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COMPETING INTEREST OF FINANCIAL VALUE \geq £1,000:	
Speaker Name	Statement
Dr Keith Radcliffe	None
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HIV infected health care workers

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HIV+ health care workers (HCWs) have infected patients

The Florida dentist

- 1986 ... diagnosed HIV+
- 1987 ... diagnosed AIDS (Kaposi's sarcoma)
- 1990 ... died
- 5 patients infected based on genome sequencing
- Why so many transmissions?

Transmission of HIV from HCWs to patients

<u>Year</u>	<u>Country</u>	<u>HCW & procedure</u>	<u>Number of infected patients</u>	<u>Number patients tested</u>	<u>% patients infected</u>
1999 ¹	France	Orthopaedic surgeon Hip replacement	1	983	0.10%
2002 ²	France	Nurse, general surgery <u>No</u> EPPs	1	2,294	0.04%
2003 ³	Spain	Obstetrician C-section	1	250	0.40%

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1. Lot (*Ann Intern Med* 1999).
 2. Astagneau (*Am J Infect Control* 2002).
 3. Bosch (*Lancet Infect Dis* 2003).

HIV Infected Health Care Workers: Guidance on Management and Patient Notification (Dept Health 2005)

- **1.1** Applies to all HCWs (and students)
- **1.7** Only possible risk is from 'bleed-back' from HCW to patient during an exposure-prone procedure (EPP)
- **1.8** Patient(s) only need to be notified if distinct risk of 'bleed-back' from an HIV+ HCW during an EPP
- **2.4** Risk of transmission very low:
 - 1988-2003 – 28 Patient Notification Exercises (PNEs) – >7,000 patients tested – no transmissions
- **3.1** HIV+ HCWs must not perform EPPs

- **3.5 EPPs** – where HCW’s hand inside a body cavity – not fully visible at all times & at risk of trauma from sharp instrument or tissue (e.g. bone)
 - e.g. open surgical procedures, most dental & ENT procedures
- **8.1 Categories of EPP**
 - 1 – Hand outside patient & visible most of time and risk of injury slight
 - 2 – Hand not always visible but risk of injury slight
e.g. appendicectomy
 - 3 – Hand not visible for significant part of procedure and risk of injury e.g. hysterectomy, caesarean section, cardiac surgery
- **3.7 Decision on individual restrictions to practice taken by occupational health physician (OHP)**

- **4.7** A HCW who believes they may be at risk of HIV must promptly seek and follow confidential professional advice on whether they should be tested for HIV. Failure to do so may breach the duty of care to patients.

- **4.12** If an HIV+ HCW has performed EPPs the Director of Public Health will decide whether to carry out a Patient Notification Exercise (PNE)
 - Risk assessment on a case-by-case basis
 1. PNE essential if any evidence of transmission
 - Local 'cross-matching' exercise ('practical and proportionate')¹
 2. Review of practice e.g. type of EPP, compliance with infection control
 3. Health of HCW e.g. cognitive impairment, eczema

1. UKAP 2012 (UK Advisory Panel for HCWs infected with bloodborne viruses).

PNEs

- **8.9** If decide to do PNE – how far to look back?
 - Known duration of infection
 - Previous negative test(s) or stored sample(s)
 - Risk factor history
 - Seroconversion illness
(RITA)
 - **8.12** Unknown duration of infection
 - 10 years
 - If any transmission extend as far back as possible
- **8.13**
 - If no evidence of transmission – only contact category 3 EPPs
 - If evidence of transmission – contact all EPPs
- **8.15** UKAP – can advise – keep informed (whether PNE or not)

- **9.4** Advice on retraining of HCW
- **10.1-3** Protect confidentiality of HCW as far as possible

Review -Tripartite Working Group

- Representatives from:
 - Advisory Group on Hepatitis (AGH)
 - Expert Advisory Group on AIDS (EAGA)
 - UKAP
- Remit:
 - To undertake a review of the current policies on the restriction of all HCWs infected with blood-borne viruses whose clinical duties rely on performing EPPs

Approach taken

Focussed on examining

- Analysis of retrospective PNEs connected with HIV infected HCWs in the UK from 1988-2008
- Evidence pertaining to HIV transmission from infected HCWs
- International policies on HIV infected HCWs

Results of 34 PNEs 1998-2008

Speciality of HCW

Speciality	Patients at risk (EPPs 1-3)	Patients tested	% at risk tested
Dentistry (n=6)	12,328	2,745	22%
Obs and Gynae (n=9)	10,650	4,940	46%
Midwifery (n=5)	194	154	79%
Multiple specialities (n=3)	713	159	22%
Theatre nurse (n=4)	583	306	52%
Unknown (n=7)	2,510	1,545	62%
Total (n=34)	26,978	9,849	37%

Patient category	Total	Transmission risk (%) (95% confidence limits)	Transmission risk (1 in xxxx)*
Total identified at risk (EPP 1-3)	26,978	-	-
Number of probable cases	0	-	-
Total number of patients tested	9,849	0.00% (0-0.037%)	< 1 in 2700
Total number of patients tested who were at high risk (category 3 EPP)	2,283	0.00% (0-0.161%)	< 1 in 620

* Based on the upper 95% confidence limit for the proportion of patients that could be found to be infected

Data limitations

- Date of HIV acquisition of the HCWs was unknown
- Many patients potentially exposed to HIV were not tested (up to 63%),
- The risk of HIV transmission is likely to be dependent on type of procedure, viral load, stage of infection in the HCW and infection control procedures practices - this information was often unavailable

Possible number of transmissions if HIV infected HCWs undertaking EPPs were allowed to work

Plausible risk of transmission *	1 in 1600
Estimated number of transmissions per year (11 surgeons performing 250 EPP3 procedure/year = 2,750)	1.6 per year
Possible transmission risk estimate based on a 20-fold reduction with ARVs	<1 in 33,000
Estimated number of transmissions if HIV-infected surgeons referred to UKAP between 2004-2009 were allowed EPP3 practice and were taking effective ARV-Rx	1 every 12 years

* a 3 in 4 chance the risk is less than this value and a 1 in 4 chance the risk is greater than this value

Transmissibility of HIV, viral load and antiretroviral (ARV) therapy

(Hetero)sexual transmission

- No transmissions when viral load <1,500 c/mL (Rakai Study¹)
- No transmissions when viral load <400 on ARVs²
- Heterosexual transmission 96% ↓ with ARVs (HPTN 052³)
- HIV transmission rate 0.2/100 person-years (95% CI = 0.07–0.7) 91% ↓ Cf. no ARVs⁴
- HIV transmission rate 0 per 100 person-years (95% CI = 0–0.01) when VL undetectable⁵

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1. Quinn et al. *N Engl J Med* 2000; **342**: 921-9.
 2. Attia et al. *AIDS* 2009, **23**:1397–1404.
 3. Cohen et al. *N Engl J Med* 2011; **365**: 493-505.
 4. Baggaley et al. *Epidemiology* 2013; **4**: 110-21.
 5. Loutfy et al. *PLoS One* 2013; **8**: e55747.

Vertical transmission

- Pre-/peri-natal
 - 0.1% if on ARVs with undetectable VL (Cf. 25.6% historically)¹
 - *‘Vaginal delivery is recommended for women on HAART with ... VL <50 ...’*¹
- Post-natal (breastfeeding)
 - 1.1% with ARVs (+6 months breast-feeding)²
 - *‘... breastfeeding by a woman with HIV and fully suppressed virus on ART should no longer automatically constitute grounds for a child safeguarding referral.’*¹

1. BHIVA guidelines for the management of HIV infection in pregnant women 2012.

2. Shapiro et al. *N Engl J Med* 2010; **362**: 2282-94.

International policies on HIV infected HCWs

- Australia, Ireland, Italy and Malta - restrict HIV infected HCWs from invasive/EPPs
- Austria, Belgium, Canada, Finland, New Zealand and Sweden – management is on a case-by-case basis
- US, France and Germany – no exclusion under certain monitoring conditions (but not national policy)

Conclusions of the Tripartite Working Group

- Policy to restrict practice of HIV-infected HCWs introduced at a time when much less was known about risk of transmission
- No documented cases of HIV transmission from HCW → patient (in the UK)
- Data from UK PNEs suggest the risk is low (retrospective US data also suggests risk is low)
- Current policy does not take into account viral suppression achievable on ARVs
- UK policy is more conservative than some countries (but in line with others)

Conclusions of the Tripartite Working Group

- Published in a consultation document December 2011
- Consultation ran until March 2012
- Further discussion by working group
- Dept Health's response August 2013

Conclusions of the Tripartite Working Group

- Risk of transmission extremely low/negligible
- Would be reduced further by ARVs
- HCWs should be allowed to perform EPPs provided:
 - On ARVs with VL stably <200 c/mL (2 consecutive tests)
 - Monitored every 3 months (maximum 14 weeks) – joint responsibility of treating physician and OHP
 - Rebound >200 – repeat – if again >200 HCW to stop performing EPPs
 - Rebound $>1,000$ HCW to stop performing EPPs

- Cases to be notified to UKAP for first 2 years
- Public Health England will maintain a database of cases
- PNEs will only be considered if HCW not on ARVs or VL >1,000
 - Offer post-exposure prophylaxis to exposed patient(s)
- Should elite controllers be required to take ARVs?
 - Refer to UKAP for advice on a case-by-case basis

15 August 2013 Last updated at 07:51



Ban lifted for NHS staff with HIV

COMMENTS (945)

The government is to lift a ban that stops healthcare staff with HIV performing certain medical procedures.

Healthcare staff in England, Wales and Scotland having HIV treatment will be able to take part in all tasks, including surgery and dentistry.

England's chief medical officer, Prof Dame Sally Davies, said it was time to scrap "outdated rules".



England's chief medical officer, Prof Dame Sally Davies, says the risk to patients is "negligible"

Next steps:

Detailed guidance being drawn up by PHE to support implementation (?December 2013)

Responsibilities of HCWs

- **Legal**

- Health and safety legislation e.g. Health and Safety at Work Act 1974 – *‘employees have a legal duty to take reasonable care for the health and safety of themselves and of others’*

- **Professional**

- Doctors: Good Medical Practice (GMC 2013)

28. *‘If you know or suspect that you have a serious condition that you could pass on to patients, or if your judgement or performance could be affected by a condition or its treatment, you must consult a suitably qualified colleague. You must follow their advice about any changes to your practice they consider necessary. You must not rely on your own assessment of the risk to patients.’*

- Dentists & dental nurses: Standards for the Dental Team (GDC 2013)

1.5.2 *'You ... must follow guidance on blood-borne viruses.'*

- Nurses & midwives: The code: Standards of conduct, performance and ethics for nurses and midwives (NMC 2008)

'... make the care of patients your first concern.'

'You must act without delay if you believe that you, a colleague or anyone else may be putting someone at risk.'

Triple jeopardy for non-compliant HCWs

Sanctions by:

1. Legal action
2. Professional regulator
3. Disciplinary action by employer

Acknowledgement

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