Update on schemes and 'the future'

Dr Vivienne James

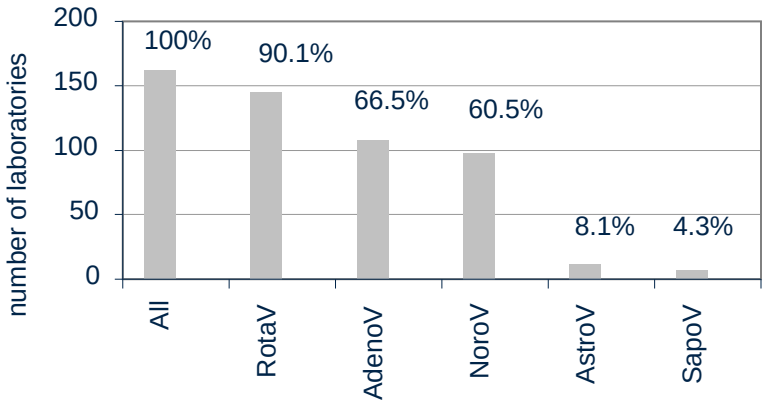
In development: Gastrointestinal viruses scheme

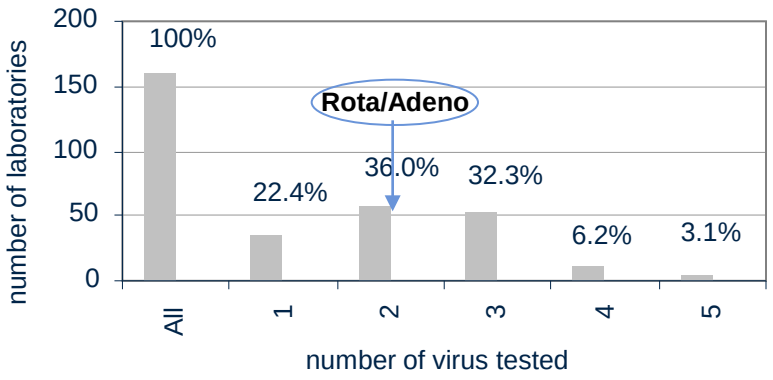
03/2011 QUESTIONNAIRE

-Hannah McGregor-

In March 2011, a questionnaire regarding testing for gastrointestinal viruses was sent to all existing UK NEQAS for Microbiology participants: 243 participants replied.

→ 161 laboratories testing for 1 or more gastroenteritis viruses





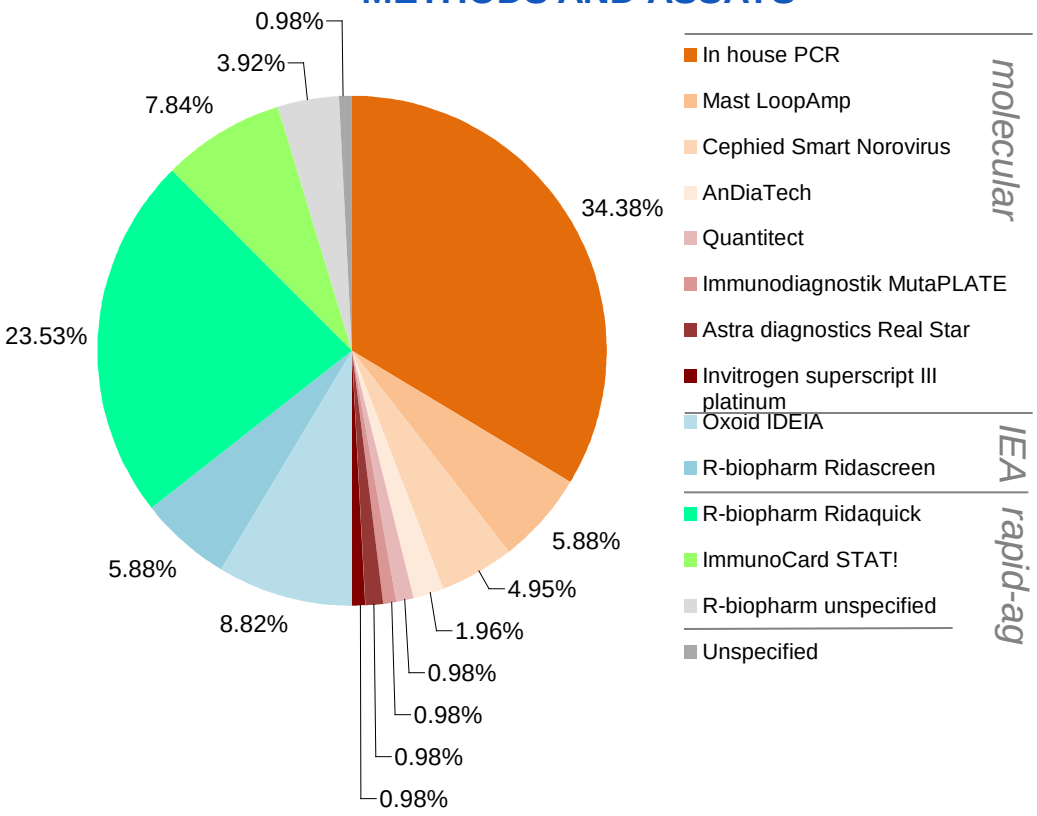
→ testing carried out between 1 and 20 tests a week

In development: Gastrointestinal viruses scheme

03/2011 QUESTIONNAIRE / NOROVIRUS

➡ 97 out of 161 (60%) laboratories routinely perform a norovirus detection assay

METHODS AND ASSAYS

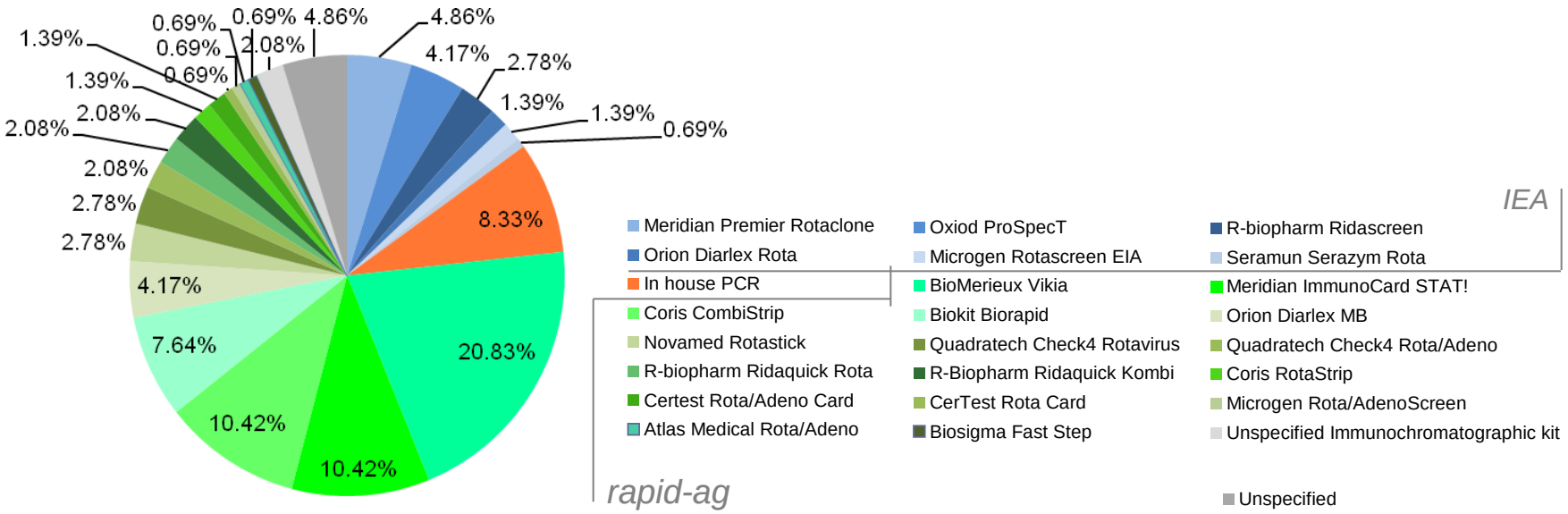


In development: Gastrointestinal viruses scheme

03/2011 QUESTIONNAIRE / ROTAVIRUS

➡ 145 out of 161 (90%) laboratories routinely perform a rotavirus detection assay

METHODS AND ASSAYS

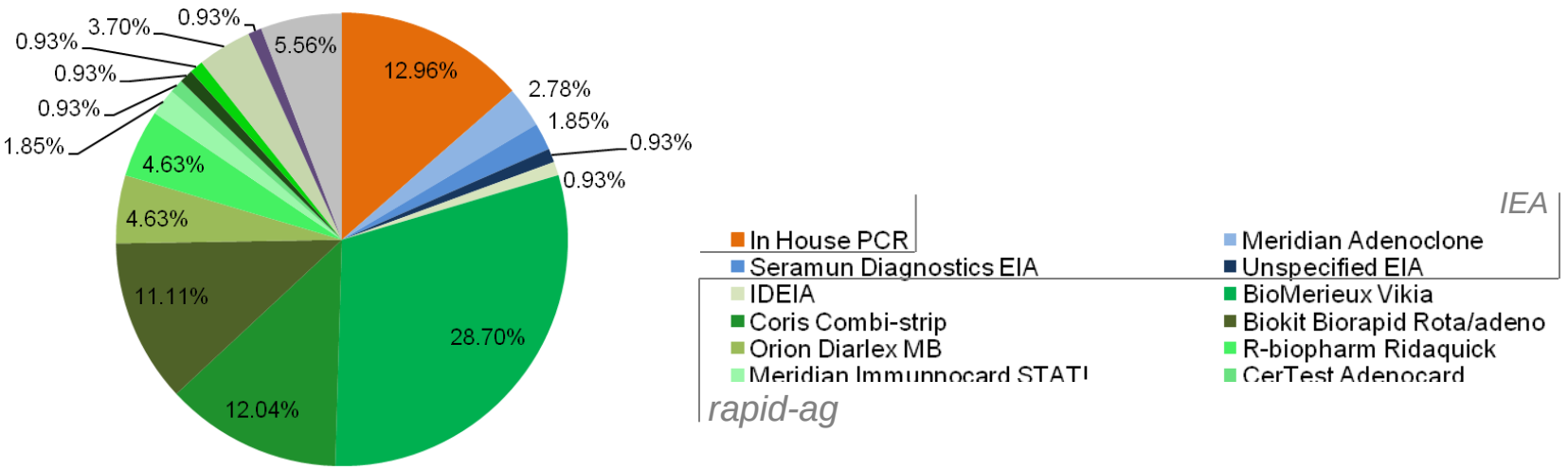


In development: Gastrointestinal viruses scheme

03/2011 QUESTIONNAIRE / ADENOVIRUS

➡ 108 out of 161 laboratories (67%) routinely test for enteric adenoviruses

METHODS AND ASSAYS

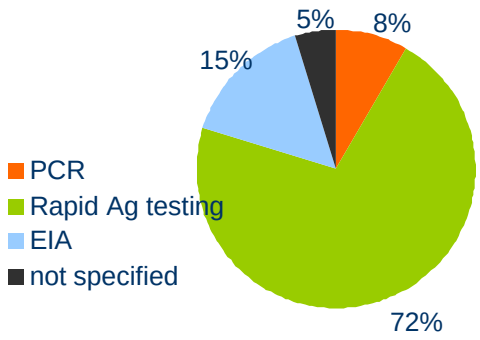


In development: Gastrointestinal viruses scheme

03/2011 QUESTIONNAIRE / SUMMARY / PREPARING DEVELOPMENT

ROTAVIRUS

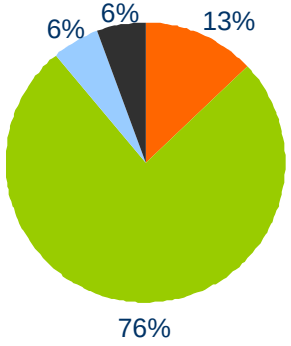
n=145



•BioMerieux Vikia (21%)
•Meridian Bioscience (15%)

ADENOVIRUS

n=108

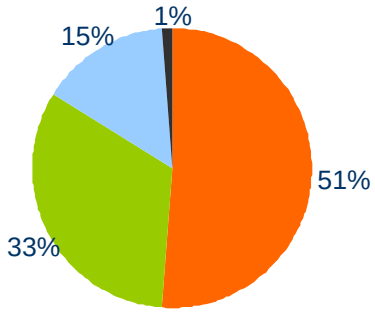


•BioMerieux Vikia (29%)
•Coris Combistrip (12%)

→ 63% use a combo ADV/RTV assay

NOROVIRUS

n=97



•In House PCR (34%)
•R-Biopharm Ridaquick (24%)
•Oxoid IDEIA (9%)

- *Stool-based specimens*
- *Clinical details*
- *PCR/EIA/RapidAg*

In development: Gastrointestinal viruses scheme

07/2011 PRE-PILOT / NOROVIRUS

➡ 6 stool-based specimen sent to 20 laboratories

PRE-DISTRIBUTION RESULTS

	0828	0829	0830	0831	0832	0833	
pre-D RT-PCR*	Pos	Pos	Pos	Neg	Pos	Pos	*in house HPA Colindale /GEZI
Ct values	24.2	20.0	29.6	-	30.9	17.0	
Genotype	II	II	II	-	I	II	
pre-D EIA**	Pos	Pos	Neg	Neg	Neg	Pos	**Oxoid IDEIA
ratio	1.68	5.60	0.25	0.12	0.15	3.66	

PRE-PILOT RESULTS

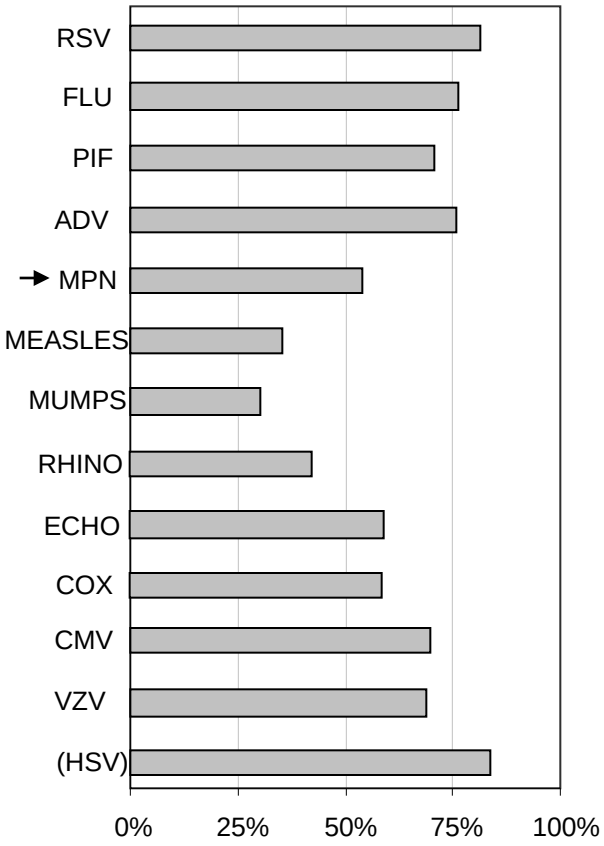
	0828	0829	0830	0831	0832	0833	
Intended result	Pos	Pos	Pos*	Neg	Pos*	Pos	
	Number of correct results per specimen						
In House RT-PCR, n=8	8	7	7	7	7	8	molecular
Cepheid Smart Norovirus, n=2	2	2	2	2	2	2	
Mast Loop Amp, n=1	1	1	1	1	0	1	
Oxoid IDEIA, n=3	3	3	1	3	1	3	IEA
RIDA®QUICK, n=5	5	3	0	4	0	5	
Immunocard STAT!, n=1	0	0	0	1	0	0	Rapid-Ag
All, n=20	19	16	11	19	10	19	
Performance / % correct results	95%	80%	55%	90%	50%	95%	

*weak positive

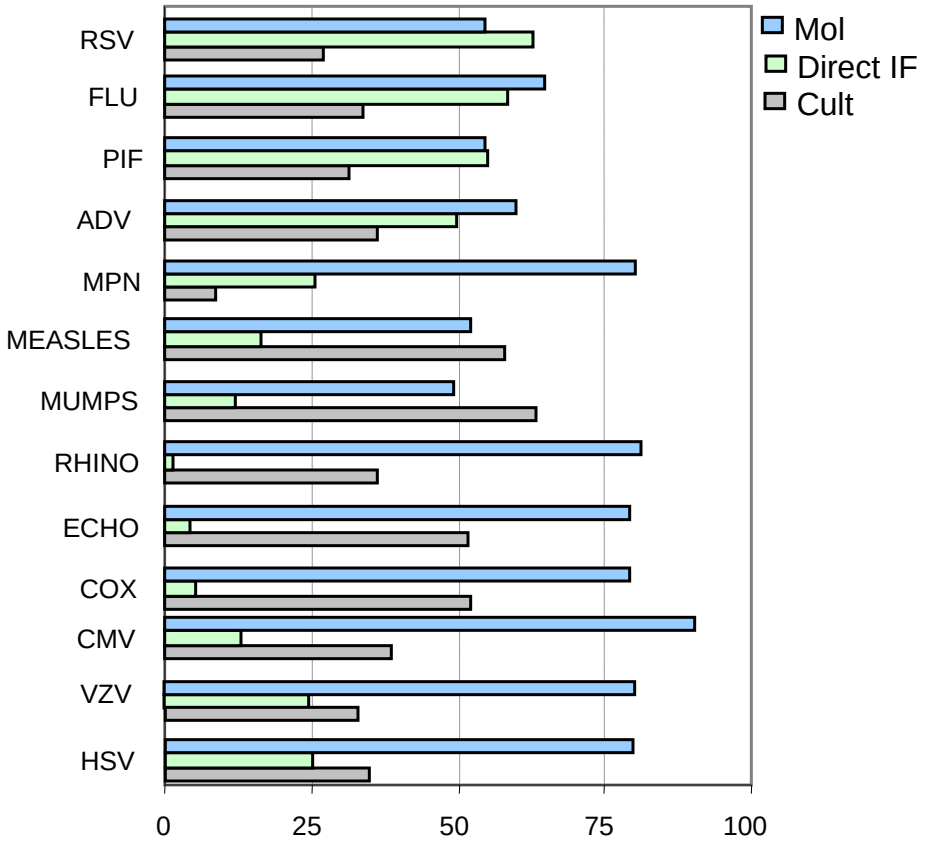
Virus Identification scheme and the development of Respiratory Viruses schemes

01/2009 Questionnaire sent to all participants to review practice in virus identification. 188 replies including 54 (27%) from participants currently taking part in the virus identification scheme.

%-laboratory routinely testing for:

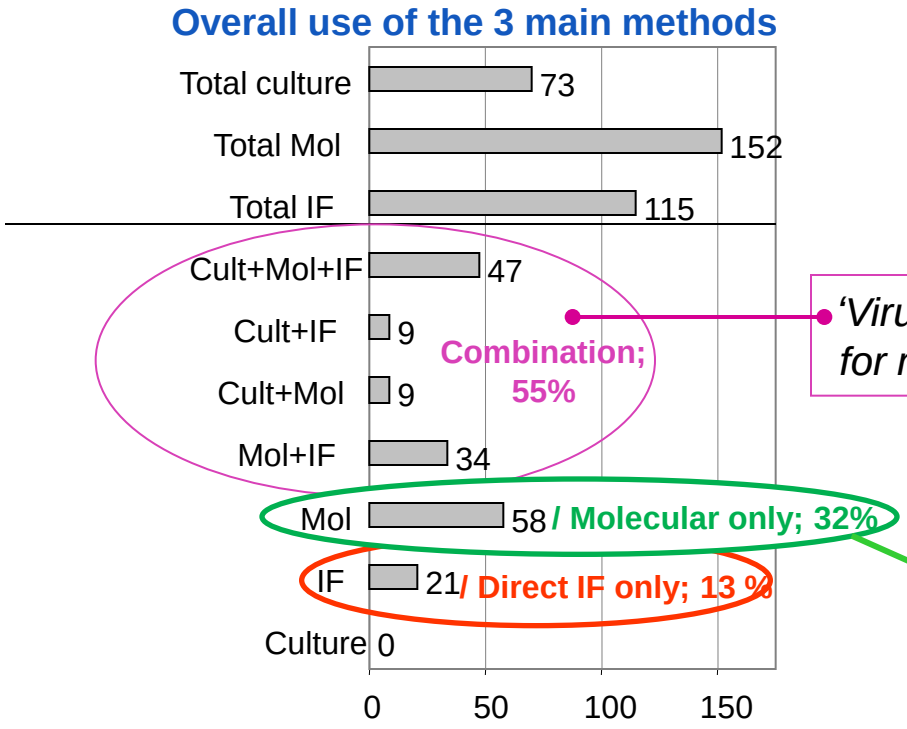


%-use of method by virus:



Virus Identification scheme and the development of Respiratory Viruses schemes

01/2009 Questionnaire



'Virus identification scheme' specimens are suitable for molecular detection, IF and culture identification

44.9% of participants in the virus identification scheme would retain the scheme as it is and 24.5% would prefer a culture specific scheme.

Developing a molecular respiratory scheme

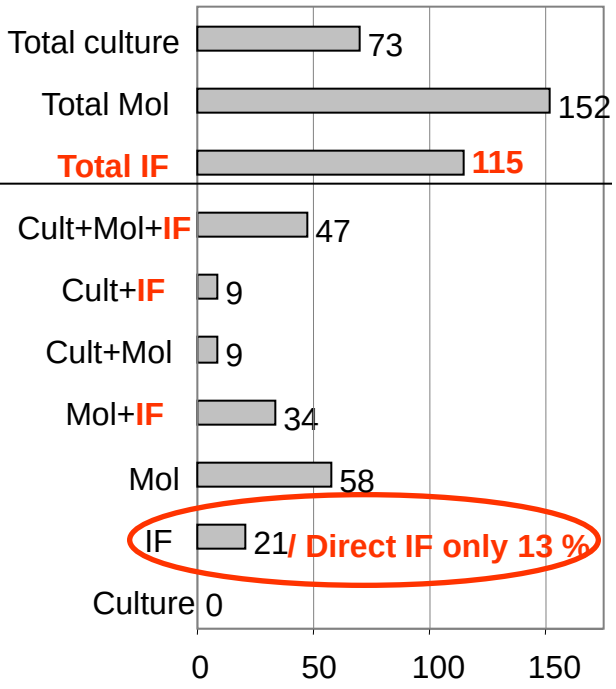
75% (questionnaire replies) would prefer a molecular scheme.

- Extend no. of respiratory specimens per year (currently 3 to 4)
- Simulated NPA /TS / BAL..freeze-dried
- Include respiratory viruses difficult/unable to grow in cell culture (Metapneumovirus, PIF4, Coronavirus…)
- Identification and Typing (Flu)
- Multiple viruses specimen
- Atypic respiratory bacteria (M pneumoniae / C pneumoniae / L pneumophilla)

Virus Identification scheme and the development of Respiratory Viruses schemes

01/2009 Questionnaire

-Mihaela Cirdei-



Developing a rapid testing scheme

➡ 64% of the questioned laboratories would prefer to use an IF-specific scheme

- Large number of laboratories using direct IF
- Direct IF is used mainly for: RSV / Flu / PIF
- Rapid testing using POCT devices is increasing especially outside of the laboratory →growing demand for EQA specimens containing RSV and Influenza viruses

- *Current Virus identification specimens are not suitable for POCT testing (negative results due to interference from the matrix)*
- *Developing specimens suitable for IF and POCT containing RSV- or Flu-infected cells, identifiable by IF, and with sufficient soluble Ag for POCT testing*
- *Microbiology laboratory and clinical settings outside the laboratory*

- *Pre-pilot distribution (February or March 2012)*

Development of a combined scheme for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*

-Anneline Rossouw-

- Questionnaire distributed to participants of the scheme for the molecular detection of *Chlamydia trachomatis* to determine testing practices: resulted in the decision to develop a new specimen type

- Dual detection of *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG) by molecular methods in **liquid simulated urine**

- Pilot distribution dispatched to 75 UK participants in March 2011

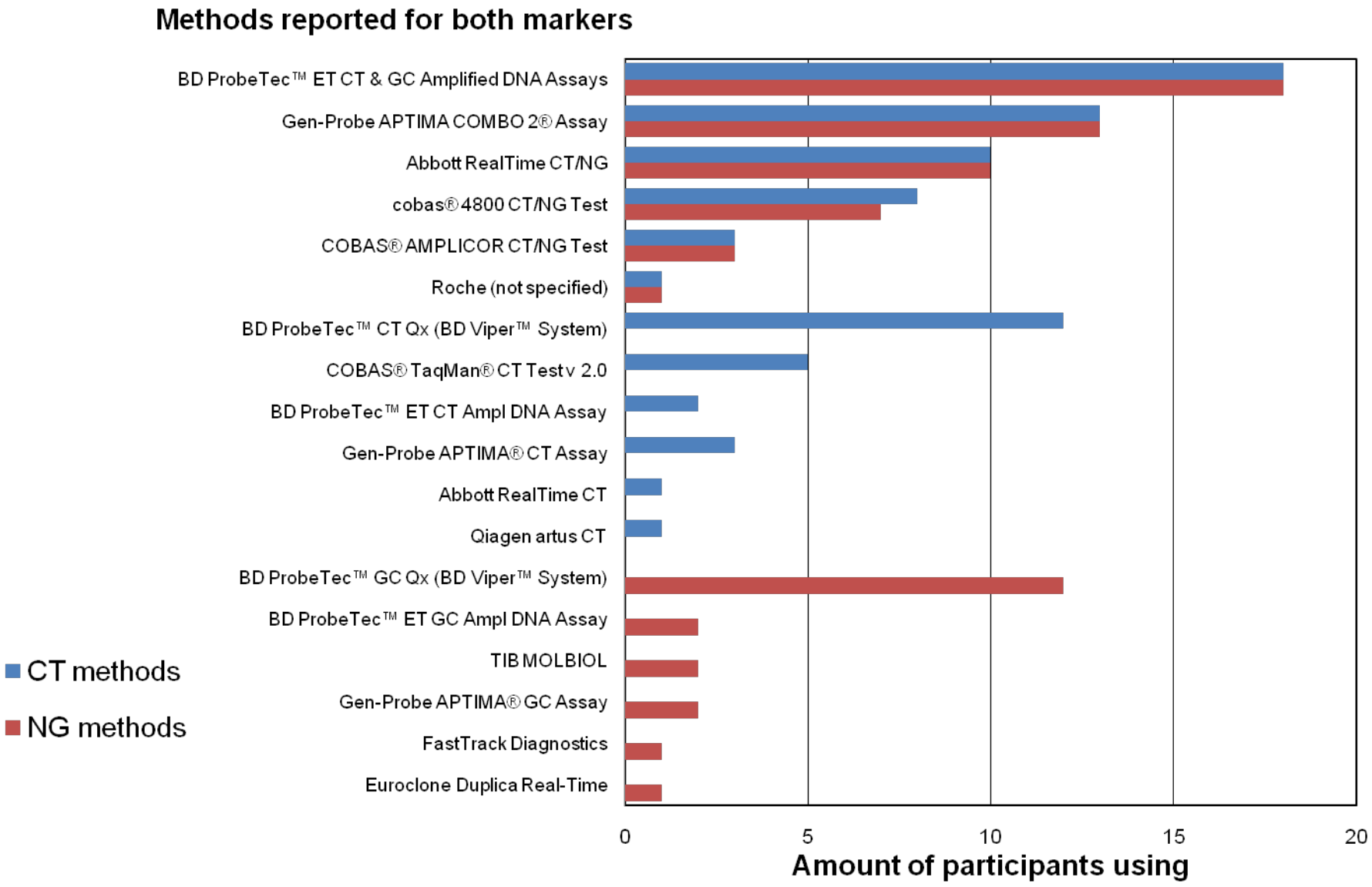
Development of a combined scheme for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*

CT source material: serial dilution of cultured laboratory adapted *C. trachomatis* L2 strain

NG source material: serial dilution of 0.5 McFarland suspension of a clinical sample collected GRASP 2007 (Gonococcal Resistance to Antimicrobials Surveillance Programme)

	0822	**0823**	**0824**	**0825**	**0826**	**0827**
Overall intended result	CT Neg NG Pos	CT Pos NG Pos	CT Pos NG Pos	CT Pos NG Neg	CT Pos NG Pos	CT Pos NG Pos
CT % correct	Neg 100%	1: 5.0 10^4 98.6%	1: 2.5 10^5 97.2%	1: 1.25 10^6 87.5%	1: 2.5 10^3 98.6%	1: 2.5 10^3 98.6%
NG % correct	1: 10^5 94.1%	1: 10^2 100%	1: 10^4 97.1%	Neg 92.6%	1: 10^3 100%	1: 10^2 100%
Overall performance	96.7% for CT		97.3% for NG			

Development of a combined scheme for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*



Development of a combined scheme for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*

- A second pilot has just been dispatched
  - 22 November 2011 (closing date 12 December)
- It is hoped that the specimen type will be included in our current molecular detection of *Chlamydia trachomatis* scheme subject to pilot results and approval.