Safeguarding Adults: Its Everyone's Business
Manchester Nov 24th 2022

Cameras, Care Homes and the Abuse of Older People: Can AI Help?

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Abuse of Older People: The Concern

- The abuse of older people is here to stay (in all its facets)
  … and may have increased during lockdown
- Demographic change *may* mean greater exposure of older people to abuse
  … though *our* agenda is one focused on care homes for those aged over 60
- Combatting the abuse of older people reflects our commitment to human rights
  … in a context where the persistence of abuse represents a societal failure
- Minimum prevalence is (different studies, different contexts) from 4% upwards
  … but certainly under-reported
- Increasing (?) concern about such abuse is in part fuelled by regular media exposés
  … for care homes (physical, but also verbal abuse and neglect)
  … also in hospital and primary care settings
  … also in relation to other vulnerable groups
  … exposed through CCTV or secret filming using miniature cameras

The Key Question

- Key Question: Should we permit (or even encourage) the <u>surveillance</u> of older people in care settings (in the interest of safeguarding)?

  The answer may be '**Yes**', though with a range of provisos and conditions and (as part of which) …

Cameras shown are examples from Vivotek (Taiwan), Cisco and and Verkada (US)

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Responding 'Yes' to the Key Question

- Key Question: Should we permit (or even encourage) the surveillance of older people in care settings (in the interest of safeguarding)?

  The answer may be '**Yes**', though with a range of provisos and conditions, and (as part of which)…
- We might use the more benign 'monitoring' word to describe what we do (or is this an unwarranted deception?)!
- We might draw on examples of how different (other) technologies are used either to

  (a) help us provide care and support or

  (b) guide and empower people in their own care

  … through the use of assistive technologies that include telecare and telehealth
- We might justify our answer by recourse to Joan Tronto's social theories for care

  … that champion competence and responsibility; but also attentiveness (therefore observation) and responsiveness

  … arguably justifying the use of technologies to help us 'see'

  … and within which (audio-) and video-cameras *might* play a part!

Responding ‘No’ to the Key Question 1

Image from: Canadian Association of Retired Persons

▶ Key Question: Should we permit (or even encourage) the surveillance of older people in care settings (in the interest of safeguarding)?

But, instead, you might shout ‘**No**’! Good quality care means we cannot use surveillance technologies, at least in the form of (audio-) and video-cameras,

because … ⇨

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Responding 'No' to the Key Question 2

- Key Question: Should we permit (or even encourage) the surveillance of older people in care settings (in the interest of safeguarding)?

  But, instead, you might shout '**No**'! Good quality care means we cannot use surveillance technologies, at least in the form of (audio-) and video-cameras, because …

- They are too intrusive and their use can invade people's personal privacy
- They are unproven
- There are too many legal hurdles to cross
- It would cost too much
- Their use will undermine relationships of trust (essential within care services)

- At least some of these responses are sometimes or often true … but when you express such views about surveillance, what are you thinking of? … is it this? ⇨

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Saying ‘No’ to 24/7 Observation

- Perhaps some say ‘**No**’ because of a view of cameras and surveillance something like this? … with observation on a 24/7 basis (typical of the security industry)
- But we need to think differently (informed by technological developments) … with service specifications and commissioning demanding a different (new) approach

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Changing Context and Changing Technology - The Fact of the Matter

- Camera technologies are evolving (rapidly)
- Commercial organisations recognise the 'market' for monitoring well-being
  … with that market partly driven by public concern about abuse
  … they argue the case for their products and services in different care contexts
  (but sometimes come from ill-informed and/or ageist perspectives)
  … with an awakening recognition of the potential offered by recent developments
  - because e.g. of what can be done to images and for 'alerts' (e.g. through their treatment and the use of AI) but also how extra safeguards can be built in through an 'edge computing' approach (with data held by and intelligence of the cameras)
- So a changed mindset (not forgetting the audio- option) would
  … think of cameras as devices for gathering data (in the form of pixels) rather than as tools for 'seeing'
  … and will necessarily consider the implications for service frameworks

Data in the Form of Pixels

- Pixels … tiny dots of colour from which you can build images
- For monitoring (surveillance) purposes we could collect data in the form of pixels (able to be analysed with AI)

  … able to be stored for a period, but <u>mostly **never**</u> to be reconstituted into images, and even then …

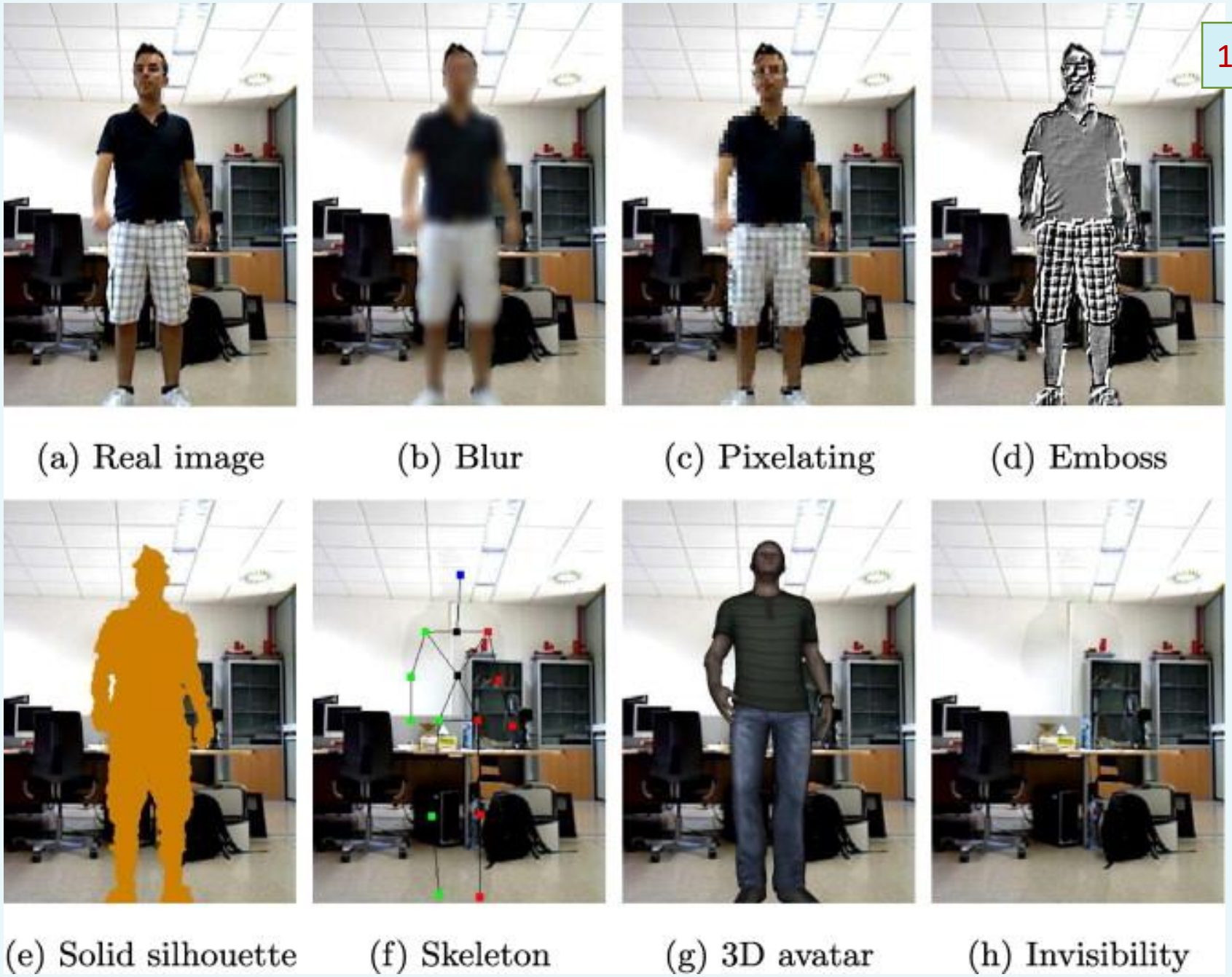
  … only in <u>special</u> situations to be seen by <u>authorised</u> persons; and

  … only to the *level* required
  - audio only
  - blurred
  - outline
  - skeletal
  - silhouette
  - avatar
- Various options ⇨

Different Kinds of Image

From: Francisco Flórez-Revuelta, Kingston University

Kingston University London

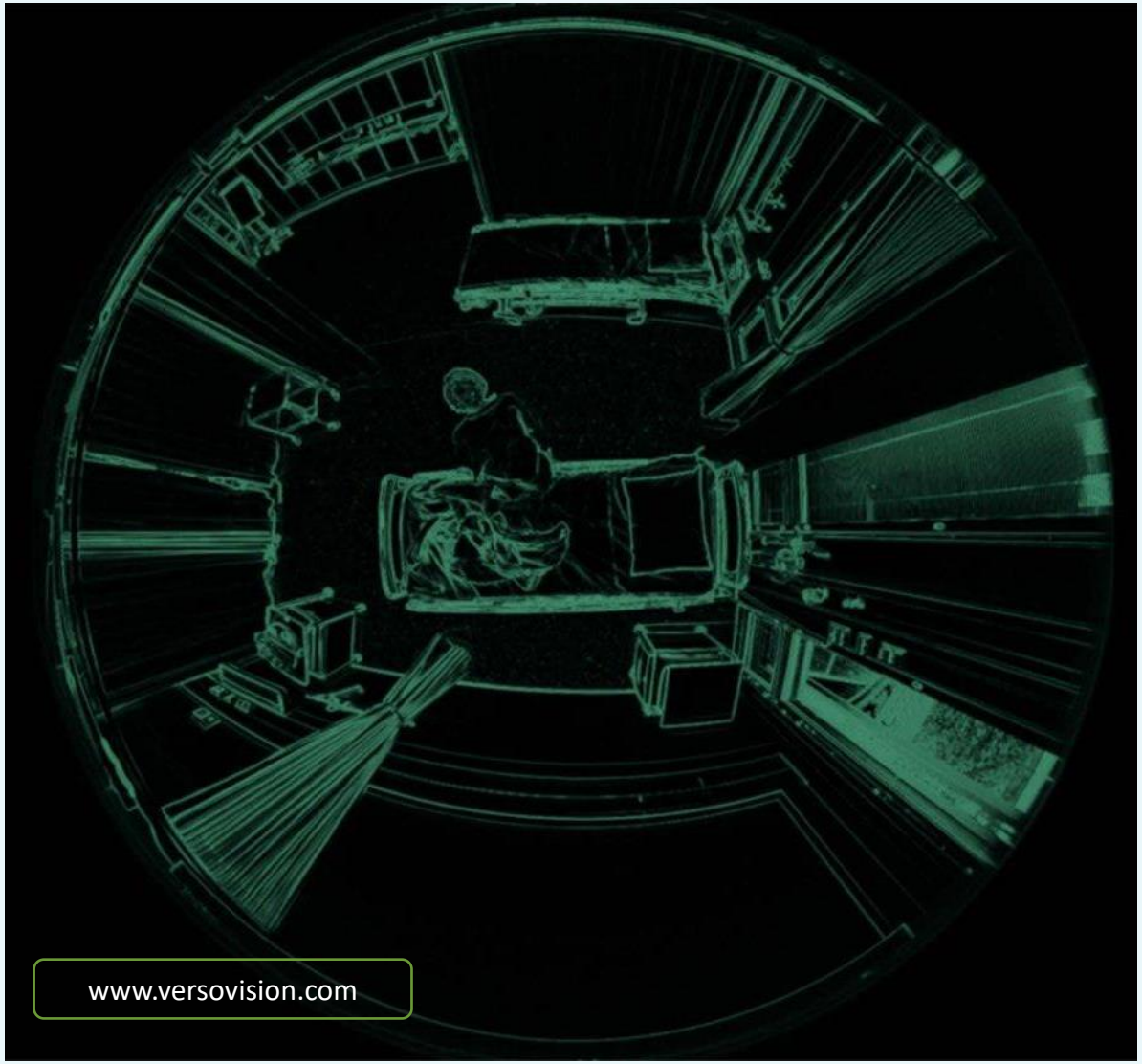


(a) Real image (b) Blur (c) Pixelating (d) Emboss

(e) Solid silhouette (f) Skeleton (g) 3D avatar (h) Invisibility

- … or PTO (outline) ⇨

or … **Outline Images**



- This is the kind of image currently being explored (by Finnish company Verso Vision)

… probably the closest we get to a kind of ‘default’ privacy setting

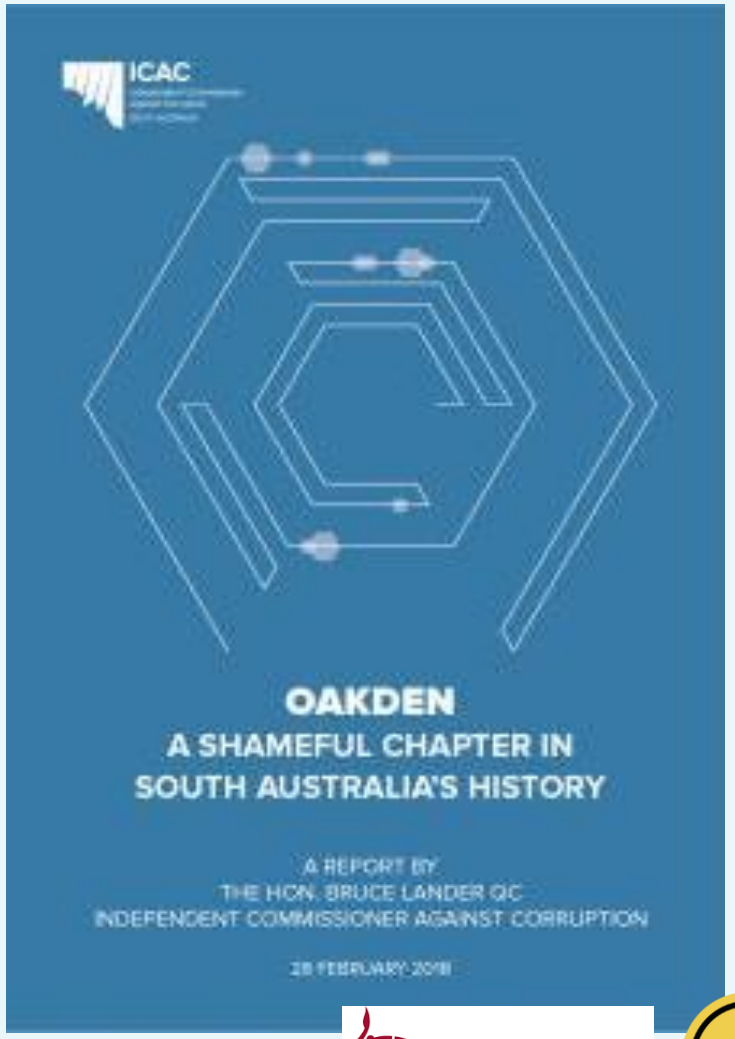
... potentially represents ‘permissible’ viewing (following AI initiated ‘alerts’) by nursing and care staff - as signalled in some

  - Finnish hospitals; and
  - Australian care home trials ⇨

- Gives pointer to AI developments taking place to (try to) recognise ‘alert’ situations in care settings

Australia

- In fact, it is from Australian initiatives from which we can *begin* to learn some lessons
- These follow exposés (through CCTV) and public outrage about a decade of abuse at the Oakden Older Persons Mental Health Facility in South Australia re. mismanagement and the use of excessive restraint, rough handing, injuries, excessive medication administration, etc.
- SA Health are especially sensitised to the matter and explored use of 'camera assisted' <u>surveillance</u>
  (a) via a trial in two care homes; and
  (b) through a newly completed (October 2022) public consultation on cameras in care homes



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Australia: Focus on the SA Trial

Northgate House, Adelaide

Australia: Focus on the SA Trial

- Pilot camera installations in two care homes
  - … independent (PwC) evaluation report (for 12 month pilot) released in June 2022 – for what was styled ‘an AI-based technology system’ with …
  - … ‘audio-visual surveillance in common areas and resident bedrooms’ for 41 residents (with their consent)
  - … evaluation focus was on ‘feasibility, acceptance and influence on quality and safety of the pilot’ including minimisation of ‘risk, abuse, harm or neglect’
- Camera technologies and system worked on basis of *silhouettes* (not outlines) via Singapore-based (Senturian) and Danish company (Milestone)
- Focus on incidents (falls, calls for help, screams, excessive noise) but trial showed
  - … (too) many false alarms; and that
  - … extent of improvements in detecting events during the trial was insufficient to give adequate level of confidence in the system
- Key conclusion ‘the AI used … was not sufficiently accurate at detecting incidents’

A Wider International Perspective

- Internationally … there is a lot of interest in and increasing use of cameras in the context of abuse – as 'technological witness' and deterrent
  … legislative frameworks focusing on legal and ethical issues (notably privacy)
  … but minimal attention given to the service approaches that might harness benefits via advancing camera technologies and the associated use of AI
- Legislative frameworks or guidelines can be noted (at least) for
  - Australia (strong focus)
  - Canada (Ontario)*
  - Denmark
  - Republic of Ireland*
  - The Netherlands
  - New Zealand
  - Sweden
  - United Kingdom ⇨
  - United States (at state level)

* Strongly featured in Davidson et al (2020) report

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Fisk and Florez-Revuelta, 2016

… and for the United Kingdom 2

- Principles and principles (for service providers)

  Seven principles set out in 2016 (Nursing Times – **Fisk & Florez-Revuelta**)

  … pointed to in the very recent South Australia consultation

Therefore overt, with notices, clarity in contracts, etc.

1. Any reasonable level of surveillance, including cameras, is appropriate for common or public areas in care homes
2. Care homes should be able to provide or should be willing to permit or facilitate the use of surveillance technologies (including cameras) within a resident's room or other private areas
3. The location of surveillance technologies should be carefully considered. They should be visible or otherwise clearly known to be present
4. Staff should be fully aware of their responsibilities in relation to surveillance technologies
5. Access to data, images, audio or video footage should be restricted only to authorised persons or agencies in particular, defined circumstances
6. Data, images, audio or video footage should be treated as if owned by the resident – gathered, held and used for his/her benefit
7. Consent for the use of surveillance technologies that might intrude excessively on an individual's privacy should be subject to approval by the appropriate regulatory agency

Including bedrooms and bathrooms. But subject to consent and clear safeguards around viewing of images, listening to audio (see 5)

Recognising that such technologies can safeguard *them* as well as residents

A legal grey area. Needs clarity

CQC, 2022

… and for the United Kingdom

A hugely important area. Links to notion of 'edge computing' with 'smart' cameras

- Principles and principles (for service providers)

  Seven principles for 'CCTV 'or other forms of surveillance' set out (by **CQC**, 2022)

  … helpful and far more insightful than their earlier 'guidance' (in 2014/5)

1. Demonstrate people are safeguarded by clear policies and practices for data security, risks, disclosure and impacts (via DPIA); with usage following appropriate authorisations 'where applicable'.
2. Demonstrate recordings and information are secured through e.g. appropriate access systems (including remotely) and audit trails, data encryption and secure location of equipment.
3. Demonstrate privacy is protected through e.g. documented consent and dialogues with families (or best interest decisions) regarding implementation, consideration of 'privacy by design' and service alternatives.
4. Demonstrate that people are involved by e.g. considerations (above) and consultation with third parties including other care professionals and the ICO.
5. Demonstrate the use of surveillance is lawful including ICO registration and e.g. showing it is 'necessary and proportionate', the use of privacy notices to all persons impacted and compliance with their rights.
6. Demonstrate that staff using the system are trained 'according to DPST (Data Protection Statutory Training)', around equipment use and regarding 'disciplinary actions for misuse of the system'.
7. Demonstrate transparency of use by showing extent of discussions, signage, privacy notices and DPIA publication.

An ongoing process with extra effort involved at the beginning of any initiative involving cameras.

Extent of benefit will be very difficult to measure. .

The seriousness of inappropriately accessing recordings is not easily overstated. Staff must be fully aware and audit frameworks robust.

… and for the United Kingdom 5

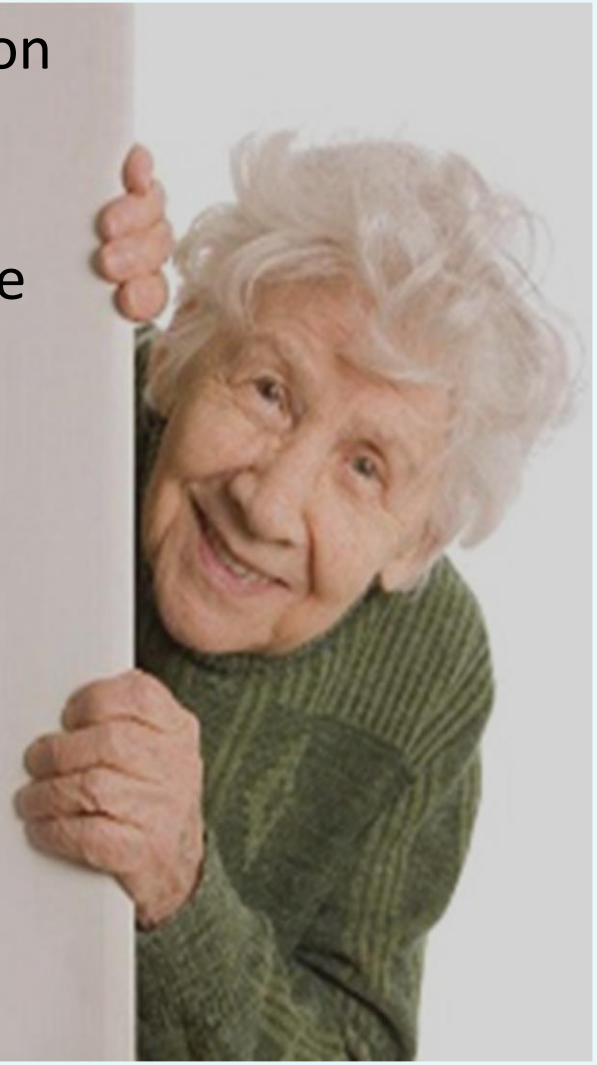
- In sum: There are important pointers by the CQC to the legal context – reaffirming e.g. what we are accustomed to with the GDPR and emphasising need for
  - consultations at all stages (ideas, proposals, implementation, impact) that set out purpose, the why and where, data gathered and how used, etc.
  - getting legal advice
  - making clear why surveillance is the 'best way' to achieve service objectives
  - having a DPIA (Data Protection Impact Assessment) in place
  - having regard to guidelines of the 'Biometrics and Surveillance Camera Commissioner'
  - taking especial care (i.e. conforming with RIPA 2000, Regulation of Investigatory Powers Act) regarding covert surveillance
- Affirmed that the service should 'aim to make the impact on people's privacy as small as possible' – this including sensitivity to e.g. personal care and religious observance, and the ability to switch off the equipment

… and for the United Kingdom 6

- Notable is that the CQC also addresses (and, in some senses, legitimises) the issue of family members using miniaturised camera devices. The CQC calls for
  - … (family) concerns to be raised first with the service provider
  - … great care to be exercised in using such cameras because of potential impact on privacy (not just that of the resident)
  - … having permission of the resident – but, 'if they are unable to give permission it is important that you feel sure you are doing the right thing. In other words, acting in their best interests'
  - … careful keeping of the recordings and ensuring appropriate sharing (with CQC)
- Current position: probably 100+ care homes with CCTV (carehome.co.uk survey 2019)
- Two (more?) UK companies known to be 'active' in this field – CareProtect and Everon
- Continuing ethical debates (for some with a human rights focus)
  - … but with insufficient acknowledgement (as yet) of how new technologies may (as signalled in this presentation) help to resolve some of these

Summing Up 1

- Arguments for and against cameras in care homes will rumble on
- The abuse of older people with continue with more exposés
  … and calls for the issue to be addressed
- Evidence of the efficacy of cameras is sparse but the case to use technological tools to help address it is strong
- Privacy remains <u>the</u> key issue … *but*
- Advances in camera technologies need to be recognised
  … we can now do things differently
  … and we need to develop the frameworks, service and technological specifications to enable these
- And AI in the context of cameras and images *will* have its place
  … despite initial failures
  … with the controlled use of information and images ⇨



Summing Up 2

- All of this must be supported by changed mindsets (and new understandings by service providers) as signalled in this presentation. These
  … could open the door to new 'smart camera (and probably AI) assisted' service frameworks
  … operating legitimately, sensitively and effectively (with data and, therefore images and audio recordings, fully safeguarded) – perhaps helping set new 'privacy norms' for care *settings*
  … acting as a deterrent to the abuse of older people in care homes
  … and, where necessary, performing the role of 'technological witness'••

Food for thought!

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Thank You

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