



Public Health  
England

**NHS**

*Blood and Transplant*

# Hepatitis E Virus screening England and Wales up to April 2017

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## HEV and Blood Safety

SaBTO (Advisory Committee on the Safety of Blood, Tissues and Organs) formed a working group

2016 - recommendation for the implementation of selective screening

- Donations given to SOT and SCT patients
- NHSBT extended this to neonates <1 year

2017- recommendation extended to universal screening

- Blood donations
- Tissues/organs/stem cells

NB: blood screening will only **reduce** exposure as risk from diet still exists



## HEV and Blood Safety

Drivers were Penrose report, 45% transmission and persistence

2016 - recommendation was considered proportionate

- Donations only to be given to SOT and SCT patients
- NHSBT extended this to neonates <1 year
- Estimated need 300-400,000 donations to serve

2017- recommendation extended to universal screening

- Utilisation actually >700,000 donors in practice
- Double inventory expenses and complexity
- Increased wastage, risks and uncertainty
- Universal no more expensive than costs above for selective screening



## HEV and Blood Safety

Following universal screening the service response included

Donor confirmation

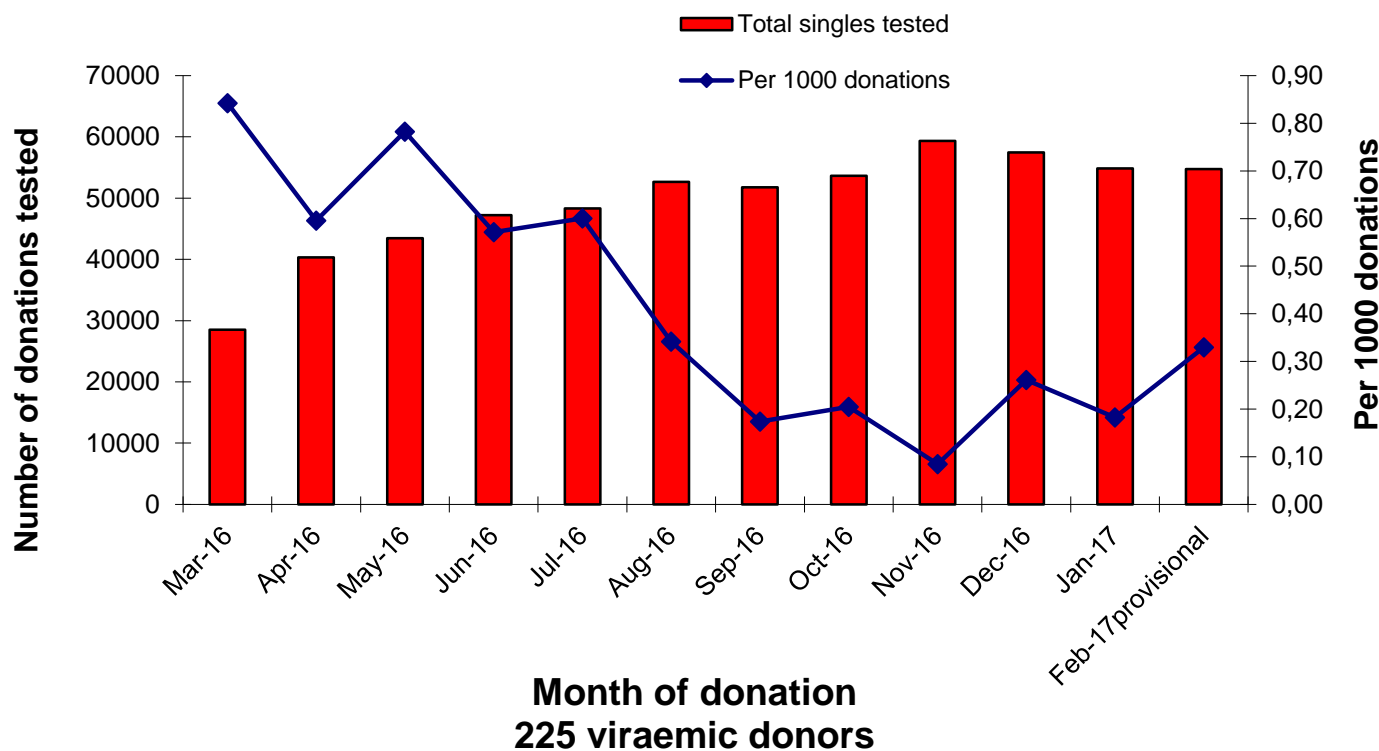
- All pick up were confirmed PCR +ve
- Sequencing

Donor return

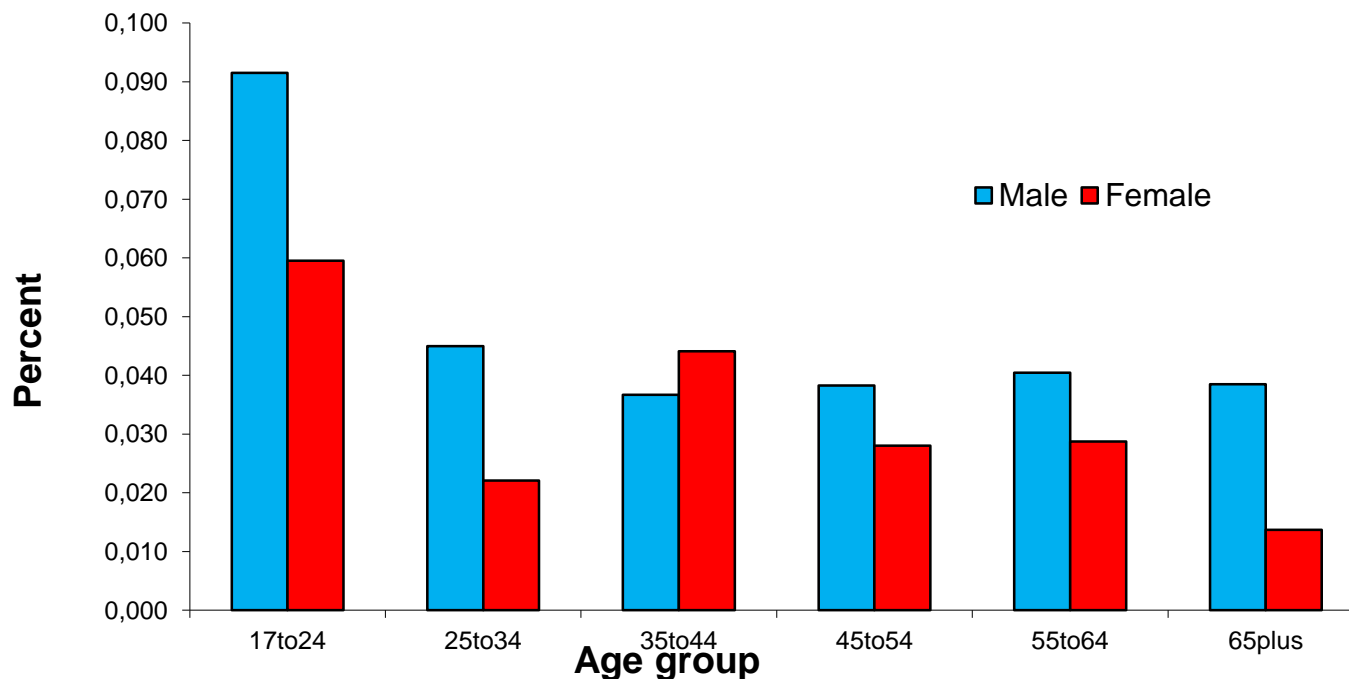
- Component donors as required, RNA neg plus strong IgG
- WB donors retested for anti-HEV, so far all seropositive

Information given and invitation to participate in a web based survey

# HEV RNA testing of blood & apheresis donations at NHSBT 2016



# HEV RNA percent viraemic by gender and age group, Feb 2016 to Feb 2017

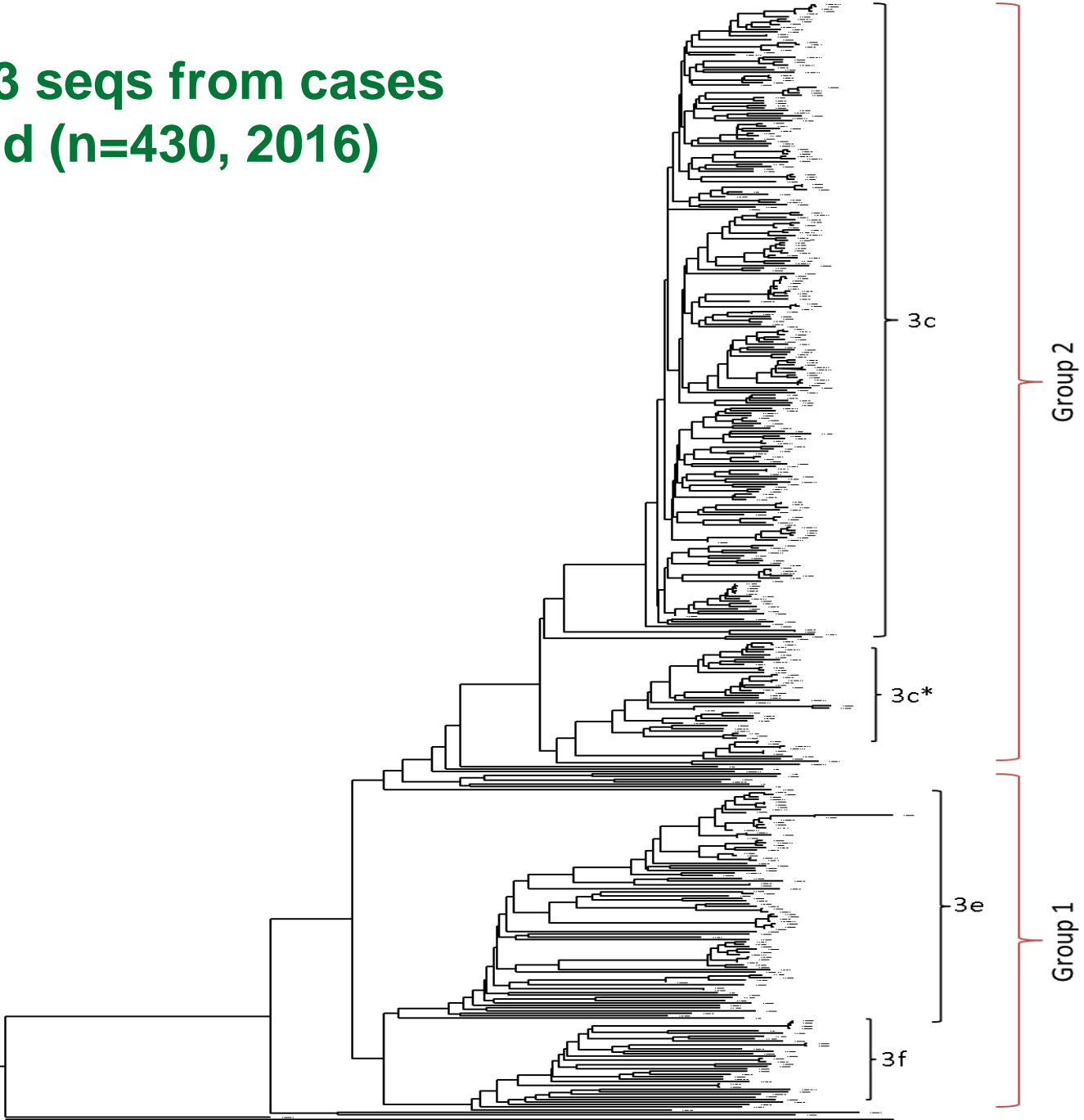




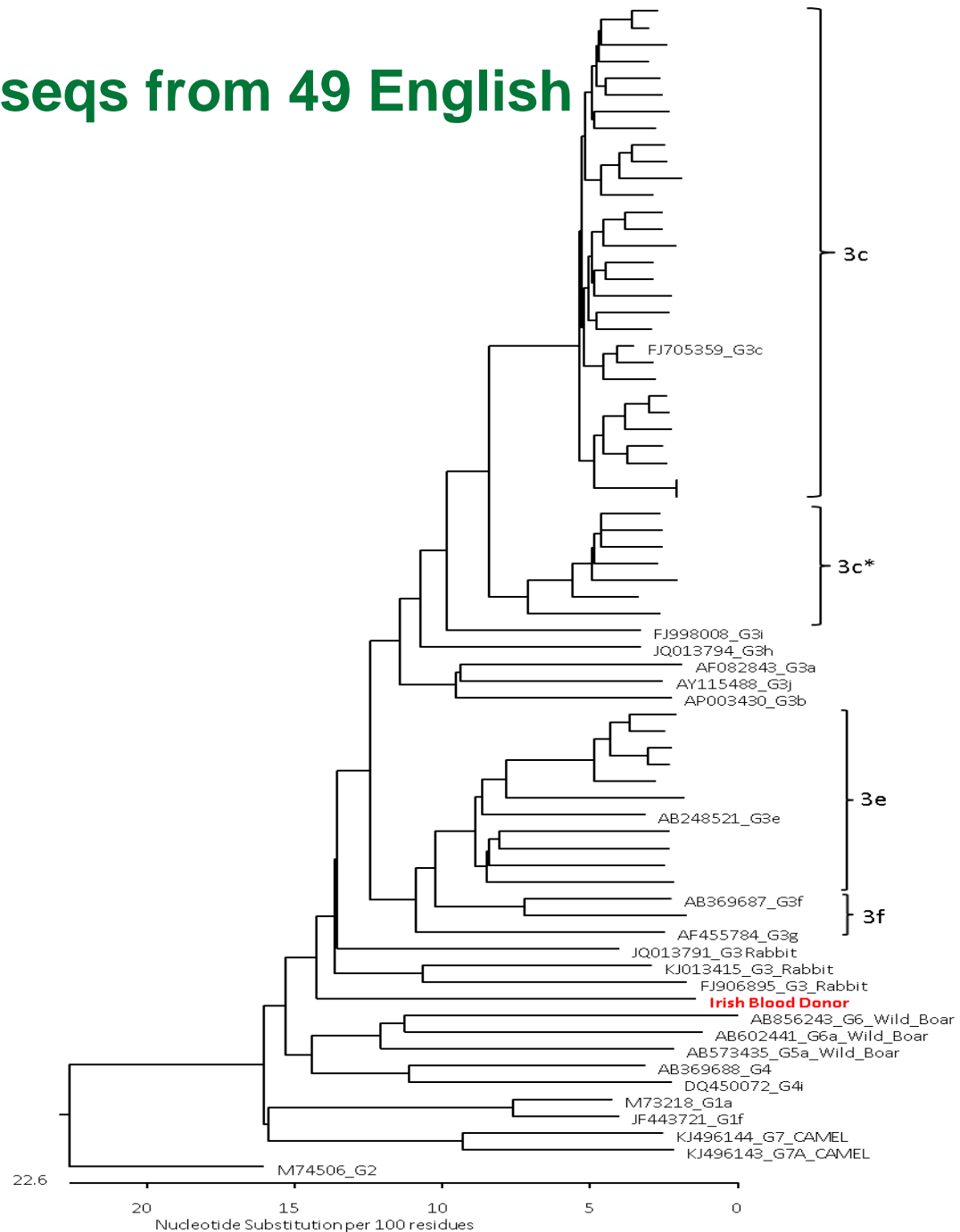
## Viraemic donations by month

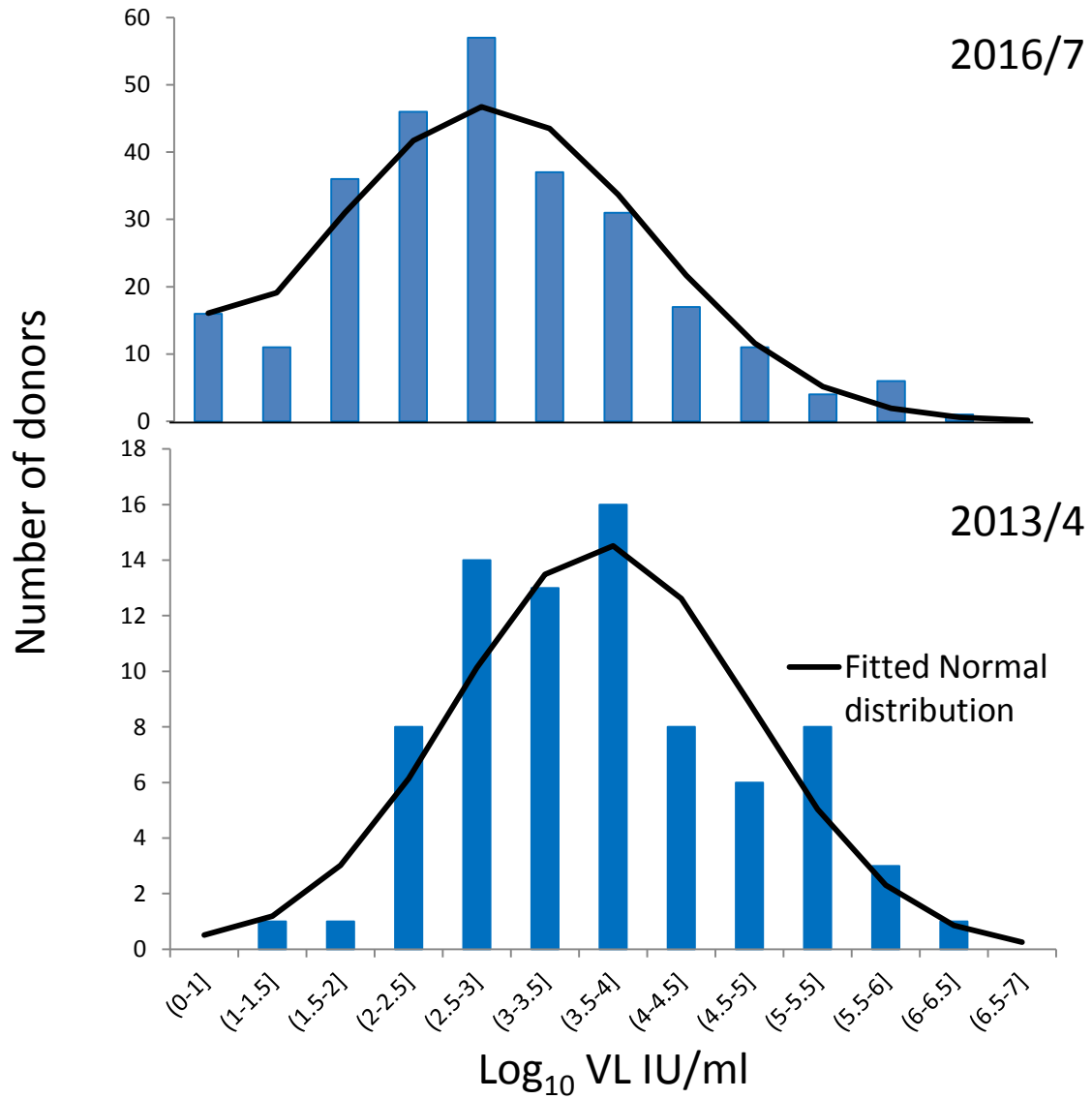
Month 2016/17	Donations tested	Confirmed RNA positive	Prevalence rate	% of donations positive
February	603	1	1 in 603	0.17
March	28491	24	1 in 1187	0.08
April	40305	24	1 in 1679	0.06
May	43443	34	1 in 1277	0.08
June	47232	27	1 in 1749	0.06
July	48329	29	1 in 1666	0.06
August	52672	18	1 in 2926	0.03
September	51784	9	1 in 5753	0.02
October	53668	11	1 in 4878	0.02
November	59362	5	1 in 11872	0.01
December	57472	15	1 in 3831	0.03
January	54866	10	1 in 5486	0.02
February	54733 *	18 *	1 in 3040	0.03
<b>TOTAL</b>	<b>592960</b>	<b>225</b>	<b>1 in 2635</b>	<b>0.04</b>

# HEV G3 seqs from cases England (n=430, 2016)

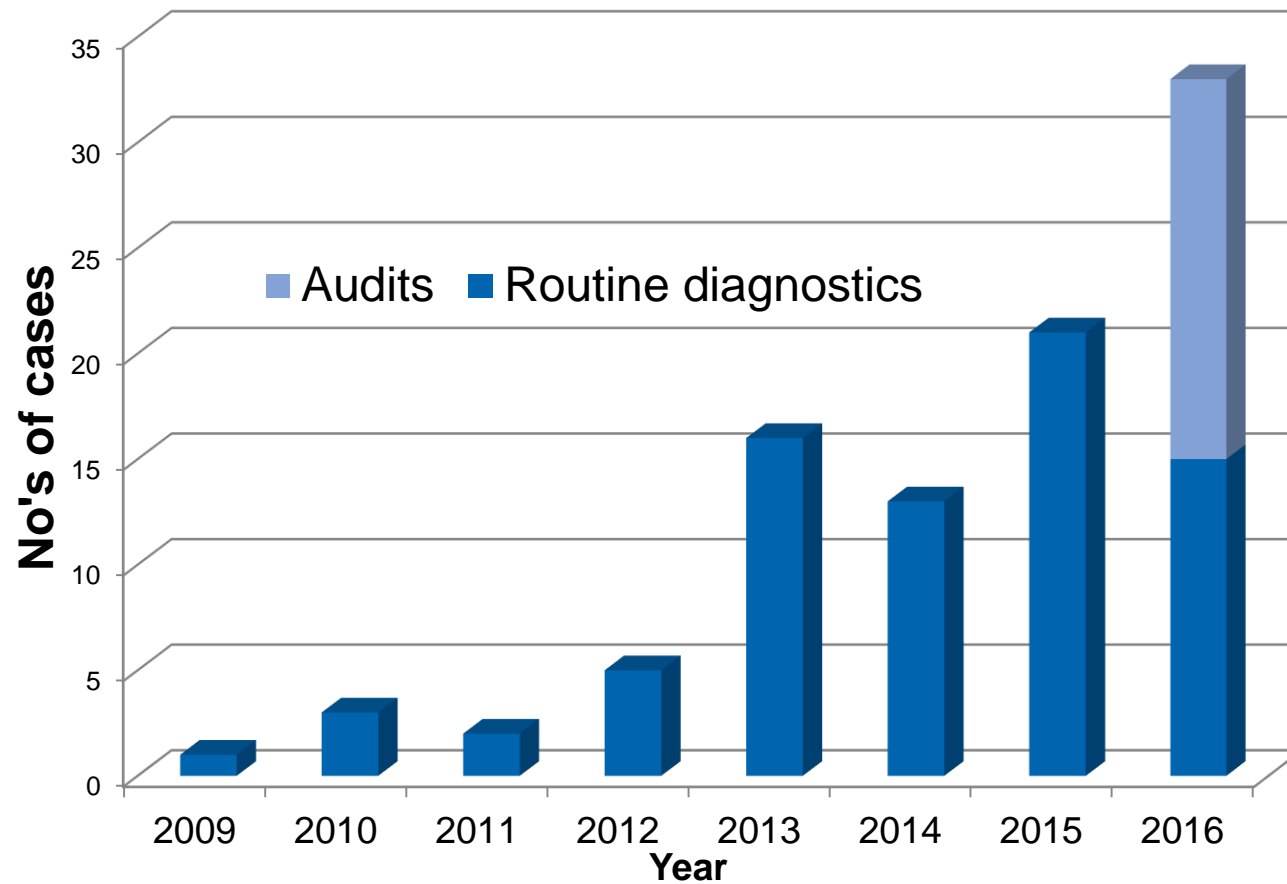


# HEV G3 1.3 Kb seqs from 49 English donors (2016)



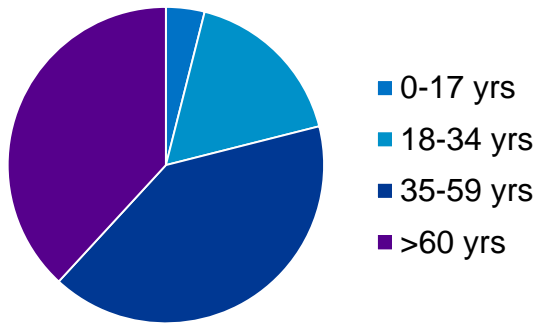


## Chronic HEV England & Wales 2009-2016 (n=94)

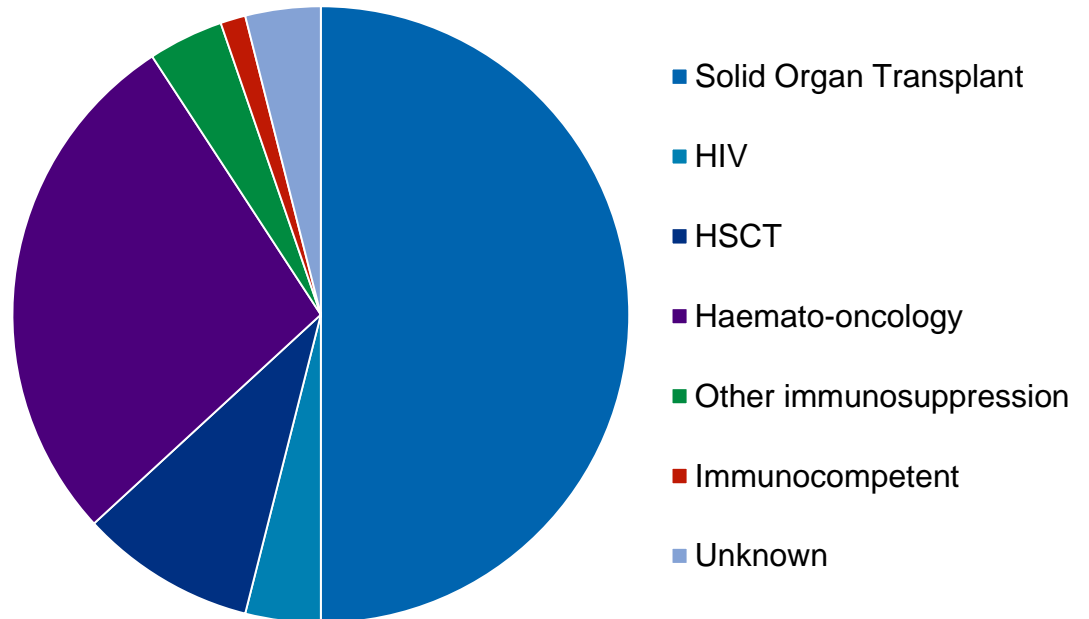


# Patients with chronic HEV (n=76)

**Age**



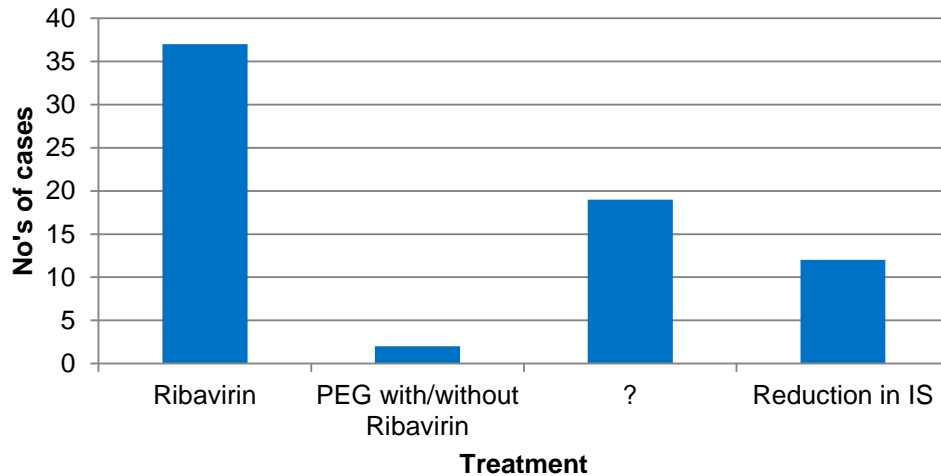
**Underlying condition**



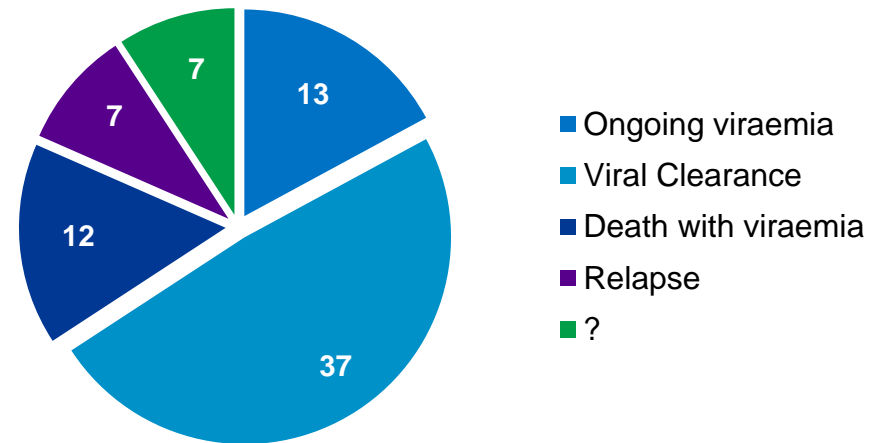
# Management of chronic hepatitis E

48/76 treated, 4 not treated, 24 uncertain

### Treatment for chronic HEV



### Outcome



# HEV RNA confirmed donations by month

Month 2016/17	Donations tested	Confirmed RNA positive	Prevalence rate	% of donations positive
February	603	1	1 in 603	0.17
March	28491	24	1 in 1187	0.08
April	40305	24	1 in 1679	0.06
May	43443	34	1 in 1277	0.08
June	47232	27	1 in 1749	0.06
July	48329	29	1 in 1666	0.06
August	52672	18	1 in 2926	0.03
September	51784	9	1 in 5753	0.02
October	53668	11	1 in 4878	0.02
November	59362	5	1 in 11872	0.01
December	57472	15	1 in 3831	0.03
January	54866	10	1 in 5486	0.02
February	54183	18	1 in 3010	0.03
March	70303	13	1 in 5408	0.02
April#	109300	32*	1 in 3415	0.03
<b>TOTAL</b>	<b>772013</b>	<b>270</b>	<b>1 in 2859</b>	<b>0.03</b>

\* Provisional data, this is the number of screen reactives (not confirmed with reference testing)

# Universal screening started on the 10<sup>th</sup> April 2017





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England



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## Acknowledgements

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