

# Dr Arran Hamlet

EPIDEMIC INTELLIGENCE SERVICE OFFICER

Centers for Disease Control and Prevention, Atlanta, USA

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*Infectious disease epidemiologist and mathematical modeller with extensive experience in data analysis and statistical/mechanistic modelling to inform outbreak response and public health policy.*

## Education

### PhD titled 'Yellow fever in South America: The role of environment and host on transmission dynamics'

Jan 2017-Jan 2020

IMPERIAL COLLEGE LONDON

London, United Kingdom

- Looked at understanding the epidemiology of yellow fever across South America, with a focus on Brazil, examining the roles of climate, environment and host. Employed a variety of statistical and mechanistic modelling techniques. Worked with the WHO, the Brazilian Ministry of Health and the university Fundação Oswaldo Cruz.
- Supervised by Dr Tini Garske and Professor Neil Ferguson, fully funded by the UK Medical Research Council.

### MSc in Epidemiology

Oct 2014-Oct 2015

IMPERIAL COLLEGE LONDON

London, United Kingdom

- Awarded a distinction for my dissertation project titled 'The Seasonality of Yellow Fever in Africa.'

### BSc in Biology with Psychology

Sep 2011-May 2014

QUEEN MARY UNIVERSITY OF LONDON

London, United Kingdom

- Focus on Evolutionary Biology and Neuroscience.

## Employment

### Epidemic Intelligence Service Officer (Washington State Department of Health)

July 2022-

CENTERS FOR DISEASE CONTROL AND PREVENTION

Seattle, USA

- **Select projects below.**
- **Lead on an Epi-Aid investigating the rise in detections of *Corynebacterium diphtheriae* in Washington state.**
  - Co-lead of a multidisciplinary team from local, state and federal agencies, tasked with investigating the increase in *C. diphtheriae* detections in Washington State, 2018-2023.
  - Organized meetings and coordination with local health jurisdictions and hospital system partners to gain access to medical records for chart abstraction, and to understand the context of the increases.
  - Conducted interviews with laboratory directors to understand changes in testing practices, and with partners providing housing and medical care to those experiencing homelessness.
  - Analysis currently ongoing, focusing on changes in transmission and surveillance, the clinical course and social factors related to the increase in detections.
- **Lead on estimating the prevalence of long COVID in Washington.**
  - Created a mathematical model using WA DOH data to estimate age, sex, race-ethnicity, and county level prevalence of long COVID over time.
  - The method was designed and validated with subject matter experts from WA DOH and the CDC to produce a highly flexible approach that integrated existing data sources with the latest findings from scientific literature.
  - Results presented to CSTE, WA DOH leadership, and used in discussions with the Washington State Senate for long COVID advocacy and the positioning of resources.
  - Manuscript under review and the approach is highlighted in a CSTE position paper.
- **Lead on an outbreak investigation of gastrointestinal illness on the Pacific Crest Trail.**
  - Lead the outbreak investigation and response. This included, survey design, patient interviews, epidemiological analysis and environmental sampling of pit latrines and shared use facilities.
  - The findings led to changes in WA DOH policy on the use of social media in outbreak investigation, a MMWR article was published and presentations given at EIS and CSTE conferences.
- **Evaluation of the rabies surveillance system.**
  - Compared existing rabies mandatory reporting with syndromic surveillance collected from emergency departments and urgent care centers on potential rabies exposures, and with recorded post-exposure prophylaxis.
  - Identified clear gaps in certain counties reporting of rabies, with some of these reporting less than 1 in 10 estimated rabies exposures.
  - Currently assessing whether we can use these alternative data systems to capture a more accurate understanding of human-rabies encounters, and remove potential rabies exposure as a notifiable condition.

- **Tuberculosis in the correctional system..**

- Part of the WA DOH team, supervising and responding to Tuberculosis in the WA correctional system following the largest outbreak in decades. Provided leadership and analytical support.

- **Malaria in Uganda and Ethiopia.**

- Working with the CDC malaria group to analyse a study looking at increasing funding to community healthcare workers during 2021-2022, results currently being written up for a manuscript.
- Working with the Presidents Malaria Initiative and PATH to provide subnational estimates of the impact of Anopheles stephensi on malaria transmission in Ethiopia.

## **Visiting Researcher**

IMPERIAL COLLEGE LONDON

*Jun 2022-*

*London, United Kingdom*

- Visiting researcher for mathematical and statistical modelling of malaria and yellow fever.
- Provide direction and feedback for projects, reviewing manuscripts and planning strategic research goals.

## **Postdoctoral Researcher (Malaria)**

IMPERIAL COLLEGE LONDON

*Jan 2020-Jun 2022*

*London, United Kingdom*

- Involved in a variety of projects assessing the public health impact of various control measures on the burden of malaria across Africa using mechanistic transmission models.
- Several of these outputs were used by organizations such as the WHO, IVCC, MedAccess and Ministries of Health to understand the potential benefits of different malaria control strategies and the utility of next generation bednets such as Piperonyl butoxide (PBO) or Interceptor® G2 in areas of high insecticide resistance.
- Assessed the impact of disruption caused by the SARS-CoV-2 pandemic on malaria control across Africa. Results published Nature Medicine as joint first author.
- Lead researcher on a piece of work assessing the potential impact of Anopheles stephensi establishment on malaria transmission in Ethiopia.
- This piece of work was conducted with Abt Associates and the Presidents Malaria Initiative.
- The findings were published in BMC Medicine, and have been widely cited by the WHO and PMI in their advocacy work.

## **Postdoctoral Researcher (Nigeria COVID-19 response)**

IMPERIAL COLLEGE LONDON

*Apr 2020-Dec 2020*

*London, United Kingdom*

- Lead researcher for Imperial College London's data analytics and modelling support for the Nigerian Government.
- Conducted rapid analysis to answer specific questions in order to provide evidence for policy decisions to be made by the Nigerian Presidential Task Force.
- Produced a multitude of reports as well as regular state-specific analysis that fed into NCDC, US CDC and UK Department for International Development decision making.
- A number of position papers can be found at <https://statehouse.gov.ng/covid19/2020/09/18/evidence-based-guidance-on-measures-to-curb-the-spread-of-covid-19/>.

## **Postdoctoral Researcher (COVID-19 response)**

IMPERIAL COLLEGE LONDON

*Feb 2020-Dec 2020*

*London, United Kingdom*

- Provided technical support and input for numerous reports and projects, with a focus on work in Low-to-Middle-Income Countries (LMIC) and on quantifying the underascertainment of mortality. Work contributed to several peer reviewed papers and numerous position papers.
- Seconded through the Global Outbreak Alert and Response Network to provide analytical support for the WHO in Geneva Feb - Apr 2020 to understand the initial spread of COVID-19.

## **PhD in Infectious Disease Modelling**

IMPERIAL COLLEGE LONDON

*Jan 2017 - Jan 2020*

*London, United Kingdom*

- PhD thesis titled 'Yellow fever in South America: The role of environment and host on transmission dynamics'.
- Explored the role of climate, landcover and zoonotic reservoirs on the distribution of yellow fever in South America. Additional work focussed on estimating the vaccination coverage of yellow fever globally over time.

## **Research Assistant**

IMPERIAL COLLEGE LONDON

*Oct 2015 - Dec 2016*

*London, United Kingdom*

- Outbreak analysis and response for the 2015-2016 outbreak in Angola and the Democratic Republic of the Congo working with the World Health Organization (WHO).
- This involved rapid modelling and data analytics to answer questions on the spread and suitability of the environment for transmission, and planning vaccination campaign strategies to stop the outbreak.
- Hired as a consultant to produce a report on strategies for optimally reducing the risk of yellow fever transmission in Africa, and the potential for global spread.
- Responsible for estimating population-level vaccination coverage across Africa and the development of an open-source tool to explore this information. Currently utilised by researchers and the WHO.

## Course Instructor and Curriculum Designer

Jan 2022 -

APPLIED EPI

Online

- AppliedEpi is the non-profit behind the Epidemiologist R Handbook, used by almost 2 million epidemiologists worldwide. Since early 2022 they have offered courses teaching applied R coding to epidemiologists, running over a hundred courses for dozens of Ministries of Health globally as well as the WHO, CDC and various other institutions.
- I was responsible for designing and creating several of the modules on data management and analysis, as well as the sole designer and creator of the Advanced Statistics in R course.
- I have lead or demonstrated on courses for almost a dozen agencies, including the Health Departments for Michigan, Wales, Canada, Cambodia, Kazakhstan.
- Currently lead author responsible for a team of epidemiologists writing chapters of data analysis and regression in a field manual for applied epidemiologists.

## Epidemiologist: COVID-19

Feb 2020 - Apr 2020

WORLD HEALTH ORGANIZATION

Geneva, Switzerland

- Provided technical support for the WHO in the Health Emergency Information and Risk Assessment (HIM) pillar through GOARN deployment
- Work involved exploring and quantifying mortality, transmission and country specific impacts through data analysis and visualisation in real time as the COVID-19 pandemic unfolded. Aspects of data visualisation acknowledged in <https://worldhealthorg.shinyapps.io/covid/>.
- Continued to provide adhoc support till Dec 2020.

## Epidemiologist: Yellow fever

Jul 2016 - Sep 2016

WORLD HEALTH ORGANIZATION

Geneva, Switzerland

- Commissioned to produce a report evaluating the risk of outbreaks of yellow fever across Africa as a result of ongoing transmission in Angola and the Democratic Republic of the Congo and the potential for introduction into Asia.

## Epidemiologist

Feb 2016 - Mar 2016

OZYGEN SYSTEMS

London, United Kingdom

- Hired to produce a report on numerous pathogens involved in nosocomial infection and to evaluate the applicability of ozone decontamination technology in UK healthcare settings to limit their spread.

# Funding awards

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## MRC Pump Priming (£23,000)

Nov 2019

IMPERIAL COLLEGE LONDON

London, United Kingdom

- Jointly awarded £23,000 with co-PI Natsuko Imai to run a week long training workshop in Rio de Janeiro focusing on the use of mathematical models in outbreak response and policy.
- Course was run collaboratively with the Brazilian Ministry of Health and Fundação Oswaldo Cruz (Fiocruz).

## MRC Exceptional Training Opportunity

Oct 2017/Aug 2018/Jun 2019

IMPERIAL COLLEGE LONDON

London, United Kingdom

- Oct 2017: Awarded £650 to travel to the WHO in Geneva, Switzerland to present my work on yellow fever and discuss with the yellow fever team how my PhD can provide support for their activities.
- Aug 2018: Awarded £2220 to travel to Rio de Janeiro and Brasilia, Brazil, and present my results on modelling yellow fever in South America at a meeting co-hosted by the Brazilian Ministry of Health and the Pan American Health Organization, as well as to set up a research collaboration with Fiocruz.
- Jun 2019: Awarded £1719 to travel to Bogota, Colombia to lecture and demonstrate on a course coordinated between Imperial College London, Instituto Nacional De Salud and Pontificia Universidad Javeriana Bogota which aimed to give an introduction to infectious disease modelling.

# Teaching

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## Shortcourse co-organiser

Jan 2021 - Sep 2021

IMPERIAL COLLEGE LONDON

London, United Kingdom

- Co-organiser on the departments 'Mathematical modelling for the control of infectious diseases' short course, run since 1990 and designed to teach public health professionals about infectious disease modelling.
- Responsible for helping redesign, and restructure, the course in order to deliver it fully online in light of the ongoing COVID-19 pandemic.

## PhD Assessor

Oct 2020-Jun 2023

UNIVERSITY OF SÃO PAULO

São Paulo, Brazil

- Examining progress and assisting with the research of a PhD student's project titled 'Spatio-temporal dynamics of yellow fever in Brazil'.

## MSc Dissertation Supervisor

May 2020 - Oct 2020

IMPERIAL COLLEGE LONDON

London, United Kingdom

- Designed and supervised MSc Epidemiology projects looking at the effect of forest fragmentation on yellow fever in Southern Brazil, and exploring the differences in transmission dynamics between yellow fever, dengue and Zika.

## Graduate Teaching Assistant

IMPERIAL COLLEGE LONDON

Jan 2017 - Jun 2022

London, United Kingdom

- Teaching assistant and demonstrator for numerous modules on infectious disease modelling, statistical analysis and epidemiology.

## Shortcourse Demonstrator

IMPERIAL COLLEGE LONDON

Jun 2019

Bogota, Colombia

- Demonstrator and lecturer on a course coordinated between Imperial College London, Instituto Nacional De Salud and Pontificia Universidad Javeriana Bogota which aimed to give an introduction to infectious disease modelling.

## Shortcourse Demonstrator

IMPERIAL COLLEGE LONDON

Sep 2017/Sep 2018/Sep 2019

London, United Kingdom

- Demonstrator on numerous practical exercises and lectures on data analysis and infectious disease modelling on the aforementioned departments 'Mathematical modelling for the control of infectious diseases' short course.

## Design and implementation of an online platform for teaching infectious disease modelling

IMPERIAL COLLEGE LONDON

Jan 2019 - Sep 2019

London, United Kingdom

- Responsible for liaising between programming team and course organisers to design and translate existing practicals from Berkely Madonna to an online web interface running the Odin language.
- Highly successful implementation with the platform now being used for both future shortcourses and the MSc Epidemiology at Imperial College London.

## Presentations

### Estimating the Burden and Distribution of Long COVID in Washington State

WESTERN STATES MODELING SYMPOSIUM

Sep 2023

Virtual

### Gastrointestinal illness among hikers on the Washington State Pacific Crest Trail, August–October 2022.

EIS CONFERENCE 2023 AND CSTE 2023

Apr 2023

USA

### The potential public health consequences of COVID-19 on malaria in Africa

LONDON MALARIA NETWORK

Oct 2020

London, United Kingdom

### Seasonality of agricultural exposure more important than seasonality of climate for predicting yellow fever transmission in Brazil

AMERICAN SOCIETY OF TROPICAL MEDICINE AND HYGIENE

Nov 2019

National Harbor, USA

### Statistical and mathematical modelling of yellow fever in South America

OUTBREAK ANALYSIS AND MODELLING FOR PUBLIC HEALTH

Jun 2019

Bogota, Colombia

### Land-use, vegetation and habitat fragmentation as drivers of yellow fever transmission in South America

INTERNATIONAL CONFERENCE ON ONE MEDICINE ONE SCIENCE

Feb 2019

Chiang Mai, Thailand

### Yellow fever in Brazil - Modelling as a tool to inform outbreak response and public health policy

YELLOW FEVER FORECASTING: EMBEDDING MODELLING IN LESSONS LEARNT EXERCISES

Nov 2018

Brasilia, Brazil

## Publications

### FIRST AUTHOR PUBLICATIONS - 7

#### Notes from the Field: Gastrointestinal Illness Among Hikers on the Pacific Crest Trail—Washington, August–October 2022

**A HAMLET**, K BEGLEY, S MIKO, L STEWART, W TELLIER, JG-D LEON, H BOOTH, S LIPPMAN, A KAHLE, A ROUNDTREE, A HATADA, S LINDQUIST, B MELIUS, M GOLDOFT, M MATTIOLI, M HOLSHUE

*Mmwr. Morbidity And Mortality Weekly Report*

2023

#### The potential impact of *Anopheles stephensi* establishment on the transmission of *Plasmodium falciparum* in Ethiopia and prospective control measures

**A HAMLET**, D DENGELA, JE TONGREN, FG TADESSE, T BOUSEMA, M SINKA, A SEYOUN, SR IRISH, JS ARMISTEAD, T CHURCHER

*BMC Medicine*

2022

#### Seasonality of agricultural exposure as an important predictor of seasonal yellow fever spillover in Brazil

**A HAMLET**, DG RAMOS, KAM GAYTHORPE, APM ROMANO, T GARSKE, NM FERGUSON

*Nature Communications*

2021

## Seasonal and inter-annual drivers of yellow fever transmission in South America

A HAMLET , KAM GAYTHORPE, T GARSKE, NM FERGUSON

*PLoS Neglected Tropical Diseases*

2021

## Yellow fever in South America: The role of environment and host on transmission dynamics

A HAMLET

*Imperial College London*

2020

## POLICI: A web application for visualising and extracting yellow fever vaccination coverage in Africa

A HAMLET , K JEAN, S YACTAYO, J BENZLER, L CIBRELUS, N FERGUSON, T GARSKE

*Vaccine*

2019

## The seasonal influence of climate and environment on yellow fever transmission across Africa

A HAMLET , KÉV JEAN, W PEREA, S YACTAYO, J BIEY, MV KERKHOVE, N FERGUSON, T GARSKE

*PLoS Neglected Tropical Diseases*

2018

## ADDITIONAL PUBLICATIONS - 32

## Seasonal dynamics of Anopheles stephensi and its implications for mosquito detection and emergent malaria control in the Horn of Africa

C WHITTAKER, A HAMLET , E SHERRARD-SMITH, P WINSKILL, G CUOMO-DANNENBURG, PGT WALKER, M SINKA, S PIRONON, A KUMAR, A GHANI, S BHATT, TS CHURCHER

*Proceedings Of The National Academy Of Sciences*

2023

## Baylisascaris procyonis Roundworm Infection in Child with Autism Spectrum Disorder, Washington, USA, 2022

BA LIPTON, HN OLTEAN, RB CAPRON, A HAMLET , SP MONTGOMERY, RJ CHANCEY, VJL KONOLD, KE STEFFL

*Emerging Infectious Diseases*

2023

## Correction: The epidemiology of Mayaro virus in the Americas: A systematic review and key parameter estimates for outbreak modelling

E-Y CAICEDO, K CHARNIGA, A RUEDA, I DORIGATTI, Y MENDEZ, A HAMLET , J-P CARRERA, ZM CUCUNUBÁ

*PLoS Neglected Tropical Diseases*

2023

## Serological evidence of virus infection in Eidolon helvum fruit bats: implications for bushmeat consumption in Nigeria

D CANTONI, M MAYORA-NETO, M DERVENI, KD COSTA, VO AMEH, CT SABETA, E WRIGHT, SD SCOTT, ES GIOTIS, AC BANYARD, N TEMPERTON

*Frontiers In Public Health*

2023

## Marburg Virus Disease outbreaks, mathematical models, and disease parameters: a Systematic Review

G CUOMO-DANNENBURG, K MCCAIN, R MCCABE, HJT UNWIN, P DOOHAN, RK NASH, JT HICKS, K CHARNIGA, C GEISMAR, B LAMBERT, D NIKITIN, J SKARP, J WARDLE, M KONT, S BHATIA, N IMAI, Sv ELSLAND, A CORI, C MORGENSTERN, A MORRIS, A DIGHE, A HAMLET , C WHITTAKER, D JORGENSEN, E KNOCK, E UNWIN, H THOMPSON, I ROUTLEDGE, J HICKS, K FRASER, L GEIDELBERG, L CATTARINO, M BAGUELIN, N MOGHADDAS, R NASH, S RADHAKRISHNAN, ZC PEREZ

*The Lancet Infectious Diseases*

2023

## Alternative epidemic indicators for COVID-19 in three settings with incomplete death registration systems

R MCCABE, C WHITTAKER, RJ SHEPPARD, N ABDELMAGID, A AHMED, IZ ALABDEEN, NF BRAZEAU, AAA ELHAMEED, AS BIN-GHOUTH, A HAMLET , R ABUKOURA, G BARNESLEY, JA HAY, M ALHAFFAR, EK BESSON, SM SAJE, BG SISAY, SH GEBREYESUS, AP SIKAMO, A WORKU, YS AHMED, DH MARIAM, MM SISAY, F CHECCHI, M DAHAB, BS ENDRIS, AC GHANI, PGT WALKER, CA DONNELLY, OJ WATSON

*Science Advances*

2023

## Optimising the deployment of vector control tools against malaria: a data-informed modelling study

E SHERRARD-SMITH, P WINSKILL, A HAMLET , C NGUFOR, R N'GUESSAN, MW GUELBEOGO, A SANOU, RK NASH, A HILL, EL RUSSELL, M WOODBRIDGE, PK TUNGU, MD KONT, T MCLEAN, C FORNADEL, JH RICHARDSON, MJ DONNELLY, SG STAEDKE, S GONAHASA, N PROTOPOPOFF, M ROWLAND, TS CHURCHER

*The Lancet Planetary Health*

2022

## Mapping environmental suitability of Haemagogus and Sabethes spp. mosquitoes to understand sylvatic transmission risk of yellow fever virus in Brazil

SL LI, AÉL ACOSTA, SC HILL, OJ BRADY, MABD ALMEIDA, JdC CARDOSO, A HAMLET , LF MUCCI, JTD DEUS, FCM IANI, NS ALEXANDER, GRW WINT, OG PYBUS, MUG KRAEMER, NR FARIA, JP MESSINA

*PLoS Neglected Tropical Diseases*

2022

## Exploring agricultural land-use and childhood malaria associations in sub-Saharan Africa

HA SHAH, LR CARRASCO, A HAMLET , KA MURRAY

*Scientific Reports*

2022

## Feasibility, acceptability, and effectiveness of non-pharmaceutical interventions against infectious diseases among crisis-affected populations: a scoping review

JA POLONSKY, S BHATIA, K FRASER, **A HAMLET**, J SKARP, IJ STOPARD, SÉP HUGONNET, L KAISER, C LENGELER, K BLANCHET, P SPIEGEL

*Infectious Diseases Of Poverty*

2022

## Understanding the potential impact of different drug properties on severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission and disease burden: A modelling ...

C WHITTAKER, OJ WATSON, C ALVAREZ-MORENO, N ANGKASEKWINAI, A BOONYASIRI, LC TRIANA, D CHANDA, L CHAROENPONG, M CHAYAKULKEEREE, GS COOKE, J CRODA, ZM CUCUNUBÁ, BA DJAAFARA, CF ESTOFOLETE, ME GRILLET, NR FARIA, SF COSTA, DA FORERO-PeÑA, DM GIBB, AC GORDON, RL HAMERS, **A HAMLET**, V IRAWANY, A JITMUANG, N KEURUEANGKUL, TN KIMANI, M LAMPO, AS LEVIN, G LOPARDO, R MUSTAFA, S NAYAGAM, T NGAMPRASERTCHAI, N'A'AIH NJERI, ML NOGUEIRA, E ORTIZ-PRADO, MWP JR, AN PHILLIPS, P PROMSIN, A QAVI, AJ RODGER, EC SABINO, S SANGKAEW, D SARI, R SIRIJATUPHAT, AC SPOSITO, P SRISANGTHONG, HA THOMPSON, Z UDWADIA, S VALDERRAMA-BELTRAN, P WINSKILL, AC GHANI, PGT WALKER, TB HALLETT

*Clinical Infectious Diseases*

2022

## apping environmental suitability of Haemagogus and Sabethes spp. mosquitoes to understand sylvatic transmission risk of yellow fever virus in Brazil

SL LI, AL ACOSTA, SC HILL, OJ BRADY, MABD ALMEIDA, JdC CARDOSO, **A HAMLET**, LF MUCCI, JTD DEUS, F IANI, NS ALEXANDER, GR WINT, OG PYBUS, MUG KRAEMER, NR FARIA, JP MESSINA

*PLoS Neglected Tropical Diseases*

2022

## Reduction in mobility and COVID-19 transmission

P NOUVELLET, S BHATIA, A CORI, KEC AINSLIE, M BAGUELIN, S BHATT, A BOONYASIRI, NF BRAZEAU, L CATTARINO, LV COOPER, H COUPLAND, ZM CUCUNUBA, G CUOMO-DANNENBURG, A DIGHE, BA DJAAFARA, I DORIGATTI, OD EALES, SLV ELSLAND, FF NASCIMENTO, RG FITZJOHN, KAM GAYTHORPE, L GEIDELBERG, WD GREEN, **A HAMLET**, K HAUCK, W HINSLEY, N IMAI, B JEFFREY, E KNOCK, DJ LAYDON, JA LEES, T MANGAL, TA MELLAN, G NEDJATI-GILANI, KV PARAG, M PONS-SALORT, M RAGONNET-CRONIN, S RILEY, HJT UNWIN, R VERITY, MAC VOLLMER, E VOLZ, PGT WALKER, CE WALTERS, H WANG, OJ WATSON, C WHITTAKER, LK WHITTLES, X XI, NM FERGUSON, CA DONNELLY

*Nature Communications*

2021

## Under-reporting of deaths limits our understanding of true burden of covid-19

C WHITTAKER, PGT WALKER, M ALHAFFAR, **A HAMLET**, BA DJAAFARA, A GHANI, N FERGUSON, M DAHAB, F CHECCHI, OJ WATSON

*BMJ*

2021

## The global burden of yellow fever

KAM GAYTHORPE, **A HAMLET**, K JEAN, DG RAMOS, L CIBRELUS, T GARSKE, N FERGUSON

*Elife*

2021

## Within-country age-based prioritisation, global allocation, and public health impact of a vaccine against SARS-CoV-2: A mathematical modelling analysis

AB HOGAN, P WINSKILL, OJ WATSON, PGT WALKER, C WHITTAKER, M BAGUELIN, NF BRAZEAU, GD CHARLES, KAM GAYTHORPE, **A HAMLET**, E KNOCK, DJ LAYDON, JA LEES, A LØCHEN, R VERITY, LK WHITTLES, F MUHIB, K HAUCK, NM FERGUSON, AC GHANI

*Vaccine*

2021

## Leveraging community mortality indicators to infer COVID-19 mortality and transmission dynamics in Damascus, Syria

OJ WATSON, M ALHAFFAR, Z MEHCY, C WHITTAKER, Z AKIL, NF BRAZEAU, G CUOMO-DANNENBURG, **A HAMLET**, HA THOMPSON, M BAGUELIN, RG FITZJOHN, E KNOCK, JA LEES, LK WHITTLES, T MELLAN, P WINSKILL, ICCOVID-19RTBSDBA.DCA.FSGKAMINJELD.JMSUH.JT.VR 1, N HOWARD, H CLAPHAM, F CHECCHI, N FERGUSON, A GHANI, E BEALS, P WALKER

*Nature Communications*

2021

## The epidemiology of Mayaro virus in the Americas: A systematic review and key parameter estimates for outbreak modelling

E-Y CAICEDO, K CHARNIGA, A RUEDA, I DORIGATTI, Y MENDEZ, **A HAMLET**, J-P CARRERA, ZM CUCUNUBÁ

*PLoS Neglected Tropical Diseases*

2021

## Database of epidemic trends and control measures during the first wave of COVID-19 in mainland China

H FU, H WANG, X XI, A BOONYASIRI, Y WANG, W HINSLEY, KJ FRASER, R MCCABE, DO MESA, J SKARP, A LEDDA, T DEWÉ, A DIGHE, P WINSKILL, SLV ELSLAND, KEC AINSLIE, M BAGUELIN, S BHATT, O BOYD, NF BRAZEAU, L CATTARINO, G CHARLES, H COUPLAND, ZM CUCUNUBA, G CUOMO-DANNENBURG, CA DONNELLY, I DORIGATTI, OD EALES, RG FITZJOHN, S FLAXMAN, KAM GAYTHORPE, AC GHANI, WD GREEN, **A HAMLET**, K HAUCK, DJ HAW, B JEFFREY, DJ LAYDON, JA LEES, T MELLAN, S MISHRA, G NEDJATI-GILANI, P NOUVELLET, L OKELL, KV PARAG, M RAGONNET-CRONIN, S RILEY, N SCHMIT, HA THOMPSON, HJT UNWIN, R VERITY, MAC VOLLMER, E VOLZ, PGT WALKER, CE WALTERS, OJ WATSON, C WHITTAKER, LK WHITTLES, N IMAI, S BHATIA, NM FERGUSON

*International Journal Of Infectious Diseases*

2021

## Mental health and psychosocial support in conflict: children's protection concerns and intervention outcomes in Syria

N RASLAN, **A HAMLET**, V KUMARI

*Conflict And Health*

2021

## Assessing the impact of preventive mass vaccination campaigns on yellow fever outbreaks in Africa: A population-level self-controlled case series study

KÉV JEAN, H RAAD, KAM GAYTHORPE, **A HAMLET**, JE MUELLER, D HOGAN, T MENGISTU, HJ WHITAKER, T GARSKE, MN HOCINE

*PLoS Medicine*

2021

## Estimating the number of undetected COVID-19 cases among travellers from mainland China

CA DONNELLY, S BHATIA, N IMAI, G CUOMO-DANNENBURG, M BAGUELIN, A BOONYASIRI, A CORI, Z CUCUNUBÁ, I DORIGATTI, R FITZJOHN, H FU, K GAYTHORPE, A GHANI, **A HAMLET**, W HINSLEY, D LAYDON, G NEDJATI-GILANI, L OKELL, S RILEY, H THOMPSON, SV ELSLAND, E VOLZ, H WANG, Y WANG, C WHITTAKER, X XI, NM FERGUSON

*Wellcome Open Research*

2021

## Estimates of the severity of coronavirus disease 2019: a model-based analysis

R VERITY, LC OKELL, I DORIGATTI, P WINSKILL, C WHITTAKER, N IMAI, G CUOMO-DANNENBURG, H THOMPSON, PGT WALKER, H FU, A DIGHE, JT GRIFFIN, M BAGUELIN, S BHATIA, A BOONYASIRI, A CORI, Z CUCUNUBÁ, R FITZJOHN, K GAYTHORPE, W GREEN, **A HAMLET**, W HINSLEY, D LAYDON, G NEDJATI-GILANI, S RILEY, SV ELSLAND, E VOLZ, H WANG, Y WANG, X XI, CA DONNELLY, AC GHANI, NM FERGUSON

*The Lancet Infectious Diseases*

2020

## Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe

S FLAXMAN, S MISHRA, A GANDY, HJT UNWIN, TA MELLAN, H COUPLAND, C WHITTAKER, H ZHU, T BERAH, JW EATON, MÉL MONOD, AC GHANI, CA DONNELLY, S RILEY, MAC VOLLMER, NM FERGUSON, LC OKELL, S BHATT

*Nature*

2020

## The impact of COVID-19 and strategies for mitigation and suppression in low-and middle-income countries

PGT WALKER, C WHITTAKER, OJ WATSON, M BAGUELIN, P WINSKILL, **A HAMLET**, BA DJAFAARA, Z CUCUNUBÁ, DO MESA, W GREEN, H THOMPSON, S NAYAGAM, KEC AINSLIE, S BHATIA, S BHATT, A BOONYASIRI, O BOYD, NF BRAZEAU, L CATTARINO, G CUOMO-DANNENBURG, A DIGHE, CA DONNELLY, I DORIGATTI, SLV ELSLAND, R FITZJOHN, H FU, KAM GAYTHORPE, L GEIDELBERG, N GRASSLY, D HAW, S HAYES, W HINSLEY, N IMAI, D JORGENSEN, E KNOCK, D LAYDON, S MISHRA, G NEDJATI-GILANI, LC OKELL, HJ UNWIN, R VERITY, M VOLLMER, CE WALTERS, H WANG, Y WANG, X XI, DG LALLOO, NM FERGUSON, AC GHANI

*Science*

2020

## Potential impact of the COVID-19 pandemic on HIV, tuberculosis, and malaria in low-income and middle-income countries: a modelling study

AB HOGAN, BL JEWELL, E SHERRARD-SMITH, JF VESGA, OJ WATSON, C WHITTAKER, **A HAMLET**, JA SMITH, P WINSKILL, R VERITY, M BAGUELIN, JA LEES, LK WHITTLES, KEC AINSLIE, S BHATT, A BOONYASIRI, NF BRAZEAU, L CATTARINO, LV COOPER, H COUPLAND, G CUOMO-DANNENBURG, A DIGHE, BA DJAFAARA, CA DONNELLY, JW EATON, SLV ELSLAND, RG FITZJOHN, H FU, KAM GAYTHORPE, W GREEN, DJ HAW, S HAYES, W HINSLEY, N IMAI, DJ LAYDON, TD MANGAL, TA MELLAN, S MISHRA, G NEDJATI-GILANI, KV PARAG, HA THOMPSON, HJT UNWIN, MAC VOLLMER, CE WALTERS, H WANG, Y WANG, X XI, NM FERGUSON, LC OKELL, TS CHURCHER, N ARINAMINPATHY, AC GHANI, PGT WALKER, TB HALLETT

*The Lancet Global Health*

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## Comparison of molecular testing strategies for COVID-19 control: a mathematical modelling study

NC GRASSLY, M PONS-SALORT, EPK PARKER, PJ WHITE, NM FERGUSON, K AINSLIE, M BAGUELIN, S BHATT, A BOONYASIRI, N BRAZEAU, L CATTARINO, H COUPLAND, Z CUCUNUBA, G CUOMO-DANNENBURG, A DIGHE, C DONNELLY, SLV ELSLAND, R FITZJOHN, S FLAXMAN, K FRASER, K GAYTHORPE, W GREEN, **A HAMLET**, W HINSLEY, N IMAI, E KNOCK, D LAYDON, T MELLAN, S MISHRA, G NEDJATI-GILANI, P NOUVELLET, L OKELL, M RAGONNET-CRONIN, HA THOMPSON, HJT UNWIN, M VOLLMER, E VOLZ, C WALTERS, Y WANG, OJ WATSON, C WHITTAKER, L WHITTLES, X XI

*The Lancet Infectious Diseases*

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## The potential public health consequences of COVID-19 on malaria in Africa

E SHERRARD-SMITH, AB HOGAN, **A HAMLET**, OJ WATSON, C WHITTAKER, P WINSKILL, F ALI, AB MOHAMMAD, P UHOMOIBHI, I MAIKORE, N OGBULAFOR, J NIKAU, MD KONT, JD CHALLENGER, R VERITY, B LAMBERT, M CAIRNS, B RAO, M BAGUELIN, LK WHITTLES, JA LEES, S BHATIA, ES KNOCK, L OKELL, HC SLATER, AC GHANI, PGT WALKER, OO OKOKO, TS CHURCHER

*Nature Medicine*

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## Evidence of initial success for China exiting COVID-19 social distancing policy after achieving containment

KEC AINSLIE, CE WALTERS, H FU, S BHATIA, H WANG, X XI, M BAGUELIN, S BHATT, A BOONYASIRI, O BOYD, L CATTARINO, C CIAVARELLA, Z CUCUNUBA, G CUOMO-DANNENBURG, A DIGHE, I DORIGATTI, SLV ELSLAND, R FITZJOHN, K GAYTHORPE, AC GHANI, W GREEN, **A HAMLET**, W HINSLEY, N IMAI, D JORGENSEN, E KNOCK, D LAYDON, G NEDJATI-GILANI, LC OKELL, I SIVERONI, HA THOMPSON, HJT UNWIN, R VERITY, M VOLLMER, PGT WALKER, Y WANG, OJ WATSON, C WHITTAKER, P WINSKILL, CA DONNELLY, NM FERGUSON, S RILEY

*Wellcome Open Research*

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## The effect of climate change on yellow fever disease burden in Africa

KAM GAYTHORPE, **A HAMLET**, L CIBRELUS, T GARSKE, NM FERGUSON

*Elife*

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## Eliminating yellow fever epidemics in Africa: vaccine demand forecast and impact modelling

KÉV JEAN, **A HAMLET**, J BENZLER, L CIBRELUS, KAM GAYTHORPE, A SALL, NM FERGUSON, T GARSKE

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## SARS-CoV-2 infection prevalence on repatriation flights from Wuhan City, China

HA THOMPSON, N IMAI, A DIGHE, KEC AINSLIE, M BAGUELIN, S BHATIA, S BHATT, A BOONYASIRI, O BOYD, NF BRAZEAU, L CATTARINO, LV COOPER, H COUPLAND, Z CUCUNUBA, G CUOMO-DANNENBURG, B DJAAFARA, I DORIGATTI, SV ELSLAND, R FITZJOHN, H FU, KAM GAYTHORPE, W GREEN, T HALLETT, **A HAMLET**, D HAW, S HAYES, W HINSLEY, B JEFFREY, E KNOCK, DJ LAYDON, J LEES, TD MANGAL, T MELLAN, S MISHRA, A MOUSA, G NEDJATI-GILANI, P NOUVELLET, L OKELL, KV PARAG, M RAGONNET-CRONIN, S RILEY, HJT UNWIN, R VERITY, M VOLLMER, E VOLZ, PGT WALKER, C WALTERS, H WANG, Y WANG, OJ WATSON, C WHITTAKER, LK WHITTLES, P WINSKILL, X XI, CA DONNELLY, NM FERGUSON

*Journal Of Travel Medicine*

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## International risk of yellow fever spread from the ongoing outbreak in Brazil, December 2016 to May 2017

I DORIGATTI, **A HAMLET**, R AGUAS, L CATTARINO, A CORI, CA DONNELLY, T GARSKE, N IMAI, NM FERGUSON

*Eurosurveillance*

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## Risks posed by Reston, the forgotten ebolavirus

D CANTONI, **A HAMLET**, M MICHAELIS, MN WASS, JS ROSSMAN

*Msphere*

2016