

Title page

Clinical Round Up

Authors

Lewis Haddow ¹

Sophie Herbert ²

Affiliations

¹ Centre for Sexual Health and HIV Research, University College London, UK

² The Ashwood Centre, St Mary's Hospital, Kettering, UK

Author contributions

Both authors contributed to the identification of studies and writing of the manuscript. LH wrote the first draft.

Conflicts of interest

None to declare.

Manuscript body (794 words including subheadings)

Sexual health remains a major global health concern

The Global Burden of Disease Study (GBD) has examined large-scale trends in death, loss of life-years, and the contribution of risk factors to ill health in 188 countries for over two decades. It gives a remarkable overview of global health: the biggest of “big picture” views. An analysis specifically looking at young people (aged 10-24 years; subdivided into 10-14, 15-19, and 20-24 year age groups) is of interest to those working in sexual health.¹ Unsafe sex appears in the top four on the list of risk factors for males and females, for deaths and disability-adjusted life years (DALYs), and for the 15-19 and 20-24 year age-groups. Alcohol use claims the top spot, but also relevant to STI readers are intimate partner violence, drug use and childhood sexual abuse, which all feature in the top ten for all age groups, male and female. Worldwide, HIV is the leading cause of death for 10-14 year-olds, third for 15-19 year-olds, and fifth for 20-24 year-olds.

Transfusion cannot be completely safe from blood-borne viruses even in high-cost healthcare settings

From 1973 to 2011, standard hepatitis B (HBV) screening practice in the Netherlands was to test for surface antigen (sAg), which has a prevalence of 0.2%. From 2008, HBV DNA testing was introduced, and a “look-back” exercise was carried out for all previous donations from those donors found to have a DNA-only positive profile.² This exercise covered 2.3 million blood donations. The study identified 22 HBV DNA positive, sAg negative donors, yielding 448 issued blood products. In many cases, the recipients had died, and many more

could not be traced. Only 82 recipients were tested, and 4 infections were identified. Some donors had given multiple donations: one donated 47 times, yielding 55 blood components for transfusion. Three infections could be sourced from this particular donor, and the supporting molecular epidemiological results are reported in the paper.

Screening for STIs in urgent non-STI care settings

A study of 553 patients enrolled 14-21 year-olds who were attending an urban children's Emergency Department in Washington DC for non-STI complaints. Participants were offered screening for chlamydia and gonorrhoea.³ Acceptability was high, with 59% agreeing to be screened, including almost half of patients who denied any sexual activity. There was a 4.9% test positivity rate (16/326): all positive for chlamydia, and one patient with both infections. Two patients testing positive had denied sexual activity, although one later said she had had sex, and the other was retested with a negative result. The authors may be considered pessimistic in describing this as a low prevalence of asymptomatic STI, given the non-STI care setting and the sexual behaviour of the sample. A cost-effectiveness analysis might clarify our interpretation of the results. It would also be interesting to compare and contrast acceptability and prevalence with other high-income countries where healthcare systems are different.

Long-term trends in testing and diagnosis of infections

Viral hepatitis is now the leading infectious cause of death globally, and temporal trends in incidence in HIV positive patients were analysed in a recent EuroSIDA study.⁴ Data were analysed from the observational cohort, including European residents who were hepatitis C

(HCV) antibody negative at baseline and had two or more HCV tests subsequently. There were 223 HCV seroconversions from 16,188 tests among 5736 HIV+ patients between 2002 and 2013. Testing rates increased over time but positivity did not. Testing was most frequently carried out in the Western EuroSIDA region (France, Belgium, Switzerland, Austria, Luxembourg and southern Germany), in men who have sex with men (MSM), and in younger white patients. HCV seroconversions were particularly frequent in injecting drug users (IDU), and to a lesser extent in the Eastern and Northern regions and in younger patients.

A paper reporting more than a century of data is always going to catch the eye of the clinical round-up.⁵ Rates of gonorrhoea in Denmark from 1900-2010 provide a rich source of historical health information. As in other high-income countries, it is notable that rates have remained flat at less than 10 cases of culture-confirmed gonorrhoea per 100,000 population since the mid-1990s, following precipitous declines after the post-war peak of over 300 per 100,000 in the early 1970s. Many different aspects of the data are considered in the paper, but the analysis reported in the abstract focusses on the sites from which specimens were taken and their yield. In 40% of men and 30% of women with pharyngeal gonorrhoea, none was detected in the urogenital tract, and in 67% of men with rectal gonorrhoea, this was the only site of the infection. These are interesting observations but the “bigger picture” lies in the figure of a century’s gonorrhoea and syphilis rates, overlaid with Europe’s major wars and Denmark’s relevant public health legislation.

References

1. Mokdad AH, Forouzanfar MH, Daoud F, Mokdad AA, El Bcheraoui C, Moradi-Lakeh M, et al. Global burden of diseases, injuries, and risk factors for young people's health

- during 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2016;387(10036):2383-401.
2. Lieshout-Krikke RW, van Kraaij MG, Danovic F, Zaaijer HL. Rare transmission of hepatitis B virus by Dutch donors with occult infection. *Transfusion* 2016;56(3):691-8.
 3. Goyal MK, Teach SJ, Badolato GM, Trent M, Chamberlain JM. Universal Screening for Sexually Transmitted Infections among Asymptomatic Adolescents in an Urban Emergency Department: High Acceptance but Low Prevalence of Infection. *The Journal of pediatrics* 2016;171:128-32.
 4. Boesecke C, Grint D, Soriano V, Lundgren JD, d'Arminio Monforte A, Mitsura VM, et al. Hepatitis C seroconversions in HIV infection across Europe: which regions and patient groups are affected? *Liver international : official journal of the International Association for the Study of the Liver* 2015;35(11):2384-91.
 5. Lind I, Hoffmann S. Recorded gonorrhoea rates in Denmark, 1900-2010: the impact of clinical testing activity and laboratory diagnostic procedures. *BMJ Open* 2015;5(11):e008013.