

# Our Time to Shine: Empowering the Data, Information and Knowledge Workforce as a Driving Force for Digital Health and Care

## **Appendix 3:**

Emergent themes from consultation with  
strategic stakeholders

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*a collaboration between*

**INNOVATION  
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**Main report:** [Our Time to Shine : Empowering the Data, Information and Knowledge Workforce as a Driving Force for Digital Health and Care](#)

## Appendices

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## Appendix 3: Emergent themes from consultation with strategic stakeholders

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### Introduction

This report summarises key themes emerging from interviews with strategic stakeholders across Scotland's health and social care, about current state and future development needs for the specialist data, information and knowledge workforce.

### Key drivers for change in role and models of working

#### *Strategic national policy*

- Strategic national policy, including the Digital Health & Care Strategy, Public Health Reform and the establishment of the new public health body for Scotland
- Health and social care integration: healthcare, social care and public health (which is still seen as separate from 'health' and 'social care')
  - Need to remove the technical and psychological barriers against working together across the sectors.
    - Collaborative toolsets e.g. Office 365 and cloud computing will facilitate this: data/information/knowledge is moving from being behind closed doors (machines in buildings) to being much more accessible in the cloud.

#### *Data driven and intelligence informed world*

- Increasingly data driven and intelligence informed world, the roles and functions undertaken by data, information and knowledge are changing rapidly: the general driver across the public sector for transformation to meet the wide financial challenges and better meet service user needs.

- There is an urgent need to explicitly recognise this and be proactive to address leadership and ownership issues
  - The staff who provide specialist data, information and knowledge services will need to be better recognised: it's not been clear how much these services support and contribute to clinical/frontline service delivery.
- Increasing demand for SDIK services:
  - Use of DIK to plan and implement the transformation of services
    - Using digital to better understand what's going on: using data to understand the nature of the transformation that's needed.
    - Currently service delivery plans tend to be based on assumptions rather than data; and, once written, look to data to support the plan. Data needs to be used to challenge assumptions before plans are written.
      - Business – e.g. Rolls Royce – is using Big Data to fundamentally change delivery models. Health and social care are not using data to transform itself in the way that industry is using data to transform itself: we need to use data to understand the model/s of health and care, to develop predictive models of service delivery.
  - In relation to improving outcomes for patients/service users
    - Including realistic medicine and using information to support patients e.g. in shared decisions making
- Developing of new methodologies e.g. agile approaches which don't definitively specify a service, but put key staff (and service user) groups and resources together to co-design services. Agile methodology is important: working much more iteratively and collaboratively towards outcomes that are much more co-designed than pre-determined. Having data/information/knowledge centrally involved in this is essential.
  - People are key drivers of change:
    - Bring different people together to explore what changes they need to make, and co-design and co-create those changes.
      - It will be important to bring clinical/frontline staff together with data/information/knowledge staff to work on data informed service transformation.
    - Listen to new (and often quite junior) staff about new ways of working. For example, PHI used to train staff in using software that was developed 20 years ago; new recruits told you that they had used newer, better and free software whilst at university, so PHI has changed the software that it uses.
      - Senior staff need to have the confidence to listen to and learn from (often more junior) new recruits to the workforce.
    - Recognise that the kind of people working in SDIK in health and social care are generally not proactive or strategic, so it essential that strategic decision makers are bought into the process to advocate for and support the better use of data, information and knowledge in health and social care. Charismatic leaders (at local and national levels) who recognise that DIK are very important

need to be involved, who can make the links between DIK and local and national outcomes.

- SDIK staff shortages in health and care
  - Academia and the NHS are struggling to recruit specialist data/information/knowledge staff: it's impossible to compete with salaries that are offered elsewhere.
  - Need for HE programme development

## Future priorities

### *Skills/careers development*

#### Frameworks

- Any SDIK framework needs to
  - Flexible and robust, easy to use and strategically visible
  - Have various entry levels and flexible career pathways
  - Focus on capabilities rather than job gradings/remuneration such as AfC
  - Recognise both qualitative and quantitative experts
    - Generally, health staff are experienced at measuring the outcomes ('successes') of specific one-time or defined episodic interventions; care staff and social workers support people over time to 'live well'. Health and social care staff need to work together to think about what 'success' looks like, and how it is measured.
      - For example, delayed discharge: reduced numbers of delayed discharges looks like a 'success' for the NHS; but in terms of the person who has left hospital to go home, and the care staff supporting them, it might not feel/look like 'living well' unless they are getting the right service for them.
      - From a data and analytics point of view, we need to combine the data approaches of both health and care, and for the sectors to upskill each other.
- Address different career development cultures there are a lot of staff within the specialist data, information and knowledge workforce, who are generally less 'regulated' than other health and care staff:
  - Academic career progression (e.g. for people involved in academic public health) is generally through research **outcomes**/productivity (e.g. measured through academic publications)
  - NHS career progression is generally through competency frameworks – **inputs** to job functions
  - Local authorities may value more adaptable staff than the NHS which (very generally) values recognised/regulated 'badges'.
- Through apprenticeships frameworks and by engaging H/FE providers
- Skills needed include:
  - Proactive problem solving
  - Translating detailed numerical analysis into real and meaningful information for the real world.

- Predictive modelling

### Learning opportunities

- Consider the full learning arc for the development of data/information/knowledge capabilities: from school to undergraduate programmes to postgraduate professional education (health & social care professionals) and senior mathematics, AI, data sciences etc. professionals.
- There is very little HE provision relating to specialist data, information and knowledge in health and care
- There is a need for leadership training at all levels, and involving clinical staff, specialist data, information & knowledge staff, and government
- There is a need for accessible CPD opportunities, incl online training, professional community of practice

### Professionalisation, standards, safety, protection of the public

- Health and care are professionally driven/led: they use professions – which have very specifically defined knowledge bases – to manage risk i.e. through statutory (and some voluntary<sup>1</sup>) professional regulation and employer set organisational accountability.
  - A ‘profession’ can be defined through:
    - A defined – or ‘specialist’ knowledge base: there is no such knowledge base for data/information/knowledge staff
    - Defined educational routes into the profession: there is a need to better understand the knowledge and skills gaps among specialist data, information and knowledge staff so as to provide ways of plugging the gaps.
    - Defined standards of conduct
- A key challenge for the specialist data, information and knowledge workforces in health and care will be about getting (widely disparate) employers to think about their role in managing risk.
  - Specialist data/information/knowledge staff might not necessarily pose a risk to individual patients/service users, but they can pose a significant risk in relation to e.g. population health
  - This may be facilitated by people working in specialist data/information/knowledge roles developing a professional identity, self-regulation and increasing their visibility to their employers. But:
    - Without funding to support education and training to support the development of a professional identity this won’t happen.
    - The risk of increasing their visibility is that employers might notice how much they cost, and decided that they don’t need them
  - Proportionately more staff in social care are (perhaps) regulated (through registration with SSSC) than in the NHS as the general public has developed a greater awareness of the risks involved in social care
  - There is no clear steer from the Scottish Government about managing risk/protecting the public through the regulation of staff who are not regulated by statute<sup>2</sup>.

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<sup>1</sup> Through Professional Standards Authority Accredited Registers, eg the Academy for Healthcare Science

<sup>2</sup> See the work to develop standards for health and social care support workers

- The establishment of a professional footing for SDIK staff in health and social care could – in addition to assuring the protection of the public, and managing risk in delivering health and care services:
  - Develop parity of esteem, support and recognition with other professional groups e.g. NMAHPs.
  - Address the real inequalities across the SDIK workforce, with some very skilled graduates entering the workforce at AfC band 3 (although mostly they enter at band 5). This is not a good use of staff skills and capabilities.

### Strategic partnerships

- Develop partnerships – academia, health & care, 3<sup>rd</sup> sector, corporate: there's a real need for health and care staff who can interface with industry. A new working model needs to be developed, for example, people working 4 days weekly with e.g. google, and one day weekly in health and care, drawing on their altruistic bent. This could be relatively easy to do, with people earning very large salaries in industry. You also consider that this is something that should be rapidly developed, as the UK is losing people with valuable skills to the export market.
  - The idea of joint appointments was also discussed at the SDS seminar to launch the SDS/DHI report: Review and Analysis of the Digital Health Sector and Skills for Scotland.

### New ways of working

- Need to make clear and convincing clear and convincing transformational case for changing models of working:
  - That is articulated by leaders. However, there is no clearly identified leadership for this group
    - A Chief Information Officer Role may be established, that is different from, and complements, a Chief Clinical Information Officer role
    - Sponsorship of this development needs to be kept on the agenda to support uptake and implementation of the recommendations
  - That moves beyond the current reactive model, to a proactive anticipatory service model which anticipates where DIK will be needed, particularly for prevention of disease– at the very least, which provides a horizon scanning service.
  - That makes use of DIK and imperative part of everyone's work, and as such SDIK services need to be there to support this.
    - This needs to include co-production of DIK resources with e.g. clinical practitioners to ensure relevance, and to ensure that SDIK services are realistic about the support that they can provide.
    - Creates a safe 'play' space to nurture staff to work in new innovative and proactive ways, e.g. allocated time to explore, be curious and collaborate about new ways of working, including taking risk with data/information/knowledge. Tech companies build time to explore and collaborate on new ways of working e.g. Google assigns 20% of staff time to this. This can be built into job descriptions e.g. 'We expect that this postholder will explore, be curious and collaborate about new ways of working, including in areas related to, but no specific to this job area'.

- That liberates/unlocks DIK so that it is quickly and easily accessed – currently technology keeps DIK locked away e.g. through user accounts
- Facilitates DIK sharing across teams
- Supports networking and collaboration of SDIK staff across Scotland
  - Need for strong facilitation
  - Focus on development of good practice
  - Build a sense of ownership and responsibility across SDIK workforce groups
  - Work with existing professional bodies e.g. BCS, Federation for Informatics Professionals Working in Health & Social Care (Fed-IP), Association of Professional Health Analysts
- That demonstrates the contribution of the SDIK workforce to health and social care transformation
- That might include the potential to support self-management, community empowerment and shared decision-making.
- Consider exploring:
  - NHS support for professional librarianship e.g. public funding of HEIs to provide the NHS with professional knowledge and learning
  - How the third sector uses knowledge/intelligence to inform its development
  - The parallel with roll-out of QI models of working, possibly with early adopter IJBs e.g. experimenting with more integrated service models
  - A key area where data/information/knowledge across the health and care sectors is an issue (e.g. bed blocking, home care) and explore what the issues are.

### *Immediate priorities*

- Ensure that this project is involved in the TOPOL review, including being at the engagement workshops in August; and perhaps inviting Eric Topal to Scotland – none of the 3 engagement workshops is in Scotland.

## Appendix A: Strategic stakeholder interviews

Name	Name	Job title	Organisation	Interview date
Paul	Campbell	Clinical Director for eHealth	NHS National Services	05-Jul
Angela	Campbell	Deputy Director [H&SC] Analytical Services Division	Scottish Government	04-Jul
Phillip	Couser	ISD Director	NHS National Services Scotland	25-Jun
Gillian	Docherty	Chief Executive Officer	The Data Lab	21-Aug
Andrew	Fraser	Director of Public Health Science, Chair of Public Health Workforce Group	NHS Health Scotland	18-Jul
Ann-Marie	Gallacher	Chief Information Officer	NHS 24/Scottish Centre for Telehealth & Telecare	06-Aug
Philip	Gillespie	Director of Strategic Change and Innovation	SSSC	20-Jul
Scott	Heald	Associate Director - Data Management / Head of Profession for Statistics, Public Health & Intelligence	NHS National Services Scotland	03-Jul
Rikke	Iversholt	Acting Director	IRISS	02-Jul
Marilyn	Lennon	Senior Lecturer and Chancellors Research Fellow in Digital Health and Wellness	University of Strathclyde	12-Jul
Phil	Mackie	Head of Knowledge and Research Services	NHS Health Scotland	30-Jul
Rami	Okasha	Executive Director, Strategy and Improvement	Care Inspectorate	26-Jun
Lorna	Ramsay	Medical Director for Information Technology	NHS National Services	23-Jul
Aziz	Sheikh	Director of Usher Institute	University of Edinburgh Usher Institute of Population Health Sciences and Informatics	02-Aug
Carol	Sinclair	Associate Director (Consultancy, Knowledge and Research Services), Public Health & Intelligence	NHS National Services Scotland	06-Jul
Christopher	Wroath	Director of Digital	NHS Education for Scotland	28-Jun