

Don't panic! 2022

Celebrating the 25th Anniversary of Don't panic!

23 June 2022

Event Information

Welcome

We would like to welcome you to the 25th Anniversary of the Don't panic! conference.

The Healthcare Infection Society's Professional Development Committee have put together an excellent programme which takes a practical approach to current infection control issues

We hope you enjoy the meeting.

Questions

To submit your questions for the speakers, please use the Q&A function in Zoom. The chair will select questions to read out to the speaker. Note that they will address as many questions as the time permits.

If you need to ask the host a question please direct your chat message only to HIS Zoom.



Programme

Morning session

Chair: Elisabeth Ridgway, Emeritus Consultant Microbiologist, Sheffield Teaching Hospitals NHS Foundation Trust

09:30–09:35	Welcome and introduction	Elisabeth Ridgway , Chair
	The old foes haven't disappeared...	
09:35–10:00	Update on the UK epidemiology of MRSA and MSSA	Bruno Pichon , Lead Scientist for Staphylococcus and Streptococcus, UK Health Security Agency
10:00–10:25	Incidence, outcomes and antimicrobial resistance in Gram negative bloodstream infection	Sarah Gerver , Head of the Antimicrobial Resistance and Prescribing Section, UK Health Security Agency
10:25–10:50	Recent changes in the epidemiology of invasive meningococcal infection	Stephen Clark , Senior Scientist, UK Health Security Agency, Meningococcal Reference Unit (MRU)
10:50–11:15	<i>Break</i>	
	Lessons for IPC in communicating risk	
11:15–11:40	Communicating risk to patients and healthcare workers	Dr Alexandra Freeman , Executive Director, Winton Centre for Risk and Evidence Communication, University of Cambridge
11:40–12:05	How to use Twitter during the #COVID19 pandemic	Charlotte Hammer , Applied Infectious Diseases Epidemiologist, Disease Dynamics Unit, University of Cambridge
12:05–12:30	IPC—What's the Story? Effective Media Communication for IPC Practitioners	Mark Brealey , Mark Brealey Communications Ltd
12.30–13.15	<i>Lunch</i>	

Afternoon session

Chair: Chris Lynch, Consultant Microbiologist, Sheffield Teaching Hospitals NHS Foundation Trust

	New and updated guidelines review	New and updated guidelines review
13:15–13:30	Publication of Updated VHF guidelines, on behalf of ACDP	Anne Tunbridge , Sheffield Teaching Hospitals NHS Trust
13:30–13:55	Final rinse water for endoscope washer-disinfectors	Craig Williams , Consultant Microbiologist, Lancaster Royal Infirmary
13:55–14:20	Guidelines on the control of diphtheria	Colin Brown , UK Health Security Agency
14:20–14:45	Automated room decontamination	Alan Beswick , Principal Scientist, HSE laboratory
14:45–15:05	<i>Break</i>	
	Lessons from the pandemic	
15:05–15:30	Within-hospital SARS-CoV-2 transmission	Benjamin Lindsey , NIHR Academic Clinical Fellow, Sheffield Hospitals NHS Trust
15:30–15:55	Antimicrobial resistance and COVID-19: intersections and implications	Gwen Knight , Associate Professor and Co-Director, AMR Centre, London School of Hygiene and Tropical Medicine
15:55–16:20	Changes in public health-seeking behaviours for respiratory tract infections during the COVID-19 pandemic	Donna Lecky , Head of Primary Care and Intervention, UK Health Security Agency

Speaker Abstracts

Incidence, outcomes and antimicrobial resistance in Gram-negative bloodstream infection

Sarah Gerver, Head of the Antimicrobial Resistance and Prescribing Section, United Kingdom Health Security Agency (UKHSA).

Between 2016 and 2019, the incidence for all key Gram-positive and Gram-negative bloodstream infections (BSI) increased. However, in 2020, the incidence of the majority of key Gram-negative BSI (GNBSI) decreased. *Escherichia coli* was the most common cause of GNBSI during 2016 to 2020, and despite a 13.8% decrease in its incidence between 2019 and 2020, it remained a significant concern; particularly as the observed reduction was predominantly due to community-onset cases.

The incidence of all key GNBSI, except for *E. coli*, increased between 2020 and 2021, equal or greater to the incidence observed in 2019.

The GNBSI antimicrobial resistance (AMR) burden increased year-on-year between 2016 and 2019, with an overall increase of 25.7%. After which there was a 15.7% reduction from 15,960 to 13,450 estimated resistant BSI, between 2019 and 2020. While there has been an increase in many of the key GNBSI

incidence between 2020 and 2021, the AMR burden has continued to decrease – by a further 11.0% – in 2021, with an estimate of 11,970 key AMR BSI lower than the 2016 burden estimate of 12,700. This is predominantly because of the continued reduction in *E. coli* BSI. However, it is of note that the estimated number of resistant *Klebsiella pneumoniae* increased 9.7% between 2020 and 2021 (from 1,751 in 2020 to 1,921 in 2021).

In 2021, the thirty-day all-cause case fatality rate in patients with key resistant GNBSI was 17.1% and 15.6% amongst patients with sensitive GNBSI infections.

The underlying causes of reductions in both BSI and AMR BSI incidence in 2020 were likely to be multifactorial; with significant changes in population-level behaviour and healthcare provision (reduced social mixing, reduced healthcare seeking, reduction in secondary care referrals and GP testing) resulting from the COVID-19 pandemic response.

The GNBSI AMR burden has continued to decrease in 2021; however, there were continued lockdowns in early 2021 and substantially less completed elective care pathways between January 2020 and July 2021 than pre-pandemic numbers. As such, it is not yet known if the reductions in AMR GNBSI burden will be sustained, or, as social mixing and healthcare provision continue to return to pre-pandemic levels, whether the AMR burden will start to increase again.

Recent changes in the epidemiology of invasive meningococcal disease in England

Stephen Clark, Senior Scientist, UKHSA Meningococcal Reference Unit (MRU), Manchester

Introduction

Whilst rare in the UK, Invasive meningococcal disease (IMD) has relatively high mortality rates and can cause devastating sequelae including limb loss, cognitive impairments and hearing loss.

Here we describe changes in the epidemiology of invasive meningococcal strains in England over the past 15 years.

Methods

The UK Health Security Agency's Meningococcal Reference Unit performs laboratory confirmation and strain characterisation on meningococcal disease cases in England and Wales. Approximately half of cases involve submission of a clinical isolate and subsequent serogrouping, serotyping and whole genome sequence analysis.

The remaining cases are confirmed and genogrouped from submitted clinical samples (e.g. blood and CSF) using a Taqman PCR assay targeting the *ctrA* and *siaD* capsular meningococcal genes.

Results

Total cases of group B IMD declined gradually from 2007 to 2019. This was partially due to the introduction of a group B vaccine into the UK infant immunisation

programme in 2015, however, group B rates were declining prior to vaccine introduction.

A drastic increase in group W disease was observed in England between 2010 and 2015 due to the spread of a hyper-invasive group W clonal complex 11 strain in the UK and elsewhere globally.

Introduction of an MenACWY conjugate vaccine for adolescents served to reduce group W cases (and those of other serogroups) in the vaccinated population and other age groups through indirect herd protection.

In March 2020, the UK government introduced strict

societal restrictions to curb the spread of SARS-CoV-2. This led to sharp reduction in IMD cases to historic low due to an interruption in transmission. From September 2021, after remaining COVID-19 restrictions had been lifted, group B IMD cases in 15-24 age group (particularly university students) have increased sharply and now exceed pre-pandemic levels.

Conclusions

IMD rates remain low in most age groups following the COVID-19 lockdowns, however, the recent sharp increase in group B cases among adolescents is a public health concern.

Using Twitter during the #COVID19 pandemic

Charlotte Hammer, Applied Infectious Diseases Epidemiologist, University of Cambridge

The COVID-19 pandemic has fundamentally changed the way that public health professionals work and communicate. Over a very short time span, remote working arrangements have become the norm, and meetings have shifted online.

Physical distancing measures have accelerated a trend toward digital communication and social exchange. At the same time, the work of epidemiologists has been held under a magnifying glass by journalists, governments and the general public, in a way not previously seen.

With social media becoming an integral part of our

society over the last decade, Twitter is now a key communication tool and platform for social networking among epidemiologists (#EpiTwitter) as well as the wider infectious diseases community (#IDTwitter). Drawing on experiences and observations of the use of Twitter by field epidemiologists and public health professionals for rapid professional exchange, public communication of science and professional development during the pandemic, this presentation will address both best practices and associated risks of social media usage.

For those field epidemiologists and public health partitioners new to social media, this will be an opportunity to find out how Twitter can be used in a variety of ways, both at their home institutions and during field deployments.

These include information dissemination, science communication and public health advocacy, professional development, networking and experience exchange.

Communicating risk to patients and healthcare workers

Alexandra Freeman, Executive Director, Winton Centre for Risk and Evidence Communication, University of Cambridge

Risks are complex things, involving probabilities, uncertainties and emotions. Yet it's important to communicate what we know, and what we don't know,

to people who have to take important decisions around risks (both personal and policy decisions).

So, how can we tackle risk communication in a way that informs people and empowers them to make their own decisions, rather than giving them a simple 'message' that tells them what we think they should do?

The Winton Centre for Risk and Evidence Communication specialises in this kind of communication, and Alex will outline some principles based on empirical experiments that the Cambridge team and others have done on how people respond to different communications.

IPC: What's the story? Effective media communication for IPC practitioners

Mark Brealey, Director, Mark Brealey Communications Ltd.

Good communication can save lives. Whether through the headlines we read, the interviews we see or the social media content we consume ... messages, facts and opinions are everywhere. This Pandemic has brought home the power of good—and bad—communication.

This presentation will spell out why IPC has always been a critical news story, not just in a pandemic. It will offer

top tips to help practitioners understand how the media works and how they can work more closely with their communications teams to get messages out to patients and the public. We'll examine the use of key messages and evidence to build an honest and persuasive story. We'll also look at the factors that trigger more challenging news coverage and how to avoid or reduce the risk.

Delegates will be shown simple techniques to prepare for and deliver a successful media interview with candour and clarity. These tips won't just be useful for Radio 4 or BBC Breakfast; they'll give transferrable skills for other settings where the priority is to communicate vital messages that help prevent and control infection.

Publication of Updated VHF guidelines, on behalf of ACDP

A Tunbridge¹, R Shorten², E Aarons³, M Jacobs⁴, M Reynolds⁵, A Woolridge⁶, J Dunning⁷, T Evans⁸

The Advisory Committee of Dangerous Pathogens (ACDP) undertook a complete review of the guidelines for the management of viral haemorrhagic fever (VHF) in 2019. The publication of the guidelines was delayed due to the Covid-19 pandemic but are due for release in 2022. The guidance has been reviewed in light of new management pathways for High Consequence Infectious Diseases (HCID) within the UK and the

consensus PPE guidelines developed by the UK HCID network.

A summary of the changes to the guidelines will be presented, which have relevance for both clinical and laboratory healthcare staff, public health and ambulance teams, plus mortuary and funeral personnel who might be required to deal with a patient with VHF.

Affiliations:

1. Sheffield Teaching Hospitals NHS FT; 2. Lancashire Teaching Hospitals NHS FT; 3. Guys and St Thomas's Hospitals NHS FT; 4. University of Oxford; 5. UKHSA; 6. Independent Safety Services Ltd; 7. Royal Free Hospital NHS FT; 8. University of Glasgow

Automated room decontamination

Alan Beswick, Principal Scientist, HSE Laboratory, Buxton, Derbyshire

Automated room decontamination (ARD) systems may help to enhance levels of environmental cleaning and disinfection in critical areas, such as clinical treatment rooms, hospital wards and other healthcare related environments where infection control is important. They should be used in addition to routine physical cleaning and disinfection but can bring certain advantages that may benefit cleaning outcomes.

ARD is a collective term that can include airborne

disinfection (fumigation) systems, germicidal UV equipment and air cleaning devices. Recently, the Healthcare Infection Society published evidence based information to assist potential purchasers and end users of such equipment, with a focus on germicidal UV and airborne disinfection equipment.

The published information was designed to help equipment users to understand some of the most important aspects of choosing and operating such devices. This presentation will reflect on some of the content of the recent publication, but will also include further reflections on almost twenty years of practical testing of such equipment at HSE's laboratory in Buxton. Equipment efficacy, limitations and safety in use will all be considered.

Final rinse water for endoscope washer-disinfectors

Craig Williams, Consultant Microbiologist, Lancaster Royal Infirmary

An overview of the recently updated HIS guidance on Final rinse water quality for flexible endoscopy to minimise the risk of post-endoscopic infection.

Within-hospital SARS-CoV-2 transmission

Benjamin Lindsey, NIHR academic clinical fellow, Sheffield Hospitals NHS Trust

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has resulted in multiple hospital outbreaks, exposing healthcare workers and non COVID-19 patients to SARS-CoV-2 infection. To safely continue routine and elective activities in hospitals during times of high SARS-CoV-2 incidence, it is important to discern factors that drive hospital-acquired infections. This greater understanding can be used to protect staff and patients, as well as informing further efforts to contain hospital outbreaks.

A retrospective Bayesian modelling study was used to reconstruct transmission chains amongst 2181 patients and healthcare workers using combined viral genomic and epidemiological data at a large UK NHS Trust between 1st March 2020 and 25th July 2020

(Wave 1) and 30th November 2020 and 24th January 2021 (Wave 2).

Staff-to-staff transmission was estimated to be the most frequent transmission type during Wave 1. Patient-to-patient transmissions to become the predominant transmission type in Wave 2. Over 50% of hospital-acquired infections were concentrated in 8/120 locations in Wave 1 and 10/93 locations in Wave 2. Approximately 40% to 50% of hospital-onset patient cases resulted in onward transmission compared to less than 4% of definite community-acquired cases.

Prevention and control measures introduced during the COVID-19 pandemic may have had a significant impact on reducing infections between healthcare workers but were insufficient during the second wave to prevent a high number of patient-to-patient transmissions. As hospital-acquired cases appeared to drive most transmissions, more frequent and rapid identification and isolation of these cases will be required to break hospital transmission chains in subsequent pandemic waves.

Antimicrobial resistance and COVID-19: intersections and implications

Gwen Knight, Associate Professor, Co-Director, AMR Centre at the London School of Hygiene and Tropical Medicine

Before the COVID-19 pandemic began, antimicrobial resistance (AMR) was among the top priorities for global public health. Already a complex challenge, AMR now needs to be addressed in a changing healthcare landscape. Indeed, over 2 years into the COVID-19 pandemic, the dynamics of AMR remain uncertain.

In this talk I will present a structured way for considering how COVID-19 and AMR interact in terms of how

antimicrobial usage, infection prevention, and health systems affect the emergence, transmission, and burden of AMR. Some of the COVID-19 related, short-term changes that may lead to reduced AMR prevalence include increased hand hygiene, decreased international travel, and decreased elective hospital procedures.

Current data suggest that antibiotic use in the community has decreased since the start of the COVID-19 pandemic. However, high antibiotic exposure in COVID-19 patients and the use of antibiotics more widely as standard healthcare pathways break down will have the opposite effects on AMR prevalence. In pulling together the latest published evidence in this talk I will attempt to bring these complex factors together to improve our preparedness and response to these intersecting public health challenges.

Changes in public health-seeking behaviours for respiratory tract infections during the COVID-19 pandemic

Dr. Donna Lecky, Head of the Primary Care and Intervention Unit, UK Health Security Agency

Background

COVID-19 exerted significant strain on national healthcare services across England. To explore changes in public health-seeking behaviours for respiratory tract infections (RTIs), and knowledge of, and attitudes towards antibiotics, a national survey was conducted in March 2021 with findings compared to a baseline survey from before UK lockdown restrictions in March 2020.

Methods

Comparing responses to a telephone survey of 1,676 adults (2021) and a face-to-face survey of 2,022 adults (2020) across England. Key demographics were representative of the population. The 2021 survey included additional COVID-19 relevant questions.

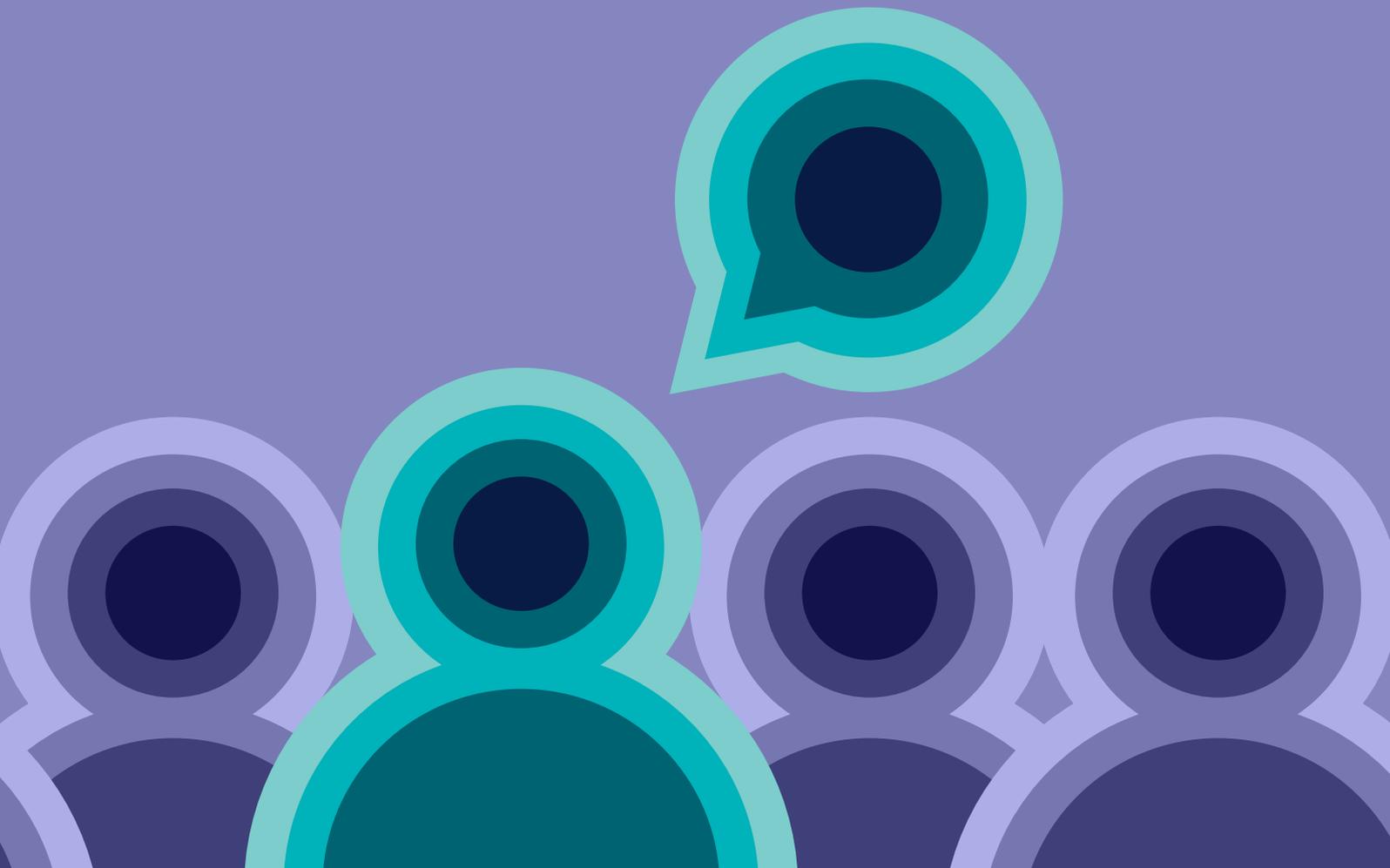
Findings

Compared to 2020, fewer respondents self-reported RTIs in the last 12-months (51% vs. 70%; $p < 0.05$), however, there was no change in reported consultation with GPs (25% vs. 23%; ns). Expectation for antibiotics increased in 2021 (56% vs. 38%, $p < .05$), but self-reported antibiotic prescriptions were similar (54% vs. 52%; ns). Respondents reported more proactive symptom management, with greater reports of seeking over-the-counter remedies (55% vs. 35%; $p < .05$), alongside continuation of usual activities (56% vs. 30%; $p < .05$).

In 2021, 71% of respondents understood antibiotics are not effective against COVID-19 and did not differ according to their COVID-19 infection status. Compared to 2020, there was increased belief (62% vs. 57%, $p < .05$) that individuals can personally help reduce antibiotic resistance.

Interpretation

Public health bodies should consider how changes brought about by the pandemic may have facilitated increased self-care, and how to support continued self-care post-pandemic. Conjunctively, campaigns should capitalise on increased public empowerment to tackle antimicrobial resistance.





Events Programme 2022

27 JUNE–1 JULY 2022

**Engineering aspects of
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6 JULY 2022

**Trainee education day:
Infection prevention and
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FIS | HIS International 2022

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26–30 SEPTEMBER 2022

**Engineering aspects of
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29 SEPTEMBER 2022

**Bridging the clinical –
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Birmingham Conference and Events
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20 OCTOBER 2022

**Introduction to guideline
development**

Online via Zoom

2 NOVEMBER 2022

**Trainee education day: IPC in
non-acute settings**

Online via Zoom

10 NOVEMBER 2022

Outbreaks training course

Montagu House, Wakefield Street,
London

9 DECEMBER 2022

**DIPC development day:
Navigating the minefield:
dealing with complaints,
litigation and the media**

Royal College of Physicians, London

**For more information visit
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Federation of Infection Societies International Conference 2022



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26 September



Abstract
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Earlybird
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