

INCREASE-HEALTH-CORONA: WORKSHOP PROTOCOL

**REAL TIME EVALUATION OF GLOBAL ACTIONS IN RESPONSE TO THE SARS CoV 2 PANDEMIC
& IDENTIFICATION OF BEST PRACTICES TO STRENGTHEN HEALTH SYSTEMS IN IRAN AND GERMANY**

Rationale:

The international exchange between technical experts on evolving strategies, technological and medical solutions and the discussion of gaps and challenges but also the identification of best practices and sharing of experiences in the response to the SARS Cov 2 pandemic are at the forefront of the workshops organized by the Academy of the Disaster Research Unit at the Free University of Berlin.

The workshop protocols are documenting the conversational course with an emphasis on key findings rather than as word for word transcript. All participants will have had the opportunity to review and comment on the draft version of the workshop protocols prior to their publication

Workshop № 01, date: 15.07.2020

Workshop Topic:

Treatment in Hospitals and Home Quarantine

The discussion is intended to address the challenges faced by (health-) authorities and scientists to develop a system of care with sensitivity, coverage, and appropriate facilities in order to timely identify cases of the disease, to create scientific and updated protocols for screening, referral, patient follow-up and call centers, admission, treatment, and rehabilitation of recovered patients, the prioritization of testing, the development and design of patient management and follow-up programs and/or reluctancies to go to a convalescent home to manage the hospital load and improve surge capacity of hospitals.

Key highlights:

- Using comprehensive guidelines, protocols and risk assessments to develop a national response plan are major contributors to effective containment of the pandemic
- international partnership / professional exchange is essential in fighting the pandemic
- there are no major differences in the scientific key-measures Germany and Iran are taking to control the pandemic
- Iran has a centralized and vertical health care system while the German health care system is largely decentralized

- Iran has made large progress in fighting the pandemic while the political situation (sanctions) might impair adhesion to recommended measures
- clinical symptoms vary widely, possibly even seasonally
- high number of young/active asymptomatic patients worldwide and in Iran presents a challenge for testing and treatment and facilitates the possible transfer of the disease to vulnerable people
- identifying asymptomatic and pre-symptomatic individuals is a problem regarding disease containment
- High burnout rates among health workers in Iran are concerning

Follow up

- Exploration regarding interest and need for translation of the hospital fact sheet / protocols and guidelines
- Possible collaboration on the crisis management handbook (translation, technical input and possible adaptation to Iranian context) mentioned by Mr. Cwojdzinsky and Dr. Tinnemann

Follow up workshop subjects:

- Patient flow (finding experts for patient flow in Germany; having a look at the strategies from countries like Korea which have had experiences with earlier outbreaks of SARS and MERS)
- Contact tracing
- Risk assessment and risk communication
- Psychol-social aspects

Detailed summary of workshop notes:

Situation in Iran

Beginning in March Iran has been affected by COVID 19 as the first Middle Eastern country. Since then the number of cases has increased and the number of hospitalized people is more than the capacity. Social distancing could not be established effectively resulting in infection rates near to the worst-case scenario.

During the first weeks of the pandemic there had been no proper protocol for patient flow i.e. screening, referral, patient follow up and call centres, admission, treatment, and rehabilitation of patients.

As a result, the situation led to confusion and even panic. People were scared of being infected when going to the hospital which led to a lack of effective care for people in need. Capacity of hospital beds largely occupied by COVID 19 Patients blocked the flow of non-COVID patients.

There was a lack of integration of the health systems involved in the patient flow - such as prehospital, hospital and health centres. Also, reluctance of people to be admitted in covalence centres which were supposed to reduce delayed/disrupted patient care and hospital loads.

Main challenges of disease management

- Unclear process of screening system, patient detection, referral to health centres, hospitalization and transferring to ICUs in first few weeks.
- Lack of an appropriate triage system for infected patients in hospitals.
- Uncertainty regarding the incubation period of the disease as well as the pathogenesis/contagious time and transmission of the disease from a suspected/infected person to others.
- Lack of follow up call program for first few weeks
- Unclear process of patient flow for asymptomatic, pre-symptomatic and symptomatic patients.

Actions approved by the Iranian government / National Interventions

- Measures to change community health behaviours to improve self-care and self-isolation
- Physical distance / social distancing
- active case finding and isolation of identified COVID-19 cases

Screening system and call centres

There is a national website (www.salamat.org.ir) where people can register themselves and doing self-monitoring; if suspected to be infected, they are contacted by health staff.

People can contact local health centres which are distributed around the country where they can be tested. There are three formal call centres supported by medical staff volunteer who have been educated to manage calls.

If people after primary screening are infected or suspected of living with infected, health staff will actively find them by telephone or direct contact and help them.

Patient flow

After active screening mild or moderate cases are recommended to take drugs and do self-care and self-isolation and keep contact with doctors - severe cases are referred to hospitals. The Iranian welfare organization is responsible to support older adults, disabled and vulnerable people.

Several protocols for older adults, homeless, drug abusers, schools and home care have been developed.

National protocols for diagnostic and treatment are developed centrally by a multidisciplinary scientific community and revised every two weeks based on national and international experience.

Several ongoing clinical trials are testing drugs and evaluate treatment protocols.

Clinical manifestations

Symptoms are very different including cough, fever, dyspnoea, restlessness, lack of energy, losing smell and taste, sleep problems, decreasing Po₂, myalgia, brain and kidney damage etc. Clinical manifestations changed since the beginning of the pandemic.

The number of deaths and hospital admissions is increasing again after a decrease in April.

Conclusion

There is a need for a comprehensive risk assessment to develop a national response plan with emphasis on:

- contact tracing to interrupt disease transmission
- active screening
- patient flow
- psychological and social dimensions of the disease
- continuity in treatment by the same doctor
- higher risks for older patients with pre-existing conditions
- policy making on a national level and local planning tailored for prevalence of the disease and local conditions
- investigation of long-lasting symptoms and sequelae
- studying the incubation period, the pathogenesis time and transmission of the disease

Clinical Experiences

There are three cardinal symptoms: fever, cough, and shortness of breath. Because of the summertime some symptoms like nausea and diarrhoea have become more prominent.

During the past months the protocol has been adapted and testing has been increased from initially three PCR test centres with not more than 2000 tests a day at the beginning of the crisis to presently 150 PCR test centres with more than 40 000 Test per day.

Currently all patients are tested before operations or chemotherapy and now most of the positive tests come from patients who go to hospital for other diseases. Many patients don't show any symptoms but have a positive PCR result.

Right now, it's not clear in which cases to start medication and which drugs to use. Also, at this time it is not clear which vaccine will be successful and whether the sanctions will allow for an import to Iran.

This makes prevention more important: Masks and maybe lockdown again.

These days there are many new cases, but perhaps there are deaths falsely ascribed to COVID-19 when people are tested positive but actually die of other diseases.

Discussion

The approach in Iran seems very similar to Germany but situation is more difficult.

A future collaboration could focus on hospital specific issues by including more specific technical experts in specific areas of intensive care unit treatment and testing.

It is concerning that the case numbers are still very high, and the measures taken in Iran don't seem to have an impact on the high case number. There are no issues of the health system per se or in the service provision. There seems to be a disconnect between what the authorities are doing and wanting the population to do and the ability and capacity of the population or even the trust in the messages.

There are similarities between the situation in Iran and in Germany where restrictions have been eased, and parts of the population don't adhere to what is recommended. There is a lot of room for cooperation regarding how the communication between population and government authorities is working.

In Germany a hospital checklist has been developed which could be useful and be shared; it is available in German language but could be translated.

Material that can help directly could be translated by the ADRU.

There are experts in Iran who are in contact with scientific community and searching for academic publications for example by the Robert Koch Institute; but it will be used to translate German language documents.

In Germany public health is decentralized; responsibilities are mostly delegated to local levels. This is regarded to be key factor how Germany got a good grip in containing the spread of the disease.

The Robert Koch Institute has an advisory function and doesn't give clear rules how problems are solved on a local level.

What is concerning regarding the situation in Iran is the burnout in hospital staff. An important question is how patient flow is organized. In Germany hospitals have not been overwhelmed but most cases have been treated at home.

The speed of the spread has been overwhelming for health systems.

The health system in Iran is completely centralized, but not before a few weeks it hasn't been integrated very much. Sanctions had an impact on the availability of testing, drugs, protective clothes and Personal Protective Equipment (PPE).

Early opening is a problem in Iran and that is the main reason for increase in cases. There are strong economic reasons for early opening.

Both health systems are completely different as Iran has a centralized health system and in Germany decisions are made at a local level. There is a need for a profound understanding on which kind of solutions may work in these different contexts.

There is a need for more professionals, and all are asked how (in a second step) we can involve more experts.

The Charité Berlin produced a handbook on crisis management (open access) in German which could be translated and contributed to internationally. There is some funding and it could maybe even be translated into Farsi. Perhaps colleagues from Iran could contribute to it and add some aspects that are missing and making this a more global project. The handbook is intentionally set up as a collaborative project. It includes basic strategies and tools and would be a good starting point for a collaborative project. The Handbook is also a base for an online course.

Regarding the social aspects of COVID 19 in Iran there is a sense of community care in the population and protecting vulnerable parts of the population. The situation in Germany is more under control than in other countries and people are cooperative. But psychological effects of the social distancing and the effect of cultural factors in this regard are still unclear.

According to recent studies psychological impacts are post-traumatic stress symptoms, confusion, anger, stress because of continued fear and frustrations, questions of financial aid, lack of Information etc. There is also an exacerbation of pre-existent mental health problems.

The Iranian health care system was in a good shape compared to other middle eastern countries and Iran has enhanced the coordination of government agencies and municipal bodies. Previous studies indicated that there is a huge lack of mental health preparedness of community and also insufficient social trust to governments for confronting such a vast incidence.

People in Iran are really exhausted due to the ambiguity of the disaster and uncertainties.

Sharing the experience of the two affected countries with different culture and economical background will help to better respond to challenges. There is a need to determine the psychological impact in both countries (psychological and social aspects) as the individual behaviour is crucial.

Psychological and social aspects are important as they will develop further and have an impact on all our futures.

Because of limited resources the topics which will be relevant for the next future should be addressed first. But we should list the different topic and set up a pathway for further collaboration beyond the scope of this project. The present project is only a kind of platform which can bring actors together and identify these topics.

Exchange is important but it is a central question what the current needs are. In international cooperation it is always crucial at first to understand each other. Some topics seem to be clear from a certain cultural and professional background, but the whole situation could be different. We should take the time

to understand the backgrounds, the systems; where structural problems may lie. Furthermore, it is important to understand what the different structural aspects mean - where are the benefits where are the pitfalls, can we learn from each other in this sense?

There are no major differences in the measures taken in Germany and Iran, but that is only true on a general level. Regarding time frames, rhythms and ways of communication there are huge differences. There should be a focus on which communication strategies have been taken and under which circumstances and to what kind of outcome did they lead. How to communicate risk and information? There are social tensions in both countries. People are exhausted but vulnerability is different.

These are two different systems and the situation in Iran is fragile because of the sanctions; people have to go out for economic reasons. Differences in risk communications could also be discussed.

Regarding medical aspects there is little difference, but the economic and cultural backgrounds are different, e.g. during the Iranian New Year's celebration [Nowruz] some people didn't follow social distancing. Problems of risk communication could be discussed.

Talking about proper risk communication means to know the cultures; risk communication is sometimes misunderstood as convincing the people to do something or moving in a specific direction but it is a process which goes in both directions: institutions sometimes have to adapt to local circumstances. It is a complex social process to develop proper risk communication strategies and beyond the scope of this project. Perhaps topics could be identified that are more concrete. For example, experiences in contact tracing could be shared.

Experiences about contact tracing can be shared; in Iran call centres have been set up but currently there is no App.

In Germany, an App has been implemented, that is distributed freely. It measures distance and time, warns if a person is tested positive. Its source code is public and hosted on GitHub; requires a relatively new mobile phone; one could approach the federal government for a permission to use the source code.

There are also Software tools developed for contact tracing; initially designed for outbreaks in Africa. These are also open source and could be adapted.

The largest problem are asymptomatic and pre-symptomatic people who don't know or who don't care if they infect others; now there is a rule that people should wear masks. Regarding infected people there are no real problems in taking measures (wearing masks keeping distance etc.)

Patient flow should be discussed.

Some of the patient flow is a result of policies or guidelines. The guidelines and protocols for patient flow should be compared. Why people mostly end up in hospitals in Iran.

There are probably no experts for patient flow into hospitals (e.g. how to keep people outside the hospitals), there are experts regarding patient flow inside hospitals.

If there are papers or other materials regarding patient flow this may be shared and translated.

Patient flow is related to the health system of the country; for example, it is dependent on information from websites

Other countries like Korea have had experience from earlier outbreaks of SARS and MERS; a short presentation or written paper on approaches and lessons learned by these countries would be interesting, also regarding patient flow

Risk communication, social aspects, contact tracing and patient flow are possible follow up topics. Most important are patient flow questions.

So patient flow will be a good follow up as it is the most relevant right now.

If there are other relevant information or topics, we can take these up and include them; also regarding translations.

Resources will be coming with the meeting minutes.