

AERONAUTICS AND SPACE ENGINEERING BOARD

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Flying in the COVID-19 Era--Science-based Risk Assessments and Mitigation Strategies on the Ground and in the Air: A Workshop

A VIRTUAL WORKSHOP OPEN TO THE GENERAL PUBLIC

Hosted by the Aeronautics and Space Engineering Board
National Academies of Sciences, Engineering, and Medicine

February 4, 2021 – February 5, 2021

AGENDA

THURSDAY, FEBRUARY 4, 2021 OPEN SESSION

Meeting Open to the Public

Livestreaming Link: <https://livestream.com/nasem/events/9503214>

All times are US Eastern Standard (UTC-5:00)

Workshop Opening

11:00 AM	Welcome on Behalf of the Planning Committee <i>John-Paul Clarke, Sc.D., Chair, Planning Committee Ernest Cockrell, Jr. Memorial Chair in Engineering, University of Texas at Austin</i>
11:03 AM	Keynote Talk: COVID-19 from a Public Health and Medicine Perspective (45-minute presentation and 12-minute Q&A session) <i>Ashish K. Jha, M.D. Dean, School of Public Health, Brown University</i>
12:00 PM	Keynote Talk: COVID-19 Pandemic: The World in Disorder (30-minute presentation) <i>Victor J. Dzau, M.D. President, National Academy of Medicine</i>
12:30 PM	Keynote Talk: A Virologist's View of COVID 19 (45-minute presentation and 15-minute Q&A session) <i>William A. Haseltine, M.D. Chair and President, ACCESS Health International, Inc.</i>
1:30 PM	Workshop Overview <i>John-Paul Clarke, Sc.D., Chair, Planning Committee Ernest Cockrell, Jr. Memorial Chair in Engineering, University of Texas at Austin</i>
1:35 PM	Break (40-minute break)

Session I – Setting the Stage

ISSUE: What is the science behind risk mitigation strategies and how might they be implemented to ensure health?

2:15 PM Session I Speaker Presentations

(15-minute presentations)

Session Moderator:

John-Paul Clarke, Sc.D., Chair, Planning Committee

Ernest Cockrell, Jr. Memorial Chair in Engineering, University of Texas at Austin

Speakers:

- Containing Covid: Reducing risk through layered nonpharmaceutical interventions

Caitlin Rivers, Ph.D.

Asst. Professor, Bloomberg School of Public Health, Johns Hopkins University

- Insights from the 2013 NAS report on 'Infectious Disease Mitigation in Airports and Airplanes' and application to Covid-19

Joseph Allen, D.Sc.

Assoc. Professor, T.H. Chan School of Public Health, Harvard University

- Aeroporti di Roma and the Italian Government's Actions to Ensure Health Safety During the Pandemic

Ivan Bassato

Executive Vice President of Operations, Aeroporti di Roma

- Data Science Perspective on Flights: FlyHealthy study

Vicki Stover Hertzberg, Ph.D.

Professor, School of Nursing, Emory University

- Aerosol Dispersion in Commercial Aircraft Cabins

Joshua L. Santarpia, Ph.D.

Assoc. Professor, University of Nebraska Medical Center

3:30 PM Session I Question Period

(45-minute Q&A session with panel roundtable)

4:15 PM Break

(15-minute break period)

Session II: Transmission Risks & Mitigations in the Airport – Terminal & Landside

ISSUE: What are the transmission risks of COVID-19 within the airport terminal and what mitigations are effective?

4:30 PM Session II Speaker Presentations

(15-minute presentations)

Session Moderator:

Ilan Kroo, Ph.D., Member, Planning Committee

Professor, Aeronautics and Astronautics, Stanford University

Speakers:

- Airport and Airplanes

Leonard Marcus, Ph.D.

Co-Director, National Preparedness Leadership Initiative

- Where are the locations and activities of risk in travel?

Jack Spengler, Ph.D.

Professor, T.H. Chan School of Public Health, Harvard University

- Regional Airports and Airlines Perspective

Nobuyo Reinsch

Vice President of Aviation Safety & Security, Regional Airline Association

- Infection Prevention Aspects of Air Travel

Saskia Popescu, Ph.D.

Asst. Professor, Biodefense Program, Schar School of Policy and Government, George Mason University

- Non-Pharmaceutical Interventions Recommended at Airport Level in Europe

Cristian Ionut Panait, M.D.

Medical Expert, Aircrew & Medical Department, European Union Aviation Safety Agency

5:45 PM Session II Question Period

(45-minute Q&A session with panel roundtable)

6:30 PM Day 1 Closing Remarks

John-Paul Clarke, Sc.D., Chair, Planning Committee

Ernest Cockrell, Jr. Memorial Chair in Engineering, University of Texas at Austin

Workshop Adjourns for the Day, reconvene tomorrow at 11:00 AM

FRIDAY, FEBRUARY 5, 2021
OPEN SESSION

Zoom Remote Access Information – Open Session

Phone: +1-646-828-7666

Link: TBD

Meeting ID: TBD

Password: TBD

11:00 AM Welcome from the National Academies of Sciences, Engineering, and Medicine

Colleen Hartman, Ph.D.

Aeronautics & Space Science Director, NASEM

11:01 AM Recap of Day 1 and Comments on Day 2 Agenda

John-Paul Clarke, Sc.D., Chair, Planning Committee

Ernest Cockrell, Jr. Memorial Chair in Engineering, University of Texas at Austin

Session III: Transmission Risks & Mitigations in the Aircraft Environment

ISSUE: What are the transmission risks of COVID-19 within the aircraft? What mitigation strategies are effective?

11:15 AM Session III Speaker Presentations

(15-minute presentations)

Session Moderator:

Robie Samanta Roy, Ph.D., Member, Planning Committee

Vice President, Technology, Government Affairs, Lockheed Martin

Speakers:

- How Airlines Responded to the COVID-19 Crisis

Laurie A. Garrow, Ph.D.

Co-Director, Center for Urban and Regional Air Mobility (CURAM), Georgia Institute of Technology; President, Airline Operations Research Society (AGIFORS)

- In-flight COVID-19 Transmission Risk and Feasible Mitigation Strategies

Joshua Barocas, M.D.

Asst. Professor, Boston University School of Medicine

- The role of fomites in the spread of viruses and quantitative microbial risk assessment

Charles Gerba, Ph.D.

Professor, University of Arizona

- Boeing and Airline Studies on Cabin Spread

Michael Delaney, Member, Planning Committee

Chief Aerospace Safety Officer and Senior Vice President, Global Aerospace Safety, Boeing

- Airbus Studies on Cabin Spread and Airflow

Stefan Roemelt

Senior Vice President of Engineering, Cabin & Cargo, Airbus

Delta's Approach to Covid

David Garrison

Senior Vice President for Corporate Safety, Security, and Compliance, Delta Air Lines

12:45 PM Session III Question Period

(45-minute Q&A session with panel roundtable)

1:30 PM Break

(30-minute break period)

Session IV: What Do We Wish We Knew Then? What Do We Wish We Could Know Now?

ISSUE: Looking back over the last year, what information was missing and what lessons did we learn? How does that inform our prioritization of studies and information going forward?

2:00 PM Session IV Speaker Presentations

(15-minute presentations)

Session Moderator:

Pamela Melroy, Member, Planning Committee

CEO, Melroy & Hollett Technology Partners

Speakers:

- Collaboration and Fast Response During the Pandemic

David Walt, Ph.D.

Professor, Harvard Medical School

- Adaptive Terminal Creation

David Kipp

Vice President, Technology Services, Burns Engineering

- COVID 19 – A Catalyst for Accelerating Airport Terminal Design Trends

Josh Cohn

Director, Airport Planning, InterVistas

- Multi-Layered Strategy to Reducing COVID-19 Risk in Air Travel

Hassan Shahidi, Ph.D.

President, Flight Safety Foundation

- Impact on the Aviation Industry

James Wiltshire

Assistant Director for External Affairs, International Air Transport Association

- Communicating with the Public

Lindsey Leininger, Ph.D., M.A.

Clinical Professor of Business Administration, Tuck School of Business, Dartmouth University

3:30 PM Session IV Question Period

(45-minute Q&A session with panel roundtable)

4:15 PM Break

(15-minute break period)

Session V: Ensuring the Future in US for the Aviation Industry

Summary Session - Looking into a crystal ball: how will COVID-19 affect the commercial airline industry?

4:30 PM Session V Speaker Presentations

(15-minute presentations)

Session Moderator:

Alan Epstein, Ph.D., Member, Planning Committee

Professor Emeritus, Aeronautics and Astronautics, Massachusetts Institute of Technology

Speakers:

- Public Health Perspective

Celine Gounder, M.D.

Clinical Asst. Professor, New York University Grossman School of Medicine

- Perception and Attitudes Towards COVID-19 Mitigation Measures: A Cross-National Analysis of Air Travel Demand

Francesco Manca, Ph.D.

Research Associate, Dept. of Civil and Environmental Engineering, Imperial College London

- A Systems Approach for Pandemic Preparedness and Response

Pinar Keskinocak, Ph.D.

Director, Center for Health and Humanitarian Systems, Georgia Institute of Technology

- An OEM View on Health and Safety Engagement Post COVID-19

Valerie Manning, Ph.D., Member, Planning Committee

Senior Vice President, Customer Support, Airbus

- Prognostication for the Airline Industry

Myles Walton, Ph.D

Managing Director, UBS

5:45 PM Session V Question Period

(45-minute Q&A session with panel roundtable)

Workshop Closing

6:30 PM Workshop Summary

John-Paul Clarke, Sc.D., Chair, Planning Committee

Ernest Cockrell, Jr. Memorial Chair in Engineering, University of Texas at Austin

Workshop Adjourns