned due to COVID-19 continues to surge during pandemic

COVID OUTLOOK
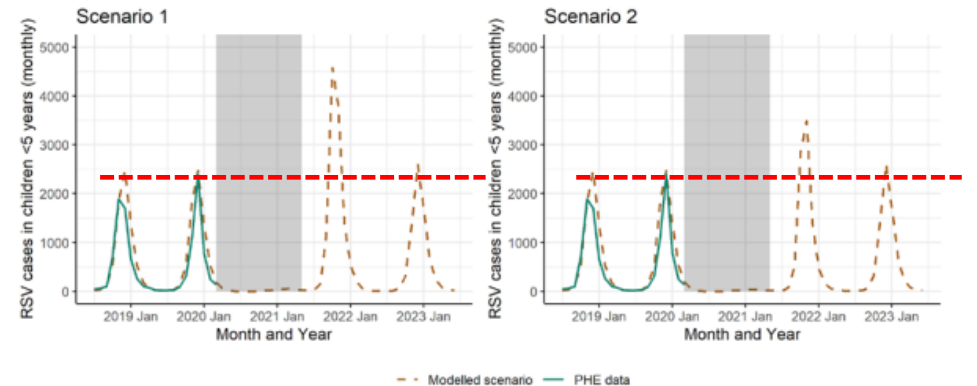Neil Ferguson: COVID-19 measures could be considered if hospitalisations double

RELATED STORIES

Prepare now for winter COVID-19 peak, warn infectious disease experts

MOST POPULAR

FEATURED

Figure 5: Two potential scenarios for RSV in England. In Scenario 1, we assume that maternal protection decays over the period that behavioural and environmental

47

The Academy of Medical Sciences

interventions are in place due to a lack of exposure. In this scenario, a peak outbreak would be ~2 times the magnitude of a normal year, with a 65% increase in cases in children <5 years, 100% increase in cases in youngest infants and 40% increase in infection across the population. In Scenario 2, we assume no change in pre-existing levels of maternal protection. In this scenario, a peak outbreak would be ~1.5 times the magnitude of a normal year, with a 25% increase in cases in children <5 years, 30% increase in cases in youngest infants and 40% increase in infection across the population. For both scenarios, we assume that the level of behavioural and environmental interventions in place between March 2020 and June 2021 reduced transmission of RSV by 30%, a level that is sufficient to interrupt transmission for most of this period. The model is fitted to data from England (PHE reports from DataMart). Similar patterns would be expected in Wales, Scotland and Northern Ireland.

Doing what we can - Alarm testing

Alarm Type	ARC Platform	BS8521			BS8521			TT92					
Protocol								DTMF			STMF		
BT Consumer – FTTC (SOGEA)	Jontek												
	PNC												
BT Consumer – FTTP	Jontek												
	PNC												
BT Enterprise – FTTC (SOGEA)	Jontek												
	PNC												
BT Enterprise – FTTP	Jontek												
	PNC												
Vodafone – FTTC (SOGEA)	Jontek												
	PNC												
Vodafone – FTTP	Jontek												
	PNC												
Zen – FTTC (SOGEA)	Jontek												
	PNC												
Zen – FTTP	Jontek												
	PNC												
TalkTalk – FTTC (SOGEA/MPF)	Jontek												
	PNC												
TalkTalk – FTTP	Jontek												
	PNC												
Sky – FTTC (SOGEA)	Jontek												
	PNC												
Sky – FTTC (SOGFAST)	Jontek												
	PNC												
Sky – FTTP	Jontek												
	PNC												

Doing what we can II – Understanding Service User concerns

55+

There is a lack of information around how the phoneline will change and its implications	~40%
Whether I will still have a landline phone number	~24%
Whether I can keep my landline phone number	~27%
Impact on the cost of landlines (i.e. phone bills etc.)	~36%
If the connection is as reliable	~41%
If the landline phone or other equipment (e.g. telecare equipment etc.) I currently use will still work	~28%
Who will help older or vulnerable people who may struggle to make the transition to a digital service	~45%
If emergency calls will work in a power cut	~38%
Other	~1%
Don't know	~4%
Not applicable - nothing particularly worries me about the change to a digital phone line by 2025	~32%

YouGov

Where can you find the data to assess your risk?

- Ask you manufacturer/provider for their test results – BT Labs, Virgin labs, OpenReach lab

- Ask for test results over multiple networks – ie. not simply BT to BT, but BT to Talk Talk to Virgin ..etc.. as this more accurately reflects how an analogue signal may traverse across a number of digital networks

- Monitor the "First Time Call Failure" on your ARC platform – especially for regular system-to-system test calls

- Call reason code on your telephony Customer Services to track any increase/decrease in customer issues/enquiries

Agenda

- Taking a risk-based approach

- **Current digital challenges**

- Seizing digital opportunities

Understanding the NEW points of failure
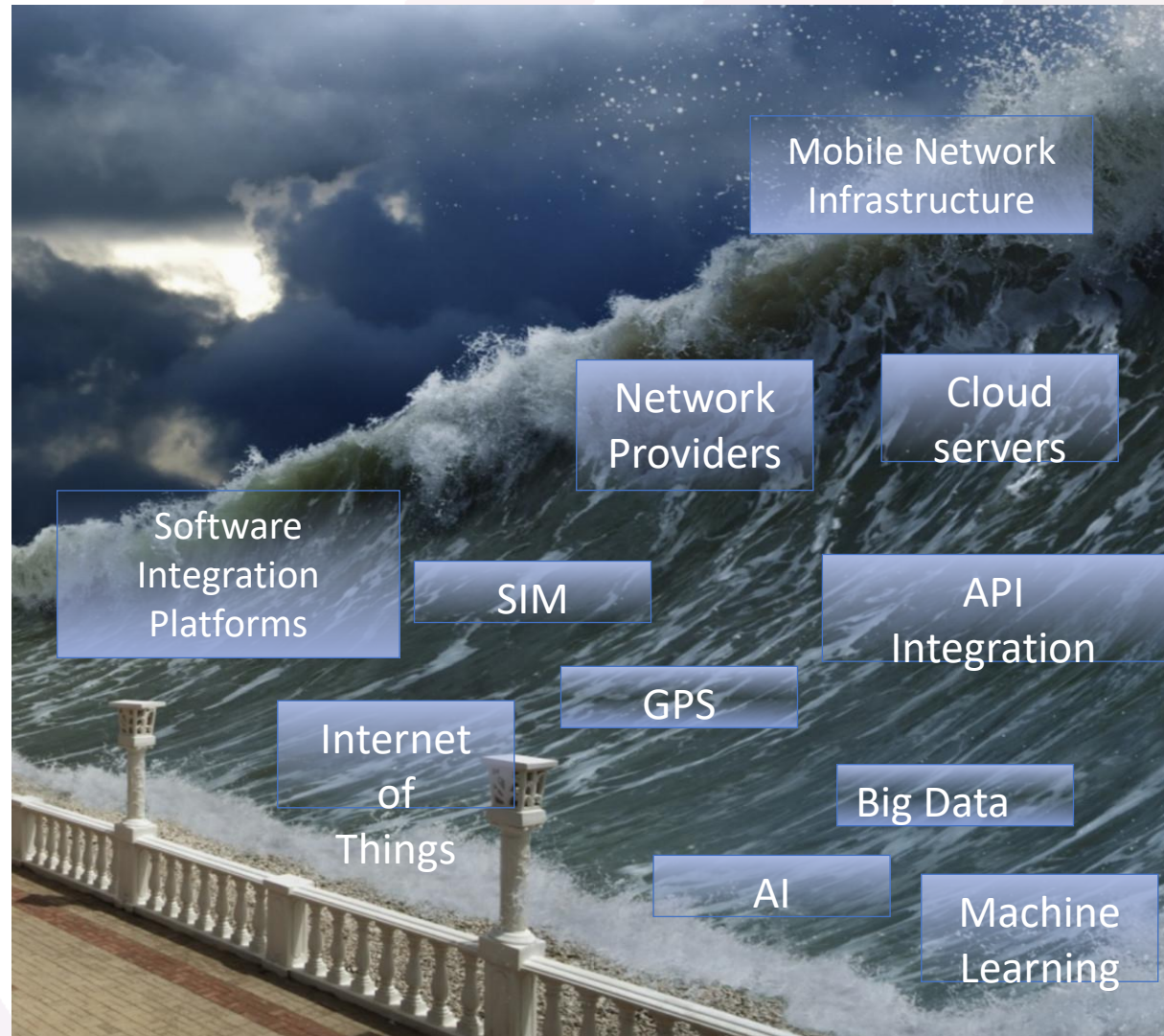
OpenReach roll-out learnings

Trials Learnings

The trials have accelerated the conversation, CPs have solutions under development, Openreach continues to enhance existing All IP products to break down the barriers to WLR migrations

End Customer Awareness

- Low level of understanding in the general public
- Despite CP contact, some end customers don't move
- Messaging isn't simple
- Proactive messages = a more positive reaction

Migration Planning

- No one true source for how lines are used
- Different customers require different migration journeys

Vulnerable End Customers

- Not all devices compatible with digital lines
- CPs continue to work with their vulnerable customers – creating a tailored journey
- The test lab is crucial to understand compatibility issues
- Prove IP Voice lite
- Managed telecare journey SOR progressing

Timing

- We have seen an increase in movement at the end of the trials
- Natural tendency to leave complex moves till last, could increase the risk of having service impacted

CPs

- Some CPs have engaged well with Openreach
- CPs have built customer journeys with more products available
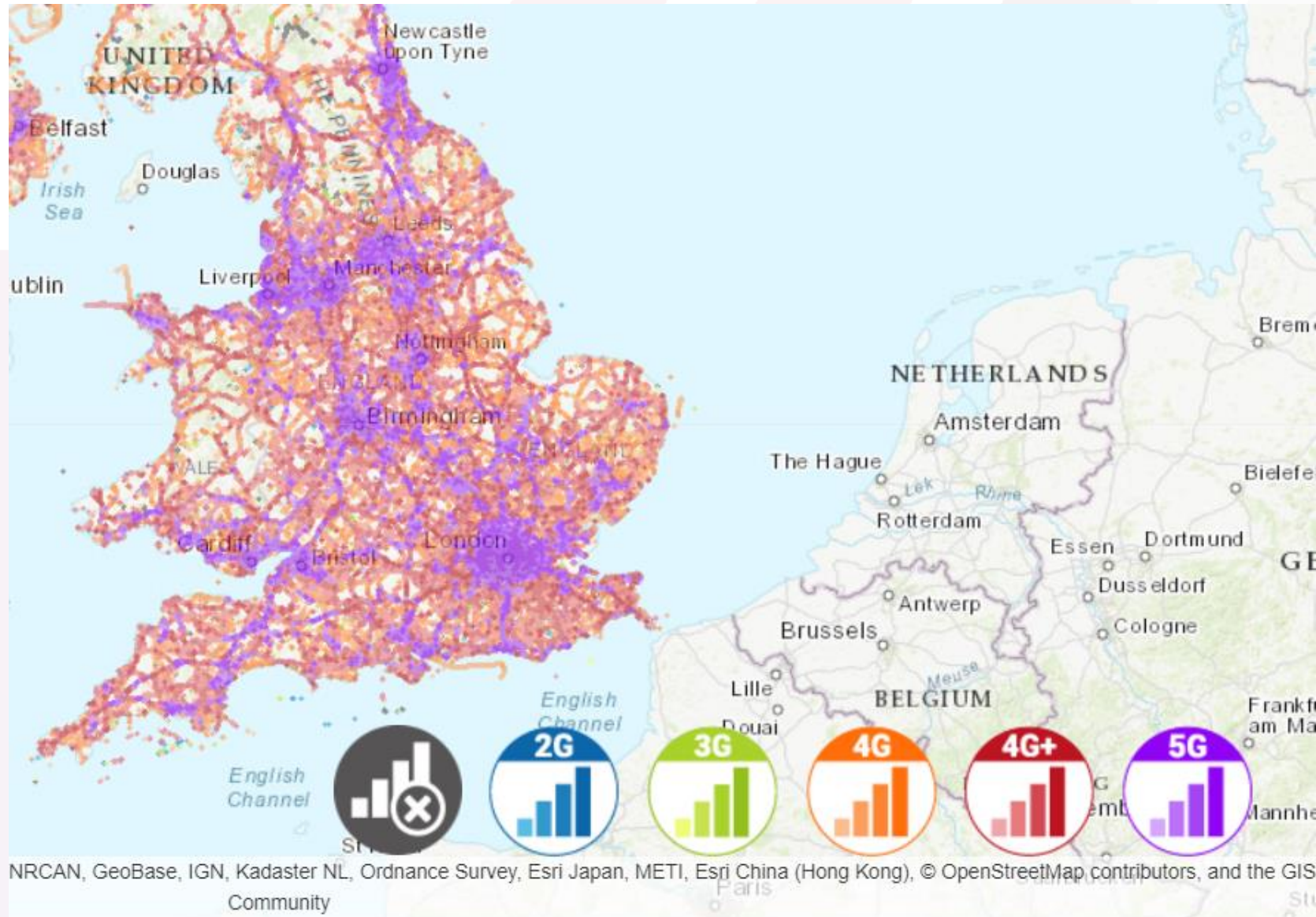
Advocates

- Impartial advocates are trusted, and end customers listen to them
- Advocates are crucial to vulnerable end customers

Openreach granted exemptions for a number of complex scenarios and the vulnerable, we've seen a large number of these exemptions subsequently migrate to All IP products

3G to 4G transition

Agenda

- Taking a risk-based approach

- Current digital challenges

- **Seizing digital opportunities**

Seizing Digital Opportunities: Prevention

Taking Care
Part of AXA Health

Taking Care Prevent

The watch collects data about the wearer's activity levels, which can be viewed in a secure website. The Artificial Intelligence in the Prevention Platform learns what activity levels are 'normal' for the wearer.

Email alerts will make you aware of changes in activity that may contribute to a higher risk of falling. By reviewing the changes in 'normal' activity, you can proactively manage the risk of a fall.

Taking Care's Prevention Team will be alerted of 'high' risk factors that may predict a fall approximately 10 days in advance and will be in touch at a convenient time to discuss.

The Taking Care Prevention Team will identify actions that you or your loved one can take to reduce the likelihood of a future fall. The Taking Care Prevention Team will monitor progress and make follow-up calls to ensure the Action Plan is reducing the risk of a fall.

Move More Live More
With innovate UK finding

Two Northern Ireland Health Trusts identify service users who are at risk of a fall. Via a triage process, delivered by Age NI, the higher risk patients are referred to Taking Care.

The wearable collects data about the wearer's activity levels, which can be viewed in a secure website. The Artificial Intelligence in the Prevention Platform learns what activity levels are 'normal' for the wearer.

The Taking Care Prevention Team will identify actions that the service user can take to reduce the likelihood of a future fall. The Taking Care Prevention Team will monitor progress and make follow-up calls to ensure the Action Plan is reducing the risk of a fall.

Ulster University is engaged in the programme in terms of fall-prevention health outcome benefit-recording, providing academic rigour.

Ulster University

Predictive Pendants ©
Analogue Prevention
(2023)

During the course of the normal 24/7 monitoring service TC will collect an array of data connected to analogue pendant usage – including falls, accidentals, tests and 999 dispatch.

This "big" data will be analysed to review if there is a definable pattern of pendant presses that precede a cancellation for the reasons of "Death" or "Moving into a Care Home" (#1 and #2 reasons for cancellation)

Based on the identification of a pattern that precede lapses a "Coefficient of Prevention" will be developed – which, when applied to current data, will provide an indication of customers who are on the pathway to cancellation due to death/moving to care home.

Using this data the Prevention Team can proactively intervene to provide health prevention guidance and seek to slow down movement along the decline pathway.

Seizing digital opportunities: Proactive

Taking Care — Part of AXA Health

Taking Care Sense

A small battery-powered sensor is placed on a kitchen shelf, no other installation is needed.

A picture of behaviour is built - Typical behaviour patterns are quickly recorded based on use of a kettle, cooking, washing up, etc. Over time, these behavioural patterns become more accurate.

If the typical behaviour deviates notably, Taking Care's Prevention Team will be alerted.

Taking Care's Prevention Team will call the customer to check on their welfare.

Safe Home Alert

Sensors around the home learn and keep track of your loved one's daily routine, providing peace of mind when you can't be there.

Alerts that require immediate action are sent to our Emergency Resolution Team, for example, if the front door has been left open during the night.

Insights allow family members to see changes in daily routine, for example, a loved one eating and drinking less. These insights help you take action before a problem escalates.

Your loved one can press their alarm pendant any time of the day or night to speak with our Emergency Resolution Team. We'll call you or the emergency services if further help is needed.

Falls Risk Score ©

Taking.Care Falls Risk Score

Online Falls Risk Score, commissioned via Aston University for Healthy Ageing using NICE guidelines for falls prevention.

14 questions that provide algorithm-based indication of likelihood of fall.
Family/Loved Ones can use the FRS to identify appropriate device from TC alarm/alerts device range and provide an ongoing assessment of progress through frailty journey. Access also provided to TC "Fall Prevention" guide

Your Mum's falls risk score is **4 out of 5**

Don't worry, there are some things you can do to help your Mum stay safer and remain happy and independent.

These may reduce the risk of injury and provide peace of mind. The guides that you will receive at the end of this assessment explain more.

Recommended for you

Based on your answers, we recommend you consider this personal alarm:

Classic Fall Alarm

If you are worried about how you would get help if you fall, this alarm provides peace of mind and security in the home and garden.

30 day risk free trial

Getting help when Dion's Mum had a fall

When Dion's Mum had a fall, Taking Care were alerted and quickly called an ambulance.

Dion explains how a personal alarm meets his Mum had the support to continue living in the home she loves. Read Val's story

Getting out and about with a GPS alarm

Tricia explains how a GPS personal alarm means she can get out and about with confidence.

She has even trained her dog Barclay to press the personal alarm button in an emergency! Read Tricia's story

Winning Gran over (and worrying less)

When Alice suggested a fall alarm, her Gran was sceptical at first.

But she was soon won over by the friendly service and now Alice feels much happier her Gran has the support she needs. Read Alice's story

And don't forget your (analogue) dark data?

"Dark data is data you don't know.

Dark data might even be data you have in principle, perhaps data lying unnoticed, hidden, and unsuspected elsewhere in your records or files, and not included in your analysis.

This brings me back to one of the most basic and simplest, but often most effective and powerful applications of the dark data perspective: the use of data that has already been collected, lying gathering metaphorical dust in unnoticed and unused folders in your computer: data which exists but has hitherto been concealed. This data was probably put aside because it had no relevance to a certain question. But that does not mean that it doesn't contain valuable information about other questions.

It simply takes someone to formulate the right question and recognise that this dark data can shed light on it."


David J. Hand - Emeritus Professor of Mathematics and Senior Research Investigator at Imperial College London, formerly President of the Royal Statistical Society and Fellow of the British Academy.

Delivering Prevention Today

Saving lives.
One analogue alarm at a time

How to harness the hidden data in your existing alarm.
Equipment to keep people safe right now.

Taking Care
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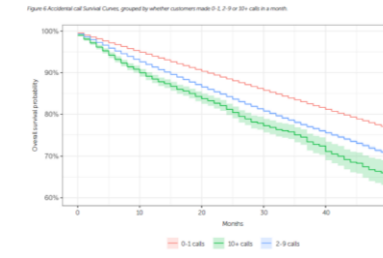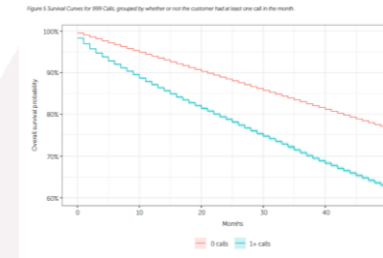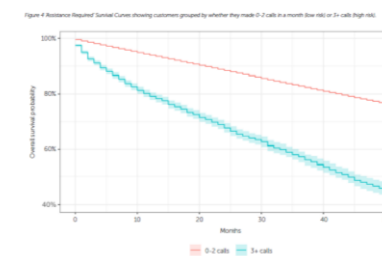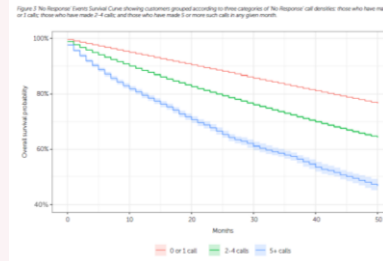
Call reasons as correlated to subsequent death	Frequency trigger (how many is too many)	Monthly risk	Prediction period	Risk ratio
1. Assistance Required	3 calls or more in a month	3.1%	3 months	4.8
2. No Response	5 calls or more in a month	4.4%	1 months	4.7
3. 999 Called	1 call or more in a month	1.5%	3 months	3.0
4. Total Calls	5 calls or more in a month	1.2%	1 months	3.0
5. Test	0 calls in a month (1 or more indicates lower risk)	1.0%	12 months	2.0
6. Accidental	10 calls or more in a month	3.1%	3 months	2.0

Call reasons as correlated to de-registration for reasons other than death	Frequency trigger (how many is too many)	Monthly risk	Prediction period	Risk ratio
1. No Response	10 calls or more in a month	2.7%	3 months	5.7
2. Assistance Required	3 calls or more in a month	2.5%	3 months	5.3
3. Total	10 calls or more in a month	1.5%	1 month	4.8
4. 999 Called	2 calls or more in a month	1.4%	6 months	3.1
5. Test	0 calls in a month (1 or more indicates lower risk)	0.6%	1 month	2.4
6. Accidental	5 calls or more in a month	0.9%	6 months	1.9

No Response Calls	Assistance Required Calls	1 Month Risk (95% CI)	2 Month Risk (95% CI)	6 Month Risk (95% CI)
0 or 1	0-2	0.9% (0.9%, 1.0%)	1.4% (1.4%, 1.4%)	3.2% (3.2%, 3.3%)
0 or 1	3+	4.9% (4.1%, 5.6%)	7.1% (6.2%, 8.1%)	12% (11%, 14%)
2-4	0-2	2.3% (2.2%, 2.4%)	3.3% (3.1%, 3.4%)	6.8% (6.6%, 7.0%)
2-4	3+	5.5% (3.8%, 7.1%)	7.6% (5.7%, 9.5%)	14% (12%, 17%)
5+	0-2	4.3% (3.8%, 4.8%)	6.1% (5.5%, 6.7%)	13% (12%, 13%)
5+	3+	6.1% (3.9%, 8.3%)	9.6% (6.7%, 12%)	19% (15%, 22%)

Taking
Care

Part of AXA Health