



# 24<sup>th</sup> Annual Chicago Infection Control Conference

September 18, 2019

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Global Migration Task Force, CDC Ebola Response 2018-2019

Dr. Alvarado-Ramy has disclosed that there is no actual or potential conflict of interest in regards to this presentation

The planners, editors, faculty and reviewers of this activity have no relevant financial relationships to disclose. This presentation was created without any commercial support.

# Learning Objectives

At the conclusion of this course participants will be able to:

- Describe how Chicago Department of Public Health is exploring the root causes of health disparities among those living in Chicago.
- Identify public health resources to contact for reportable disease conditions, obtain specialized treatments, or engage for antibiotic stewardship assessments through the Chicago Department of Public Health.
- Describe surveillance and response efforts around emerging and re-emerging infections including Legionnaires' disease, measles, and preparedness regarding the Ebola situation in the DRC.
- Identify mechanisms of surveillance for acute responses (such as emerging lung diseases in those with vaping history) and how to report these suspected cases to public health.

# To obtain credit you must:

- **Complete an electronic evaluation**
- **After completing the evaluation you can generate your certificate immediately.**

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*Rush University Medical Center designates this live activity for a maximum of 6.0 AMA PRA Category 1 Credit(s)<sup>™</sup>. Physicians should claim only credit commensurate with the extent of their participation in the activity.*

*ANCC Credit Designation – Nurses*

*The maximum number of hours awarded for this CE activity is 6.0 contact hours.*

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*Rush University is an approved provider for physical therapy (216.000272), occupational therapy, respiratory therapy, social work (159.001203), nutrition, speech-audiology, and psychology by the Illinois Department of Professional Regulation.*

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# Approach to Risk Assessment and Management for Persons Traveling to the United States from Ebola Outbreak Areas in the Democratic Republic of the Congo, August 2018-August 2019

24<sup>th</sup> Annual Infection Control Conference, Chicago Department of Public Health

Malcolm X College, September 18, 2019

Francisco Alvarado-Ramy, MD, FACP

Global Migration Task Force, CDC Ebola Response 2018-2019

# Objectives

- Overview of Ebola outbreak in Democratic Republic of the Congo (DRC)
- Compare risk assessment and management strategies for persons arriving from DRC with approach used during West Africa epidemic
- Describe CDC outreach to NGOs
- Share insights from domestic Ebola response events during 2019
- Summarize data on volume of travel from DRC to Chicago, IL
- Provide basic information about EVV options for clinical staff in US hospitals or deployers to DRC

# Assessing and Managing Risk for Most HP

## Ebola Outbreak in West Africa 2014-2016

- Health, exposure assessment on arrival at 5 US ports of entry
  - Condition for entry (all comers, not just HP)
  - Risk assessment form, in-depth assessment for symptoms or potential exposures
  - Contact information shared with state health departments
- Active monitoring
  - Daily reporting of temperature and other signs / symptoms to public health officials
  - Not done under federal order
- States and locals may have been more restrictive than CDC's recommendations in post-arrival conditions for monitoring / movement

HP = healthcare personnel

# Assessing and Managing Risk for Most HP Ebola Outbreak in DRC 2019

- **Recommendation** for most HCWs is **Facilitated Self-monitoring**
- NGOs requested to:
  - Remain in contact with staff during their assignment
  - Conduct a predeparture health and exposure assessment for HCWs after finishing duties but before leaving outbreak area
    - CDC does not require a copy of completed form\*
    - NGO and HCW should keep copy in case requested by state / local health departments
  - Establish advance contact with state health department with jurisdiction for location where staffer will stay during their recommended 21-day self-monitoring period
- States, local health departments may be more restrictive than CDC in post-arrival conditions for monitoring / movement

\*Available at <https://wwwnc.cdc.gov/travel/page/recs-organizations-sending-workers-ebola>

# Lay Travelers to DRC

## Pre and Post Travel Advice

- Consider travel health and medical evacuation insurance coverage
- If a US citizen, register with the US Department of State
  - Enroll online in the Smart Traveler Enrollment Program (STEP)
    - Receive security updates and information about getting help in the event of an emergency
- For travelers to the outbreak area, pay attention to your health during travel and for 21 days after you leave the outbreak area
- Seek medical care immediately if you develop fever, muscle pain, sore throat, diarrhea, weakness, vomiting, stomach pain, or unexplained bleeding or bruising during or after travel

**CDC travel notice:** <https://wwwnc.cdc.gov/travel/notices/alert/ebola-democratic-republic-of-the-congo>

**STEP site:** <https://travel.state.gov/content/travel/en/international-travel/before-you-go/step.html>



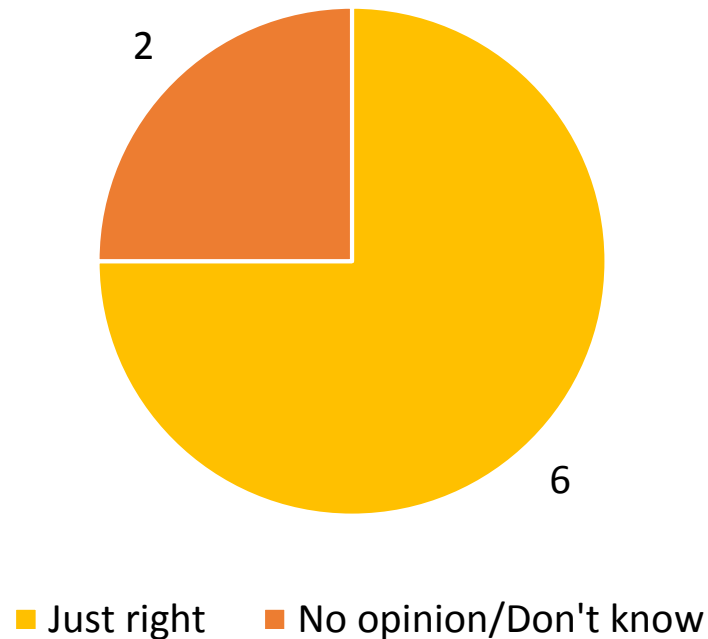
## HP Tending to Patients with EVD (wore PPE, no breaches in ICP)

Activity	Canada	United Kingdom	United States
<b>Establishing connection with public health</b>	Self-initiated in community (within 1 business day of arrival)	Returning workers scheme via NGO or self-referral	Via NGO with CDC support. Health and exposure assessment recommended before departing outbreak area
<b>Air travel</b>	Allowed	Not allowed once arrived in UK	Allowed
<b>Monitoring type</b>	Self	Active	Self with NGO oversight**
<b>Clinical work</b>	Allowed*	Not allowed	Allowed**
<b>Presence in public place</b>	Allowed*	Allowed	Allowed
<b>Public transportation</b>	Allowed*	≤ 2 hours	Allowed
<b>Other</b>		Postpone receipt of non-essential care; use barrier contraception and private lodging; avoid places hard to exit	Establish contact with state HD; agree on process to seek evaluation if HCW becomes ill

Following assessment by public health officer. \*\* State/local public health agency or medical facility could impose other conditions.  
HP = healthcare personnel

# Post-Deployment Monitoring and Management NGO Survey, 2019 (N=8)

NGOs' opinions of current CDC recommendations regarding self-monitoring for Ebola signs and symptoms under oversight of the NGO, for personnel leaving Ebola outbreak areas



*“The US has less work and travel restrictions than some countries like UK for healthcare workers returning from Ebola outbreak areas but more restrictions than other, usually less developed, countries where our staff have traveled to. The US is about the same as Canada.”*

# NGOs on the Front Lines of Ebola Response

- Operate Ebola treatment centers
- Run or assist with other healthcare operations
- Provide nutrition assistance
- Offer spiritual support
- Run education programs
- Conduct field investigations
- Develop infrastructure



Courtesy of Samaritan's Purse

# CDC Domestic Collaboration with NGOs

- NGO staff face occupational risk for Ebola virus exposures
- Though their numbers are low, NGO staff represent a disproportionate percentage of travelers to the US from the outbreak areas in DRC
- CDC began outreach in August 2018
- Exchange information, learn about footprint in DRC / outbreak areas
  - Inform CDC risk assessments and recommendations
  - Relay CDC recommendations

# CDC Guidance to NGOs and Sponsored Personnel (Topics Covered Besides Facilitated Self-monitoring)

- Ebola infection prevention
- Options for vaccination
  - Against Ebola
  - Routine and destination-specific vaccine-preventable diseases
- Malaria prophylaxis
- Travel health and evacuation insurance
- Availability of CDC expert consultation for symptoms or exposure
- Indications for medical evacuation (and how to get support if needed)
- Resumption of clinical duties on return to the US

# Communication Flow for Travelers Sponsored by NGOs

NGO notifies CDC  
about planned arrivals

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graph TD; A[NGO notifies CDC about planned arrivals] --> B[CDC gives state HD contact information and current CDC recommendations to NGO]; B --> C[NGO establishes communication with state/local HD, agrees on monitoring expectation, and outlines contingency plans];
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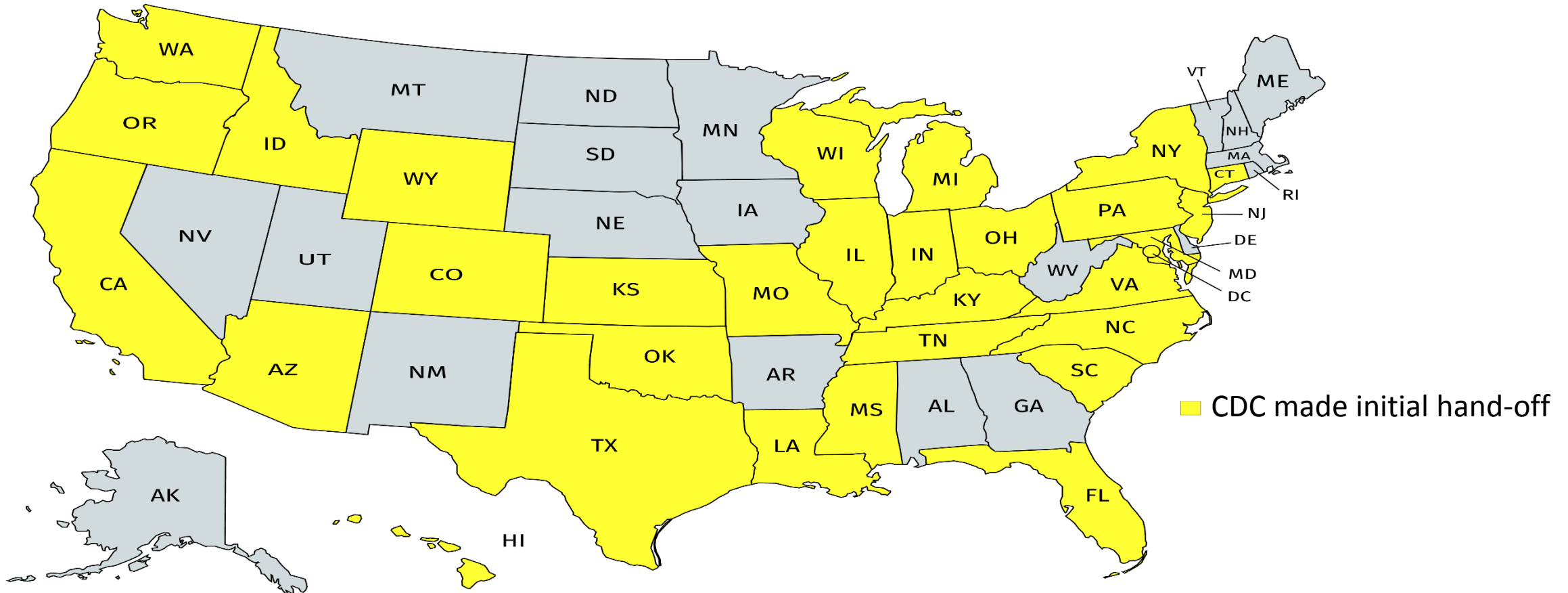
CDC gives state HD contact  
information and current CDC  
recommendations to NGO

NGO establishes communication  
with state/local HD, agrees on  
monitoring expectation, and  
outlines contingency plans

Promotes early notification of  
extraordinary events:

- Unprotected exposures
- Ill traveler *en route*
- Need for Medical Evacuation

# CDC Assistance in Linking NGO with State HDs to Enable Facilitated Self-Monitoring



**N = 30 states plus DC as of June 16, 2019**

# US Border Health Ebola Response Events

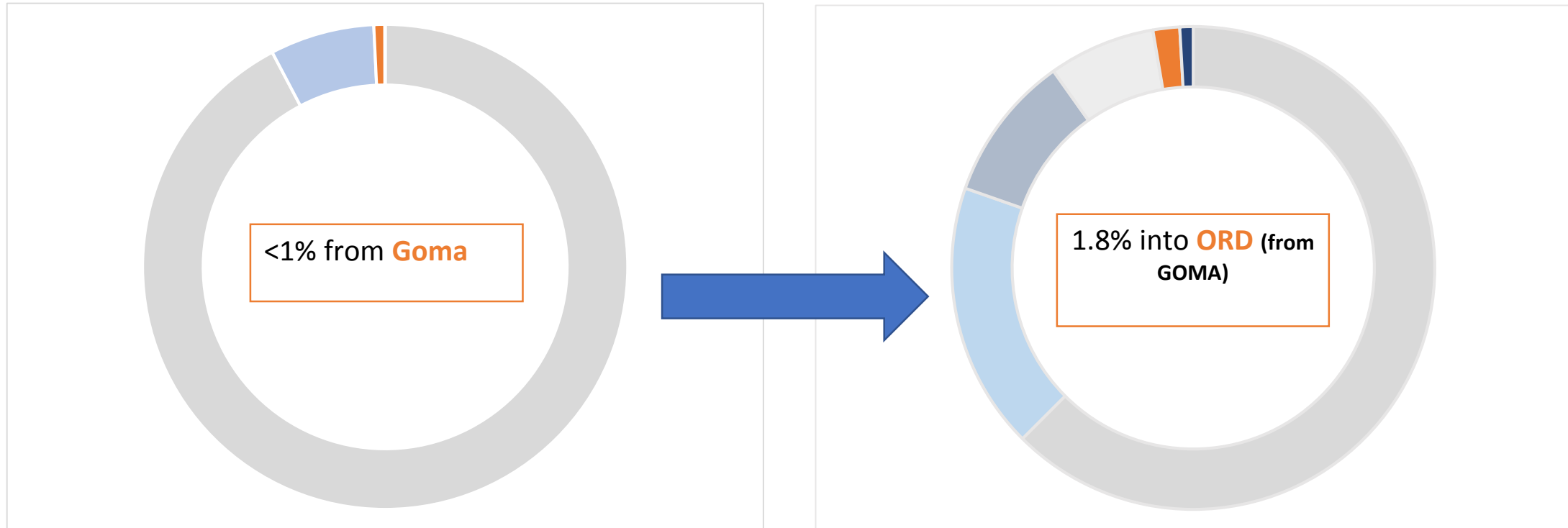
## High Risk Contacts, Ill Travelers — 2019

Presentation	Initial Notification	Risk Profile and Management	Diagnosis
High-risk contact, asymptomatic (physician)	NGO, WHO	Community healthcare service to patient subsequently diagnosed with EVD; voluntary quarantine next to Nebraska Biocontainment Unit	None
Ill traveler (researcher)	Traveler's partner	Patient altered sensorium, Uncertain history: percutaneous injury? recent Ebola vaccination? work on Ebola project? date of symptom onset? Admitted to hospital	Malaria
Ill traveler on flight to US (NGO's medical director)	NGO	Very comprehensive, timely, and reliable information to conduct risk assessment. No disruption for traveler	Travelers' diarrhea
Ill traveler died aboard flight arriving in US (visitor)	Airline	Recent fever, travel originated in DRC, on malaria treatment x 2 days, on antipyretic, dyspnea, hematemesis on board; medical examiner	Ebola and malaria negative; final report from ME pending



# Proportion of total international air passenger journeys from airport in outbreak vicinity (**GOMA**), DRC into Chicago O'Hare (**ORD**)

January-December 2018



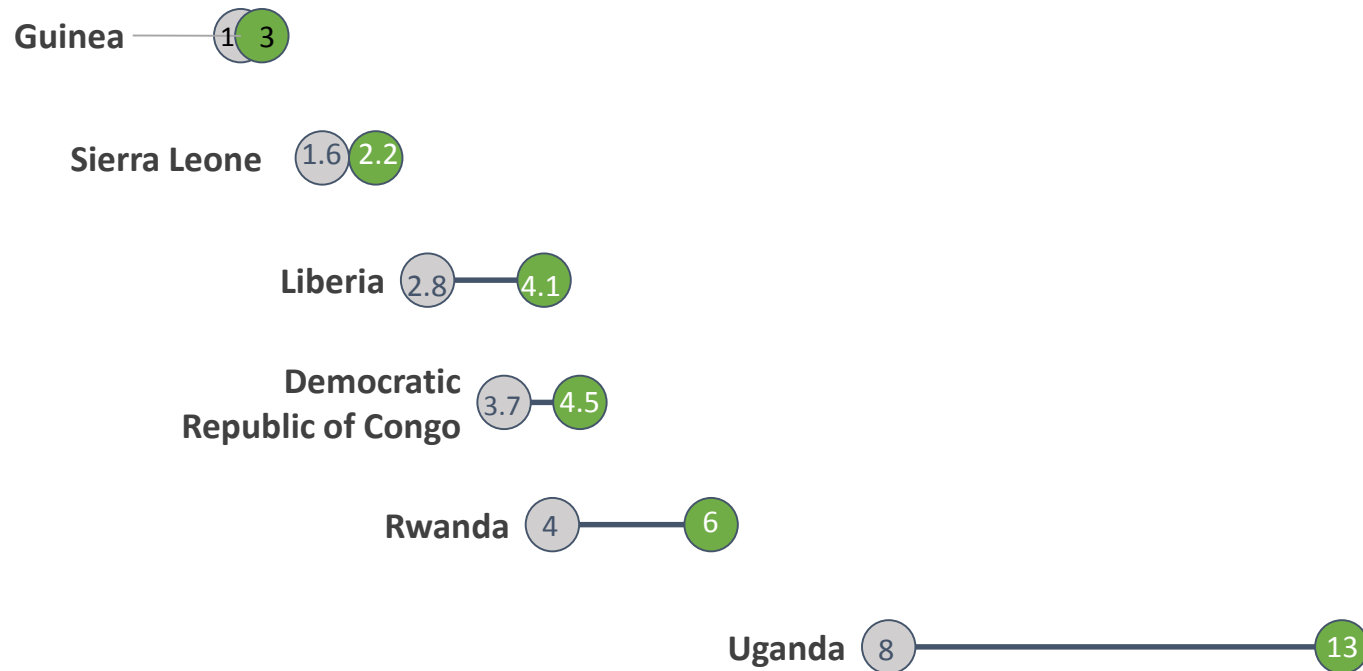
Source: OAG. Commercial, proprietary data.

All travel data presented are modeled estimates based on ticket sales and reporting from airline carriers.

CDC is sharing the air passenger data upon reasonable request and with the permission of OAG Aviation Worldwide Ltd.

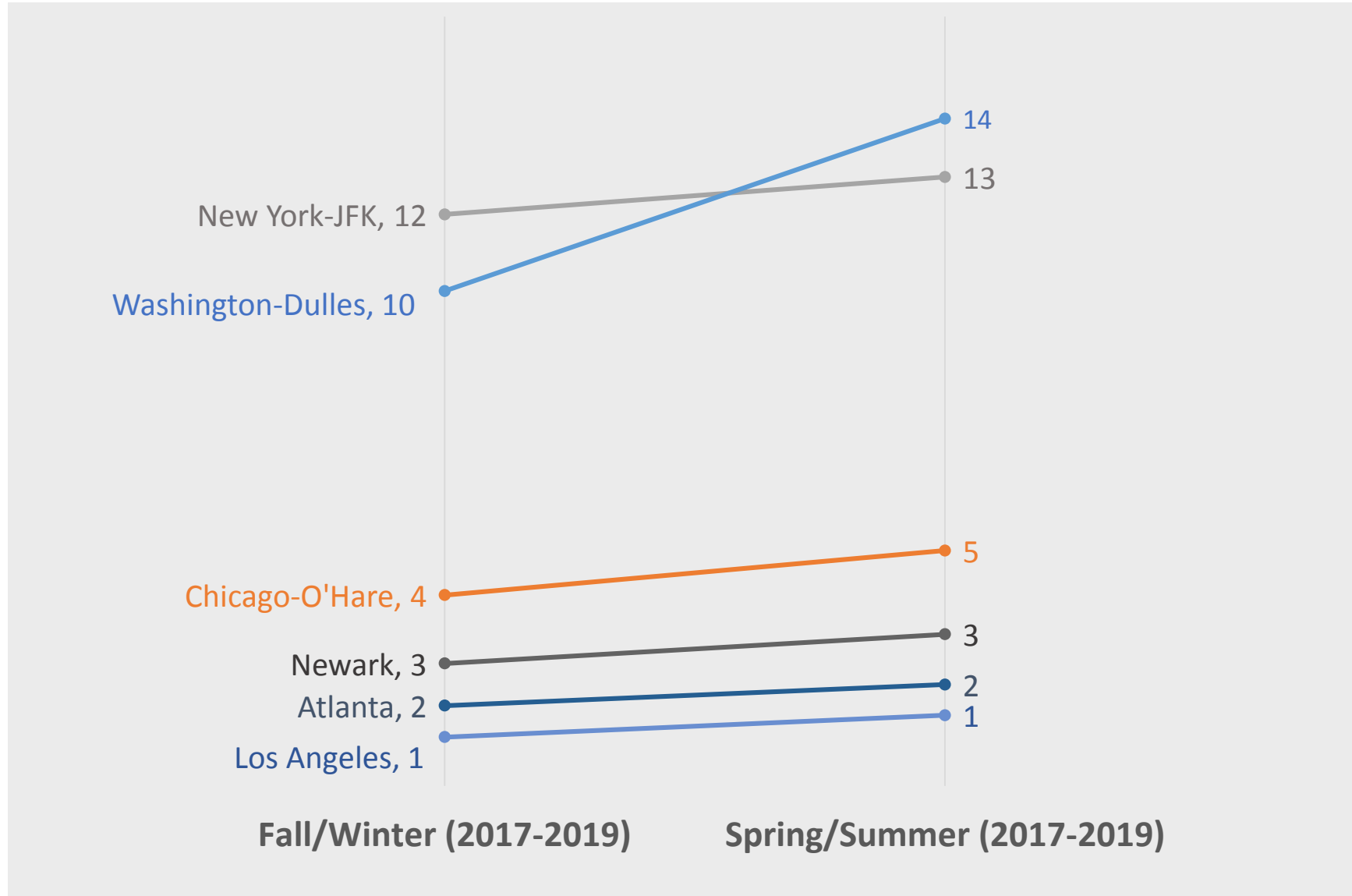
# Average Daily Air Passenger Journeys into Chicago O'Hare First Ports of Entry from airports in DRC, Uganda, Rwanda, Guinea, Liberia, and Sierra Leone

January 2014- December 2016 and January 2017-December 2019



Source: OAG

# Average daily air passenger journeys from DRC top U.S. Ports of Entry during Fall/Winter and Spring/Summer months January 2017-December 2019



Source: OAG

# Travel Data Summary

- No direct flights from DRC arrive into the United States
- During 2018, an estimated 15,000 air passenger journeys arrived from the Democratic Republic of Congo (DRC) into the United States
  - Approximately 14% of those passenger journeys' first port of entry was Chicago O'Hare (ORD)
- On average, 4.5 passenger journeys arrive into Chicago O'Hare from DRC daily
- Approximately 92% of the air passenger journeys depart from Kinshasa N'Djili airport, less than 1% depart from Goma.
  - Of the passenger journeys arriving from Goma, 1.8% have Chicago, O'Hare (ORD) as a U.S. first airport
- Overall, ORD consistently ranks 3<sup>rd</sup> among U.S. Ports of Entry and Final Arrival Airports from airports in DRC
- Approximately 43% of air passenger journeys arriving into ORD first port of entry from DRC will remain at ORD

# PREPARE Protocol

- Immunization with Merck vaccine
- Occupational risk
- Primary immunization at month 0
- Randomization at 18 months
  - Booster
  - No booster
- Blood draws for Ab titers
  - Month: 0, 1, 3, 6, q 6 up to 36
  - Primary locations
    - NIH Clinical Center, Bethesda, MD\*
    - Emory University, Atlanta, GA
    - Winnipeg, Canada
  - Follow-up locations
    - Rocky Mountain Laboratories, Hamilton, Montana
    - University of Texas Medical Branch
    - Boston, MA (coming soon)

\* Travel funds for participants once they are enrolled in study

# PREPARE Protocol: POCs

**NIH**

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# Thanks to Chicago Department of Public Health for the invitation and continued partnership with CDC

For more information,

Visit: <https://www.cdc.gov/vhf/ebola/index.html>

Call: 1-800-CDC-INFO (232-4636)

Send e-mail to: [eocdgmqopschief@cdc.gov](mailto:eocdgmqopschief@cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

