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Event

Potential exposure to hepatitis B virus (HBV) in renal dialysis patients due to failure to follow national guidance on management of patients with HBV in renal units

Notified by

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Authorised by

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NIRP Level

N/A

Incident Lead

N/A

Instructions for Cascade

- **Devolved Administrations** to cascade to Medical Directors and other DA teams as appropriate to their local arrangements
- **Regional Deputy Directors** to cascade to Directors of Public Health
- **UKHSA microbiologists** to cascade to non-UKHSA labs (NHS labs and private)
- **UKHSA microbiologists** to cascade to NHS Trust infection leads
- **NHS labs/NHS infection leads/NHS microbiologist/NHS infectious disease specialists** to cascade as appropriate within the NHS Trust.

Background and Interpretation:

In the past six months, there have been a number of reports to UKHSA from NHS Trusts of patients with hepatitis B virus (HBV) infection inadvertently sharing dialysis machines with other patients who are susceptible to HBV; this is contrary to national clinical guidance. These incidents occurred due to the hepatitis B surface antigen (HBsAg) positive result in the patient being identified after use of the shared dialysis machine.

As a result, several patients were potentially exposed to HBV infection. Following risk assessment, enhanced surveillance with fortnightly hepatitis B (HBsAg) testing for 3 months was initiated and HBV post exposure prophylaxis was required for several



exposed patients. To date, we are not aware that any HBV transmissions have occurred following these incidents.

Implications & Recommendations for NHS

All centres performing renal replacement therapy are advised to follow Guidance of the UK Kidney Association (previously Renal Association) on the Management of Blood Borne Viruses within the Haemodialysis Unit. This guidance recommends that:

- All patients starting haemodialysis, including patients with acute kidney injury or returning to haemodialysis after another modality of renal replacement therapy, or following dialysis overseas, should be demonstrated to be HBsAg negative before having dialysis on the main dialysis unit.
- Patients who are HBsAg positive must be dialysed on separate machines in an area that is segregated from the main dialysis unit.
- Patients who require haemodialysis before the result of the HBsAg test is known should be dialysed in an area that is segregated within the main dialysis unit (such as a side room). The dialysis machine should not be used for another patient until a negative HBsAg result is reported or the machine has been decontaminated using a HBV suitable decontamination regimen
- Dialysis units should also ensure that all patients starting dialysis, who are susceptible to HBV infection, receive HBV vaccination. Patients should be tested for hepatitis B surface antibody (anti-HBs) 1-2 months after completing the course of vaccination and the level should be recorded. Depending on the anti-HBs level a repeat course of vaccination may be required if the patient has an inadequate immune response.
- Patients who are established on dialysis but identified as being susceptible to HBV and without evidence of having received HBV vaccination, should be promptly commenced on a course of vaccine.

Staff working on renal units should (already) be vaccinated and have had anti-HBs levels checked by occupational health services but this is a good opportunity to check that all eligible staff are up-to-date with immunisations.

Although these recommendations mainly apply to Haemodialysis Units, aspects will also be relevant to other settings, where renal replacement therapy is provided, such as Intensive Care Units.

For further information, see the Guidance of the UK Kidney Association (previously Renal Association) on the Management of Blood Borne Viruses within the Haemodialysis Unit, available here:

<https://ukkidney.org/sites/renal.org/files/FINAL-BBV-Guideline-June-2019.pdf>



UK Health Security Agency

Further information on hepatitis B immunisation is in the Green Book: Immunisation against Infectious Disease, available here: [Hepatitis B: the green book, chapter 18 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18)

NHS colleagues are asked to report any similar exposure incidents in renal services to UKHSA local Health Protection Team and/or the national hepatitis team through the Colindale duty doctor service. The UKHSA national hepatitis team can support local UKHSA/ NHS blood-borne virus (BBV) risk assessments.

Implications & Recommendations for UKHSA sites and services

Consultants in Public Health Microbiology should confirm that trusts offering renal replacement therapy know where to access rapid HBsAg testing

UKHSA microbiology / virology laboratories, Health Protection Teams may receive requests for advice from NHS trusts on possible hepatitis B exposure incidents and should familiarise themselves with the Guidance of the UK Kidney Association (previously Renal Association) on the Management of Blood Borne Viruses within the Haemodialysis Unit, available here:

<https://ukkidney.org/sites/renal.org/files/FINAL-BBV-Guideline-June-2019.pdf>

UKHSA colleagues are asked to let the national hepatitis team know of any similar exposure incidents in renal services through the Colindale duty doctor service. The national team can support local UKHSA / NHS BBV risk assessments.

A Standard Operation Procedure for UKHSA duty doctors for responding to initial calls about BBV incidents in renal patients will soon be available in the duty doctor pack.

Implications & Recommendations for UKHSA Regions

As above

Implications and recommendations for Local Authorities

N/A

References/ Sources of information

Guidance of the UK Kidney Association (previously Renal Association) on the Management of Blood Borne Viruses within the Haemodialysis Unit, which is available here:

<https://ukkidney.org/sites/renal.org/files/FINAL-BBV-Guideline-June-2019.pdf>

Green Book: Immunisation against Infectious Disease [Hepatitis B: the green book, chapter 18 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18)

Hepatitis B Immunoglobulin: when to use as post exposure prophylaxis [Hepatitis B immunoglobulin \(issued September 2022\) - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/hepatitis-b-immunoglobulin-issued-september-2022)