

A Global Survey of PAs During the COVID-19 Pandemic

Oren Berkowitz, PhD, PA-C orenbe@ariel.ac.il

Ariel University, Ariel, Israel

Department of Health Systems Management

Co-authors: Roderick Hooker, PhD, MBA, PA; Roi Ozer, MBA, EMT-P;
Avi Zigdon, PhD

Disclosures

- No relevant commercial relationships to disclose

Learning objectives

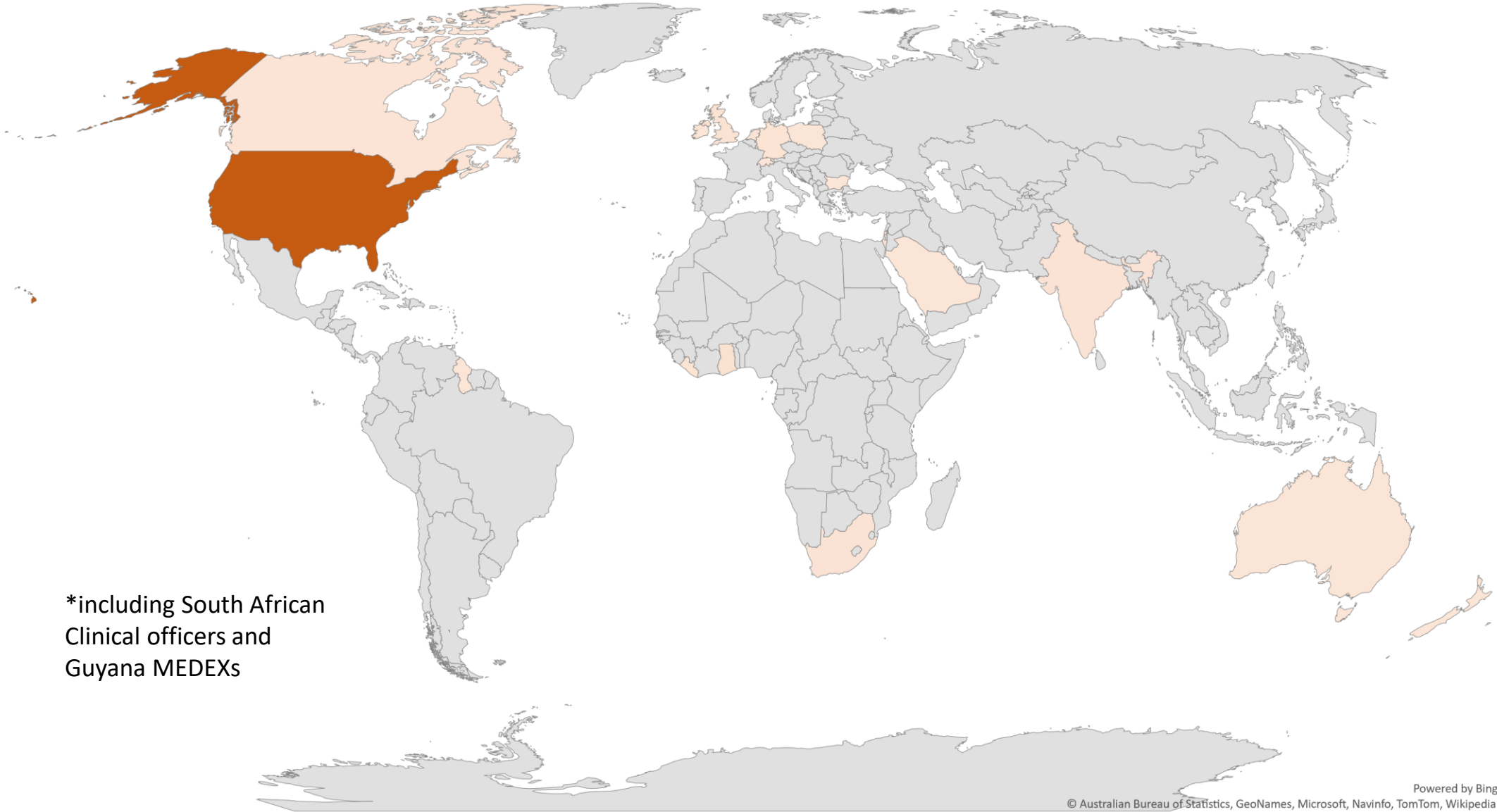
At the end of this session, participants should be able to:

- Describe how PAs provided care during the COVID-19 pandemic around the world
- Discuss how the health policies in different countries affected PA practice during COVID-19

COVID-19

- Many healthcare systems found themselves ill-prepared to handle the outbreak.
- The healthcare workforce shifted tasks and repurposed many professions to provide frontline care
- 18 countries were identified with PA comparable healthcare providers
- Investigators sought to understand their role in the evolving pandemic

18 PA Countries*



*including South African
Clinical officers and
Guyana MEDEXs

BRIEF REPORT

A global census of physician assistants and physician associates

Roderick S. Hooker, PhD, PA; Oren Berkowitz, PhD, PA-C

ABSTRACT

The physician assistant or physician associate (PA) profession is being adopted in many countries. At a time of improved communication and international exchange of educational methods, no central repository of PA numbers exists. The authors set out to consolidate basic information on PAs. The purpose of the project was to support efforts underway that include the global development of PAs. The prevalence of PAs in each country was obtained using an informant methodology strategy and supplemented with reports and internet validation. Eighteen countries have a PA (similar healthcare professionals with different titles were not included), for an estimated total of more than 132,000 clinically active PAs and 366 training programs. In most countries, PA expansion was reported as being underway. **Keywords:** physician assistant, physician associate, PA, global, census, workforce



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The physician assistant/associate (PA) movement is in various stages of development in many countries. Literature on the role of PAs in contemporary medicine is growing; plentiful in some countries and absent in others. We communicated with various scholars and

Literature and government reports were supplements to

TABLE 1. An estimated global PA census as of mid 2020

| Country | PAs | Year of first PA graduation | Number of PA programs |
|-------------------|---------|-----------------------------|-----------------------|
| Australia | 30 | 2011 | 1 |
| Bulgaria | 100 | 2017 | 3 |
| Canada | 750 | 2012 | 4 |
| Germany | 1,000 | 2005 | 13 |
| Ghana | 3,000 | 1971 | 3 |
| Guyana | 75 | 1978 | 1 |
| India | 1,500 | 1994 | 30 |
| Ireland | 28 | 2017 | 1 |
| Israel | 70 | 2017 | 1 |
| Liberia | 1,200 | 1967 | 3 |
| Netherlands | 1,400 | 2003 | 5 |
| New Zealand | 10 | 0 | 0 |
| Poland | 3 | 2019 | 1 |
| Saudi Arabia | -- | 2008 | 1 |
| South Africa* | 1,300 | 2010 | 3 |
| Switzerland | 60 | 2007 | 1 |
| United Kingdom** | 2,000 | 2004 | 35 |
| United States*** | 120,000 | 1967 | 260 |
| Total (estimated) | 132,526 | | 366 |

*Clinical associates

**England, Scotland, Wales, and Northern Ireland

***50 States; Washington, DC; and five territories: Puerto Rico, US Virgin Islands, Guam, Northern Mariana Islands, and American Samoa

Approximately 132,526 active PAs in the world

- 90% in the USA
- 10% global

Hooker RS, Berkowitz O.
A global census of physician assistants and physician associates.
JAAPA. 2020 Dec

Survey

- Novel survey developed on Qualtrics (Qualtrics, Provo, UT) platform
- Subjects were screened and asked to participate only if they had been “Clinically practicing” PAs from January 1, 2020
 - Every country discovered COVID-19 cases at a different date and so a general baseline date of January 1, 2020 was used for convenience to describe the beginning of the worldwide outbreak in order to simplify communication
- The survey was in English
- Local research assistants tested the survey for face-validity
- Responses were anonymous and no contact information was collected
- Prior approval obtained from the institutional ethics committee

Survey methods

- Global electronic survey launched from June-July 2020
- Snowball technique
 - Academic and research colleagues, professional associations, PA advocates, etc.
 - At least 1-12 well-connected PA associates in every one of 18 countries were asked to forward the survey to as many PAs as they knew

AAPA deployed the survey through the “PA Observations” service to reach a representative sample of US PAs



Are you in need of the PA or PA student perspective for a research study or for feedback on educational materials? PA Observations is a service that pairs students, researchers, and industry partners with PAs and PA students who are willing to share their experiences. This service offers access to PAs in most specialty areas and settings, and at all experience levels.

How can you connect with PAs and PA students?

Contact AAPA Research at research@aapa.org to discuss your project needs. AAPA Research will review your project and determine if the research panel is right for you. If your project is accepted, AAPA Research staff will help develop your questions into a custom survey and handle survey logistics until the project's end. We collect responses, conduct the data analysis, send thank you gifts to the participants, and send a final report in the format of your choice.

What do you receive?

At the conclusion of your project you will receive a de-identified data set and a summary report of your findings.

Who is in your subject panel?

AAPA has more 1,000 PAs and 400 PA students actively participating in the PA Observations program and we are continually recruiting new members. Additional PAs may be available to participate in your study.

What type of projects do we accept?

- Opportunities may include but are not limited to:
- Reviewing informational materials and providing feedback to industry partners
 - Answering questions about types of services rendered or use of certain classes of medications
 - Providing insights for a dissertation

Survey Respondents

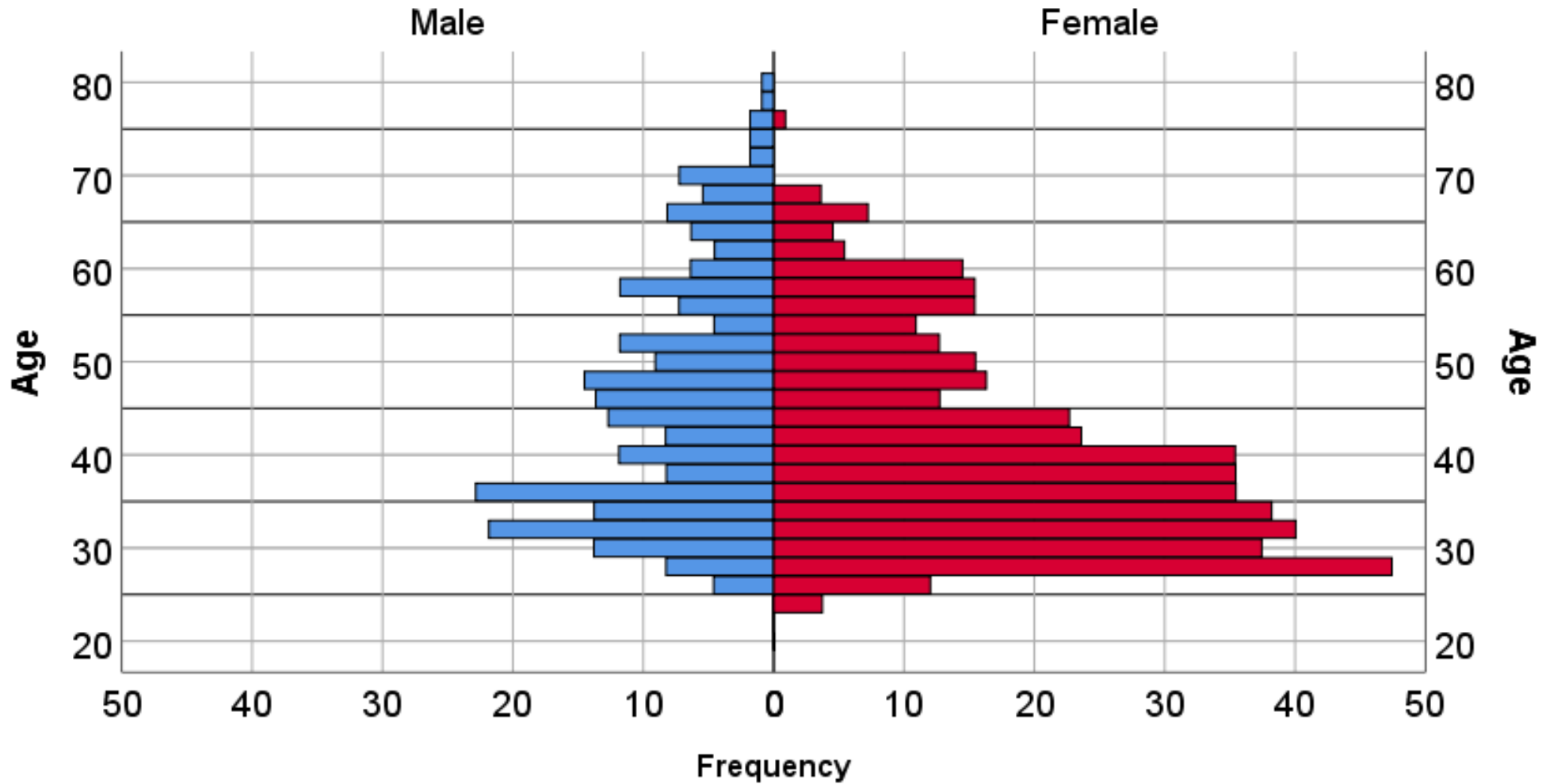
- 1,936 interacted with the survey
- **1,458 PAs** were included for final analysis
- **Full survey completion rate of 65%**
- **39% global** participants
- **61% USA** participants

| Countries with a recognized PA profession | | |
|--|-------------|---------------|
| | Frequency | Percent |
| Australia | 2 | 0.14 |
| Canada | 189 | 12.96 |
| Germany | 20 | 1.37 |
| Ghana | 42 | 2.88 |
| India | 55 | 3.77 |
| Ireland | 11 | 0.75 |
| Israel | 24 | 1.65 |
| Liberia | 2 | 0.14 |
| Netherlands | 63 | 4.32 |
| New Zealand | 7 | 0.48 |
| Poland | 1 | 0.07 |
| South Africa | 27 | 1.85 |
| Switzerland | 6 | 0.41 |
| United Kingdom of Great Britain and Northern | 101 | 6.93 |
| United States of America | 889 | 60.97 |
| Undetermined | 19 | 1.30 |
| Total | 1458 | 100.00 |

Data analysis

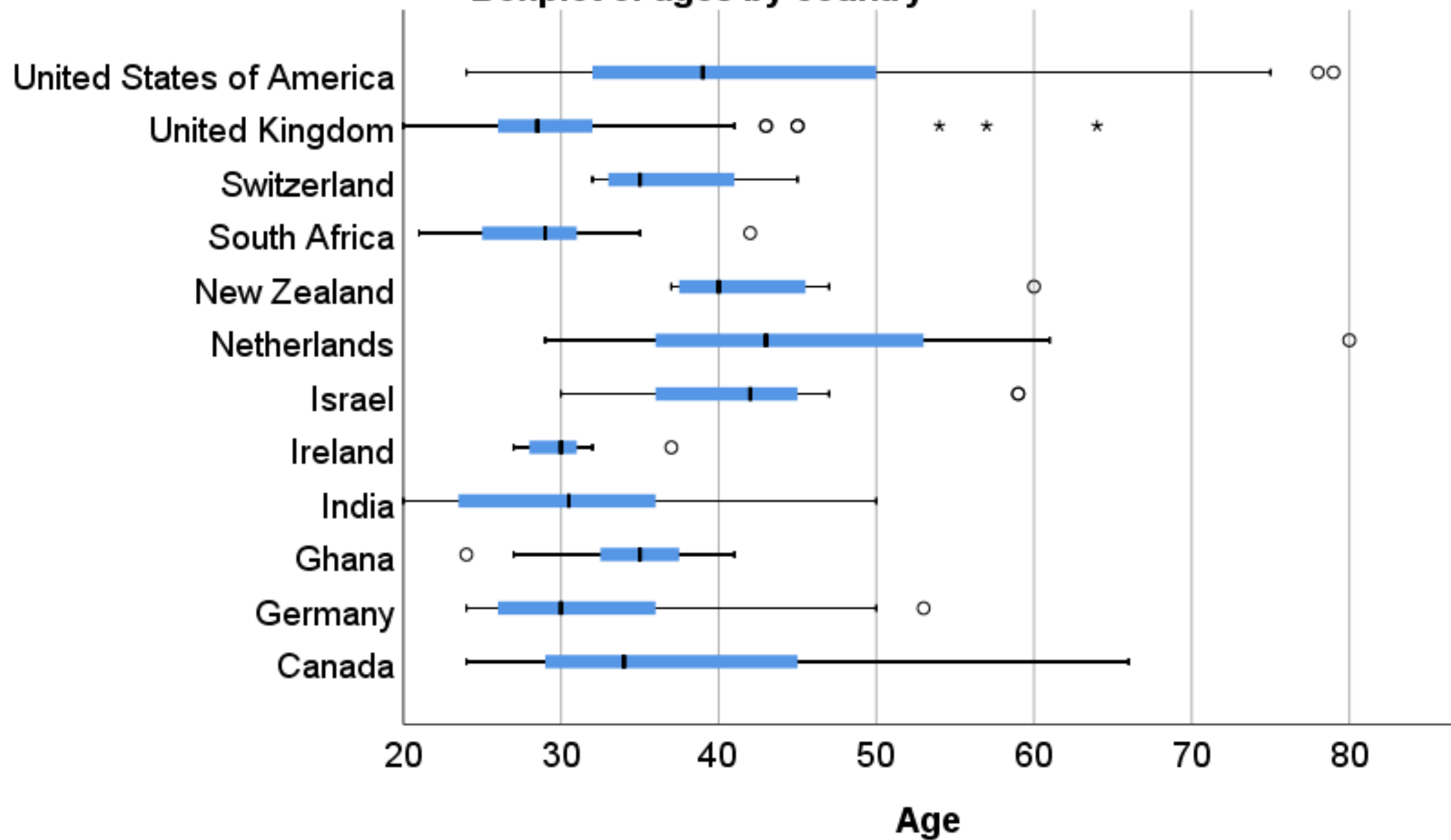
- Countries were excluded from analysis if they had less than 5 respondents or came from undetermined countries
 - Australia, Liberia, Poland, and 19 from undetermined countries
- Responses were analyzed with descriptive statistics at both the individual country level and the aggregate global level
- Aggregate global responses were adjusted by weighting according to marginal distributions derived from previous analysis
 - Hooker RS, Berkowitz O. A global census of physician assistants and physician associates. JAAPA. 2020 Dec;33(12):43-45.

Weighted age and gender distribution of global PAs



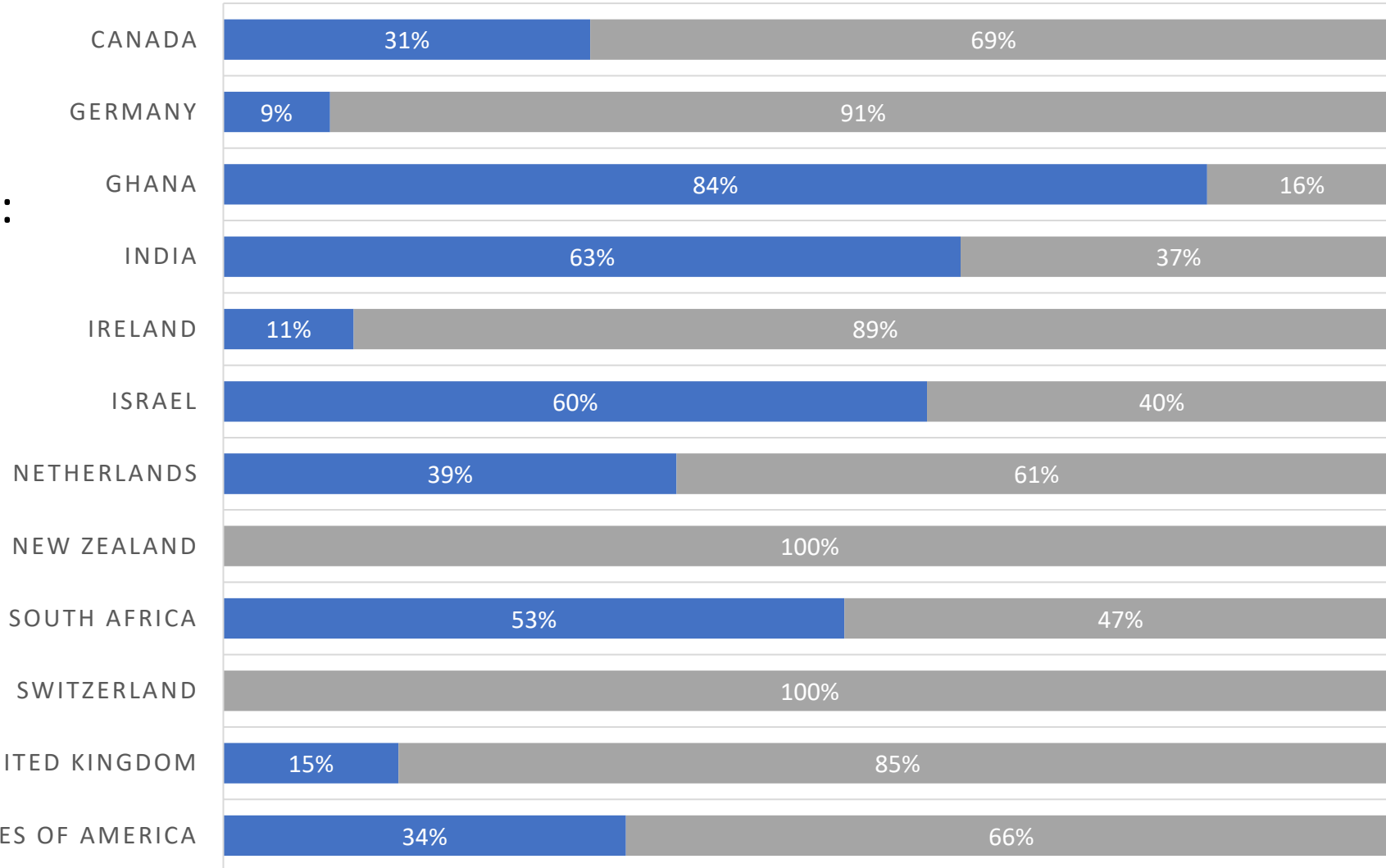
Overall weighted:
Median = 39
IQR = 32-50

Boxplot of ages by country

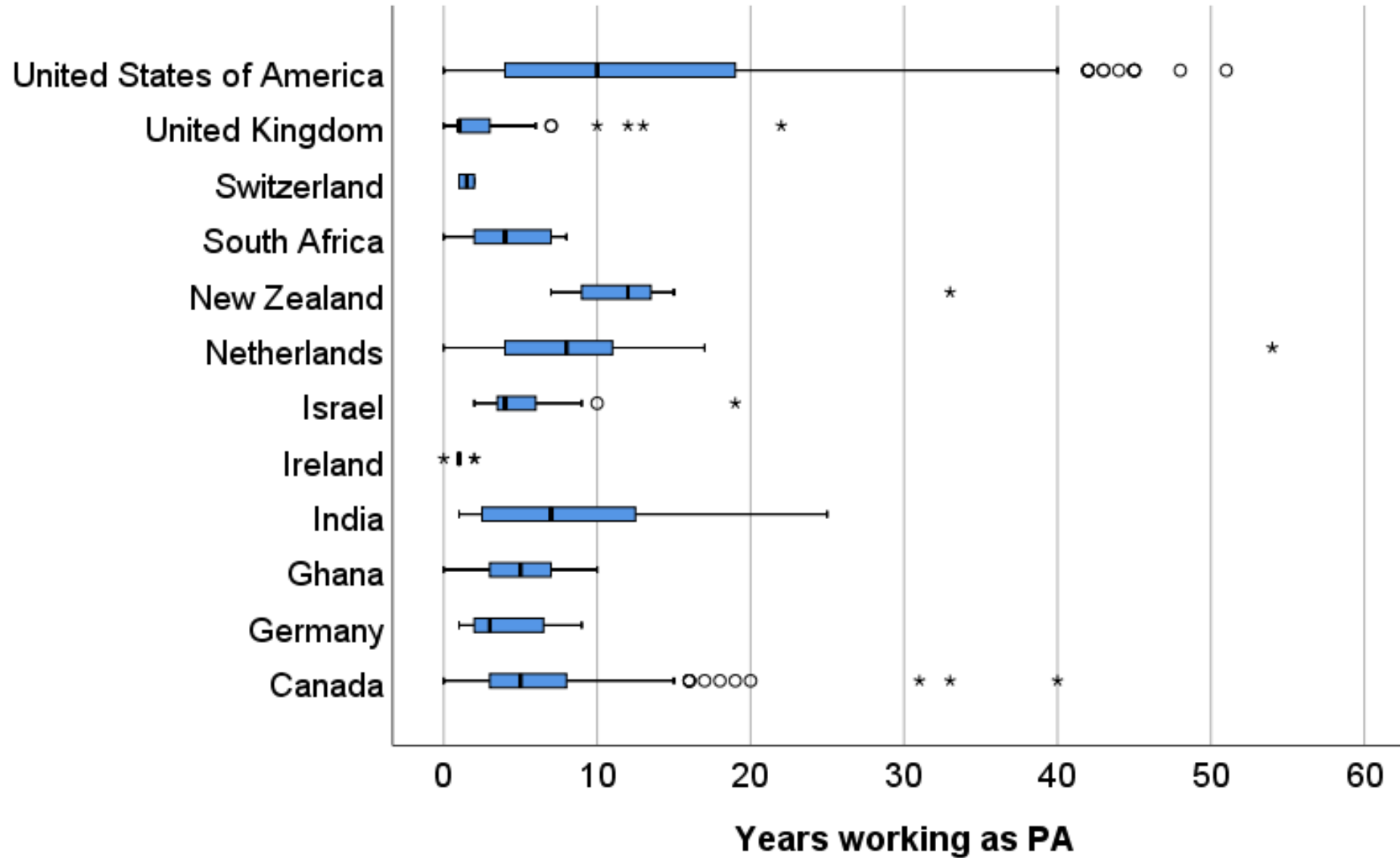


GENDER DISTRIBUTION BY COUNTRY

■ Male ■ Female



Overall weighted:
66% Female
34% Male



Overall weighted:
Median: 10
IQR: 4 - 19

Figure 2. COVID-19 Clinical Tasks

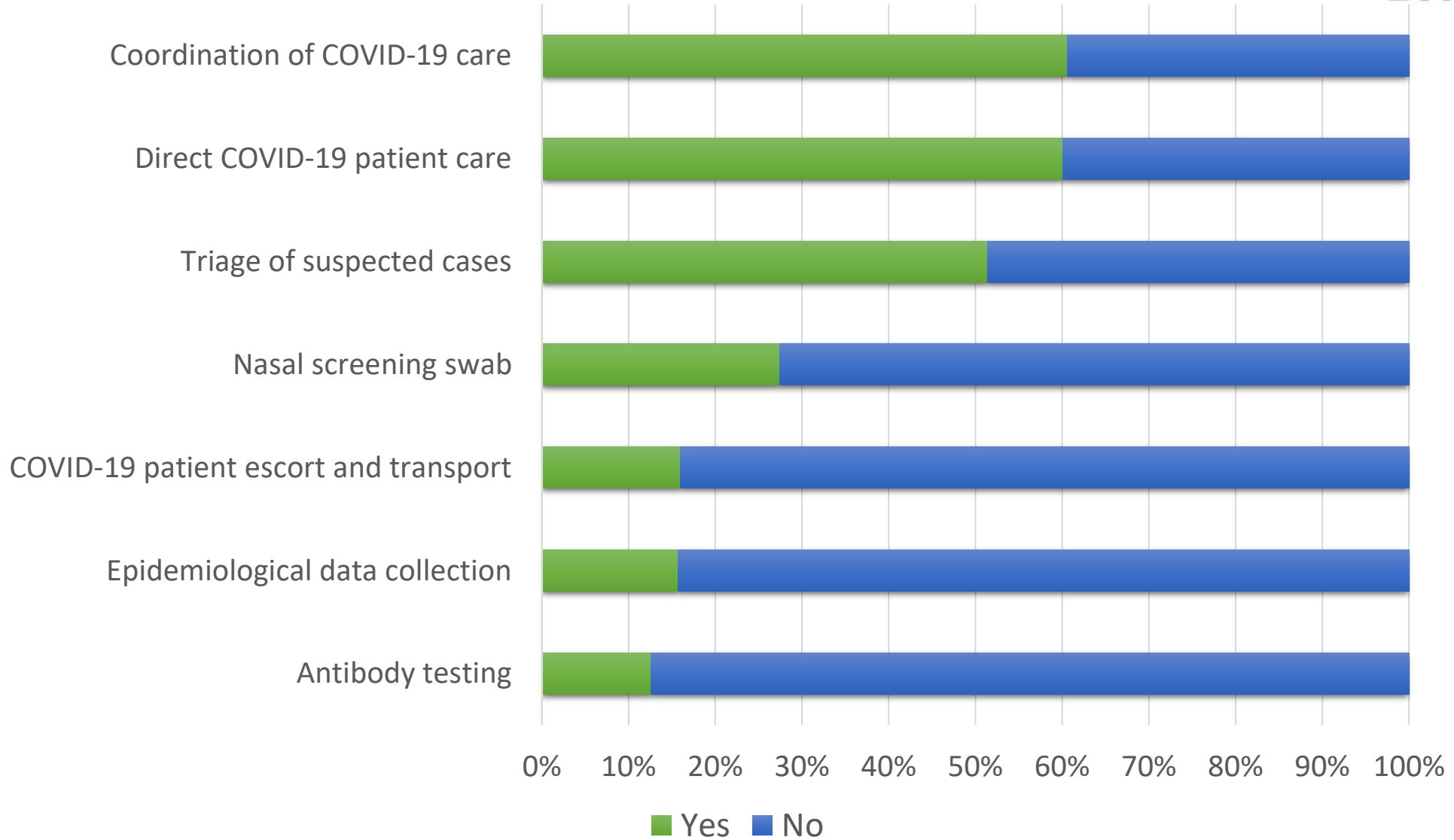


FIGURE 3. TIME SPENT WORKING WITH COVID-19 PATIENTS

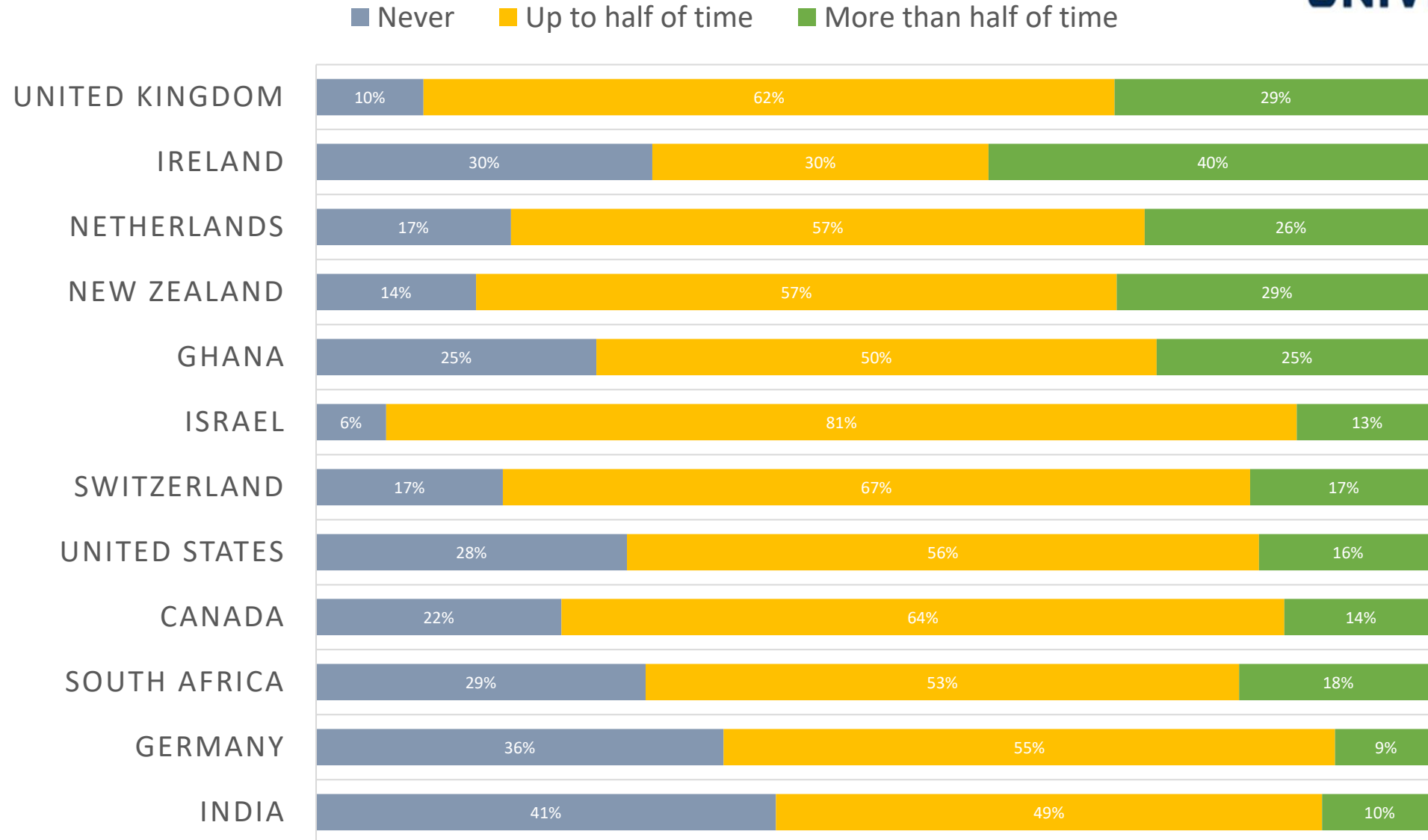


Figure 4. Work-related consequences of COVID-19 exposure

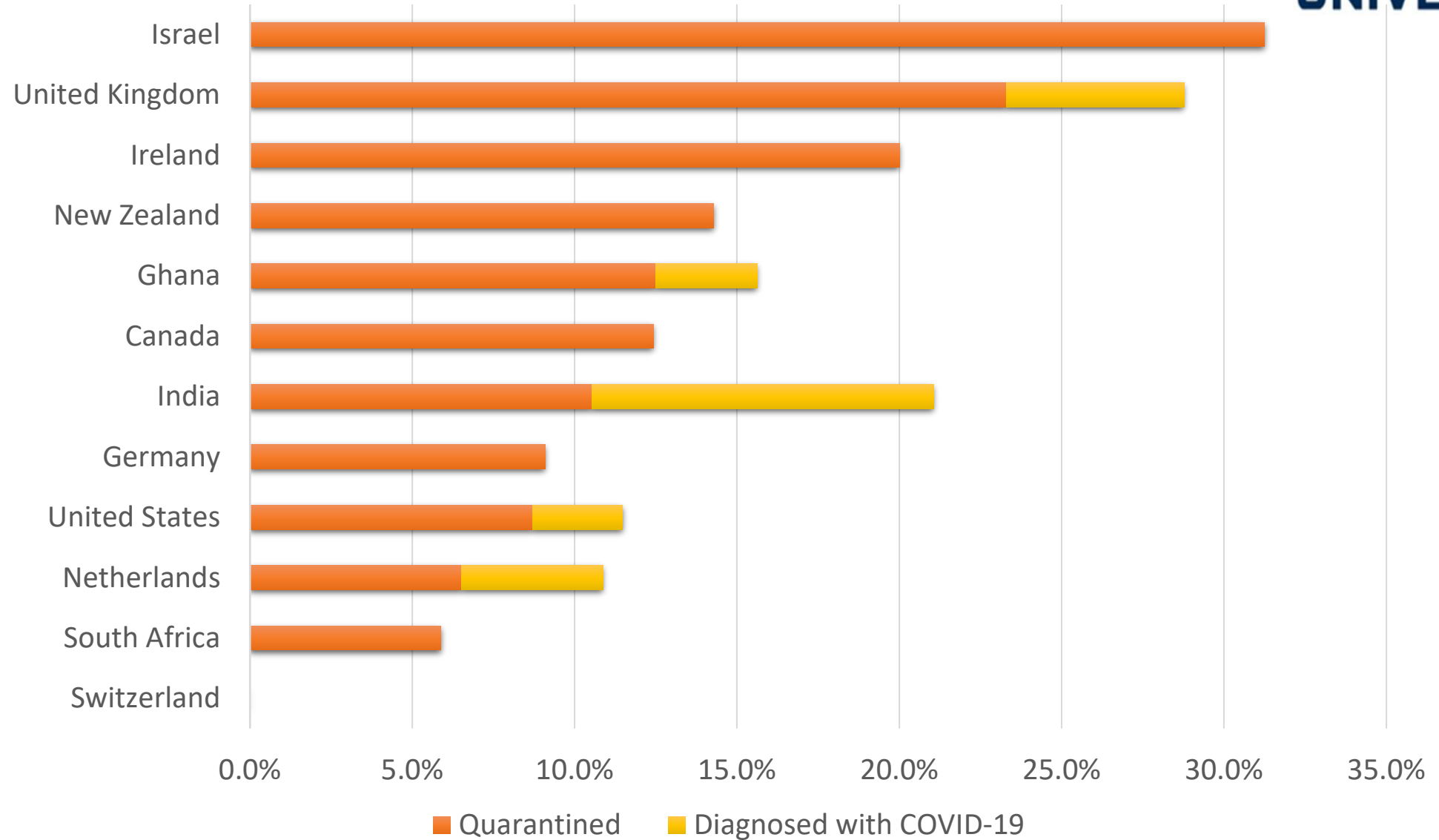
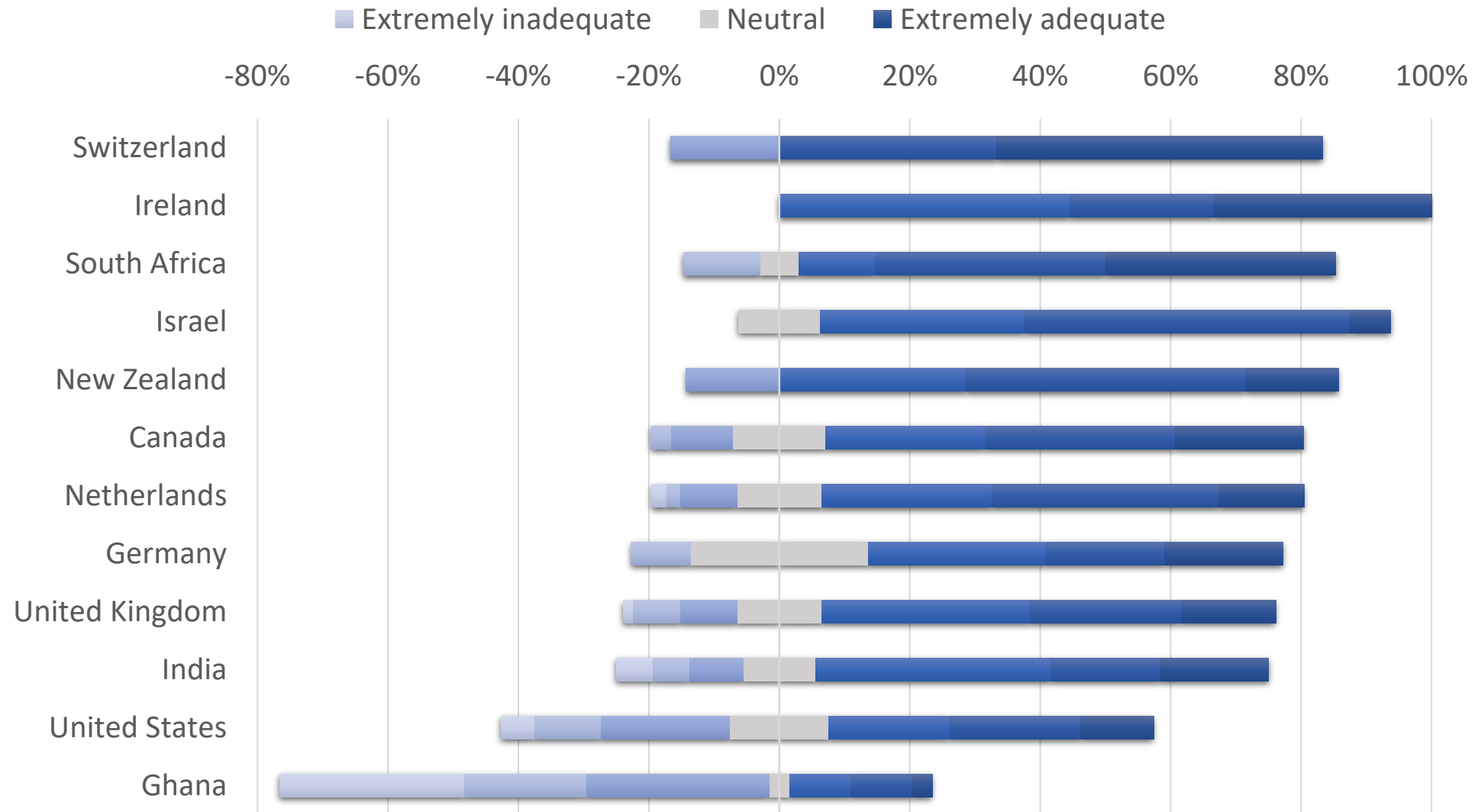


Figure 5. How adequate was the supply of COVID-19 personal protective equipment



Discussion

- World Health Organization Clinical Management of COVID-19 (WHO 2020) describes a coordinated and multidisciplinary care pathway that a patient enters when screened to be a COVID-19 case
 - The report makes no reference to who the provider of care should be other than they should be experienced with managing acutely ill patients
 - No mention of scope of practice nor licensure
 - Recommendation is that epidemiological conditions should dictate response
- Call for US “governors to enact emergency orders that modify or temporarily rescind medical practice policies that inhibit health professionals’ ability to expand their scope of practice as required” (Fraher 2020)
 - At least 8 states were identified that relaxed their scope of practice regulations for PAs

Discussion

- Majority of global PAs have provided direct care to COVID-19 patients and participated in a variety of special epidemic clinical tasks
- A majority of global PAs have spent some to most of their time caring for COVID-19 patients with variations between countries
 - High rates in the United Kingdom might reflect the early spread of disease there and a larger number of PAs working in primary care/acute care
 - Lower rates in India might reflect the later spread of disease experienced there and the fact that nearly all Indian PAs work in cardiovascular surgery which might put them less on the frontlines

Discussion

- More than 20% of respondents from Israel, the UK, Ireland, and India were placed in quarantine or fell ill to COVID-19 due to their exposure at work
 - This reflects the high-risk working conditions experienced during the first part of the outbreak
 - Many respondents reported a lack of adequate PPE but it did not directly correlate with quarantine or illness, rather quarantine and illness were probably due to a general lack of preparedness leading to excess exposure to COVID-19
- 35% of USA respondents reported an inadequate amount of PPE which was strikingly more than any of the other economically developed countries

Conclusions and take-home points

- PAs responded from 18 countries about their activities during COVID-19
- Weighted global PAs skewed greatly towards the young female demographic reflecting known shifts in the PA profession except for a few individual countries
- Respondents most commonly were in the PA profession for 10 years or less, also reflecting the rapid worldwide growth of the PA profession
- 60% of weighted global PAs had ever provided direct COVID-19 patient care
- Most PAs from every country spent at least up to half of their time working with COVID-19 patients varying from 60%-94% of respondents
- The risk of quarantine or infection was high with over 20% of respondents from Israel, UK, Ireland, and India reporting such work-related consequences
- Most of the respondents felt like there was an adequate supply of PPE except for, notably, Ghana and the US

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Questions?

- Feel free to contact me via email or through my website

orenbe@ariel.ac.il

DrOrenBerkowitz.com