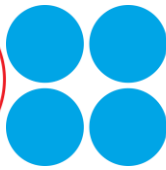


INCREASING COVID-19 VACCINATION AVAILABILITY AND REDUCING HEALTH INEQUALITIES IN VACCINE UPTAKE

(Project Grant ID: 870896740)



BRITISH COUNCIL



Brunel University London

Problem Description:

- ✓ Understanding the current vaccination strategies through interviews.
- ✓ Identifying the most relevant indicators for assessing the efficiency of vaccination facilities and logistics flow
- ✓ Designing a mobile vaccination program to increase vaccination access, especially for vulnerable people

Vaccination around the world: There are only a few countries manufacturing vaccines. Health officials stress that it should be over everywhere for the pandemic to be over anywhere. Therefore, manufactured vaccines are distributed to other countries.

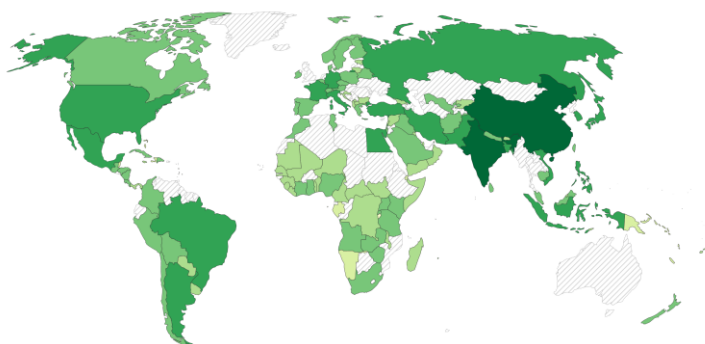
COVID -19 VACCINES IN COMPARISON

Company	UK Approved	US Approved	Type	Doses	Storage	Additional Information
Oxford Uni- AstraZeneca	✓	Pending	Viral vector (genetically modified virus)	X2	Regular fridge temperature 2 to 8°C (6 months)	Source: Respective Companies, WHO.
Pfizer- BioNTech	✓	✓	RNA (part of virus genetic code)	X2	-70°C (7 months) Can be stored at -25C to +10C for up to 2 weeks (unpunctured vials) OR 1 month at +2C to +8C for 100 hours (US FDA - 1 month unpunctured / unpunctured OR Room temperature (max +25C) for 2 hours)	Source: Ministry of Health - Ontario, Canada (published 20th May 2020) US FDA (FDA report published 19th May 2020)
Moderna	✓	✓	RNA	X2	-20°C (6 months) Unpunctured vials can be stored in a refrigerator at +2C to +8C for up to 30 days. Punctured vials can be stored at +8C to +25C for up to 24 hours	Source: US FDA report (revised 2nd March 2020)
Novavax	Pending	Pending	Protein-based	X2	Regular fridge temperature 2 to 8°C (6 months)	Source: Respective Companies, WHO.
Janssen	✓	✓	Viral vector	X1	Regular fridge temperature 2 to 8°C (3 months)	Source: Respective Companies, WHO.
Gamaleya (Sputnik V)	Pending	Pending	Viral vector	X2	-18.5°C (liquid form) Regular fridge temperature Storage in a refrigerator at +2°C to +8°C for up to 2 months. Future developments to extend storage to 6 months.	Source: TASS (Russian news agency)
Sinovac (CoronaVac)	Pending	Pending	Inactivated virus (weakened virus)	X2	Regular fridge temperature 2 to 8°C (12 months) Room temperature not to exceed +25C	Source: Government of Pakistan (published 22nd April 2020)

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COVID-19 vaccine doses administered, Nov 5, 2022

All doses, including boosters, are counted individually.



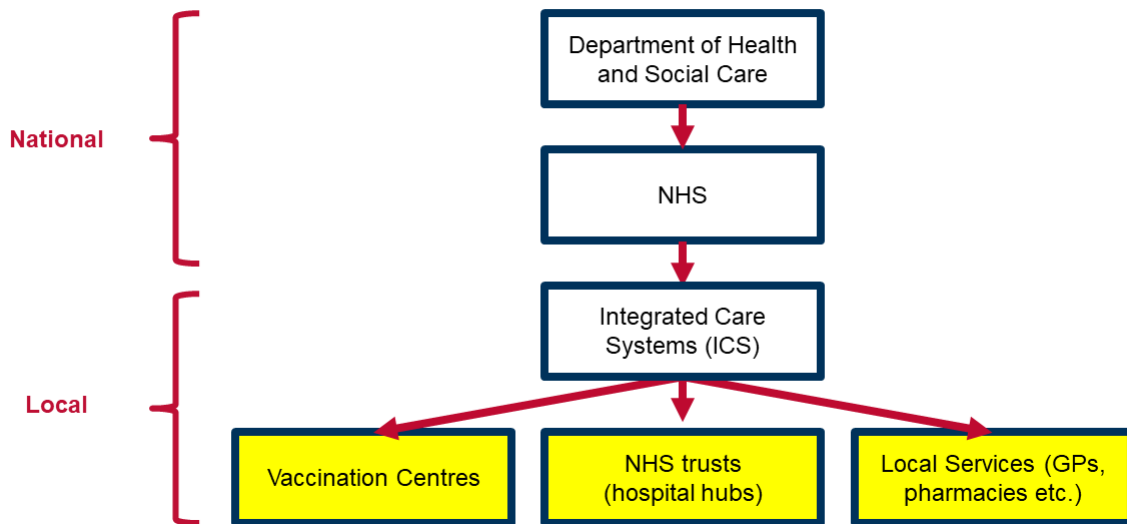
Source: Official data collated by Our World in Data

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Even though vaccines were practical cures, there was highly unfair vaccine distribution across countries.

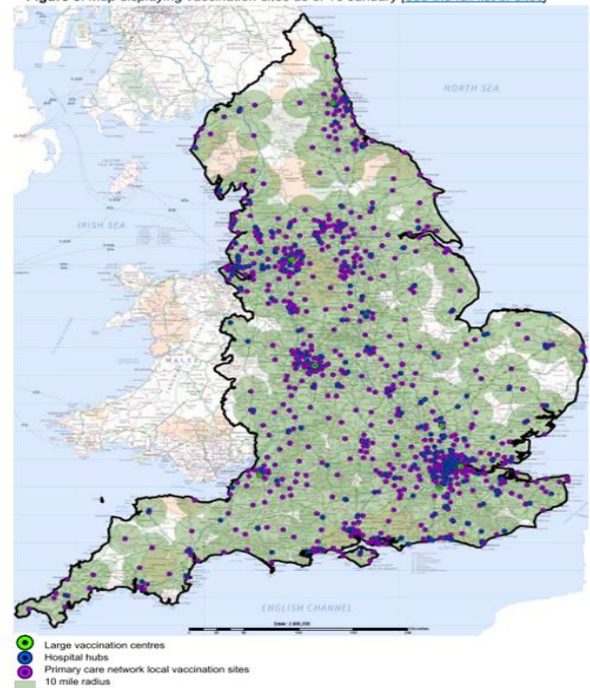
UK vaccination strategies:

IN THE UK, NATIONAL AND LOCAL LEVEL SERVICES ARE INTEGRATED INTO THE COVID-19 VACCINE PROGRAM



96% of the population in the UK is within 10 miles of a vaccine service. In order to increase vaccination levels even more, the number of active hospital hubs, local vaccination service sites and large vaccination sites are increased while providing mobile vaccination units for highly rural areas.

Figure 5. Map displaying vaccination sites as of 10 January [\[see the full list of sites\]](#)



Turkey Vaccination Strategies

According to the information received from the Turkish Ministry of Health, vaccination is implemented:

- ✓ In Hospitals/health institutions
- ✓ In Family health centres
- ✓ For specific groups:
 - In Nursing homes
 - In Rehabilitation centres
 - In Protection houses
 - In the Home Health Services system

Success Stories:

- Istanbul (Bahçelievler) Case
- Bursa Case



According to the news, with the implementation of half-mobile vaccination points, 2500 citizens received their first dose of vaccines in those mobile units in one week.
(resimler: ShoppingMallVac.jpg, TCCDVac1.jpg, Esenboga_vac.jpg)



Figure 1: Vaccination Site in Shopping Mall



Figure 2: TCDD Vaccination Site



Figure 3: Esenboğa Vaccination Site

Interview with Policy Makers and Health Workers:

- The health worker talked about more operational processes
- The press consultant discussed more administrative procedures and details

Questions:

1. How long do these teams usually stay in the same area and where?

2. Is a certain age group targeted?,
3. Do the teams apply any dose?
4. Who should be on these healthcare teams?
5. What precautions are taken for post-vaccination?
6. What are the operational criteria?
7. How are the regions and teams where the vaccine will be administered? Is it targeted to places where the vaccine is under-applied or difficult to access?

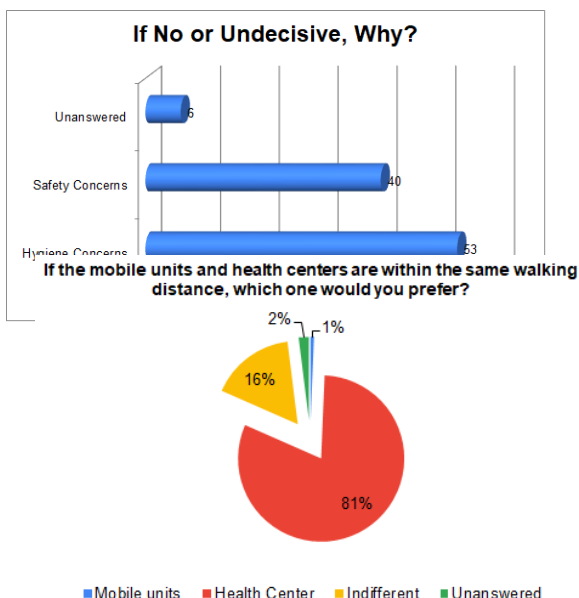
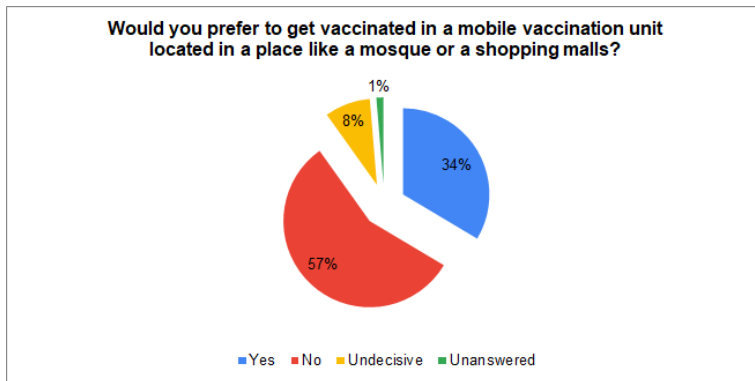
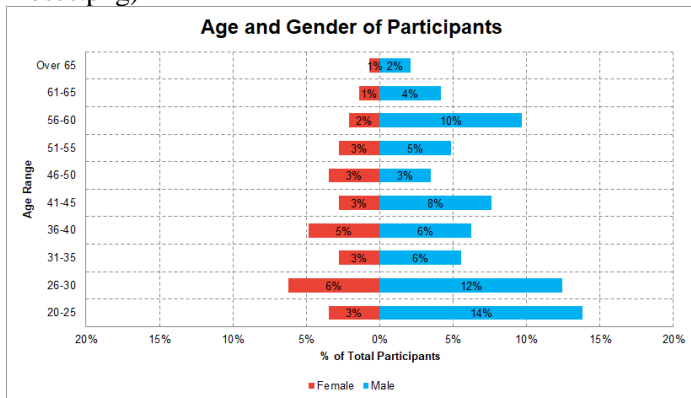
Survey:

The extensive scale survey is used to get a more comprehensive range of people’s perspectives on mobile vaccination. (152 participants)

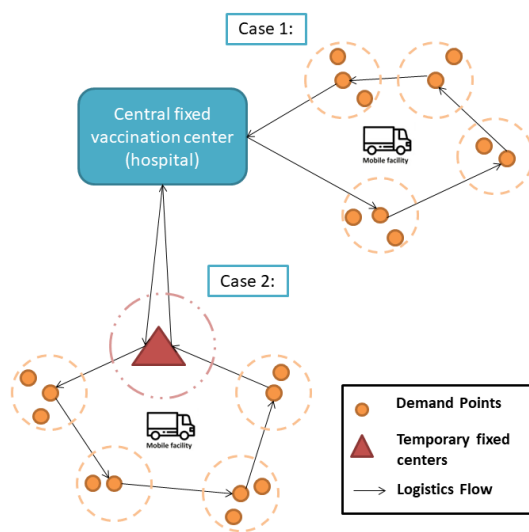
Survey Link:<https://docs.google.com/forms/d/1ignaZs-npLe1yL2bG2GbXnxPYz97bw9wRlXhO1rPc8/edit>

Survey Results:

(buraya resimler: ageandgenderofpart.png, preferenceofpart.png, reasons.png, sameWalk_pref.png, Doses.png)



A Scientific Approach:



There are 2 cases:

- half-mobile services (Case 1)
- and
- temporarily fixed centres with half-mobile services (Case 2).

Aims:

- ✓ improve social welfare and prevent the spread of COVID-19 through effective vaccination
- ✓ improve the cost-effectiveness of deploying limited vaccines to the vast public
- ✓ promote health equity by increasing the accessibility to vaccines from disadvantaged social groups

A General Guideline for Vaccination Implementation:

We interviewed individuals from Turkey and the UK to understand the current vaccination system dynamics. As a result, mobile vaccination centres appear to be a successful means of increasing the availability and accessibility of vaccines. We proposed a mobile vaccination system based on the best practices in the UK and Turkey. Then, we used the mathematical models to implement mobile vaccination strategies through a case study.

We constructed a general guideline for implementing vaccines to reduce health inequality by combining the model results and interviews.

- Step 1: Implementation of vaccines to fixed centers
- Step 2: Implementation of vaccines to fixed centers
- Step 3: Implementation of vaccines to mobile centres

Please check the leaflet for more details.