



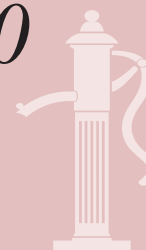
Pumphandle Lecture 2010

"Sapiens, Synergy, Solidarité, Success"

David Nabarro

Wednesday 8th September – 5:15 pm

John Snow Hall, London School of Hygiene and Tropical Medicine



David Nabarro studied at Oxford and London Universities and qualified as a physician in 1973. After a short period in the UK National Health Service he worked for six years in child health and nutrition programmes in Iraq, South Asia and East Africa, taught for six years at the London and Liverpool Schools of Tropical Medicine, served as Chief Health and Population Adviser to the British Government's Overseas Development Administration and in 1997 became Director for Human Development in the UK Department for International Development (DFID). In 1999 he was selected to lead Roll Back Malaria at the World Health Organization (WHO). Within two years he was appointed Executive Director and two years later was asked to lead WHO's Department for Health Action in Crises, coordinating worldwide support for health aspects of crisis preparedness, response and recovery. In September 2005 Dr Nabarro joined the office of the UN Secretary General as Senior Coordinator for Avian and Pandemic Influenza. In January 2009 he was given the additional responsibility of coordinating the UN System's High Level Task Force on the Global Food Security Crisis.

There has been considerable speculation over the title and content of this year's Pumphandle Lecture, but our speaker has preferred to keep us guessing, and his options open.

The Lecture will be followed by the Society's Annual General Meeting, to be held at the John Snow Public House (at the corner of Broadwick and Cambridge Streets, in Soho), to which all are invited....

The Lecture will be recorded and placed on the Society's website, alongside any PowerPoint presentation.

Pumphandle Lecture 2009

"When Nature turns cook: an epidemiological feast" Dr David Heymann

Reported by: Dr Rosalind Stanwell-Smith, Hon. Secretary, John Snow Society.

The 17th annual Pumphandle Lecture was held appropriately on 8th September 2009, the anniversary of the removal of the pumphandle in 1854. The new John Snow lecture theatre at the London School of Hygiene and Tropical Medicine was the venue for Dr David Heymann's reflections on his experience in communicable disease epidemiology and control over three decades. Dr Heymann is currently the Chair of the Health Protection Agency in England and Head of the Centre on Global Health Security at Chatham House, London.



In Zaire (Democratic Republic of the Congo) in 1976, investigation of an outbreak of a new type of viral haemorrhagic fever was linked to re-use of syringes and needles, compounded by re-use after only rinsing in distilled water. The first case had been infected via live animals kept to provide fresh meat at home, demonstrating the risk to humans of zoonoses that can jump species. The virus was later named Ebola following a related outbreak at a hospital in Kinshasa. During the 1980s, another new virus, HIV, was also linked to re-used syringes and needles at a paediatric hospital in Romania, as well as to the use of pooled gammaglobulin to immunize orphans. In 1998, the importance of good animal husbandry was demonstrated by an outbreak of Rift Valley Fever in the Sudan, due to the failure to vaccinate cattle, in turn related to shortage of the vac-

cine, illegal trading of unvaccinated cattle and flooding, which favoured the mosquito vector. The emergence of SARS (Severe Acute Respiratory Syndrome) in Hong Kong in February 2002 was traced eventually to a zoonotic corona virus that had jumped species. The main reservoir was thought to have been civets, used in cooking in China: the index case had travelled to Hong Kong, where several people staying at the same hotel contracted the infection. The virus spread further by human contact to become a global outbreak, contained by July 2003.

Another way in which humans can help 'Nature's Cookbook' is in the increasingly successful campaign to eradicate poliomyelitis: the oral vaccine carries a small risk of vaccine associated paralytic polio. With dwindling epidemics of polio and three

WHO regions now free of the virus, there may soon come a time when the earlier Salk injectable vaccine would be a safer choice – but its expense will limit its use and highlight the problem of access to health interventions.

After Dr Heymann's excellent talk of these past decades of discovery, there was support for the idea of establishing an International Pumphandle Day to give more attention to Nature's cookbook – and the value of interventions. Dr Heymann joined members at the customary celebration of Dr Snow's pumphandle intervention at the John Snow Pub.

A more detailed account of this lecture was published in the journal *Public Health*¹ and the slides are available on the Society's website.

1. *Public Health*. 2009 Dec;123(12):814-6

Encounters at the Pub

Members will be aware of the Society's constitutional encouragement to visit the John Snow Pub on Broadwick Street on any visit to London. The Pub's new managers, Andy Large and Amy Dunne, welcome members.

As a consequence of the Society's growth, one often finds other members from around the world on a visit to the Pub. One way to make such contacts is by asking for the current guestbook (normally kept behind the flap in the ground floor bar). If it is not there, it is most likely with a member, probably in the upstairs bar. You are encouraged to seek them out and make new friendships with your many colleagues

Facsimile photocopies of old guestbooks are kept in a cabinet provided by the Society, in the upstairs bar. Should members wish to browse these old books, they should request the key from Andy or Amy, or from whoever is behind the bar. Once again we note with sadness the disappearance of the first guestbooks, covering the 1960s and 1970s – should anyone learn of their whereabouts, please encourage their return to the Society and Pub.



Amy Dunne and Andy Large, new Managers of the John Snow Public House in Soho, welcome Society members



The Heidelberg chapter gathering around the statue of Ignaz Semmelweis situated in the Botanical Garden on the University Campus, some of the members proudly displaying their mugs. It may be possible to guess the identity of the one on the statue!

Heidelberg Chapter

In Heidelberg, Germany, an outbreak of John Snow Society membership has been noted. The index case appears to have been Sabine Gabrys, a suspected super-shedder who contracted the condition during a recent period studying epidemiology at LSHTM, where she may have been responsible for a series of smaller outbreaks. The first new case in Heidelberg occurred in a class of Masters students in International Health that she was teaching. Interesting to note, membership of the Society was associated with top marks in the epidemiology exam (though we don't claim causality, confounding might be at play). Subsequent waves of membership were triggered by imported mugs from London. Physical presence of mugs thus appears to increase transmission probability. Currently, the outbreak amounts to 14 new members, ranging from students to professors and originating from eight different countries - which promises further dissemination around the globe.

Membership, email addresses, chapters and meetings

Membership in the Society continues to grow, with approximately 200 now joining every year, and almost 2000 names on our database. Given our lifetime membership policy, and the possibility that some honoured members may have failed to notify us of their decease, not all those colleagues are still with us (we also recognise we have no way to confirm how many mugs are still intact). We expect approximately 300 emails will bounce when this Broadsheet is sent out. *Members are again reminded of the importance of informing the Society of any change in email address....*

New chapters continue to appear – most recently in Heidelberg – and meetings are known to be held in extraordinary places, as shown on the next page. We encourage members to keep us informed of such activities in order that they can be recorded properly in our annual newsletter.

John Snow Award by Epidemiology Section of APHA

At the annual conference of the American Public Health Association in November 2009, Dr Ros Stanwell-Smith was delighted to have the privilege of making the presentation of the John Snow Award to Dr Richard Kaslow, an epidemiologist with a distinguished career including research into the immunogenetic determinants of AIDS and other infectious and immune diseases. The John Snow Award is given each year to honour major contributors to epidemiology and public health.





Snow – the movie

A short film telling the Soho cholera story, ‘Snow’, has just been shot in Los Angeles. The writer/director, Isaac Ergas, was inspired by Dr John Snow’s work while studying for a MPH and the project was funded by the Sloan Science Foundation, in collaboration with the School of Cinematic Arts at the University of Southern California and Dr Larry Kushi, a research scientist at Kaiser Permanente. Using a volunteer crew of 75 and 20 actors, the filming took nine days and final editing is in progress. The film will be submitted to film festivals with screenings expected from February next year and the director plans to make it available online in due course. Ergas and his co-writer/producer Jay New hope that investors will see the potential for a feature length version of the story – it already has a Hollywood ring to it with Snow challenging “the city’s elite to expose the ugly truth about London’s water supply” to become the “Father of Modern Epidemiology”. Reviews from John Snow Society members are eagerly awaited!

From the Society’s Scrapbook



Barry Bloom celebrates his membership at the Pub



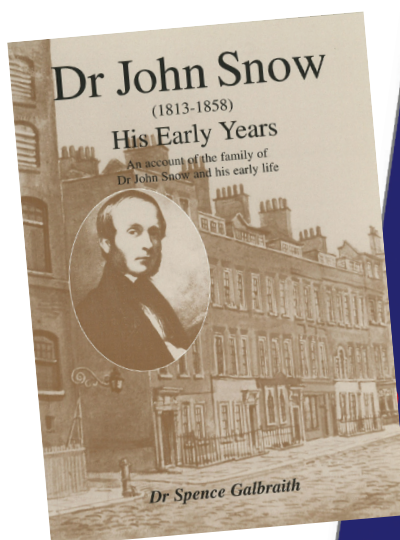
David Heymann enhancing his magnetism from the red granite kerbstone marking the site of the pump



Corinne Merle and Babis Sismanidis take advantage of our quorum rule, for a JSS meeting on Kilimanjaro

Exclusive to JSS Members

The ever popular silk ties are still available to members for £16 (£12 if collected in person). The Society also offers silver pump motif lapel pins, mugs and the book “John Snow: His Early Years” by Dr Spence Galbraith. Discount is available for bulk purchases. Please contact johnsnowsociety@rsph.org.uk for more details.



Hyperinfectivity and the cholera near Golden Square

The outbreak near Golden Square began “in the night between the 31st August and the 1st September” 1854, and resulted in at least one hundred and ninety seven deaths among cases with onset on the 1st and 2nd of September. We can only guess at the case fatality rate associated with cholera at this time but there must have been many more cases – truly an explosive outbreak. If one looks at the map in Snow’s On Cholera then it is apparent that there was a particularly large number of deaths (18) at the fourth house from the corner, near where the pump stood on Broad Street.¹ We do not have denominator data but this was clearly a badly hit household. Codeco and Coelho have pointed out that this explosive nature of cholera outbreaks is surprising given that a million organisms are needed to cause infection in volunteers.² It is also notable that John Snow commented that on the evening of the 3rd September when examining the water from the pump “I found so little impurity in it of an organic nature, that I hesitated to come to a conclusion.” So why so explosive?

Codeco and Coelho point out the work of Merrell³ and colleagues in mice suggesting that *Vibrio cholerae* arising from human faeces are much more successful at infecting the small bowel than vibrios coming from in vitro cultivation. So gut passage appears to confer “hyperinfectivity”, a feature that is lost if the organism is outside the gut for 18 hours. Mathematical modelling assuming this variation in infectivity suggests that explosive outbreaks of cholera can be expected where communities have both poor hygiene and contact with recently shed bacteria.⁴ So does this explain the explosive nature of the outbreak near Golden Square? It seems unlikely that the pump water contained very recently shed organisms and more likely that much of the explosive nature of the epidemic was due to faecal-oral transmission in the domestic setting – as we can see in that fourth Broad Street house. But it would also be good to see some empirical confirmation of “hyperinfectivity” in a modern outbreak.

Andy Hall

1. Snow J. On Cholera. Second edition, 1855. Reprinted by Hafner 1965.
2. Codeco CT, Coelho FC. Trends in Cholera Epidemiology. Plos Medicine 2006, 3(1) :e42
3. Merrell DS et al Nature 2002; 417:642-5
4. Hartley et al Plos Med 2006;3:e7

News from New Zealand

Ross Lawrenson (FFPH) and John Moodie (FFRAC) presented papers on “John Snow - the epidemiologist” and “John Snow - the anaesthetist” to researchers at the Auckland Medical History Society on 3rd September 2009. The meeting was well attended by more than 70 members, and members of the Society related comments and memories of their teaching about John Snow and their contacts with the John Snow Pub!

Veronique Gibbons (John Snow Society, LSHTM alumni) made sure of a visit to the John Snow Pub on her side-trip to London in July 2010 after attending the 2010 European Educational Programme in Epidemiology in Florence, Italy.

The memory of John Snow is alive and well in New Zealand.

John Snow Committee

Nominations sought from young enthusiasts

According to our constitution, the Society’s policies are set by a Steering Committee, and proposals are placed before the Annual General Meeting, which takes place at the Pub, following the annual Pumphandle Lecture.

Current Committee members are: Prof Paul Fine (Hon Pumphandle President), Dr Ros Stanwell Smith (Hon Pumphandle Secretary), Prof Sandy Cairncross, Dr Mary O’Mahony, Prof Jimmy Whitworth, Dr Dilys Morgan, Dr John Watson, Dr Adrian Padfield, Prof Andy Hall. Members are appointed for three years, terms are staggered, and at least two current members step down each year (DM and RSS in 2010). Members standing down may put themselves forward for re-election.

Nominations are invited for membership on the Committee. Only Society members in good standing (with an intact mug*) are eligible. Nominations from young enthusiasts are encouraged. A valid nomination will consist of a statement of no more than 54 words by the nominee, indicating eagerness to serve and vision for the Society. Nominations received by the Society’s secretariat (lhay@rsph.org.uk) by 5th September will be eligible for vote at the AGM.

** Members are reminded that broken mugs (and hence membership standing), and lost membership cards, may be replaced at a cost of £5 and £2 respectively (plus postage).*

Conference

Legionnaires’ Disease: Through the Looking Glass

Tuesday 16th and Wednesday 17th November 2010
28 Portland Place, London, W1B 1LY

Even though it’s been over 30 years since the first recognised outbreak of Legionnaires’ Disease, there are still many aspects of this infection that are not understood. This RSPH conference will provide essential updates on clinical and microbiological diagnosis, the emerging epidemiological trends and question and review the effectiveness of control and prevention policies for legionella infections. Internationally recognised speakers will share their experiences of managing outbreaks in hospital and health care settings, hotels, ships and communities. Looking to the future, information on how London is preparing for the control and prevention of legionella infections associated with the 2012 Olympics will also be presented. For more information, please contact Lizzy Hay.



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