FORWARD THINKING

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SOVEREIGN ORDER OF MALTA

MARCH 2021

A European Gulf-MENA Doctor-2-Doctor Covid-19 Initiative

How doctors and health professionals from across Europe and the Gulf-MENA supported one another during the pandemic

CONTENTS

PREFACE

The Doctor to Doctor project: bringing together expertise on a virtual platform to promote a better understanding of the Covid-19 pandemic

The first Doctor to Doctor meeting was convened by the Order of Malta with Forward-Thinking last April, shortly after the outbreak of Covid 19 in many European countries. With its deeply rooted mission of care and medical assistance, the Order of Malta took immediate action to bring relief to the people affected by the pandemic. Covid hospitals and wards were set up, and new programmes to support the national health system were launched.

In no time the Order of Malta's organizations in Italy, Germany, France and many other European countries were in the forefront in fighting the pandemic, which was by then rapidly spreading across Europe. Given its strong presence in the Middle East, the Order of Malta focused its attention also on the escalation of the virus in the region, already severely affected by chronic political and economic crises.

The Doctor to Doctor initiative was developed precisely to allow medical personnel, scientists and health authorities of different countries, confronting the same unprecedented grave health hazard - with its far reaching social implications -, to learn one from another, sharing knowledge on the latest medical advancements, and promoting a better understating of protocols in the treatment of Covid 19 patients, and on containment strategies.

Right from the beginning of this ambitious endeavour, it was clear that the Covid 19 pandemic represented a common threat, and that any proposal addressing the challenges it posed was doomed to fail without a global and transnational approach.

Through its wide diplomatic network, the Foreign Department of the Order of Malta's government, in partnership with Forward Thinking, was able to engage high representatives of different national health authorities to join in productive and insightful online debates, where medical expert - such as immunologists, virologists, emergency doctors, and health policy makers- could share their experiences with the aim of advancing globally the understanding of Covid 19.

Over 6 months, Doctor to Doctor meetings were organized with health representatives from Italy, Germany, France, Ireland, Lebanon, Jordan, Palestine, Turkey, Yemen, and South Africa. Additional sessions were also held with Latin American countries, gravely affected by the pandemic.

The findings emerged from these ongoing meetings have been drawn up in this document, which is intended to serve as a guideline enclosing the main insights and key lessons learned so far in the fight against Covid 19.

While the scientific community is making incredible leaps in the research and development of multiple effective vaccines, it is clear that a full understanding of the virus and its effects is still far away. To this end, the mechanism of regular discussions between medical experts represents an essential tool for the promotion of effective responses. The Order of Malta wishes to express its gratitude to the over 130 doctors and scientists, who - by bringing new perspectives and selflessly dedicating time and energy - have enormously contributed to the success of these discussions.

H.E. Albrecht Freiherr von Boeselager

Grand Chancellor | Sovereign Order of Malta

KEY MESSAGES FROM THE REPORT

- **Prevention and containment measures** are effective at virus suppression but unsustainable economically for many countries. This can place greater strain on the public, as well as risk pose challenges to public confidence in government. For example, see the experiences of Jordan and Lebanon p.14-15

- **Medical exchange platforms** are valuable and when deployed early and sustained can have practical impact in contributing to the awareness of doctors and healthcare professionals in difficult contexts – whether in war zones or elsewhere – of current best practices in rapidly developing situations. For example, Yemen p.17

- **Conflict areas** – whether in Gaza, Syria or Yemen – where many of the world's most vulnerable communities live require increased international support that responds to the specific challenges posed in each area.

- **More research** is needed into community and local response mechanism across the world to share learning around the creative ways local communities responded. For example, in Lebanon and Gaza p.14

- **Unequal access to treatments** for Covid-19 forced less economically developed countries to adopt different treatments from their wealthier counterparts, with unknown consequences. Without strengthening international mechanisms, such as COVAX, to address unequal access to vaccines, there is a risk this mistake will be repeated, potentially prolong the pandemic. As of February 2021, 10 countries are responsible for 75% of global vaccinations, while 130 countries are yet to receive a single dose.

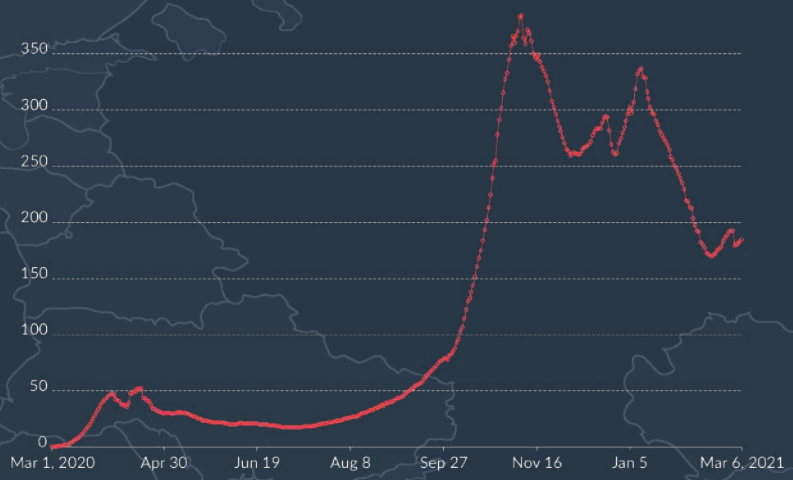
COVID-19 In numbers

Europe

38,721,820 cases

876,198 deaths

Europe daily new confirmed COVID-19 cases per million people (7-day rolling average.)

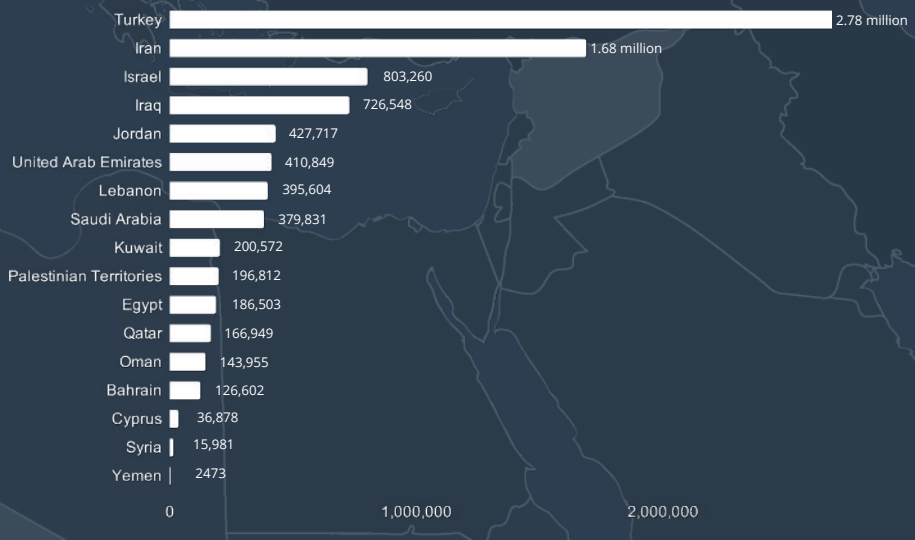


Middle East

5,873,348 cases

116,290 deaths

Middle East cumulative confirmed COVID-19 cases, March 07, 2021



Worldwide

Total deaths

2.59 million

Total confirmed cases

116.8 million

Source: Johns Hopkins University, national public health agencies

Figures accurate as of 08 March 2021

SECTION 1:

Background to the Doctor-2-Doctor initiative

Covid-19 is a transnational threat that no state can hope to defeat alone. The virus calls out for a multilateral approaches and, despite deep political tensions, policymakers in the Middle East have recognised that dialogue in the field of health would be beneficial to share vital experiences of containing and treating Covid-19.

Early in the pandemic, Forward Thinking were contacted by doctors working in the Palestinian Territories, who were concerned that the virus could overwhelm their already strained healthcare systems. In response and, in partnership with the Sovereign Order of Malta, we facilitated a series of online video-conference meetings that linked Palestinian doctors with European counterparts who were then at the epicentre of the crisis.

From these initial meetings it became apparent that this model of sharing insights and best practices between medical experts would benefit all states with fragile health systems. In response, we launched the Doctor-2-Doctor Initiative – a regular dialogue between Europe and the Gulf-MENA region focussed on strengthening the collective response to Covid-19. Over the course of 2020 it has become an example of a mechanism of cooperation on common challenges in the region.

This initiative has focused on issues relating to treatment; best practice for containing the virus; and the significance of personal protective equipment (PPE) for healthcare workers. By sharing best practice at this early stage, the hope is that national responses will be strengthened, saving lives. So far, slightly over 135 health experts from Australia, Democratic Republic of the Congo, Germany, Iran, Ireland, Italy, Jordan, Lebanon, Palestine, Saudi Arabia, South Africa, Sweden, Syria, Turkey, the United Kingdom and Yemen and the World Health Organisation have participated in the dialogue.

This report is divided into four sections. Section 1 gives the history of the initiative and how it developed. Section 2 outlines the key insights. Section 3 is divided thematically and provides an in-depth summary of different countries' experience of Covid-19. Finally, Section 4 provides a brief overview of outstanding questions and possible future areas of discussion.

Key stats

17

17 meetings - on Jordan, Lebanon, Palestine, South Africa, Syria and Yemen

135

135 Health Experts have shared advice and expertise, informing the use of drugs, quarantine procedures and use of PPE

15

Countries have participated - Australia, Germany, Iran, Ireland, Italy, Jordan, Lebanon, Palestine, Saudi Arabia, South Africa, Sweden, Syria, Turkey, the United Kingdom and Yemen

To date, 17 meetings have taken place:

Covid-19 and the West Bank, Assessing the needs – **26th March 2020**

Covid-19 and the Gaza Strip, Assessing the needs – **27th March 2020**

Covid-19 and the Gaza Strip – **11th April 2020**

Covid-19 and the West Bank – **15th April 2020**

Covid-19 and the Gaza Strip – **20th April 2020**

Covid-19 and the West Bank – **21st April 2020**

Covid-19 and Yemen – **7th May 2020**

Covid-19 and Yemen – **20th May 2020**

Covid-19 – comparing the experiences of the Palestinian Territories – **4th June 2020**

Covid-19 and Lebanon – **10th June 2020**

Covid-19 and South Africa – **18th June 2020**

Covid-19 and Yemen – **6th July 2020**

Covid-19 and Jordan – **16th July 2020**

Covid-19 and Syria – **24th August 2020**

Covid-19 in the Gaza Strip – responding to community transmission – **28th August 2020**

Understanding the second phase of Covid-19 in Europe and the Gulf-MENA region – **19th October 2020**

Covid-19 in Gaza – **25th November 2020**

SECTION 2:
About Covid-19

As of late January 2021 there have been over 100 million cases of Covid-19 worldwide[1]. The disease has impacted around 210 countries and territories. Over 2.1 million people have died. Covid-19 not only has sparked a health crisis, but it has also fuelled a global economic downturn and an array of complex social challenges. States across Europe and the MENA region, even those that appeared to have avoided the worst of the pandemic, have seen cases rise sharply in recent weeks. Indeed, record rises in new cases, are being recorded across Europe, with governments reluctantly returning to national lockdowns last seen a year ago.

Much is unknown about Covid-19 and best practices are continually being updated and refined. The information contained in this report therefore does not claim to be definitive. Rather it reflects the best understanding of the virus at this time among a group of doctors, health professionals and policymakers from across Europe and the Gulf-MENA who have been meeting regularly during the pandemic to exchange ideas and experiences.

The virus

- For most people, Covid-19 appears to be experienced as a mild illness. The current best estimates are that around half of those infected will not be aware of any symptoms. Others will experience a range of symptoms from a dry, painful cough, to headaches, fever, fatigue, muscle pains, nausea, or loss of smell and taste. Most people will recover by resting at home for around two-three weeks.

- However, the virus is far more serious for those who are elderly (65 plus), have underlying health conditions or comorbidities. These are the groups who must be shielded as a priority.

- Although there are rare exceptions, the virus appears to pose very little risk to the young (those under 35). The risk to children is believed to be especially small – current evidence is that they only make up 1-2% of Covid-19 cases. A recent study from the UK found amongst children who fell ill, only 1% died and all deaths were amongst those who had profound underlying health conditions. The main risk for young people is therefore not one of mortality but that they become vectors for the spread of the virus amongst the vulnerable segments of the population. One large study from India found that children played a significant role in spreading the virus, not only amongst other children but also adults.[2]

- The risk of catching the virus outside appears to be significantly less than catching it in enclosed spaces.

- The potential link between level of viral load and severity of illness needs to be explored further. However, it is possible that reducing the overall number of viral particles that people are exposed to, could lead to lower viral loads in patients and thus reduce the severity of symptoms and mortality. If this link is proved, it would be further evidence of the importance of ensuring social distancing and limiting human contact.

- The scientific community is still debating if the virus has begun to attenuate to humans. However, at this time, the dominant theory is that despite thousands of minor mutations, Covid-19 has not changed significantly over the course of the year.

Covid-19 and the Middle East

- The scientific community is divided on how well equipped the Middle East is to weather Covid-19. Strengths include:

  - An overwhelmingly young population (majority under 35)

  - A highly immunocompetent population

  - Far fewer old people concentrated in care homes, which have been the centres of infection and deaths in Europe.

  - A warmer climate which potentially may limit the ability of the virus to spread outside. However, the relationship between climate and the virus is highly disputed. The more significant aspect may be that warmer temperatures allow people to conduct more activities outside (where it is more difficult to catch the virus) for a greater part of the year, rather than heat impacting the virus itself.

1 https://www.bbc.co.uk/news/world-51235105

2 See https://science.sciencemag.org/content/early/2020/09/29/science.abd7672

Credit: Office of Mustapha Barghouti and the Palestinian Medical Relief Committees.

- Weaknesses include:

  - A high number of fragile states, whose healthcare systems are already strained.

  - A high rate of conflict which makes accurate data collection difficult and encourages the movement of people.

  - A high number of refugees and internally displaced people, living in temporary facilities

  - Overcrowded cities with extremely high population densities.

  - Fewer financial resources and weaker social nets which makes policies of lockdown more difficult to maintain and enforce.

Treatments

- There are no known treatments for Covid-19. Accordingly, the emphasis must be on prevention and some of the oldest tools available to the medical community – effective personal hygiene and isolating those suspected of being infected.

- For those with mild symptoms, paracetamol to manage discomfort should prove sufficient.

- Do not rush patients onto ventilators. Ventilators should be treated as a tool of last resort for the most serious cases.

- Supplying oxygen through less invasive means is more effective for moderate cases and has fewer potential complications.

- The use of prone positioning for awake patients appears to be a safe way to improve oxygenation (and thus potentially minimise risks of patients becoming seriously ill).

- For patients receiving ventilation, low doses of the steroid Dexamethasone can alleviate complications and reduce mortality rate by about one third. For patients who only require oxygen, the use of the drug can reduce mortality by approximately one fifth.

Masks, PPE and ventilation

- Ensuring adequate PPE for health workers is essential. Health workers must have confidence they are being protected, otherwise there is a risk (as occurred in parts of Yemen) that they will stop reporting for duty at hospitals. The death of health care workers is a particular tragedy in countries whose health infrastructure is already under severe strain.

- However, with strict adherence to guidelines, there is no reason why health workers should fall ill or die. Evidence from German hospitals indicated that only 3-4% of their staff ever caught the virus, including those working in Covid wards. As of September 2020 only one Lebanese health worker has died from Covid-19 and this is believed to be due to negligence. Of Saudi healthcare workers who have fallen ill, 80% are believed to have caught the virus in the community rather than in medical contexts.

- The wearing of surgical masks, gowns, and gloves, limiting contact time with suspected Covid-19 patients to under 15 minutes, maintaining social distancing, regular hand washing, and regular disinfection of surfaces should provide adequate protection for health workers.

Credit: Office of Mustapha Barghouti and the Palestinian Medical Relief Committees.

• As important as wearing sufficient PPE, is teaching staff how to remove it safely. There are numerous teaching resources that can be shared to spread awareness.

• Patients being treated for suspected Covid-19 should also wear surgical masks at all time.

• The wider public should also be encouraged to wear masks. However, these need not be surgical quality. Indeed, in contexts where resources are limited, it can be important to ask the public not to hoard commercial masks. Instead they can repurpose other textiles to serve their needs.

• Local industries can be repurposed to improve PPE stocks. In Ireland, universities repurposed their 3-D printers to create plexiglass visors for health workers. Similarly, Turkish businessmen were able to adapt existing textile factories to mass produce masks suitable for the public.

• Where indoor activities are essential (for example teaching young children), there is a growing body of evidence that indicates ensuring adequate ventilation is an important tool is preventing the spread of the virus. Air conditioning units that circulate air from different parts of a building appear to have the potential to spread the virus. It is recommended that fresh air ventilation be used wherever feasible.

Isolation protocols

• Where possible, keep those infected with the virus in isolation at home. Hospitals capacity must be kept for the sickest patients.

  o When at home, those infected with the virus must keep in isolation from family members. Provided isolation guidelines are followed strictly, other members of the family need not become sick. In Lebanon, the advice was given to designate a single family member to be the primary caregiver in the home, which was found to greatly reduce the risk of wider transmission.

  o Those infected at home must remain in communication with health authorities and be prepared to travel to hospital if their conditions deteriorate. Pulse oximeters can be effective early warning tools in these contexts by alerting if blood oxygen levels are declining.

• In hospitals, establishing screening centres so those reporting with suspected Covid-19 are separated from other patients. These can be simple structures outside of the hospital where patients are asked questions on their symptoms and are then directed accordingly.

  o However, there are risks that as the volume of suspected cases rise, large queues can form outside of health centres and can inadvertently become a mechanism for the spread of the virus. The rapid processing of patients at hospitals is therefore essential. Some hospitals in Germany are experimenting with using rapid antigen tests (whose results typically take 15 minutes) as a predictive tool for patients presenting with suspected Covid.

• Care homes for the elderly are particularly vulnerable to the virus and need the strictest possible safeguards to protect residents. In Europe, deaths in care homes have made up a significant proportion of the deaths amongst the elderly. In contrast, countries in the Middle East such as Lebanon which do not have a culture of care homes, have seen far fewer deaths amongst their older population.

  o Regular testing for staff and patients is essential. In Germany, the decision was taken to prevent all outside visitors to care homes when rates of community transmission were high. This proved effective in limiting rates of infection in care homes when compared to other countries in Europe who did not take similar measures.[3]

3 Residents in UK care homes are estimated to be 13 times more likely to die of Covid-19 than their German counterparts, in spite of Germany having an overall care population that is twice as large.

Public information and maintaining morale

• Public compliance with health guidelines is essential to control the spread of the virus. People need to understand what measures they need to take to slow its spread (wearing masks, trying to maintain social distancing) and what to do if they suspect they are unwell.

• People need to be aware of the real risks posed by Covid-19. However, it is important not to frighten the public, so they stop going to the doctors for other illness. This has been the experience in some European states and may have caused unnecessary deaths.

• The experience of Ebola in West and Central Africa highlights the importance of developing communication strategies in close consultation with communities to ensure messages resonate and are more likely to be followed.

• A combination of high-tech and low-tech techniques should be used to create mass awareness. Online campaigns and social media can be powerful tools for both good and ill – authorities need to be aware of the risks of misinformation and conspiracy theories which erode trust. Contract tracing apps have been deployed effectively in some countries such as Germany and Jordan.
However, evidence for their effectiveness elsewhere is mixed. Furthermore, these approaches are of limited utility in fragile contexts where internet access is sporadic and electricity blackouts common. Posters should not be neglected as a cheap means of spreading messages widely. Religious authorities can also be an effective means of disseminating key messages, for example through Friday prayers.

• Public morale is not infinite. The longer tight restrictions continue, the greater the risk that public compliance with the rules will begin to fall. Worryingly, there are already signs of "Covid fatigue" in some parts of Europe and the Gulf-MENA region. One approach to this problem –attempted in Sweden – is to maintain a looser set of restrictions, to try and preserve a level of sufficient normality that can retain public support in the long-term. Effective test and tracing regimes would appear to offer another solution - if outbreaks can be detected early enough, they can be contained through localised measures without lockdowns having to be imposed more widely. However, developing these systems has proved extremely challenging and they can become overwhelmed by a high volume of cases.

Doctores en la Red

Within the framework of "Doctors 2 Doctors", the Grand Magistry of the Order of Malta organised a segment, called "Doctores en la Red" (Doctors on the Web), specifically for Latin American countries. There were four webinars, three in Spanish and one in English, involving a total of 16 countries, 13 of which were Latin American: Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Peru, Puerto Rico, Dominican Republic, as well as Spain, the United States and Italy.

The seminars were attended by some 260 people, the vast majority of them doctors and nurses, all involved in the fight against Covid-19. The aim was to give the initiative an eminently medical-scientific focus, in which the exchange of experiences played an essential role. The topics covered included: prevention of Covid-19, diagnosis, transmission of the disease, spread and evolution of the virus by country and by age or risk group, medical and pharmacological treatment.

Eight of the Order's Associations were involved in organising the webinars, including Spain.

• It is a testament to the scientific community that effective vaccines have been found for Covid-19 in record time. 56 countries are currently rolling out national vaccine programmes worldwide. However, only one of these is considered to be a “low income country."

• Furthermore, it appears likely that any vaccine will not be available for widespread distribution until well into 2021, if not 2022. For example, Pfizer plans 1.5 billion doses of its vaccine to be produced in 2021, but given each patient requires two doses to be immunised, demand is likely to outstrip supply for the foreseeable future.

• Even when vaccines can be mass produced, the logistics involved in distributing it will be extremely challenging, especially if vaccines need to be kept at low temperatures.

• This means governments for the foreseeable future must rely on the proven tools of: mask wearing, washing hands, maintaining social distancing, ventilating essential indoor spaces, systems of track and trace to break the transmission of the virus, and effective quarantine for those who are infected.

· Policymakers must also be alert to the risks of misinformation around vaccines. Rumours and conspiracy theories about Covid-19 vaccines have become widespread (in what some have termed an ‘infodemic’) and threaten to reduce the take up of vaccines once they become available. A recent worldwide poll founds that almost one in four people would refuse a vaccine if they were offered one.[4] It is not enough to try and slow the spread of disinformation on social media, policymakers must also launch public information campaigns to explain in clear terms why vaccines are safe and why fears about their rapid development are misplaced.

4 See https://www.ipsos.com/en-us/news-polls/WEF-covid-vaccine-global

The effectiveness and sustainability of lockdowns

The arrival of a pandemic was predictable. The danger was well known and acknowledged. There had been numerous epidemics in recent decades, most notably SARS, that highlighted the potential risks. That so many countries were still so ill-prepared for the arrival of Covid-19 in spite of this, starkly exposes the need to bolster the global framework around public health. Far greater communication and coordination between states is needed in the field of health if future pandemics are not to wreak similar havoc. Health must be seen, not as a cost, but as an investment in the security and prosperity of a country.

Speed is at the heart of an effective response to a pandemic. In today’s globalised world, policymakers should act on the assumption that if a novel virus emerges it will likely reach their shores. The countries that weathered the initial phase of the virus best, are those who began planning as soon as the threat emerged. For example, Lebanon held its first crisis meeting on January 30th, just after the first case in the Middle East was announced in the UAE on the 29th of January and almost a month before the first case in Lebanon was detected. Lockdown procedures were implemented extremely quickly, and the country was able to identify its “patient zero” early on.[5]

However, early successes can breed over-confidence. Lebanon also exemplifies this experience. After its initial successes, in the summer the decision was made to reopen the airport to allow expatriates to return home but the authorities failed to ensure there would be adequate resources in place to manage the volume of people entering the country.

Consequently, the system to test new arrivals for the virus quickly became overwhelmed, leading to many infected people spreading the virus before they could be alerted that they should be isolating. By September, community transmission was widespread across Lebanon and the authorities had lost the ability to contain the virus. This experience exemplifies a key lesson of the second half of 2020 - no country can afford to be complacent. Lockdowns proved their ability to suppress the virus but if efforts are not sustained, Covid-19 will inevitably re-emerge and can rapidly grow.

5 Lebanese health experts acknowledge this was easier in their context, where there is a single international airport which could be monitored closely, than in larger countries.

SECTION 3:

How different countries experienced and responded to Covid-19

Prevention

At this time, good personal hygiene, social distancing, and frequent hand washing are the only effective measures that can mitigate the impact of Covid-19. The need for social distancing to remain at 1.5 metres or more has been a consistent point of consensus over the past year.

As there is no known drug that can prevent the spread of the virus, the medical community has relied on these proven tools and measures to fight the disease. To ensure that these measures are implemented in practice, effective public health campaigns must be launched. During our virtual meetings, medical professionals from Australia, Europe and the World Health Organisation have circulated examples of their public health responses. This proved incredibly potent for counterparts from countries such as Yemen where there has been a stigma towards being tested for Covid-19. The availability of public health information, whether through posters, leaflets or social media campaigns, can alleviate some of the stigma associated with Covid-19 testing.

Protective Personal Equipment (PPE) is central to preventing Covid-19. It is particularly important for healthcare workers who are at the frontline of dealing with the virus and is essential to maintain their morale. Doctors in Yemen revealed that the severity of Covid-19 was creating growing fear among their colleagues and leading some to avoid working in hospitals. Such fears are not unfounded – when PPE is in short supply, large numbers of health workers can fall sick. This has been the experience of Syria, where over 100 doctors have reportedly died from the virus. Similarly, in Ireland, where there were initially severe shortages of PPE, up to 30% of staff were falling ill in some institutions.

While PPE equipment does not offer total protection, in combination with appropriate hygiene measures it can significantly reduce the risk of contraction. Research conducted in Germany revealed that only 2% of their health workforce have been antibody positive. Ideally, FFP2 or N95 masks are the best tools for healthcare workers. Supplies of these masks are often limited and so should be reserved for those dealing with the virus. In countries suffering from conflict – such as Palestine, Syria and Yemen – such masks are often unavailable. In this case surgical masks should be used. If both staff and patients use these masks, they have been found to be highly effective in limiting its spread, as reflected in an antibody tests of healthcare workers in Europe.

Innovative solutions can also be found. In Ireland, 3D printers at universities were used to create visors and shields for doctors. Similarly, in Germany Plexiglass barriers to surround patients on ventilators helped to ensure that doctors did not have close contact with the infected patients.

Training medical staff, particularly the auxiliary teams is fundamental. Online courses (as have been established in Germany and Turkey) are particularly valuable as they allow social distancing to be maintained.

To slow the spread of the virus, hospitals and care homes should be effectively locked down when community transmission is widespread. In Germany, it became apparent that controlling the spread would have been impossible without prohibiting visitors to hospitals and care homes. Strict contact management protocols were implemented, limiting contact time of staff with even apparently healthy contacts, to 15 minutes or less of face-to-face contact. Staff were instructed to measure their temperatures twice a day, as well as keep a record of their symptoms, activities, and contacts. PPE equipment including masks, gowns, gloves, glasses, face shields etc. were deployed to protect from iatrogenic transport of the virus.

CBZ (corona treatment centres) for outpatient care were set up in several regions to relieve hospitals and private practices of the pressures of the pandemic. In Europe, these measures for the management of suspected Covid-19 patients proved effective in controlling the number of patients transmitted into hospitals.

The German experience also suggests that specialised hygiene concepts and contact tracing for swimming pools, gastronomy, schools and nurseries, hair salons and places of worship should be enacted. Registered (named) visitors are now allowed to enter care homes and hospitals provided they are screened for any symptoms (fever, cough, loss of smell or taste).

On June 16th, a Corona-Warning App was introduced in Germany on Android/iOS) with over 10 million downloads in two days. The hope was that this could help with track and trace new infections when lockdown measures are eased. Similar track and trace apps have been launched in Jordan and initially appeared effective in containing the spread of Covid-19.

In Jordan, through collaboration with the Ministry of Health, the engineering department within the Ministry developed digital mechanisms to help Jordan combat the spread of Covid-19. A Covid-19 website has been launched to disseminate information on the virus. Additionally, many phone applications have been created, such as a phone app called Sahtak (Your Health) which helps civilians know more about the virus, the cases, preventative measures as well as how to take care of themselves. Many other countries, such as Australia, also introduced Covid tracing apps, yet their usefulness has been questioned. Numerous technical problems have been identified and insufficient public adoption have limited their effectiveness.[6] Increasingly it appears that these "high-tech" approaches are best thought of as supplementary, rather than a replacement for, traditional track and trace strategies. Nevertheless, doctors remain interested in connecting with their counterparts in Europe and the Gulf-MENA to better understand their experiences surrounding the use of technical platforms to disseminate Covid-19 related information as well as track and trace patients. How to implement these technological approaches in countries such as Palestine or Yemen which suffers from poor Wi-Fi access remains a challenge.

6 See https://www.theguardian.com/world/2020/sep/23/glitches-dent-german-enthusiasm-for-covid-contact-tracing-app

Learning for future pandemics

Lebanon

Covid-19 has struck different countries with varying degrees of severity at different times. At the time of writing, many European countries do appear to be on the upwards trajectory of a "second peak". However, this is only true for 4 of the 22 countries of the Eastern Mediterranean (which includes the countries of the Middle East) according to WHO statistics. Many Eastern Mediterranean countries initially had very limited outbreaks of Covid-19 and have only recently seen an exponential growth in cases in what some term a delayed first wave.

Lebanon initially appeared to have contained the virus. By acting immediately, the Lebanese Red Cross played a pivotal role in confronting the emerging threat of Covid-19 across the country. They identified the need for response planning before the government following the first confirmed case of Covid-19 in the United Arab Emirates on 29 January 2020. Experiences from the Ebola outbreak enabled stronger institutional preparedness from the Red Cross, namely the review of contingency stock such as PPE a measure that was conducted 2 weeks before the worldwide PPE shortfall.

Retraining of staff was also carried out. By February 4th, the organisation identified the best strategies for pre-hospital care, the transporting of patients, as well as ensuring that the number of responders to reduce contact with suspected or confirmed cases.

As a leading Lebanese epidemiologist acknowledged, while effective planning and preparations were undoubtedly important factors in the country's early ability to control the virus, luck and environmental factors should not be discounted. Lebanon has an environment that is more septic than Europe, contributing to a high level of immunocompetence amongst the population. Lebanon's young population represents a further asset. Consequently, by June herd immunity was thought to be being reached in small clusters where cases have been confirmed.

While Lebanon has a relatively high population of elderly citizens for the Middle East, only 5% are in care homes due to cultural and sociological norms. Thus, because the elderly are less geographically concentrated in Lebanon, the virus has not been able to spread as easily amongst this vulnerable segment of the population which has likely contributed to the country's low death rate.

By June, Lebanon appeared to have contained the virus. This contributed to the fateful decision to reopen Beirut's international airport so that the country's large expatriate population could return home to visit extended families.

However, policymakers failed to simultaneously establish sufficiently robust mechanisms to control the flow of people entering the country. Everyone entering Lebanon was tested for the virus and were told that if they were not contacted within 48 hours, they should assume they had a negative result. Unfortunately, testing capacity could not keep pace with the volume of arrivals, leading to people who had the virus not being contacted for almost a week in many cases. Consequently, the virus began to spread rapidly and by September community transmission was widespread. Lebanon's experience over 2020 exposes how quickly early successes can be eroded by the premature easing of measures. Nevertheless, while rates of infection in Lebanon are now high, hospitalisation rates amongst those infected have fallen from 5% several months ago, to just under 3% today. Fatality rates have also fallen from around 1 per 100, to 0.7 per 100.

The Lebanese association of the Order of Malta has been actively engaged in the fight against Covid 19, which was worsened by the explosions in Beirut in August 2020 - making many people homeless - and by the ongoing socio-economic crisis. Multiple strategic initiatives have been taken by the Association with the aim of strengthening its community health centres and mobile medical units assisting people in need all over the country.

Jordan

Jordan has experienced a similar pattern of initial success giving way to more challenging circumstances. After its first confirmed case of Covid-19, the Jordanian government received praise for its swift response in handling the Covid-19 outbreak. Immediate lockdown measures were imposed alongside a travel ban and developing a track and trace mechanism. Through the early recognition of the importance and need to cooperate and coordinate with key international partners to ensure that the health facilities are ready and well-equipped with critical medical supplies for the Covid-19 response. The supplies included PPE equipment, diagnostic and biomedical equipment to enable the Ministry of Health teams to rapidly detect, isolate, trace and quarantine all cases. Only 3 hospitals in Jordan admitted Covid-19 patients, so that expertise could be concentrated amongst the staff and to decrease the possibility of the virus spreading to other patients.

Centralisation in this area was balanced with de-centralisation of services at the local level. For instance, the Jordanian government provided Irbid, a city located in the North of Jordan which was the epicentre of the Covid-19 outbreak, autonomy to manage the cases in the city. This enabled the local government in Irbid to make immediate decisions without referring to the central government. By late June, Jordanian authorities had essentially eliminated the presence of Covid-19 in the country.

But again, as economic necessity required the government in Jordan to ease restrictions, new cases began to gather pace. Failures to test and effectively quarantine people crossing the border from Syria have been identified as one avenue through which the virus returned to Jordan. By early September, transmission of the virus utterly dwarfed the Spring peak. As of November 2020, new daily cases in Jordan are in the range of 4000-6000, straining hospital resources.

Quarantine procedures

Quarantine is one of the most important tools available to slow the spread of the virus. A Cohrane Rapid Review of evidence[7] found that restricting cross-border travel at an outbreak's start can reduce new cases by anywhere from 26-90 percent, but speed is essential to prevent community transmission from occurring. The importance of quarantine and border controls will not decline in the foreseeable future however, as more countries begin to repatriate citizens and as international travel restarts.

Early discussions suggested that the incubation period of the virus appears to be on an average of 5 to 6 days. However, there are extremes of 2 to 12 days. This has led to an advised quarantine period of 14 days in most countries across the world. Those kept in quarantine need to be kept as isolated as possible, with separate rooms in which meals can be served from a distance and individual toilet facilities. For this reason, hotels have proved useful for quarantining individuals. The psychological pressures of remaining in relative isolation for this length of time should not be neglected and it is important to have provisions to support the mental health of those in isolation.

However, other countries have taken a more stringent approach **Jordan** has introduced more stringent quarantine measures, namely through their 14+14 quarantine protocol. All those who arrive in Jordan are quarantined for two weeks in a hotel and are then instructed to quarantine at home for another two weeks. A tracing system is used to monitor all civilians quarantined in Jordan. This approach of effectively 28 days' quarantine was developed after cases were identified where the infection had taken place during the 14-day hotel quarantine (where guests quarantining in the hotel and infected others effectively setting back the 14 days). Therefore, as a precautionary measure, the further 14 days' quarantine at home was instituted.

A pilot for a bracelet that tracks and traces quarantined civilians has been developed to ensure that upon departing from the hotel, they are monitored closely.

Doctors in **Australia** have cited this model as interesting, particularly the use of the tracking bracelets. It is noted that the second wave in Australia is linked to breaches of quarantine and social distancing protocols, particularly amid the relaxation of public health orders.

Another location where quarantine has been central to the strategy of the authorities has been in the **Gaza Strip**. The health system in Gaza is extremely fragile and experts from the UN and WHO warned it could quickly become overwhelmed were community transmission of the virus to occur.

Accordingly, authorities decided early on that their best strategy was to use the tight control over Gaza's borders to their advantage and try to prevent the virus from ever entering the territory. Accordingly, everyone entering Gaza was placed into a 14-day quarantine. At the end of this period, people would be tested with a PCR kit. If it showed as negative, individuals would be held for a further two days and then retested. If the test again showed a negative result, they would be released. If at any stage the test showed as positive, then the individual would be held for a further week before beginning the two-stage test protocol again. Strict adherence to this procedure proved highly effective and for months no community transmissions occurred. However, on the 25th August the unfortunate news was announced that the first community cases had been detected within a refugee camp. The authorities have announced a total lockdown and an investigation has been launched to try and detect how the patients became infected.

7 See https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD013717/full

Unfortunately, if quarantine procedures are breached the virus has repeatedly shown its ability to spread faster than health authorities can implement effective containment. This is amply demonstrated by the case of Gaza where community transmission is now widespread. The WHO states there have been nearly 21,000 confirmed cases of Covid-19 in the territory.[8] However, random testing of the population by the health authorities suggests that the true prevalence could be much higher. Some even suggest that as many as 700,000 people out of Gaza's total population of 2.1 million could be infected with the virus. What is certain is that Gaza's health infrastructure is rapidly becoming overwhelmed. As of December 2020, Gaza lacked 47% of the essential drugs, 33% of basic medical supplies and 62% of its laboratory supplies to run an effective health service. ICU beds are limited and many of those there are lack full equipment such as non-rebreathing masks. Oxygen supplies are also running dangerously low. While there are relatively few confirmed deaths from Covid-19 (102 according the WHO) there are concerns that these could rise sharply in the coming months. These numbers also don't account for the deaths that Covid-19 is indirectly contributing to, by forcing overwhelmed hospitals to cancel routine surgeries and treatments for illnesses such as cancer. Having lost control of the virus, Gaza now needs urgent support to prevent a deepening on the territory's humanitarian crisis.

Sharing best practices and procedures in healthcare settings

Healthcare workers are amongst the most important asset a state has in the fight against Covid-19 and lie at the heart of any effective response. Preserving their morale is essential, and for this they must have confidence they are being protected against the virus. The Doctor-2-Doctor platform allowed doctors to exchange their best practices and the measures they have implemented to protect both themselves and the wider well-being of patients in hospitals.

The **Turkish** experience stressed the importance of creating triage outposts to filter patients upon arrival, enabling nurses and doctors to separate those displaying symptoms of Covid-19, namely fever and cough or other possible signs of the virus. These individuals are sent to specialized parts of hospitals, where strict social distancing measures and PPE requirements are in place, allowing other parts of the hospital function more normally. Not only does this help minimise risks of transmission but it can provide a means of stretching limited resources (for example of PPE) further.

Hospitals in **Germany** and **Lebanon** also developed structures for isolating cases and preventing an outbreak within hospitals and medical centres. In Beirut, a miniature hospital was created solely for patients with moderate symptoms of Covid-19. In Germany, suspected patients at hospital emergency departments were separated. Patients with Covid-19 were placed in separate wards with a team of staff tasked with the treatment of Covid-19. Covid-19 and non-Covid-19 patients were also separated in ICU departments, as were the staff. The only exception was the intubation with the most experienced doctor (anaesthesiologist) who could move between wards and departments.

Since the outbreak, hospital staff have been tested for antibodies (IgG). The first results revealed that 3-4% of medical staff have developed antibodies even in risk zones and the Covid wards. This reveals that by ensuring that patients, doctors and nurses, as well as visitors wear surgical masks it is possible to greatly reduce the risk of catching the virus.

In the Middle East, there was interest in understanding whether air conditioning in hospitals could contribute to the spread of the virus. During the meeting on 6th July, doctors in **Saudi Arabia** were able to provide more precise information on the use of air-conditioning, referencing a paper published by the CDC[9] which explored the correlation between air-conditioning and the spread of the virus. It revealed that the aerosol that may contain droplets of the virus can circulate through the air conditioning and expose all those in the room to a possible infection.

8 See http://www.emro.who.int/pse/palestine-news/landing-page-for-covid19.html
9 https://wwwnc.cdc.gov/eid/article/26/7/20-0764_article

Another paper has been published by the Infectious Diseases Society of America which explores the link between airborne transmission and Covid-19[10]. This demonstrates growing concern of air-conditioning instruments and the spread of the virus, particularly within households. Questions regarding the use of air-conditioning were highlighted in the early stages of the Doctor-2-Doctor meetings and were revisited frequently, thus allowing doctors to make informed decisions on air-conditioning equipment.

In **Lebanon**, as in many other countries there are important examples of how communities responded to protect their most vulnerable in challenging contexts. The question of when to hospitalise and when to tell patients to self-isolate at home is critical. Over the course of the discussions, consensus emerged across the different contexts that for mild cases, it is better for patients to be kept in isolation at home. This strategy not only alleviates the pressures on hospitals, it can also contribute to the reduction of Covid-19 transmission. For instance, four weeks after the first major outbreak, in Becharre, a Lebanese village with 2,500 metres of altitude, medical facilities and universities were sent to the village to produce tests for the village and develop a health care system catered to that municipality. A mini hospital was created to hospitalise moderate patients. Mild and asymptomatic patients were sent home and told to check their oxygen levels three times a day. Only if the results were below 92, they were transferred to hospital in Beirut. 65 cases of Covid-19 were managed in Bacharre, with no deaths. After 6 weeks, Covid-19 was eradicated from the village.

Similarly, in **Turkey**, medical interventions would be determined by patients who have a fever and cough and are suspected of having Covid-19. Doctors search for dyspnoea and breath per minute to determine whether the patient fell under the pneumonia criteria. If the patient is under the age of 50, other diagnoses would be examined. Over 50 patients would be hospitalized as pneumonia patients. Nevertheless, **German** and **Italian** doctors have reiterated that a delicate balance between self-isolation and hospitalization needs to be struck, as early treatment for more serious cases is the most effective means of preventing the patient from deteriorating and requiring ventilation.

In Yemen, the interventions provided by doctors in the Doctor-2-Doctor platform helped shape the responses of doctors, as conveyed in follow-up discussions with the participants. In Ma'rib, a city located in the north-central region of Yemen, the impact of Covid-19 has been detrimental to the fragile health system in the country. There are approximately 2-3 million internally displaced Yemenis because of the conflict in Ma'rib city, with only 6 ICU beds available. The main Covid-19 hospital is located 20km outside of Ma'rib and currently only has 20-25 ventilators as well as a limited medical team. Despite these challenges, doctors located in Ma'rib have participated in the Doctor-2-Doctor dialogues and have been able to harness the advice provided to adapt their protocols and strategies. For instance, 4 medical centers in the province have been turned into isolation and treatment centers to reduce the contagion of Covid-19. According to statistics provided from one of the doctors working on the frontline fighting against Covid-19 in Ma'rib revealed that despite the high infection rates, only 15 Covid-19 related deaths have been reported in the city.

Treatments

Through the Doctor-to-Doctor meetings, doctors and health practitioners shared their best practices with regards to treating the virus. This led to doctors adopting new approaches with significant outcomes.

For example, doctors in **Yemen** explained how there had been initial reluctance to using Dexamethasone. However, because of Yemeni doctors becoming aware of the use of Dexamethasone in other countries through the Doctor-to-Doctor meetings, this drug is now being used and is demonstrating good results.

Doctors, pharmacologists, and epidemiologists have continuously stressed that treatments vary depending on the severity of the case. As case studies changed, more information became available on how patients should be treated allowing doctors to divide the discussion on treatment into three categories: mild, moderate and severe cases. For those with mild symptoms, paracetamol is an effective means of managing the fever. For more severe cases, antithrombotic drugs such as Heparin were suggested as having possible effectiveness in preventing thrombosis in the small veins of the lungs. In the most severe cases, it is vital to fight inflammation. Strong anti-inflammatories such as Tocilizumab or Corticosteriods can be used in these circumstances. But these should only be used as a last resort and avoided for patients who are only showing mild inflammatory symptoms. ECMO ((Extra Corporeal Membrane Oxygenation) has been used in intensive care, as asserted in the presentation by Australian doctors.

Currently, there is no known drug that can prevent the spread of the virus. However, there are several drugs that may contribute to a reduction in mortality. Doctors in this platform highlighted the importance of enabling the medical community to continually discuss approaches to treatment during a pandemic, as advice can shift rapidly. This was demonstrated within the initiative itself, in relation to the drugs Dexamethasone and Hydroxychloroquine.

Dexamethasone, a low-cost drug, is an anti-inflammatory medication.[11] The use of Dexamethasone to treat severe cases of Covid-19 has been welcomed by the World Health Organization (WHO) after the drug demonstrated some positive results in the initial clinical trials[12]. For patients on ventilators, the use of low-dose Dexamethasone has been able to alleviate some of the complications and reduce mortality rate by about one third. For patients who required only oxygen, mortality was reduced by approximately one fifth[13].

10 https://academic.oup.com/cid/article/doi/10.1093/cid/ciaa939/5867798
11 http://chemocare.com/chemotherapy/drug-info/dexamethasone.aspx
12 https://www.who.int/news-room/detail/16-06-2020-who-welcomes-preliminary-results-about-dexamethasone-use-in-treating-critically-ill-covid-19-patients
13 https://www.medrxiv.org/content/10.1101/2020.06.22.20137273v1

Covid isolation Center - Khalifa General Hospital, Al-Turbah, Taiz, Yemen

However, Dexamethasone is not risk free and should not be administered to patients with acute oncoming infection as it can diminish the capacity of the immune system to fight against the disease.

Prior to the emergence of Dexamethasone, the scientific community was, and still is, debating the efficacy of Hydroxychloroquine as a viable treatment option for Covid-19.
Only recently has the WHO resumed its study into the use of Hydroxychloroquine after reviewing safety concerns. Hydroxychloroquine was initially developed to "prevent and treat malaria, a mosquito-borne parasitic infection"[14].

During the early stages of Doctor-2-Doctor exchanges, these was widespread interest in Hydroxychloroquine and anecdotal evidence suggested it could provide useful. However, it was soon understood that the results from the initial clinical trials were poor in terms of efficacy. Because the use of Hydroxychloroquine has potential safety risks such as triggering cardiovascular problems, the growing consensus is that the dangers of using of the drug probably outweigh the benefits[15]. This is now the position in most of Europe.

However, some countries continue to use the drug. Doctors and medical staff in Jordan have argued that the drug can be a useful tool, where it is cost effective and accessible when compared to other medicines. As a result, it has been repeatedly used as part of the clinical response in Jordan with strict supervision protocols in place. ECG has been conducted on patients to ensure that no risks are involved if Hydroxychloroquine is administered. This has not demonstrated a change in the mortality rate and as yet, Jordanian authorities state that it has not revealed any adverse side-effects.

Healthcare costs are an important factor that cannot be discounted in discussions on Covid-19. The economic implications of Covid-19 in Jordan are enormous and have placed the state under mounting financial strain. This is true for many other Middle Eastern countries. Hydroxychloroquine is a relatively cheap and widely available drug that health practitioners know well and are confident in using. In the Jordanian context it represents an affordable treatment option, whose adverse effects can be managed, and which offers assurance to patients and may offer some health benefits.

In contrast, drugs such as Remdesivir (which has received attention internationally as it appeared to offer small improvements in the recovery time of patients although this is now contested) are less viable in the Middle Eastern context because of its cost and short supply.

The rapidly changing advice for potential Covid-19 treatments is likely to continue for the foreseeable future, given the novelty of the virus. In this context, mechanisms for regular discussions between health experts are essential. In Lebanon doctors, epidemiologists and scholars involved in combating and treating Covid-19 have formed a working group. They held meetings twice a week to discuss emerging literature, particularly when developing treatment options such as whether Hydroxychloroquine, statins and anticoagulants should be used. Protocols were also established to deal with asymptomatic patients. The Doctor-2-Doctor network acts as another mechanism for the dissemination of knowledge, as exemplified through feedback from doctors who find that their reflections on prevention measures, contact tracing and treatment options align with their respective country's approach.

14 https://www.discovermagazine.com/health/what-is-Hydroxychloroquine-and-does-it-treat-covid-19
15 see paper Helsinki Policy Forum- Doctor-2-Doctor Initiative: Jordan 16.07.2020 p.5-6

SECTION 4:

Questions on Covid-19

While much has been learned about the virus, much remains to be uncovered. New insights are constantly being discovered as health authorities gather more data and evidence over what works and what does not.

In the Doctor-2-Doctor initiative, numerous issues have emerged where there is still limited understanding and a recognised need for further research. These are outlined below with the intention of highlighting where future discussions may be helpful. The Doctor-2-Doctor initiative will continue to provide a mechanism where these and other issues can be debated and discussed as the fight against Covid-19 continues into 2021.

- **What mechanisms need to be established to ensure that a vaccine is equitably shared across the globe according to need?**

The experience with PPE and drugs such as Remdesivir suggests that without structures in place, poorer countries risk losing out to richer countries in securing supplies.

- **How can policymakers address the global rise in vaccine scepticism?**

Should vaccination be made compulsory or remain voluntary?

- **What is the current understanding of the long-term health consequences from being infected with Covid-19?**

Anecdotally, a growing number of people who have recovered from the virus still report chronic fatigue, shortness of breath and difficulty concentrating. Claims have been made that the virus can cause scarring of the lungs or even effect the brain.

o If there are long-term consequences, what are they and what proportion of people will suffer from them?

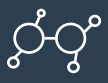
o Are there common factors amongst those who report long-term symptoms?

o Are these after-effects permanent or will they fade with time?

- **What is the link between viral load and severity of illness?**

Does a higher viral load increase the likelihood of hospitalisation?

- **What challenges are new variants of the virus posing?**



- **How can local, as opposed to national, lockdowns be enforced most effectively?**

This is a critical question in large parts of the Middle East who do not have the resources or established social security systems to return to national lockdown for a prolonged period.

- **How effective have contact tracing apps proven?**

Are there some countries where they have proved more effective than others? If so, why?

- **How can public consent for restrictions be maintained into the medium term?**

About the organisers

The Doctor-to-Doctor initiative is a joint project facilitated by Forward Thinking and the Sovereign Order of Malta.

Forward Thinking is a British Charity founded in 2004 to promote dialogue and support the resolution of conflict in the Gulf-MENA region. In Israel-Palestine, Forward Thinking works to create an inclusive climate where previously unengaged stakeholders – particularly those perceived as hardliners – can be involved in improving the prospects for peace. At a regional level, Forward Thinking facilitates the Helsinki Policy Forum to bring together government officials and parliamentarians from across the Gulf-MENA region and Europe to address shared policy challenges and clarify misperceptions. Finally, the UK Programme works with British Muslim communities to help them access local and national decision-makers to discuss shared challenges and identify where policy changes may be required.

The Sovereign Order of Malta, founded in Jerusalem around the year 1048, is a Catholic religious and lay order. The Sovereign Order of Malta is mainly active in health and social care and humanitarian aid and operates in over 120 countries. Its 13,500 members are supported by 80,000 volunteers, with over 40,000 doctors, nurses and paramedics. The Order of Malta manages hospitals, health centres, out-patient units, institutes for the elderly and disabled, terminal patient centres and volunteer corps. Malteser International, the Order of Malta's special relief agency, is always in the front line in natural disasters and to alleviate the consequences of armed conflicts. The Sovereign Order of Malta is neutral, impartial and apolitical. It has bilateral diplomatic relations with 110 States, official relations with another 6 States, and relations at ambassadorial level with the European Union. It is a Permanent Observer to the United Nations and its specialized Agencies and has representatives to the main international organizations. Since 1834 the Order of Malta's Government has its seat in Rome, where it is guaranteed extraterritoriality rights.

This report has been written by members of Forward Thinking, and is based on a series of meetings facilitated by Forward Thinking and the Sovereign Order of Malta.

Final responsibility for the content of the report rests with the authors alone. Feedback is welcome and should be sent to: admin@forward-thinking.org

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