



Digital Models of Healthcare for Whole System Working

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International Comparisons

- Solutions do not lie with ‘better or more IT’
- Solutions lie as much *outside* a hospital as *within* its walls
- Solutions depend on cross-service cultural alignment
- Solutions must unlock the power of clinical tech held back by weak administrative systems

This makes it a complex nut to crack....



11 Case Studies, Every Continent



Outcome Measures of Digitally Integrated Care

Overcomes distance and geography, travel and mobility

Links health, care and well-being together (data, systems, processes, money, services)

Enables social prescribing and community services complement acute services

Gives insight into patient needs and preferences and anticipates the need for early intervention

Deals with complex social issue that impact health – loneliness, education and employment

Puts people more in control of their health and well-being

Reduces costs (but not in IT)

Keeps people out of hospitals

Digital Maturity Self-Assessment in Health Systems

- 1** **IT systems** are in place for most care functions, including electronic records, with an IT strategy, but they are not integrated in a single digital operating model.
- 2** A **digital strategy** is in place, supported by technology plans which drive a 'whole organisation' approach to IT deployment and data use, but not pan-organisation.
- 3** Digital planning is part of a **wider integrated care system** strategy, with integrated governance, budgets and teams across relational care services in a location.
- 4** **Fully integrated care** embraces a wide range of services and is driven by 'population health' methods, with cognitive health tools such as AI, wearable technologies and 'virtual hospitals'

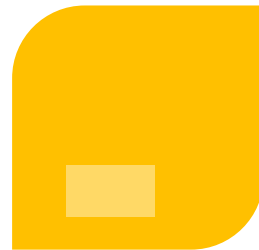
The UK Challenge



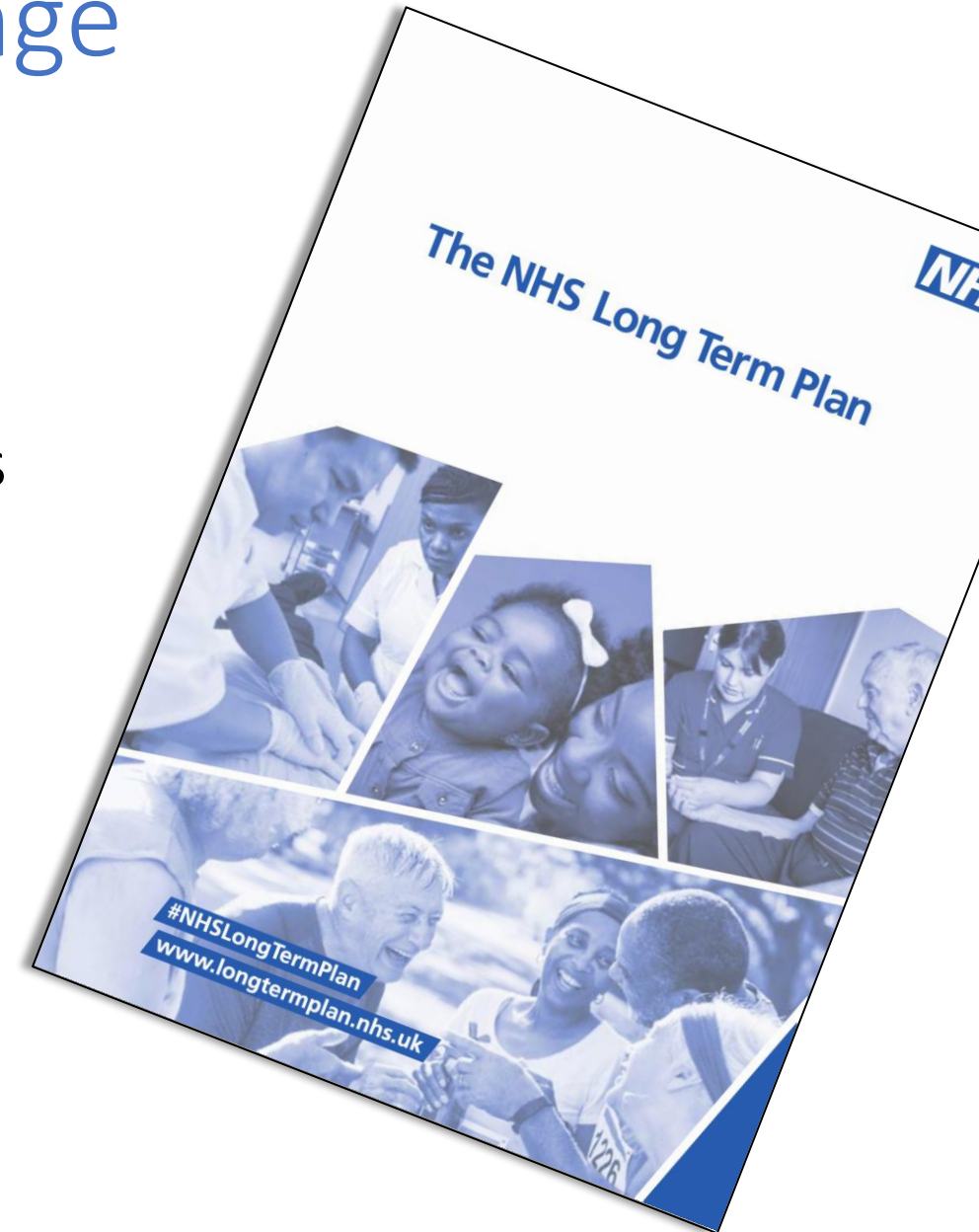
EXCITING POSSIBILITIES FROM
DIGITAL, DATA AND
TECHNOLOGY



LOTS OF GREAT PROJECTS



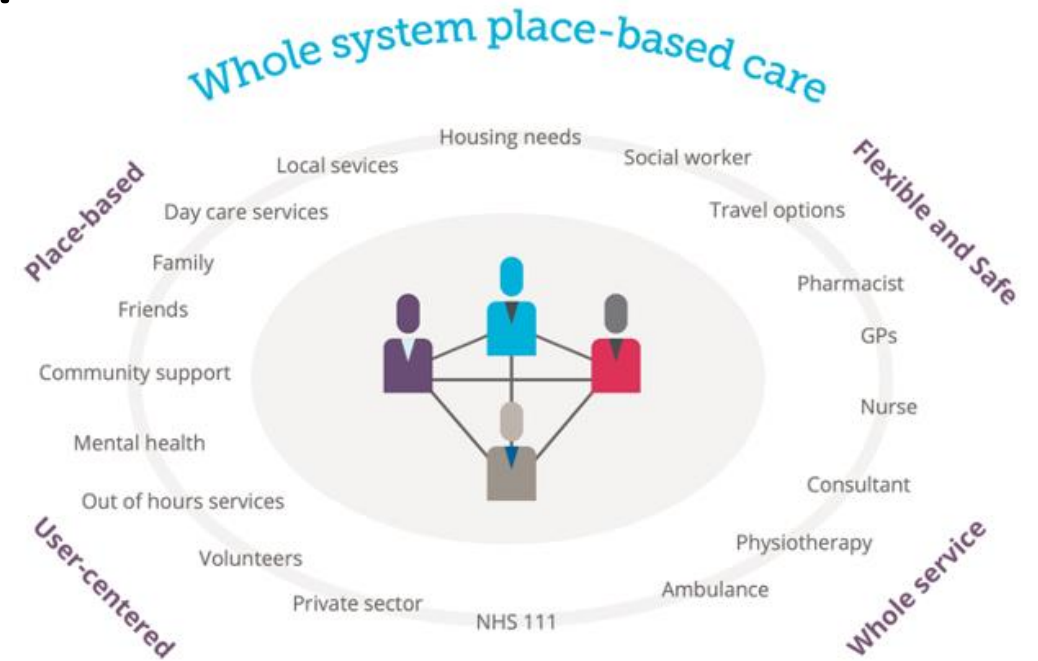
YET TOO MUCH REMAINS
FOCUSED ON THE TECHNOLOGY
AND PROGRESS IS SLOW



International Comparisons (2)

Led by **Population Health** priorities:

- Blending prevention and treatment
- Centered on demographics and community profile
- Focus on inclusion, cultures and local community needs
- Care-led, with political support (not the reverse)
- Integrated teams where possible:
 - Joint decision-making across a spectrum of services
 - Resources span silos and are sufficient for the challenge.



Wider concept of 'well-being', not traditional care silos

International Comparisons (3)

Joining up across traditional health and care services:

- Accountability, governance, leadership and risk modelling
- Resources, records, and data
- Virtual teams with joint training
- Solutions and care plans for individual needs that cross services
- Digital *and* IT planning (together and across services)
 - Systems designed for sharing and integrating
 - Not separate IT and digital teams/projects/accountability



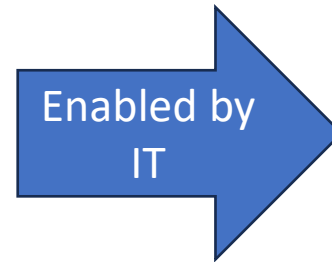


It's about innovation through
technology, not innovative technology.

- Problem does not lie with technology
- The problem lies with a fixation on the 'IT' rather than 'digital' – e.g. EPR

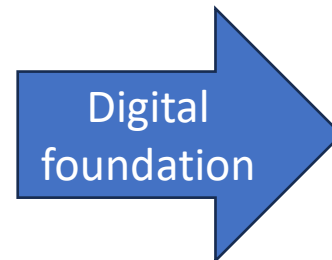
Getting 'IT' Right

Digital is about new operating models, new risk models, new roles and responsibilities, new metrics, new workflow, inclusivity, virtual worlds, integrated care



Workflow redesign, virtual wards, productivity, equality, new models of governance, and risk, integrated services, data architectures and use

Technology is about artificial intelligence, electronic patient records, Cloud, infrastructure, quantum computing, data centres and IT leadership

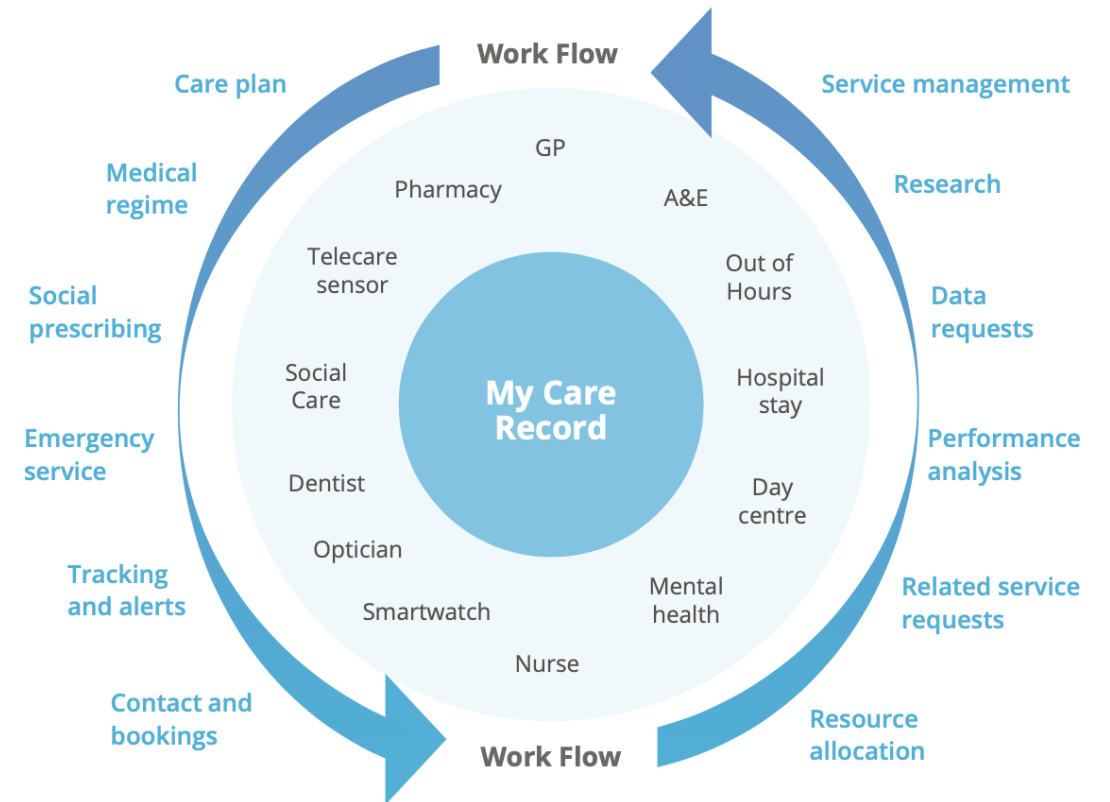


Cloud, , RPA, IoT, data science tools, VR, telemedicine, cyber security, quantum, EPR, 5G, Cloud infrastructure, collaboration tools

Both are fundamentally important and must work together, but they are very different disciplines

Data is the Starting point

- Patient owned data
- Distributed, shared electronic records
- Common standards for data capture, use, sharing and analytics
- Unique identifiers, but many data sources
- Virtual and dynamic



15 design principles for integrated care

1	Integrating and sharing resources, e.g. bringing together different budgets
2	Technology integration and unification is prioritised in a single strategy
3	Priorities are centred on individuals and outcomes, not just health services
4	Data standards are agreed across different agencies
5	There is a 'place-based' approach to connecting care partners
6	Sufficient time and investment are provided where required
7	Autonomy and responsibility (with support) lies with the individual wherever possible
8	Integrated governance and decision-making replace simple cooperation agreements
9	Co-design, and willingness to change are set as important cultural priorities
10	Risk models tolerate mistakes on the journey, but lessons are truly learned
11	Sharing of care records is critical, not just linking related records
12	There is a focus on population health, equality, and well-being in an area
13	Shared care systems are prioritised over complex system linkages
14	Solutions and associated policies are led by care professionals, not by politicians
15	Training and support are prioritised to help with change and new systems adoption

Closing Messages

- **The digital model for health and care** is fundamentally changing the nature of ‘bricks and mortar’
- **New definition of ‘patient centred’ and ‘clinically led’ needed** – new strategy
- **‘Porous’ care boundaries** need managing (home, community, care, outpatients, etc) – data is key
- **Invest in IT**, but only as part of a new digital model of health care
- **Distributed care data records** is the future (not big EPR systems alone)
- **Flexibility and adaptability** will be essential (not ‘predictability’)
- **Design care for the next 20 years** (not best practice from the past 20 years)
- **The biggest challenge:** so many vested interests and preconceived views.



From Victorian to
Virtual hospitals

