

What drives adoption of innovations? A case exploring Point-of-Care Tests for STIs in UK sexual health services

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Facilitators and barriers to clinical innovations

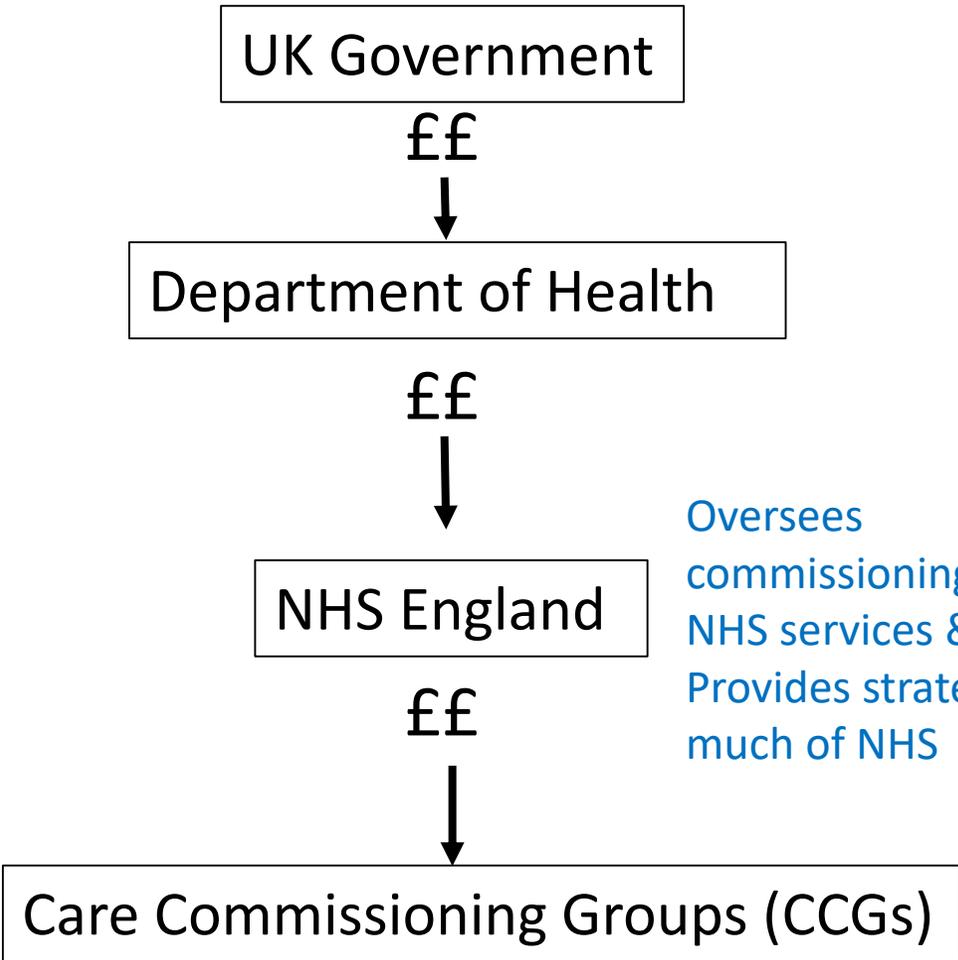
- Guidance for best clinical practice is often based on evidence-based medicine
- Evidence-based medicine: robust clinical research should determine best clinical practice
- New technologies in healthcare often have the capacity to improve clinical practice but are rarely adopted into care
- Lack of time, inclination or training often cited as challenges for adopting evidenced-based practice
- Social, structural and contextual forces are increasingly seen as important to consider

A whole systems approach

1. How health services are structured
2. Function and usability of the diagnostic(s) within this structure
3. The opinions and priorities of key stakeholders for diagnostic adoption and implementation

1. How are NHS sexual health services structured?

Commissioning, funding and remit of the services



Oversees commissioning of NHS services & Provides strategy for much of NHS



Identify local health needs and commissions services accordingly

NHS sexual health services

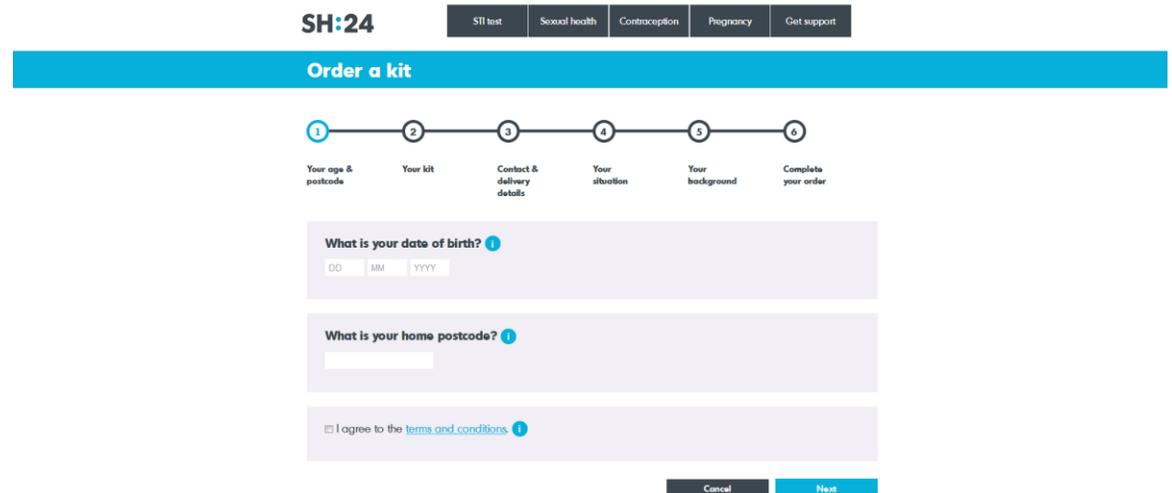
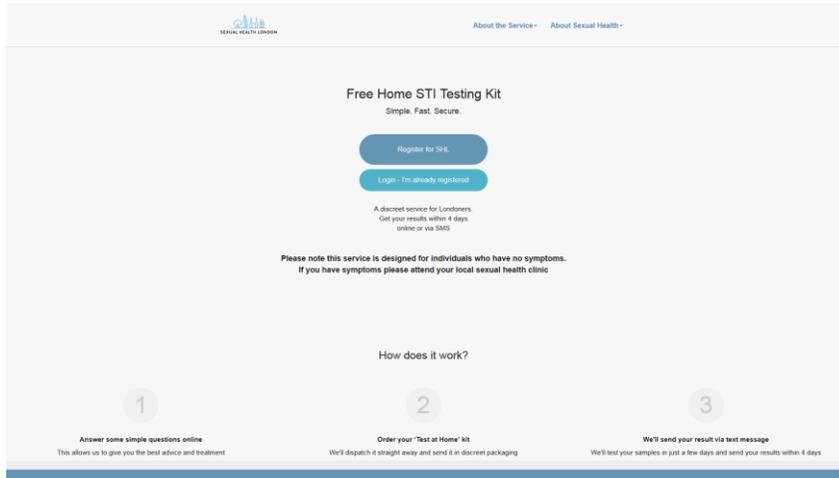
Brick and mortar services

- Family planning, genitourinary medicine (GUM) or sexual and reproductive health clinics
 - Local community services: Brook and other services for young people; GP services; some pharmacies
 - Clinics may be stand-alone or in hospitals
 - Confidential and access unrestricted
 - No referral needed
 - No NHS number recorded

NHS sexual health services

Remote self-sampling for asymptomatic patients

- Order online, postal sample kit, results via text message
 - National Chlamydia Screening Programme: anyone <25 years old with no symptoms can screen for Chlamydia / Gonorrhoea
 - Some clinical services and locations also offer remote screening, e.g. SH:24, SHL



2. Function and usability of new diagnostics

Test development considerations



PRECISE

rapid testing, guiding treatment

Precise study social science programme:

Developing patient-centred, rapid, Point-of-Care testing including antimicrobial resistance markers for specialist sexual health services in the NHS

- Qualitative interviews: clinicians (N=7) and patients (N=63)
- 6 clinics across UK
- Jan 2015 – Dec 2017

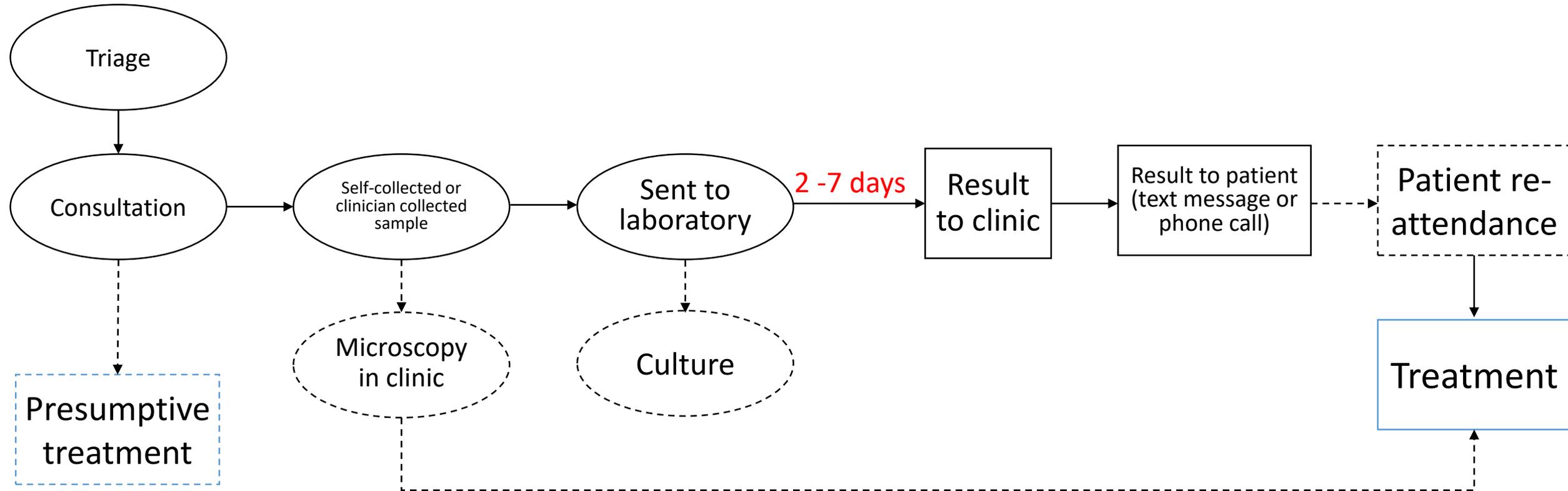
Clinician priorities for POCT development

Structural factors:

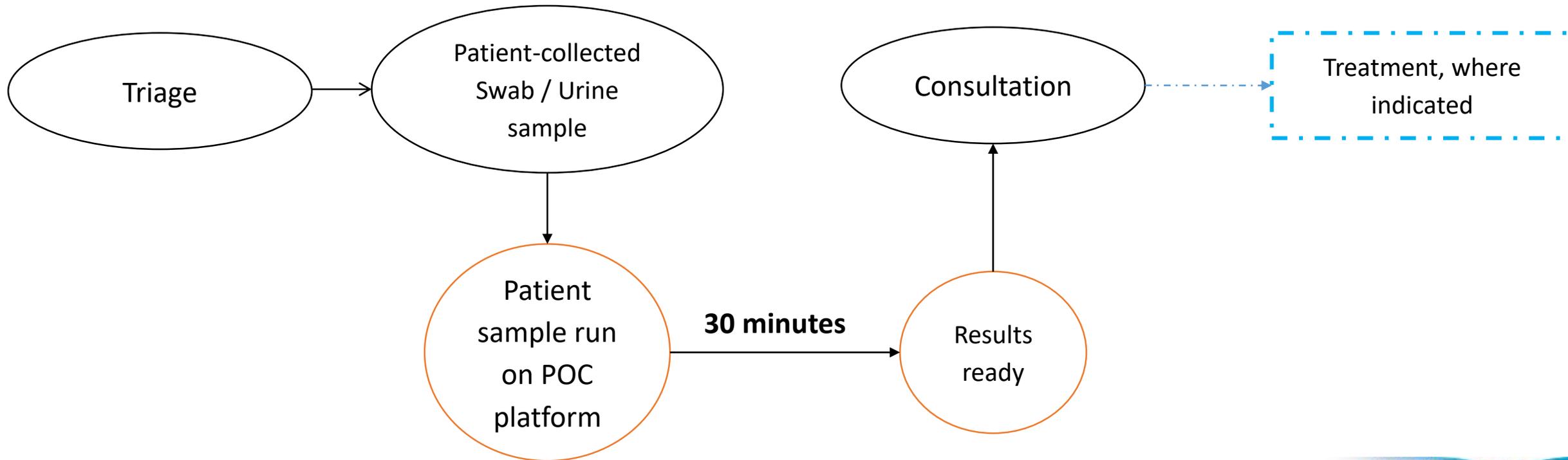
- POCT design and function:
 - Accuracy of test
 - Is it cost effective?
- Structure of clinic
 - Will new POC diagnostic pathways work in practice?

Current clinical pathway

Patients attending sexual health clinics: Chlamydia and Gonorrhoea testing



Potential new clinical pathway POCT for CT/NG



Clinician priorities for POCT development

Social and contextual factors:

- Local epidemiology
 - Emerging infections (e.g. *M. genitalium*)
 - Antibiotic resistance
- Patient acceptability of new pathways
 - Receiving results at different times?
 - Willing to wait for results?

Patient priorities for POCT development

Receiving results at different times

Well, it would still be less waiting than generally happens anyway so I'd be okay with that to be honest.

Heterosexual female, age 36, London (La07)

Yes, I still think that's hugely beneficial because at least you could go again and take some of the worry away. So you deal with that there and then, you know, I mean, it would be perfect if you could have everything in one go, get it sooner rather than later. I think finding out along the way is better than waiting for the all-round all-clear if you see what I mean.

MSM, age 35, Devon (D08)

I think it'd still be better, to be honest. I think you're getting some results on the day, so you know partly, part of your infection status quicker.

MSM, age 19, London (La12)

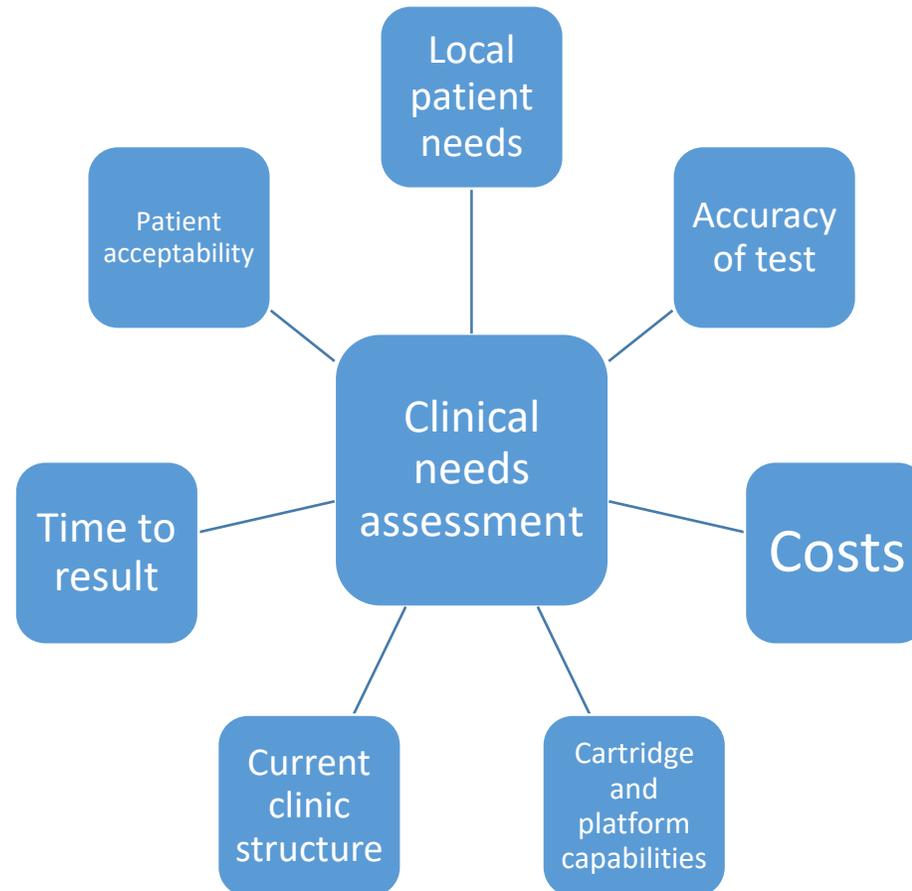
Patient priorities for POCT development

Willingness to wait for results

*No, there are circumstances - I mean, if I was in a position where I'd had unprotected sex with people and felt like I was at the risk of STIs, then, yes, I'd be more than happy to wait, but if it was just one of my general check-ups because I've had a new partner or something like that then I'd be much less inclined to wait because I wouldn't feel like I was at risk. **I think it all comes from gauging how much at risk I am at the time as to how much amount of time that I'm willing to put into getting tested and getting it sorted.***

- MSM, age 20, Devon (D09)

Summary: factors to consider in POCT development



3. Diagnostic adoption and implementation

Identifying key stakeholders and understanding their considerations for new diagnostic test adoption

A Rapid Stratified Medicine Diagnostic Test for STI Patients at the Point-of-Care

Social science study:

Facilitators and barriers to adopting rapid point of care tests for curable sexually transmitted infections in NHS sexual health clinics

- Qualitative interviews with key stakeholders; 6 clinics in England
- National quantitative survey of key stakeholders (*forthcoming*)
- June 2017 - present

Identifying Key stakeholders

Multiple self-identified key stakeholders involved in the adoption process for POCTs for STIs:

- Healthcare professionals: clinicians, nurses, health care assistants and clinic managers
- Laboratory staff and management
- +/- POC coordinators
- +/- Commissioners

Key stakeholders for POCT adoption

- Clinical care team
 - Clinicians: champion need for new tests
 - Nurses and Health Care Assistants: essential for implementation plans
- Management (clinic and Trust)
 - Clinic managers: liaison between Trust management and clinical team
 - Point of Care Coordinator: oversight for all POC in Trust
 - Commissioners (sexual health +/- public health): decide on the business case
 - Laboratory management: understand implications for existing contracts

Key stakeholder considerations for adoption

- Clinicians: PPV and usefulness to patient populations

“Will this POCT increase the standard of care for our patient population?”

- Nurses and HCAs: logistics, ease of use

- Clinic management: logistics, pathways and turn-around-time

“Will this POCT improve our clinic flow?”

- Lab: existing contracts, regulatory issues and validation testing

“What are the regulations for POCT validation testing?”

- Commissioners: cost-saving or cost-neutral

“Will this POCT be cost effective for our service?”

Key stakeholders: social drivers

- Policy initiatives can drive innovation
- Idea for change often led by clinicians but requires all stakeholders' input to be successful
- Inter-personal relationships
 - Lead clinicians and commissioners: may facilitate adoption
 - Clinicians and nurses: may facilitate implementation plans
 - Can overcome negative attitudes toward change

Costs – the business case

- Structural, social and contextual factors may be input data for a business case:
 - Predictive values of test
 - Fit of new pathways into existing structure
 - Potential patient acceptability of proposed new pathways
 - Epidemiological data
 - Cost savings based on initial purchase price and pathway placement
- Cost equivalency may be overcome by policy initiatives
 - POCTs may be seen as advancing the service
 - Some policies mandate new technology implementation without cost considerations

Summary and recommendations

- POCT development choices influence potential for clinical adoption
 - Lead clinicians often champion adoption of new technology that serve patient needs
- Decision to purchase
 - cost
 - policy considerations
 - Interpersonal relationships
- Implementation likely to necessitate inclusion of all levels of clinical staff for success

Disclosures

Special thanks to participants in qualitative interviews and all clinical staff involved in both the Precise and Facilitators to Adoption studies.

Funding and support:

Precise study: This research was supported by the National Institute for Health Research (NIHR) i4i Programme (grant number II-LB-0214-20005). The views expressed are those of the authors and not necessarily those of the NIHR, the NHS or the Department of Health.

Facilitators to Adoption: This research is supported by an Innovate UK award for Stratified medicine: connecting the UK infrastructure SBRI Phase 2, awarded to Binx health (ref.: 90174-463338). Innovate UK and Binx health have had no role in the decision to present these data.

The Applied Diagnostic Research and Evaluations Unit acknowledges the support of the National Institute of Health Research Clinical Research Network (NIHR CRN).

Disclaimer / Conflicts:

ADREU has received funding from Binx health (formerly Atlas Genetics), Alere, Cepheid, SpeedDx, Mologic, Revolugen and Sekisui. SSF has been a member of the BD Diagnostics Advisory Panel on UK Provision of Sexual Health Services.