Association of primary health care & country-level pandemic responses on rate of death from COVID-19: an international study

Prof Felicity Goodyear-Smith, University of Auckland, **NZ**

Prof Bob Phillips, American Board of Family Medicine, **USA**

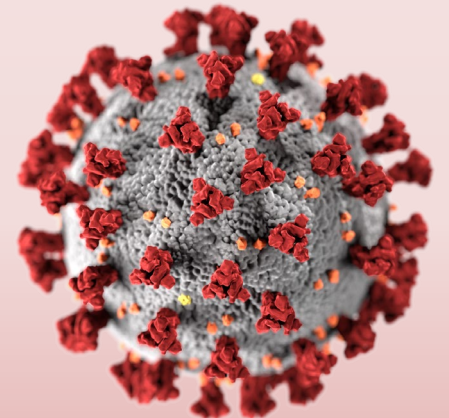Assoc Prof Andrew Bazemore, Am Board Family Medicine, **USA**

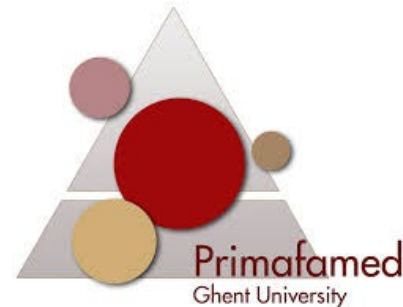Dr Karen Kinder, Technical University of Berlin, **Germany**

Cristina Mannie, Mast Analytics, **South Africa**

Stefan Strydom, Mast Analytics, **South Africa**

Endorsing organizations

Approaches to address pandemics

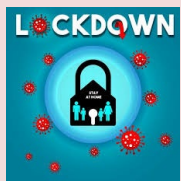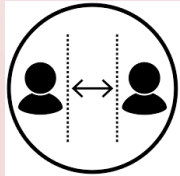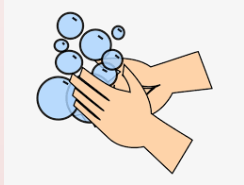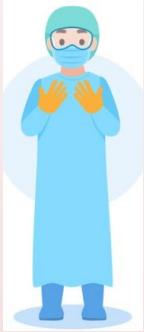| 1 Block entry in country	Border control Quarantine & test arrivees
2 Reduce the spread	Variety of primary health care (public health + primary care) measures
3 Manage severe cases to reduce deaths	Hospitalisation, oxygenation, intensive care, ventilation

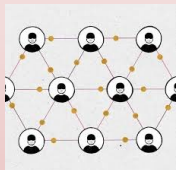# PHC (public health & primary care) responses

| Hygiene measures	Hand-washing Personal protective equipment
Limit person-to-person contact	Physical distancing Ban mass gatherings Primary care clinicians work remotely (e-consultations) Self-isolation, shutdown
Identify cases	Testing Contact tracing Surveillance

Aim

Examine countries' characteristics & strategies in dealing with COVID-19 from PHC perspective to determine:

- what factors correlate with rate of death
- what lessons may be learned to better address this & future pandemics

Method

- PHC clinicians, researchers, policy-makers
- English & Spanish versions
- Disseminated via PHC networks + snowballing
- Questions addressed:
  - ➤ nature of their PHC system
  - ➤ how it responded to the pandemic
  - ➤ use of health information technology
  - ➤ whether their country had pandemic plan
  - ➤ various strategies employed in response to the pandemic
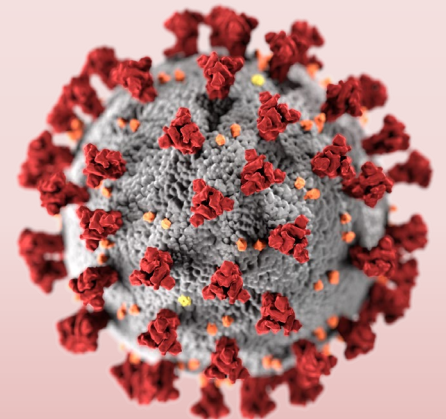
Data for each country

- Participants' survey data around country-level & PHC pandemic responses
- Maximum death rate on a 7-day moving average basis (response variable)
- Participants' narratives (qualitative data)

Analyses

Univariate, bivariate & regression model analyses
Thematic analysis

Results

- 1131 responses from114 countries - LIC, MIC & HIC, all world regions.
- Ranged from 158 (Australia) to 34 countries with single respondent from each
- Top 5 (>50 responses): Australia (163), NZ 99), Mexico (78), Malaysia (77), US (55)
- 73% primary care clinicians, 17% academics, 6% policy-makers, 4% other
- English version completed 92%, Spanish 8%
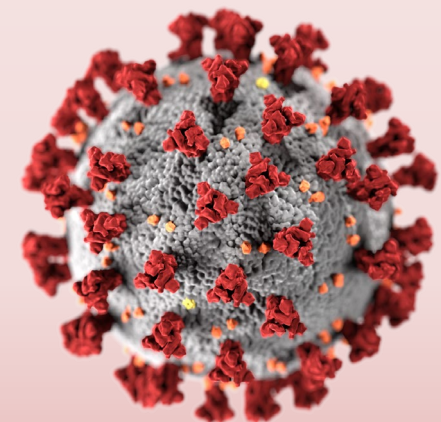
Distribution of respondents
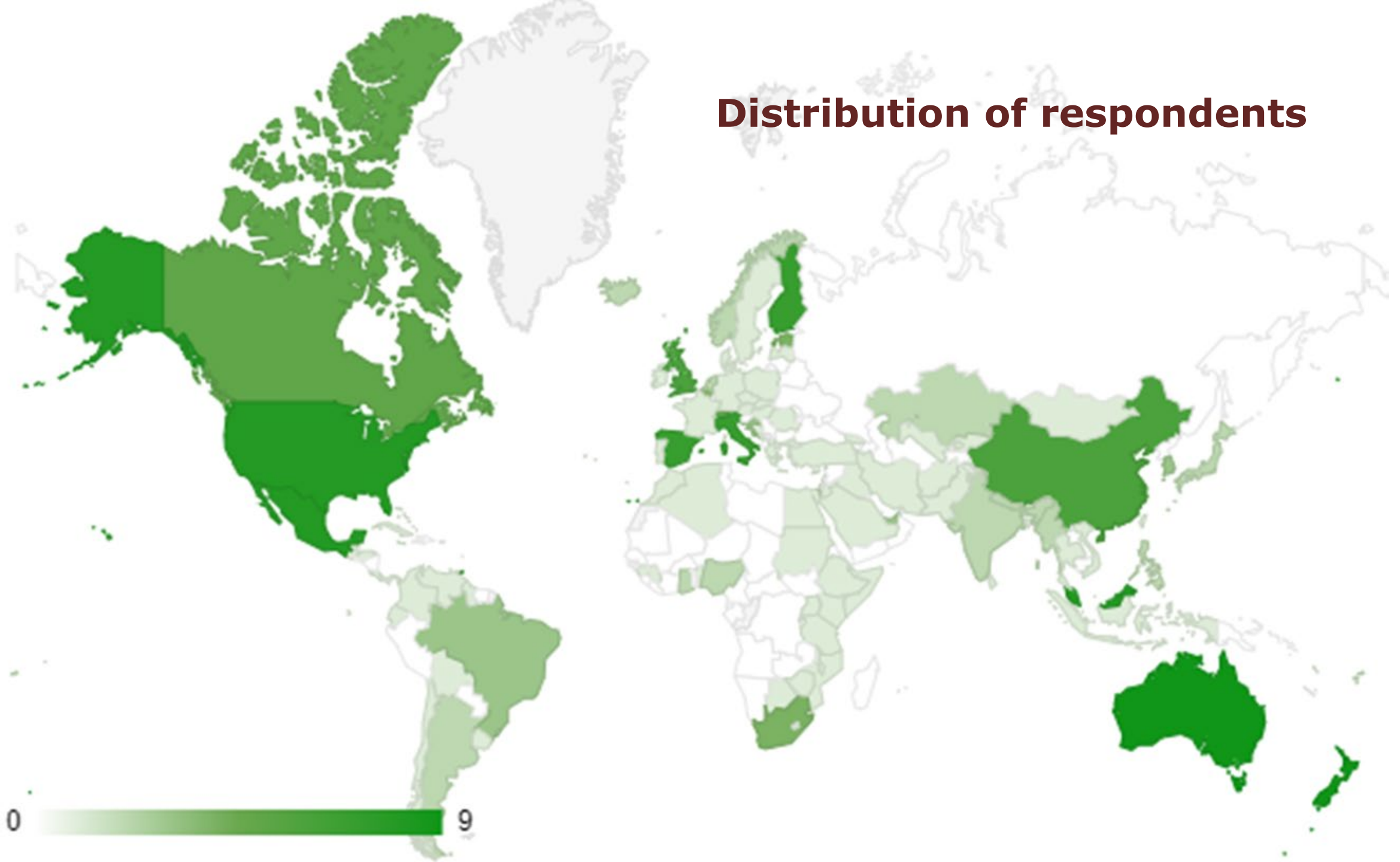
Preliminary results

TESTING Death rates less where:
- Testing readily available at time of 1st COVID death
- Testing performed on incoming travellers
- Testing conducted for those exhibiting symptoms
- Testing conducted for those exposed to COVID-19 positive individuals

MOVEMENT RESTRICTIONS Death rates less where:
- Physical distancing
- Event closures
- Closure of all but essential services
- Isolation based on contract tracing
- Self-isolation in households
- Quarantine for suspected cases

EXISTING STRONG PHC SYSTEM Not correlated with death rates:
- If stopped at border, PHC irrelevant (eg small island nations)
- Response uncoordinated, public health & PC not integrated
- PC not engaged
- Lack of PPE, testing for community-based workers