

Primary HPV screening: The current state of the science - UK

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Disclosures

- No financial relationships or conflict of interest to disclose



HPV primary screening – UK

Talk will cover:

HPV testing –triage and post treatment ‘test of cure’

Sentinel site Project

Preliminary Findings

Implementation plan



Triage of Borderline/low grade abnormalities

England, Wales, Northern Ireland
Implemented HPV triage in 2012/3

Scotland-did not implement triage
so acceptable to refer for colposcopy if:
Borderline nuclear change x 3
Low grade dyskaryosis x 2



Management of BNA/ Low grade Dyskaryosis

If Colposcopy adequate and normal:

- Discharge to GP for routine cytology 3-5 years

If Colposcopy Low grade/ biopsy proven CIN 1:

- Repeat cytology, HPV, colposcopy in 12 months
- Community cytology and HPV in 12 months

If Colposcopy High grade:

- Treat



Effects of HPV triage on colposcopy

Increase in low grade referrals  workload /capacity issues

Increase in High grade referrals and treatments  earlier detection and management of HG disease

Reduction of follow-ups if pathway followed



Approved HPV platforms in UK

Qiagen Hybrid Capture 2 High-Risk HPV DNA test

Abbott RealTime High Risk HPV test

Roche Cobas 4800 HPV system

Hologic Aptima HPV Assay

Hologic Cervista HPV HR test

BD Onclarity HPV test

Cepheid Xpert HPV assay



HPV Testing in Wales – current status

HPV Test of Cure (Sept 14/Dec 15)

HPV triage of low grade abnormalities (May 16)

Other factors

- Vaccinated women just entering the screening programme
- Cervical smear numbers falling
 - Extended intervals
 - Reduced repeat smears
- Reduced prevalence of CIN in screened population



Scotland

No data –no pilot sites or early implementers.

Several meetings to put together a full business case as instructed by Scottish government.

If approved, will go to full primary HPV implementation



Northern Ireland

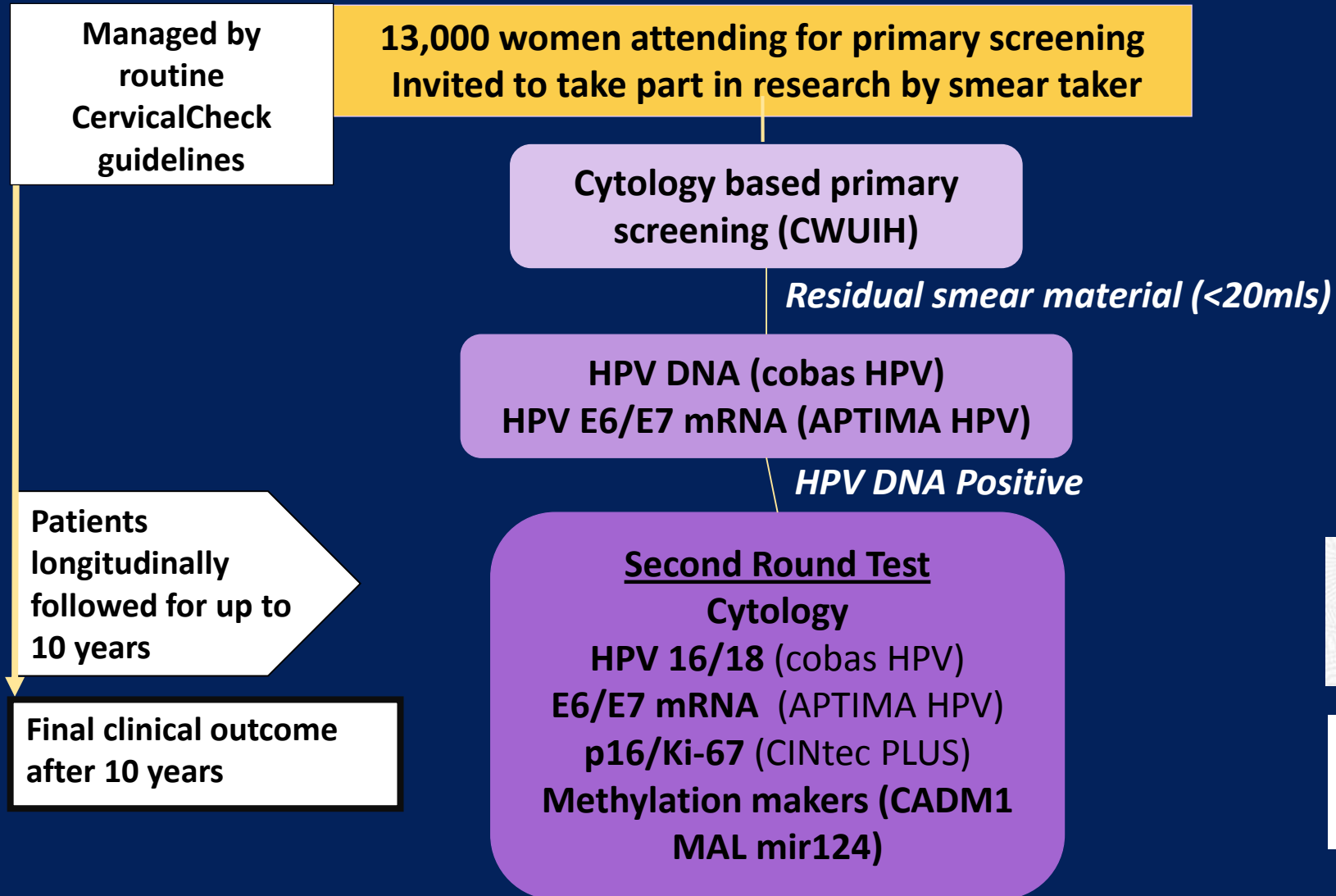
Triage and TOC -follow England guidance

Will see how England and Wales get on.

Have established a committee – but will not be implementing HPV primary screening before 2019.



Republic of Ireland: CERVIVA HPV Primary Screening Pilot



Evidence supporting HPV Primary screening

ARTISTIC (A Randomised Trial in Screening To Improve Cytology)

Manchester based trial, ages 20-65

Evaluated effectiveness of HR HPV screening

Compared LBC and HPV testing

Over 3 screening rounds, HPV-PS

- Showed increased sensitivity to detect CIN 2+
- Gave longer protection after a negative result



Six English sentinel sites

Initially evaluated HPV triage

For primary HPV screening:

Only partial conversion to maintain
cytology expertise

Local models for conversion to primary
HPV screening are variable

Different hr-HPV testing platforms

Roche – Norwich, Sheffield, Manchester

Genprobe – Bristol, Liverpool

Abbot – Manchester, London

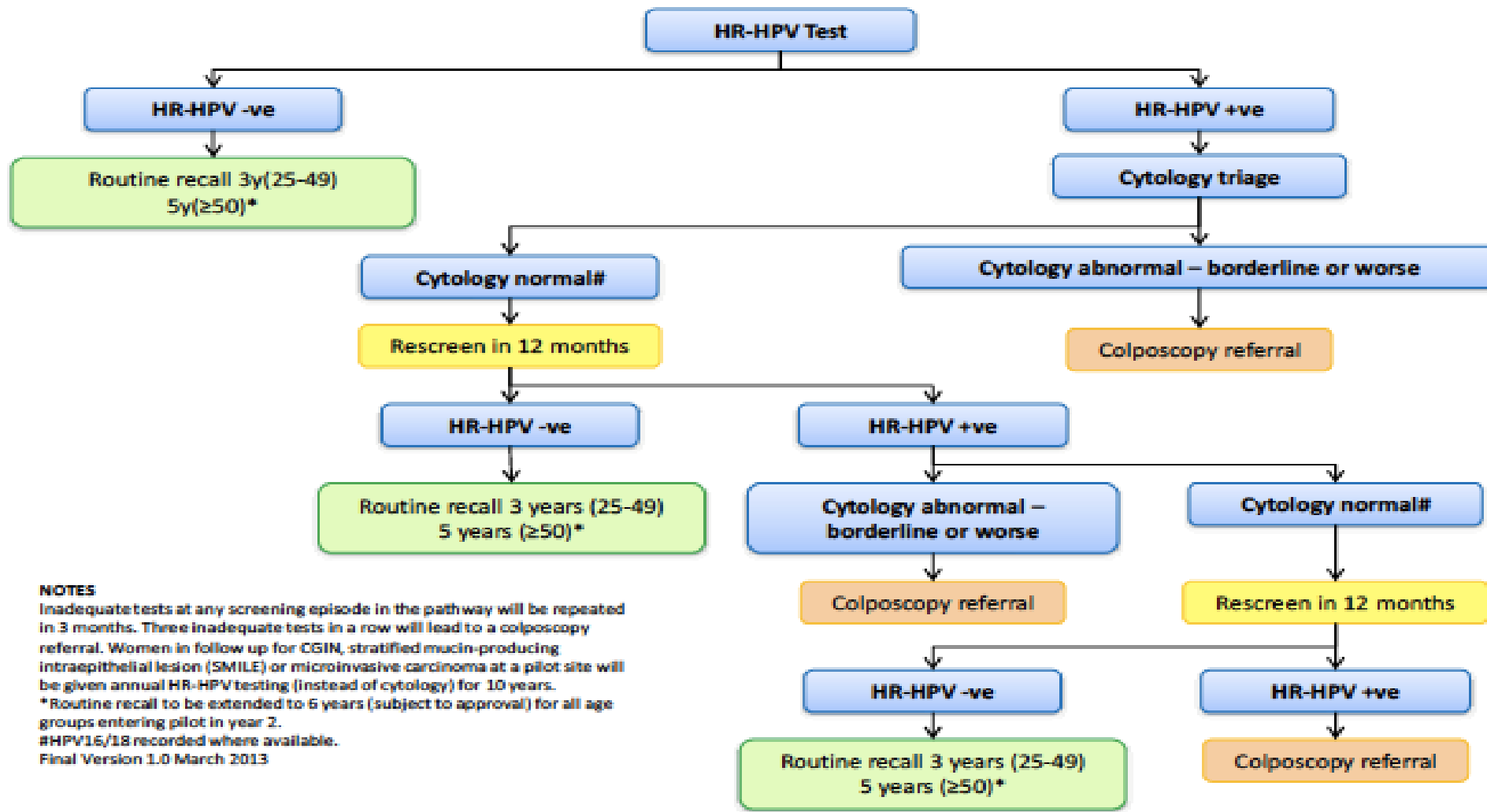
Triage by reflex cytology

Thin prep or Surepath



Pilot started in April 2013

Algorithms for HPV primary cervical screening currently in use with the primary HPV screening pilot in England



Amendments to Algorithm for primary HPV screening

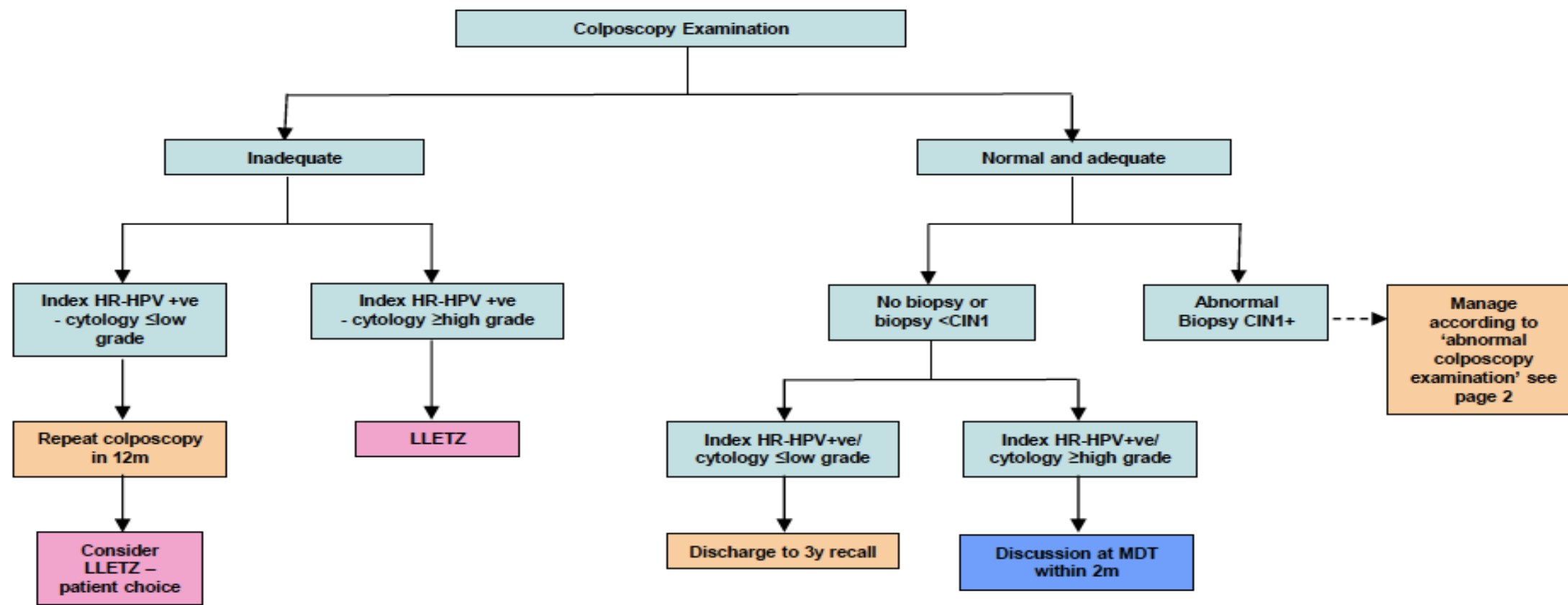
April 2014 – started referring HPV 16/18 cytology negative to colposcopy at 12 months

April 2015- started referring HR-HPV other cytology negative at 24 months



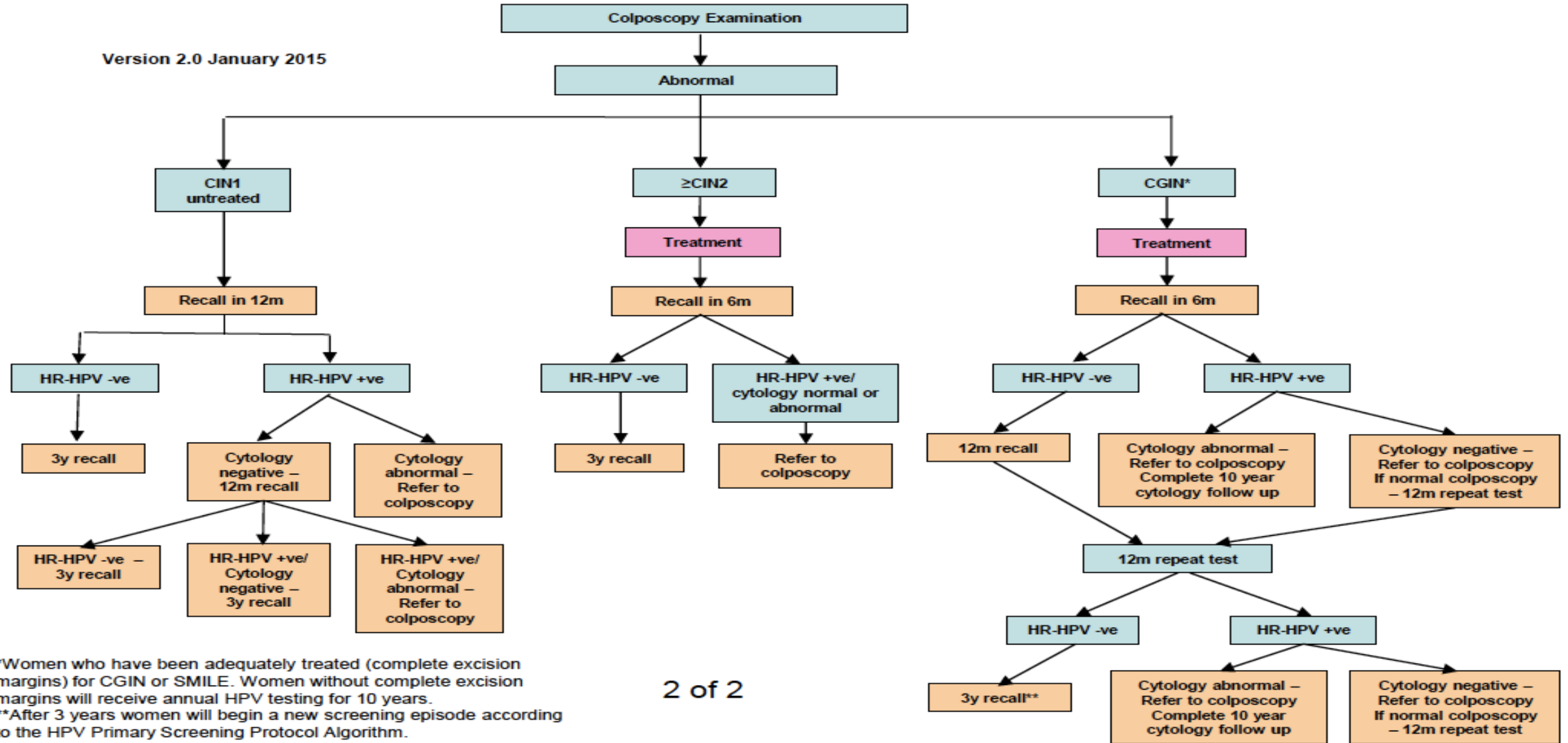
HPV Primary Screening Pilot Colposcopy Management Recommendations Algorithm

Version 2.0 January 2015



HPV Primary Screening Pilot Colposcopy Management Recommendations Algorithm

Version 2.0 January 2015



*Women who have been adequately treated (complete excision margins) for CGIN or SMILE. Women without complete excision margins will receive annual HPV testing for 10 years.

**After 3 years women will begin a new screening episode according to the HPV Primary Screening Protocol Algorithm.

2 of 2

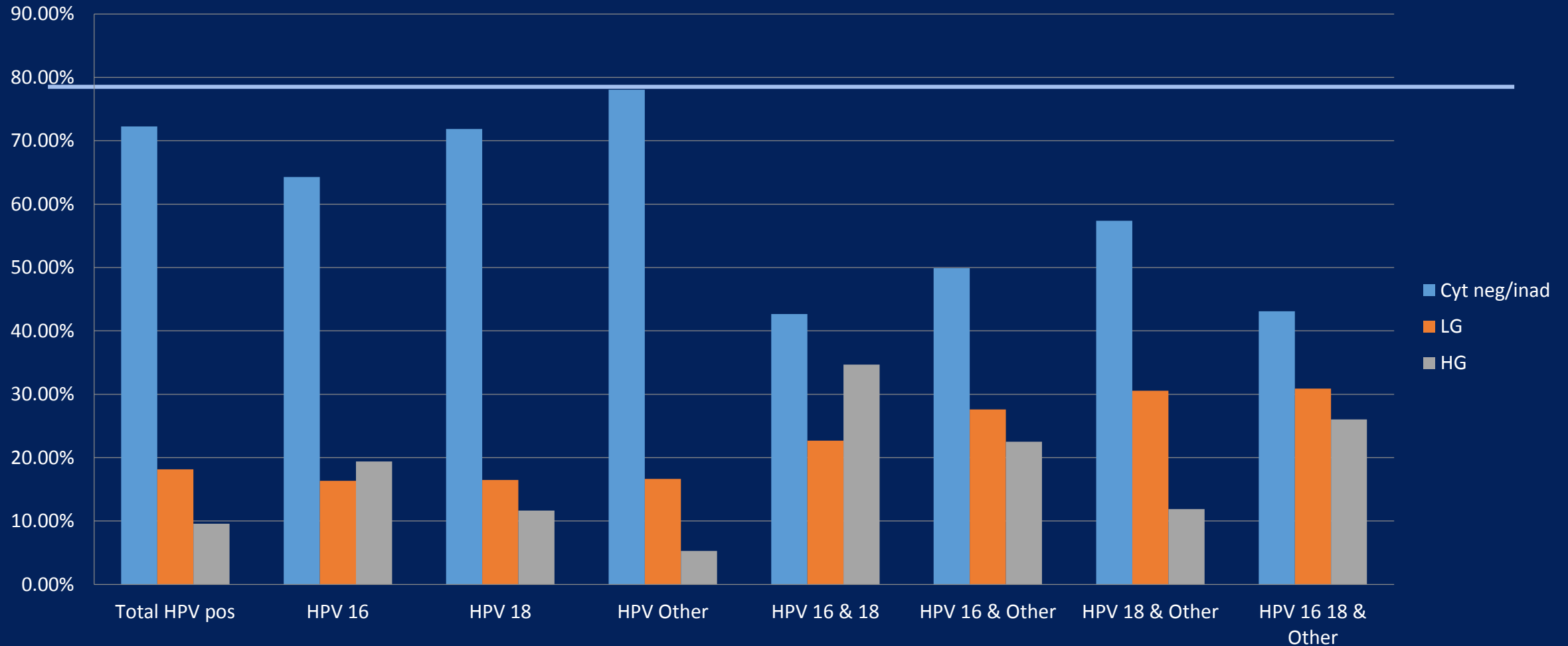


Primary HPV Screening

- All women aged 25 – 65
- 314,244 women underwent primary HPV testing to Dec 2015
- 651,307 women underwent primary cytology testing to July 2015
- hr-HPV positive rates
 - Average 12.7%, range 10.5 – 15.0%
 - HPV 16/18 4.0%
 - Age 24-29 27.6%
 - Age 50-64 5.5%



Outcome of cytology by hr-HPV genotyping at Sheffield

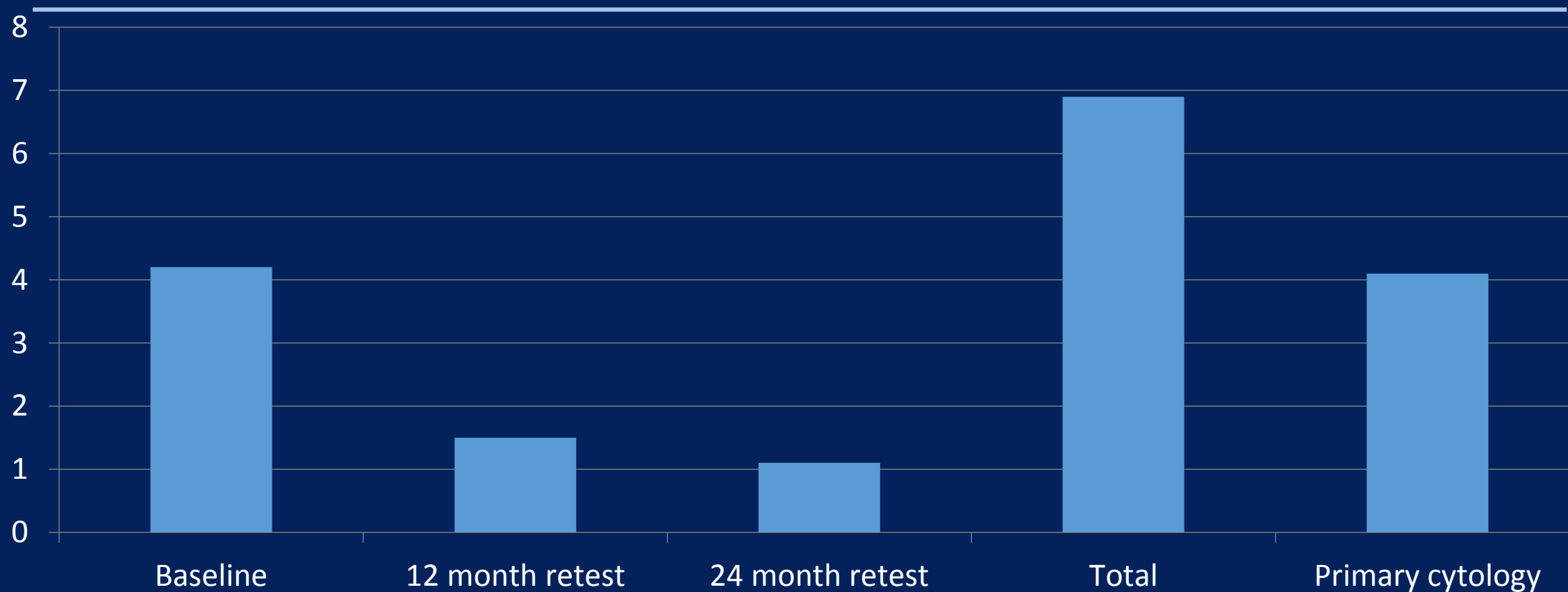


Infection with multiple hr-HPVs are associated with higher rates of abnormal cytology



Changes in colposcopy referrals in Sheffield

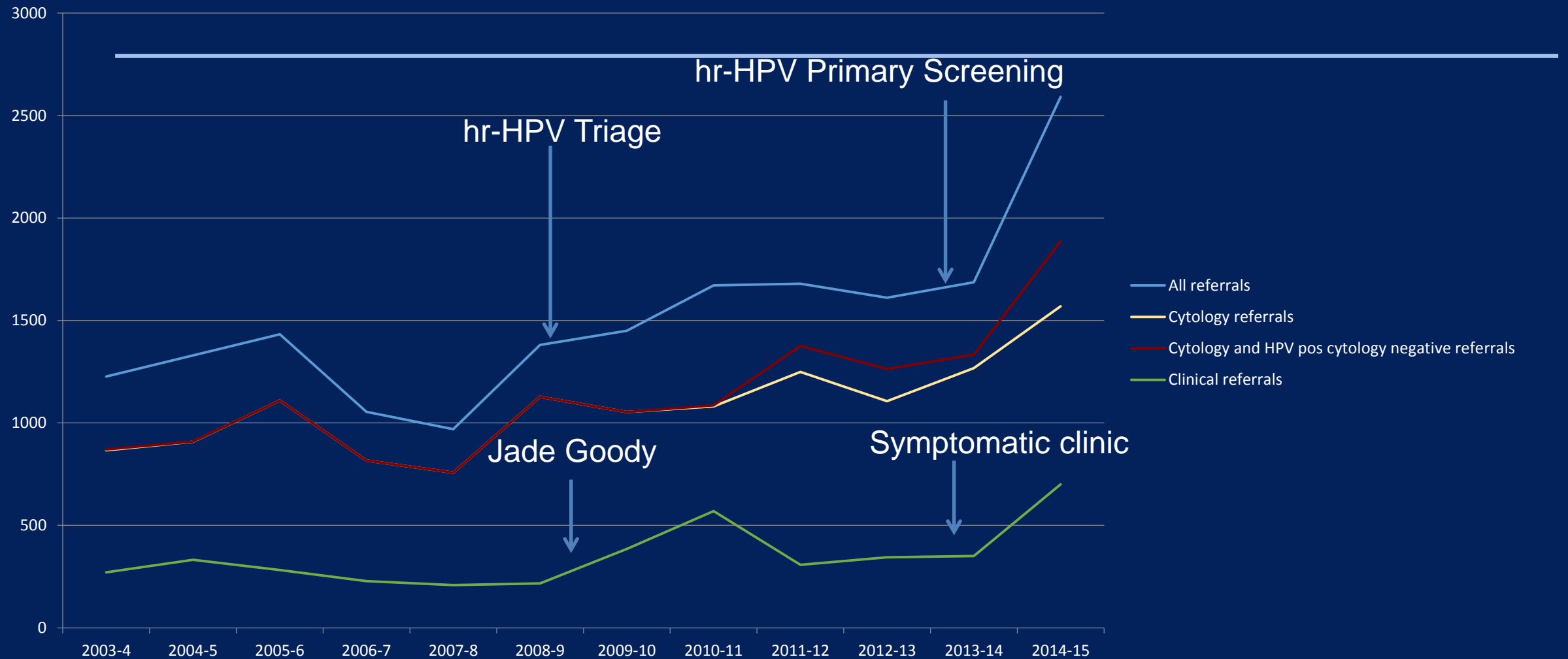
% of women screened referred to colposcopy



Primary hr-HPV screening increases referral to colposcopy by 68%

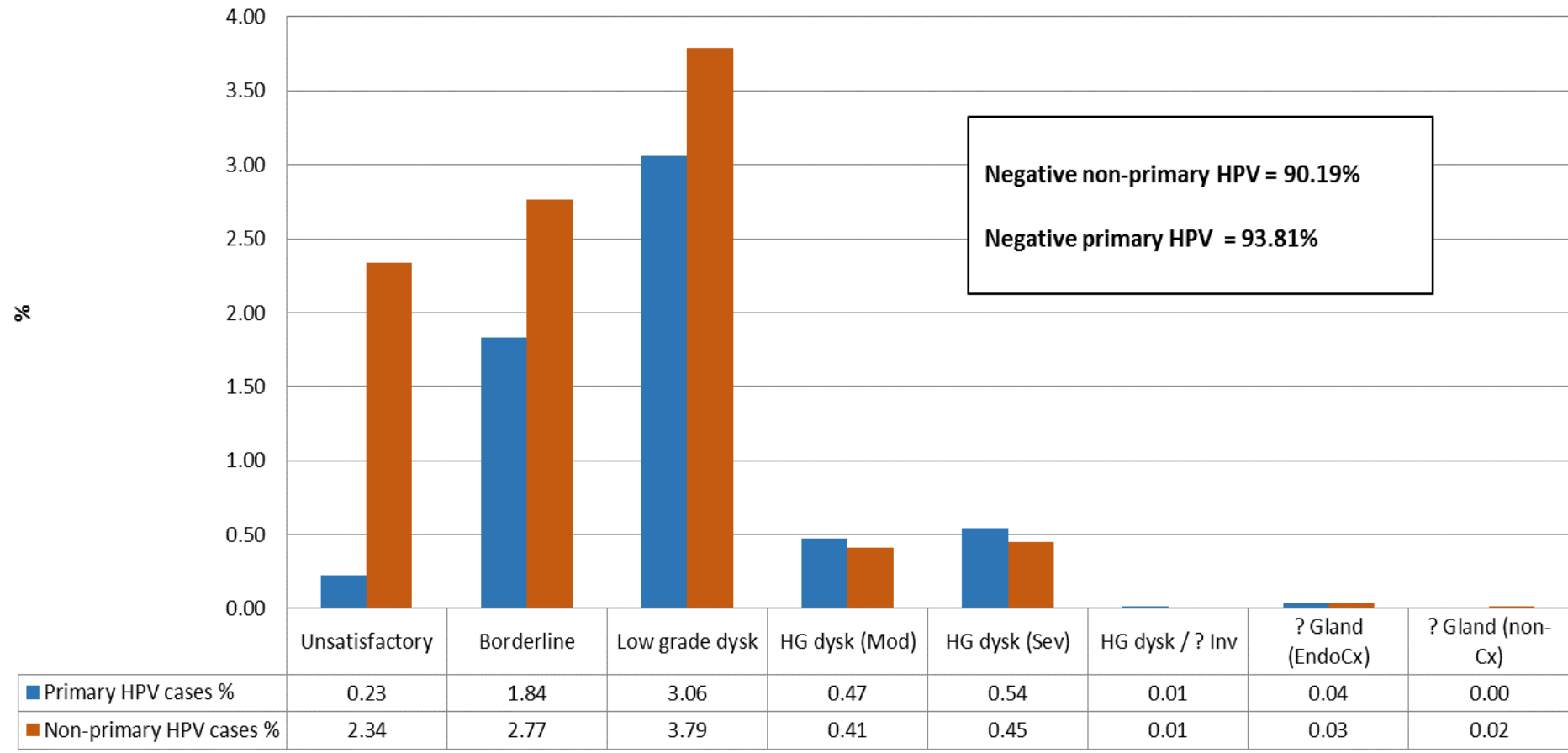


Changes in colposcopy referrals at Sheffield



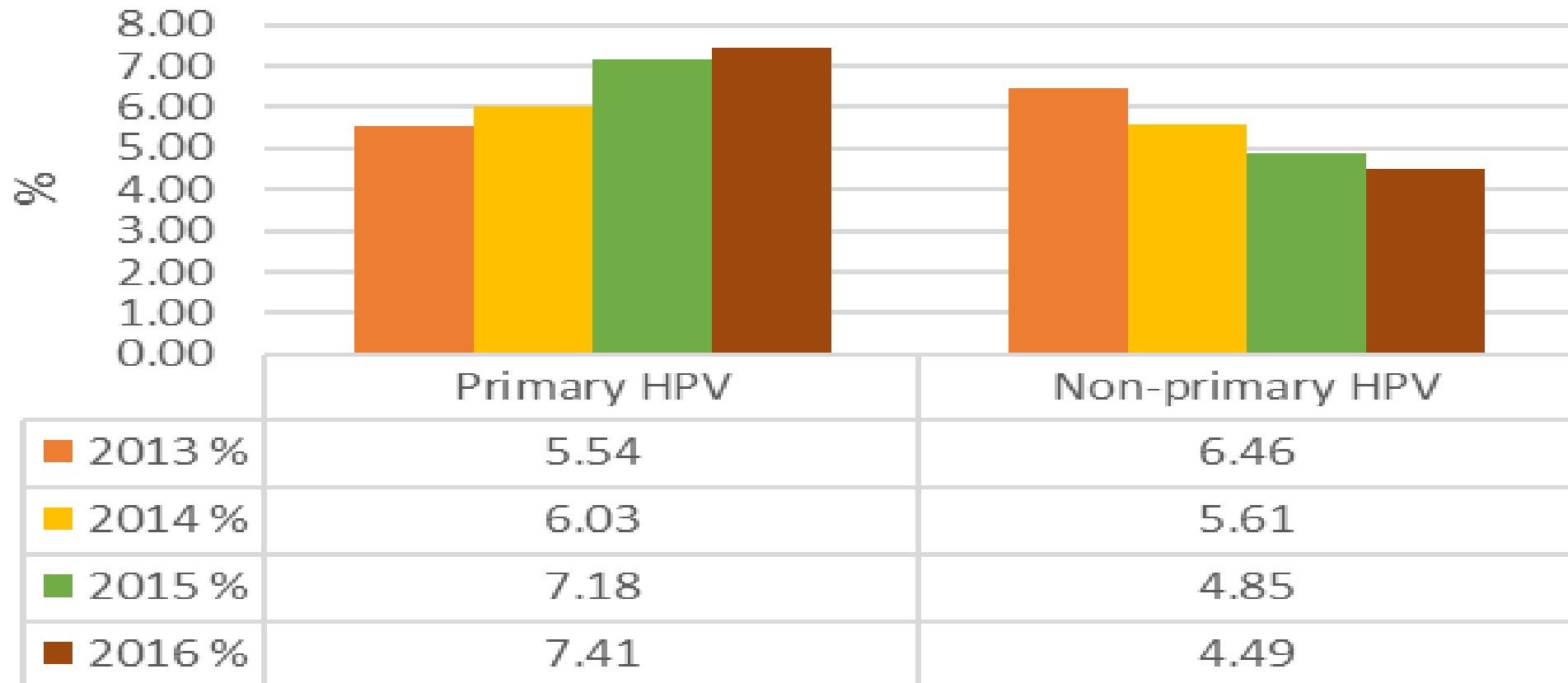
Northwick Park (London) experience

Proportions of non-negative cytology primary and non-primary cases July 2013 to May 2016



Northwick Park (London) experience

Colposcopy referral rates 2013 - 2016



National implementation of HPV primary screening

Public Health Minister for England announced HPV primary screening will be implemented into English cervical screening programme by 2019

Deciding how best to roll out HPV testing as the primary cervical screening test

Ruth Stubbs, 31 January 2017 — NHS Cervical Screening Programme



Primary HPV screening implementation: Laboratory reconfiguration

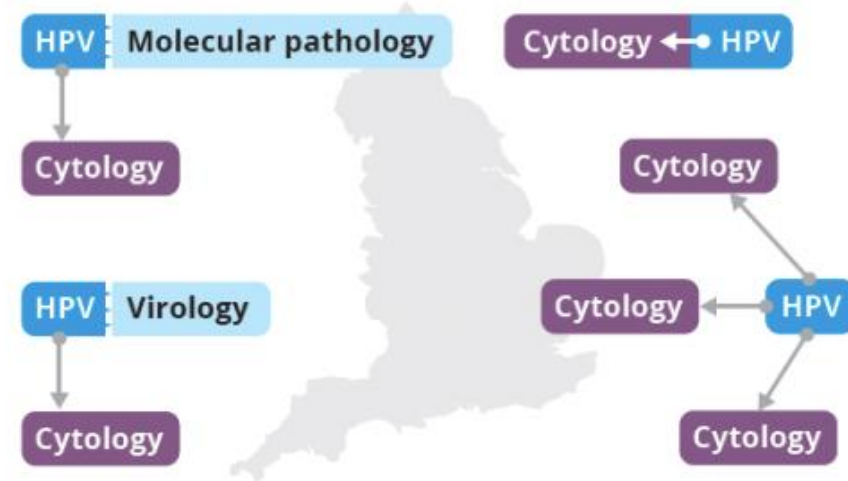


Objective	Weight
Quality	18
Staffing Feasibility	15
Effective IT Connectivity	15
Cost of Safe Delivery	15
Linkage to Local Services	10
Delivery During Transition	6
Adequate Clinical Support	6
Service Sustainability	6
Specimen Transport Feasibility	5
Commissioning Feasibility	4
Total	100

Options appraisal for laboratory reconfiguration

Current system
59 laboratories across England

1. Many providers delivering HPV testing and cytology testing (aligns with current cervical screening model).

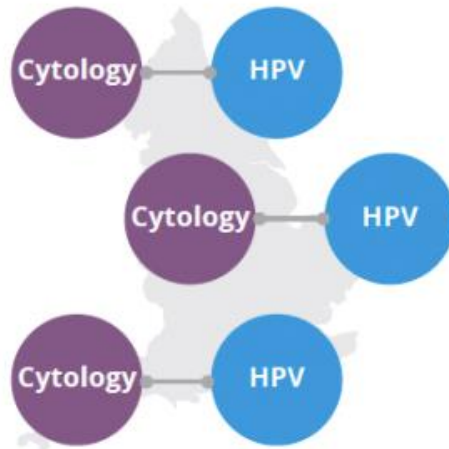


Option 1. Many providers of HPV testing and cytology screening. Primary HPV testing may be provided by internal cytology, virology or molecular pathology departments. Trusts without HPV testing facilities onsite may deliver HPV testing through a SLA with a central virology laboratory. If HR-HPV is detected a cervical sample will be sent for cytology screening.

Favoured option for laboratory reconfiguration

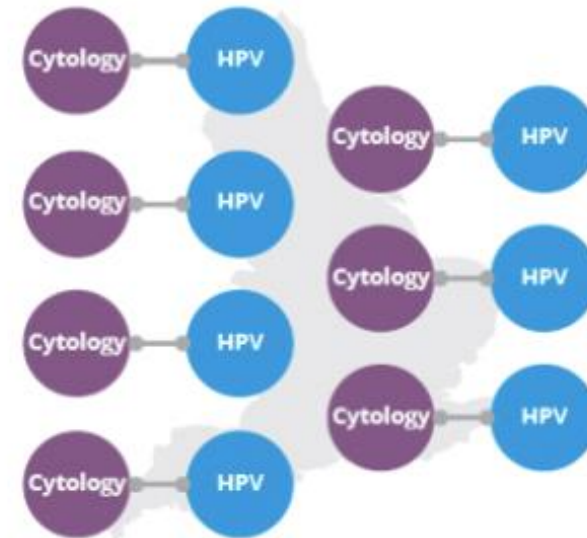
4. Centralisation of HPV testing and cytology testing as a single seamless service, using:

- a minimum number of 4 to 5 centralised services performing both HPV testing and cytology screening (option 4a)



Option 4a. A minimum number of large centralised HPV testing and cytology testing services, with high-throughput testing for HR-HPV.

a maximum number of 10 to 15 centralised services performing both HPV testing and cytology screening (option 4b)



Option 4b. A maximum number of centralised HPV testing and cytology testing services, with high-throughput testing for HR-HPV.

Future UK-National Screening Committee Decisions

- Primary HPV Geno-typing,
- Extended screening intervals following Primary HPV testing implementation,
- Screening HPV positive women beyond the age of 65
- Self sampling and how this impacts on coverage
- How to deal with increase in colposcopy workload

Expected decisions Summer 2017



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