The magic bullet hits many targets: Salvarsan's impact on UK health systems, 1909–1943

The development of Salvarsan had a profound impact on venereal disease (VD) care in the UK. Administratively distinct from the general health system, the new system of VD care created by the Royal Commission provided diagnosis and treatment to all regardless of means. The government supplied three-quarters of the centres' costs and provided Salvarsan free to general practitioners.¹

Beyond shaping health systems, the growing importance of Salvarsan also prompted the creation of a new medical subspecialty: venereology, which emerged with its own specialist training track focused on diagnosing, treating and eventually preventing syphilis infection. By the end of 1917, 118 new VD clinics had opened and 204 000 patients were evaluated.² Syphilis screening increased after the development of Salvarsan.³ As the rapidly expanding VD system surpassed the number of skilled doctors, army physicians more skilled with VD control were hired by some non-military hospitals; elsewhere more junior and inexperienced physicians assumed greater responsibility. In 1922, the founding of a new national medical society for venereology heralded the specialty's official recognition.⁴

For the Royal Commission, curing syphilis through medical means, such as administering Salvarsan, took precedence over behavioural interventions, such as promoting condom use.² This attitude extended into the start of the war days. At the start of World War I, the Minister of War Lord Kitchener urged caution to soldiers: "In this new experience you may find temptations both in wine and women. You must entirely resist both temptations, and, while treating all

women with perfect courtesy, you should avoid any intimacy."⁵

Expressing similar attitude, one of the Royal commissioners noted, "sex instruction based on moral principles ... stood as the core of its preventive strategy." Moreover, "the government-subsidized treatment centres were to be set up to treat, rather than medically prevent VD cases."⁶ Prevention required tackling behaviour, which the Commission avoided.

Despite its reputation as a 'magic bullet', the impact of Salvarsan on health systems was greater than its clinical utility as an antisiphilic drug, which was marginal at best. Salvarsan did not effectively cure neurosyphilis and was associated with a number of side effects.² By 1914, 109 deaths had been attributed to Salvarsan.⁷ Ongoing problems with administration and dosing increased the need for specialist venereologists.² The standard 2-year course of mercury continued to be used for decades.

Yet, despite Salvarsan's toxicity, incomplete effectiveness and inability to fully displace other forms of treatment, the drug proved pivotal in the development of new public health structures, specialty medical training and changing attitudes among authorities.

Adriane Gelpi,^{1,2} Joseph D Tucker^{1,3}

¹Institute for Global Health and Infectious Diseases, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

²Social Medicine Department, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

³International Diagnostics Centre, London, UK

Correspondence to Dr Joseph D Tucker, International Diagnostics Centre, Keppel Street, London WC1E 1, UK; joseph.tucker@post.harvard.edu

Acknowledgements The authors would like to thank Dr Lesley Hall at the Wellcome Library and Dr Kevin Brown at the Alexander Fleming Laboratory Museum for archival assistance and Catie Gliwa for administrative assistance.

Contributors AG and JDT wrote the article, revised it and approved the final version being submitted.

Funding Support for this work was provided by the Brocher Foundation, the UNC Center for AIDS Research (NIAID P30-AI50410) and the Social and Ethical Aspects of Research on Curing HIV Working Group (NIAID R01A108366-01). The Working Group's composition and rationale are explained at <http://searchiv.web.unc.edu/>

Competing interests None.

Provenance and peer review Commissioned; internally peer reviewed.

CrossMark

To cite Gelpi A, Tucker JD. *Sex Transm Infect* 2015;**91**:69–70.

Sex Transm Infect 2015;**91**:69–70.
doi:10.1136/sextrans-2014-051780

REFERENCES

- 1 [No authors listed]. The report of the Royal Commission on venereal diseases. *BMJ* 1916;1:345–6.
- 2 Evans D. Tackling the 'Hideous Scourge': the creation of the venereal disease treatment centres in early twentieth-century Britain. *Soc Hist Med* 1992;5:413–33.
- 3 Morabia A, Zhang FF. History of medical screening: from concepts to action. *Postgrad Med J* 2004;80:463–9.
- 4 Fox WS. Presidential address. *Br J Vener Dis* 1926;2:59–64.
- 5 Arthur G. *Life of Lord Kitchener*. London: MacMillan, 1920.
- 6 Whitelegg E, Open University. *The changing experience of women*. Oxford: M. Robertson in association with the Open University, 1982.
- 7 Ward PS. The American reception of Salvarsan. *J Hist Med Allied Sci* 1981;36:44–62.