UK e-HEALTH WEEK

#EHW2018
70 Years of Tech
How digital has changed the NHS

@MarkDuman
Reflections – core themes

• Person centred health/ wellbeing

• Information (as a) therapy

• ‘Digital’ health
“We see things as we are, not as they are”

PROFESSIONAL/ SYSTEM

‘X’ TREATMENT CONDITION PATIENT PERSON

PERSON/ SOCIETY

‘HARD/ MEDICAL’ ‘SOFT/ SOCIAL’

Talmud Berachot 55b
PERSONALISED MEDICINE

MOTIVATION

Past medical history and Current medication
Ethnicity/ communication Preferences
Health / digital literacy
Medication beliefs
Health beliefs

POISON
A MIRACLE CURE
TOUCH OF SUGAR
LIFE-THREATENING DISEASE

BEYOND HEALTH
The Four Levels of Patient Activation

**LEVEL 1**

**Predisposed to be passive**
Patients lack the confidence to play an active role in their health.
‘My doctor is in charge of my health.’

**LEVEL 2**

**Building knowledge and confidence**
Patients have some knowledge but large gaps remain. They can set simple goals.
‘I could be doing more.’

**LEVEL 3**

**Taking action**
Patients have the key facts and are building skills. They are goal-oriented.
‘I’m part of my healthcare team.’

**LEVEL 4**

**Maintaining behaviors, pushing further**
Patients have adopted new behaviors but may struggle in times of stress or change. Healthy lifestyle is a key focus.
‘I’m my own advocate.’
Many studies show that activated’ patients have better health outcomes at lower costs. Patients with lower activation scores cost 8% to 21% more.

<table>
<thead>
<tr>
<th>2010 patient activation level</th>
<th>Predicted per capita billed costs ($)</th>
<th>Ratio of predicted costs relative to level 4 Patient Activation Measure (PAM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 (lowest)</td>
<td>966</td>
<td>1.21</td>
</tr>
<tr>
<td>Level 2</td>
<td>840</td>
<td>1.05</td>
</tr>
<tr>
<td>Level 3</td>
<td>783</td>
<td>0.97</td>
</tr>
<tr>
<td>Level 4 (highest)</td>
<td>799</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Source: Hibbard J H, Greene J, Overton V (2013) ‘Patients with lower activation associated with higher costs; delivery systems should know their patients’ “scores.” Health Affairs, 32, no (2013): 216-22. (Quoted in KPMG, ‘Creating new value with patients, carers and communities’)
FIGURE 1: ENGLISH NHS FUNDING GAP BY 2013/14

£126 billion
NHS funding needed in 2014

£21 billion
Shortfall if no real rise 2011/12-2013/14 and no productivity improvement

£1.6
£1.4
£1.8
£3.5
£0.4

Quality
Real pay and prices
Waiting times
Capital
Demand drivers
Clinical governance

Save £30Bn!
Care AND Coach

Information about personal health situation
Self care support
Health literacy
Communication skills
Decision making
Being connected

PASSIVE

All faith in our doctor
Passive behaviours
Helplessness
Isolation

ACTIVATED

Know Your Own Health
Take action
Find information
Organise our questions
Map our options and choices
“Information (as a) Therapy”

1. Asset Based Community Development
2. Care Planning
3. Health Coaching
4. Information Prescriptions/ Bibliotherapy
5. Medicines Optimisation
6. Patient Activation/ Health Literacy Measure(s)
7. Patient Decision Aids/ Shared Decision Making
8. Peer Support
9. Personal Health Budgets
10. Records Access/ Patient Online
11. Structured Patient Education
12. Telehealthcare

Source: Salford’s Primary Care Commissioning Strategy 2007/08 – 2017/18
Digital Health: Converge or Collide?
Self-management changes **supply**

Current imbalance in supply/demand; **change demand**

Solutions for SELF-MANAGEMENT can **REBALANCE THE EQUILIBRIUM**

Create self-management tools enabling interventions which:

- improve patient and staff experience and outcomes
- Are clinically validated and cost effective
- Don’t compromise patient safety and enhance it if possible
In Summary

• Think (and act) **patient/ person**

• Integrate ‘**information therapy**’ into healthcare/ wellness

• Be **channel agnostic**
Florence and Now the Machine: Nursing Leadership in a Digital Age

Angela Reed, Senior Professional Officer
About me…
About Florence…

‘In attempting to arrive at the truth, I have applied everywhere for information, but in scarcely an instance have I been able to obtain hospital records fit for any purpose of comparison….’

Florence Nightingale 1863
So what about nursing in a digital age?
Today’s Discussion:

• Context for digital change
• Importance of nursing on population health and the impact of the profession
• Potential impact of digital approaches for nursing
• Context of my work
• Study overview
• So what?
Context for digital change:

- population demographics
- chronic diseases
- spiralling health care costs
- scarce resources
- major shortages in professional staff
- need for improved transparency
- quality and person centric models of care

Kennedy and Moen (2017)
Impact of Nursing on Population Health:

**WHO (2010)**

nursing scope of practice is highlighted as one which is flexible to populations and patient health needs, and has been particularly successful in delivering services to the most vulnerable and hard-to-reach populations

**WHO (2016)**

nurses role critical to building communities that are resilient and capable of managing and responding to their own healthcare needs
So what about nursing?

- Largest registered professional workforce (almost 700k N & M in UK – NMC)

- Investment = increased life expectancy & reduced mortality for people (ICN, 2016) (Ball et al., 2018)

- Attributed economic value for emotional and psychological needs of populations (Dick et al., 2014)

- Higher % RNs associated with the most cost effective approach for healthcare linked with societal benefits, such as averted lost productivity (Griffiths et al., 2016)
The e-Nurse (and other legends)

Nursing Science
Computer Science
Information Science

Opportunities to Improve Outcomes through Data!

NIPEC
So what about Nursing?

Role Importance

Global Shortage

175 million public access health info (Gee et al, 2012)
Nurses biggest professional users (Page, 2016)

Diffuse Nursing Strategy for Digital Change
So what?

- Engaged
- Prepared
- Interested?
Context of my work
“I think one’s feelings waste themselves in words; they ought all to be distilled into actions which bring results.”

-> Florence Nightingale

Florence Nightingale Foundation Leadership Scholar 2017
A seat at the table?

“A leader takes people where they want to go. A great leader takes people where they don’t necessarily want to go, but ought to be.”

—Rosalynn Carter
Nursing and digital change – the evidence

• Lack of recognition of importance from nurse leadership (Remus & Kennedy, 2012)
• Passive acceptance of technology (Remus and Kennedy, 2012)
• Need for nurses to engage in systems design (Sockolow et al, 2014)
• Unlock potential for use of real-time data (Reid Ponte et al, 2016)
• Understand importance of terminology and the nursing narrative (Green & Thomas, 2008)
• Opportunities to influence and lead implementation – through knowledge of workflows and decision making capability (Edwards, 2012)
“To be ‘in charge’ is certainly not only to carry out the proper measures yourself but to see that everyone else does so too.”

Florence Nightingale
Driving Blind?

gap in awareness of societal & technological trends & developments related to nursing
Simpson 2013

unable to professionally represent in tech discussions with physicians and other stakeholders
Kennedy & Moen, 2017

rely on expert counsel from informatics teams
Reid Ponte et al, 2016
Characteristics of Senior Nurse Leaders to Enable Digital Transformation

- Reviewed the evidence
- Semi structured interviews – cascade approach
- Site visits: UK, USA and Australia
- Online survey – specific to nurses that have led system wide digital transformation
Where did I find e-nursing (after 25 years)

- Canada
- Australia
- New Zealand
- USA
- Denmark
- Finland
- Netherlands
- Norway
- Spain
- Portugal
- China
- Korea
- Switzerland
- Croatia
- Estonia
- Ireland
- Sweden
- UK
Survey Data (launched 6/4/18) n = 39

15.4% ♂
84.6% ♀
92% > 45 yrs

23% graduate
20.5% post graduate cert/dip
43.6% Master’s Degree
10.3% PhD or above

74.4% significant decision-making or influence
15.6% final decision making

USA – 5.1%
Europe - 94.9%
STRATEGIST

ability to:

1. craft, share and sell a vision that inspires action
2. influence to direct and guide toward a common goal
3. collaborate and empower

EXTRA?

• *Awareness* of how to use technology not necessarily working knowledge
• Knowledge of value of technology
• Person-centredness
LEADER
ability to:

1. provide leadership for the adoption and implementation of information systems
2. continually professionally develop
2. demonstrate authenticity, consistent with the individual’s core values
3. demonstrate decisiveness and presence

EXTRA?
- Resilience
- Ability to mentor and succession plan
ADVOCATE

ability to:

1. bridge between patient care and technology constructing a collaborative vision
2. enable service users to understand their own data and impact on their health plans through others
3. knowledge of nursing processes and workflows to influence how a digital system is configured
4. influence design, procurement and deployment, aligned to nursing and service user need

EXTRA?
- Enabling service user involvement
- Enabling data analysis and use of data to improve outcomes
CHANGE AGENT
ability to:

1. develop appropriate professional and organisational policies to support transformational digital change
2. implement appropriate evaluation metrics and methodologies to support transformational digital change
3. demonstrate personal ‘branding’ and identity as a cultural and organisational change agent

EXTRA?
• Ability to articulate benefits to clinical teams in a meaningful way
• Ability to design evaluation metrics
INFORMATICIAN
knowledge of:

1. privacy and data management
2. transformation of data into information to support nursing decision making (data science)
3. data quality
3. ability to assess data integrity and quality

EXTRA?
• Interpret data trends meaningfully
• Knowledge of governance framework
Top Two?

- Strategist
- Leader
- Advocate
- Change Agent
- Informatician
So what?

1. provide leadership for the adoption and implementation of information systems
2. bridge between patient care and technology constructing a collaborative vision
3. enable service users to understand their own data and impact on their health plans through others
4. influence design, procurement and deployment, aligned to nursing and service user need
5. implement appropriate evaluation metrics and methodologies to support transformational digital change
Extra

1. *Awareness* of how to use technology not necessarily working knowledge
2. Knowledge of value of technology
3. Enabling data analysis and use of data to improve outcomes
4. Ability to design evaluation metrics
Blue Sky Thinking?

1. Gap in Senior Nurse Leader development
2. Training opportunities
Blue Sky Thinking?

1. Finish work
2. Publish findings
3. Make recommendations
4. Potential for collaboration
5. EFFECT CHANGE
Let's Talk!