Workshop 1: Responding amid evolving complexities

World Bank EAP COVID-19 Workshop Series

May 18, 2021
Part 1a: Global COVID-19 update and how policymakers can respond

by Emily Serazin, Managing Director and Partner, BCG
Cases are still high around the world even as vaccine rollout is underway; resurgences in countries like India have had devastating impacts

As of 02 May 2021

Daily new cases (7-day rolling average)

Key observations

156M

# of confirmed cases

19.0M

# of active cases

3.3M

# of fatalities

1.2B

# of vaccinations

Source: Our World In Data, Press search
Fourteen vaccines have been approved for full, emergency, or limited use; trial data show high effectiveness in protecting against severe COVID-19

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Earliest approval date</th>
<th>Countries providing approval</th>
<th>Countries providing approval [3]</th>
<th>Efficacy in registration trials</th>
<th>Select countries (not comprehensive)</th>
<th>#</th>
<th>Symptomatic Reduction (95% Confidence Interval) [6,7]</th>
<th>Hosp.</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>CanSino Biologics (China)</td>
<td>Jun '20</td>
<td>China, Mexico, Pakistan, Hungary</td>
<td>5</td>
<td>65%</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sinovac (China)</td>
<td>Jul '20</td>
<td>China, Countries in LATAM &amp; ME</td>
<td>20</td>
<td>50-84% (CI 36%, 62%) [11]</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Gamaleya &quot;Sputnik V&quot; (Russia)</td>
<td>Aug '20</td>
<td>Russia, Countries in Asia, Africa, LATAM</td>
<td>60</td>
<td>92%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WIBP1 Sinopharm (China)</td>
<td>Sep '20</td>
<td>China and UAE</td>
<td>2</td>
<td>79%</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BIBP2 and Sinopharm (China)</td>
<td>Sep '20</td>
<td>China and countries in ME, Asia</td>
<td>19</td>
<td>79%</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vektor (Russia)</td>
<td>Oct '20</td>
<td>Russia</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BioNTech (Germ.), Pfizer (US)</td>
<td>Dec '20</td>
<td>Countries in most regions of the world</td>
<td>64</td>
<td>95% (CI 71%, 99%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderna, NIH (US)</td>
<td>Dec '20</td>
<td>Countries in NAMR, Europe</td>
<td>35</td>
<td>94% (CI 89%, 97%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxford Uni., AstraZeneca (UK)</td>
<td>Dec '20</td>
<td>Countries in most regions of the world</td>
<td>46</td>
<td>70-76% (CI 68%, 82%) [8]</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bharat Biotech (India)</td>
<td>Jan '21</td>
<td>India, Iran</td>
<td>6</td>
<td>80.6% [8]</td>
<td>-</td>
<td></td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CoviVac (Russia)</td>
<td>Feb '21</td>
<td>Russia</td>
<td>1</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janssen (J&amp;J) (US)</td>
<td>Feb '21</td>
<td>US, Bahrain, Canada, EU</td>
<td>39</td>
<td>66% (CI 60%, 72%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anhui Zhifei Longcom (China)</td>
<td>Mar '21</td>
<td>China, Uzbekistan</td>
<td>2</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>Apr '21</td>
<td>Kazakhstan</td>
<td>1</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novavax (US)</td>
<td>May '21</td>
<td>Anticipated; Rolling review in EMA [5]</td>
<td>0</td>
<td>49-89% (CI 75%, 95%) [12]</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curevac (Germany)</td>
<td>May '21</td>
<td>Anticipated; Rolling review in EMA [5]</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Wuhan Institute of Biological Products 2. Beijing Institute of Biological Products 3. Emergency/limited use and licensure 4. Only includes vaccines manufactured by AstraZeneca 5. European Medicine Agency 6. Reported efficacy numbers are difficult to compare due to differences in clinical trial protocol since symptoms defined as mild, moderate, and severe may vary by clinical trial protocol 7. Range reflects differences based on geography 8. Not yet peer reviewed 9. As reported Nov '20 and US Phase III trial 10. 66% efficacy for moderate cases and 85% efficacy for severe cases globally 11. Based on Phase 3 trials in Brazil with resulting over-all efficacy of 50% 12. Based on Phase 3 trial results with over-all efficacy of 89% 13. Based on Phase 3 trial results with over-all efficacy of 89%

Roll out leaders provide real-world examples of how vaccines can work against the pandemic

Daily new cases/million against people vaccinated per hundred

- Real-world data confirms that vaccines work
- Reduction in transmission seen after significant vaccination coverage

Source: Our World in Data, Press search
Vaccine production forecasts in 2021 show the world will have a supply excess \(^1\) (B doses)

- **Non-replicating viral vector**: 5.8
- **RNA**: 3.4
- **Inactivated**: 2.6
- **Protein subunit**: 0.4
- Under regulatory review: 8.1
- Candidates pre-regulatory review: 8.1
- Total 2021 Doses: 22.5

Will be enough supply in 2021 to cover world population with **two doses** \(^2\) and vast majority with another **one-dose booster**

However, ~4 doses per citizen locked in by high-income countries vs low-income countries at 0.9 doses per citizen showing highly inequitable distribution

In **EAP** \(^3\), **1.1 B doses** locked in by countries which is only equivalent to **1.4 doses per citizen** (1.8 doses per citizen if including China)

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1. Based on manufacturer capacity. 2. Assuming all vaccine candidates require 2-doses. 3. EAP excluding China
Based on current plans, it will take until 2024 to emerge from the pandemic, as many lower-income countries are severely behind in vaccination.

1. Based on country reported plans, where vaccination completion threshold can vary from ~60-80% vaccination of either the adult or full population. Earlier timelines likely do not include children. 2. Low- and middle-income countries, defined as countries with a GNI per capita of <$12,536 per year (World Bank). 3. Includes support from COVAX.

Source: COVAX, World Bank 2021 population, press search, BCG
~350M doses have been administered to date across EAP

738K doses administered daily across EAP\(^1\); current throughput will have EAP reaching 70% coverage in 3.7 years

Doses administered per 100 people across EAP countries

<table>
<thead>
<tr>
<th>Country</th>
<th>No. of doses administered (K)(^2)</th>
<th>As % of population(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>317,586</td>
<td>22.06</td>
</tr>
<tr>
<td>Indonesia</td>
<td>21,667</td>
<td>7.92</td>
</tr>
<tr>
<td>Singapore</td>
<td>2,214</td>
<td>37.84</td>
</tr>
<tr>
<td>South Korea</td>
<td>4,176</td>
<td>8.15</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1,734</td>
<td>5.36</td>
</tr>
<tr>
<td>Philippines</td>
<td>2,395</td>
<td>2.19</td>
</tr>
<tr>
<td>Cambodia</td>
<td>2,827</td>
<td>16.91</td>
</tr>
<tr>
<td>Mongolia</td>
<td>2,155</td>
<td>65.72</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1,040</td>
<td>1.91</td>
</tr>
<tr>
<td>Thailand</td>
<td>1,744</td>
<td>2.50</td>
</tr>
<tr>
<td>Laos</td>
<td>184</td>
<td>2.53</td>
</tr>
<tr>
<td>Vietnam</td>
<td>510</td>
<td>0.52</td>
</tr>
<tr>
<td>Timor</td>
<td>3</td>
<td>0.20</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>3</td>
<td>0.03</td>
</tr>
<tr>
<td>Pacific Islands</td>
<td>77</td>
<td>0.49</td>
</tr>
</tbody>
</table>

Note: 70% population coverage is used as a point of reference; different countries have different population coverage targets
1. EAP not including China
2. Does not differentiate between 1\(^{st}\) & 2\(^{nd}\) doses; as a result, population coverage should not be understood to mean population fully vaccinated

Source: Our World in Data; Press research
New variants threaten to undermine progress to date and remind us that no one is safe until everyone is safe

Variants have emerged around the world with varying impacts on transmission and vaccine effectiveness

Illustration of immunity levels as time progresses after current COVID-19 vaccine

Uncontrolled transmission in countries around the world threatens to undermine vaccination progress

Global map of daily new cases per million

1. Trials of Novavax, Janssen, and AstraZeneca in South Africa suggest the B.1.351 variant can escape some immunity and may not stop infections but should still offer protection against severe and life-threatening COVID-19 illness. In April 2021, Pfizer reported 91% efficacy against B.1.351 variant versus 95% in its original trial. Source: CDC, BBC, CNBC, The Wire, Reuters; Our World in Data
Challenges lie ahead for rollout leaders and laggards

US first doses down 50% from peak as demand becomes key bottleneck and J&J pause fuels safety concerns

US 7-day rolling average new daily doses (2021)

India a cautionary tale of need to sustain public health measures, accelerate Vx rollout

Source: Our World in Data, Press search
What governments can do: Three key imperatives to end the global pandemic

**Strengthen surveillance and sustain mitigation**
- Testing at scale
- Genomic surveillance of variants
- Sustained public health measures

**Aggressively vaccinate now**
- Supply redistribution and throughput expansion
- Demand generation
- Adverse event monitoring

**Adapt to vaccine innovation**
- Booster doses
- Pediatric vaccination
- Mix and match vaccines
Scaling testing a key pillar of ongoing containment

Why scale: Testing leaders continue to show how robust testing enables sustained containment

As of May 16, 2021

<table>
<thead>
<tr>
<th>Country</th>
<th>Tests per case</th>
<th>New cases/million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>6,835</td>
<td>0.3</td>
</tr>
<tr>
<td>Singapore</td>
<td>3,741</td>
<td>5.5</td>
</tr>
<tr>
<td>New Zealand</td>
<td>3,672</td>
<td>0.2</td>
</tr>
</tbody>
</table>

How to scale: Potential to leverage accelerated innovation of more accessible antigen RDT (~US$2.50 now vs.~US$8 for PCR)

Ag RDTs also available as WHO released interim guidance in September 2020
- SD Biosensor Standard Q & Abbott Panbio receive WHO EUL in September and October, respectively
- Package to launch & scale 120 million of these two EUL’d Ag RDTs for LMICs announced by ACT-A Dx partners

Looking ahead: Ag RDTs to unlock access to lower middle-income countries
- Higher value provided to LMICs based on faster turn-around time, lower cost, and higher degree of usability (no additional infrastructure or in-depth training)
- To increase uptake, 3 priority activities are needed: unlock funding for procurement, increase evidence generation studies, build technical assistance and training support networks in countries

What can governments do now?

- Maximize utilization of current testing infrastructure where possible
- Sustain investments in testing capacity—build as a no-regret move
- Explore roll-out of more scalable testing solutions such as WHO EUL-receiving antigen RDTs

Source: WHO, Our World in Data, Press search
Genomic surveillance capacity must rapidly expand to identify and track variants – multiple potential levers to explore

**Potential levers for capacity-build**

- Leverage new high-throughput machinery in national reference labs as a feeder for samples
- Engage universities/private labs with sequencing capabilities and integrate into national data network (as in US CDC variant surveillance strategy)
- Explore use of nascent low-cost point-of-care sequencing platforms (e.g., Oxford Nanopore)
- Support novel partnerships with global institutes for sequencing (e.g., Sentinel system developed by ACEGID, Broad Institute, etc.)

**Sequencing gap in EAP: % of COVID-19 case sequences shared via GISAID**

<table>
<thead>
<tr>
<th>Country</th>
<th>Sequencing gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>59.1%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>46.5%</td>
</tr>
<tr>
<td>Japan</td>
<td>5.4%</td>
</tr>
<tr>
<td>South Korea</td>
<td>4.1%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>3.0%</td>
</tr>
<tr>
<td>China</td>
<td>2.7%</td>
</tr>
<tr>
<td>Thailand</td>
<td>1.0%</td>
</tr>
<tr>
<td>Cambodia</td>
<td>1.0%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.1%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

*As of May 16, 2021*

What can governments do now?

- Assess feasibility of potential expansion options
- Fast-track capacity-building to accommodate best practice sequencing of 5% of active cases

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1. Minimum coverage set by US CDC on genome sequencing for variant surveillance
Source: Nature, CDC, Illumina websites, GISAID
Public health measures must be sustained in parallel with vaccine rollout

Governments w/ advanced Vx programs are keeping PHMs in place until significant coverage is reached

**UK**
- Alert level maintained at 4 (strict social distancing) from February in spite of accelerated Vx roll-out
- Level 3, meaning gradual easing of restrictions, targeted by mid-May due to sustained low new cases
- Maintains global lead as >50% people vaccinated reached

**Illinois**
- **70% of residents over 65 vaccinated** - Mass events will be opened to 60% capacity; Wearing a mask in public and social distancing still required
- **Once 50% of residents over 16 vaccinated** - No capacity limits

**Israel**
- Mask mandate continues even as Vx coverage close to 60%
- Re-opening continues as vaccinated people are issued "green passes" to be presented for entry in public places

What can governments do now?

- Plan to sustain public health measures and containment strategies until transmissions are meaningfully contained and significant Vx coverage reached
- Engage public now regarding country strategy of phased lifting of restrictions as well as the health and vaccination metrics that will be used as key indicators
Supply: redistribution strongest lever in near term to get more doses to supply-starved countries

Excess doses in YE'20-21 given formalized PPAs and populations for countries with 50 M+ in excess doses available – using publicly available data²

<table>
<thead>
<tr>
<th>Country</th>
<th>Population x 2 doses¹</th>
<th>Booster shots¹</th>
<th>Excess doses</th>
<th>Secured doses</th>
<th>Optioned doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>0.5</td>
<td>0.2</td>
<td>2.1</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>0.7</td>
<td>0.3</td>
<td>2.2</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>0.1</td>
<td>0.4</td>
<td>0.4</td>
<td>0.0</td>
<td>0.1</td>
</tr>
<tr>
<td>CA</td>
<td>0.1</td>
<td>0.3</td>
<td>0.3</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>AU</td>
<td>0.0</td>
<td>-0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>JP</td>
<td>0.2</td>
<td>0.3</td>
<td>0.5</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>1.5</td>
<td>4.1</td>
<td>5.1</td>
<td>3.6</td>
<td></td>
</tr>
</tbody>
</table>

As of 9 Apr

Excess supply assumptions:
- Excess is supply above 2 doses + booster shots for 80% of the population >12¹

1. Including 10% wastage
2. Excluding supply from Curevac and Sanofi/GSK

What can governments do now?

- Advocate for re-distribution from high-income countries (for countries facing supply constraints)
- Consider policies to stretch limited supplies (e.g. greater interval between first and second dose, limited inventory, single / fractional dosing)
- Prepare delivery infrastructure for higher throughput
- Ensure success of current manufacturing networks and consider expanding local production for medium to long-term supply

Source: UNICEF COVID-19 Vaccine Market Dashboard (data extracted April 2021), World Bank, press search, BCG analysis
Demand: primary constraint will shift from supply to demand over time

What can governments do now?

- Identify population segments exhibiting higher hesitancy and execute targeted communication strategies
- Ensure barriers to access are reduced (e.g. vaccination leaves, off-hour inoculations, mobile vaccination sites)
- Incentivize vaccination through cash, other perks; consider mandates (e.g. for schools, workplace, travel)
- Prepare delivery infrastructure for multi-phase evolution (high throughput, demand generation, booster campaigns, routine immunization)
**Booster shots** will be a policy response to uncertainty regarding Vx durability and impact of variants

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>What we know now</th>
<th>What's in the works?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pfizer</td>
<td>• Based on 6-month data through March 13, shows 91.3% vaccine efficacy at 6 months</td>
<td>• Started evaluation of a third booster to prolong immunity against current and emerging variants</td>
</tr>
<tr>
<td>moderna</td>
<td>• Study data published April 6, 2021 shows high antibody persistence 6 months after second dose</td>
<td>• Initiated three phase 1 studies focused on boosters, including one specific against B.1.351 and another half-dose booster of the original vaccine</td>
</tr>
<tr>
<td>Bharat Biotech</td>
<td>• N/A</td>
<td>• Set to conduct trial of third dose of Covaxin administered as booster 6 months after 2nd dose</td>
</tr>
</tbody>
</table>

**What can governments do now?**

- Identify potential scenarios and weigh costs and benefits for booster strategy (including target population, channels, timing)
- Secure additional supply to meet potential booster requirements
- Identify and engage target populations that will benefit most from booster shots

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1. May be either vaccine developed by Sinopharm with the Beijing Institute of Biological Products or the Wuhan Institute of Biological Products

Source: Manufacturer press releases, press search, New England Journal of Medicine
Pediatric vaccination a key response to reduce transmission amid high Vx hesitancy and/or young median populations

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>What’s approved now?</th>
<th>What’s in the works?</th>
<th>Estimated timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pfizer</td>
<td>16+</td>
<td>• Ages 12-15 submitted to FDA 4/9</td>
<td>• EUA for 12+ granted May 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Now enrolling 6 months to 11 years for clinical trial</td>
<td>• Announced filing for ages 2+ in Sept</td>
</tr>
<tr>
<td>Biontech</td>
<td></td>
<td>• TeenCove: ages 12-17 trial underway</td>
<td>• Trial results expected soon</td>
</tr>
<tr>
<td>Moderna</td>
<td>18+</td>
<td>• KidCove: Now enrolling 6 months to 11 years for clinical trial</td>
<td>• EUA for 12+ anticipated later in summer</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>18+</td>
<td>• Ongoing Phase 2a study involving ages 12-17</td>
<td>• Anticipated to follow Pfizer &amp; Moderna approvals given previous timeline</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Planning children, infant, and maternal studies</td>
<td></td>
</tr>
</tbody>
</table>

What can governments do now?

- Engage schools now to get ahead of parents' vaccine hesitancy
- Activate provider network within children-relevant channels
- Explore potential of mandates (e.g. some US universities mandating Vx before return to school)

Source: Manufacturer press releases, press search
Mixing and matching vaccines a key response to supply uncertainty and vaccine hesitancy; both trials and real-world implementation under way

**Key developments across countries:**

<table>
<thead>
<tr>
<th>Country</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM-COV trial led by the Oxford Vaccine Group</td>
<td>COM-COV trial led by the Oxford Vaccine Group underway for 800 volunteers aged 50+ for 4 different combinations of prime and booster shots; initial findings show increased frequency of mild-moderate reactions after 2nd dose but no other safety concerns.</td>
</tr>
<tr>
<td>France</td>
<td>France recommended use of mRNA-based COVID-19 vaccines as the 2nd dose for citizens aged 55 below inoculated with the AstraZeneca for the 1st dose.</td>
</tr>
<tr>
<td>Canada</td>
<td>Canada considering providing citizens choices for their 2nd dose, pending further trial data.</td>
</tr>
</tbody>
</table>

**What can governments do now?**

- Assess fit to country's vaccination context, considering supply & delivery situation, throughput and uptake.
- Re-align communication strategy to ensure that benefits and risks are understood by the public.
- If data positive, use to support a "the best vaccine is the one you can get first" message.
A global pandemic requires a world effort to end it – none of us will be safe until everyone is safe

Dr. Tedros Adhanom Ghebreyesus
Director-General, WHO
How governments can effectively communicate the risks and benefits of COVID-19 vaccines

David Spiegelhalter

Chair of the Winton Centre for Risk & Evidence Communication, Centre for Mathematical Sciences, University of Cambridge

Non-Executive Director, UK Statistics Authority
President, Royal Statistical Society 2017-2018
@d_spiegel

World Bank Workshop 2021
• UK has had a very successful vaccine rollout

• Vaccine hesitancy in some ethnic groups

https://www.opensafely.org/research/2021/covid-vaccine-coverage/#weekly-report
Where is the Indian variant in the UK?
Share of Indian variant of concern (B.1.617.2) in fortnightly sequencing data (%), by local authority

SOURCE: WELLCOM SANGER INSTITUTE/PHE
Virus spreading fastest in areas with lower vaccination uptake

Cases vs vaccinations in wards of Blackburn and Bolton

*Less than 3 cases over period so data is not released for privacy reasons*
Some concerns expressed in UK

• Safety, particularly due to its rapid development:
  • “I feel like it’s too early. I don’t feel enough time or research has passed. I don’t know what the effects from the vaccine will be after five, 10 or 15 years from now.”

• Fear of effects on fertility

• Young people feel they don’t need it anyway

• Suspicion of its being derived from chimpanzee virus or cells from a human foetus

• General distrust governments and pharmaceutical industry

• Misinformation
  • “In real life I've heard it's working and it's fine. On the internet I've heard loads of people have died from the vaccine, so there's real life and online”.

• Survey by Office for National Statistics
Baroness Onora-O’Neill....

• Organisations should not be aiming to ‘increase trust’

• Rather, aim to demonstrate trustworthiness
Five rules for evidence communication

Avoid unwarranted certainty, neat narratives and partisan presentation; strive to inform, not persuade.

1. Inform, not persuade
2. Balance, but not false balance
3. Disclose uncertainties
4. State evidence quality
5. Pre-bunk misinformation
Communicating the potential benefits and harms of the Astra-Zeneca COVID-19 vaccine

Jonathan Van-Tam, Deputy Chief Medical Officer, at briefing on 7th April announcing that Oxford/AstraZeneca vaccine was not recommended for under 30s
Weighing up the potential benefits and harms of the Astra-Zeneca COVID-19 vaccine

For 100,000 people with low exposure risk*

ICU admissions due to COVID-19 prevented every 16 weeks:

Age group

| Age Group | ICU Admissions
|-----------|----------------|
| 20-29yr   | 0.8
| 30-39yr   | 2.7
| 40-49yr   | 5.7
| 50-59yr   | 10.5
| 60-69yr   | 14.1

Serious harms due to the vaccine:

| Age Group | Serious Harms
|-----------|----------------|
| 20-29yr   | 1.1
| 30-39yr   | 0.8
| 40-49yr   | 0.5
| 50-59yr   | 0.4
| 60-69yr   | 0.2

* Based on coronavirus incidence of 2 per 10,000: roughly UK in March
# Low infection rate*

<table>
<thead>
<tr>
<th>Age</th>
<th>Cases of COVID-19 hospitalisations prevented</th>
<th>Cases of blood clots with low platelets</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29</td>
<td>🟣🟦🟦🟦 4</td>
<td>🟠 1.9</td>
</tr>
<tr>
<td>30-39</td>
<td>🟣🟦🟦 5</td>
<td>🟠 1.8</td>
</tr>
<tr>
<td>40-49</td>
<td>🟣🟦🟦🟦 6</td>
<td>🟠 2.1</td>
</tr>
<tr>
<td>50-59</td>
<td>🟣🟦🟦🟦🟦 10</td>
<td>🟠 1.1</td>
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<tr>
<td>60-69</td>
<td>🟣🟦🟦🟦🟦🟦 19</td>
<td>🟠 1</td>
</tr>
<tr>
<td>70-79</td>
<td>🟣🟦🟦🟦🟦🟦🟦 45</td>
<td>🟠 0.5</td>
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<tr>
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<td>🟣🟦🟦🟦🟦🟦🟦🟦🟦 151</td>
<td>🟠 0.4</td>
</tr>
</tbody>
</table>

*“Low” exposure: using virus circulation for September 2020 (incidence: 55/100,000 population)
This project tracks behavioural science evidence and advice about COVID-19 vaccine uptake.

The COVID-19 Vaccine Communication Handbook

Translations:

French | German | Italian | Japanese | Serbian | Spanish | Swedish

Other languages coming soon!

Summary for policy-makers:

English | French | German | Greek | Italian | Japanese | Serbian | Spanish | Swedish
What facilitates vaccine uptake?

Although most people and their children get vaccinated against common diseases, there is variability between countries, cultures, demographic, and ethnic groups.

People are more likely to vaccinate when:  

- It is convenient, free, and easy.
- They have confidence in the safety of the vaccine and trust the system that delivers it.
- Their healthcare professionals recommend it.

- Role models, friends and family, or others “like them” have already been vaccinated.
- People are reminded that their actions can foster community immunity and help others.
- People recognize the risk from the disease, and understand vaccination is an effective solution to that risk.
Conclusions

• Demonstrate trustworthiness in advance
• Stratify/segment audiences
• Engage with community and listen to concerns
• Make it easier to get vaccine
• Pre-empt misunderstandings with trusted local people
• Emphasise vaccination is not just for individual - also to help their community (some claim it is a moral obligation)
• Incentives?
• Test messages
Thank you