

## **Update on UK NEQAS Virology, Molecular & Serology schemes**

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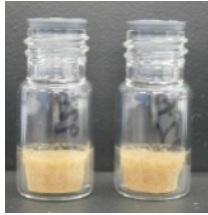
## Schemes (introduction year) → YEAR / changes to schemes

|  |  |
|--|--|
| Virus identification (1972)                  |  |
| Syphilis serology (1978)                     | 2014 / new marker / Tp IgM and blot  |
| Hepatitis B serology (1978)                  | 2012 / new marker / HBcIgM<br>2013 / pilot clinical scenario                                   |
| Rubella IgG serology (1979)                  |  |
| HIV serology (1986)                          |  |
| Hepatitis C serology (1994)                  | 2013 / new marker / HCV Ag<br>2011 / Ab profiles presented                                     |
| Anti-HBs detection (1996)                    |  |
| Immunity screen (1996)                       |  |
| HIV-1 RNA quantification (2000)              |  |
| Hepatitis C RNA detection (2001)             | 2013 / 3 distributions per year<br>2009 / Quantification                                       |
| Diagnostic serology: exanthem screen (2001)  |  |
| Diagnostic serology: hepatitis screen (2001) |  |
| HBV DNA quantification (2003)                |  |
| Molecular detection of viruses in CSF (2003) |  |
| Blood borne viruses (2004)                   |  |
| <i>C. trachomatis</i> DNA (2005)             | 2013 / new marker / <i>N gonorrhoeae</i> DNA   |
| CMV DNA quantification (2007)                |  |
| Measles IgG serology (2010)                  | 2012 / new marker / Mumps IgG  |
| Molecular detection of HPV (2009)            |  |
| EBV DNA quantification (2011)                |  |
| HIV Point of Care (2011)                     |  |
| Rapid Respiratory-RSV (2013)                 |  |
| Gastrointestinal viruses (2015)              | 2014 / Rotavirus, Adenovirus, Norovirus  |
| Blood donor screen (2015)                    | 2013 / markers: HBsAg, HCV Ag/Ab, HIV Ag/Ab,<br>HTLV I/II ab, Tp Ab                            |
| Parvovirus B19 and Rubella serology (2016)   | In development / Molecular detection of respiratory viruses<br>HEV serology<br>CMV IgG avidity |

# Amendments to existing service (1)

## Gastrointestinal viruses scheme – first distribution 23/11/2015

- 2015, current number of participants: 121
- 2 distributions per year, 4 samples in each distribution, 1mL liquid stools F/D



## Parvovirus B19 and Rubella serology – Going live in 2016/2017

- 2 distribution per year, 4 samples in each distribution
- Markers: Parvovirus B19 IgM/IgG, Rubella IgM/IgG
- Scoring: Positive or negative for the relevant marker
- Sample volume: 1mL

## Diagnostic serology: exanthem

- Discontinue from 2016

# Amendments to existing service (2)

## ► Amendments to the web-site

Amended markers in the '**Blood borne viruses**' and in the '**Blood donor screen**' schemes: HIV and HCV according to the UK guidelines

HIV screening: from *anti-HIV* to ***HIV Ag/Ab***

(combo assay is recommended for use within UK)

HCV screening: from *anti-HCV* to ***HCV Ag/Ab***

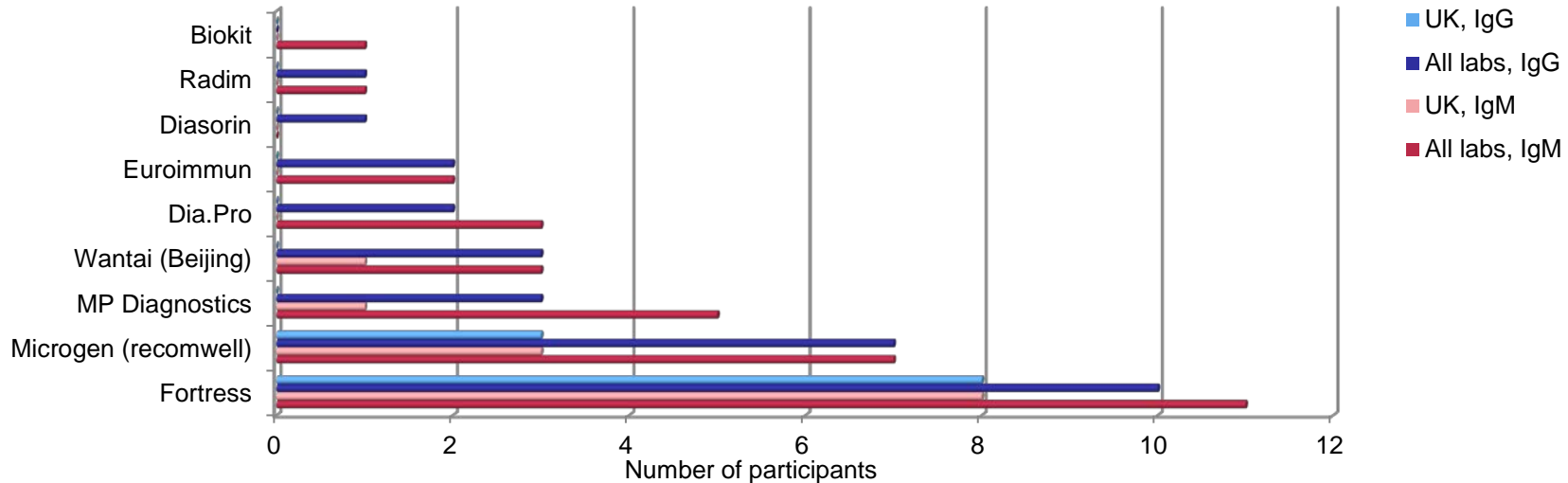
(screening with 3<sup>rd</sup> or 4<sup>th</sup> generation ELISA)

# HEV serology – in development

2015 – Questionnaire, 149 replies

- 35 (13 UK) test for HEV IgM/IgG

- 17% use a confirmatory assays
- 67% use Microgen RecomLine Blot



- the majority of laboratories test less than 100 samples / month (median: 45, mainly from patients with acute hepatitis)

| Category     | Tests per month |            |                   | Blood and tissue donors |     | Transplant recipients |     | Patients with acute hepatitis |            | Pregnant women |     |
|--------------|-----------------|------------|-------------------|-------------------------|-----|-----------------------|-----|-------------------------------|------------|----------------|-----|
|              | Number          | Percentage |                   | IgM                     | IgG | IgM                   | IgG | IgM                           | IgG        | IgM            | IgG |
| <25          | 7               | 22%        | <b>mostly</b>     | 2%                      | 3%  | 9%                    | 15% | <b>69%</b>                    | <b>51%</b> | 5%             | 3%  |
| 25-100       | 17              | 55%        | <b>frequently</b> | 2%                      | 5%  | 11%                   | 11% | 7%                            | 13%        | 11%            | 13% |
| 101-1000     | 6               | 19%        | <b>rarely</b>     | 39%                     | 37% | 42%                   | 36% | 4%                            | 13%        | 48%            | 45% |
| >1000        | 1               | 4%         | <b>never</b>      | 57%                     | 55% | 38%                   | 38% | 20%                           | 23%        | 36%            | 39% |
| <b>Total</b> | <b>31</b>       | <b>100</b> |                   |                         |     |                       |     |                               |            |                |     |

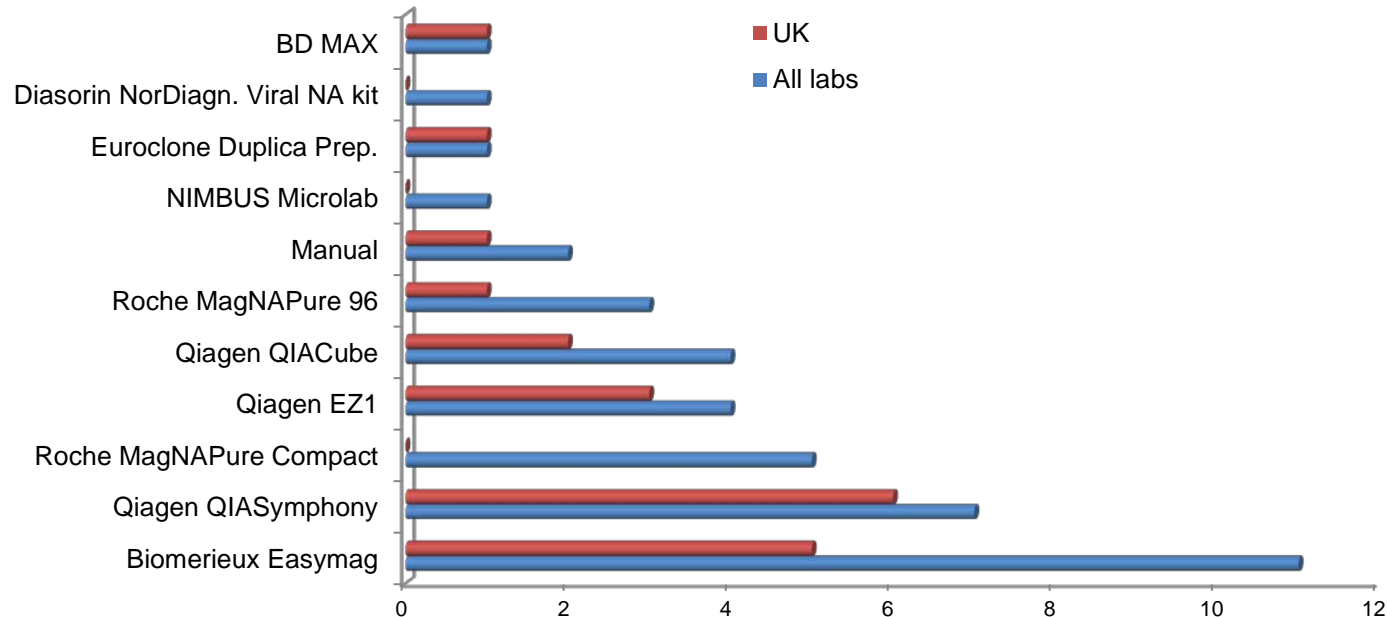
- 28% of laboratories test for HEV RNA

59% of participants are interested in participating *in pilot* scheme (2016)

# Molecular detection of respiratory viruses in development (1)

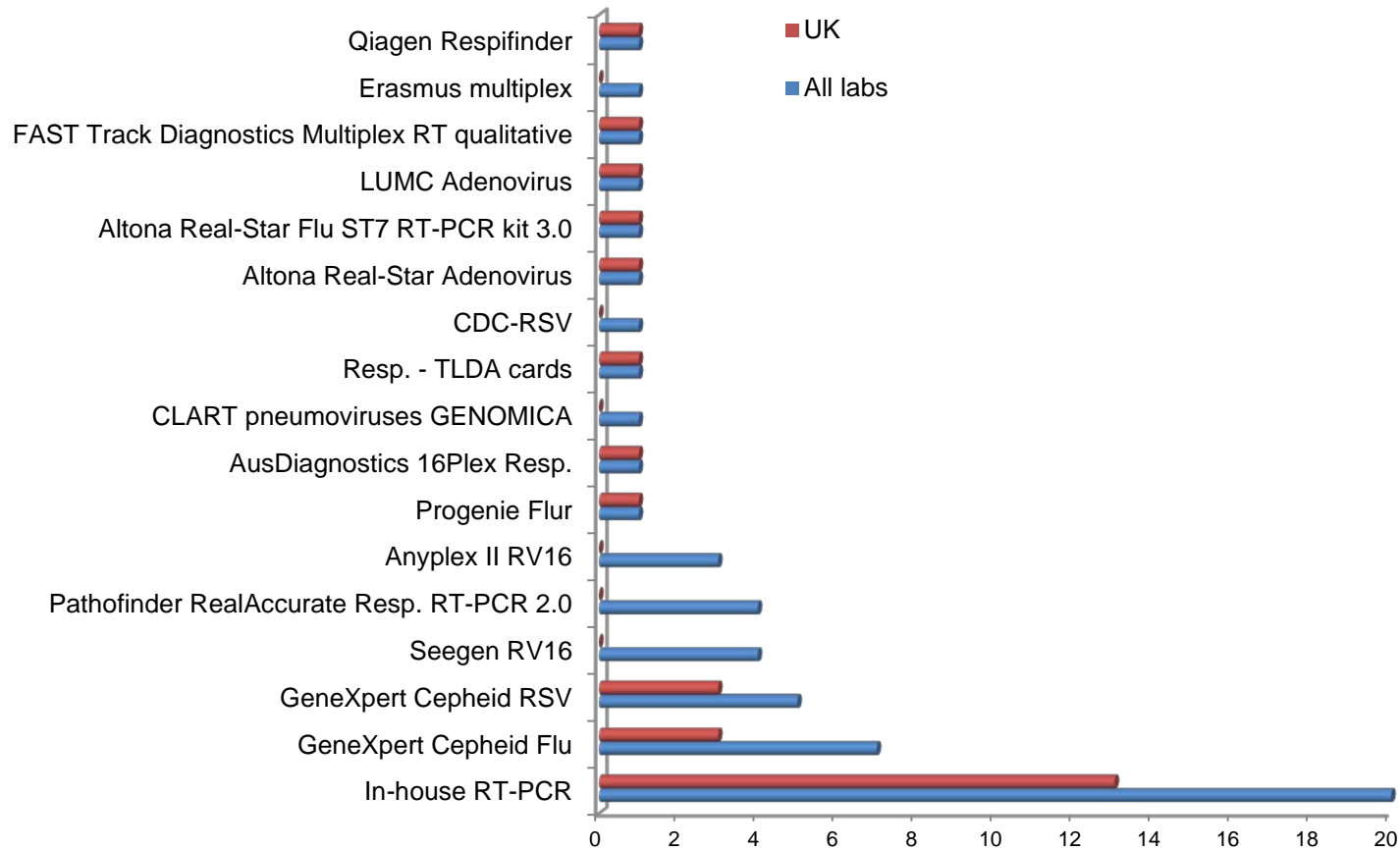
2015 Questionnaire: 55 replies

- 52 (27 UK) laboratories test for respiratory viruses
- Extraction kits used by participants:



# Molecular detection of respiratory viruses in development (2)

- Amplification kits used by participants:



# Molecular detection of respiratory viruses in development (3)

- Type of respiratory specimen accepted for testing:

|            | Throat | Nasopharyngeal | Broncho-alveolar lavage | Sputum |
|------------|--------|----------------|-------------------------|--------|
| mainly     | 69%    | 36%            | 11%                     | 8%     |
| frequently | 18%    | 42%            | 55%                     | 25%    |
| rarely     | 5%     | 15%            | 29%                     | 42%    |
| never      | 8%     | 7%             | 5%                      | 25%    |

- Median of sample volume submitted to extraction: 235 $\mu$ L (100-2000 $\mu$ L)
- 78%** of participants are interested in participating *in pilot* EQA scheme (2016)



# Thank you!

***PARTICIPANTS:***

for returning questionnaires and testing pilot specimens

***UK NEQAS:***

Production team

Office team

Quality team

for all the invaluable support

***UK NEQAS:***

Virology & Molecular team (Petra, Elli, Habib, Firat, Yan, Purvi)  
for implementing the changes and for their support