Irish Global Health Network

COVID-19 Conversations

ESTHER Alliance for Global Health Partnerships

Leaving No One Behind: Keeping up Essential Services for NCD Patients in Ethiopia during the Time of COVID-19 Response

A Global and African overview

19th June 2020

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https://www.worldometers.info/coronavirus/

1. Direct impacts and epidemiology of SARS-CoV-2 virus

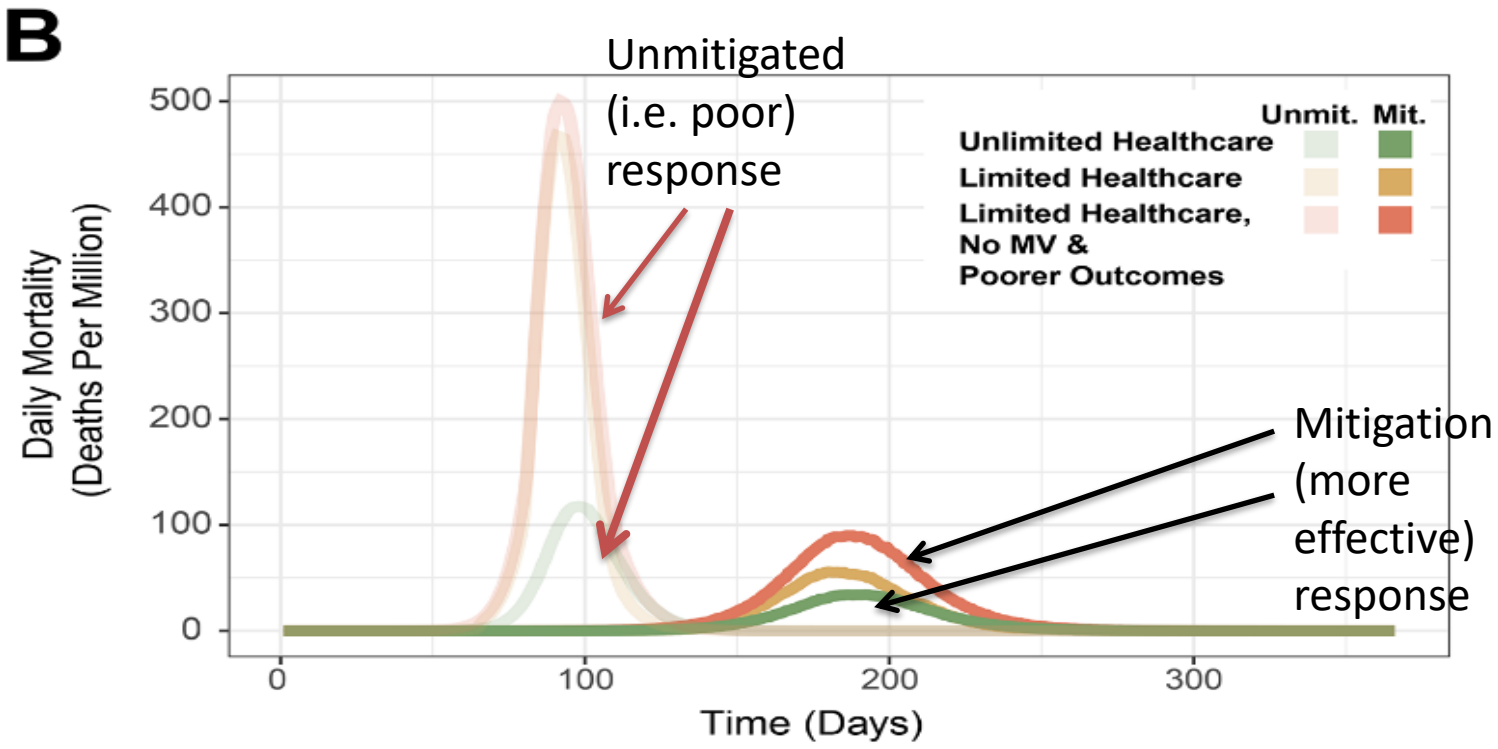
- The viral infection can move from nose and throat to lungs where it may cause acute respiratory distress (SARS), characterised by shortness of breath and hypoxia; sometimes secondary pneumonia.
  - Oxygen is the most important treatment to have available
- It may cause a 'cytokine storm' – an overreaction of the immune system – leading to coagulation disorders and body systems failures
- Risk factors: age, coronary heart disease, hypertension, diabetes, chronic obstructive pulmonary disease, obesity
- Case fatality rate 0.5-5% (up to 20% in over 80s) – x 5-50 greater than influenza – but most people (including the elderly) recover
- Asymptomatic x 10 times more common than symptomatic infections especially in younger age groups

LMIC / African country comparison: 19th June

#	Country, Other	Total Cases	Total Deaths	Tot Cases/ 1M pop	Deaths/ 1M pop	Total Tests	Tests/ 1M pop	Population
	Brazil	983,359	47,869	4,627	225	2,344,437	11,032	212,508,714
	India	381,485	12,605	277	9	6,426,627	4,659	1,379,530,022
1	South Africa	83,890	1,737	1,415	29	1,228,098	20,716	59,281,463
15	Kenya	4,257	117	79	2	130,498	2,429	53,722,222
16	Ethiopia 29th May	3,954 831	65 7	34 7	0.6 0.06	202,214	1,761 842	114,841,341
24	Zambia	1,416	11	77	0.6	46,549	2,535	18,360,933
34	Uganda	741	0	16	0	155,882	3,413	45,673,523
37	Mozambique	662	4	21	0.1	20,263	649	31,216,274
38	Malawi	592	8	31	0.4	8,904	466	19,108,440
40	Tanzania	509	21	9	0.4	-	-	59,657,686

https://www.worldometers.info/coronavirus/

Modelling mortality by healthcare quantity and quality in LMICs



Walker et al. The impact of COVID-19 and strategies for mitigation and suppression in low- and middle-income countries. Science. **10th June** https://science.sciencemag.org/content/early/2020/06/11/science.abc0035

Equity: direct and indirect impacts of COVID-19 on vulnerable populations / the poor in LMICs

- Modelling impact of COVID-19 with respect to wealth – a 32% increased probability of death in poorest quintile
  - Lack of geographical and financial access to health care – 12.4%
  - Lack of access to handwashing (water and soap) – 2 billion worldwide
  - Occupational risk – 0-13% of poorest quintile can work at home
- Additional risk mediators and indirect impacts
  - Age and household structure (intergenerational mixing)
  - Food insecurity – a result of and a risk factor for COVID-19
  - Vulnerable / displaced populations
- Co-morbidities
  - NCDs: diabetes, hypertension, coronary heart disease – > impact on poor?
  - Infectious diseases: TB, HIV and AIDS,

Report 22 (**12th May**): Equity in response to the COVID-19 pandemic: an assessment of the direct and indirect impacts on disadvantaged and vulnerable populations in low- and lower middle-income countries https://www.imperial.ac.uk/media/imperial-college/medicine/mrc-gida/2020-05-12-COVID19-Report-22.pdf

Modelling impacts of COVID-19 on MCH

Table 2. Component and coverage reductions for Scenario 2

$ + Fear

Lockdown

	Workforce Reduction	Supplies Reduction	Demand Reduction	Access Reduction	Coverage Reduction
Family Planning	Small (5%)	Moderate (10%)	None (0%)	Small (5%)	18·8%
Antenatal Care	Moderate (10%)	Moderate (10%)	Small (5%)	Small (5%)	26·9%
Childbirth Delivery Care	Moderate (10%)	Moderate (10%)	None (0%)	Small (5%)	23·1%
Postnatal Care	Moderate (10%)	Moderate (10%)	Small (5%)	Small (5%)	26·9%
Vaccinations	Moderate (10%)	Moderate (10%)	Small (5%)	Small (5%)	26·9%
Early Child Preventative	Small (5%)	Moderate (10%)	Small (5%)	Small (5%)	22·8%
Early Child Curative	Moderate (10%)	Moderate (10%)	None (0%)	Small (5%)	23·1%
Relative increase in the proportion of children who are wasted					20·0%

Early estimates of the indirect effects of the coronavirus pandemic on maternal and child mortality in low- and middle-income countries
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31089-8/fulltext#%20

Modelling impacts of COVID-19 on MCH

Table 4. Additional deaths for each scenario and time period

	3 months		6 months		12 months	
	Child	Maternal	Child	Maternal	Child	Maternal
Scenario 1	126,700	6,100	253,500	12,190	506,900	24,390
Scenario 2	223,600	10,790	447,200	21,570	894,400	43,150
Scenario 3	578,500	28,350	1,157,000	56,700	2,313,900	113,400

Women in childbirth:
Ensuring provision of
1. uterotonics,
2. antibiotics,
3. anti-convulsants and
4. clean birth environment

will prevent **60% of avoidable deaths**

Protecting Children:
1. Wasting to lead to **21%** of additional deaths, Management of 2. Neonatal sepsis / pneumonia 3. antibiotics for pneumonia, 4. ORS: = further **40%** of avoidable deaths
Also Malaria and vaccinations

Modelling impacts of COVID-19 on HIV TB Malaria

HIV and AIDS

- Interruptions to Antiretroviral treatment (ARVs) during period of high health systems demand, may lead to 10% rise in HIV related deaths over 5 years

Tuberculosis

- Reductions in timely diagnosis and treatment of new cases during periods of lockdown, setting back stop TB by 5 to 8 years – 20% rise in deaths over 5 yrs

Malaria

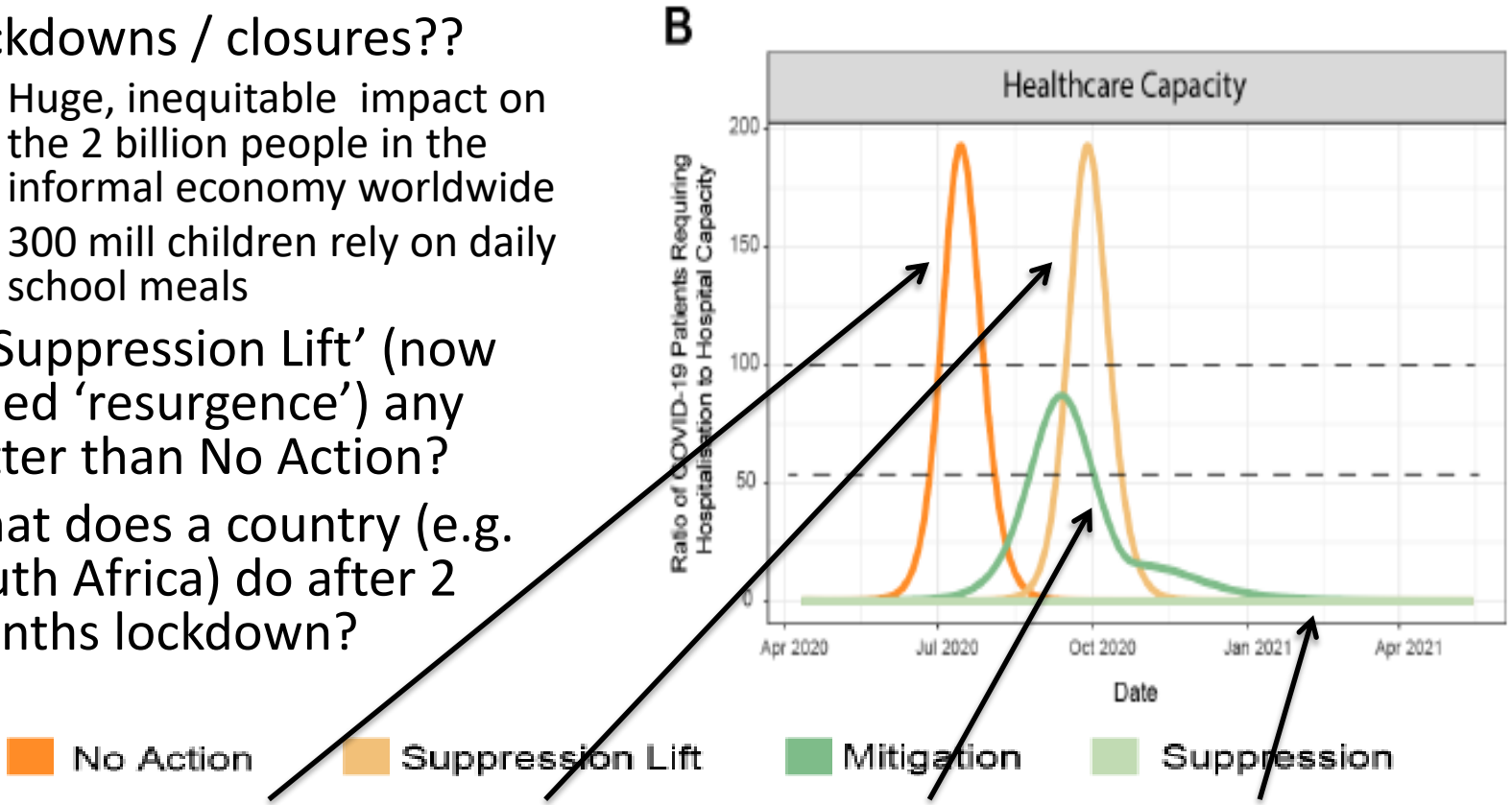
- Reduced prevention activities (esp bed net campaigns), doubling malaria burden – 36% rise in deaths, mainly in the next 1-2 years

"…. the impact of each type of disruption could . . .lead to a loss of life-years over five years that is of the same order of magnitude as the direct impact from COVID-19 in places with a high burden of malaria and large HIV/TB epidemics" or greater . . . ?

- 4 epidemic scenarios modelled
- Focus on maintaining critical services: diagnosis and treatment (HIV and TB) and prevention (Malaria) and on ensuring health systems resilience

How countries respond will determine the Direct *and* Indirect impacts of COVID-19

- Lockdowns / closures??
  - Huge, inequitable impact on the 2 billion people in the informal economy worldwide
  - 300 mill children rely on daily school meals
- Is 'Suppression Lift' (now called 'resurgence') any better than No Action?
- What does a country (e.g. South Africa) do after 2 months lockdown?



Walker et al. Science. 10th June https://science.sciencemag.org/content/early/2020/06/11/science.abc0035
recognise the difficult trade-offs and uncertainty about best exit strategies for LMICs

What are the appropriate responses?

- Community- (community health worker) based approach
  - Syndromic diagnosis versus investing in PCR testing kits
  - Feasible and humane physical distancing (home isolation) while cases are symptomatic AND to protect the vulnerable (older + co-morbidities)
  - Contact tracing and isolation of symptomatics (more infectious)?
  - Hygiene (soap and water) to protect the vulnerable from infection
- Communicate and engage with communities – lessons from Ebola
- Cash transfer and food security programmes
- Health systems response
  - Protect staff
  - Make oxygen widely available
  - Reorient and direct resources to protect priority services

Has COVID-19 subverted global health? Richard Cash, Vikram Patel Lancet 5th May
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31089-8/fulltext

Essential health services *

1. Governance and coordination mechanisms to complement response protocols
2. Identify context relevant essential services
3. Optimise service delivery settings and platforms
4. Patient flow – screening, triage, targeted referrals
5. Allocate health workforce
6. Mechanisms to maintain availability of essential medications, equipment and supplies

** COVID-19: Operational guidance for maintaining essential health services during an outbreak . WHO.* https://www.who.int/publications-detail/covid-19-operational-guidance-for-maintaining-essential-health-services-during-an-outbreak

Will the Higher-Income Country Blueprint for COVID-19 Work in Low- and Lower Middle-Income Countries? Global Health: Science and Practice 10th June https://www.researchgate.net/publication/342085391_Will_the_Higher-Income_Country_Blueprint_for_COVID-19_Work_in_Low-_and_Lower_Middle-Income_Countries

- Balance expected benefits and harms (of lockdowns)
- Assess feasibility and sustainability of suppression

Conclusions

1. Limit spread, short of full suppression
2. Mitigate harms (associated with control efforts, e.g. avoiding creating barriers to people accessing care for NCDs)
3. Shield those at high risk – the elderly and vulnerable