

Today's Agenda

Time (MT)	Presentation	Presenter(s)
Noon – 12:05 pm	Welcome, Announcements, Introductions	Lachelle Smith, Director, ECHO Idaho
12:05 – 12:10 pm	Idaho Epidemiology and Public Health Updates	Carolyn Buxton Bridges, MD, FACP
12:10 – 12:35 pm	Travel-Related Transmission	James Whitlock, MD Student
12:35 – 12:55 pm	COVID-19 Patient Case Discussion	ECHO Community of Practice
12:55 – 1 pm	Closing Pearls, Announcements, Call to Action	Megan Dunay, MD Lachelle Smith, Director, ECHO Idaho

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Idaho Epidemiology and Public Health Updates

Carolyn Buxton Bridges, MD, FACP

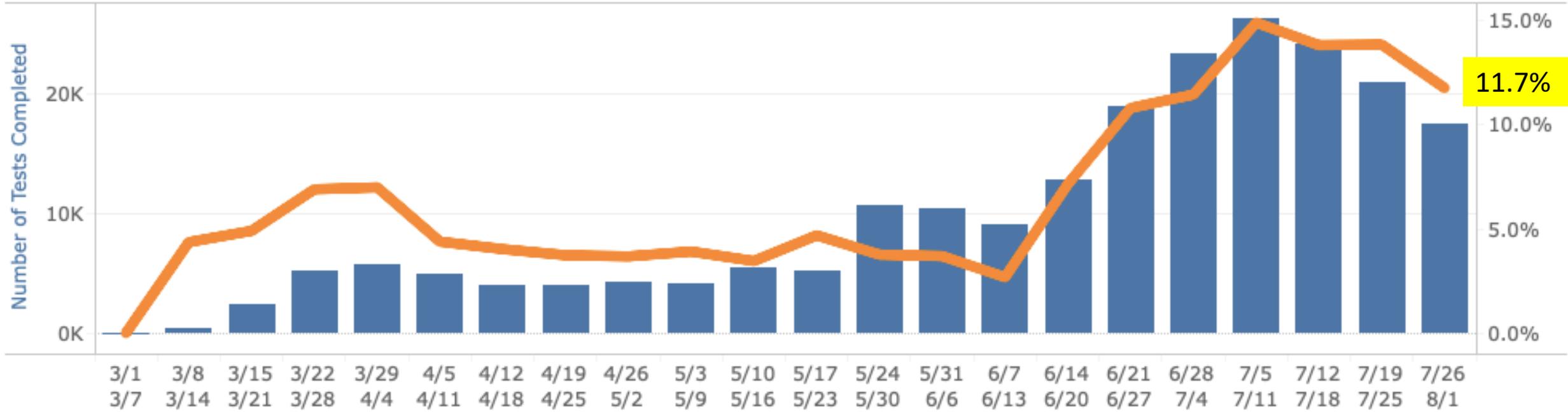
Governor's Coronavirus Working Group, Former CDC Public Health Physician and Researcher

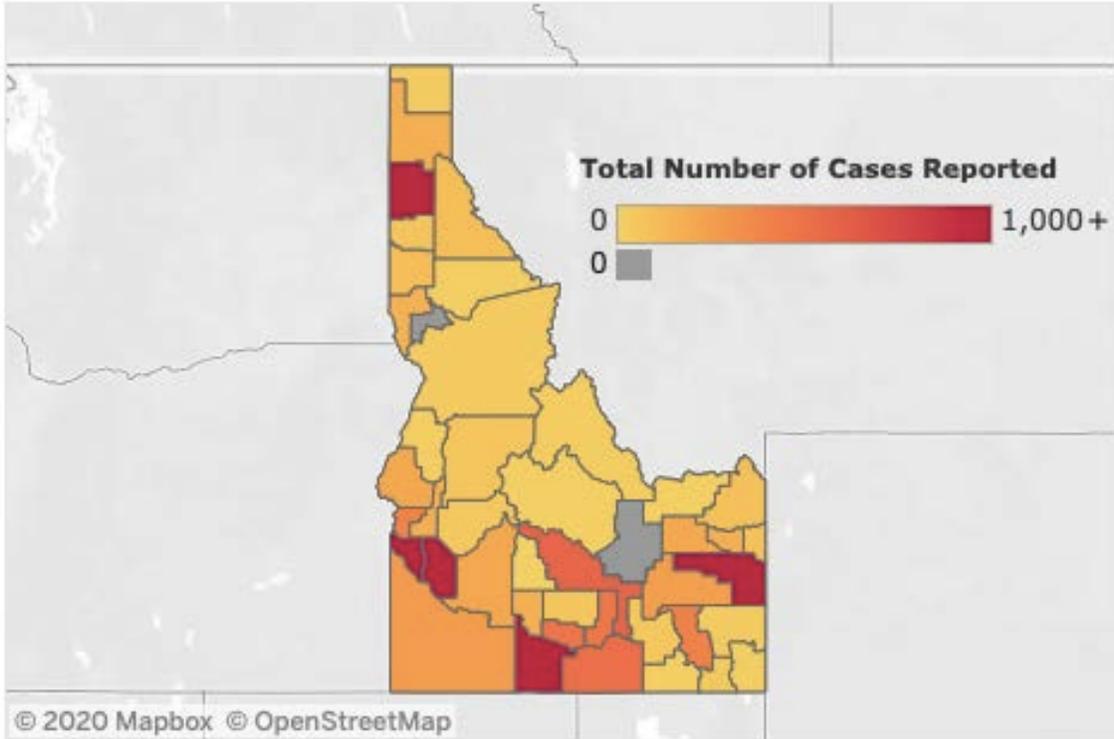
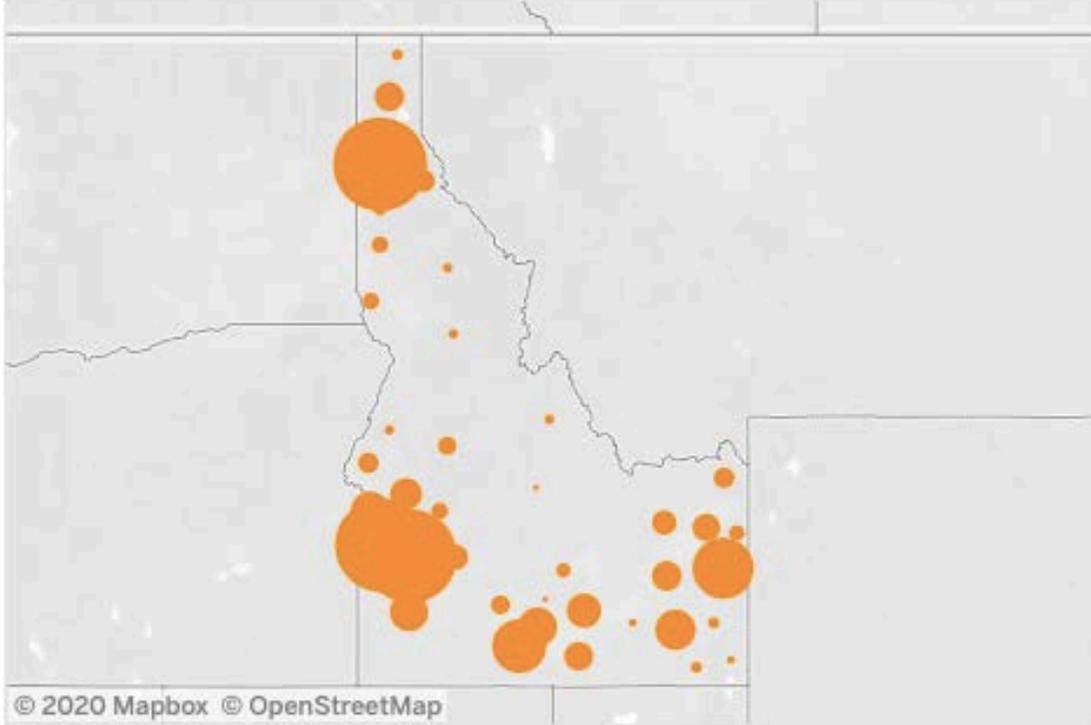
Case Counts and SARS-CoV-2 PCR Testing in Idaho

	5/19/2020	6/15/2020	7/13/2020	7/20/2020	7/27/2020	8/3/2020	8/10/2020
Total lab-confirmed and probable	2,455	3,462 (Δ 556)	11,402 (Δ 7,940)	15,266 (Δ 3,864)	18,694 (Δ 3,428)	21,675 (Δ 2,981)	25,100 (Δ 3,425)
Deaths	74 CFR =3.0	88 CFR =2.5	102 (Δ 14) CFR =0.18	122 (Δ 20) CFR=0.52	152 (Δ 30) CFR =0.88	200 (Δ 48) CFR=1.61	239 (Δ 39) CFR=1.14
Hospitalizations	213	270	500 (Δ 230)	621 (Δ 121)	750 (Δ 129)	886 (Δ 136)	1006 (Δ 120)
ICU admissions	89	100	144 (Δ 44)	186 (Δ 42)	224 (Δ 38)	256 (Δ 32)	282 (Δ 26)
Healthcare personnel	295	366 (Δ 57)	760 (Δ 394)	908 (Δ 148)	1,076 (Δ 168)	1271 (Δ 195)	1467 (Δ 196)
Total tests	37,847	65,306 (Δ 17,436)	129,540 (Δ 64,234)	150,142 (Δ 20,602)	169,588 (Δ 19,446)	186,475 (Δ 16,887)	206,830 (Δ 20,355)

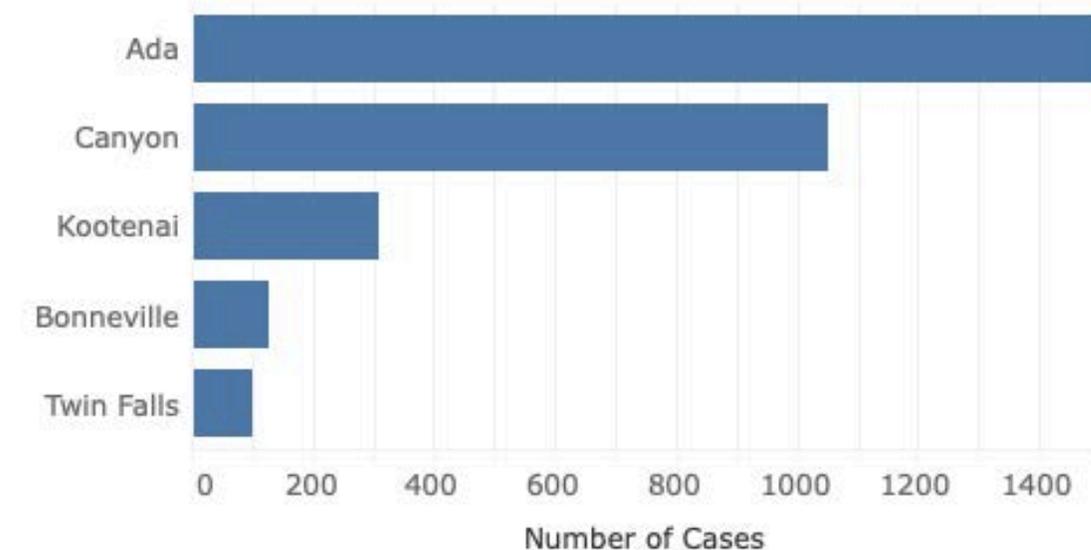
<https://coronavirus.idaho.gov>

Weekly PCR Laboratory Tests Completed and Percent Positivity by Specimen Collection Date¹





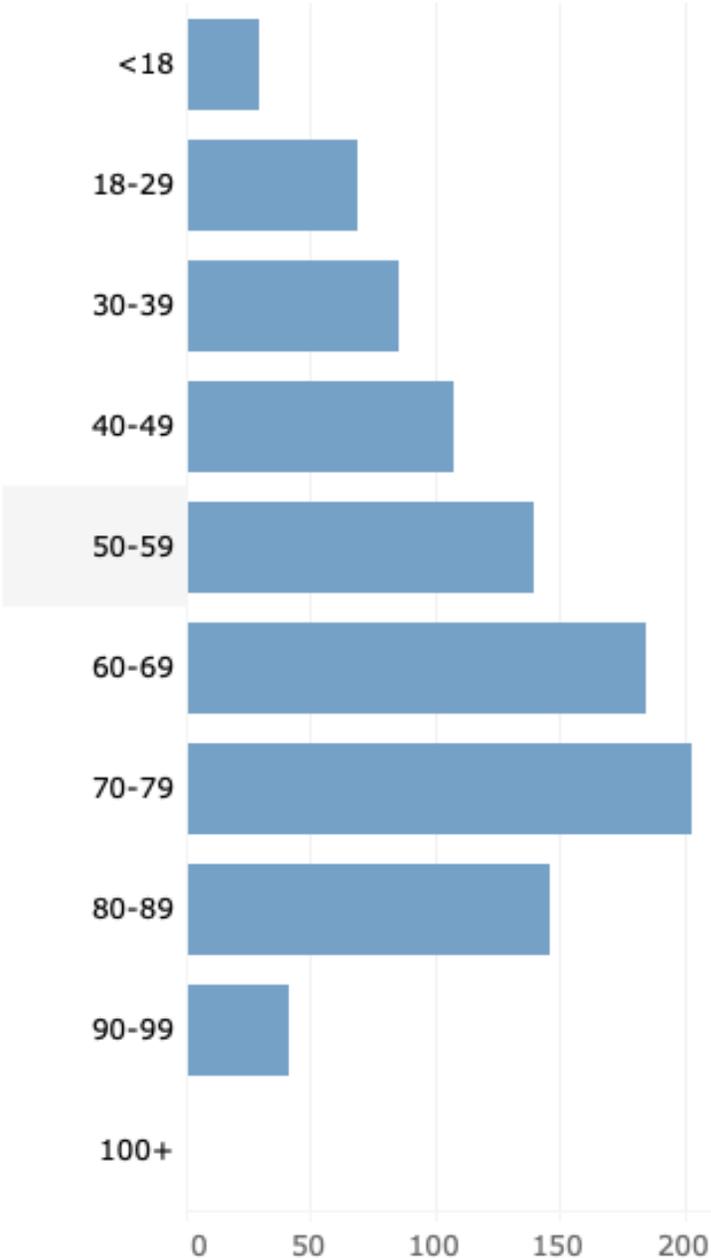
Counties With the Highest Number of Cases for Week Selected¹



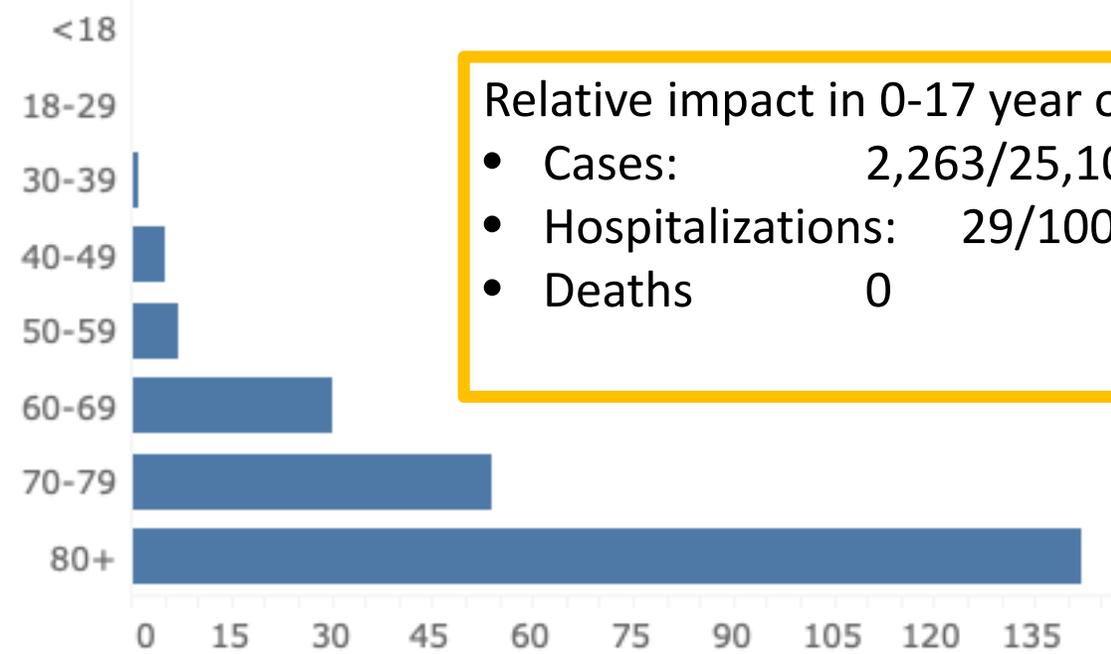
Total cases/7-day average per 100,000 by county

- Ada 21.5 1,899
- Canyon 45.3 2,553
- Kootenai 12.7 1,081
- Bonneville 29.3 903
- Twin Falls 28.3 1,646
- Blaine 3.72,506

Age group of Idahoans ever hospitalized with COVID-19



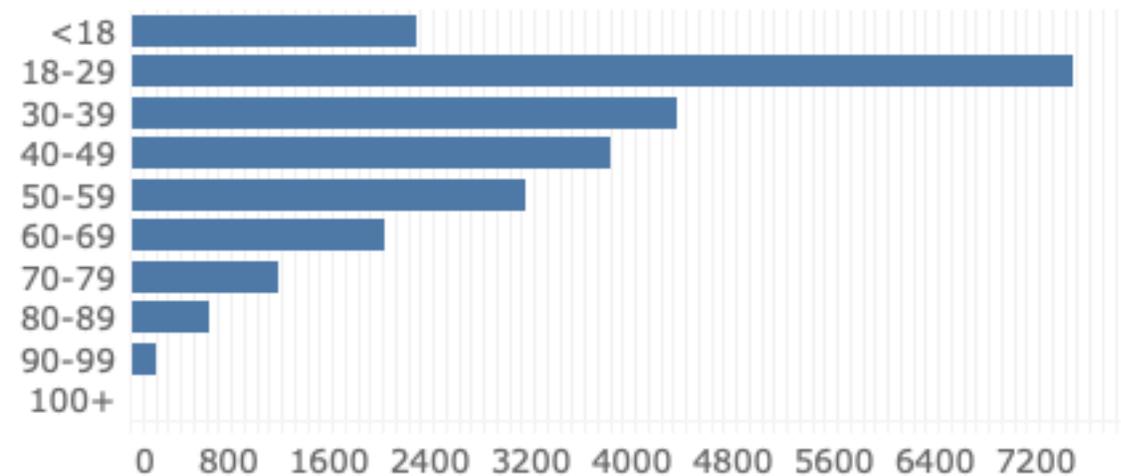
Deaths by Age-Group



Relative impact in 0-17 year olds thus far

- Cases: $2,263/25,100=9.0\%$
- Hospitalizations: $29/1006=2.9\%$
- Deaths: 0

Cases by Age-Group



Characteristics and Quality of US Nursing Homes Reporting Cases of Coronavirus Disease 2019 (COVID-19)

Paula Chatterjee, MD, MPH; Sheila Kelly, MPH; Mingyu Qi, MSc; Rachel M. Werner, MD, PhD

- Using Nursing Home Compare and publicly available data on nursing home outbreaks in 23 states, authors evaluated predictors of having COVID-19 cases as of April 29, 2020
- Factors associated with COVID-19 cases on residents
 - Facility reports of incidents or substantiated complaints
 - For-profit homes
 - Higher number of beds
 - Rates of COVID in the county – biggest predictor, increased risk 2 times
- Not associated with STAR ratings or total deficiency scores
- Highlights importance of controlling community outbreaks

Ships, Planes, and Automobiles: What Early COVID-19 Research Teaches Us About Travel Related Transmission

James Whitlock, MD Student (MS3)
WWAMI Medical School

Learning Objectives

- Explain how COVID transmission occurs in travel settings such as cruise ships, airplanes, and public transportation
- Examine why these settings may be related to higher attack rates
- Determine what effects preventative measures like social distancing and face masks have on transmission in these settings

Background

- Cruise industry

- Estimated 30 million passengers travel on 272 cruise ships annually
- Closed environment, rotating staff, close living quarters, and passengers from around the world facilitate disease spread

- Air travel industry (Iacus, 2020)

- Up to 4.3 billion passengers fly annually
- Global aviation industry worth \$2.7 trillion, provides 65.5 million jobs
- Very sensitive to novel pathogen outbreaks (SARS 2003, MERS 2015)

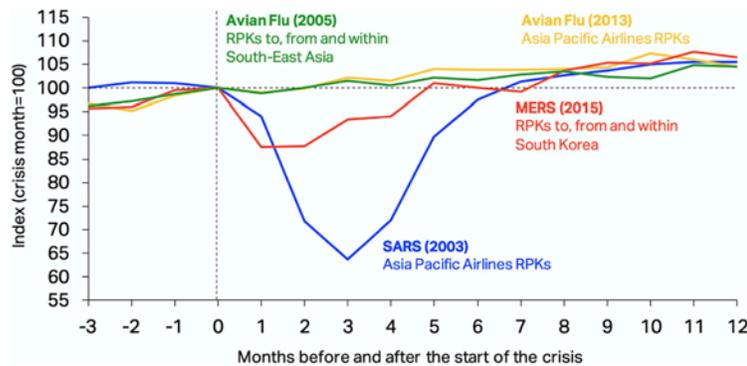
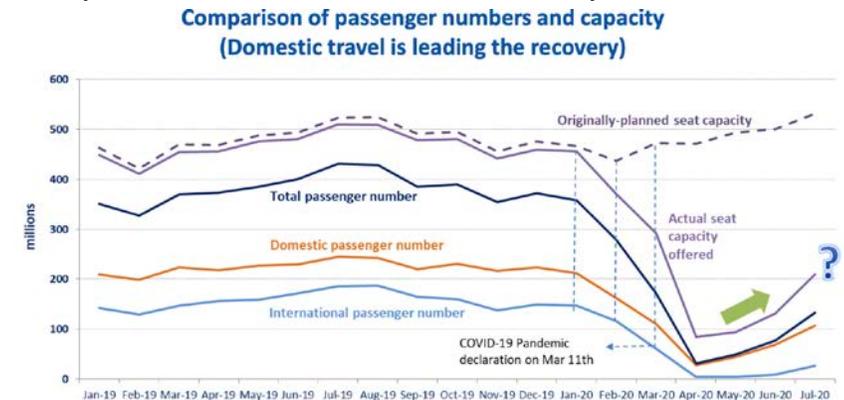
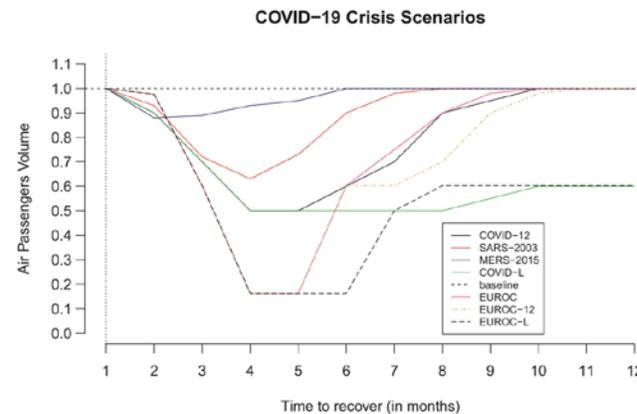


Fig. 2. Impact of past outbreaks on aviation. Source IATA Economics.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7200368/>

<https://www.cdc.gov/mmwr/volumes/69/wr/mm6912e3.htm>



ICAO reports: July 2020



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Cruise Ships

(Rocklöv, J. Travel Med., 2020)

(Moriarty, MMWR, 2020)

- **Diamond Princess**

- Jan 25, first symptomatic passenger
- Feb 3, confirmed COVID diagnosis
- Feb 5, quarantine begins
 - **20** confirmed cases among food service workers within 3 days
- **3711** passengers, **712** positive results (**19.2%**)
 - **46.5%** of COVID cases were asymptomatic when tested, and **17.9%** never developed symptoms
- RNA detected in cabins up to 17 days after vacated

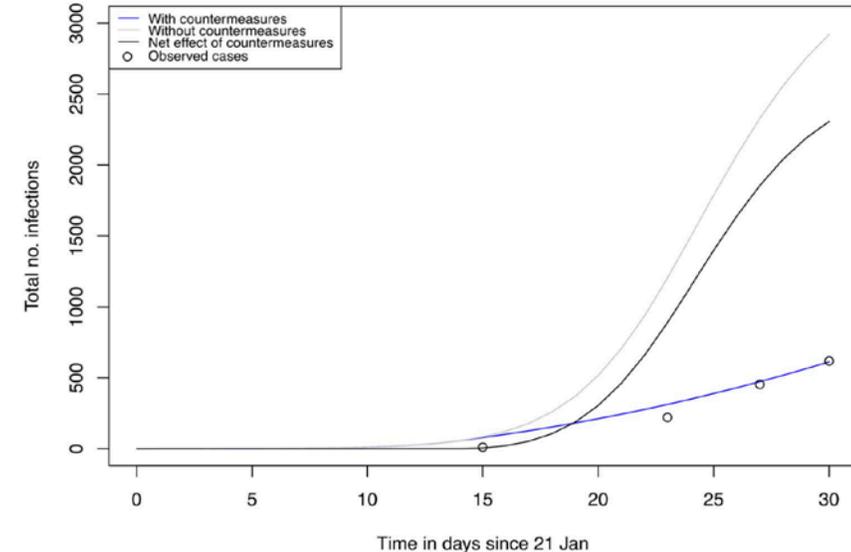
- **Grand Princess**

- March 4, **22** cases on Voyage A
- **1111** crew members remained onboard for Voyage B
- March 8, quarantine begins
 - **496** passengers, **78** positive results (**16.6%**)
- By March 13, 17% of US cases were cruise passengers

<https://www.cdc.gov/mmwr/volumes/69/wr/mm6912e3.htm>

- **Diamond Princess**

- R_0 estimated to be initially **14.8** aboard ship, declined to 1.78 after quarantine
- R_0 of 2.2-3.7 observed on mainland
- Models testing the viability of countermeasures estimate that quarantine prevented up to 2300 cases.



<https://academic.oup.com/jtm/article/27/3/taaa030/5766334>



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Ships Cont.

- **(Payne, MMWR, 2020)**

- Cross-sectional study of service members aboard USS Theodore Roosevelt, April 2020
- Convenience sample: **382** out of **1417**
 - **238** (62.3%) positive or previous positive SARS-CoV-2 with serum or PCR testing
 - **144** (37.7%) negative SARS-CoV-2

- Preventative measures associated with decreased seropositivity

- Using face coverings: 53.8% vs 67.5%
 - OR of 0.30
- Avoiding common areas: 55.8% vs 80.8%
- Observing social distancing: 54.7% vs 70%

Characteristic	No. (%)		
	Current or previous SARS-CoV-2 infection* (N = 238)	No evidence of SARS-CoV-2 infection (N = 144)	Infection versus no infection OR (95% CI) [†]
Number of symptoms			
1–3	51 (26.3)	49 (54.4)	Referent
4–5	37 (19.1)	13 (14.4)	2.74 (1.30–5.75) [§]
6–8	50 (25.8)	16 (17.8)	3.00 (1.51–5.96) [§]
>8	56 (28.9)	12 (13.3)	4.48 (2.15–9.37) [§]
Still symptomatic at time of survey (n = 275)			
Yes	65 (34.0)	24 (28.6)	1.29 (0.74–2.26)
No	126 (66.0)	60 (71.4)	Referent
Duration >1 week (n = 186)	70 (55.6)	29 (48.3)	1.34 (0.72–2.47)
Reported prevention behaviors			
Increased hand washing	218 (62.1)	133 (37.9)	0.90 (0.42–1.94)
Hand sanitizer use	219 (61.5)	137 (38.5)	0.59 (0.24–1.44)
Avoiding common areas	78 (53.8)	67 (46.2)	0.56 (0.37–0.86) [§]
Face covering use	158 (55.8)	125 (44.2)	0.30 (0.17–0.52) [§]
Increased workspace cleaning	195 (63.5)	112 (36.5)	1.30 (0.78–2.16)
Increased berthing cleaning	156 (61.9)	96 (38.1)	0.95 (0.61–1.47)
Increased distance from others	105 (54.7)	87 (45.3)	0.52 (0.34–0.79) [§]

Ships, Planes

- **(Draper, Commun Dis Intell, 2020)**

- Descriptive study regarding contact tracing and PCR testing performed for first 28 cases in Northern Territory, Australia
- Airplane Close-Contacts – 326
 - Passenger (131): within 2 rows of passenger
 - Crewmembers (195): everyone on flight
 - Of 326 monitored, none were positive
- Cruise ship contacts – 46
 - Anyone on board
 - Of 46 monitored, 2 tested positive
- Household contacts – 51
 - Of 51 monitored, 2 tested positive

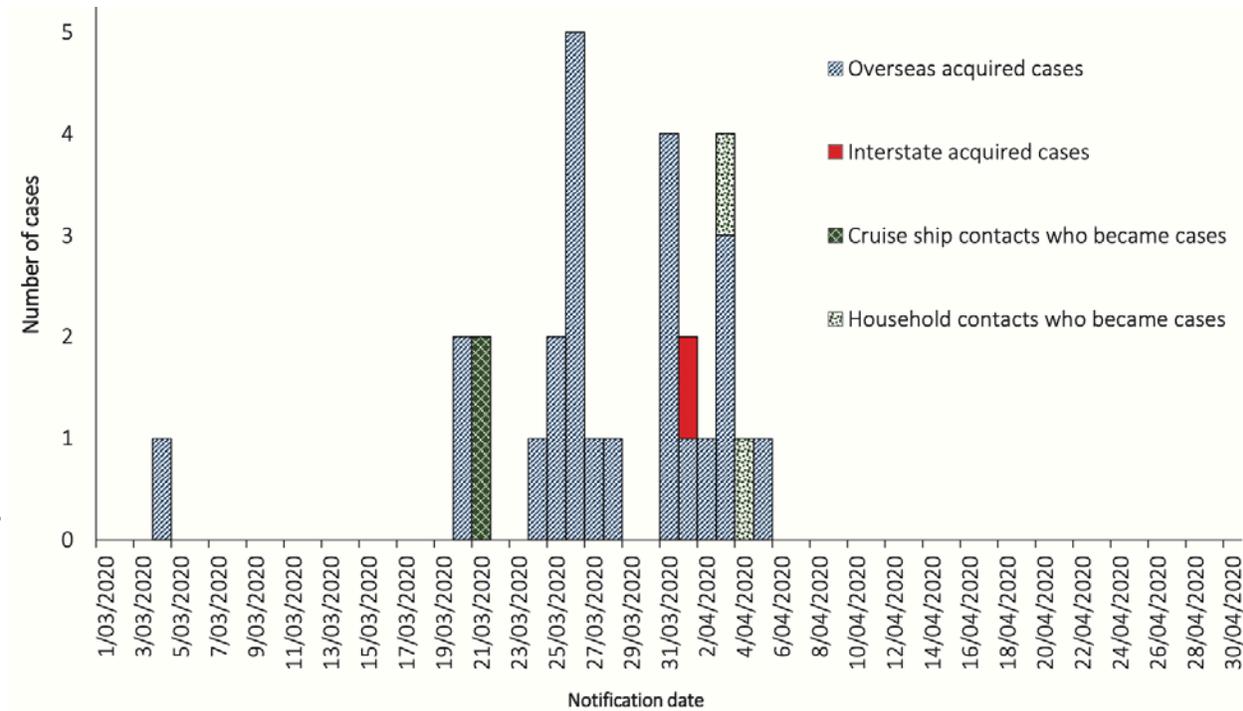


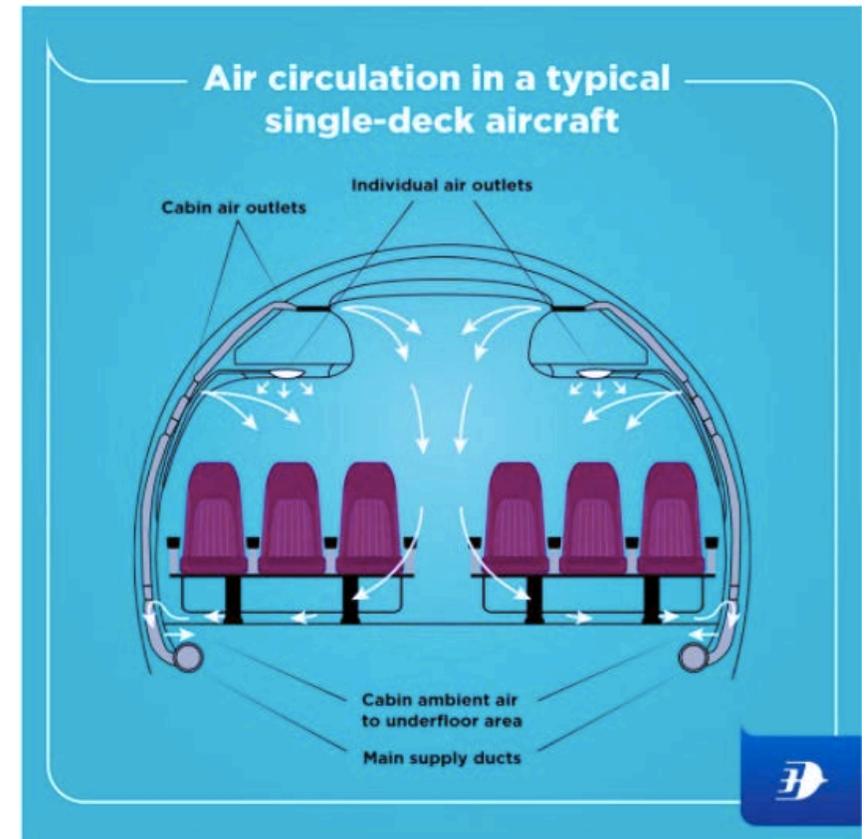
Table 1. Total number of close contacts identified by the NT CDC, 1 March – 30 April 2020

Category	Number of people	Percentage of total
Aircraft passengers	389	74
Cruise ship passengers	59	11
Household contacts	52	10
Healthcare workers	4	<1
Other	23	4
Total	527	

Planes Cont.



- **(Nir-Paz, J. Travel Med., 2020)**
 - Case series of 11 repatriated Israeli citizens from Diamond Princess, 4 crew members
 - 14 hr, Japan → Israel
 - 2 passengers with spouses hospitalized with COVID infections, and had positive viral cultures after flight
 - Presumed to be infectious during flight
 - Passengers wore surgical masks/N95s for the duration of the flight
 - Replaced masks every 3 hours, removed to eat/drink
 - 9 other passengers and 4 crew members quarantined and tested, no new cases



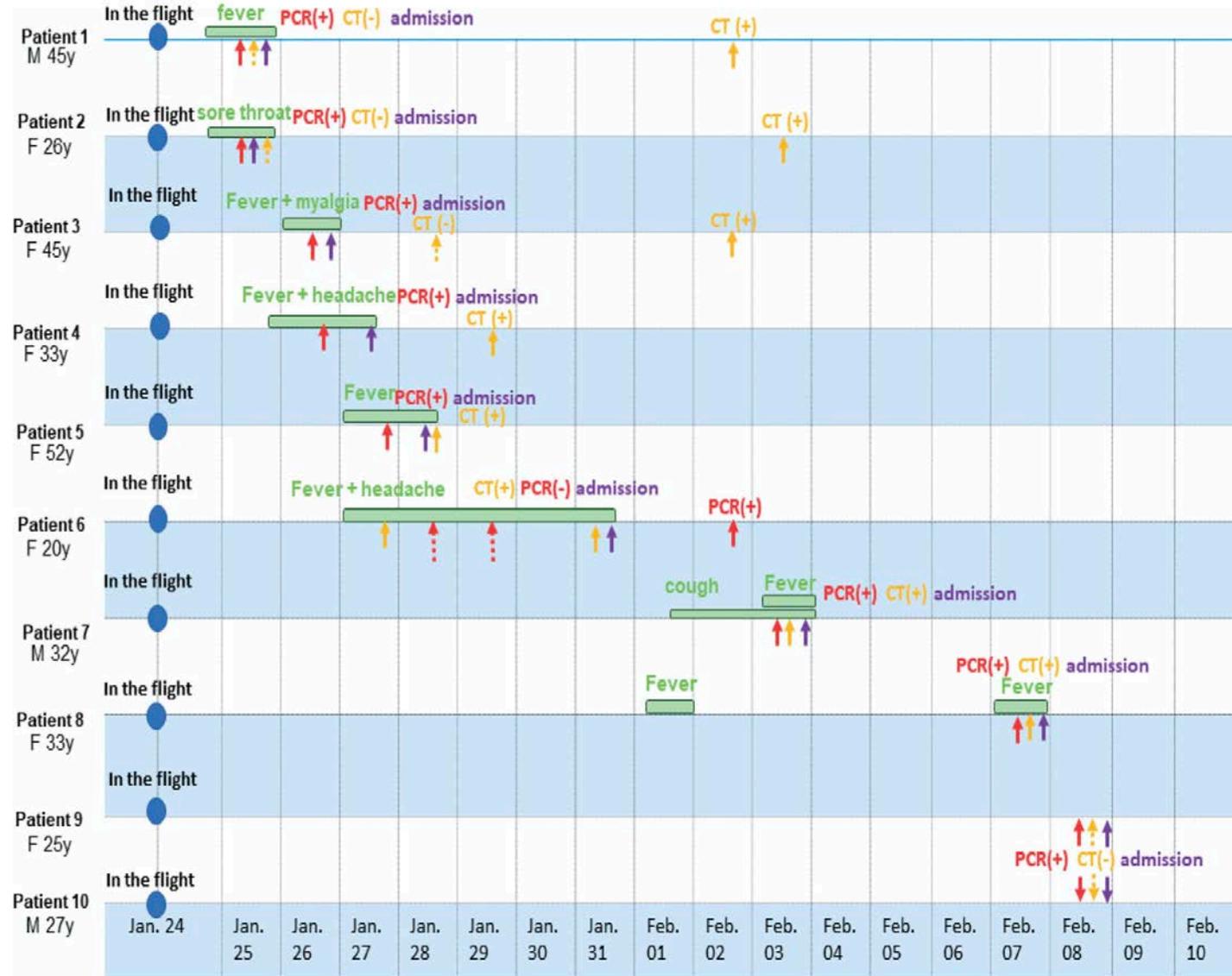
Malaysia Airlines illustrated typical air circulation on an aircraft MALAYSIA AIRLINES

Planes Cont.

- (Yang, Infectious Diseases, 2020)

- Case series 325 passengers
 - 5 hr, Singapore → Hangzhou
- Pre/post flight screening
 - 1 patient febrile following flight, had not worn a mask
- Crew and passengers quarantined
- 9 other passengers had positive throat swabs
 - 2 asymptomatic
 - All recovered
- No crew members infected
 - All wore masks
- Attack rate of 3.69% slightly lower than influenza (4.3-7.5%)

<https://www.tandfonline.com/doi/full/10.1080/23744235.2020.1800814>



Automobiles

- **(Pongpirul, NEJM 2020)**

- Case report of taxi driver in Thailand
- Recalls driving tourist from China who frequently coughed
- Had not heard of COVID, and did not take precautionary measures
- Jan 20, Symptomatic
 - Fever, Cough, Myalgia
- Jan 24-28, Rested at home before presenting to the hospital
- Tested positive.
- Negative test results for all 13 close contacts between Jan 20-28

- **(Liu, ISIRV 2020)**

- Case report of cluster outbreak from symptomatic individual's use of public transportation in China
- First bus trip – No face mask
 - 2hr 10min, 39 passengers
 - 5 passengers were infected (12.8%)
- Second bus trip – Purchased facemask
 - 50min, 14 other passengers
 - No passengers infected (0%)

<https://onlinelibrary.wiley.com/doi/full/10.1111/irv.12740>

<https://onlinelibrary.wiley.com/doi/full/10.1111/irv.12740>

Key Points

- Crowded environments with travelers from around the globe provide unique environments for increased transmission
- Attack rates are low on flights but can be much higher on cruise ships.
- Staggering disembarking of crew members and passengers on cruise ships perpetuates infection across voyages
- Initial underestimation of asymptomatic transmission and lack of quarantine/masks may have worsened initial spread
- Quarantine and avoidance of central gathering locations on ships can also reduce transmission
- Masks are an effective way to decrease transmission of COVID in each of these settings

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COVID-19 Patient Case Discussion

ECHO Community of Practice

Case

You run a 200-employee company that provides in-home health care services.

Two personal care aides travelled to Las Vegas together last week. They wore cloth facial coverings while on airplanes and in airports. They wore cloth facial coverings when they were required in restaurants and clubs in Vegas, but they weren't required in all of the establishments they visited.

A therapist you employ took his adolescent son to a soccer tournament in Salt Lake City last week. All soccer players were tested for COVID with a PCR test prior to participation in matches, and all players tested negative.

An RN you employ flew to visit her mother who lives on the Oregon Coast two weeks ago. She wore a surgical mask at all times on the trip. Her mother did too. Her mother lives in a single-family home. The employee has now developed a cough.

Case

- What do you do?
 - Las Vegas travel/personal care aides?
 - Salt Lake City travel/physical therapist?
 - Oregon Coast travel, RN... with symptoms >14d after travel?

JOIN US FOR OUR NEXT SESSION!

For information, please visit uidaho.edu/echo

- Tuesday, August 18 at noon MT

Ongoing Resource List

RESOURCES FROM TODAY'S SESSION AND PAST SESSIONS CAN BE FOUND IN OUR ONGOING RESOURCE LIST.

<https://iecho.unm.edu/sites/uidaho/download.hns?i=440>