

Summer 2021

29th Pumphandle Lecture 2021

“COVID-19: Lessons Learned and Remaining Challenges” by Anthony Fauci



Wednesday
8th September
5:30pm London time

Because of the Covid-19 crisis,
the lecture will be delivered
remotely.

Anthony S. Fauci, MD, is Director of the National Institute of Allergy and Infectious Diseases (NIAID) at the U.S. National Institutes of Health, where he oversees an extensive research portfolio focused on infectious and immune-mediated diseases. He has served the American public health sector in various capacities for more than 50 years, including as Director of NIAID since 1984, and has acted as an advisor to every U.S. President since Ronald Reagan. As the long-time chief of the NIAID Laboratory of Immunoregulation, Dr. Fauci has made many seminal contributions in basic and clinical research and is one of the world's most-cited biomedical scientists.

He was one of the principal architects of the President's Emergency Plan for AIDS Relief (PEPFAR), a program that has saved millions of lives in low and middle income countries, and has been a prominent figure in the world's response to COVID-19.

The lecture will begin at 5:30pm and close at 7pm. This will be followed by the Society's Annual General Meeting (AGM) from 7pm to 7:30pm. All Society members are encouraged to attend the AGM. The lecture will be recorded and placed on the Society's website.

Information on how to attend the lecture is available at the following link:
www.lshtm.ac.uk/newsevents/events/john-snow-society-pumphandle-lecture-2021

28th Pumphandle lecture 2020

“Africa CDC – A New Public Health Order” by John Nkengasong

The 28th annual Pumphandle Lecture was delivered on Thursday 10th September 2020, by Dr John Nkengasong, founding Director of the Africa Centres for Disease Control and Prevention. Because of the Covid-19 pandemic, the lecture was delivered remotely, from Addis Ababa, Ethiopia, to a worldwide audience of more than 300 Society members and guests.

The Speaker began by tracing the dramatic changes underway in Africa over recent years exemplified by expanding population, political commitments towards free trade and movement, and ambitious targets for economic growth by 2020 and 2063. Alongside these changes, the continent faces multiple health problems, including an increasing frequency of new and emerging infections, despite limited health institutions, workforce and budget.

The Africa CDC was launched in 2017 to meet these challenges, and has set an ambitious goal of a “New Public Health Order”, involving (1) the establishment and strengthening of continental and national public health institutions, (2) the development of a substantial public health workforce, (3) establishment of local manufacture of vaccines, therapeutics and diagnostics, and (4) the development of public-private-philanthropic partnerships. Each of these goals was illustrated with impressive examples of accomplishments in recent years, including the creation of Regional Collaborating Centres in North, West, Central, East and Southern Africa, which have in turn made major contributions in the response to the ongoing Covid-19 crisis.



The speaker answered a series of excellent questions from the remote audience, and the vote of thanks was proposed by Dr Dilys Morgan. Removal of the pump handle is a tradition of the Society, and so, because of the remote delivery of the lecture, Dr Martin Muita constructed a replacement pump from waste materials especially for the occasion. The Speaker was invited to remove its handle, which he effortlessly did, to close the proceedings. A recording of the lecture is available on our website: www.johnsnowsociety.org

What if?

The Greatest Missed Microscopical Opportunity?

Paul Bingham

Members familiar (as all should be...) with John Snow's magnum opus "On the Mode of Communication of Cholera" (second edition, 1855) will know that Snow attempted to find the responsible agent: "The water at the time of the cholera contained impurities of an organic nature, in the form of minute whitish flocculi visible on close inspection with the naked eye." He requested a colleague, Dr Arthur Hill Hassell, to examine water of the Broad Street pump:

"Dr. Hassell, who was good enough to examine some of this water with the microscope, informed me that these particles had no organised structure, and that he thought they probably resulted from decomposition of other matter. He found a great number of very minute oval animalcules in the water, which are of no importance, except as an additional proof that the water contained organic matter on which they lived..." (p.52)

The fascinating story of the search for, and ultimate identification of, *Vibrio cholerae* (by Filippo Pacini and later Robert Koch), has now been told by one of our long-standing members, Dr Paul Bingham, and published in a little-known journal, the Newsletter of the Postal Microscopical Society. This article is now available on the Society's website, at: www.johnsnowsociety.org

Chapters

According to our Constitution www.johnsnowsociety.org, we have not given detailed guidance on Chapter formation, but two statements are particularly relevant: "Eligibility to join the Society is defined as wishing to celebrate the memory of John Snow." And: "Members of the Society are encouraged to establish informal groups, chapters (divisions) and meetings in their own countries and localities. Local groups may levy an additional fee to finance their local activities."

Another principle enshrined in the Society's Constitution is that: "A John Snow Society meeting can be declared wherever and whenever at least two Members of the Society are present. A photographic record of meetings and events may be sent to the Secretary for inclusion in the Society's archives."

We are aware of at least 14 "chapters" that have been organised in various places over the years, including in Kampala Uganda, Maputo Mozambique, Norway, Iceland, Finland, Auckland New Zealand, Heidelberg (now Berlin) Germany, Bethesda Maryland, San Francisco California, Hanover New Hampshire, Texas and South Carolina in the USA, and Sydney and Melbourne in Australia. The society would welcome hearing about the formation of more chapters and will gladly receive news from chapters for inclusion in this Broadsheet newsletter.

COVID-19 has obviously affected Chapter activity, but we have received reports from five honoured Chapters 'round the world', all linking the ongoing coronavirus pandemic with the tradition of John Snow.

Continued on next page >





Germany

Sabine Gabrysch, Sophie Gepp, Laura Jung, Nicholas Kyei and Amanda Wendt

The epidemic spread of planetary health awareness

In the midst of the COVID-19 pandemic, we observed an epidemic spread of an inspiring narrative among health professionals and their contacts in Germany, with links to LSHTM and elsewhere: Planetary Health, the idea that human health is inextricably linked with all life forms and the whole living planet Earth. While already prevalent in other countries, the first outbreak in Germany could be traced to an index case attending a meeting in Berlin in late 2017 when the German Alliance for Climate Change and Health (**KLUG**) was founded. Spread continued slowly but steadily, picking up pace with a conference session in 2019, the formation of highly infectious change agents at a leadership workshop in Munich and mixing with the For Future movement, leading to the more transmissible [healthforfuture.de](https://www.healthforfuture.de) variant.

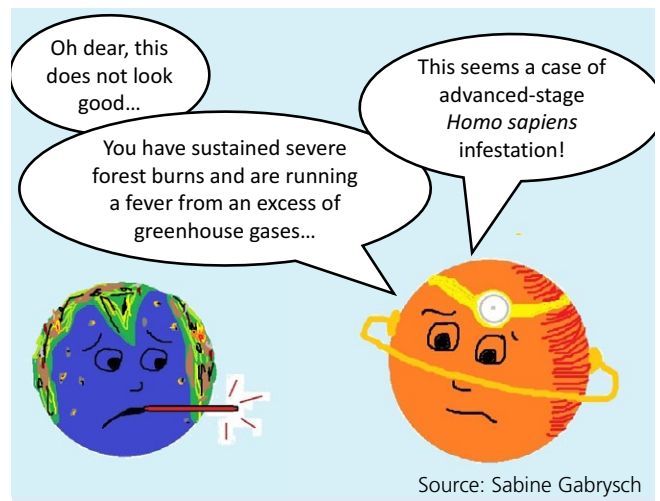
Presentations and teaching could be identified as sources of further infections. During the COVID-19 lockdown in 2020, the online [planetary-health-academy.de](https://www.planetary-health-academy.de) emerged as a superspreading event with thousands of contacts each session, facilitating the formation of satellite hubs in over 50 German cities and leading to local outbreaks of creative activities. Subsequent seasons of the series in English and the continued availability of all talks online contributed to a propagated outbreak in many other countries, alongside [invivoplanet.com/2020-meeting.html](https://www.invivoplanet.com/2020-meeting.html) and [planetaryhealthannualmeeting.com](https://www.planetaryhealthannualmeeting.com).

Within Germany, the infection of two well-known public communicators contributed to spreading the idea into previously untouched segments of the German population and parliament: An infected comedian-physician founded the [stiftung-gegm.de](https://www.stiftung-gegm.de), which works towards a healthy Earth and healthy humans, and published a humorous book on the topic.

When the contagion spread to an astrophysicist and science communicator, it resulted in the formation of the Munich Science Communication Lab on Planetary Health, launching in late July at sites.ifkw.lmu.de/mscl. Activities are underway to boost the reproductive number even further and reach a social tipping point before the German elections. Watch this space, or rather, join in and infect at least two others, wherever in the world you are!

Talk on Planetary Health by Sabine in English: youtu.be/zdTOTIBpa-o

More talks in English at [planetary-health-academy.de/materials/](https://www.planetary-health-academy.de/materials/)



Source: Sabine Gabrysch

Could the increasing awareness that human health is linked to the health of planet Earth help make *Homo sapiens* less virulent?



Maputo Mozambique / Melbourne Australia

Mohsin Sidat / Julie Cliff

Mozambique is now into its third wave of Covid-19, more severe than the previous two

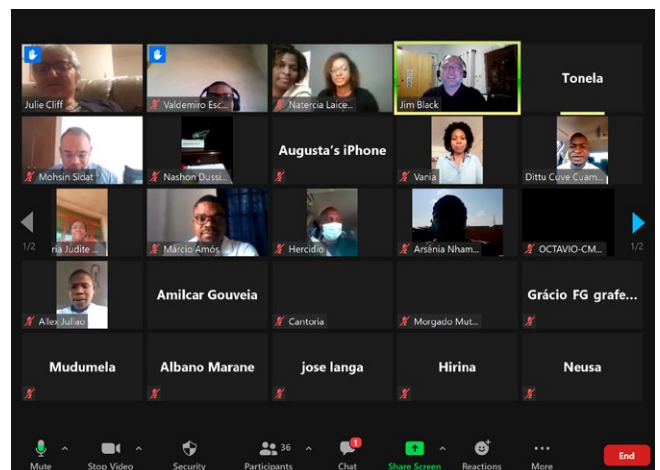
The Maputo chapter of the John Snow Society was faced with the impossibility of holding a physical meeting given local Covid restrictions and the separation of members between Maputo and Melbourne.

We could not even fulfil the requirement that a John Snow Society meeting can be declared whenever and wherever at least two Members of the Society are present.

Our solution was a Zoom meeting, held on 17th July, 2021. In Melbourne, Dr Jim Black presented on the use of sewage sampling for mapping and surveillance of Covid-19. He illustrated how this followed in the tradition of John Snow.

Thirty four participants, mostly young researchers, from Maputo joined, the largest attendance ever at a Maputo John Snow Society meeting. A lively discussion ensued.

Although we missed the physical get together, our virtual meeting opened new possibilities. Covid-19 forced us to adapt. We suggest that virtual chapter meetings be considered in the future.



Screen shot of Maputo Chapter John Snow Society meeting, 17th July 2021.

Message from the Editor of the IJE (our Sister Journal!)

OF MICE AND EPIDEMIOLOGISTS

Australian epidemiologists would rarely make the average Aussie's guest list for a barbecue. Despite their lack of interpersonal skills, they have now been challenged socially by the media demands of the pandemic. Donna Lu, a science writer for The Guardian Australia, wrote on 4th July about the experiences of some of our best-known commentators: Catherine Bennett, inaugural chair in epidemiology at Melbourne's Deakin University, Professor Mary-Louise McLaws, a senior epidemiologist at the Sydney's University of New South Wales, Professor Raina MacIntyre, Professor of Global Biosecurity at the same University, and Professor Sharon Lewin, the inaugural director of the Melbourne's Peter Doherty Institute for Infection and Immunity.

All have been joined by Australian Broadcasting Corporation's Dr Norman Swan. A former paediatrician with a long media career, Norman features epidemiologists and infectious disease specialists to explain trends in cases, vaccine roll-out and areas of controversy. Professor Bennett recalled the first time she was publicly recognised – in a supermarket. "A woman called out, acknowledging she'd seen me on TV. She screamed out, 'I love you!' While it happened progressively, it's still a very strange thing." Professor McLaws told Lu, "People will come up and say, 'Thank you very much for talking to us apolitically', or 'You make me feel calm about what's happening'".

Lu quotes Professor Sharon Lewin. "My role as a scientist is to ensure that the government and leaders have access to the best synthesis of science at the time, and for their policy to be influenced by the science. There's been a real respect for expertise in this country."

Although the restrictions on movement and a faltering vaccination roll-out have led to restlessness, epidemiology's contribution has generally been well received. With organised public health capacity, the use of testing, tracing, distancing, quarantine and face-masks, we have thus far (early July 2021) had as few as 31,000 confirmed cases and 900 deaths in our population of 25 million. To date, Indigenous Australians have not been more seriously affected. The politics are simply put: incumbent parochial State governments strongly seek re-election. Other state and federal politicians note this and react accordingly.

Australia appears to be out of favour with the gods. We are suffering from droughts, floods, fires and plagues. Australia is usually in drought every 18 years, but rain has been especially scarce since 1994. La Niña brought generous relief in 2011, but dry conditions returned in mid-2013. New South Wales was 100% in record drought in 2019. Horrific bushfires followed, and then flooding rains in February 2020. Then Covid arrived. The conditions at the end of 2019 when the drought broke were ideal for mice to breed beyond their season, which they did – devouring crops, stored grain and hay – and morale. In March this year, according to Wikipedia, 'mice stripped food and other items from the shelves of a supermarket in Gulargambone, 300km north west of Sydney.'

So, there you have it. Humans strip the supermarket shelves of toilet paper when Covid lockdowns are announced and plagues of mice do likewise when they run out of wheat. What a splendid time to be an epidemiologist – loved by the populace and with so much work to do we can hardly cope. John Snow, eat your heart out!





New Zealand

Ross Lawrenson (Professor of Population Health, University of Waikato)

Update from New Zealand

The last year in New Zealand has been very different to most countries – we have had minimal community cases of Covid and we were ranked second after Hong Kong in the Economist’s “normalcy index”. This is because our politicians have listened to our scientists and taken appropriate action to eliminate the Covid-19 virus. Our epidemiologists, pandemic modellers and infectious disease experts have become household names appearing daily on TV. Last year I mused on whether we would have a Covid vaccine available for use in 2021? – we do, but at the end of April New Zealand lay second bottom in the OECD for the number of vaccinations actually administered. The slow roll-out has been driven by the lack of supply – with the pressure on manufacturers to deliver to countries where health services are being challenged. The New Zealand population have been remarkably tolerant – taking the approach that the rest of the world have a greater need than we do. To date most priority groups – health workers, border workers and those living in residential care have been vaccinated but 90% of us are still waiting. Currently polls suggest 77% of adults say they are likely to have the vaccine. Maori have been prioritised for vaccinations but worryingly only 68% say they are likely to get vaccinated. For those saying they are unlikely to get vaccinated, the commonest reason is that they do not see the need (which make sense as we have eliminated the virus). But pressure is also mounting to open the borders for tourists. That is our biggest conundrum. With no community cases for 4 months we have tried opening with Australia – but with the outbreaks in Sydney and Melbourne the border has closed again. Similarly opening the borders to Pacific countries has started, with the Cook Islands (a great place for a break) but an outbreak of Covid in Fiji has dampened the enthusiasm for opening to others.

It would seem that if 20 to 30% of the country remain unvaccinated then the political risk of allowing Covid into the country will be high. The Government are looking at building quarantine facilities rather than relying on using hotels, which suggests that our borders are to be shut for well into 2023 - which is an election year. Which brings me to other matters – in November 2020 Jacinda Ardern and the Labour party won a comprehensive victory. This has allowed the Government to push ahead unfettered on a number of reforms – in particular of the health system. So for the first time in 20 years the system is facing major upheavals. The White paper has outlined the major changes – the health boards will be scrapped replaced by a single national health agency, the formation of a Maori Health Authority which will advise on the delivery of services and will also have a commissioning role. The other reform of interest to those of us in public health is the announcement of a Public Health Agency which will be embedded in the Ministry of Health “to focus on strengthening health protection and health promotion and to improve public health knowledge, research and intelligence” The Minister has announced his intention to establish an expert advisory committee on public health – a reflection on how important this government has seen the need for expert scientific advice when making policy. Of course the Government have other challenges - climate change, a housing crisis and a promised extra \$1.9 billion for mental health remaining largely unspent. And to cap it all my own Waikato health board serving 450,000 people has been brought down by a ransomware attack! When thinking of 2022 who knows what new challenges will be thrown our way – but no doubt we will continue to follow our Kiwi motto “she’ll be right”.



Texas, USA

Marty Gibson and Betty Bowles

News from The Texas Chapter of the John Snow Society.

When we reflect on this past year and the effects of a major pandemic, we are once again reminded of how important water is to our well-being. Clean safe water has played an important role in the fight against COVID-19. Two billion people in low and middle income countries do not have adequate access to soap, water, and sanitation. Those are important tools in reducing the spread of COVID-19 (Denham, 2020). Clean drinking water and adequate hydration are also important to prevent dehydration and to keep secretions thinner for proper clearance from the lungs (ASPEN, 2020). On World Water Day, the theme was that water is more precious than ever in the global fight against the coronavirus pandemic. Wastewater testing may play an important role in the in COVID-19 control by providing an early indication of a coronavirus outbreak, even in asymptomatic communities.

Virus may be detected up to one week before cases start to rise. In one study in a dormitory in Arizona, they were able to estimate how many people out of the 327 residents were infected. With this information they can sample residents and remove those affected to prevent spread (Maya, 2020). Daniel Nix, a member of the Texas Chapter of the John Snow Society has been instrumental in testing wastewater and ensuring that north Texas residents have access to our most precious resource in the fight against COVID-19.

ASPEN (2020). Nutrition and hydration: Key weapons in the fight against COVID-19. Am Soc Per Ent Nut.

Denham, R. (2020). The important role of water in the fight against COVID-19. Rotary International.

Maya, A. (2020). A secret weapon in the fight against COVID-19. WaterWorld.



Special reports:

Dr John Snow walk... in York



Members will be interested to learn that a new mixed-use housing development in John Snow's home city is celebrating his life and legacy by naming a walking route through the development "Dr John Snow Walk"! Hudson Quarter, located opposite the railway station in York, is a short distance from North Street, where Snow was born and lived until he was around 14. The development features 127 apartments and 39,000 sq ft of Grade A office space, set around a new courtyard and landscaped grounds, as well as the new walkway through the site linking the railway station with the Micklegate area of the City Centre.

Neil Sinclair, CEO of developers Palace Capital plc commented: "We wanted to celebrate the life and achievements of Dr John Snow as he was a pioneer in public health and grew up so close to Hudson Quarter. His legacy is even more relevant, given the current Covid pandemic situation and the efforts of health authorities around the world to curtail its effect. This new walking route is a fitting way to raise the profile of Dr John Snow, an international figure in the fields of anaesthesia, epidemiology and public health, in the City where he was born."

The development was completed in April 2021, with the first commercial tenants and residents already calling Hudson Quarter home.

Dr John Snow Rose

Society Chairman, Prof Jimmy Whitworth, has provided this photo of a Dr John Snow Rose in his garden in north London.

The **Dr John Snow Rose** was bred by the renowned Douglas Gandy, near Lutterworth in Leicestershire. He first introduced this rose in 1979 and named it after being inspired by reading the history of John Snow. He made contact with the John Snow Society to let us know about it and made his roses available at a discount. Sadly Douglas died about 10 years ago and his company closed. As far as we know this rose is no longer available for sale. Should anyone know otherwise, please inform the Society.



Dr John Snow Rose

Media items

- Several members have noted that the Prof Chris Whitty, Chief Medical Officer of England and Chief Medical Advisor to the UK government, often wears a John Snow Society tie in televised interviews... A photo of this went viral on the Society's Twitter account. How appropriate!
- The **Society's website** has been revised, with much interesting material.
- A **new interactive map** of the 1854 Broad Street outbreak is available on line
- **Episode 2 of the BBC4 series on maps** included a discussion of John Snow's maps (minutes 21 to 26)



Society Matters:

Call for nominations to the John Snow Society Steering Committee

The John Snow Society Steering Committee ("J3SC") met on 11 June 2021, continuing its work to manage the Society and make it sustainable into the future. The current committee comprises Jimmy Whitworth and Oliver Cumming (Co-Chairs), James Hargreaves and Paul Fine (Co-Secretaries), John Watson and Sebastian Funk Co-Treasurers), Stefan Flasche (Web Content Officer), Dilys Morgan, Marta Tufet, Charlotte Flynn, Kate Russell and Lauren D'Mello-Guyett. Five Committee members reach the end of their 3-year terms this year, and one (OC) has decided not to apply for another term. According to our Constitution, the J3SC can hold up to 12 members, in addition to founding members (JWh,DM,PF) and thus there are at least four places open this year.

We invite applications from members in good standing (with intact mug and membership card). Following our constitution (johnsnowsociety.org) a valid application should be received by the Society by 1st September, and will consist of "a statement of 54 words describing commitment to - and vision for - the Society. Applications will be considered by the J3SC for ratification by Members present at the AGM, unless it is necessary to conduct an email poll if suitable applicants exceed vacancies." Because of the COVID-19 pandemic, arrangements for ratification and induction of new J3SC members will be presented at the forthcoming Pumphandle Lecture.

Exclusive to JSS Members

A new 12th "COVID edition" mug is now available, with John appropriately masked and an internal virus. Free to new members, additional mugs can be purchased if you wish to add to your collection or as insurance policy against breakage (which, according to our constitution, deactivates your membership).

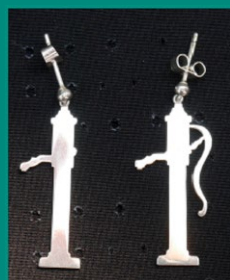


Members can purchase up to 2 additional mugs. The elegant pump-design silk ties (each has a single pump without handle) and the illustrated book by Dr Spence Galbraith (John Snow: his early years) are also available for purchase. See web site for details.

JSS Earrings: Limited Edition

A limited supply of solid silver earrings depicting the Broad Street pump (with and without the handle) are now available for members only.

Cost £60. Please email johnsnowsociety@lshtm.ac.uk for orders and enquiries.



Reminder to Members – update your email address

Our cumulative membership total, to whom we will send notice of this Broadsheet, now exceeds 4000. Unfortunately, more than 25% of emails bounce. We suspect that a few members may have crossed the great divide, but we also suspect that some have merely changed their email addresses. Or some email addresses may have been illegible or otherwise in error from the start. So – if you are/have been a member, but do not receive one email a year from us – please let us know your appropriate (personal generally better than job-related) email. Or if you know of a member who has not heard from us – encourage them to contact us and update their email address.

Keeping in touch

The John Snow Society contacts all members once per year, via email, with news about the Society and details of the annual Pumphandle Lecture.

For more interactive participation in the Society, please join the over 2,000 like-minded and follow us on **Twitter** (@JohnSnowSociety)



Contact details for the John Snow Society

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