

30th Pumphandle Lecture 2022

“The imperative of climate action for health” by Andy Haines



John Snow Lecture Theatre
Wednesday
28th September
5:30pm London time

Andy Haines is Professor of Environmental Change and Public Health, in the Centre on Climate Change and Planetary Health, at the London School of Hygiene & Tropical Medicine. He was formerly a family doctor and Professor of Primary Health Care at UCL. He developed an interest in climate change and health in the 1990's and was a member of the Intergovernmental Panel on Climate Change for the 2nd and 3rd assessment exercises, and review editor for the health chapter in the 5th assessment. He was Director (formerly Dean) of the London School of Hygiene & Tropical Medicine from October 2001–2010. He chaired the Scientific Advisory Panel for the 2013 WHO World Health Report, the Rockefeller/Lancet Commission on Planetary Health (2014–2015) and the European Academies Science Advisory Council working group on climate change and health (2018–2019). He currently co-chairs the Inter-Academy Partnership (140 science academies worldwide) working group on climate change and health and is also co-chairing the Lancet Pathfinder Commission on health in the zero-carbon economy. He has published many papers on topics such as the effects of environmental change on health and the health co-benefits of low carbon policies. His current research focuses on climate change mitigation, sustainable healthy food systems and complex urban systems for sustainability. He was awarded the Tyler Prize for Environmental Achievement in 2022.

The lecture will begin at 5:30 pm in the John Snow Lecture Theatre at LSHTM, and close at 7:00 pm. This will be followed by the Society's Annual General Meeting (AGM) from 7.00pm to 7.30pm. All Society members are encouraged to attend the AGM, either in person or remotely. The lecture will be recorded and placed on the Society's website.

After the AGM all members are warmly invited to repair to the John Snow public house in Broadwick Street, Soho, a short walk from LSHTM.

Please note that you can join this event in person or you can watch the live broadcast. You can join the live broadcast by following this link: lshtm.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=20010fb7-93c0-4770-9bcb-aef40133644e

29th Pumphandle lecture 2021

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

The 29th annual Pumphandle lecture was delivered on Wednesday September 8th 2021 by Dr Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases at the US NIH. The lecture was delivered remotely to more than 2,000 participants worldwide.

This was a tour-de-force summary of the current science around SARS-CoV-2 epidemiology and prevention, and COVID-19 disease and treatment. Dr Fauci began by describing recent outbreaks of the coronaviruses causing SARS and MERS, and moved on to describe the emergence and spread of SARS-CoV-2 globally and in the US since 2020.

Continued on next page >



He described the main clinical manifestations of infection, explained some of the key guidance on management of those with COVID-19, and described the US Government's investments to develop new medicines against diseases of pandemic potential.

He celebrated the incredibly fast development and evaluation of safe and efficacious vaccines with different mechanisms of action. More soberingly he described some of the emerging variants of SARS-CoV-2, and their changing transmissibility, clinical manifestations and susceptibility to vaccines.

Dr Fauci answered questions from the international audience, addressing key issues at the time of the lecture. He argued that "boosters" would be an essential part of the emerging landscape and supported the need for paediatric vaccination. When asked whether he thought it was possible both to

continue to expand access to vaccines in richer countries (in particular, the roll-out of boosters) and to work toward "global vaccine equity", he replied that he was an optimist, and that he believed this was possible, including by richer countries such as the US donating doses and supporting increased capacity for production. Through this, "in a reasonable time we could supply vaccines to the rest of the world".

After a vote of thanks delivered by Dr Dilys Morgan, expressing warm appreciation for his lecture, Dr Fauci followed tradition by removing the handle from a pump provided by the society for his office.

A recording of the lecture is available on the Society's website: www.johnsnowsociety.org

A message from the co-chairs of the John Snow Society: we need your views

Jimmy Whitworth and James Hargreaves

The year 2022 sees the 30th annual Pumphandle Lecture, and the 30th Anniversary of the John Snow Society. Over those 30 years the Society has acquired over 4000 members, and the 29 lectures to date have seen some of the biggest names discuss the most important issues in epidemiology and public health. It is a much-loved institution across the public health community. The Society has always sought to achieve a range of goals; on the one hand to host one of the most prestigious public health lecture series in the world, and on the other, as our Constitution describes, "to have fun and benefit from networking opportunities."

The Society is in very good health in 2022—financially and reputationally. Our bank balance is stronger than it has ever been (a cause for celebration because it means there is no financial impediment to securing the best speaker every year, and also allows us to replenish our stock of members' mugs periodically). The 2021 Pumphandle Lecture by Dr Fauci saw a total of 2341 unique viewers attend at some stage of the lecture, by far the biggest audience for any of the 29 Pumphandle lectures to date.

So, it is from this position of strength, and on the occasion of our 30th birthday, that we are launching a Consultation with the membership on the future direction that the Society should take. We wish to celebrate 30 marvellous years, and see a healthy Society delivering for a further 30 years and more.

As many of you will know, the Society was originally co-founded by five colleagues (Paul Fine, Mary O'Mahony, Dilys Morgan, Ros Stanwell-Smith and Jimmy Whitworth), who can serve as permanent trustees and several have sat on the John Society's Steering Committee ("J3SC") since its inception. They have been joined over the years by approximately 30 elected trustees of the Society, drawn from the membership, each serving 3-year terms (with many serving repeated terms) on the J3SC. The J3SC is the decision making and executive body of the Society, electing and approaching the Pumphandle Lecturer each year, running the Society's administration and developing the Broadsheet newsletter. We, James and Jimmy, as current co-chairs of the Society are launching this consultation on behalf of J3SC.

The Society faces challenges. The founder members are, ahem, approaching retirement age, and there will ultimately be a need to replace their energy and vision. With the growth of the society has come a growing administrative burden, for example managing memberships, posting mugs and a range of other tasks – and we would like to use this opportunity to offer our sincere gratitude to Professor Liz Allen and Deborah Curle for their support to the Society in their roles as Faculty Dean and Operating Officer at the Faculty of Epidemiology and Population Health at LSHTM which is the current host of the Society. We need to set the society's organisation on a secure footing for the coming years.

The decolonisation of global health agenda has also shone an important light on issues of diversity, representation and historical legacy in public health. Former Pumphandle lecturer, and society member, Richard Horton¹, called recently that "those who lead epidemiology and public health today ... might wish to reflect on the origins of their discipline, the histories they choose to ignore, the myths they prefer to propagate." While the COVID-19 pandemic has increased the visibility of epidemiologists and public health, it has also seen abuse of scientists and the spread of misinformation. As our 30th Pumphandle lecturer will no doubt describe, matters of planetary health and climate change threaten to dwarf all other considerations over the coming 30 years.

John Snow faced up to the major public health challenges around him, and his legacy of epidemiological method and public health action lives on. Please help us shape the future of the John Snow Society.

We want to hear from you. Please take 10 minutes of your time to fill in this questionnaire:

<https://forms.gle/wWtpxKmSiv1JE3od6>

We want to hear your views on what the society does, how it is organised, and where it should go next.

1. [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(22\)00312-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00312-9/fulltext)

Chapters

According to our Constitution (www.johnsnowsociety.org/constitution.html), 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 several honoured Chapters 'round the world, linking the ongoing coronavirus pandemic with the tradition of John Snow.



Maputo Mozambique / Melbourne Australia

Mohsin Sidat / Julie Cliff

Heterogeneity of water sources

In Mozambique, the dramatic impact of Covid-19 has lessened. The John Snow Society met virtually by Zoom, including participants from Mozambique and Australia on July 30th 2022. Dr Mohsin Sidat organized the presentation.

We were able to return to the theme of John Snow, presenting some preliminary results from a cross-sectional study of water supply and sanitation in Beira, a large provincial capital, where cholera epidemics are frequent. One aim of the study was to demonstrate the heterogeneity in water service satisfaction and access to water in low-income peri-urban neighbourhoods. The study was led by Courtney Victor of Emory Rollins School of Public Health and for analysis spatial statistics and regression analyses were used².

Although water access was increasing, inequity of water supply remained a concern. The study highlighted the lack of attention given to urban informal settlements when it comes to development of water supply. Describing this heterogeneity can guide the development of infrastructural solutions to reduce water access inequities.

One of the maps from the study is included (Figure 1). In this context 'unimproved' means traditional hand-dug wells, rivers, and other surface water sources. (Not unlike London in Snow's day.) 'Improved' refers to protected sources such as mains (piped) water or sealed, concrete-lined wells. Figure 2 shows a place where residents without access to their own piped water outlet have cut into a buried water pipe. The transfer of water risks contamination and the water source is 'unimproved'.

2. Victor C, Vega Ocasio D, Cumbe ZA, Garn JV, Hubbard S, Mangamela M, et al. (2022) Spatial heterogeneity of neighborhood-level water and sanitation access in informal urban settlements: A cross-sectional case study in Beira, Mozambique. PLOS Water 1(6): e0000022.

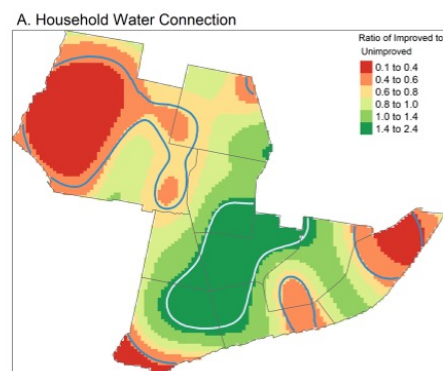


Figure 1: A map from the article illustrating the spatial heterogeneity of availability of water from 'improved' sources across the City of Beira.



Figure 2: Beira residents without an 'improved' source of water tapping into an existing pipe. Photo credit: Agostinho Muneme and Sandy McGunegill.

Greetings from the happiest country on Earth?

A Canadian friend sent me a link to an article published in the Guardian: "The world happiness report named Finland world's happiest country for fifth year running." Reading this in a foreign newspaper puzzles the average Finn. You mean this Finland, where we live? Surely, we can't be the happiest. Besides, a Finn doesn't need to be a statistician to know it is impossible that we win anything five times in a row. The report must have included one of these errors typical of epidemiological studies: either it failed to measure real happiness, or the average Finn was simply too depressed to answer – introducing a selection bias.

But what was the case definition of happiness in the report? In addition to personal assessment of wellbeing, the World Happiness Report includes economic indicators, social support, personal freedom, and levels of corruption. If happiness is defined like this, we're alright. In our mind, though, real happiness is clearly something else. Interviewed by Philip Rosenthal for the Somebody Feed Phil series on Netflix, even our prime minister Sanna Marin was hesitant about our happiness: 'Oh, well, yes, uh... It's not that we're always cheerful. It's to do that we have a good society...', she replied.

Finns can become anxious about international news media spreading information regarding our supposed happiness. It is as if we don't want people to come over here and be disappointed. Therefore, we would rather not talk about it (being silent comes naturally to us anyway!), until they find out it was due to measurement error. Before that happens, I must admit, we nervously browse through the pages of the World Happiness Report, looking for risk factors of happiness, fearing we might be exposed to them, and have to start smiling all the time or, in the worst case, small talking to strangers.

Indeed, our happiness is not laughing out loud, singing or dancing on the streets. We'd rather seclude ourselves to a cottage by water, heat up the sauna and skinny dip through a hole in the ice during the winter or immerse ourselves in the cool summer waters under the midnight sun. Even though we are surrounded by stunning nature, we always remember to remind ourselves and others that mosquitos still are a nuisance in the summertime. It's nice here – but far from perfect – or happiest!

There's clearly a difference between the Nordic countries, in self-esteem at least. I lived in Copenhagen for three years doing a postdoc and the Danes were often congratulating me for having the opportunity to come and enjoy their beautiful and lively Copenhagen, one of the most attractive cities in the world. Even if Helsinki also ranks as one of the most livable cities with a great work life balance, we tend to ask foreigners who live here whether they fell in love with a Finn or got a job offer they couldn't refuse, as if these were the only reasons for a foreigner to stay.

Many countries ranking last in the happiness report were war-torn, and the war in Ukraine is a stark reminder that the peace and quiet we so much love can be lost. Deep down, we Finns have always known it, hearing our grandparents tell the stories of the Winter War fought in 1939 – 1940 when the Soviet Union invaded parts of Finland. Despite territorial losses, we were able to maintain independence and rebuild a country that now ranks as the happiest on Earth. Latest polls tell us that most Finns would still be willing to defend Finland in a war, placing us on top in this ranking, too. Although we may hesitate to call it happiness, we have something here that we live and could die for.

Salvatore Pablo Lucia lectures

The San Francisco chapter co-hosted the 16th annual Salvatore Pablo Lucia lecture on May 22 2022. This lecture, which commemorates the legacy of Dr. Lucia, the first chair of the Department of Preventive Medicine at the University of California, San Francisco, has featured such stalwarts as Professors Martin McKee and James Hargreaves of the London School of Hygiene and Tropical Medicine. This year's lecture was a moderated discussion of the future of COVID-19 and featured Professor Peter Chin-Hong of the Department of Medicine at UCSF, Dr. Erica Pan, who serves as the state epidemiologist for the California Department of Public Health, and Professor Lee Riley of the School of Public Health at the University of California, Berkeley.

It was moderated by Professor George Rutherford, Head of the Division of Infectious Disease and Global Epidemiology in the Department of Epidemiology and Biostatistics at UCSF, and featured a broad discussion of among other things the likelihood of new mutations (high), introduction of new variants from zoonotic sources (high), how likely will the population embrace non-pharmacologic interventions over the long term (unlikely), how durable immunity appears to be either from natural infection or vaccination, and the future of vaccination. The session can be found at <https://ucsf.box.com/s/ztbo62p09joiq2e29pezdgeo3f0neua>

To receive notices of these annual lectureships, please contact Professor Rutherford at george.rutherford@ucsf.edu

COVID-19 – Not a heavy Snowfall in Australia

Australian health and health care have experienced somewhat less than their share of the global consequences of COVID-19. The effects have nevertheless been substantial.



Mounted police were used to detect lockdown-breaking behaviour at Sydney beaches by day. By night, helicopters with search lights patrolled the high-risk, poorer, ethnically diverse suburbs where rates were high, but immunisation low. Budgetary support for workers unable to do their jobs softened Covid's economic blow.

Defects in our systems, papered over prior to 2020, have come to light – at every level.

The ambulance system has carried the load caused by the unavailability of public hospital beds. Paramedics and nurses have managed cases 'on the ramp', in ambulances outside emergency departments, immunised, or not immunised at all – requiring hospital care.

The pressure on clinical services has led to private hospitals taking on an additional load of publicly purchased elective surgery which would otherwise be handled in public hospitals. Public hospitals remain overloaded with patients who would ordinarily be moved to lower-level accommodation after stabilisation and treatment.

The nursing home sector, bearing the long-term consequences of privatisation and low staff wages, was struck savagely. The newly elected federal government is committed to implementing the findings of a royal commission. It insists that nursing homes roster one registered nurse on duty 24/7.

Other cracks have opened – in general practice, which has contended with ambulatory and mild Covid patients, infection control, telehealth, immunisation, and, like the hospitals, depleted and sick staff. Long-standing Medicare reimbursement inadequacies have worsened with increased costs for personal protective equipment and, especially in rural and remote regions, workforce shortages have come into focus. Staff fatigue is widespread.

Australia's federation of six states and two territories manifests long-standing traditions of independence, each jurisdiction glued to its own way of managing public health. Patchwork surveillance and reporting systems caused frustration among those needing information to draft national policy decisions. To address this lack of unified national action, advocates now campaign for the establishment of a national centre for disease prevention and control (CDPC)

In all of this, epidemiology, previously an unintelligible word, has floated on a cloud of public attention and recognition. This is a great time to be a media epidemiologist!

There is much to do. In any one day, about 30,000 cases are reported amongst Australia's population of 26 million. Since the beginning of the pandemic, 9,500 Covid deaths (0.36%) have been reported, many among older people with co-morbidities.

But inflated attention to our discipline has faded as 'Covid fatigue' has increased and immunisation has diminished COVID-19's sting. Strenuous debate is raging about how best to reform that system. We have to admit to a serious level of ignorance about this aspect of the consequences of COVID-19.

Despite the indisputable progress and brilliance of vaccine development and of effective therapies, much ignorance persists about, not only in Australia, of course. Many John Snows are required.



Update from New Zealand 2022

So, what is new in public health in New Zealand? We are beginning to get back to normal post Covid. At the end of 2021 we had a draconian lockdown in Auckland due to a small community outbreak of the Delta variant. We started 2022 with the introduction of the Omicron strain – and a relaxing of restrictions meaning we had a significant number of community cases – peaking at 20,000 cases a day. However due to the very high vaccination rates the impact has been manageable, and case numbers have now settled at a few thousand a day. It was noticeable that the infection rate in Pacific peoples was more than double that in Europeans, and Maori had a 50% excess – with a similar unequal impact on hospitalisation and deaths, justifying the extra effort that had been undertaken to ensure high vaccine uptake in Maori and Pacific communities.

Now the borders are finally open, the riots against vaccine mandates have subsided and New Zealand is opening up for business. While Covid was grabbing the headlines major health reforms were underway. These included the democratically elected health boards that have been in place for 20 years being scrapped in favour of a centralised Health NZ and a Maori Health Authority. The Ministry of Health has been relegated to a policy body advising the Minister. What does this mean for public health? Well the changes were greeted by the resignation of Dr Ashley Bloomfield the Director General of Health and the architect of the Covid response. His resignation was followed quickly by that of the Director and Deputy Director of Public Health. While we were all hoping for a much-strengthened public health service after the demonstrated shortages revealed by Covid – we are now facing a very fragmented public health sector with the establishment of a Public Health Commission

that will advise the Minister, a Public Health Agency providing policy advice to the Ministry and Health New Zealand appointing a Director of the National Public Health Service which actually provides the public health services on the ground. I have no doubt that the Maori Health Authority will also want to direct public health services for Maori. Who will be in charge I hear you say!

Of interest to John Snow Society members will be the other contentious political issue of the day – the proposed the “3 Waters Reforms”. This was triggered by an outbreak of *Campylobacter* in the drinking water of a small town on the East Coast of the North Island affecting 5500 of the town’s residents (JSS Broadsheet 2019). As a country with a small population and a rural base, provision of clean water and dealing with storm and wastewater has always been a challenge. In my health board of 430,000 one third of the population have no reticulated water. In our major cities there has been decades of under-investment to the extent that population growth has outstripped the capacity of the water and sewage systems to cope. Auckland beaches are frequently not swimmable because of pollution from overflowing sewage and last summer the city had major water shortages requiring the construction of a new treatment plant to be able to take river water from the neighbouring Waikato. The 3 Waters proposal is to take the responsibility for the current hotch potch of services away from local authorities and create four government-run water authorities. Councils are up in arms and there have been marches in the street but it looks like the legislation will go through and taxpayers rather than ratepayers will be paying the bills. Another blow to local democracy from our centralist government. What will the electorate say next year?

Special reports:

Dr John Snow walk... in York



We reported last year that John Snow's home city of York was to celebrate his life and legacy by naming a walking route through a new housing development "John Snow Walk". This has now been completed and was officially opened on April 11th 2022.

The walk is located in Hudson Quarter, opposite the York railway station, a short distance from North Street, where John Snow was born and lived until he was 15. It was unveiled by the Lord Mayor of York at a ceremony attended by representatives of Palace Capital plc, the NHS Trust, and the John Snow Society.

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."

Jimmy Whitworth, Co-Chair of the John Snow Society, pictured above at the walk's entrance, added "It's great that the ground-breaking work of Dr John Snow is being commemorated in his home City of York and his achievements fully recognised on this development, very close to where he was born."

Blessed chloroform lecture

The 2021 Blessed Chloroform Lecture was given by Dr John B Glenn on September 2nd at the History of Anaesthesia Society Summer Scientific Meeting in Shrewsbury. This lecture commemorates Dr John Snow's pioneering work on anaesthesia, particularly the use of chloroform in obstetric practice. Queen Victoria herself commented on 'the blessed chloroform, soothing, quieting and delightful beyond measure' to relieve the pains of childbirth after John Snow had administered it to her for the birth of Prince Leopold in 1853. Dr Glen gave a fascinating talk on his role in the discovery and development of propofol, dubbed the 'milk of amnesia', which as an intravenous infusion has transformed the practice of anaesthetics.

For those who wish to read the full lecture, it can be found in the following link, kindly supplied by the History of Anaesthesia Society. http://www.histansoc.org.uk/uploads/9/5/5/2/9552670/vol_53.pdf

Society Matters:

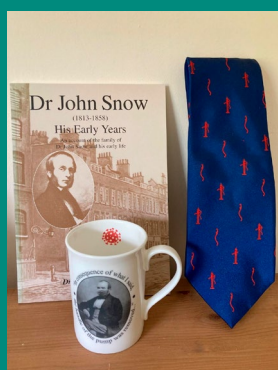
Call for nominations to the John Snow Society Steering Committee

The John Snow Society Steering Committee ("J3SC") met on May 27th 2022, continuing its work to manage the Society and make it sustainable into the future. The current committee comprises: James Hargreaves and Jimmy Whitworth (Co-Chairs), Paul Fine and Charlotte Flynn (co-Secretaries), Marta Tufet and John Watson (co-Treasurers), Sebastian Funk (Financial Controller), Stefan Flasche (Web Content Officer), Lauren D'Mello-Guyett, Alex Mold, Dilys Morgan, and Kate Russell. Two Committee members reach the end of their 3-year terms this year. 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 (www.johnsnowsociety.org/constitution.html) a valid application should be received by the Society by first 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."

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 4,000. 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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