

Press release – 26th August 2021

Empowering the crowd: Feasible strategies for epidemic management in high-density informal settlements. The case of COVID-19 in Northwest Syria. BMJ Global Health 2021;6:e004656.

More than 1 billion people around the world live in slums, shantytowns, and other informal settlements. While controlling Covid-19 is challenging in all of these communities, it is especially so in informal Internally Displaced Persons camps in active conflict regions.

An international group of scientists has modelled the risks COVID-19 poses to these settlements, and the potential beneficial impacts of a few simple interventions, taking into account the interventions' feasibility, cultural acceptance and their need for low cost. They considered as a case-study the north-western region of Syria, where over one million people living as refugees in about 1,000 camps.

Their results show that, if left unchecked, COVID-19 could kill up to 10% of the people living in an informal camp in a worst-case scenario. However, implementing a combination of simple non-medical measures could drastically reduce the impact of a coronavirus outbreak in the camps, and be beneficial to those living in the vicinity of the camps, reducing pressure on their already burdened health systems.

Other areas of Syria with high concentrations of refugee camps, such as the North/Northeast (under the control of the Kurdish autonomous administration) and South/Damascus suburbs (under the control of the Syrian government) may also benefit from this research. The researchers believe that similar strategies could and should be adopted in other settings with informal settlements around the world, potentially benefiting up to 2 billion people living in informal settlements and slums worldwide. The research is the result of a collaboration between the Pax Syriana Foundation, a social purpose civil society organization, and a group of volunteer scientists recruited by Crowdfight.org, a non-profit online platform where thousands of scientists offer their time and skills to help fight the coronavirus pandemic.

Three levels of protection

An average of 5.5 people live in each tent in the refugee camps of NW Syria. There is a high prevalence of comorbidities among the refugees, who are challenged by inadequate access to healthcare, and poor sanitary conditions. In these conditions, enforcing a strict lock-down is infeasible.

The first strategy modelled by the researchers is self-distancing, that is, encouraging residents to reduce physical contact with others, wear masks, and wash hands regularly, similar guidelines to

what the World Health Organization has been recommending since the beginning of the pandemic.

The researchers estimate that reducing the number of contacts by 20% to 50%, could reduce mortality up to about one third.

A second strategy consists of isolating potentially symptomatic cases as early as possible, even in the absence of validation by a diagnostic test that can detect the SARS-CoV-2 virus that can cause COVID-19. A realistic and affordable intervention would involve equipping each camp individual igloo washable tents, where persons suffering from any symptom could self-isolate until three days after the disappearance of their symptoms. Such an intervention would require the local community to ensure aid and care are provided to self-isolated persons, which is considered in the model. Providing only tent for every 200 people yields a marked decrease in the probability of observing an outbreak (~26%), and a reduction of mortality up to 18% can be achieved providing 1 tent every 8 people.

The third strategy consists of splitting a camp into two zones: an exposed zone where most of the residents of the camp would stay, and a smaller “safety zone” where 10 to 30% of the camp would be protected and self-organized. The safety zone would protect the fraction of the population that is highly vulnerable to COVID-19, i.e., the elderly, persons with chronic diseases, and a limited number of accompanying family members to ensure appropriate care for those in need. The authors considered different scenarios to split the population accounting for social constraints. Meetings between both sides of the camps could be organized in a “buffer zone”, simply consisting of an open tent, as long as simple measures such as mask wearing and social distancing are adhered to. The intervention reduces the outbreak probability in the vulnerable population and has synergistic effects with the other interventions.

The article discusses other measures and details such as the effect of a lockdown of the safety zone when an outbreak is detected, or how simple temperature checks alone would considerably impact the fate of a camp. Most strikingly, when a combination of non-medical measures are applied, the researchers’ model indicates that most lives could be saved, reducing mortality by more than 90% and delay an outbreak’s peak by almost 2 months. This figure would represent up to 85,000 lives in NW Syria alone.

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About Pax Syriana

The Pax Syriana Foundation is a non-profit organization for social purpose, registered in Malta under the Voluntary Organization Number VO/1446.

At Pax Syriana we believe that an empowered and vocal Civil Society will be the key to create change in war affected countries for a durable peace. We are determined to alleviate the immediate suffering of the population, while building the pluralistic and democratic foundation for a peaceful future. Our actions aim to support Civil Society by focusing on the most vulnerable at first, and by giving those means to fulfill their dreams of collective achievements.