Personalised Health and Care 2020
Using Data and Technology to Transform Outcomes for Patients and Citizens

Assessing digital applications and services
“The time is now!”
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Personalised Health and Care 2020

Using Data and Technology to Transform Outcomes for Patients and Citizens
A Framework for Action
iv. The NIB will set up a task and finish group with clinical and civil society leaders on the regulation, accreditation and kitemarking of technology and data enabled services, including apps, digital services and associated mobile devices. This is in order to support innovation, and consumer and professional confidence, including enabling GPs to be able to prescribe them. It will publish proposals by June 2015 and kitemaking of apps will begin by the end of 2015. Kitemarked services will be able to use the NHS brand and to be accessible through NHS Choices.
What is the rationale for assessing apps?

- Health application market is not working
- Wisdom of the crowd is not an effective filter
- Organisations making high quality apps need a USP
- Must support revenue generation
- Should lead to NHS recommendation and promotion

Study of 47 smoking cessation apps (Abroms et al, 2013)

**Display rank vs. evidence score**

More popular apps are lower quality – a failed market?

\[ y = 0.65x + 2 \]

\[ R^2 = 0.67 \]
Assumptions underpinning the initiative

• Apps can often provide benefit to people's health
• The health and care system would benefit from using these apps
• The health and care system does not trust apps
## Methods to assess/improve health app quality today

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<th>Disadvantages</th>
<th>Examples</th>
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<td>Wisdom of the crowd</td>
<td>Simple user ranking</td>
<td>Hard for users to assess quality; click factory bias</td>
<td>Current app stores MyHealthApps</td>
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<td>Targeted Crowdsourcing</td>
<td>Informed wider public groups</td>
<td>Still subjective</td>
<td>FoldIT</td>
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<td>Users apply quality criteria</td>
<td>Explicit</td>
<td>Requires widespread dissemination; can everyone apply them ?</td>
<td>RCP checklist</td>
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<td>Rigorous (?)</td>
<td>Slow, resource intensive, doesn’t fit App model</td>
<td>Numerous PubMed articles</td>
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<td>Physician peer review</td>
<td>Timely Dynamic</td>
<td>Not as rigorous</td>
<td>iMedicalApps, MedicalAppJournal</td>
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<td>Developer self-certification</td>
<td>Dynamic</td>
<td>Requires developers to understand &amp; comply; checklist must fit apps</td>
<td>HON Code ?, RCP checklist</td>
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<td>Developer support</td>
<td>Resource light</td>
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<td>CE marking, external regulation</td>
<td>Credible</td>
<td>Slow, expensive, apps don’t fit national model</td>
<td>NHS App Store, FDA, MHRA</td>
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Considerable challenges in creating a viable model

**Encouraging innovation**
- Thorough, considered, adaptable and streamlined
- Deliver proven digital applications

**Building Trust**
- Will the Health care system choose apps over existing measures
- Will citizens have confidence in them

**Controlling Costs**
- Scale of demand
- Throttle quantity of assessment

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Innovation focused
Indicators of quality
Crowd sourced
Lower risk

**Tension**
- System Lead
- Robust Evaluation
- Prioritised
- Higher risk
Operational model considerations

**Design Principles**

- Proportionate to the risk involved
- No reinvention – use existing measures of quality if possible
- Reasonably Fast
- Simple and reliable - not costly or a barrier to innovation
- Sufficiently robust to engender confidence
- Limited to apps that claim a beneficial health outcome
- Scalable

**Light Touch**

- Self Certification based on existing standards
- In House testing & approval
- Mechanisms for minimising risk:
  - Audits
  - Crowdsourcing
  - Feedback loops
  - External Testing

**Characteristics**

- Scalable
- Cheaper
- Robust
- Expensive
The creation of the endorsement model

Existing standards and guidelines

Identify core (objective) questions

For each determine an assessment model and a type

Question type
- Setting the Bar
- Scoring
- Transparency
- Administration
Phased assessment approach

**Self-assessed quality**
- Open data
- Security & Privacy
- Technical standards
- User centred
- Application risk type (e.g. medical device)
- Proxy of Impact

**Crowd sourcing**
- Establish demand
- Build trust

**Impact assessment**
- Efficacy/Effectiveness
- Robust Studies (RCT)
- New Models (AB/Iterative)

**Independent evidence evaluation**
- Subject matter expert
- Cost effective
- Recommended
Decision to apply

Stage 1: self-assessment against criteria
- Self assessment against pre-set criteria
  + Applications encouraged for some categories of apps based on System needs

Stage 2: ‘community’ evaluation
- Crowd-sourced feedback from professionals and public
  + Some apps may need to go through other assessment processes; for example compliance with medical device regulation

Stage 3: preparing a benefit case
- Selection of groups of apps for impact assessment
  + Sharing of experience and support by local commissioners

Stage 4: independent impact evaluation
- Categories of apps independently evaluated for impact (efficacy and cost effectiveness) leading to recommendation for System to use (or not)

Process components

Volumes

Benefits for apps

10,000 per year?

2,000 per year?

50-100 per year?

20 per year?

5-10 per year?

A small number of apps are recommended

A small number of apps become ready for benefit / impact evaluation

A share of the self-assessed apps are reviewed by community/local areas

A share of the registered apps meet the self-assessment threshold. Poor apps drop out

These apps become available for rating on the crowd sourcing platform

Community feedback is exposed on NHS.UK and in relevant context

Potential selection for Stage 3

These apps have access to benefits including: promotion, funding, prescribing, NHS brand

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Enrolment in range of activities to enable further assessment including robust studies

Selection of groups of apps for impact assessment

A small number of apps have received evaluative support during Stage 3

Sharing of experience and support by local commissioners

A share of the self-assessed apps are reviewed by community/local areas

These apps become available for rating on the crowd sourcing platform

Community feedback is exposed on NHS.UK and in relevant context

Potential selection for Stage 3
The experiment: working in pilot domains

- Smoking cessation
- Obesity / Diabetes
- Mental health
- Post operation rehabilitation
- Early years support (red book)
- End of life
Get my App endorsed

Build confidence in your App with health professionals by using this self assessed NHS endorsement process. When health professionals know that an App is safe and trustworthy they are more likely to recommend it to patients, and patients are more likely to use it.

Step 1 - Is self assessment right for your App?

Use this check to see if self assessment is right for your App and to find out what you need to do to get your App ready for the self assessment process.

Start here

Step 2 - Self assessment

If endorsement is right for your App you have to go through a self assessment of the key attributes of your App.

If you've already started this process and saved your progress you can go straight to self assessment.

Self assessment

Step 3 - Submit for endorsement

After completing your self assessment you can submit the assessment for review and endorsement. To find out about the benefits of endorsement click here.

Learn more

The demo
Timeline / Next steps

• Publish Roadmap (Jun 2015)
  - Proposals for an application assessment framework
  - Digital (early) prototype of the self-assessment stage

• Consult on proposals (Summer 2015)

• User acceptance research (from August 2015)
  - Citizens
  - Clinical Groups
  - System roles (e.g. payers)

• Announce early plans to pilot a small number of apps through the model and assessment process (Sept 2015)

• Iteratively build the online self assessment process, establish methodologies for launch in 2016