London Consortium of Occupational Health Practitioners

LCOHP Audit Project:
Audit of implementation of DOH guidance (Green Book) on immunity checks and immunisation at New Entrant to the Trust

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Executive summary

The purpose of this project was to audit the implementation of Green Book standards by Occupational Health Services (OHS) providing service to NHS Trusts and see if there is sufficient consistency in practice to enable sharing information regarding immunity screening and immunisation of staff transferring between the Trusts, to avoid repetition.

The response rate to the LCOHP audit was 77% (25 OHS participated).

Results showed good implementation of Green Book standards with over 80% of participants adopting the same approach for a majority of criteria. All participants had local policy or guidance and all screen and immunise for hepatitis B, measles, rubella and 92% for varicella in clinical workers. There was inconsistency in defining acceptable documentary evidence.

The screening of non-clinical and non-patient facing staff was not as consistent as for clinical staff. Variation in practice was also found for immunity to varicella which reflected a less prescriptive standard in the Green Book. The time course for the assessment of immunity and immunisation showed a variation in practice between OHS.

Recommendations are made to address the variations in practice including the development of criteria for documentary evidence, immunity assessment and immunisation of non-clinical and non-patient facing workers, agreeing a time frame for immunity assessment to take place, and agreeing a standard in relation to varicella immunity . OHS are also recommended to review any local variations in practice that would not be compatible with data sharing.

Background

LCOHP is keen to develop a London wide healthcare worker infectious disease immunity and immunisation 'passport' that can be transferrable between NHS Trusts in London without the repetition of unnecessary tests which are inconvenient to the worker, time consuming to occupational health and costly to the Trust.

With advancement of the Electronic Staff Record (ESR project), staff immunity and immunisation data will be also added to ESR and this information will be transferred between NHS Trusts as the worker changes employment within the NHS. Work is being done on the bidirectional interface of electronic transfer of immunity and immunisation data between ESR and the commonly used occupational health data bases COHORT (Medgate) and OPAS (Warwick International) so that immunity and immunisation data only have to be entered on one data base and can be transferred to the other.

Information is needed on the implementation of national guidance in Trust OH policies in order for occupational health services to have confidence that immunity screening and immunisation data can be shared. The national standard for guidance on the screening of new healthcare workers for infectious diseases is 'Immunisation against infectious disease: the Green Book[1] originally issued by the Department of Health and now under the Public Health England. Specific guidance is given for the screening for immunity and immunisation of healthcare workers in the green book.

LCOHP has already audited TB screening in the Audit of implementation of NICE TB guidance CG1172 which demonstrated a large variation of practice. The current audit aims to assess the practice in relation to immunity screening and immunisation for hepatitis B, measles, rubella and varicella.

Aims

- To audit implementation of Department of Health guidance 'Immunisation against infectious disease: the Green Book standards' for measles, rubella, varicella and hepatitis B by NHS Trusts within LCOHP
- To audit some other areas of practice in respect of immunity and immunisation of healthcare workers to measure the variation in practice

Methodology

Immunity screening is defined as activity of establishing immunity against vaccine preventable communicable disease including blood test, history and documentation of previous screening. Immunisation is defined as act of administering a vaccine.

An audit tool (appendix 1) was developed to establish occupational health policy and practice in relation to the standards relevant to occupational health (OH) in the Green Book. To clarify actual practice some additional questions not relating to Green Book standards were added. Wherever necessary participants were given the opportunity to comment in a free text box.

The audit tool was piloted by four sites to ensure it was user friendly.

The audit was launched via Surveymonkey and the link to the audit tool was emailed to all LCOHP mailing list for 32 NHS OHS in London and the South East. The clinical/ nurse lead of each participant unit completed the questionnaire according to the local protocol/ policy. One reply for each Occupational Health Service (OHS) was requested within a two week period in May 2013. OHS that had not replied within this period were sent an additional e-mail reminder and given a further two weeks to complete the tool.

Participation was voluntary and the results were coded and anonymised. As a clinical audit without recognisable personal data ethical, approval was deemed unnecessary.

Results

Response Rate

All LCOHP members (n=32) were invited to participate in the audit of which 25 (response rate 77%) completed the questionnaire.

The 25 OHS that responded provide occupational health services to 28 NHS Trusts including 22 Acute, 4 Mental Health and 1 Community NHS Trusts. One OHS provides OH to a healthcare higher education institution (medical and nursing students).

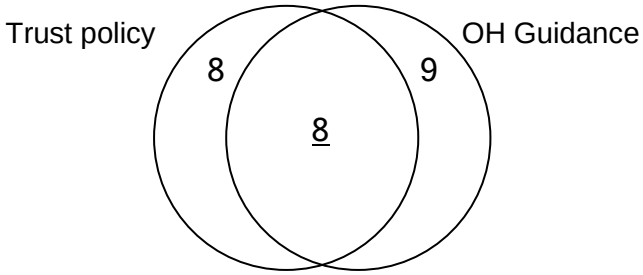
Whilst not all LCOHP members fall within the London area this represented 68% of acute NHS Trusts, and 40% of mental health NHS Trusts in London.

Trust policy

1. **Do you have Trust or OHS guidance on immunity checks and immunisation of staff at New Entry to the Trust? (Choose more than one option if appropriate)**

   All participants have some form of guidance on immunity checks and immunisation.

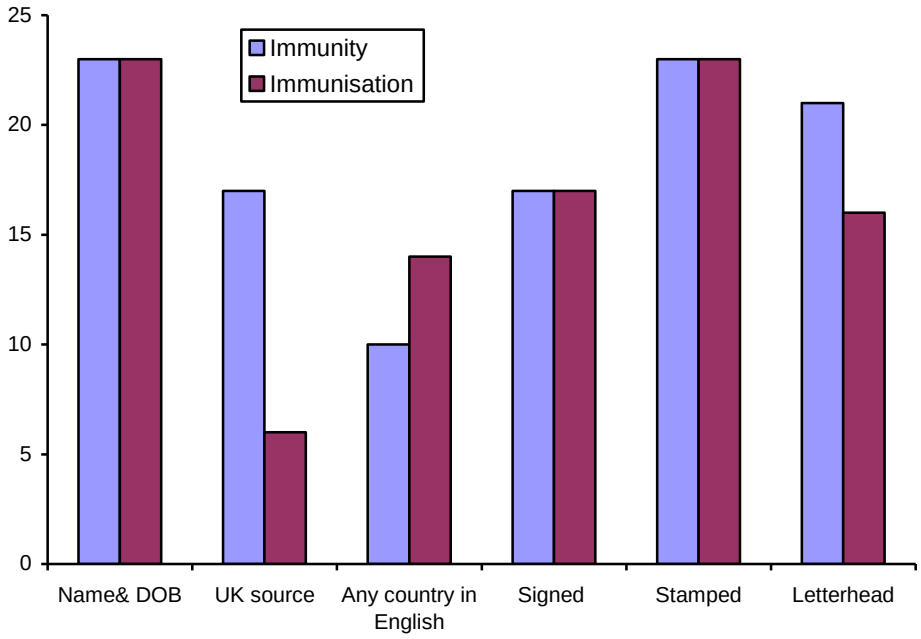
   16 have Trust policy, 17 have OH Guidance and 8 have both.



Documentary evidence

2. **What is acceptable documentary evidence of immunity or immunisation? (Choose more than one option if appropriate)**

	Immunity	Immunisation
Name and date of birth	23	23
Should be from UK source	17	6
Can be from any country in English	10	14
Should be signed by an authorising officer (e.g. doctor, nurse)	17	17
Should be stamped by the organisation or authorising officer	23	23
Should be on organisational letterhead	21	16



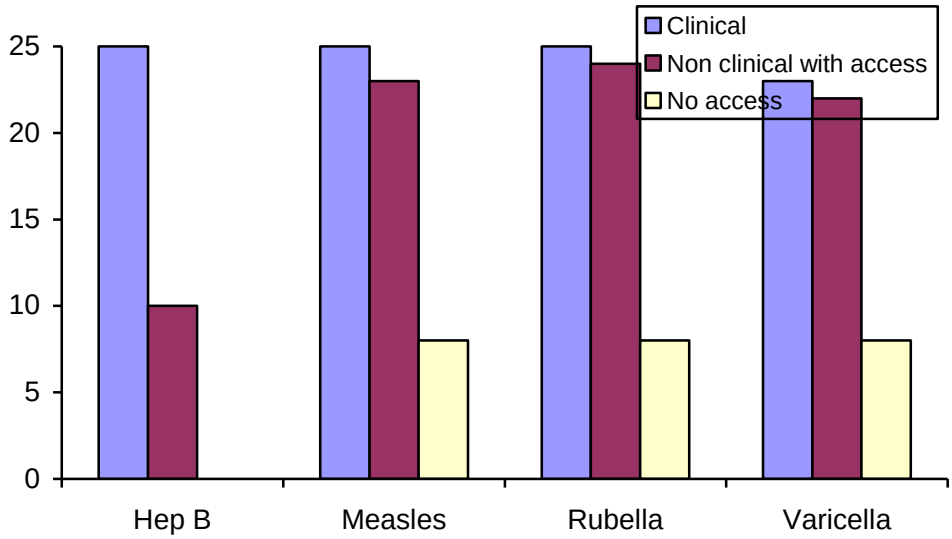
Except for EPP clearance (which was excluded from this audit) there is no prescriptive guidance or standard on the acceptable standard of documentary evidence. Nevertheless a degree of agreement is observed in terms of Immunity documents where 92% of participants require “Name & DOB” and “Stamp by the organisation or authorising officer” and 84% insist the document should be produced on the “Letterhead”. Less agreement is observed in other potential criteria and also in respect to Immunisation documents.

We noted that in 5 cases for immunity and 2 cases for immunisation, the participants chose “Should be from UK source” and “Can be from any country in English”. This was unexpected result as the intention was either/ or question. This is perhaps due to misunderstanding the question.

Immunity/ immunisation assessment at new entry to the Trust

3. **What immunity assessment and/or immunisation do you undertake for the following staff groups at New Entry to the Trust? (Choose more than one option if appropriate)**

	Hep B	Measles	Rubella	Varicella
Clinical workers	25	25	25	23
Non clinical workers with direct access to patients	10	23	24	22
Workers with no access to patients	0	8	8	8



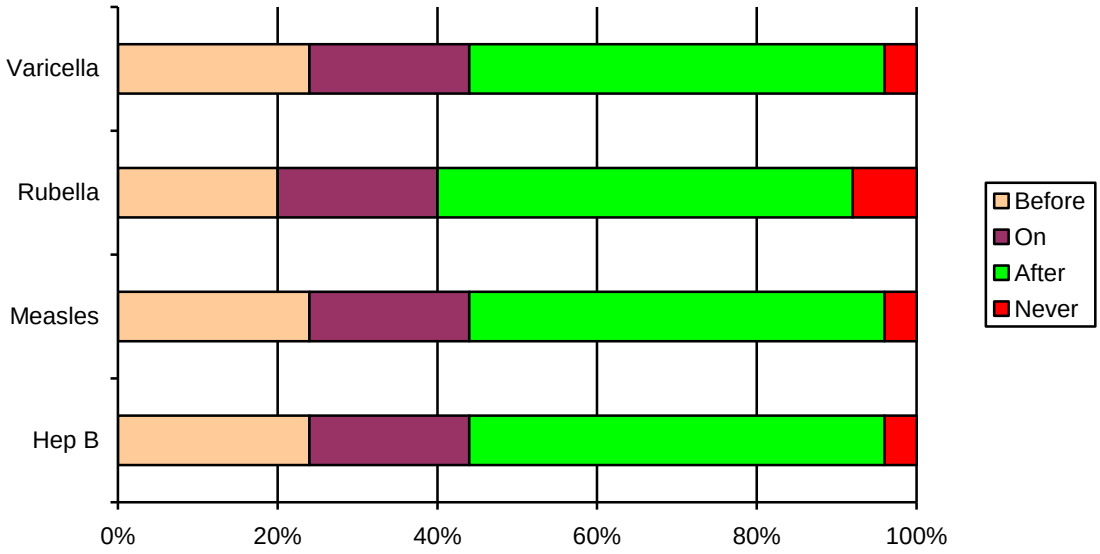
There is an excellent agreement on offering vaccination to clinical workers. However it was concerning that two participants do not offer varicella immunisation to clinical workers. We acknowledge this could be potentially due to a practical matter e.g. the vaccination is carried out by others (e.g. GP).

There is less consistency when it comes to non-clinical workers with only 40% offering hepatitis B vaccination to those non-clinical workers with direct access to patients and 32% offering MMR and varicella to <u>all workers</u> including those with no access to patients.

Time course for completion of immunity assessment

4. **By which time should staff have completed the assessment of immunity at New Entry to the Trust? (Choose more than one option if appropriate)**
5.

ONLY	**Hep B**	**Measles**	**Rubella**	**Varicella**
Before the staff member starts work with the Trust	6	6	5	6
On the start day	4	4	4	4
After the staff member starts work with the Trust	6	6	6	6
No answer (Never?)	1	1	2	1



This demonstrates a variation in acceptable timing for completion of immunity assessment. Almost 1 in 4 (24%) of the participants insist that the immunity assessment should finish “Before” the commencement whereas an extra 1 in 6 extends this to “On Commencement”. About half of the participants accept this can be completed “After Commencement” all of which impose some sort of time limit for this to be done (see below).

4a. If after the start day, do you have a defined timeframe for it to be completed and do you apply different rules for different staff. Please detail in box below

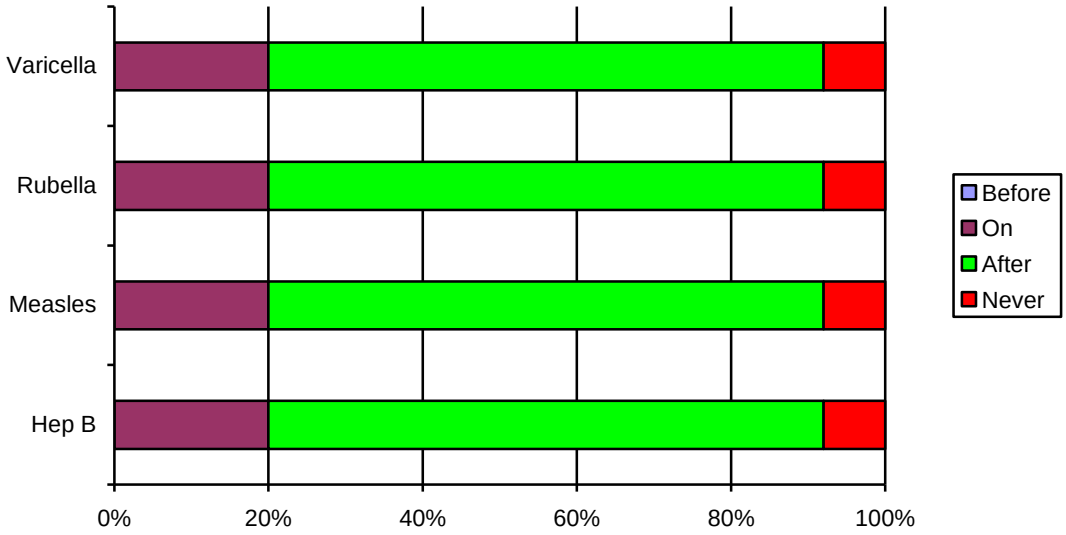
1 week	3
2 weeks	5
4 weeks	4
12 weeks	1
Total	13

There is high degree agreement on the time limit for immunity assessment “After Commencement” as almost all (12/13) participants, restrict it to 4 weeks.

Time course for starting immunisation

6. **By which time should staff have started immunisation, if needed, at New Entry to the Trust? (Choose more than one option if appropriate)**

ONLY	Hep B	Measles	Rubella	Varicella
Before the staff member starts work with the Trust	5	7	7	7
On the start day	11	11	11	11
After the staff member starts work with the Trust	18	18	18	18
No answer (Never?)	2	2	2	2

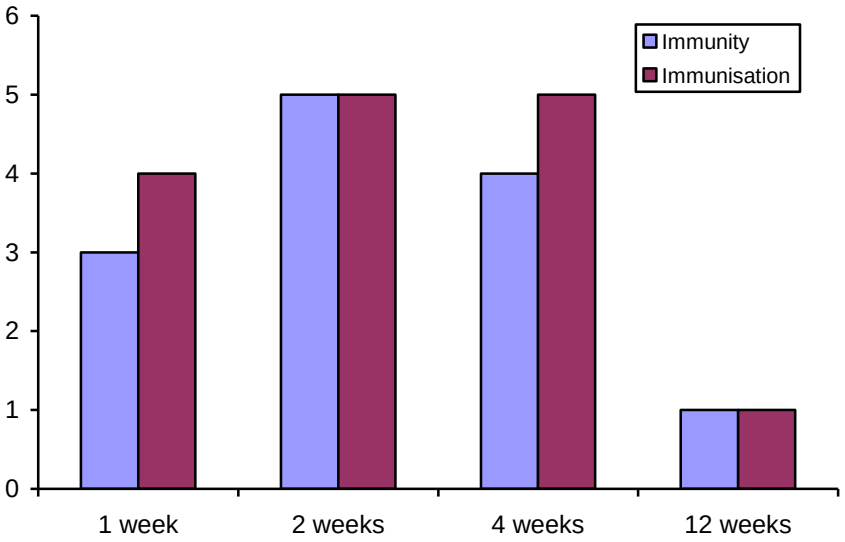


A better agreement is observed in respect to the time course of "start" of immunisation, no participant starts "Before" whereas almost 1 in 5 (20%) start "On Commencement". Just under three quarter (72%) start immunisation "After Commencement" all of which impose some for of time limit for this be done (see below).

5a. If after the start day, do you have a defined timeframe for it to be completed and do you apply different rules for different staff. Please detail in box below

1 week	4
2 weeks	5
4 weeks	5
12 weeks	1
Total	15

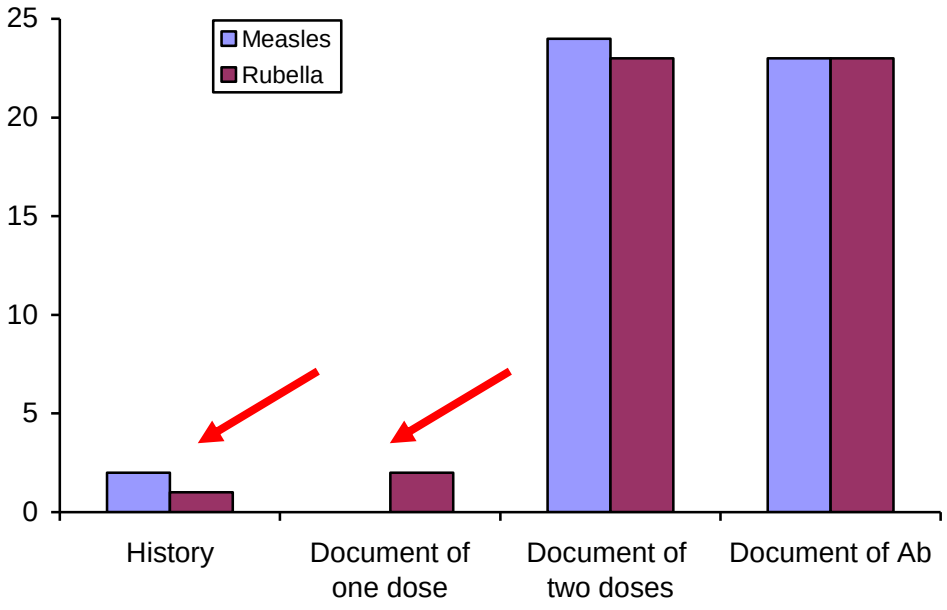
There is high degree agreement on the time limit to start immunisation "After Commencement" as almost all (14/15) participants, restrict it to 4 weeks.



Acceptable evidence of immunity

7. **What is your acceptable standard of immunity to measles and rubella? (Choose more than one option if appropriate)**

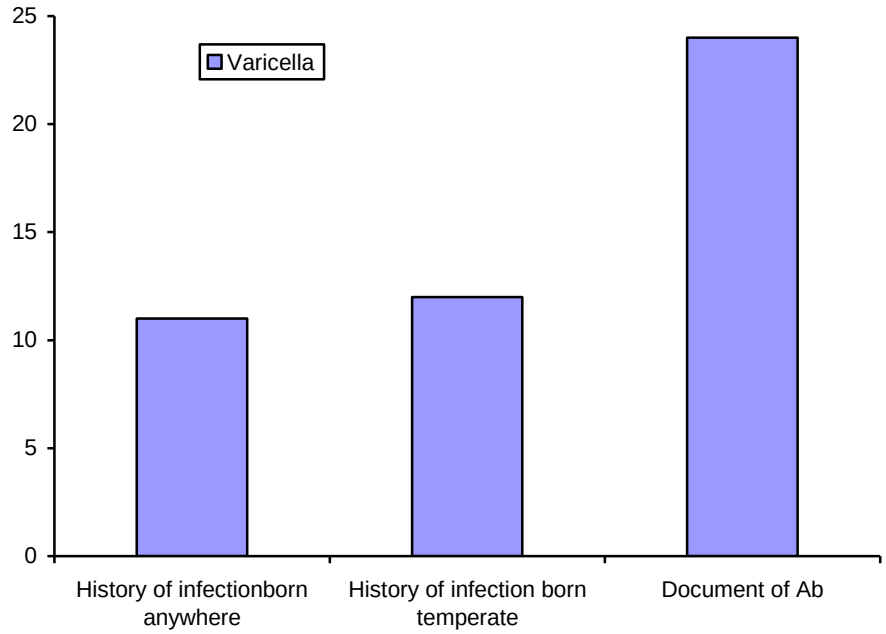
Any	Measles	Rubella
History of disease	2	1
Documentary evidence of having received one dose of MMR/monovalent vaccine	0	2
Documentary evidence of having received two doses of MMR/ monovalent vaccine	24	23
Documentary evidence of a positive antibody test against the disease	23	23



There is an excellent compliance with the relevant guidance on MMR immunity assessment hence a remarkable consistency amongst the participants, over 90% agreed on the criteria.
We noted that 2 and 1 participant consider “History of the disease” for Measles and Rubella respectively as evidence. Two participants accept “One dose” of MMR as evidence of immunity for rubella.

8. **What is your acceptable standard of immunity to varicella? (Choose more than one option if appropriate)**

Any	
History of chicken pox/ shingles born anywhere	11
History of chickenpox/ shingles born temperate regions	12
Documentary evidence of a positive antibody test for varicella	24



The majority of participants (96%) accept Ab as evidence of immunity against varicella. Three OHS accept only antibodies and do not take account of history.
The Green book mentions that the history of chickenpox is a less reliable predictor of immunity in individuals born and raised outside temperate regions. The advice from NHS Plus[3] is more prescriptive and suggests that people born in tropics/ subtropics should have their immunity tested by Ab regardless of history of illness. Unsurprisingly this has resulted in some inconsistency and has divided the sample to half, 44% accepts history from any one whereas 48% only consider history valid in people born in temperate regions.

Number of doses

9. **How many doses of MMR do you give to staff who are not immune to measles and rubella?**

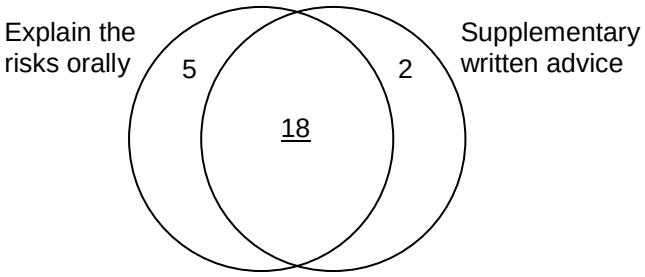
   Void - Unfortunately the question was wrongly entered to the Surveymoneky rendering the results impossible to interpret.

10. **How many doses of varicella vaccine do you give to staff who are not immune to varicella?**

    There is an excellent compliance with the relevant guidance on varicella vaccination hence a remarkable consistency amongst the participants, 96% of participants give 2 doses of varicella vaccine. We noted that one participant did not answer but we are unsure whether it was simply missed or vaccination is not carried out by that particular service.

Refusal

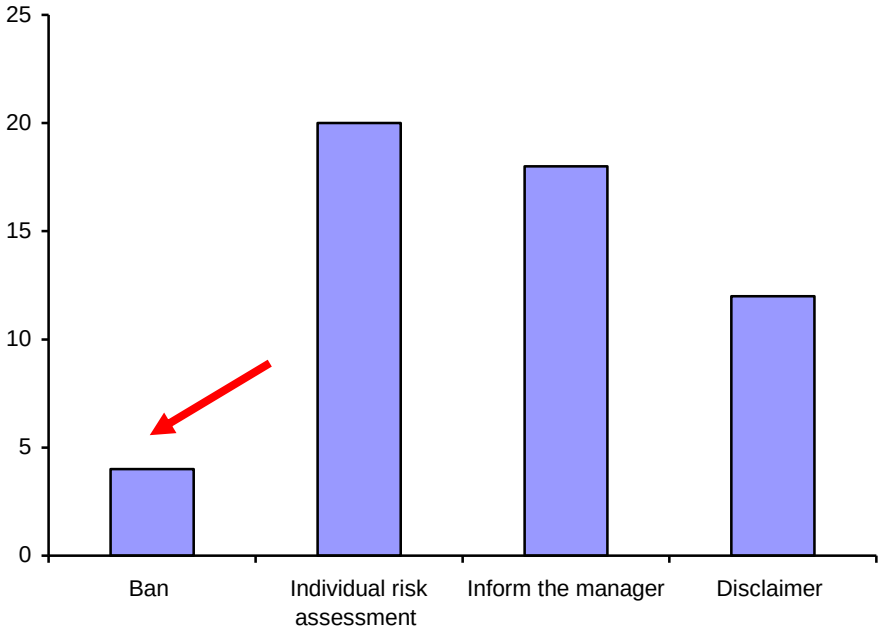
11. **If a staff member who is not immune declines MMR or varicella vaccine what initial action do you take? (Choose more than one option if appropriate)**



Despite no prescriptive guidance on how to deal with a staff member who declines vaccination, a very good agreement is observed. All OHS take action with 92% explaining the rationale of vaccination orally and 80% offering supplementary written advice and 72% doing both.

12. If the person continues to decline MMR or varicella vaccine despite OH advice what do you do? (Choose more than one option if appropriate)

Any	
Blanket ban to work in areas that there is a risk to patients	4
Individual risk assessment	20
Inform the manager	18
Ask them to sign a disclaimer	12

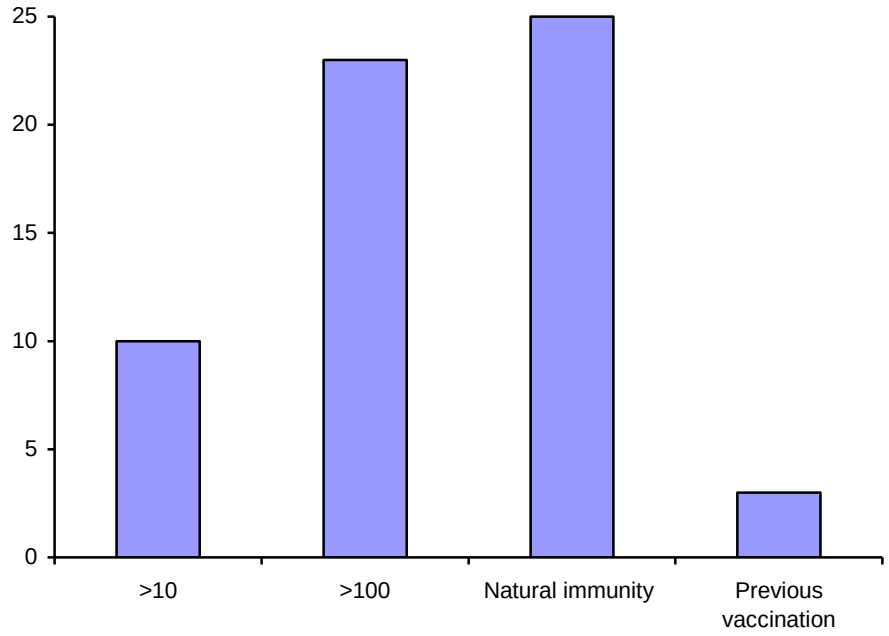


If the staff member continues to decline vaccination following further explanation, there is less consistency in approach although still a high degree of agreement is seen as 80 and 72% of participants undertake an “Individual risk assessment” and or “Inform the manager”.
We noted that 16% impose a blanket ban on practice of those staff who continue refusing vaccination but all of them undertake “Individual risk assessment” and 3/4 “Inform the manager”.
Just under half (48%) of participants ask the staff member to sign a disclaimer.

Immunity against Hepatitis B – Standard

13. What is your acceptable standard of Hepatitis B immunity? (Choose more than one option if appropriate)

Hep B surface antibody titre >10	10
Hep B surface antibody titre >100	23
Natural immunity (Hepatitis B core antibody positive)	25
Verbal or documentary evidence of previous vaccination	3

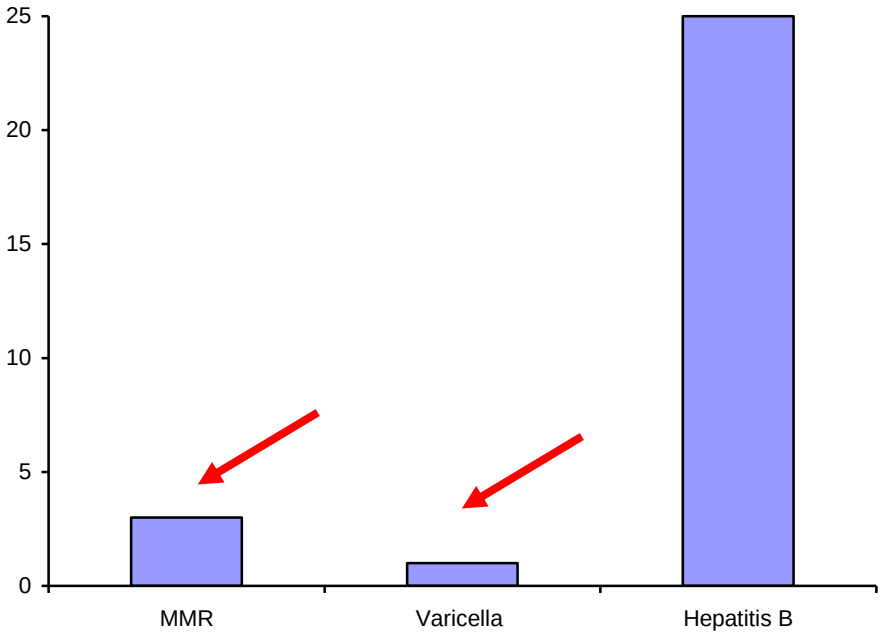


Of 10 people who chose >10, two participants accept HBsAb>10 and the other 8 chose 10 and 100 as well as >10.
Three participants chose “Verbal or documentary evidence of previous vaccination” but notably all of them use the other two criteria (>100 or natural immunity) too.

Immunity against Hepatitis B - Post vaccine serology

14. After which vaccinations do you arrange for immunity testing (post vaccine serology - PVS)? (Choose more than one option if appropriate)

MMR	3
Varicella	1
Hepatitis B	25

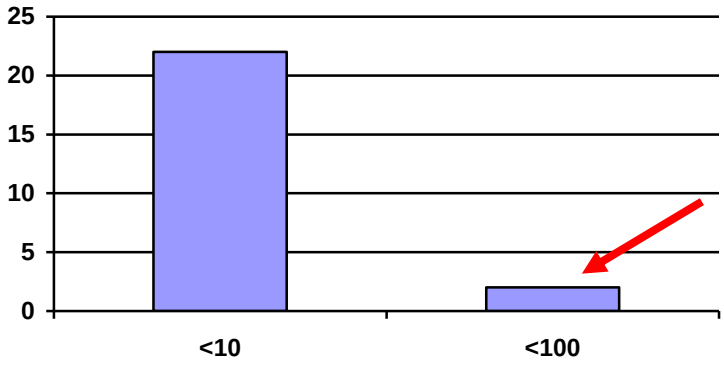


We noted that 3 and 1 participant do PVS for MMR and varicella respectively.

Immunity against Hepatitis B - Non responder definition

15. After full course of 3 Hepatitis B vaccine at the recommended intervals, how do you define non responder?

Hepatitis B surface antibody test <10	22
Hepatitis B surface antibody test <100	2



There is an excellent compliance with the relevant guidance on hepatitis B immunity hence a remarkable consistency amongst the participants with 88 to 100% adopting the same approach in factors enquired about.

We noted that 2 participants consider HBsAb <100 as non-responder.

Immunity against Hepatitis B – Booster

16. If the Hep B antibody titre after vaccination is >100, what do you do? (Choose more than one option if appropriate)

Offer a single dose of hepatitis B vaccine after 5 year	24*
Offer a single dose of hepatitis B vaccine every 5 year	0
Check serology after every booster	1

* One participant "offer a single dose of hepatitis B vaccine after 1 year"

We noted that 1 participant measure HBsAb after every booster.

Immunity against Hepatitis B – Partial responder

17. If the Hep B antibody titre after vaccination is between 10 and 100, what do you do? (Choose more than one option if appropriate)

Check hepatitis B markers (HBcAb, HBsAg)	7
Offer a single dose of hepatitis B vaccine	22
Offer a full course of hepatitis B vaccine	1
Check serology after the booster	12
Nothing	0

A large variation of practices was observed in relation to partial responders, 28% check HBV markers whilst almost 50% check for PVS.

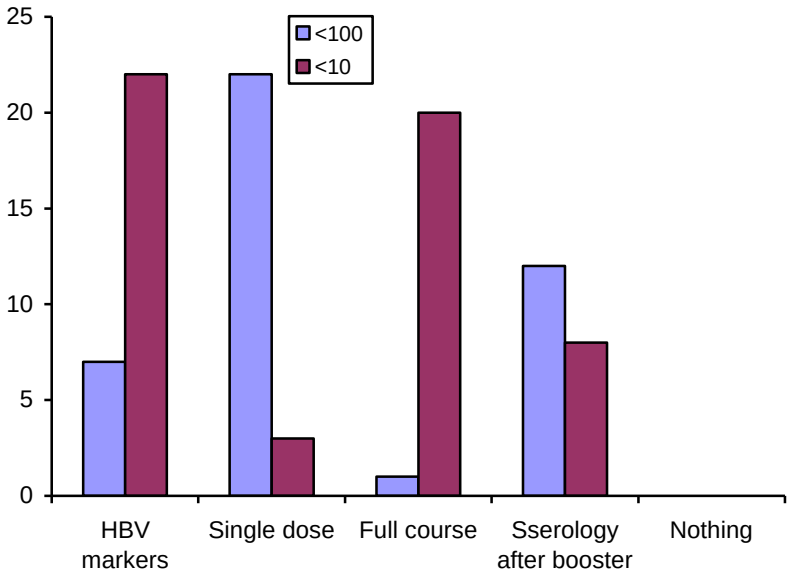
A summary of comments is provided here:

- Viral Hepatitis Board recommend 2 boosters if <20. Otherwise we do 1 booster
- Hep B Markers will have already been checked if from 'High risk country'.
- We usually check for hep b markers at beginning of hep b course for anyone born outside of UK/America based on a risk assessment of country born in how long lived there etc
- Will have already undertaken HBsAg and HBcAb prior to commencing course if status unknown.

Immunity against Hepatitis B – Non responder

18. If the Hep B antibody titre after vaccination is <10, what do you do? (Choose more than one option if required)

Check hepatitis B markers (HBcAb, HBsAg)	22
Offer a single dose of hepatitis B vaccine	3
Offer a full course of hepatitis B vaccine	20
Check serology after the booster	8
Nothing	0



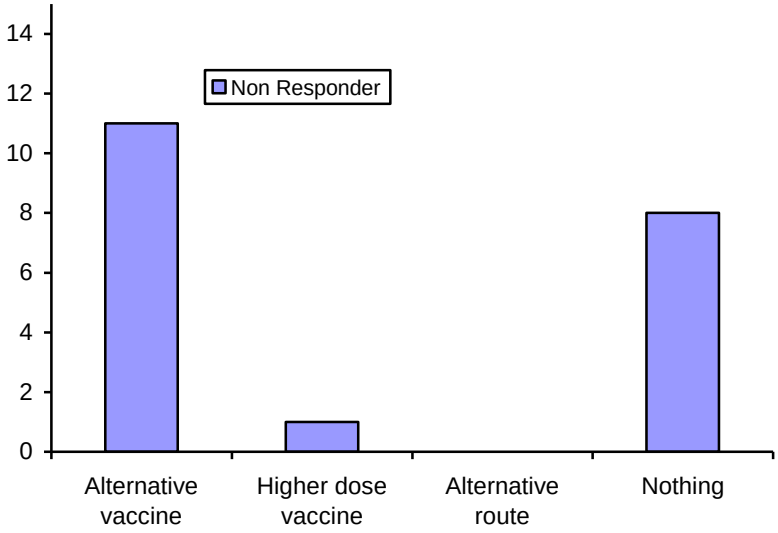
The practice in relation to non-responders seems more consistent although there still areas of variation. Only 2 participants “Check hepatitis B markers (HBcAb, HBsAg)”, “Offer a full course of hepatitis B vaccine” and “Check serology after the booster”.

Of note all participants take some form of action.

Immunity against Hepatitis B – Non responder management

19. What do you offer to staff who are non responder to HBV vaccination? (Choose more than one option if appropriate

Alternative vaccine	11
Higher dose vaccine	1
Alternative route of injection	0
Nothing	8



The management of non responders varied considerably from no action (32%) to alternative vaccine in 44%. There is no guidance apart from providing information on this topic which can explain different approaches.

From the next question it is clear that all participants provide advice and information therefore we assume those eight participants who chose “Nothing” meant no further action in terms of further blood tests or vaccination.

Immunity against Hepatitis B – Non responder information

20. What advice do you give to staff who are non responders to hepatitis B vaccine? (Choose more than one option if appropriate)

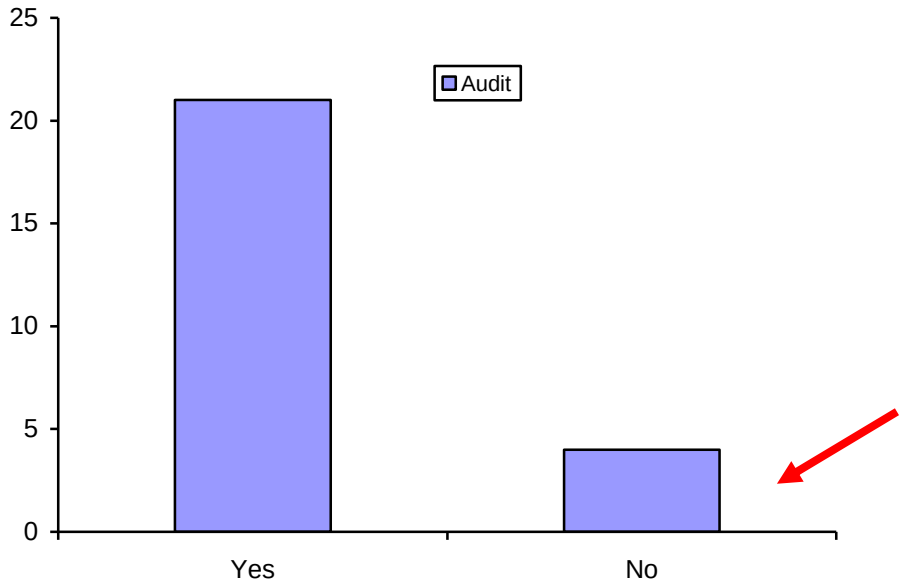
No advice	0
Advise strict adherence to universal precautions	25
Exclude from procedures where there a is risk of body fluid exposure	0
Exclude from EPP	0
Report body fluid exposure immediately to OH	25

All participants stress to non-responders the importance of adhering to universal precautions and reporting body fluid exposure incidents immediately.

Overall an excellent compliance with the relevant guidance on hepatitis B immunity assessment and management was observed with 90% or more participants adopting the same practice in most areas.

Audit

21. Do you conduct any audit of immunity and immunisation?



The question was wrongly entered to the Survey monkey therefore detailed data cannot be provided. Based on the limited information available 84% of participants do conduct audit of immunity and immunisation, be it audit of process or outcome or both. Four participants do not undertake relevant audit.

Discussion

The audit demonstrates a relatively homogenous implementation of guidance and standards in respect to immunity assessment and immunisation of NHS staff with over 80% of participants adopting the same approach for a majority of criteria. This is likely to be due to clear guidance provided by Green Book which reduces the likelihood of varying interpretations as was observed in the TB audit previously. Areas that a prescriptive guidance is not provided, high degree of variation of practice are seen (see below).

Encouragingly all participants use some form of local guidance or policy which ensures consistency and transparency of practice. It also facilitates development of a unanimous policy, at least in principle, with the aim to avoid repetition of immunity clearance/ immunisation when staff move from one trust to another.

There is no written standard of acceptable documentary evidence. In only two criteria an agreement of over 80% was reached. The documentary evidence form an essential part of immunity clearance/ immunisation therefore it is imperative that a consensus is reached to standardise the acceptable criteria to facilitate sharing information between OH services.

All participants screen and immunise for hepatitis B, measles, rubella and 92% for varicella. However the approach is less consistent for non-clinical and non-patient facing staff. It is acknowledged that vaccination of each group of staff is based on the local risk assessment and perhaps other drivers, nonetheless the variation observed is quite large e.g. 40% of participants offer hepatitis B to non-clinical. The Green Book advice for non-clinical workers with direct patient contact is '*Hepatitis B vaccination is recommended for workers who are at risk of injury from blood-contaminated sharp instruments, or of being deliberately injured or bitten by patients.'* In the Eye of the Needle report from the Public Health England (formerly known as Health Protection Agency)[4] that reports on UK blood and body fluid exposures where the source was infected with a blood borne virus, 72 out of 4381(1.6%) injuries were in staff that were not involved in direct patient care. It is therefore of merit to review and compare the risk assessments in relation to non-clinical workers with the objective to reach a consensus if possible.

The time course for the assessment of immunity and subsequent immunisation if needed, showed a wide variation in practice; 24% of participants will not allow staff to start unless they are cleared whilst 50% accept or indeed undertake the screening after the commencement within a defined period. There is no prescriptive guidance on timing of the screening, except for TB and EPP which were not subject of this audit. Although it will be good practice to have a more consistent approach, this is unlikely to have significant impact on clearance when staff are transferring as the clearance should have been given at the first job. However it is imperative that for those trusts that accept post commencement clearance, a defined time period is enforced to ensure that new staff do not slip through the net. According to the results the most commonly cited time period is 4 weeks which can be used as an example of good practice / standard.

It is reassuring that most participants (92% or more) agree on evidence of immunity against hepatitis B, measles and rubella. In terms of varicella immunity, 96% accept documentary evidence of a positive VZV IgG Ab. However there is a dichotomy in terms of accepting history of illness as evidence of immunity. Half OH services accepts the history of illness regardless of place of birth whilst the other half only accept it if the individual is born in temperate regions. The Green Book mentions that a history of varicella in people from temperate zones is more reliable. Nearly half of participants did not find this specific enough. The NHS Plus guidance however clearly establishes that history of the disease in people born in tropical/ subtropical regions are not reliable therefore only documentary evidence is acceptable. Considering the demography of staff in London it is imperative that a consensus is reached with regards to varicella clearance.

Where staff members declined immunisation there was good agreement of the necessary action to be taken which was in most cases, to give a verbal explanation of the risks and also written advice, followed by individual risk assessment and informing the manager. Notably four participants enforce a blanket ban but they also undertake individual risk assessment which is somehow contradictory. This requires further discussion amongst the group to explore possibility of consistent approach taking to account local requirements. It is also noted that just over half of the services do not ask the staff to sign a disclaimer if they decline vaccination. It is considered good practice to record what information have been provided regarding the risk of contracting infection and also the implications of refusing the vaccine. Whilst it is possible to be done verbally or by signposting in the notes, a disclaimer seems to be the ultimate evidence.

The audit confirms a relatively consistent approach to hepatitis B vaccination and post vaccination serology. There are areas of variation in practice mainly in respect to partial and non-responders. The Green Book advises to offer one booster to partial responders (HBsAg 10-100 IU/mL) without a need for post vaccination serology afterwards. However almost half of participants, check HBsAb titre after single booster in partial responders. Also one service offer full course to non-responders. 28% of participants check HBV markers in partial responders. The Green Book advises to check HBV markers in non responders (HBsAg <10 IU/mL) and if negative, offer a full course followed by another post vaccination serology test. Whilst management of non-responders seems relatively more consistent than partial responders, only 8% of applicants follow the Green Book advice at every stage.

Whilst variation in local protocols are expected, given the clarity of Green Book advice and the cost and ethical implications of taking unnecessary actions, it is advisable to review local policies on hepatitis B immunisation to explore whether deviation from Green Book can be avoided. This will also facilitate development of a unanimous policy, at least in principle, and sharing information.

Encouragingly all participants take some form of action for non-responders; all of them provide advice regarding universal precautions and immediate notification of body fluid exposure incidents. Given there is no prescriptive advice regarding using different strength/ brand/ route of vaccination, unsurprisingly a large variation of practice was observed. It may be an option to consider a research project to compare different approaches to non-responders in occupational context.

A large proportion of respondents (84%) undertake some form of audit. Apart from well known benefits in order to improve practice, audit is an essential requirement/ mandate for SEQOHS, Patient Group Directive (PGD) and NHS Litigation Authority.

Summary and recommendations

Overall this audit has proved a very good implementation of Green Book standards for immunity assessment and immunisation with LCOHP members providing service to NHS staff through in London. Consequently there would appear to be sufficient consistency within the group to allow development of an agreement/ unanimous protocol, at least in principle with regards to immunity assessment and immunisation for hepatitis B, measles, rubella and varicella.

Recommendations

1. To develop criteria for acceptable documentary evidence
2. To agree on immunity assessment and immunisation of non-clinical and non-patient facing workers where possible
3. To agree a time frame of completing immunity assessment/ starting immunisation post commencement
4. To agree on standard of immunity against varicella in respect of accepting history of illness in light of place of birth

5. To review local policies/ protocols in respect of assessment and management of people who are partial/ non- responders to hepatitis B vaccine according to the Green Book
6. To undertake relevant audit, members are encouraged to share experience and audit tools
7. All OHS participating in this audit and those in LCOHP who did not, who have a local variation from Green Book standards review this with their local Infection Control advisors to ensure that national guidance is followed so data can be shared.

References

1. Immunisation against infectious diseases: The Green book. Public Health England https://www.gov.uk/government/organisations/public-health-england/series/immunisation-against-infectious-disease-the-green-bookJuly 2013

2. LCOHP group audit of implementation of NICE TB guidance on TB CG 117 (2011) Ali-Asad Hashtroudi & Judy Sharpey-Schafer 2012 http://www.anhops.com/docs/395_31_LCOHPS_TB_audit_write_up-_Final.pdf

3. NHS Plus, Royal College of Physicians, Faculty of Occupational Medicine. Varicella zoster virus: the occupational aspect of management. A national guideline.London:RCP2010 http://www.rcplondon.ac.uk/sites/default/files/varicella-zoster-guidelines-web-navigable.pdf

4. Eye of the Needle. United Kingdom surveillance of significant occupational exposures to bloodborne viruses in healthcare workers: December 2012. Health Protection Agency. http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1317137310957

Appendix 1 -Audit tool

Data collection tool for LCOHPS audit of implementation of DOH guidance on immunity checks and immunisation at New Entrant to the Trust with questions marked to show the standard used or practice

Your OH Service name:

Which NHS Trust(s) are you completing this questionnaire for?
Please complete separate forms if you follow different protocols for different NHS Trusts

Question

1 Do you have Trust or OHS guidance on immunity checks and immunisation of staff at New Entry to the Trust?
Choose more than one option if appropriate **(Green book Ch 12)**

Trust policy □
OHS standard operating procedure □

2 **What is acceptable documentary evidence of immunity or immunisation?** **(No standard- practice question)**
Choose more than one option if appropriate

	Immunity	immunisation
Name and date of birth	□	□
Should be from UK source	□	□
Can be from any country in English	□	□
Should be signed by an authorising officer (e.g. doctor, nurse)	□	□
Should be stamped by the organisation or authorising officer	□	□
Should be on organisational letterhead	□	□

Other please specify in box below

3 What immunity assessment and/or immunisation do you undertake for the following staff groups at New Entry to the Trust?
Choose more than one option if appropriate **(Green book Ch 12,18, 21, 28,34)**

	Hep B	Measles	Rubella	Varicella	Others*
Clinical workers	□	□	□	□	□
Non clinical workers with direct access to patients	□	□	□	□	□
Workers with no access to patients	□	□	□	□	□

*If you chose others please provide details:

4 By which time should staff have completed the assessment of immunity at New Entry to the Trust? (No standard Practice question)
Choose more than one option if appropriate

	Hep B	Measles	Rubella	Varicella	Others*
Before the staff member starts work with the Trust	□	□	□	□	□
On the start day	□	□	□	□	□
After the staff member starts work with the Trust	□	□	□	□	□

If after the start day, do you have a defined time frame for it to be completed? *Please detail in box below*

**If you apply different rules for different staff please explain*

5 By which time should staff have started the immunisation, if needed, at New Entry to the Trust? (No standard –Practice question)
Choose more than one option if appropriate

	Hep B	Measles	Rubella	Varicella	Others*
Before the staff member starts work with the Trust	□	□	□	□	□
On the start day	□	□	□	□	□
After the staff member starts work with the Trust	□	□	□	□	□

If after the start day, do you have a defined time frame for it to be completed? *Please detail in box below*

**If you apply different rules for different staff please explain*

6 What is your acceptable standard of immunity to measles and rubella? (Green book Ch 12, 21 & 28)
Choose more than one option if appropriate

	Measles	Rubella
History of disease	□	□
Documentary evidence of having received one dose of MMR/monovalent vaccine	□	□
Documentary evidence of having received two doses of MMR/ monovalent vaccine	□	□
Documentary evidence of a postive antibody test against the disease	□	□

7 **How many doses of MMR do you give to staff who are not immune to measles and rubella? (Green book Ch 21 & 28)**

	Measles	Rubella
One	□	□
Two	□	□

8 **What is your acceptable standard of immunity to varicella?**
Choose more than one option if appropriate **(Green Book Ch 12 ,34)**
History of chicken pox/ shingles born anywhere □
History of chickenpox/ shingles born temperate regions □
Documentary evidence of a positive antibody test for varicella □

9 **How many doses of varicella vaccine do you give to staff who are not immune to varicella? (Green Book Ch 34)**

One □
Two □

10 **If a staff member who is not immune declines MMR or varicella vaccine what initial action do you take?**
Choose more than one option if appropriate **(Green book Ch 12 and practice)**
Explain the risks orally □
Supplementary written advice □

11 **If the person continues to decline MMR or varicella vaccine despite OH advice what do you do?**
Choose more than one option if appropriate **(Green book Ch 12 and practice)**
Blanket ban to work in areas that there is a risk to patients □
Individual risk assessment □
Inform the manager □
Ask them to sign a disclaimer □
Other please specify:

12 **What is your acceptable standard of Hepatitis B immunity?**
Choose more than one option if appropriate **(Green Book Ch 18 p178)**
Hep B surface antibody titre >10 □
Hep B surface antibody titre >100 □
Natural immunity (Hepatitis B core antibody positive) □
Verbal or documentary evidence of previous vaccination □

13 **After which vaccinations do you arrange for immunity testing (post vaccine serology)?**
Choose more than one option if appropriate **(Green Book Ch 12, 18, 21,28,34)**
MMR □
Varicella □
Hepatitis B □

14 **After full course of 3 hepatitis B vaccine at the recommended intervals, how do you define non responder?**
(Green Book Ch 18 p178)
Hepatitis B surface antibody test <10 □
Hepatitis B surface antibody test <100 □

15 **If the Hep B antibody titre after vaccination is >100, what do you do? (Green Book Ch 18 p177)**
Choose more than one option if appropriate
Offer a single dose of hepatitis B vaccine after 5 year □
Offer a single dose of hepatitis B vaccine every 5 year □
Check serology after every booster □
Other

16 **If the Hep B antibody titre after vaccination is between 10 and 100, what do you do? (Green Book Ch18 p178)**
Choose more than one option if appropriate
Check hepatitis B markers (HBcAb, HBsAg) □
Offer a single dose of hepatitis B vaccine □
Offer a full course of hepatitis B vaccine □
Check serology after the booster □
Nothing □
Other

17 **If the Hep B antibody titre after vaccination is <10, what do you do? (Green Book Ch 18 p178)**
Choose more than one option if required
Check hepatitis B markers (HBcAb, HBsAg) □
Offer a single dose of hepatitis B vaccine □
Offer a full course of hepatitis B vaccine □

Check serology after the booster □
Nothing □
Other

18 **What do you offer to staff who are non responder to HBV vaccination? (No standard-Practice question)**
Choose more than on option if appropriate
Alternative vaccine □
Higher dose vaccine □
Alternative route of injection□
Nothing □
Other; please specify

19 **What advice do you give to staff who are non responders to hepatitis B vaccine? (No standard – Practice question)**
Choose more than one option if appropriate
No advice □
Advise to strict adherence to universal precautions □
Exclude from procedures where there a is risk of body fluid exposure □
Exclude from EPP □
Report body fluid exposure immediately to OH □

20 **Do you conduct any audit of immunity and immunisation? (No standard- Practice question)**

Audit of the process □
Audit of the outcome □
If yes please provide details:

Thank you for completing the questionnaire