



Global Surgery and COVID-19

‘Interface between service and systems’

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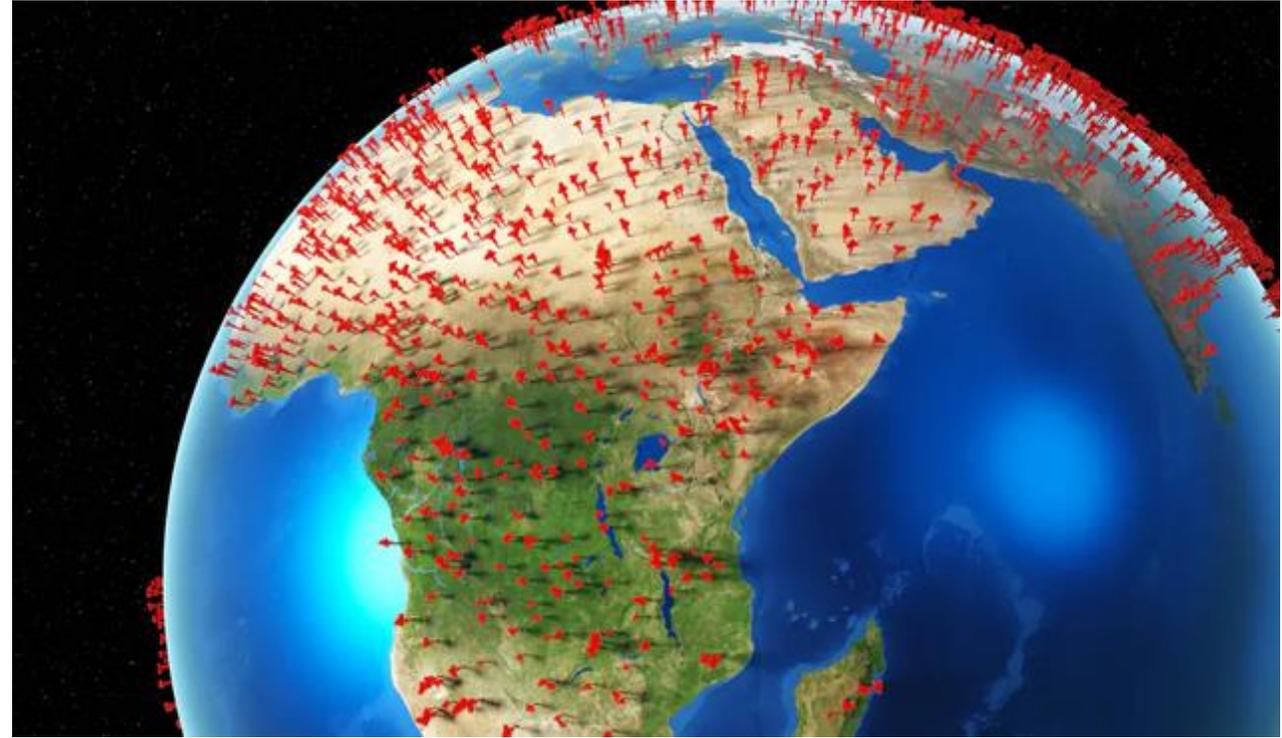
GLOBAL
SURGERY

**COVID-19 will reshape our world.
We don't know when the crisis will end. But we
can be assured that by the time it does, our
world will look very different!!!**



Outline

- **What is Global Surgery**
- **Service and Systems**
- **Population health**
- **COVID-19 Interventions and Innovation**



Global Surgery

**A trans-disciplinary
approach to providing
equitable, comprehensive
surgical care. (UCT)**

The Global Surgery Crisis

- **5 billion people lack access to safe, affordable surgical and anaesthesia care when needed**
- **143 million additional surgical procedures are needed each year to save lives and prevent disability**
- **33 million individuals face catastrophic health expenditure due to payment for surgery and anaesthesia each year**

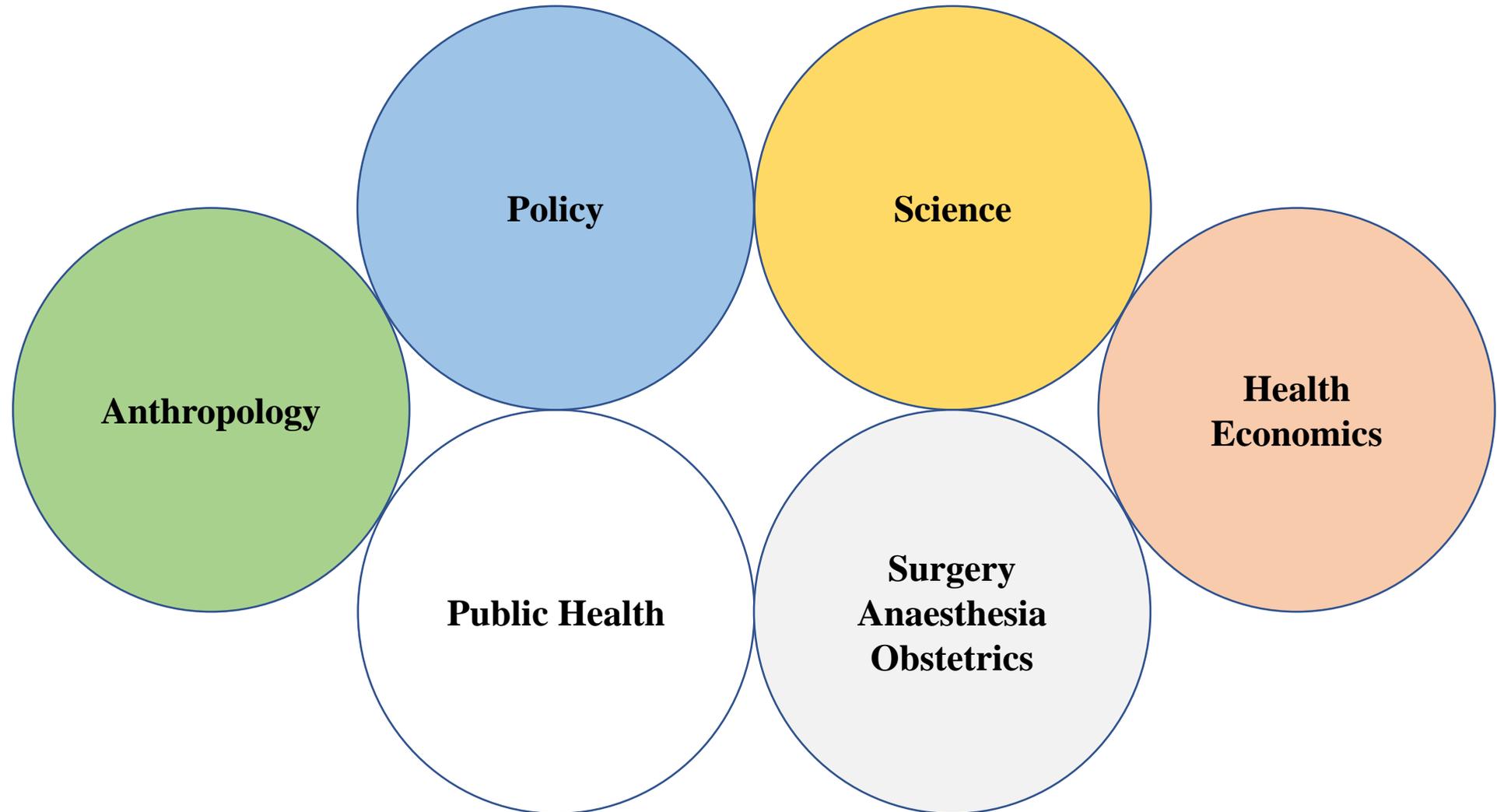




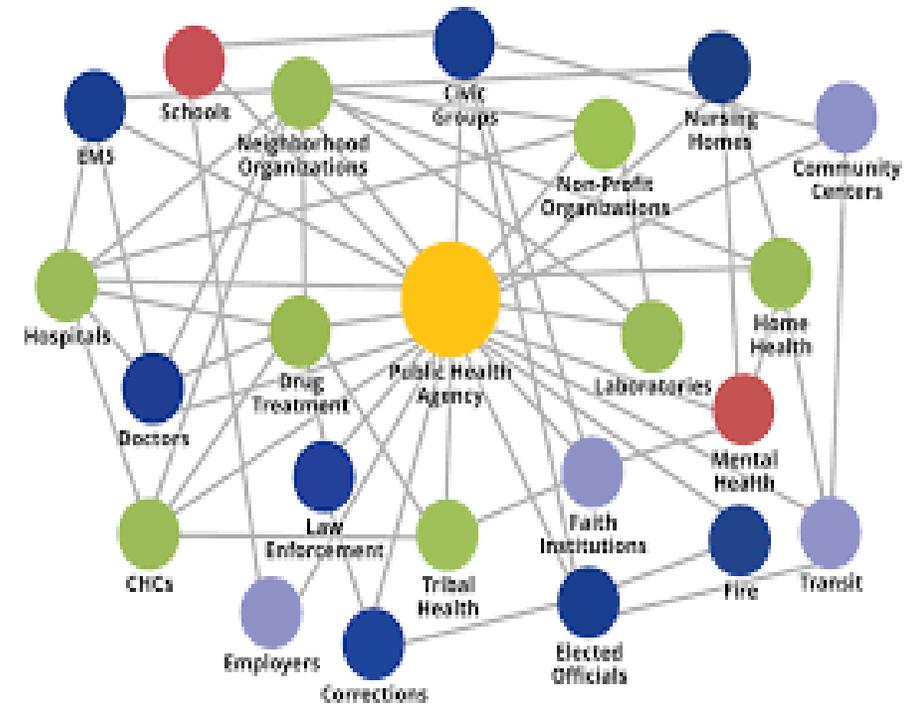
Relative risk in Africa

Adult (elective) surgical mortality	2x
Maternal (caesarean section) mortality	50x
Neonatal mortality	2x

Global Surgery



Service and Systems



How we often think about health?



Pediatrician



Internists



Anesthetist



Dermatologists



ob-gyn



radiologist



Population Health (Pandemic)

An interdisciplinary, customisable approach that allows health departments to connect practice to policy for change to happen locally.

This approach utilizes non-traditional partnerships among different sectors of the community – public health, industry, academia, health care, local government entities, to achieve positive health outcome



Global Surgery

An area of study, research, practice, and advocacy that seeks to improve health outcomes and achieve health equity for all people who need surgical, obstetric and anaesthesia care, with a special emphasis on underserved populations and populations in crisis.

It uses collaborative, cross-sectoral, and transnational approaches and is a synthesis of population-based strategies with individual surgical and anaesthesia care.

Social determinants of health

- **Education**
- **Employment**
- **Food security**
- **Water security and sanitation**
- **Equity and equality**
- **Infrastructure**



Barriers to health

- **Pollution**
- **Electricity and water insecurity**
- **Poor infrastructure**
- **Emissions from fossil fuels**
- **Shortage of oxygen, blood and blood products**
- **Lack of ICU units and critical care facilities**
- **Lack of human resources and multi-disciplinary specialists**
- **Inequality and discrimination**



COVID-19

- **Global infections: 2 642 727**
- **Global recoveries: 696 860**
- **Global deaths: 184 187**
- **Countries: 210**



Vulnerable Populations: COVID-19

Populations that are disproportionately exposed to risk

- **Age 65 and older**
- **Severe chronic lung disease or moderate or severe asthma**
- **Serious heart conditions**
- **Immuno-compromised**
 - ✓ **Cancer**
 - ✓ **Smoking**
 - ✓ **Bone marrow and organ transplantation**
 - ✓ **HIV and AIDS**

Special populations

- **Healthcare workers**
- **People who are homeless**
- **Pregnancy and breast feeding**
- **People with disabilities**

Healthcare workers

PPE recommendation (CDC):

- **Gloves**
- **Gown**
- **N95 respirator**
- **Face shield/goggles**
- **Or an air purifying respirator**



- **Clean workspaces and disinfect personal items such as stethoscopes, mobile phones, keyboards, landlines, nametags, with alcohol-based disinfectants.**
- **Banning travel to medical meetings, cancelling conferences, limiting nonessential travel, and recommending that personal travel be curtailed.**
- **Increased risk of family transmission, especially involving family members who are elderly, immunocompromised, or have chronic medical conditions.**
- **Self Care**

What about vulnerable healthcare workers

HCWs who must not work

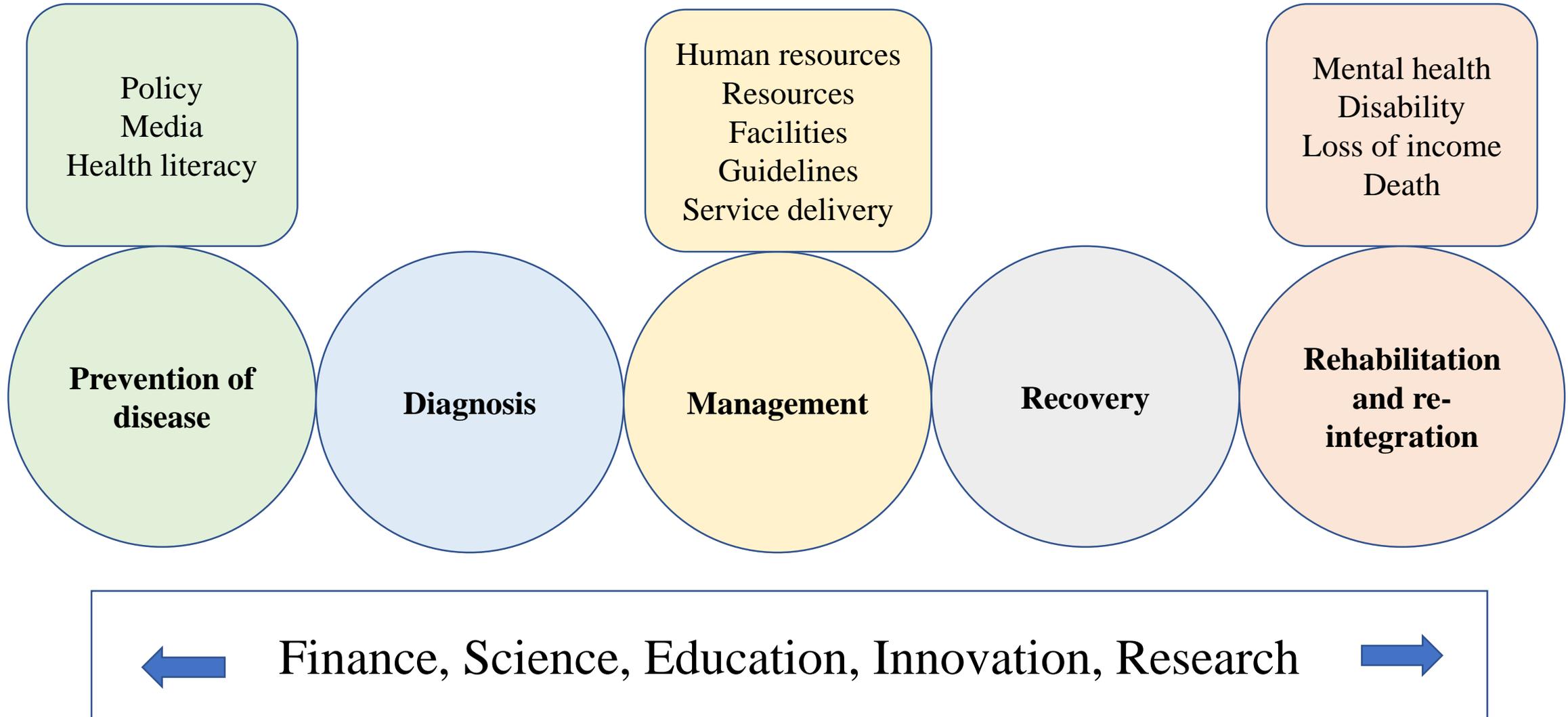
- Solid organ transplant recipients
- On chemo or radiotherapy for lung cancer
- Leukaemia, lymphoma, myeloma on treatment
- Immunotherapy or targeted cancer treatments
- Bone marrow transplant last 6 months on immunosuppression drugs
- Rare diseases
- Severe respiratory conditions
- Over age of 70

Pregnancy: As per recommendation of care provider

Workplace health and wellbeing unit (Ireland)

- **HCWs with other medically managed pre-existing disease are unlikely to be at greater risk of acquiring COVID-19 virus infection compared with other HCW's if the appropriate personal protective equipment is worn.**
- **These HCWs can continue to work UNLESS there is a specific recommendation from their treating specialist.**

A population approach

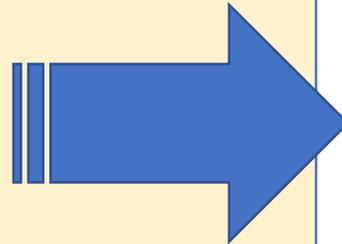




Interventions

Covid-19 literacy campaigns: Digital health

- **The use of USSD platforms**
- **Covid-19 Applications**
- **Translations**
- **Media**
- **Social media**
- **Advocacy**
- **Digital contact tracing**



- **Who is the target audience?**
- **Is the platform accessible for the target market?**
- **What languages are being used?**
- **How much does a person pay to use it?**
- **Is it entertaining or innovative enough?**
- **Does the message instill hope or fear?**

impeel



UHLALE UKHUSELEKILE. FUNDA NGO COVID-19

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Standard T&Cs and Rates apply.

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 GLOBAL ENERGY



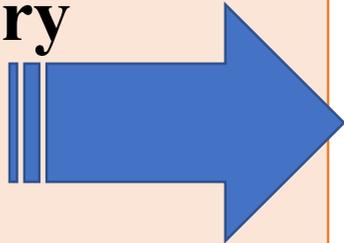
Biomedical engineering

- **Creating a list of equipment that could be made in house by the biomedical engineers**

‘From PPE to ventilatory support’

3D printing

- **Visors**
- **N95 respirators**
- **Intu-box**

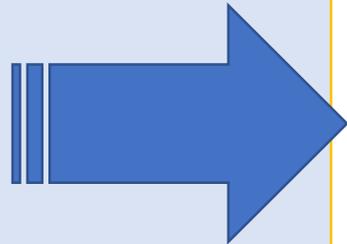


- **Funding**
- **Specifications**
- **Donor regulations**
- **SAHPRA approvals**



Telemedicine

- **Improving service delivery**
- **Virtual consultations**
- **Robotics**
- **Telemedicine devices**



- **Removes direct contact with the patients**
- **Tele-consultations**

- **Acceptability**
- **Costs**
- **Groundbreaking**
- **Regulations**



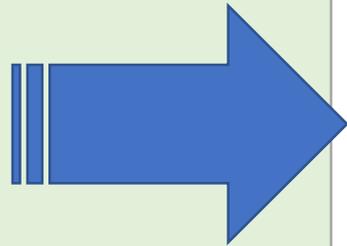
Guidelines and Training

Developing of local, national and international COVID-19 guidelines

Simulation and role play

Support for healthcare workers

- **Pregnancy**
- **Cancer**
- **Surgery**
- **Critical care**



• **Best evidence**

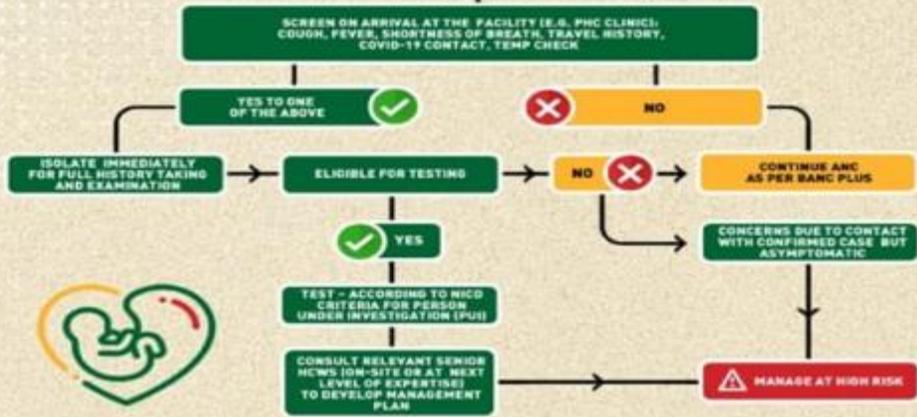
• **Best practice**

• **Context**

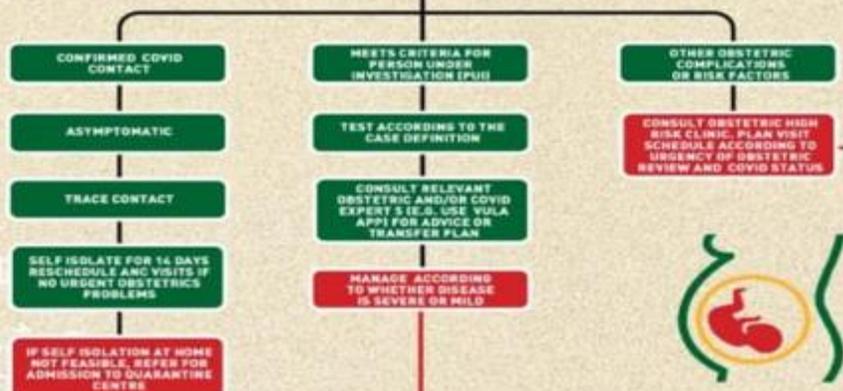
• **Relevant**

PREGNANT WOMEN COVID-19 ALGORITHM

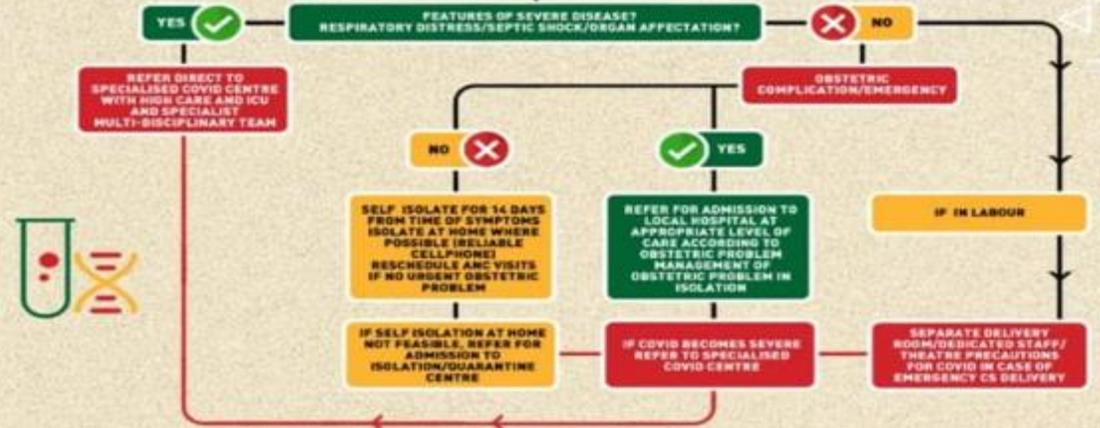
1. PREGNANT WOMAN?



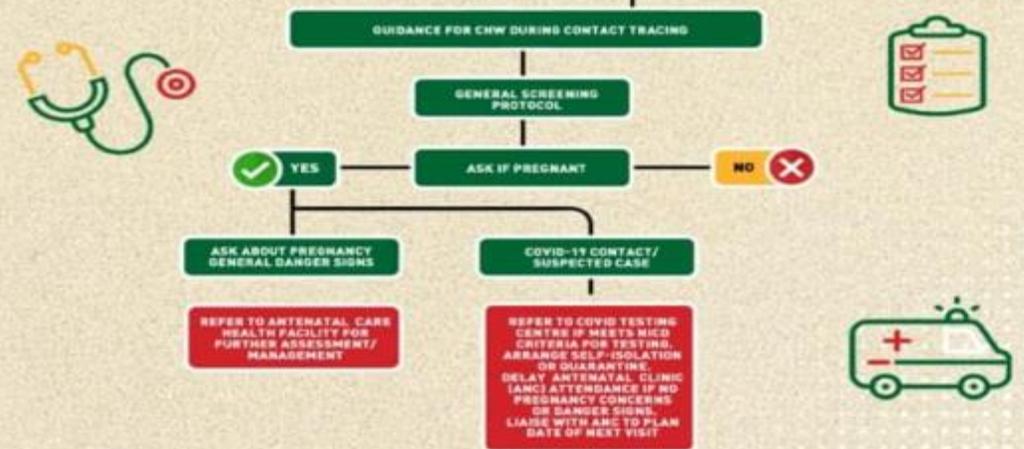
2. MANAGEMENT OF HIGH RISK PREGNANT WOMEN



3. MANAGEMENT OF HIGH RISK PREGNANT WOMEN

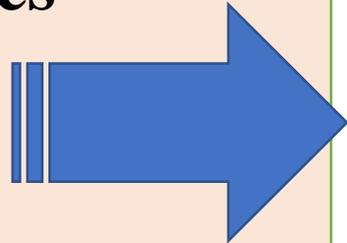


4. GUIDANCE FOR CHW DURING CONTACT TRACING



Research

- **Auditing COVID-19 outcomes**
- **COVID-Surg outcomes**
- **Cancer outcomes**



- **Informing practice**
- **National and international studies**
- **Expedited ethics reviews**
- **Funding for COVID-19 research**

The South African Covid-19 Pregnancy Outcomes Study

More than 600 000 people globally have tested positive for COVID-19 disease, with an increasing number of infected pregnant women and neonates. Research from the last influenza pandemic (2009/H1N1) showed that pregnant women were particularly vulnerable to severe infection, resulting in maternal and perinatal mortality. Evidence from the UK Obstetric Surveillance System (UKOSS), highlighted specific groups of women who were at higher risk of morbidity after 2009/H1N1 infection in pregnancy.

There is a dearth of literature from Africa regarding the disease course and pregnancy outcomes. Clear evidence is required to inform guidelines and national policy regarding the management of pregnant women in the current and future influenza pandemics in South Africa.

The primary objective of this study is to determine the disease course and outcomes of pandemic-type influenza or the novel coronavirus in pregnancy for mother and infant.

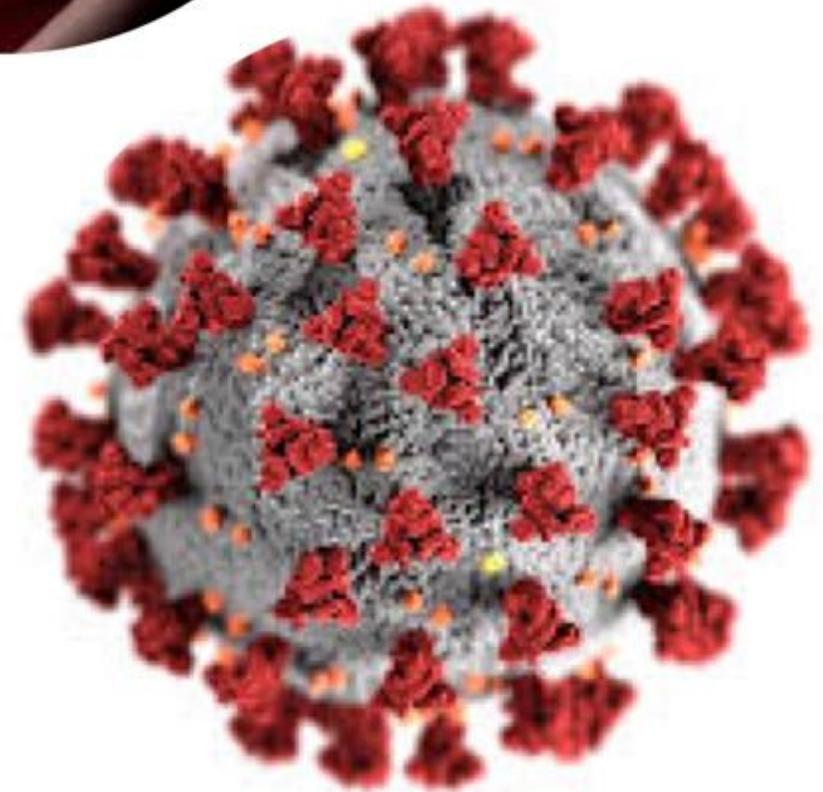
The South African Obstetric Surveillance Systems Consortium in partnership with the SA MRC Maternal and Infant Health Strategies Unit invites clinicians from South African obstetric institutions to participate in this national study.

Principal Investigators: Dr Samantha Budhram (UKN), Dr Valerie Vannevel (UP), Dr Laura Yates (UKZN) and Prof Salome Maswime (UCT)

To participate as an investigator, contact: Dr Budhram (budhrams@icloud.com)



World Health Organization



Summary

- **COVID-19 is a global crisis requiring innovation and scalable interventions that will reach populations, whilst protecting healthcare workers and the most vulnerable population.**
- **COVID-19 requires solutions from clinicians, working in partnership with government, public health specialists, scientists, engineers, NGOs and e-health companies.**

"OF ALL THE
FORMS OF INEQUALITY,
INJUSTICE IN HEALTH CARE
IS THE MOST SHOCKING
AND INHUMANE."

- REV. DR. MARTIN LUTHER KING, JR.
(1929-1968)

