Clinical Decision Support (CDS) in Primary Care: Getting Evidence into Frontline Practice

SCIMP Conference

21st September 2016

Dr Paul Miller, Chair of SCIMP and of Primary Care CDS Project Board
Dr Ann Wales, Clinical Decision Support Project Lead, Scottish Government eHealth

Overview

1. **Why Clinical Decision Support?**

2. **Roadmap**

3. **CDS platform for primary care**
   - **Envisioning the future**
   - **Making the future happen – procurement and pilot**

4. **Discussion**

The Challenge

- Increasing demand
- Overstretched resources
- Ageing population
- Increasing complexity of care
- Recruitment crises
- High profile failures in safe and person-centred care.
- Exponential growth of knowledge
  - by 2020 medical literature will *double every 73 days*

More of the same won't work

- Insanity: doing the same thing over and over again and expecting different results.
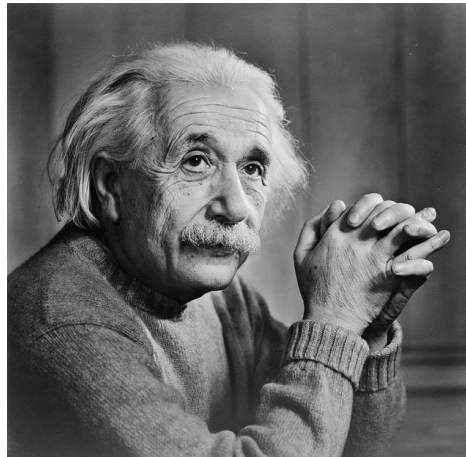
Einstein (attr)

CDS as tool for new approach to care: "quality after QOF"

- Personalised approach to care
- Shared decision-making
- Build capacity in primary care
- Reduce harm and waste
- Reduce unnecessary variation
- Manage risk better
- Increase focus on prevention, lifestyle management and use of social assets.
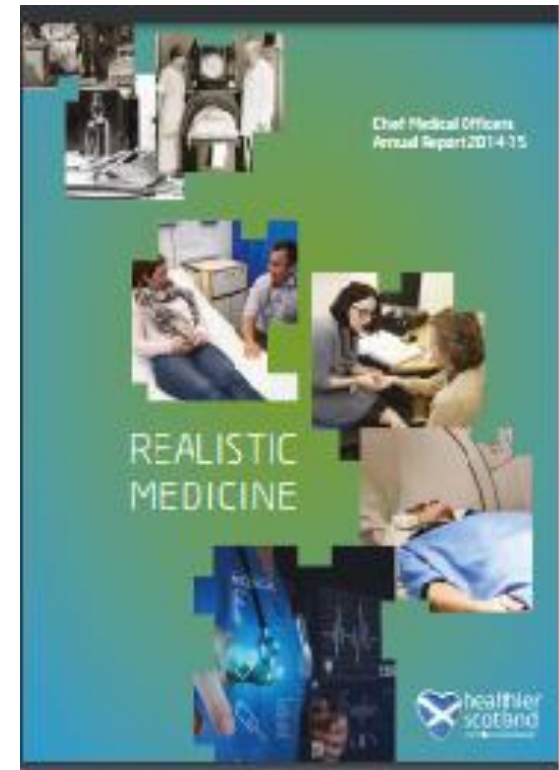
Benefits of CDS

Clinicians with CDS available to them are:

- 60% more likely to prescribe the correct medicines or other therapies;
- 70% more likely to order the required diagnostic tests
- 60% more likely to monitor drug effects in line with evidence
- 40% times more likely to take appropriate preventative measures.

CDS impact on patient outcomes:

- Trend towards reducing, patient mortality.
- Trend toward, higher quality-of-life scores.
- Reduces or prevents adverse events.
- Can improve efficiency and can reduce costs.
- Can improve patient satisfaction.

  – *8 systematic reviews – Implementation Science, AHRQ, Annals of Internal Medicine.*

CDS Roadmap for NHSScotland

- "By 2016 we will have a plan to provide clinicians with quick and easy access to decision support tools that highlight variation from best practice, generate appropriate prompts and alerts, and enable generalists and less experienced clinicians to connect to specialist clinical knowledge and experience at point of care. "

eHealth Strategy 2014-17

CDS Roadmap Deliverables

NHS SCOTLAND

Information — **Action**

Formularies
Guidelines
Evidence summaries

Tools

Calculators
Algorithms
Treatment options
Monitoring tools.

Web — **Mobile** — **Interlinked with clinical systems**

Delivery Channels

"Pull" — **"Push"**

Personalised approach to care

Patient-specific prompts based on SIGN integrated into SCI-Diabetes in NHS Tayside and West Lothian

- Patients 3-4 times more likely to be referred for screening in line with guidance.

- Small but significant improvement in glycaemic control.

Reduce harm

Sepsis mobile app

2015 – 35% of survey respondents had used app in their professional practice.

"[The app] alerted me to the gentleman's risk of deterioration and I requested an ambulance [sooner] than I would otherwise have done...the gentleman was assessed as 'sepsis' at A&E triage, and received 'sepsis 6' [care]... The gentleman recovered from his illness and is now home again."
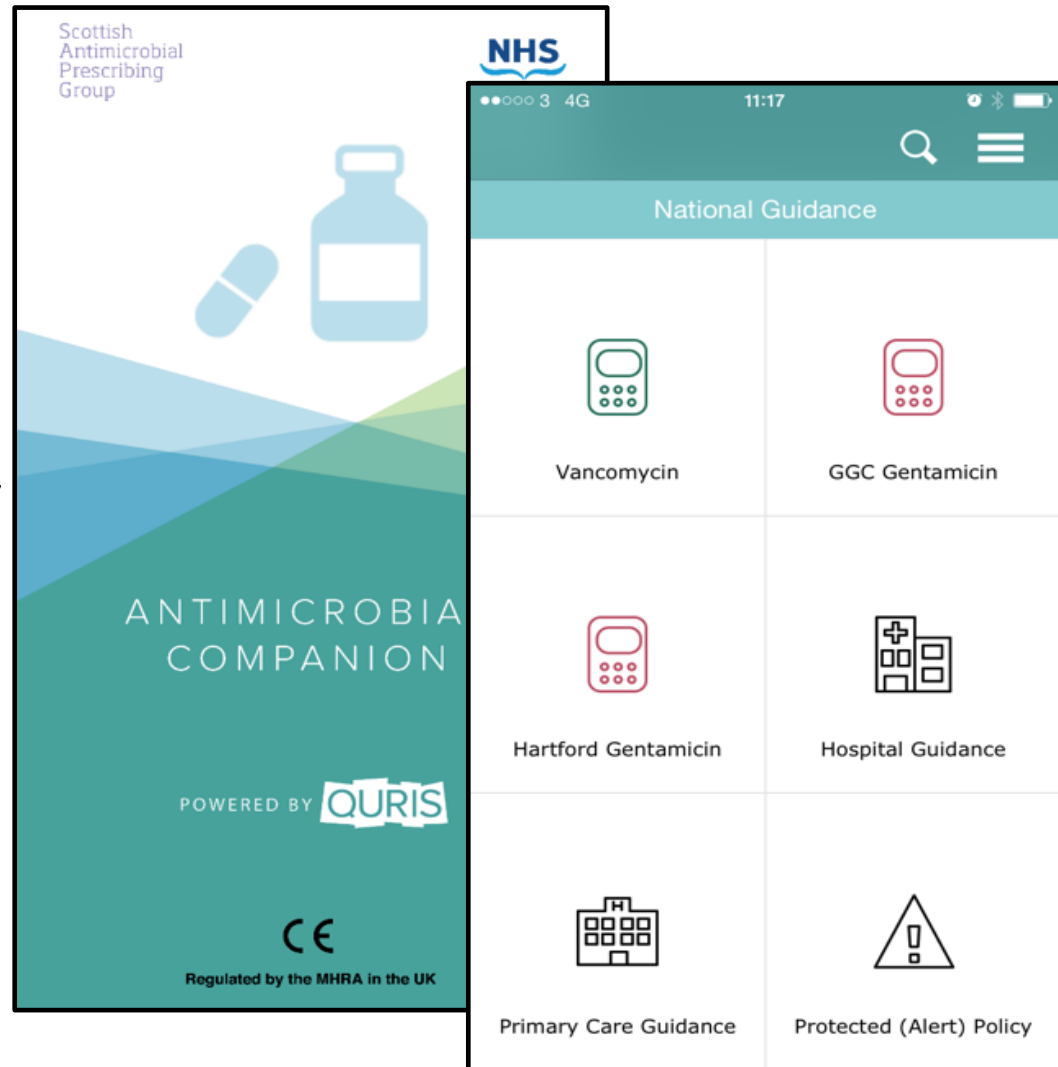
West of Scotland GP

Reduce unwarranted variation and waste

Antimicrobial

Prescribing App

- Calculators
- UTI decision aid
- Primary and secondary care guidance
- Drug information

Manage risk more effectively

Polypharmacy app

- '7-steps' medicines review

- Management of high risk situations – e.g. multiple medicines and risk of falls in older people.

- Assessing cumulative risk of drug toxicity and adverse drug reactions.

- Numbers Needed to Treat
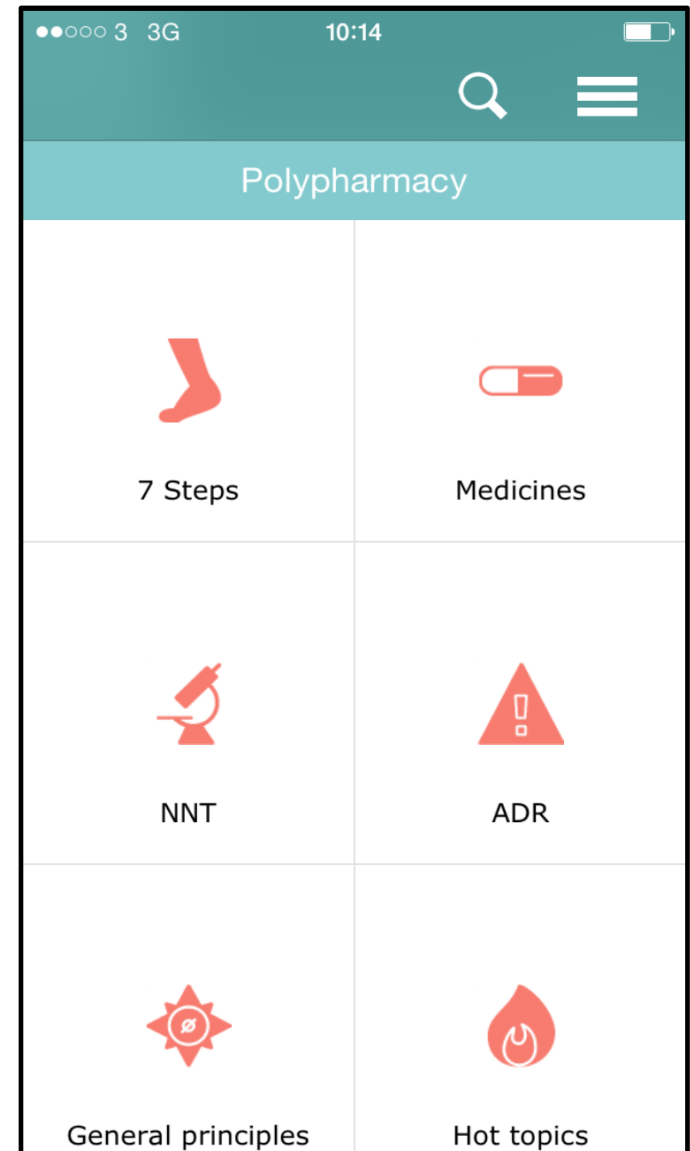
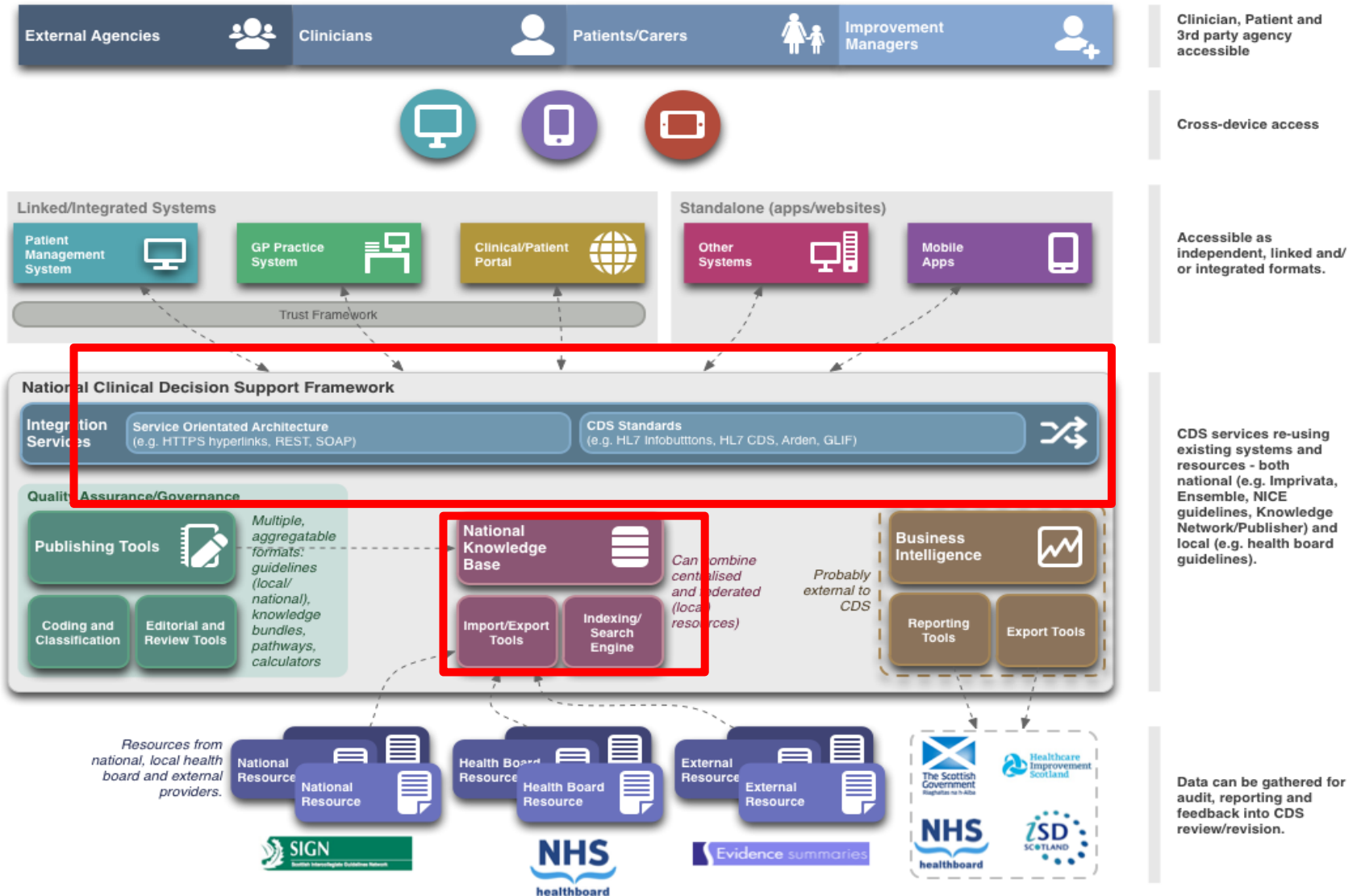# Shared decision-making

Proposals in hand:

- Decision aid to support patient-clinician conversations about insertion of grommets.

- Mobile app to monitor maternal risk throughout pregnancy; facilitate clinician -patient conversations.

Architecture:
Common Knowledge Base, Multiple Channels

Building capacity in primary care

Procurement and Piloting of

Patient-Specific CDS in Primary Care.

Tender for Patient-Specific CDS in Primary Care

Immediate project objective

- Specify, procure, and evaluate a pilot of a patient-specific clinical decision support platform linked with primary care systems in NHSScotland.

- Selection of supplier: November 2016
- Pilot runs: April 2017-March 2018

Potential longer term objective

- Business case for national roll-out of a CDS platform to primary care and potentially secondary care using the same platform.

Discussion

- Topics that would benefit from CDS in primary care:

- Where there is a need to reduce waste, variation and harm.

- Key enablers of CDS in primary care?

  – Preferred delivery channels – web, mobile, linked to clinical systems?

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