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# Characteristics of healthcare personnel with SARS-CoV-2 infection: 10 emerging infections program sites in the United States, April 2020–December 2021

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## Abstract

**Background:** Understanding characteristics of healthcare personnel (HCP) with SARS-CoV-2 infection supports the development and prioritization of interventions to protect this important workforce. We report detailed characteristics of HCP who tested positive for SARS-CoV-2 from April 20, 2020 through December 31, 2021.

**Methods:** CDC collaborated with Emerging Infections Program sites in 10 states to interview HCP with SARS-CoV-2 infection (case-HCP) about their demographics, underlying medical conditions, healthcare roles, exposures, personal protective equipment (PPE) use, and COVID-19 vaccination status. We grouped case-HCP by healthcare role. To describe residential social vulnerability, we merged geocoded HCP residential addresses with CDC/ATSDR Social Vulnerability Index (SVI) values at the census tract level. We defined highest and lowest SVI quartiles as high and low social vulnerability, respectively.

**Results:** Our analysis included 7,531 case-HCP. Most case-HCP with roles as certified nursing assistant (CNA) (444, 61.5%), medical assistant (252, 65.3%), or home healthcare worker (HHW) (225, 59.5%) reported their race and ethnicity as either non-Hispanic Black or Hispanic. More than one third of HHWs (166, 45.2%), CNAs (283, 41.7%), and medical assistants (138, 37.9%) reported a residential address in the high social vulnerability category. The proportion of case-HCP who reported using recommended PPE at all times when caring for patients with COVID-19 was lowest among HHWs compared with other roles.

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# Sars A Case Study In Emerging Infections

**Robert Peckham**



## **Sars A Case Study In Emerging Infections:**

**SARS** Angela McLean, Robert May, John Pattison, Robin Weiss, 2005-03-10      **SARS** Angela R. McLean, 2005 The sudden appearance and rapid spread of Severe Acute Respiratory Syndrome SARS in 2002 served to alert the world to the fact that emerging infections are a global problem Living in affluent societies with well developed healthcare systems does not necessarily protect people from the dangers posed by life threatening infections The SARS epidemic tested global preparedness for dealing with a new infectious agent and raised important questions how did we do and what did we learn This book uses the SARS outbreak as a case study to enumerate the generic issues that must be considered when planning the control of emerging infections Emerging infections are more than just a current biological fashion the bitter ongoing experience of AIDS and the looming threat of pandemic influenza teach us that the control of infectious disease is a problem we have not yet solved Scientists from a broad range of disciplines biologists veterinarians physicians and policy makers all need to prepare But prepare for what SARS A Case Study In Emerging Infections provides an up to date and accessible overview of the tasks that must be addressed by a community that wishes to confront emerging infections Each chapter is written by a world expert and offers an authoritative and timely overview of its subject While focusing on SARS the book addresses a whole range of pertinent considerations and issues from the use of new mathematical models to account for the spread of infection across global airline networks to a discussion of the ethics of quarantining individuals in order to protect communities The book will be of interest to students academics and policy makers working in the fields of disease ecology medicine and public health      **Communication and Engagement with Science and Technology** John K. Gilbert, Sue Stocklmayer, 2013 Science communication seeks to engage individuals and groups with evidence based information about the nature outcomes and social consequences of science and technology This text provides an overview of this burgeoning field the issues with which it deals important influences that affect it the challenges that it faces It introduces readers to the research based literature about science communication and shows how it relates to actual or potential practice A Further Exploration section provides suggestions for activities that readers might do to explore the issues raised Organized around five themes each chapter addresses a different aspect of science communication Models of science communication theory into practice Challenges in communicating science Major themes in science communication Informal learning Communication of contemporary issues in science and society Relevant for all those interested in and concerned about current issues and developments in science communication this volume is an ideal text for courses and a must have resource for faculty students and professionals in this field      *Emergency Public Health: Preparedness and Response* Girish Bobby Kapur, Jeffrey P. Smith, 2010-10-05 As large scale emergencies continue to pose a threat to U S populations at the local state and national levels the public and private sectors are demanding improved public health preparedness response and cooperation for such events Emergency Public Health provides readers with important information and analysis of key public

health crises threatening our local state and national jurisdictions As the first text of its kind in the emerging field of emergency public health it provides a framework for public health professionals policy makers first responders and emergency healthcare providers to plan and implement effective measures to protect the public health of civilian populations during times of emergencies Written by experts with both emergency healthcare and public health backgrounds the case based chapters provide valuable information on the preparedness response and mitigation of emergency public health topics In addition Emergency Public Health contains timely information of key areas such as public health law and the interactions among government jurisdictions Each chapter also includes online resources for the reader to pursue additional web based resources Important features Chapters written by emergency physicians with public health degrees Case based chapters Web resources provided Covers large scale issues such as public health law government jurisdictions NGO s Chapter devoted to specific needs of children Chapter on mental health issues in times of public health emergencies Specific chapters on public health tools such as surveillance and rapid needs assessment Each chapter follows a consistent structure to maintain clarity and continuity throughout the text A Introduction B Historical perspectives C Preparedness D Response E Case study F On line resources Competitive features Covers natural emergencies Covers key topics in terrorism Covers primary topics for disaster medicine Questions for instructors What are the key topics in your course How do you like to prepare your students for public health emergencies What management principles are addressed in your course Do you teach special issues such as children and mental health issues during emergencies

**Challenges in Intelligence Analysis** Timothy Walton, 2010-08-30 In Challenges in Intelligence Analysis first published in 2010 Timothy Walton offers concrete reality based ways to improve intelligence analysis

Population Dynamics and Infectious Diseases in Asia Adrian Sleight, 2006 Initially stimulated by a scholarly workshop convened in Singapore in late 2004 and written over the subsequent 18 months this volume considers the potentially lethal pattern of infectious disease emergence in Asia It studies linkages to changes in patterns of human activity including but not limited to shifts in the distribution and concentration of human settlements and the patterns of movement within and between them It explores the causes and consequences of infectious agents in the region historically and examines such newly emergent natural biological threats as SARS and avian influenza Drawing on a range of disciplinary perspectives the book contains analyses rooted in the social physical and biological sciences as well as works which span these fields Among the issues considered are the ways in which changes in our natural and built environment social and economic pressures shifting policies and patterns of collaboration in responding to disease impact upon our approach to and success in containing serious threats Infection control has moved beyond the province of clinical experts epidemiologists and microbiologists into the mathematics of epidemic prevention and control as well as the overall physical and human ecology and historical contexts of emerging infections Not only does such a broad approach enable appreciation of complex forces driving growing epidemic risks in Asia today it also reveals the importance and relevance of

population dynamics as well as the global urgency of alleviating unsatisfactory health conditions in Asia The topic and the broad approach has international appeal beyond the region as many of these forces operate throughout the world **The Palgrave Encyclopedia of Global Security Studies**, 2023-02-15 This encyclopedia provides an authoritative guide intended for students of all levels of studies offering multidisciplinary insight and analysis of over 500 headwords covering the main concepts of Security and Non traditional Security and their relation to other scholarly fields and aspects of real world issues in the contemporary geopolitical world **A History of Infectious Diseases and the Microbial World** Lois N. Magner, 2009-04-30 A History of Infectious Diseases and the Microbial World offers readers answers to specific questions as well as the challenge of a narrative that will stimulate their curiosity and encourage them to ask questions about the theory practice and assumptions of modern medicine This work provides a broad introductory overview of the history of major infectious diseases including their impact on different populations the recognition of specific causative agents and the development of methods used to prevent control and treat them By stressing the major themes in the history of disease this book allows readers to relate modern concerns to historical materials It places modern developments concerning infectious diseases within their historical context illuminating the relationships between patterns of disease and social cultural political and economic factors Upon completing this volume readers will be prepared to answer contemporary questions concerning the threat of newly emerging infectious diseases potentially devastating pandemics and the threat of bioterrorism One will gain a precise understanding of the nature of different kinds of pathogens the unique mechanisms behind disease transmission and the means used to control prevent and treat infectious disease Although only a few of these deadly illnesses can be addressed in detail those that are discussed include malaria leprosy bubonic plague tuberculosis syphilis diphtheria cholera yellow fever poliomyelitis HIV AIDS and influenza Influenza and Public Health Jennifer Lee Gunn, Susan Craddock, Tamara Giles-Vernick, 2010 Major influenza pandemics pose a constant threat As evidenced by recent H5N1 avian flu and novel H1N1 influenza outbreaks can come in close succession yet differ in their transmission and impact With accelerated levels of commercial and population mobility new forms of flu virus can also spread across the globe with unprecedented speed Responding quickly and adequately to each outbreak becomes imperative on the part of governments and global public health organizations but the difficulties of doing so are legion One tool for pandemic planning is analysis of responses to past pandemics that provide insight into productive ways forward This book investigates past influenza pandemics in light of today's so as to afford critical insights into possible transmission patterns experiences mistakes and interventions It explores several pandemics over the past century from the infamous 1918 Spanish Influenza the avian flu epidemic of 2003 and the novel H1N1 pandemic of 2009 to lesser known outbreaks such as the 1889-90 influenza pandemic and the Hong Kong Flu of 1968 Contributors to the volume examine cases from a wide range of disciplines including history sociology epidemiology virology geography and public health identifying patterns that cut across pandemics in order to guide

contemporary responses to infectious outbreaks      Epidemics in Modern Asia Robert Peckham, 2016-04-28 Epidemics have played a critical role in shaping modern Asia Encompassing two centuries of Asian history Robert Peckham explores the profound impact that infectious disease has had on societies across the region from India to China and the Russian Far East The book tracks the links between biology history and geopolitics highlighting infectious disease s interdependencies with empire modernization revolution nationalism migration and transnational patterns of trade By examining the history of Asia through the lens of epidemics Peckham vividly illustrates how society s material conditions are entangled with social and political processes offering an entirely fresh perspective on Asia s transformation      *Encyclopedia of Pestilence, Pandemics, and Plagues* Joseph P. Byrne, 2008-09-30 Editor Joseph P Byrne together with an advisory board of specialists and over 100 scholars research scientists and medical practitioners from 13 countries has produced a uniquely interdisciplinary treatment of the ways in which diseases pestilence and plagues have affected human life From the Athenian flu pandemic to the Black Death to AIDS this extensive two volume set offers a sociocultural historical and medical look at infectious diseases and their place in human history from Neolithic times to the present Nearly 300 entries cover individual diseases such as HIV AIDS malaria Ebola and SARS major epidemics such as the Black Death 16th century syphilis cholera in the nineteenth century and the Spanish Flu of 1918 19 environmental factors such as ecology travel poverty wealth slavery and war and historical and cultural effects of disease such as the relationship of Romanticism to Tuberculosis the closing of London theaters during plague epidemics and the effect of venereal disease on social reform Primary source sidebars over 70 illustrations a glossary and an extensive print and nonprint bibliography round out the work      **The Social Ecology of Infectious Diseases** Kenneth H. Mayer, H.F. Pizer, 2011-04-28 Social Ecology of Infectious Diseases explores how human activities enable microbes to disseminate and evolve thereby creating favorable conditions for the diverse manifestations of communicable diseases Today infectious and parasitic diseases cause about one third of deaths and are the second leading cause of morbidity and mortality The speed that changes in human behavior can produce epidemics is well illustrated by AIDS but this is only one of numerous microbial threats whose severity and spread are determined by human behaviors In this book forty experts in the fields of infectious diseases the life sciences and public health explore how demography geography migration travel environmental change natural disaster sexual behavior drug use food production and distribution medical technology training and preparedness as well as governance human conflict and social dislocation influence current and likely future epidemics Provides essential understanding of current and future epidemics Presents a crossover perspective for disciplines in the medical and social sciences and public policy including public health infectious diseases population science epidemiology microbiology food safety defense preparedness and humanitarian relief Creates a new perspective on ecology based on the interaction of microbes and human activities      **Epidemic Encounters** Magda Fahrni, Esyllt W. Jones, 2012-05-24 Health crises such as the SARS epidemic and H1N1 have rekindled interest in the 1918 influenza pandemic

which swept the globe after the First World War and killed approximately fifty million people Epidemic Encounters examines the pandemic in Canada where one third of the population took ill and fifty five thousand people died What role did social inequalities play in determining who survived How did the authorities health care workers and ordinary citizens respond Contributors answer these questions as they pertained to both local and national contexts In the process they offer new insights into medical history s usefulness in the struggle against epidemic disease **Emerging Infectious Diseases**, 2007

**Hunting Wildlife in the Tropics and Subtropics** Julia E. Fa, Stephan M. Funk, Robert Nasi, 2022-09-01 The hunting of wild animals for their meat has been a crucial activity in the evolution of humans It continues to be an essential source of food and a generator of income for millions of Indigenous and rural communities worldwide Conservationists rightly fear that excessive hunting of many animal species will cause their demise as has already happened throughout the Anthropocene Many species of large mammals and birds have been decimated or annihilated due to overhunting by humans If such pressures continue many other species will meet the same fate Equally if the use of wildlife resources is to continue by those who depend on it sustainable practices must be implemented These communities need to remain or become custodians of the wildlife resources within their lands for their own well being as well as for biodiversity in general This title is also available via Open Access on Cambridge Core *Time, Globalization and Human Experience* Paul Huebener, Susie O'Brien, Tony Porter, Liam Stockdale, Yanqiu Rachel Zhou, 2016-11-03 This edited volume focuses on the intersection of time and globalization as manifested across a variety of economic political cultural and environmental contexts Since David Harvey s influential characterization of globalization as time space compression ample research has looked at the spatial aspect of the phenomenon yet few have focused on globalization s temporal aspects Meanwhile other publications have analysed problems of speed acceleration and the commodification of time but while it often serves as the implicit or explicit backdrop for these studies of time globalization is not investigated as a problem or a question in its own right In response this volume develops these conversations to consider how time shapes globalization and how globalization affects our experience of time The interplay between varying aspects of the human experiences of time and globalization requires the type of interdisciplinary approach that this volume takes The contributors advance an understanding of global time s as an arena of contestation with social political ecological and cultural implications for human and other lives In considering the diverse valences of time and globalization they illuminate problems as well as possibilities Topics covered include emerging infectious diseases temporal sovereignty worker exploitation and resistance chronobiology energy politics activism and hope and literary and cinematic representations of counter temporalities offering a rich and varied account of global times This volume will be of great interest to students and researchers from a range of disciplines including anthropology cultural studies globalization international relations literary studies political science social theory and sociology *Chinese Walls in Time and Space* Roger Des Forges, Minglu Gao, Chiao-mei Liu, Haun Saussy, 2010-03-31 Are walls remnants of ancient and medieval societies

destined to become anachronistic in modern and post modern times Or will they persist shaping as well as adjusting to new conditions Do walls necessarily constrain and even isolate those who live within them or can they act as a medium of support and communication for people on both sides This volume addresses these questions Authors from six disciplines history art law medicine communication and film provide multiple perspectives on various kinds of walls material ones around and within states cities and towns as well as virtual ones regulating the administration of justice the flow of pathogens and the transmission of information      **Infectious Diseases** Eskild Petersen, Lin Hwei Chen, Patricia

Schlagenhauf-Lawlor, 2017-02-14 The second edition of this concise and practical guide describes infections in geographical areas and provides information on disease risk concomitant infections such as co prevalence of HIV and tuberculosis and emerging bacterial viral and parasitic infections in a given geographical area of the world Geographic approach means that its the only book to guide the health care worker towards a diagnosis based on the location of symptoms and travel history by encouraging the question where have you been New content covering MERS Ebola Zika and infections transmitted during air and maritime travel Covers the major infectious disease outbreaks framed in their geographic setting such as H7N9 bird flu influenza H1N1 Ebola and Zika Outstanding international editor team with vast experience on various international infectious disease and as journal editors and key leaders in infection surveillance      *Infectious Disease Epidemiology*

Ibrahim Abubakar, Helen R. Stagg, Ted Cohen, Laura C. Rodrigues, 2016-04-07 Infectious Disease Epidemiology is a concise reference guide which provides trainees and practicing epidemiologists with the information that they need to understand the basic concepts necessary for working in this specialist area Divided into two sections part one comprehensively covers the basic principles and methods relevant to the study of infectious disease epidemiology It is organised in order of increasing complexity ranging from a general introduction to subjects such as mathematical modelling and sero epidemiology Part two examines key major infectious diseases that are of global significance Grouped by their route of transmission for ease of reference they include diseases that present a particular burden or a high potential for causing mortality This practical guide will be essential reading for postgraduate students in infectious disease epidemiology health protection trainees and practicing epidemiologists

Disease and Crime Robert Peckham, 2013-12-04 Disease and crime are increasingly conflated in the contemporary world News reports proclaim epidemics of crime while politicians denounce terrorism as a lethal pathological threat Recent years have even witnessed the development of a new subfield epidemiological criminology which merges public health with criminal justice to provide analytical tools for criminal justice practitioners and health care professionals Little attention however has been paid to the historical contexts of these disease and crime equations or to the historical continuities and discontinuities between contemporary invocations of crime as disease and the emergence of criminology epidemiology and public health in the second half of the nineteenth century When how and why did this pathologization of crime and criminalization of disease come about This volume addresses these critical



questions exploring the discursive construction of crime and disease across a range of geographical and historical settings

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