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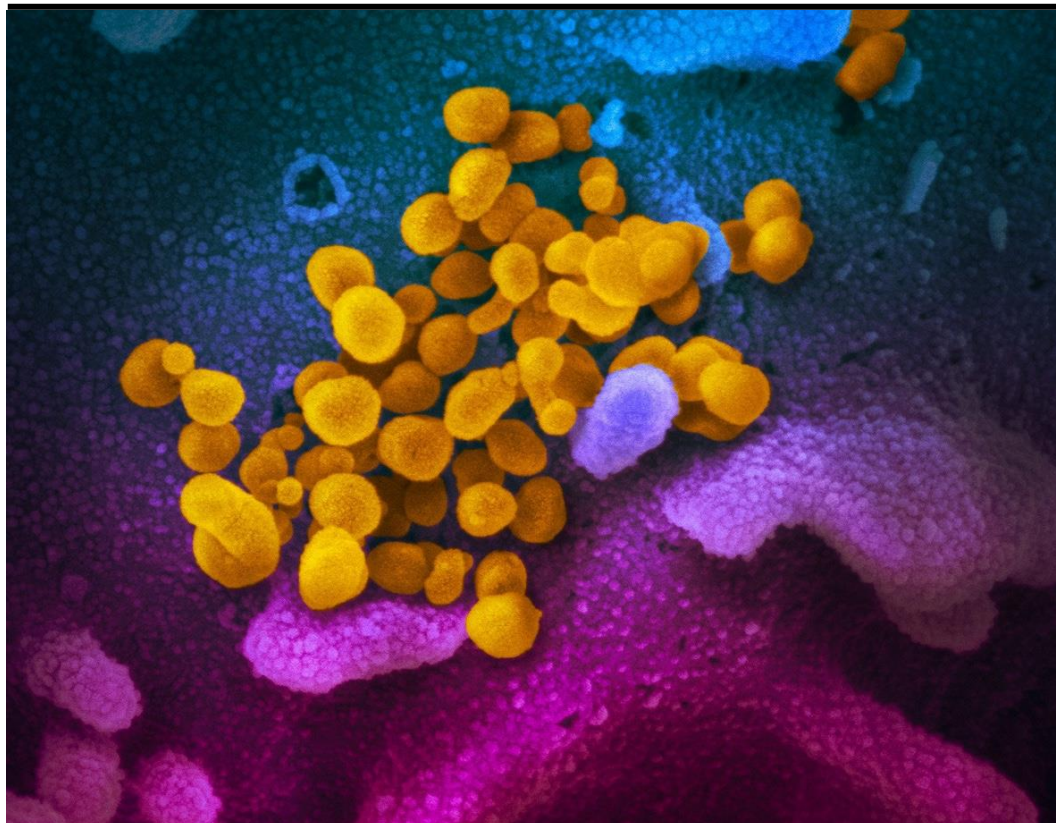- ✓ *Next Newsletter*

The International Emergency Management Society

TIEMS is an international collarborative organisation for emergency management and disaster response, continuously developing through contributions from current members and chapters and expansion with new members and chapters from across the world. Members and chapters comprise of a multidisciplinary group of international experts with different educational and cultural backgrounds, which offer valuable expertise to the TIEMS international network. TIEMS comprises of emergency planners, researchers, managers, response personnel, practitioners, social scientists, and other interested parties within emergency management and disaster response. Read more about TIEMS and its activities in this newsletter.

Kelly-Anne Frith
TIEMS Newsletter Editor

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The International Emergency Management Society - TIEMS
www.tiems.org

MISSION

TIEMS prepares the world for emergencies. TIEMS is a global forum for education, training, certification, and policy for emergency and disaster management. We do not respond to emergencies: we ensure that others are ready to respond. This is important internationally because some parts of the world otherwise have limited support for preparation.

As the international community discovers and develops new technologies, methodologies, and best practices, we offer conferences, ongoing forums, and training courses that rapidly and continuously spread the knowledge to every corner of the community. As policy makers grow to understand both the need for preparation and the support TIEMS provides, we expect to influence policy choices that strengthen cooperation among regional communities before disasters strike.

CHAPTERS

Chapters provide a regional focus for TIEMS activities. This is important because every region has unique circumstances and challenges, so there is no planning process that applies everywhere.
Currently TIEMS has chapters representing:
Belgium/Netherlands/Luxembourg, China, Finland, India, Iraq, Italy, Japan, Korea, Middle East and North Africa, Nigeria and West Africa, Romania, United States of America, Ukraine, the Philippines, France and South Africa. Australia is under establishment.

Each chapter is autonomous. Some chapter members are members of TIEMS international, and others are only members of the chapter, with local rules governing membership. The chapter establishes local activities and coordinates with the rest of TIEMS as needed.
The TIEMS Secretariat, located in Brussels, is available to the chapters for administrative support. The chapters report annually to the Secretariat about chapter activities, plans and finances.

ACTIVITIES

- TIEMS organizes international conferences, workshops and exhibitions, worldwide, with a focus on Emergency Management and Disaster Response topics

- TIEMS engages in research & technology development (RTD) projects that enable TIEMS members to apply their expertise to international emergency management initiatives

- The TIEMS International Group of Experts (TIGE) comprises 120 experts from 22 countries with wide ranging expertise and experience available to assist with emergency preparedness planning and response worldwide

- TIEMS Education and Training comprises TIEMS Academy with courses in Emergency Management and Disaster response and TIEMS International Certification - TQC for experts working in emergency management...

MEMBERSHIP

As a member of the TIEMS, you are part of an international community of leaders, practitioners and academics in emergency management, with diverse backgrounds in engineering, science, government, academics, military, and industry working together to make the world a safer place. Membership affords unique opportunities to learn, serve, and network.

Learn: From the multi-disciplinary, multi-national TIEMS community and through special programs.
Serve: By helping us in our mission to reduce the impacts of disasters and emergencies worldwide.
Network: With regional and international colleagues to develop valued personal and professional relationships, and enhanced opportunities.
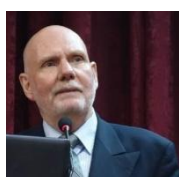
You are welcome to join us as a TIEMS member.

K. Harald Drager
TIEMS President

Conferences and Workshops

TIEMS organizes conferences, workshops, and exhibitions worldwide covering a wide range of research, best practices, and other topics in emergency management. In recent years conferences have been held in Manila in the Philippines, Kiev in Ukraine, San Diego in USA, Rome in Italy, Niigata in Japan, Aix-en-Provence in France, Erbil in Iraq and Beijing in China and in 2019 it was held in Korea. TIEMS 2020 Annual Conference will be held in Paris. In addition, local chapters host local international conferences and workshops throughout the year.

TIEMS 2019 Annual Conference
November 12 - 15, 2019
GOYANG, KOREA

Conference Host:
TIEMS Korea Chapter jointly with the
Korean Society of Disaster & Security

RTD Projects

Because TIEMS is known in the international community for the wide-ranging expertise of its members, and for its ability to network researchers, practitioners, and policy-makers, TIEMS is often asked to participate in Research and Technology Development (RTD) projects sponsored by the European Commission and other organizations. TIEMS members who express interest to participate in the TIEMS RTD projects, are selected based on their qualifications, and the expertise needed to staff the projects. RTD projects TIEMS has been involved in were ASSET, a four-year program to improve public health communications during health emergencies, and HERACLES, a three-year RTD program to develop technologies to improve cultural heritage sites in the face of climate change. At present TIEMS is a subcontractor to ECORYS for developing an expert HUB on wildfire expertise in Europe for the DG ECHO project "**Network of European Hubs for Civil Protection and Crisis Management**". This HUB will serve as an example HUB for other disaster HUBs in Europe.

Experts

The TIEMS International Group of Experts (TIGE), consisting of 120 experts from 22 countries with different educational background and experience, has been established as a resource to assist the global community in emergency planning, preparedness, and response. They are all TIEMS volunteers manning the TIEMS Board, the TIEMS Advisory Board and TIEMS Chapter Boards worldwide. TIGE's unique worldwide network of experts adds the cultural diversity to emergency management and disaster response that makes TIEMS such a valuable international network.

Education, Training and Certification

TIEMS believes that Education, Training and International Certification in Emergency Management and Disaster Response is the Key to Improved Resilience Worldwide, and TIEMS is therefore offering a Com-prehensive International Education, Training and Certification Program in this field. TIEMS motto is: *Preparedness Saves Lives*! TIEMS wants to promote an internationally shared understanding of emergency management elements, systems, qualifications, and terminology, and this is embedded in **TIEMS International Certification - TQC – Operations and Good Practise**. TQC stands for – TIEMS QIEDM Certification, where QIEMD is "Qualifications in International Emergency and Disaster Management".

TIEMS Structure

TIEMS is a true international organization, with a structure comprised of a TIEMS Board of Directors and an Advisory Board with members from 13 countries. The TIEMS Secretariat is in Brussels, Belgium, where TIEMS is registered as an international not for profit NGO. The members of TIEMS form the Annual General Assembly, which meets once a year during the TIEMS annual conference, during which TIEMS members evaluate the past performance of the organization and lay down plans and elects its board of directors.


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Message from TIEMS President

The Covid-19 Pandemic

The present worldwide situation is felt unrealistic and threatening. Even if a pandemic has been included in most global risk analysis in the past, it seemed like few still believed it would happen. Nonetheless, it is here, and along with it, enormous human, economic and social consequences. The global status when writing this message is:

- More than 2.5 mill people diagnosed with the coronavirus
- Close to 180 000 dead of Covid-19
- The virus is still spreading and seriously affecting more and more countries

We have definitely not seen the end of this pandemic crisis!
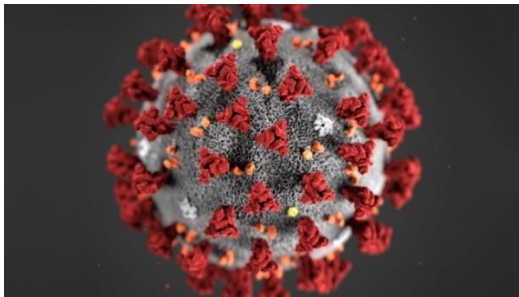
The initiative to gather information and do this special issue of TIEMS Newsletter, covering the global situation of the coronavirus and COVID-19, was taken by Roman Tandlich. Roman lives in South Africa and is TIEMS Regional Director for Africa. He has written the guest editorial of this Newsletter, and in below newsletter is summed up the situations in different countries/regions by experts in TIEMS global network.

The situation Worldwide

As TIEMS is an international organization, we asked the experts in our global network if they could contribute with facts and findings concerning the spread of the virus in their countries/regions, which could add valuable information to share: What is the present situation? What counteractions have been established and the results of these, and recommendation to others what could be the best strategy to fight this pandemic.

Since I live in Oslo, I will cover the present situation in Norway, and below is a picture describing the present situation in Norway:
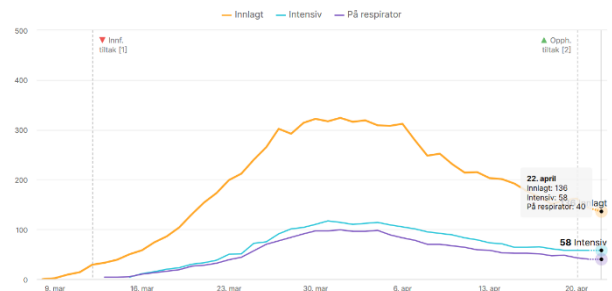
The graph shows that Norway has at present reached the peak and is on a downward trend. The first two patients were hospitalized 9th of March and the peak was reached 1st of April with

- 324 hospitalized (136) (red curve)
- 114 on intensive care (58) (blue curve)
- 99 on respirator (40) (Purple curve)
- 182 people have died og COVID-19

Today (22nd of April) the situation is illustrated in above table with the red figures, a very welcome reduction.

The number of people in Norway today diagnosed with the coronavirus is 7241. However, this figure is of course dependant on how many is tested for the coronavirus, so the real figure may be 5 – 10 bigger.

The total population in Norway is ab. 5.5 million, and there is plenty of space for everybody to move without meeting others. The largest city is Oslo, which with its surroundings has about 1 mill people. Oslo with its surroundings is also where the virus is most spreading.

Countermeasures in Norway

Norway was more or less closed down 12th of March, when schools and kindergartens were

closed and this was followed by a lockdown of most service businesses and postponement of all outdoor and indoor arrangements. All people needed to keep 2 meters distance and no gathering of more than 5 people together. For those businesses where it was possible, people worked from home.

This has had enormous consequences for businesses and employees of the shut down businesses. The unemployment rate is now about 10.4%, a rise from a normal rate of below 3%.

In order to avoid a massive bankruptcy flood of businesses in Norway, the government has up to now issued financial support and loans, etc. to those businesses struggling to survive, for close to 400 bill NOK or about 35 bill Euro.

What learning has the Corona Pandemic given us?

- We understand better how fortunate our lives have been before we were hit by the pandemic
- We have gained increased respect for those in the frontline fighting the virus, like the health workers, cleaning personnel, and those keeping the shops open
- We have learned that we were not prepared for a pandemic. There were lack of protection equipment and resources for intensive care equipment in the health sector. We have neither maintained a food storage contingency.
- We also observe that in Norway the public has mostly high trust in the authorities and politicians and mostly follow the rules put forward by the government in order to stop and slow down the coronavirus spreading

When we see the end to the pandemic, we certainly need to reconsider the country's resilience strategy.

A Predicted Pandemic

In September 2019, Gro Harlem Brundtland (Former Prime Minister of Norway) and Elhadj As Sy (Secretary General of the International Federation of Red Cross and Red Crescent Societies), wrote below, in a study by the Global Preparedness Monitoring Board about potential pandemic outbreaks:

«Preventing the next Pandmic»

«For too long, health emergencies have been met with a cycle of panic and neglect – an approach that is putting all of us at growing risk. Governments worldwide must start thinking ahead and increase funding at the community, national, and international levels to shore up health systems and prevent the spread of outbreaks.

Imagine the following scenario. In a matter of days, a lethal influenza pandemic spreads around the world, halting trade and travel, triggering social chaos, gutting the global economy, and endangering tens of millions of lives. Such a large-scale disease outbreak is an alarming – but entirely realistic – prospect. To mitigate the risks, the world must take steps now to prepare«.

It seems like this warning was mostly neglected or ignored by those in charge of taking actions!

Leadership in Corona Crisis

Those head of states and international leaders who have taken the coronavirus threat seriously and acted fast and accordingly, are those who will succeed best by stopping the coronavirus and save their population the best way.

However, some head of states do not seem to listen to the advice of their own and international experts and neglect the advices given and claim they know better themselves. That is sad to observe and may have a high cost for their own population.

International Cooperation in Crisis

Even if most countries have closed their borders and act by thinking of their own population first in this pandemic crisis, it is

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not the time for closing down global cooperation in crisis prevention and building resilience, which a few head of states claim.

On the contrary, we need to strengthen our global institutions, like WHO, and increase the exchange of experience and lessons learned in an international context. I believe that also will be the case when we see the end of the corona pandemic.

However, we also need to evaluate, why this happened, that the outbreak in Wuhan city could develop into such a pandemic, and what could have been done differently to reduce the spread of the virus and avoid the massive consequences of this pandemic. These lessons learned need to be shared internationally and the global cooperation and institutions need to be strengthen based on these findings and lessons learned.

Fake coronavirus and COVID-19 News

Unfortunately, fake news about the coronavirus are also spreading throughout the world in social and other media channels. This is making people afraid and confused and is adding stress and wrong doings.

How to counteract this and "bomb" such fake news with facts and truth, is also something that need to be carefully considered as an important learning from this crisis.

The future

I believe all of us are looking forward to get back to a normal life again, and hopefully this will not be too far into the future.

However, I think it will take a long time to feel safe and act as before, and industry and businesses will struggle with the economic consequences of the "shut down", and the market will take time to be back to normal.

But I am sure we have learned a lesson, and that we need to build the lessons learned into our future risk analysis and contingency plans.

Positive Outcome of the Pandemic

Even if this pandemic is cruel with massive consequences we have not seen since World War 2, it is also coming something positive out of it.

People has discovered that simple life also can work, and family members have more time for each other, and the environment has improved because of less emission og green-house gases. The use of internet for communication and other activities have exploded with new applications, and the culture has found new ways through internet to bring its messages and expressions to the public. I hope we do not forget this when life is back to normal.

Acknowledgement

I like to thank Roman Tandlich for taking the initiative to collect all information from TIEMS international expert network on the coronavirus and COVID-19 worldwide. It has been a valuable and important effort.

I also like to thank all experts in TIEMS international network, who have contributed with information on this topic from their country or region.

This newsletter has contributions from the following countries/regions; South Africa, Canada, Croatia, Belgium, Luxembourg, Netherlands, Italy, South Korea, Philippines, USA, Australia, Ukraine, Pakistan, North Cyprus, China, Thailand and Norway.

I hope all readers find valuable and useful information in below newsletter and stay safe through this crisis !
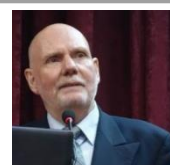
Oslo, 22nd April 2020
K. Harald Drager., TIEMS President

Message from the Editor

Hello,

This newsletter brings with it a short and brief message from me.

In this turbulent time where the world seems upside-down, we need to find the strength that lies beneath and endure through this rather tumultuous and extra-ordinary time inlight of the spread of SARS-Cov-2 and the COVID-19 pandemic.

As has been iterated all throughout social media, you have to come together in your repective nation with the main purpose to stay apart and socially distant.

Following recent trends in many countries around the world, South Africa is also currently under lockdown, recently extended until the end of April. Many people in South Africa live from hand to mouth, heavily dependent on what little income they get, and are struggling to find the means to feed their families. Many relief efforts have been established in South Africa (and locally in Grahamstown/Makhanda too) to help these less fortunate people by means of delivering food parcels gathered together from donations of food and/or money to go towards these parcels. The fact that they struggle merely to get access to food is merely an indication of the little they have, particularly with respective to hygiene and health products. Moreover, the prevalence of tuberculosis and HIV and AIDS is high in these areas. The worst case scenario in South Africa is: what will happen should the coronavirus spread into the poverty-stricken areas?

Given the struggles currently observed in various countries, many predict that the South African healthcare system would not cope with the anticipated influx of infections. I can only hope that the biological disaster relief efforts are firmly in place to circumvent loss of life on a massive scale.

Many of us are fortunate to have the means to work remotely from home where we can still earn an income. We're lucky. But, despite the ability to work from home, do take this lockdown period to spend time with your families, take up a new hobby or finish that home-based project you started.

Til the next letter, stay safe and keep well!

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GUEST EDITORIAL

THE "COVID19 PANDEMIC" STORIES AND THE ROLE OF TIEMS
In the related emergency management

by Roman Tandlich, PhD; Emma D Chapman and Rene Oosthuizen, PhD

Introduction

In the 21st century, the socio-ecological systems are often in a state of flux and this is confirmed by recent developments around the world. The world in which we live, as stipulated by Wamsler & Johannessen (2019) is "increasingly being exposed to a number of hazards, and these hazards are often interlinked with each other and they interact with vulnerable conditions to create a complex number of risks". Human and economic losses from disasters and emergency situations have thus been escalating and have jeopardised the current levels of development and the functioning of societies globally. This has, as a result, pushed mankind and stakeholders in all areas of disaster risks management (DRM) and emergency management (EM) to engage and grapple with new problems and concepts. These complexities and challenges have been further exacerbated by the global COVID19 pandemic. The first confirmed case of the COVID19 virus was reported in China in late December 2019 (European Centre for Disease Control and Prevention, 2020). Even prior to the pandemic, novel challenges have been experienced in the field of DRM. The related challenges have included climate change, the continual issue in resource accessibility and the appearance of new and a greater number of pathogens which there are no vaccines to develop against and/or medicines to treat them for. As a result of the above, DRM has been becoming an essential area for further research and practices. In other words, DRM has been "bleeding" into the elements of many human endeavours.

Changes and specifics of the DRM/EM landscape in a given country in terms of the COVID19 pandemic have resulted in the "calls for increased international efforts in order to ensure the development of national strategies for disaster risk reduction and resilience (DRRR)" (Wamsler & Johannessen; 2019). For many years now, the approach to DRRR and DRM has been an integrated one and this is reflected in many multi-lateral agreements such as the Sendai framework (Tandlich, 2019). The integrated impacts of disasters can be seen in the current scope of the ongoing COVID19 viral pandemic. Emergency managers (EMMs) and the DRM systems in many countries have to deal with the COVID19 impacts such as morbidities and mortalities due to the infections with the virus, economic losses from the lockdowns/limitation on the trading and movement of the populations in many countries, psychological impacts of the quarantine, (self-)isolation and the stay-at-home existence, to name but a few. The last 30 years have seen the removal of barriers to the mobility of people, barriers to trade and economic opportunities such as investment. The rise of the internet and the phenomena such as social media/networks has connected people like never before. These trends have been a blessing to many and the inter-connectedness of the world has removed many obstacles to exchange of information, knowledge and best practices. The fields of DRM and EM have not been an exception to this rule. Presence of social media and all other inter-connectedness tools has made the job of an EMM more difficult and simpler at the same time. Systems of the EM and DRM have adapted to this. Currently the adaptation and the essence of inter-connectedness are being challenged through the restrictions on travel and physical mobility of the people and goods amid the COVID pandemic.

The number of people, who have tested positive for COVID19 worldwide and/or considered infected, has reached over 2.3 million and more than 160 000 dead (WHO, 2020). Modelling data on the severity of the pandemic vary and are continuously being updated. These modelling predictions are

essential in informing the EM community and its conduct throughout the COVID19 pandemic. Physical security of citizens around the world, fake news and their potential detrimental impacts on the societies worldwide and the temporary need to limit certain human rights have created a framework in which EMMs and the DRM stakeholders must balance research and practice of their professions in real time, possibly to an extent never seen before. EMMs and the stakeholders in the DRM systems often take the lead in coordinating the response and recovery operations related to COVID19. In a given country, EMMs and the DRM stakeholders, more than ever before in history, execute their mandate in collaboration and coordination with healthcare staff in a given country, central banks, economic government clusters and civil defence. Exchange of information is essential under the COVID19 pandemic conditions/framework parameters and the same applies to the best EM and DRM practices. Despite the interruptions to the way that the world has operated in the 21st century until the COVID19 pandemic, sharing of resources and information is more critical than ever.

The International Emergency Management Society (TIEMS) is an NGO which is currently registered in Belgium (Tandlich, 2019). TIEMS has been working in promoting networking and knowledge exchange in the fields of EM and DRM (TIEMS, 2019a). Throughout these efforts the organisation's motto has been "think globally, act locally", which has been practically executed through organisation of workshops and conferences around the world, through interlinking research and practice across the EM and DRM (TIEMS, 2019b). One of the fundamental parts of these activities has been the exchange of information through the regular TIEMS newsletter and the special TIEMS newsletter (TIEMS, 2019b). These activities have positioned TIEMS to raise awareness about best practices and the streamlining of EM and DRM systems (see President's editorial/contribn above for details). There has been an increased awareness of the need to address the root causes of risk; which has resulted in a greater coherence between different strategies. (Wamsler & Johannessen; 2019) Human existence is becoming seemingly more an exercise for business continuity and disaster recovery. The nature and number of the factors within DRM are causing a growth in impacts and significance of climate change and weather-related disasters. TIEMS believes in continuously contributing to the root cause analysis and development/local adaptation of best practices and the COVID19 pandemic is no exception.

Local practices and the need to share solutions to COVID19 through appropriate platforms
The nature of the DRM problems and challenges for which solutions are to be found are based on the disaster's setting (GPS coordinates). Climate change has brought about changes worldwide. The United Nations Development Programme (UNDP, 2019) states that "variations in precipitation, change in temperatures and extreme weather patterns are altering the levels of hazards and increasing disaster risks". The Northern hemisphere has seen an increase in severe floods and thunderstorms and the Southern hemisphere has had droughts that have plagued Australia and Southern Africa for many years. Challenges in doing simple things, such as opening a tap and getting free-flowing drinking water, safe for domestic use, has now arisen; those living in the Southern hemisphere. Therefore performing hand hygiene, as a major prevention of the COVID19 spread, could pose a challenge in some areas of thje Southern hemisphere, e.g. on the African continent.

Approaches to these simple activities need to be reconsidered and re-learnt by every human living in the Southern hemisphere. It is discussed by (Gu; 2019) that the low-income areas and countries are seen to be at a greater risk of exposure to natural disasters and are more vulnerable to disaster-related mortality and losses than those in more developed regions. It has been seen that 92% of mortality as a result of natural disasters since 1990 has happened in low- and middle-income countries. There is an increase in vulnerability and risk to disaster events for those at the low-income segments of society as a result of a lack of access to basic necessities; they are to continue everyday tasks, even if it means putting themselves at risk. The stated segments of society are subjected to the "no work no pay principle", even if they are unwilling; this can be seen by them having to be exposed to a crowded place, such as public transport, in order to access their work opportunities. The management of the spread of COVID19 virus and similar respiratory conditions becomes almost

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impossible to manage in crowded places and one-bedroom houses. This is contrasting to the Northern hemisphere whereby the size of the economy is often greater and there is greater feasibility in the pulling of resources as a result of the civil defence mechanisms of NATO, the European Union, major OECD economies and other similar organisations. Therefore tailored solutions are needed for local conditions. Due to resource limitations and other factors, these solutions might be available in the Northern hemisphere, e.g. at academic institutions doing WASH research or NGOs such as Doctors without borders and UN agencies such as UNICEF.

In the Northern Hemisphere the economic power is spread over the whole of the EU, this makes the shutdown of major sectors of the economy easier; however, the situation is seen to be more complicated in developing parts of the world, such as the African continent. A disaster of a large-scale, as stated by (UNDP; 2019), can result in a loss of employment, economic slowdown and decreased entrepreneurial activity; which ultimately pushes more people into poverty. Furthermore, this leaves people more vulnerable in the face of disaster. Economies of scale can be seen as a challenge for many developing countries, especially those which are fundamental to DRM, mainly based in the mitigation and preparedness part of the disaster management (DM) cycle. An example of the stated is the Kingdom of Lesotho, which is an area surrounded completely by South Africa. A significant source of revenue, for decades, for the Lesotho government has been the migrant labour from the mining sector of the South African economy and, additionally, the Lesotho Highlands Water Project has ensured water security for South Africa since 1986. One can, therefore, see that the two countries are interconnected and depend on the other for everyday activity maintenance and normality of existence. The Kingdom of Lesotho has been at risk since the COVID19 virus spread began, however, it did not close its borders with South Africa. However, this changed after South Africa declared a state of national disaster on 15th March 2020 (Zulu; 2020). After this announcement as of the 16th March 2020, most of the land borders with the Kingdom (9 of the 14) have been closed by South Africa. These few facts indicate that the COVID19 pandemic will have different local impacts throughout the world.

TIEMS with its 17 chapters can provide a global picture about such impacts and nuances of local response/challenges and EM/DRM aspects of the COVID19 pandemic.

There are universal measures that are advocated as prevention and mitigation of the COVID19 pandemic such as social distancing. They can be easy to implement in developed countries and in rural areas, where space is plentiful. However, they become challenging to enforce at the developing world, as in many countries have large parts of the population living in crowded places where keeping a distance of around 6 feet from other people is almost impossible during daily activities. Some of crowdedness is the result of historical displacement of population and international borders, which have been arbitrarily drawn up without consulting the local population. Those borders might have interrupted migratory patterns of cattle herders or hunter-gatherer populations that have been in place for many centuries. Local specifics like these have a huge impact on tracing the COVID19 cases. Urbanisation and the difference distribution of economic activity will have impacts on the vulnerability of the population, e.g. with respect to income, the need to travel around during any shutdown or lockdown periods. This in turn will impact the extent of COVID19 pandemic in a particular area.

In the international domain, it has been stipulated by Human Rights Watch (2020) that international human rights law, specifically that of the International Covenant on Civil and Political Rights, allow the UN members to impose restrictions on rights of individual citizens during states of national emergency. More specifically, these rights can be limited in the case of public health emergency, as long as these are proportionate, necessary and lawful (section 4 of the Siracusa Principles, 1984). In the case of the COVID19 pandemic, examples of these restrictions will include limiting the freedom of movement by (self-)isolation or quarantine when a person has tested positive for COVID19 or been diagnosed as having the disease. It has, in many countries, led to mandatory testing of the

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individual and the tracing of people who might have had a contact with the COVID19-infected persons. Constitutional arrangements, cultural and social norms, the structure and functioning of the social compact in a given country or territory will have a major impact on the way that the Siracusa principles will be implemented and how these will be adhered or tolerated by the local population(s). Implementation can be done using flexible legislative tools, such as proclamations, executive orders or regulation which are gazetted or published in the equivalent of the U.S. Federal register. The practices of choice and their enforcement mechanisms will differ across the world and will also differ in the level of success.

This issue of the special TIEMS newsletter is aimed at facilitating the exchange of such practices and comparison of their implementation/efficiency in execution.

Besides the legal framework, limited movement of goods local and across the world will put severe strains on the availability of the resources in the EM and DRM space. Allocation of the scarce resources will be determined by the availability of the scarce resources, e.g. the personal protective equipment (PPEs), ventilators for intensive care units in hospitals and water and sanitation provisions in the conditions on the drought in the Southern Hemisphere. Some of these parameters are a function of the existing health systems in place in a given country and some are some influenced by the way that a particular country manages strategic reserves of disaster-related materials. Historical injustices for the majority of citizens in the developing world, such as in the Southern African region, is still prevalent. One of the cornerstones of the EU is the fact that it is a community of developed nations, one, thus, has the ability of visa-free travel and having the ability to go anywhere in the mainland EU with one's national identity card. Thus the current restrictions on cross-border travel goes against one of the cornerstones of the EU identity and system of countries' co-existence. Restrictions put in place for the control of COVID 19 are, therefore, not to be taken lightly. Their psychological, financial, health and other impacts can be predicted only to a certain extent.

Here the best practices and impacts amongst TIEMS chapter countries must be shared and the current special TIEMS newsletter will facilitate this.

What does an EMM do then...during COVID19?
The principles to follow must be balanced in making decisions within DRM, on the ethical front. Taking into account the impact of disasters on human rights, as discussed by Prieur (2012), it is essential to ensure the formulation of ethical principles. The general term of accountability provides communities at risk from disasters or disaster-affected communities with the ability to seek assistance from EMMs and stakeholders in the DRM system. In this context, the conduct of EMMs can never be seen as questionable. Accessibility of the EMMs and other stakeholders involved in the COVID19 pandemic is different from the ways that contact would have occurred during other disasters or epidemics. During the COVID19 pandemic, contact between the impacted populations, i.e. populations of the entire affected country or territory, and the EMMs/DRM stakeholders has been done via electronic means and the channels which do not involve face-to-face contact. Home visits and access of communities by EMMs still takes place, but the assistance that is provided or the reason for the interaction that takes place during such contacts is highly specialised and often focused only a limited set of tasks, e.g. sample collection for the COVID19 testing by RNA testing. Trust between the EMMs and the population affected will be critical here.

TIEMS can assist here based on the experience with previous participation in the ASSET project (TIEMS, 2015-2020).

Even situations such as the COVID 19 pandemic requires clear communication lines between the affected communities, i.e. the entire population of a country, and the EMMs, to be in place. Channels of communications must be clearly focused on the targeted messaging about specifics of the COVID19 pandemic and its implications within the specific geographical area. Special attention must

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be paid by the EMMs on the coordination about the contents and accuracy of the messaging, especially on social media and with focus on the prevention of fake news. All communications must be aimed at providing the population at risk or affected by COVID19 by information about the management of disease, punishment for breaching quarantine measures, and the reasons for imposing human rights restrictions, e.g. the reasons for limiting the freedom of assembly and freedom of movement.

The experience of the TIEMS stakeholders with the networking and the dissemination of the information about EM to the worldwide emergency management community will play an important role here. The TIEMS newsletters are regularly distributed to around 100000 EMMs around the world.

Contact between the EMMs and the DRM stakeholders, coordination of activities during the pandemic, as well as involvement of the community, must be done with integrity and in an ethical/legal fashion. The EMMs' integrity can be seen as the capability of the professional to take necessary, quick and the best-informed actions in each phase of the DM cycle. Integrity comes hand in hand with justice and it originates from the EMM's ability to allocate the resources, which are available with prioritisation, based on need and criteria of urgency of care, e.g. with disaster triage. No preference is to be given in the distribution of the resources based on criteria which besides the immediate need of the population affected by the disaster; therefore, no preference should be based on affiliations, ethnicity or religion. With the COVID19 pandemic and in the context of the special newsletter, the experience of the TIEMS chapters will be aimed at providing and overview about the pandemic management by EMMs and in the DRM space around the world

As Prieur (2012) states as impartiality of EM and DRM must be implemented in "terms of disaster preparedness, prevention, relief and recovery are provided and implemented on a genuine needs basis and without favouritism between concerned population groups". The EMM must adhere to the principle of "being accountable", which means to "be completely responsible for what you do and must be able to give a satisfactory reason for it" (Cambridge Dictionary; 2020). Accountability is central to management and has the ability to enhance productivity. It is a major aspect within EM and DRM. As stated by Amaratunga et al. (2016, 2019), there is a joint responsibility which must be shared and coordinated among all the stakeholders in the EM and DRM space such as governments, individuals, communities and businesses in the scope of the COVID19 pandemic as a disaster. The current TIEMS special newsletter is aimed at building on the experience of the TIEMS chapters in terms of ethical EM conduct by the TIEMS members and EM practitioners, as well as based on the previous workshops organised by the TIEMS in the recent past (Tandlich, 2019).

Further examples of actors that are accountable within the stages of DM, as outlined by (Amaratunga et al., 2016; 2019), include state institutions, professional groups, private businesses, academics and researchers, the media, political leaders and the civil society organisations. Actors are to be aware of what they are accountable for during the stages of DM; Polack et al. (2010) discuss that this can be outlined through a clear legislative environment and an enforcement mechanism. This would assist with a more responsive outlook in the event of an incident. Accountability within DM requires clear communication, transparency and clarity. As a result of the myriad of stakeholders being involved in a single disaster, as discussed above, it is imperative for each to know what it is that they are accountable for. This can only be ensured through constant communication as well as an outline for what each actor is to cover during all stages of DM. Haigh et al. (2016) states that the accessibility and availability of the relevant information is thus essential. Accountability can only be achieved based on the knowledge about the EM threat and challenges the EMMs face on a daily basis.

TIEMS is a community of practice of sorts. It stimulates the exchange of information and the education of EMMs to improve their level of skills and professional competences. Our organisation is continuously aiming to provide up to date information and knowledge to the EMMs around the world. We do this with the sense of being part of the EM community of practitioners around the globe

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and with the ethical sense of need for action. With this special newsletter, TIEMS seeks to gather and share information about the best practices and the national EM approaches to the COVID19 pandemic. Specially, we aim to gather information on the contact tracing, procurement, distribution and stock outs of the PPEs, healthcare systems responses and EM/healthcare coordination of the COVID19 infections/morbidities and mortalities, the protection of frontline staff, mobilisation of strategic reserves and management of business continuity impacts of the pandemic. This editorial sets the stage for the remainder of this newsletter in which we seek to share the best practices and stories of the EM systems from the TIEMS chapter countries and beyond. It is the hope of TIEMS stakeholders that this issue of our special newsletter will facilitate the exchange of knowledge and will directly or indirectly contribute to the professional competence of EMMSs inside TIEMS and beyond. We aim to do this through focusing on the management and progression of the pandemic across the TIEMS chapters and through the case studies about the perspectives on the impact of the outbreak about the populations in various countries and territories.

References

Amaratunga, D., Haigh, R., Hettige, S. (2016). *The role of accountability within disaster risk governance. In: Proceedings of the 6th International Conference on Building Resilience.* Massey University / The University of Auckland, Auckland, New Zealand, pp. 688698. ISBN 978-0-473-37268-2.

Amaratunga, D., Haigh, R. and Hettige, S. (eds.) (2019*). Accountability in the Context of Disaster Risk Governance; UNDRR*. ISBN 978-1-86218-170-0

Cabinet Office – Government of Japan. (n.d.) *Disaster Risk Management in Japan*. Retrieved from NGRD website: http://repositorio.gestiondelriesgo.gov.co/bitstream/handle/20.500.11762/20010/Disaster%20Risk%20Management%20in%20Japan_English%20Version.pdf;jsessionid=F5849289AD933DFAACF8130E10EEF1CD?sequence=3

Cambridge Dictionary. (2020). *Accountable*. Retrieved from Cambridge Dictionary website: https://dictionary.cambridge.org/dictionary/english/accountable

European Centre for Disease Control and Prevention (2020). Rapid risk assessment: Outbreak of acute respiratory syndrome associated with a novel coronavirus, Wuhan, China; second update – 26 January 2020. ECDC: Stockholm, 2020.

Gu, D. (2019). *Exposure and vulnerability to natural disasters for world's cities.* United Nations, Department of Economics and Social Affairs, Population Division, Technical Paper No. 4.

Haigh, R., Amaratunga, D., Hettige., S. (2016). *Ensuring Accountability in Disaster Risk Management and Reconstruction.* In: International Workshop on Disasters and Accountability, 8th December 2015, Colombo, Sri Lanka. Available at: https://www.researchgate.net/publication/303443551 (website accessed on 21st April 2020).

Human Rights Watch. (2020). *Human Rights Dimensions of COVID-19 Response.* Retrieved from Human Rights Watch website: https://www.hrw.org/news/2020/03/19/human-rights-dimensions-covid-19-response#_Toc35446580

IFRC. (2020). *IDRL Guidelines*. Retrieved from IFRC website: https://www.ifrc.org/en/what-we-do/disaster-law/about-disaster-law/international-disaster-response-laws-rules-and-principles/idrl-guidelines/

Polack, E., Luna, E., & Dator-Bercilla, J. (2010). *Accountability for Disaster Risk Reduction: Lessons from the Philippines.* CDG Working Paper 2, Brighton: CDG.

Prieur, M. (2012). *Ethical Principles on Disaster Risk Reduction and People's Resilience*. Retrieved from: Council of Europe website: https://www.coe.int/t/dg4/majorhazards/ressources/pub/Ethical-Principles-Publication_EN.pdf (website accessed on 18th April 2020).

Siracusa Principles on the Limitation and Derogation of Provisions in the International Covenant on Civil and Political Rights (UN Doc E/CN.4/1984/4, 1984). Available at: https://www.uio.no/studier/emner/jus/humanrights/HUMR5503/h09/undervisningsmateriale/SiracusaPrinciples.pdf (website accessed on 18th April 2020).

Tandlich, R. (2019). Current aspects of TIEMS in the South African context. Published in the TIEMS December 2019 newsletter, pp. 6-9. (ISSN: 2033-1614). Available at: www.tiems.info/images/pdfs/TIEMS_2019_Newsletter_Dec_2019_ver1.pdf (website accessed on 29th December 2019).

The International Emergency Management Society (TIEMS, 2019a). Official website at: www.tiems.info (website accessed on 10th July 2019).

The International Emergency Management Society (TIEMS, 2019b). Special newsletters Issue no. 9. Available at: www.tiems.info/index.php/our-archives/newsletter (website accessed on 29th December 2019).

The International Emergency Management Society (TIEMS, 2020). ASSET Project. Available at: https://tiems.info/index.php/activities-events/tiems-rtd/asset-project (website accessed on 18th April 2020).

UNDP. (2019). *Disaster Recovery Challenges and Lessons.* United Nations Development Programme, Crises Bureau.

Wamsler, C & Johannessen, A. (2019). Meeting at the crossroads? Developing national strategies for disaster risk reduction and resilience: Relevance, scope for, and challenges to, integration. *International Journal of Disaster Risk Reduction, 45 (101452),* 1

World Health Organisation (WHO, 2020). Coronavirus disease (COVID-19) Situation Dashboard. Available at: https://covid19.who.int/ (website accessed on 18th April 2020).

Zulu, S. (2020, March 16). Govt names ports of entry and borders to be closed over covid-19. *Eyewitness News*, Retrieved from Eyewitness News website: https://ewn.co.za/2020/03/16/govt-names-ports-of-entry-and-borders-to-be-closed-over-covid-19

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REFLECTIONS ON THE COVID-19 PANDEMIC FROM TIEMS CHAPTERS

FIGHTING WITH COVID-19 IN CHINA AND CHINESE EXPERIENCE

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I General Introduction

Into 2020, the world and human face the great challenge with the outbreak of COVID-19 in China, Europe, American and many countries of the world. How to stop the infections of COVID-19 to whole of the world? It will be a tremendous challenges for whole countries and emergency managers. TIEMS as an international NGO for emergency management, we have the responsibilities to find some solutions for human with the emergency management methodologies. This paper shows the process of COVID-19 infected and outbreak in China and how Chinese government fights for the COVID-19 within two months, so that we will gain some experience from the case of China, which will be benefiting for other countries.

II Cases Analysis of China

II-1 Preliminary Stage and Warning of COVID-19 in Wuhan City

The more early determined case of COVID-19 was found in December 8, 2019 in Wuhan, but someone thought it maybe more early in Oct. or Nov. 2019, maybe from Wuhan, maybe input from other country. By the end of Dec. 2019, the doctors found maybe it would infected man to man, and then, there were two groups of expert had been sent to Wuhan to make investigation. Up to 18, Jan. academician Mr. ZHONG Nanshan, a very famous pandemic doctor of China was invited to Wuhan and finally discovered COVID-19 had the features to infected man to man transmission by breathing with air and touching hand to hand in 20 Jan. 2020. And then to report to the central government of China. At 10:00 am on January 23, 2020, the central government of China declared that Wuhan city was lockdown with about 11 million people inside city. It is the first time to lockdown such big city in 5000 years history of China!

II-2 Outbreak of COVID-19 in Wuhan City and Hubei Province

Since 23, Jan, 2020, Wuhan city, the capital city of Hubei Province, and also Hubei Province became the epicenter of the COVID-19. The central government of China also declared that two military hospitals (Huoshenshan and Leishenshan) will be built in 10 days in Wuhan. In Wuhan city and Hubei Province, all the residents must stay home and quarantine by themself by the order of governments. As we known, from January 23 to February 1, 2020 whole Chinese was Spring Festival (a biggest festival a year in China) by then about 5 million people travelled to their hometown from Wuhan city, which initiated whole China had the high level risk of being infected by COVID-19. Later on, many province governments start up first or second level emergency responses and also ordered the residents to stay home to prevent the infection by COVID-19. All the residents were asked to wear the mask when they go outside.

With the orders from the central and local governments, 1.4 billions of people of China began their fighting with COVID-19:

There were about 170 thousand people to participate the fighting with COVID-19 in Wuhan city and Hubei province including medical and supported human resources from local and other provinces of China.

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Doctors and nurses of local hospital had a very hard time to rescue the cases of COVID-19, and over 3,000 doctors and nurses were infected in the early stage of the rescue by COVID-19, and some doctors and nurses dead from Jan. to March.

About 40 thousand doctors and nurses from other provinces and cities were mobilized to Wuhan city and Hubei Province to support Wuhan and Hubei since January 23, 2020 and by the end of March, 2020, most of them finished supported tasks, and none of them was infected with the perfect protections.

About 30 emergency medical teams were mobilized to Wuhan city and Hubei Province, such as EMTs of WHO certificated, national level emergency medical teams and mobile hospital of EMT's and military hospitals since January 23, 2020.

Many volunteers and social rescue teams helped the hospitals and local residents who quarantined at home to get groceries in Wuhan and Hubei after the lockdown of Wuhan city, and continuous supported them about two and half months.

II-3 Response and Protection from COVID-19 in Whole China

Since January 23, 2020, the central government of China made order for whole country and asked all residents must stay at home during the Spring Festival and cancel any private parties and public activities during the stage of fighting COVID-19.

Central government of China formed the highest level response commanding group. President Xi Jinping organized and commanded directly. Premier Li Keqiang was appointed as the group leader to lead and perform all relative issues of fighting with COVID-19. And by replacing with new leader of Wuhan city and Hubei province, the situation of fighting with COVID-19 was getting better controlled, as of shortage and lack of responsibilities during the early stage of prevention from COVID-19.

As the same time, all the provinces and cities of China set up the first or second level response system or groups, the head of provinces and cities were the leader of response group to command the provincial and local activities for anti- COVID-19. Each province came up with the response plan, organized medical resources and daily support resources for local people, and took care and tracked the cases of COVID-19. Depending on the risk level in the different areas in the whole China, all the residents stay in their home about one to two months to prevent the transmissions man to man from COVID-19.

The reports on current infected, cases, dead persons by COVID-19 from each province of whole country are shown to public everyday. Everyone can find daily reports with using mobile phone, which helps to get better knowledge of the latest situation of COVID-19. And if you are willing to know the location of new cases of COVID-19 in your city, you can locate it by GPS or Beidou positional system and GIS based map to see how far from your home or where you stay. In this way you know the risk levels of COVID-19 and to make better protection.

As of 1.4 billion of people make great efforts that they stayed in home and supported for government decisions, there were no more heavy infected cities and provinces in China except Wuhan and Hubei province as the epicenter of COVID-19. So after 22 days, that means, February 12, 2020. The peak has been reached and the total number of cases started decreasing day by day to zero by March 10, 2020. By April 9, 2020, there were 83249 cases of COVID-19 in total in China, with 77711 patients cured, 3344 patients dying and 1103 patients who arrived from other countries.

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Diagram shown the trends and changes in new cases of COVID-19 in China from January to February 2020.
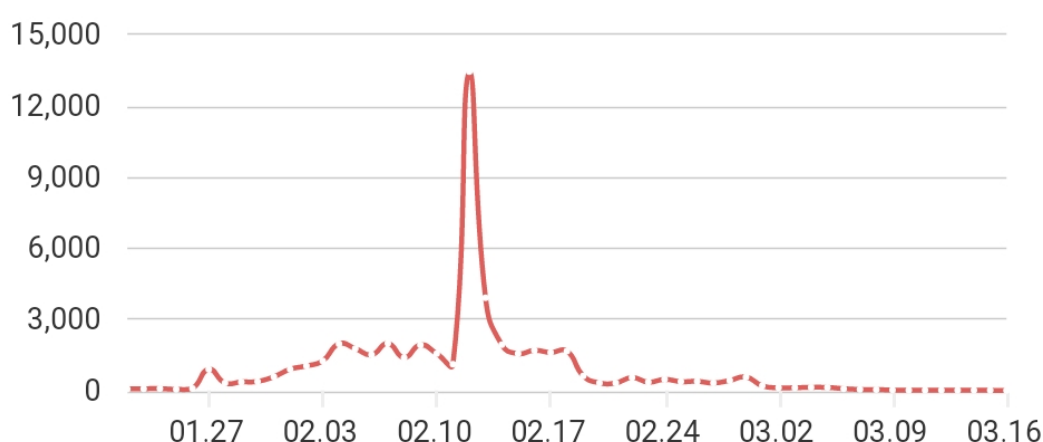

Diagram shown the trends and changes in new cases of COVID-19 in Wuhan from January to March 2020

II-4 Community Level Response and Control from COVID-19 in China

Communities in cities and villages in countryside of China is the smaller units of the governments to perform the responsibilities of government for the residents. In the whole process of fighting COVID-19 in China, the communities, villages and social organizations made a great role to manage, control, prevent local residents from the infection of COVID-19. Majority of communities (407 thousands) and villages (691.5 thousands) had control plan for each of them with the following measures:

Before you get into the community, your body temperature will be measured by security and you have to show your identification card to prove you reside here. So securities can better track your location if you infected with COVID-19. If you come back from international travels or from domestic travbels in China, with the exception of Wuhan and Hubei, you must stay at home and be quarantined for 14 days. Community and village managers will deliver the groceries as you need to your home so that local residents can stay at home for quarantine and do not have any chance to get in touch with others. From January 23 until March 10, 2020, there were no more increase in the number of infected persons due to these actions.

II-5 Present Situation in China

The cases of COVID-19 in Wuhan city totally was 50008, in Hubei Province was 67803 (include Wuhan). The death toll of COVID-19 in Wuhan was 2574, in Hubei Province was 3215 (include Wuhan). The total closed exposures under tracking of COVID-19 in Hubei were 279668. Since March 19, 2020, there were no new

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cases of COVID-19 in Wuhan. Since April 8, 2020, Wuhan city reopened after 76 days lockdown and residents of Wuhan can travel in China.

II-6 General Experience and Methodologies for Protection from COVID-19 in China

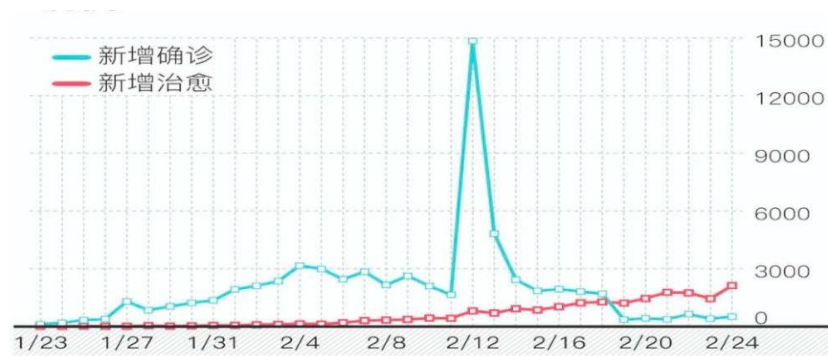Depends on the process of fighting for COVID-19, it is concluded that:

1.When you travel or meet someone in office, work sites, street, or any public place, you must wear your face mask, and if you are in the high risk area or with some high risk persons with of COVID-19, you also need gloves.

2.When you are in a high risk environment, for example, in elevator, open the door or light switches of office and building, restaurants, restroom, the gasoline dispenser, etc. to use a small peace of paper towel to touch buttons of elevator, light switches, and push or pull doors, and open doors with your closed fist or hip - do not grasp the handle with your hand, unless there is no other way to open the door.

3.Keep social distancing (1-2m) when you buy something in super markets, take out from restaurant, or in the entrance or in the security line in airport, buildings, and any situation. When you have a meeting in the office, have a lecture in classroom, or any place where COVID-19 could be outbreak.

4.Use disinfectant wipes at the stores when they are available, including wiping the handle and grocery carts.

5. Wash your hands with soap for 10-20 seconds whenever you return home from any activity that involves visiting locations where other people have been.

6. Keep alcohol-based wipes at our home and in your car for use, after getting gas or touching other contaminated objects when you can't immediately wash your hands.

7. During the outbreak of COVID-19, stay at home as much as you can, try to prevent attending or participating in any public activities. To estimate the level of risks of COVID-19, to know how far of cases of COVID-19 from you, keep on eye on the latest situation of COVID-19 and make better protection.

III Conclusions and Classification of Stages and Level Risks of Fighting COVID-19 in China

III-1 **Classification of Stages of Fighting COVID-19 in China**

The whole process of fighting COVID-19 in China could be invited into following stages:

1. Preliminary stage: to find new diseases, new case and early warning and response from Wuhan city (issue occurred; from end of Nov. 2019 until January 17, 2020).

2. Outbreak stage of COVID-19: national level response, operation and fighting with COVID-19 (disaster occurred) (from January 18, 2020-February 20, 2020).

3. Interweave Stage of COVID-19: Medical rescue operation stage and new cases less than new cured cases of COVID-19 (from February 20, 2020-March 18, 2020).

4. Recovery or monitoring stage: no new cases in Hubei province (March 18, 2020-April 8, 2020).

5. Working Recovery stage: prepare how to recover of working in whole China.

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The new cured cases great then new infections diagnosed for COVID-19 in Hubei Province from Febraury 18-24, 2020.

III-2 Level of Risks of Fighting COVID-19 in China

The level of risks caused by COVID-19 are different in China based on the density of cases infected by COVID-19:

1.Highest risk level area during the outbreak of COVID-19: Wuhuan city and Hubei Province.

2.High risk level area during the outbreak of COVID-19: Surrounding Provinces of Hubei Province: Henan Province, Hunan Province, Guangdong Province, and Zhejiang Province, etc.

3. Medium risk level area during the outbreak of COVID-19: Shandong Province, Sichuan Province, Anhui Province, Beijing city, Shanghai city etc.

4. Lower risk level area during the outbreak of COVID-19: Tibet Autonomous Region, Qinghai Province, and Xinjiang Autonomous Region and Inner Mongolia etc.
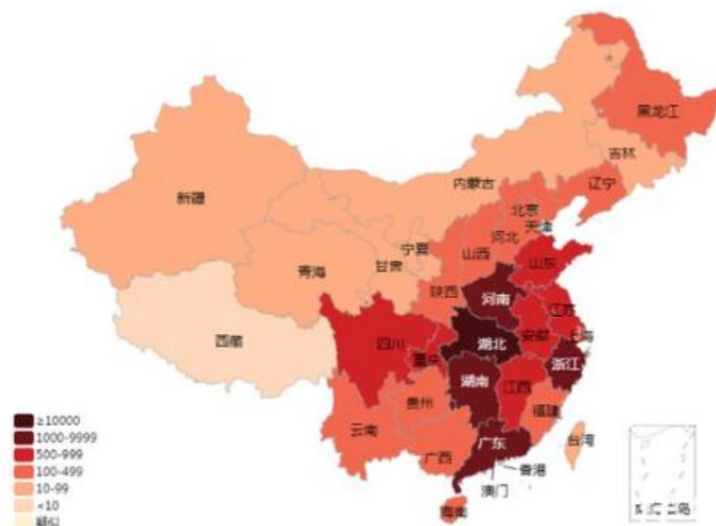
New cases distribution of COVID-19 cases in China with different level of risks

III-3 Conclusions
1.The process of Chinese fighting with COVID-19 shows that human can successfully fight with COVID-19 in two months with correct control methodologies including residents protect themself and rescue themself correctly.

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2.Countries with the outbreak of COVID-19 must have serious measures and policies for residents. Residents and public must understand the high risk situation and the importance of cooperation with local governments.

3. It is clear that we can classify the stages in fighting with COVID-19, and the level of risks of COVID-19 in China. It means that the stages of fighting with COVID-19 and level of risks of COVID-19 could also be classified in USA, Italy, UK, France and many other countries where COVID-19 outbreak at present. We can estimate the stage and level of risks of COVID-19 where those countries are in today, and then we can make suggestions for their governments based on the different stages and level of risks.

Reference
Daily reports from Chinese government of COVID-19 in Wechat.
Tencent daily report of COVID-19.
Baidu daily report of COVID-19.
Amaratunga, D., Haigh, R. and Hettige, S. (eds.) (2019). Accountability in the Context of Disaster Risk Governance; UNDRR. ISBN 978-1-86218-170-0
UNDP. (2019). Disaster Recovery Challenges and Lessons. United Nations Development Programme, Crises Bureau.
World Health Organisation (WHO, 2020). Coronavirus disease (COVID-19) Situation Dashboard. Available at: https://experience.arcgis.com/experience/685d0ace521648f8a5 beeeee1b9125cd

Editor's note: TIEMS collaborators from China shared the following link with us about the diagnosis of COVID19 which can be found at the following link: https://www.chinadaily.com.cn/pdf/2020/1.Clinical.Protocols.for.the.Diagnosis.and.Treatment.of.COVID-19.V7.pdf (website accessed on April 21, 2020).

COVID19 SITUATION IN SOUTH KOREA BY YOUNG-JAI LEE

(Submitted on April 8, 2020, Accepted after editorial review on April 16, 2020)

COVID19 cases in the Republic of Korea (submitted to TIEMS on April 8, 2020).

Date	Definite Diagnosis	Death	Under Examination
March 26	9,137	131	14,278
March 30	9,583	158	15,028
March 31	9,786	162	16,892
April 1	9,786	165	16,892
April 2	9,887	169	16,585
April 6	10,284	186	19,295
April 7	10,331	194	20,650
April 8	10,331	201	20,650

1. Diagnostic testing
Who can get tested for COVID-19? Do you test asymptomatic persons too?
We test persons who are "suspected cases" or "Patients Under Investigation (PUI)" as defined by our COVID-19 Response Guidelines (excerpt provided below). Excerpt from COVID-19 Response Guidelines:

Case Definition
Suspected case:
A person exhibiting fever (37.5 °C or above) or respiratory symptoms (coughs, shortness of breath, etc.) within 14 days of contact with a confirmed COVID-19 patient during the confirmed patient's symptom-exhibiting period.

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Patient Under Investigation(PUI):
(1) A person suspected of COVID-19 according to a physician's opinion for reasons such as pneumonia of an unknown cause;
(2) A person exhibiting fever (37.5 degrees or above) or respiratory symptoms (coughs, shortness of breath, etc.) within 14 days of visiting a country with local transmission* of COVID-19, e.g. China (including Hong Kong, Macau); or
*Refer to WHO or KCDC website (COVID-19 Situation reports: Local transmission classification)
(3) A person exhibiting fever (37.5 °C or above) or respiratory symptoms (coughs, shortness of breath, etc.) with an epidemiological link to a domestic COVID-19 cluster.

We do sometimes apply exceptions for certain high risk groups. For example, we tested all persons linked to certain major clusters (i.e., Shincheonji, Guro-gu call center) regardless of clinical symptoms. We have also recently tested all persons in long-term care facilities in Daegu City regardless of clinical symptoms.

What kind of diagnostic tests do you use for COVID-19? How is the test performed?
Korea uses COVID-19 genetic testing (real-time RT-PCR) to diagnose a patient. Specimens are collected by doctors, nurses, or clinical laboratory scientists at designated locations (i.e., screening centers/stations). Upper respiratory tract specimens are required. Lower respiratory tract specimens are also collected if the patient has sputum. Genetic testing may be performed directly at screening centers (if the center is equipped with such capacity), or the specimens may be sent to a testingcenter. Excerpt from COVID-19 Response Guidelines:

Specimen Collection Method
 Upper respiratory tract specimen:
Nasopharyngeal and oropharyngeal swab mixture (1 tube)
- (For nasopharyngeal swab) Insert a cotton swab deep into nostril.
- (For oropharyngealswab) Scrape from the inner wall of the throat with a cotton swab.

 Upper respiratory tract specimen:
 Have patient cough deeply and collect the sputum. Ensure that saliva is not included.
 - If patient does not have sputum, do not induce sputum as spitting forcibly may cause aerosol.

What is your current diagnostic testing capacity? How was Korea able to expand testing capacity in a short period of time?
Currently, there are a total of 118 institutions available for diagnostic tests: Korea Centers for Disease Control and Prevention (1), National Quarantine Stations (4), Institutes of Health and Environment (18), private clinical laboratories and hospitals (95).On average, 15,000 tests (maximum 20,000) can be performed per day. The relatively fast expansion of testing capacity was made possible thanks to active collaborative efforts between government, academia, and private sector. Korean government (KCDC) quickly developed a test and disclosed it. Based on this, a company developed and produced diagnostic reagent. Uponevaluation by government and medical academic experts, the reagent was granted emergency use authorization by the Ministry of Food and Drug Safety.Testing facilities across the nation thenbegan using the test.

To ensure accuracy of the tests performed, COVID-19testing centers were selected byKCDCfrom testing facilities that had been certifiedfor outstanding quality. They also received additional training and passed accuracy testto qualify. Testing quality of each center is maintained by quality assurance by government and academic experts.

2. Epidemiological Investigation
What methods of contact tracing do you use for COVID-19?
Contact tracing is largely divided into 4 stages: (1) investigation, (2) exposure risk assessment, (3) contact

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classification, and (4) contact management. During the investigation phase, basic information including whereabouts of the patient for a certain period of time is collected through the process of interviewing patients. Family or healthcare workers may also be interviewed if needed. If supplementary information is needed (e.g., due to memory omission or inconsistencies), more objective information (such as medical records, cellular GPS data, credit card transactions, CCTV footages) may be collected during the risk assessment stage. Contacts identified based on the collected information are subject to self-quarantine (home quarantine) along with health education and symptom monitoring.

What is the basis on which you collect and/or use personal data in epidemiological investigation?
Information required for epidemiological investigation can be collected and/or used within the scope permitted by the Infectious Disease Control and Prevention Act.

Excerpt from Infectious Disease Control and Prevention Act:
Article 76-2 (Request to Provide Information, etc.)
(1) If necessary to prevent infectious diseases and block the spread of infection, the Minister of Health and Welfare or the Director of the Korea Centers for Disease Control and Prevention may request the heads of relevant central administrative agencies (including affiliated agencies and responsible administrative agencies thereof), the heads of local governments (including superintendents of education prescribed in Article 18 of the Local Education Autonomy Act), public institutions designated under Arti cle 4 of the Act on the Management of Public Institutions, medical institutions, pharmacies, corporations, organizations, and individuals to provide the following information concerning patients, etc. with infectious diseases and persons likely to be infec ted by infectious diseases, and persons in receipt of such request shall comply therewith: <Amended by Act No. 14286, Dec. 2, 2016>

1. Personal information, such as names, resident registration numbers prescribed in Article 72 (1) of the Resident Regist ration Act, addresses, and telephone numbers (including cell phone numbers);
2. Prescriptions prescribed in Article 17 of the Medical Service Act, records of medical treatment prescribed in Article 22 of the same Act, etc.;
3. Records of immigration control during the period determined by the Minister of Health and Welfare;
4. Other information prescribed by Presidential Decree for monitoring the movement paths of patients with infectious diseases.

(2) If necessary to prevent infectious diseases and block the spread of infection, the Minister of Health and Welfare may request the relevant head of the National Police Agency, regional police agency, and police station established under Article 2 of the Police Act (hereafter in this Article, referred to as "police agency") to provide location information of patients, etc. with an infectious disease and persons likely to be infected by an infectious disease. In such cases, notwithstanding Article 15 of the Act on the Protection, Use, etc. of Location Informa tion and Article 3 of the Protection of Communications Secrets Act, the relevant head of a police agency, upon request by the Minister of Health and Welfare, may request any location information provider defined in Article 5 (7) of the Act on the Protectio n, Use, etc. of Location Information and any telecommunications business operator defined in subparagraph 8 of Article 2 of the Telecommunications Business Act, to provide location information of patients, etc. with an infectious disease and persons likely to be infected by an infectious disease; and the location information provider and the telecommunications business operator in receipt of such request shall comply therewith, except in extenuating circumstances. <Amended by Act No. 13639, Dec. 29, 2015>

(3) The Minister of Health and Welfare may provide information collected pursuant to paragraphs (1) and (2) to the heads of the relevant central administrative agencies, the heads of local governments, the chairperson of the National Health Insurance Cor poration, the president of the Health Insurance Review and Assessment Service, and such medical personnel, medical institutions, and other organizations as are performing tasks related to infectious diseases. In such cases, information provided shall be li mited to information related to the tasks of the relevant agencies, etc., for preventing infectious diseases and blocking the spread of infection.

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3. Contact Management

Korea has a relatively low fatality rate for COVID-19 cases. What special strategies do you believe contributed to achieving this?

As the number of patients rapidly surged in Daegu City and Gyeongbuk Province starting late February (which caused shortage in healthcare resources), we created a new system for allocating hospital beds based on the severity of the patient.This system enabled more medical resources to go to the more severe patients in need of urgent care, allowing more efficient treatment and management of patients. In addition, personswho areconsideredhigh-risk groups are classified as severe patientsregardless of clinical symptoms, so that they can receive timely care if needed.

COVID19 situation in Australia by Brian Holecek and the Australian TIEMS chapter members

(Submitted on April 5, 2020, Accepted after editorial review on April 16, 2020)

Australia operates under federalism with six states and two territories that make up the Australian Government. During the COVID-19 pandemic, relevant decisions and actions were formulated by a National Cabinet established on March 13, 2020 comprising of the Prime Minister and all State and Territory Premiers and Chief Ministers. The National Cabinet is basically the Council of Australian Governments (COAG). This National Cabinet is technically an intergovernmental forum, so the conventions and rules of cabinet do not apply, such as cabinet solidarity and the secrecy provisions. A Declaration of a State of Emergency has been made in each Australian State/Territory providing additional powers to the Control Agency been the State Health Department for COVID -19.

Leaders of all Australian jurisdictions that form the National Cabinet negotiate on behalf of their people, and to implement the decisions reached. As each State and Territory are unique, there are vast in distances, economic/geographic conditions, population mix, and climatic variances work to highlight the cultural differences between the States and Territories. Each State and Territory can maintain the decisions made by the National Cabinet as guidelines and each State Premiers or Territory Chief Ministers can legislate to ensure compliance if it seen or believed the population will not follow the Social Distancing and other areas to stop the spread of COVID-19. Several States has now legislated social distancing and fines can be issued. Australian Defence Force personnel are assisting with compliance checks of people in self or imposed isolation and most State Borders are now closed to non-residents, freight in still able to move between states. Victoria, New South Wales and Australian Capital Territory border have not been closed. As at 6:00am on 5 April 2020, there have been 5,635 confirmed cases of COVID-19 in Australia. There have been 181 new cases since 6:00am yesterday. Of the 5,635 confirmed cases in Australia, 34 have died from COVID-19. More than 291,000 tests have been conducted across Australia.

The following is the Limits on Public gathers as of per Australian Government Department of Health Website 04/04/2020, Stay at home unless you are:

- going to work or education (if you are unable to do so at home)
- shopping for essential supplies such as groceries, return home without delay
- going out for personal exercise in the neighbourhood, on your own or with one other
- attending medical appointments or compassionate visits

Location	Confirmed cases*
Australian Capital Territory	93
New South Wales	2,580
Northern Territory	25

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Queensland	900
South Australia	407
Tasmania	79
Victoria	1,115
Western Australia	436
Total**	**5,635**

Source: Australian Government Department of Health: as of 6:00am, 05/04/2020

The following facilities were restricted from opening from midday local time March 23, 2020:
- pubs, registered and licensed clubs (excluding bottle shops attached to these venues), hotels (excluding accommodation)
- gyms and indoor sporting venues
- cinemas, entertainment venues, casinos and night clubs
- restaurants and cafes will be restricted to takeaway and/or home delivery

From 12:00am on March 26, 2020 restrictions extended:
- food courts (except for take away)
- auction houses, real estate auctions and open houses
- personal services (beauty, nail, tanning, waxing and tattoo salons)
- spa and massage parlours, excluding health related services such as physiotherapy
- amusement parks, arcades and play centres (indoor and outdoor)
- strip clubs, brothels and sex on premises venues.
- galleries, national institutions, historic sites and museums
- health clubs, fitness centres, yoga, barre and spin facilities, saunas, bathhouses and wellness centres and swimming pools
- community facilities such as community halls, libraries and youth centres, RSL and PCYC
- gaming and gambling venues
- indoor and outdoor markets (excluding food markets). States and territories will make their own announcements about this.

From 3 April, churches and other places of worship, will be considered places of work so services can be streamed to the community. Services may be conducted and streamed providing:
- only essential staff are present
- the venue/facility remains closed to the public
- social distancing principles are adhered to — 1 person per 4 square metres

Weddings can be conducted with no more than 5 people, including the couple, the celebrant and the witnesses. The 4 square metre rule and social distancing observed. Funerals must be limited to no more than 10 people. The 4 square metre rule and social distancing observed. Hairdressers and barbers remain open with a 4 square metre rule and social distancing observed. Hotels, hostels, bed and breakfast, campsites, caravan parks and boarding houses is a be a decision for each state and territory. Schools remain open, most states have ended the first school term early.

Essential gatherings
Essential activities include:
- essential workplaces, where you cannot work from home
- health care settings
- pharmacies
- food shopping
- schools and universities, where you cannot study from home
- public transport and airports

These essential gatherings must apply social distancing and good hygiene practices, including:

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- being able to maintain 1.5 metres between people
- providing hand hygiene products and suitable rubbish bins, with frequent cleaning and waste disposal

Aged care facilities
Special restrictions remain in place for aged care facilities to protect older Australians.

Public transport
Public transport is essential at this stage but will be reviewed regularly. Non-essential travel is to be avoided. Free phone consultations with GPs and pop-up clinics to help hospitals handle 100 pop-up clinics across Australia to divert people who may be infected away from hospitals. The current government stance on wearing a mask is unless you're in direct contact as a carer, health professional etc. there is no need to wear a mask as general protection against COVID-19 however this seems to be generating a lot of media discussion.Companies are re-tooling to maintain employment to make hand sanitiser, mask etc. The Federal and State Governments have provided several financial stimulus packages due to the increasing unemployment and economic impacts of CVID-19. Unemployment rate in February 2020 was 5.2 % nationally, it is expected as reported by Westpac Weekly report current as at 27 March 2020 indicated unemployment rate to double to 11 % by June 2020. The Federal Government has a focus of a financial "Hibernation" rather than a shut down, so when the curve is on the decrease business can commence quicker, as they do not need to advertise for employees. As of March 30, 2020, $213.6bn from the Federal Government, $11.8bn from the states and $105bn in RBA-government lending has been invested.

COVID19 SITUATION IN CANADA BY A. ALEX FULLICK
(Submitted on March 29, 2020, Accepted after editorial review on April 16, 2020)

Hello to all our global TIEMS newsletter readers. I wish the circumstances under which this is being written were much more favourable to everyone, though as you know, Covid-19 has taken a pandemic grip on society. Covid-19 makes no distinction between race, colour, creed, sex, sexual orientation, religious or spiritual leanings, nationality, or political affiliation. No one is immune to its impact.

Before going to far into this editorial, I have to thank Roman Tandlich, TIEMS' South African Chapter representative that has pulled this edition together. Under 'normal' circumstances I would leading this edition but due to the nature of my career, I'm swamped with work activities and can't give this edition the attention it so dearly needed. So thank you Roman for steering the ship through rough waters.

As the Canadian representative on the TIEMS Advisory Board, I thought I'd contribute a high-level overview of what it happening here the 'Great White North'. As things continue to unfold rapidly, this list of activities represents what's happening at the time or writing tomorrow it could be different.

1.   *Border Shut Down* – Except for key trade activities, all border crossings have basically been closed. 'Snow Birds' returning from their stays in Florida, USA or other warmer locations have been told to self-isolate immediately upon their return. For many border communities this can be quite the impact. There are no tourists coming over from the US to shop or site-see and there are no Canadians heading the other way for visits either. The toll on businesses has become frighteningly high.

2.   *Repatriation*- As with many nationalities, Canada has had many of it citizens 'stuck' around the globe, as nations lock-down their societies. In many instances, Canadians are trapped within these locked-down societies and the government, travel agencies and airlines are struggling to find ways to bring them home. In many instances, Canadian authorities had no idea that there where Canadians in other countries - so identifying them and then trying to get them to a central location to transport home, assuming the country in question will even allow them to leave, has proven to be an immense challenge.

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3.   *Government Stimulus*– Recently, the government has passed a $100+ Billion dollar package to help keep businesses and people afloat. Many have lost their jobs or been laid off due to social distancing implementation and many are scared about not being able to pay their bills. In far too many cases, both parents have been laid off or let go from their jobs, along with their children staying at home because schools have been closed. Anxieties and fear are beginning to take its toll and the hope is that the stimulus package passed by the government can alleviate the fears and anxieties – at least for awhile.

4.   *Work from Home (WFH)* – There was a time when many people wished they could work from home more often, well, they got their wish. Almost all businesses now have their employees working from home putting stress upon technology infrastructure and service providers. From my own situation, I've been WFH for two weeks now and will probably be WFH for the next 2…perhaps, longer. It's proving to be challenging, as many that are WFH are finding their calls being dropped by too many using Conference Bridge numbers or too many dialing into the office overloading network capabilities. Still, I have to admit that my dog is very happy I'm WFH.

5.   *Announcements from Governments* – The announcements on what we should and shouldn't do are everywhere. From traffic status billboards to radio commercials to television commercials to even receiving government announcements sent through to our cell phones, the same messages are being communicated non-stop. Though frustrating at times (I was interrupted while talking to my mother about how she should be protecting herself), they are effective. All levels of government are communicating the same message; stay home to prevent the spread of Covid-19. The announcements contain information on what to do to prevent any further spread of the disease to 'stay at home' order to how one can exercise at home to keep fit. The messages are plentiful in content but as all levels of government communicate the same things over and over again, it's hopped that we'll be able to 'flatten the curve'.

6.   *Community Spread* - Overall, the idea is to prevent the community spread of the virus but, even though there are multiple messages being sent via multiple platforms, it's still a challenge getting people to follow them. At the time of writing this, there is a report on MSN news that up to 65 % of the virus spread is through community interactions, not through direct travel. So the messages I noted earlier. Though informative and numerous, aren't getting through to a large percentage of people that believe they are impervious to any virus impact. From my own experiences, that number appears rather high, as my neighbourhood is a virtual ghost-town. No one is out and about and when I have to walk the dog, the criss-crossing of sidewalks is the norm, anything to avoid other people.

7.   *Health Care Workers* – I would not be doing justice if I didn't mention the current heroes of the pandemic, if there can even be a hero in such a situation. We in Canada are blessed with universal health care, meaning we don't pay for our visits to the doctor's or hospital's like some countries do. Our front line health care workers are overworked, under paid, over stressed, and under resourced to deal with such a huge deluge of suspected Covid-19 cases and the treatment of those with the virus. Yet. Somehow beyond all expectations, this incredible group of individuals is marching ahead. I think there will be many changes in their profession once the current situation is over. The detail on what will change is yet to be known but I suspect there will be an even greater focus on health care and health care providers.

Of course, there are so many other activities being implemented or discussed at any given time that it's hard to get a grip on the current situation. Still, like many countries around the globe, Canada is doing it's best to address the situation because as we say; "We're all in this together".

Stay safe and stay prepared everyone!

A. Alex Fullick

Guest Editor's note: details about the number of infections and other aspects of the COVID19 outbreak in Canada can be found at: https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html?amp%Bqid=96637021

COVID19 SITUATION IN THE PHILLIPINES BY ANGELI MEDINA

On January 25, 2020, the Honorable Philippine Senator Richard Gordon, Philippine Red Cross Chairman/CEO and distinguish Philippine Red Cross Leaders invited Health/Academic Partners to participate in the "Outbreak Preparedness Meeting" relat-ing to "2019-nCoV" Preparedness and Response. Ms. Sacha Bootsma from the World Health Organization gave a presentation on "Preparing for 2019 nCoV." According to Ms. Bootsma (WHO), as of January 24, 2020, there were 830 cases in Mainland China, 2 cases in China-HongKong, 1 in China-Taiwan, 1 in South Korea, 1 in Japan- Kana-gawa, 2 in Vietnam, 1 in Singapore, 4 in Thailand- Bangkok, 1 in Nepal, 2 in USA-Washington State and 0 in the Philippines, a total of 846 with 25 deaths from China Mainland. The first reported case on December 12 was linked to a Seafood Market in Wuhan City, China (WHO).

January Week 1 - China reported to WHO a total of 59 patients with "pneumonia of unknown etiology."
Week 2- Diagnostic test confirmed 41 cases in China with 1 death
Week 3 - Japan reported 1 case, Thailand reported a second case and China reported
a 2nd death
Week 4 - total 440 confirmed cases in China, 4 in Thailand, 1 in Japan, 1 in Republic of Korea and 1 in USA; total of 6 deaths; of the 440 cases, 16 were health care workers, out of the 440 cases 51 were severe cases and some human to human transmission was occurring.

The World Health Organization sent out Public Health Advisory, Safe Travel Guidance, Food Safety Guidance, Wet Market Guidance (shopping in wet markets and working in wet markets). According to Dr. Susan Mercado, Philippine Red Cross (PRC) Deputy Secretary, who co-presented with Dr. Sacha Bootsma (WHO) on January 25, "in a public health emergency the patient is not an individual - it is a group, a community, a nation." Dr. Mercado stated that "when the corona virus of an animal meets the corona virus of humans, it can mutate, "cross over"- leap-species and transfer to humans in a more virulent form which can be deadly to human beings." The PRC launched its mobile app called RC143 that could help Filipinos assess their risk of contracting COVID19. RC143 is a navigation tool that uses wireless geo-location and sensory capabilities to trace contact events between users (PRC). (Courtesy of Mark Alvin Abrigo, Head, Health Services, Philippine Red Cross).

Philippine Department of Health (doh.gov.ph)
- The Philippine Department of Health (DOH) sent an Advisory (No.1) regarding Novel Coronavirus (2019-nCoV) Health Event.
- On January 28, the DOH convened the first Interagency Task Force on Emerging Infectious Disease (EID) meeting, with representatives from the Department of Foreign Affairs (DFA), Local and Interior Government (DILG), Justice (DOJ), Labor and Employment (DOLE), Tourism (DOT), Transportation (DOTr), and Information and Communications Technology (DICT).
- On January 30, 2020, the Philippines Department of Health (DOH) reported its first case of COVID19 in the country (doh.gov.ph).
- The agreed upon Resolutions include:
    - Ensure continuous support to Filipinos in China;
    - Ensure transportation and quarantine (14 days) plans for Filipinos from Hubei Province, China;
    - Proposed temporary restrictions in issuance of visas for travelers from Hubei;
    - Issued travel advisories discouraging non-essential travel of Filipinos to China;
    - On February 11, 2020 the DOH sent out an Advisory (No.10)- The DOH reiterated its directive to all Level 2 and 3 Public and Private Hospitals to attend to Coronavirus Disease (COVID19) patients including Persons Under Investigations (PUIs).
    - All licensed Level 2 and 3 Hospitals are equipped with Isolation Rooms at the Emergency and In-Patient Departments and should have the capability to manage infectious cases.

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- Furthermore, pursuant to Philippine Health Insurance Corporation (PhilHealth)
Advisory No. 2020-012, refusal to provide care to patients is considered a violation of the signed Performance Commitment with PhilHealth.

On March 7, the 1st local transmission was confirmed in the Philippines (who.int) On March 12, Philippine President Rodrigo Duterte announced a halt on domestic land, sea and air travel to and from Manila, as well as community quarantine measures which he called "lockdown" of the capital to arrest the spread of coronavirus. President Duterte approved a Resolution to allow a reft of containment measures including bans on mass gatherings, a month of school closures and community quarantine, as well as stopping domestic travel in and out of Manila (REUTERS 3,12).

According to WHO Situation Report, dated April 6, 2020 (who.int)
https://www.who.int/philippines/emergencies/covid-19-in-the-philippines/covid-19-sitreps-philippines
- There were 3,660 confirmed cases with 163 deaths in the Philippines.
- 54% of cases reported from National Capital Region (NCR), followed by CALABARZON
(7%) and Central Luzon (3.3%).
- Among the 2000 United Nations (UN) staff in the Philippines 9 tested positive for
COVID19, 7 from WHO, and 2 from IOM.
- The Philippine Department of Health (DOH) and Office of Civil Defense (OCD) distributed
Personal Protective Equipment (PPE) to priority hospitals.
- The Philippine Government is in the process of preparing large scale quarantine facilities,
while the local Government Units (LGU) with the support from NGOs and private
sector are setting up community isolation centers.

Other reports:
- There are 19 Police Officers, two Senators and two Senate Staffers contracted
COVID19 (CNN-Philippines)
- According to the Philippine Medical Association, doctors who have treated patients
with COVID19 are "dying in an alarming rate." 14 physicians who tested positive for
the corona virus died and four more are suspected of succumbing to the virus, (PMA
4/3/20). "Most doctors got the COVID19 due to lack of necessary personal protective
equipment (PPE) (Julie McCarthy, NPR, 4/3/20).
- Shortage on PPEs to protect healthcare staff is a critical concern that most hospital
administrators are struggling with (Philippine Hospital Association).
- Data Scientists from the University of the Philippines (UP) project the virus to infect
around 600,000 to 1.4 million people in the country with 80% coming from Metro
Manila. The UP COVID19 Pandemic Response Team stressed the need for community
collaboration to fight the corona virus (Patricia Lourdes Viray, 4/3/20 Philstar
Global). UP recommended the following measures:
> - Maintain social distancing, avoid mass gathering - Increase detection and isolation for
> asymptomatic cases
> - Increase protection and good hygiene to reduce transmission
> - In hospitals, decrease the rate of patient encounter per health worker, e.g. implement a
> policy of maximum of 3 encounters per hour in a 12 hr shift and decrease the interaction
> time between frontline health worker and patients with less than 40 minutes/day and
> provide PPEs
> - President Duterte ordered the Philippine Navy to convert the President's yacht BRP
> Pangulo into a hospital which can accommodate 28 patients and 5 medical staff (ABS CBN
> News4/5/20).
> - Ninoy Aquino Stadium, Rizal Memorial Sports Complex will be the designated quarantine
> facility for patients to decongest the hospitals and move patients from communities to
> facilities to control the spread of corona virus (CNN Philippines 4/6).

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- The economic impact of coronavirus COVID19 is expected to greatly affect the global economy. Within, the Asia Pacific region, approximately 48.7 million people are predicted to lose jobs in travel and tourism industry. In the Philippines, "approximately one million people would likely lose their jobs" due to enhanced community quarantine on the island of Luzon (statista.com).

- The government's COVID19 Task Force announced the extension of Luzon-wide enhanced community quarantine until April 30, 2020 as authorities move to increase the country's testing capacity. The department is eyeing an 8,000 to 10,000 daily testing capacity.

- According to Human Rights Watch, since March 2020, the arrest and temporary detention of people for violating curfews and quarantine regulations have crowded jails which can further increase the COVID19 cases.

- To this date, (April 8) there are about 3,870 confirmed cases of COVID19 in the Philippines (Johns Hopkins Coronavirus Resource Center). Philippine President Rodrigo Duterte and its government's (DOH Interagency Task Force) proactive approach to managing COVID19 is noteworthy for its timely strategic measures to contain the spread of corona virus disease.

COVID19 SITUATION IN NORTHERN CYPRUS BY YUSUF EKER

The new type of Coronavirus (Covid-19), which affects a wide geography in the world, was also witnessed with limited numbers in the Turkish Republic of Northern Cyprus (TRNC). The precautions taken in the country before March 10, 2020, when the first Coronavirus case was detected, were effective in this, and the number of cases remained at 96 and the number of deaths due to the disease remained at 3 as of April 09, 2020. Long before the first Covid-19 case in TRNC, on January 23, 2020, the Primary Health Care Department convened the Infectious Diseases Surveillance Committee to assess the outbreak risk and preparations. At this meeting, it was decided that there is a risk of an epidemic in the TRNC and that there were measures to be taken in the stakeholder institutions besides medical preparations. After the other meetings following the mentioned meeting, measures were taken at the land, air, and seaports with the possibility of entering the country, controls were tightened and health facilities in the country were mobilized and preparations were started for a possible epidemic.

After the measures taken, it was determined that there were people in the German tourist group who entered the country and who showed symptoms of Covid-19, and the hotel where they stayed was quarantined and tourists were observed. As a result of the investigations, the first Covid-19 case in the country was explained as a German tourist from the aforementioned party. His wife, who was in contact with the patient, was later diagnosed with Covid-19. As a result of the persons who came to the country from the UK and the people who came into contact with them, a total of 96 people were taken under control with the diagnosis of Covid-19 until 09 April 2020.

TRNC has closely followed the developments related to Coronavirus in the world from the beginning and took precautions regarding the possible epidemic in the country, taking into account the country's unique features, national advantages and disadvantages. The most important advantage of the country is that it has a small geography compared to other countries and the areas where the population lives densely are limited. Besides, TRNC, which is an island country, is a country with limited access to foreign countries due to its political status and has a small number of land, air and sea ports. Therefore, the implementation of the measures to be taken gives more effective results compared to other countries where the epidemic is effective. For this reason, from the first case in the country until April 9, 2020, out of 96 cases, which are mostly outsourced, have not been lost except for 3 people who are 2 German citizens and 1 TRNC citizen over 65 years of age.

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The measures taken by the authorized units of the TRNC have been put into effect gradually, taking into account the speed of the epidemic and the risk of the epidemic, thereby ensuring that the daily life of the public is minimized by the process, and it is ensured that it is adopted and kept at a practical level by applying the measures to the need. In the first stage, arrivals from countries where Covid-19 incidents were frequent were stopped and in the following days this measure was extended until the entry and exit of the country was completely banned. Thus, although the virus has been prevented from entering the country, it has been put into practice by taking the decision to quarantine those entering the country for 14 days in single quarantine rooms held in hotels and student dormitories, especially for TRNC citizens abroad. In addition, in order to prevent the spread of the virus in the country on March 13, 2020, all educational institutions and public and private institutions were closed except for basic services, and as of March 23, 2020, a partial curfew was declared and it was aimed to remain in the public's homes except essential necessities. In addition, a full curfew has been declared across the country from 21:00 until 06:00 in the morning, covering the dates of March 30 and April 17, 2020. In the process, rules such as working hours and disinfection procedures have been introduced in businesses such as markets, pharmacies, and banks that are open to citizens. In addition, the quarantine application was initiated as of March 26 , 2020 in the Dipakarpaz region, where the positive cases were seen, and April 4, 2020 in the Lapta and Alsancak regions. Moreover, the decision to prohibit the movement put into force between the districts between April 6-17, 2020, in order to prevent the increase in the number of cases in the country.

Beside the preventing the spread of the outbreak, a state-owned hospital was transformed into a quarantine hospital in order to prevent contamination with other patients in the hospital environment with the detection and treatment of existing and possible cases, and other patients were transferred to private hospitals. As of April 9, 2020, a total of 3615 people were tested in TRNC and 96 positive cases were detected. Out of the number of positive cases, 44 patients with virus were discharged, 49 patients are still being treated and 3 people lost their lives so far. Only one person is TRNC citizen, the other two person are German citizens/tourist and 1 people continue their treatment in intensive care unit. In the process, a total of 1838 TRNC citizens, who were abroad for education and health reasons, were brought to the country and were kept under observation for 14 days in 19 hotels and student dormitories that were turned into quarantine centers, and the people who completed the quarantine period were sent to 7-day isolation in their homes. Currently, 950 people are kept under state supervision. This number shows an increase or decrease compared to the entrance of the people who have been sent to their homes after the 14-day quarantine period and those allowed to come to the country by the TRNC authorities. As mentioned above, a total of 3615 tests have been carried out in the country so far. The small amount of tests carried out is the result of the fact that entrances and exits to the country are completely under control and the identification of people who may be in contact with positive cases can be determined. The geographical advantage of the country has eliminated the necessity of a large-scale screening in the TRNC in this area.

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Figure 1: Distribution of Positive Cases Detected in the TRNC to the Country (source: TRNC Prime Ministry Crisis Center).

In addition to the Prime Ministry Disaster and Emergency Management Committee, which is the emergency management mechanism in the country, and the District Crisis Management Centers located in 5 districts, a Crisis Center established within the Prime Ministry providing daily suggestions and recommendations to the competent authorities in order to meet the needs urgently by taking daily or hourly decisions according to the developments in this period, which is a decision-making mechanism working effectively and producing decisions in line with these recommendations.
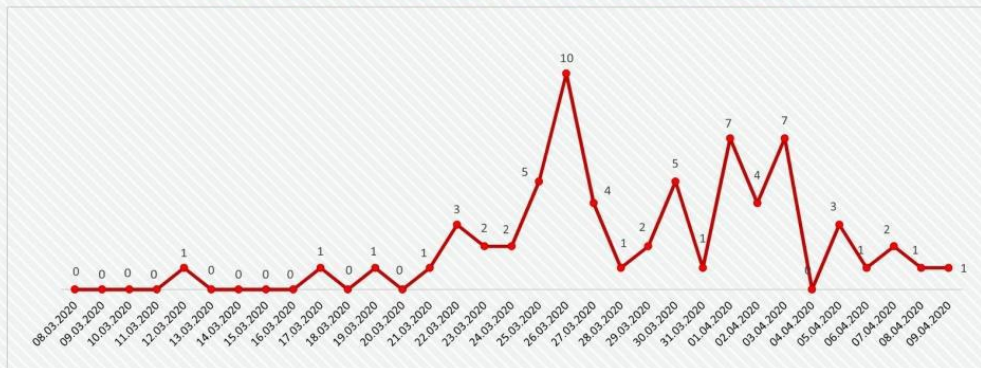
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KKTC RAKAMLARLA COVID-19 COVID-19 IN NUMBERS

09 NİSAN / APRIL 2020 17:00

BUGÜN / TODAY

Yapılan Test Sayısı
Tests Conducted — 191

Pozitif Vaka Sayısı
Positive Cases Confirmed — 1

İyileşen Hasta Sayısı
Patients Recovered — –

Yoğun Bakımdaki Hasta Sayısı
Intensive Care Patients — 1

Kaybedilen Hasta Sayısı
Daily Deaths — –

TOPLAM / TOTAL

Toplam Yapılan Test Sayısı
Tests Conducted in Total — **3615**

Tedavisi Süren Hasta Sayısı
Patients Currently Receiving Treatment in Total — **49**

Toplam Pozitif Vaka Sayısı
Positive Cases Confirmed in Total — **96**

Toplam İyileşen Hasta Sayısı
Patients Recovered And Discharged in Total — **44**

Toplam Kaybedilen Hasta Sayısı
Total Deaths — **3**

Yurtdışından gelen ve devletin Gözetimi Altında Tutulan Kişi Sayısı
People who returned from abroad and are staying under the observation of the state — **950**

KUZEY KIBRIS TÜRK CUMHURİYETİ
BAŞBAKANLIK KRİZ MERKEZİ

Figure 2: Case Status in the Country as of April 09, 2020 Source: TRNC Prime Ministry Crisis Center

The other factor of the outbreak in the TRNC compared to other countries in the world compared to the population is that it complies with the call of the people not to leave their homes unless necessary. Especially in places such as markets, banks, pharmacies where people have to be in groups, disinfection measures which are implemented strickly, prevented the increase of positive cases.

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Figure 3: Daily Case Number and Rise in the Number of Cases in TRNC between March 10, 2020 and April 09, 2020, as base on the TRNC Prime Ministry Crisis Center data.

Yusuf EKER

Turkish Republic of Northern Cyprus

Civil Defence Organization

Operation and Training Department

* All of the data used and presented in this study consists of official information provided by the TRNC authorities.

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Public Health and Communication during COVID-19: report from Makana, Eastern Cape by Sharli Anne Paphitis[1] & Joana Bezerra[2]

On the 5th of March the first COVID-19 case was reported in South Africa, and the government has taken decisive action to curb the spread of the virus within the country and minimise both the health and economic impact of a local outbreak amidst growing global fears of the pandemic ravaging the African continent (Cohen & Mbatha 2020; Lloyd-Sherlock et al. 2020). In a country with a severely strained health care system, a high burden of HIV/AIDS and TB, and grappling with water supply challenges, both global and local communities are justified in thinking that the spread of COVID-19 could have a catastrophic outcome. Globally, the COVID-19 pandemic has been tackled through widespread communication campaigns to reinforce and elicit public buy-in for increased hygiene and social distancing measures thought to help prevent viral transmission. But how does this global strategy translate to disparate local contexts across the globe?

Figure 1: Collecting water from the spring outside of Makhanda. Photo: Brad Jackson (https://www.facebook.com/StudioBradJackson/)

In the Eastern Cape, one of the poorest provinces in South Africa, there has been a race by the Department of Health to strengthen the flailing public healthcare system in the face of budget cuts at the start of the financial year and with the biggest hospital in the province (Livingston Tertiary Hospital) running at 110% capacity before the COVID-19 pandemic (Nordling 2020). But perhaps most crucially for the Eastern Cape province, critical resources may finally been diverted into the most basic resources required to manage the COVID-19 pandemic - soap and water - with Premier Oscar Mabuyane promising on the 16th of March that water tanks and soap would be delivered to areas in which it is in short supply (Nordling 2020). This will have been welcome news to residents of the Eastern Cape, and Makana Local Municipality in particular. The

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Eastern Cape has been battling severe droughts since 2016 and water supply challenges have resulted in extensive periods of water outages across local communities (Nini 2020). The global and sustained advice from health organisations shows an assumption of water as a readily available resource to operationalise for public health measures. As the spread of COVID-19 has increased in LMICs, in particular those where poor sanitation facilities are common and there is a lack of access to water, recommendations are slim on the ground – sparking anger and outrage from across the African continent asking how people could practice this advice in these conditions (Beaubein 2020; Gevisser 2020). In Makana, water is scarce. Only 53.7% of households have piped water inside the dwelling (ECSECC 2017). In the wake of the drought and water supply challenges, residents across Makana are limited to 25 litres a day, which leaves people choosing between washing clothes or showering, cooking or washing their hands, numerous times a day. Hand-sanitizer or bleach are important but expensive or inaccessible alternatives, leaving the poorest and most vulnerable members of society (particularly women, children and the elderly) to bear the greatest burden in the face of scarcity. When, or if, the promised provincial support through water tanker mobilisation materialises, the increased access to water needed to meet the continuous washing requirements being touted by global health bodies would still require significantly more than could be carried by individuals in makeshift buckets and containers to their homes from designated points.

On the 27th of March South Africa went into lockdown, with strict measures for the limitation of individual movement being enforced by the police. Following the lockdown, while less people are in the streets in town, social distancing in homes for the majority of those living in Makana, 54% of whom live below the poverty line, is not feasible (ECSECC 2017). The recommendations of one person who is not feeling well staying in one bedroom, preferably with access to one bathroom, shows how out of touch with reality those designing these public health measures are. The majority of people in Makana live in overcrowded small houses, sharing bedrooms and often beds, and with a large portion of the population with access only to shared outdoor bathrooms (ECSECC 2017). The need for space inherent in the recommendations of social distancing being publicly communicated risks ostracising and alienating members of the public who do not have access to the space required to enact these measures, leading to the deleterious effect that they may feel that these recommendations do not apply to them. Another real issue in the Eastern Cape that is very foreign to those in positions of power or privilege who set out the preventive measures, is the lack of electricity plaguing the province. This has important implications for and an impact on access to reliable information for the public who will have limited access to the media. This challenges government officials, health workers, and disaster management teams to think of different ways to reach community members that are detached from the social media world. This crucial aspect of communication without alienating large portions of local and global populations has been critically overlooked and underestimated throughout the COVID-19 pandemic to date, and is highlighted explicitly through the juxtaposition of global public health advice currently being communicated and the lived experience of those in Makana.

As members of the Community Engagement Division and acting as part of a broader disaster management response team from Rhodes University, we believe that in our response to the COVID-19 pandemic it is critical that we draw on the lessons learned from the 2014-2016 Ebola outbreak. What has been learned is that community engagement and communication campaigns play a critical role in the effectiveness of outbreak containment, where it has been found most particularly that establishing "an informative, trustworthy dialogue with the public can enhance the likelihood that messages will be well-received and acted upon" (Kass et al. 2019). Similarly, according to the WHO, the fundamental blocks of communication in a time of emergency are: credibility, trust, technical information, values and expression of care (WHO 2020). The information shared should be based on evidence and adapted to a language and a means of communication that will reach the targeted population. People's values and life circumstances will influence how they take in information and communicators must be aware of that in both messaging content and delivery methods. People need to know that the communicator cares about individuals being addressed, as well as respecting them, and these subtleties of communication transpire in the way that the message is communicated. Trust is by far the most difficult aspect of good communication to achieve and it can be easily lost if communities feel they are being lied to, information is being omitted, or if the messaging alienates them through rendering them invisible or unable to participate in protective action. Given all of

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this, our efforts across both rural and per-urban contexts, outlined below, have focussed on developing messages which are tailored to the local context and delivered through channels where existing relationships with communities are already in place.

Through a long term research project in collaboration with the Amakhala Foundation we have been working across six rural villages in and around Makana, in participatory health education projects. At a health promotion session on hypertension run on the 19th of March 2020, the Amakhala Foundation raised concerns that members of these hard to reach and isolated communities were not receiving enough information about COVID-19. At the time there were no reported cases of COVID-19 in the Eastern Cape, but cases were rising steadily across South Africa (Nordling 2020; Ellis 2020). Nine sessions on COVID-19 were prepared and run in the villages. The sessions were informal in their setting and local language was explicitly used in order to promote understanding and transparency. While much of the messaging sent out at a national level has been translated into some of the official languages of South Africa, as public health communicators we have to ensure that as it is rolled out this broader communication is explicitly tailored to local dialects and health literacy levels, particularly during a health crises where clear communication to all members of society is not merely vital, but a matter of epistemic justice. Community members came to the sessions armed with questions for the researchers with whom they had already built relations of trust and credibility. Some were questions that everyone has, such as, spending time with a partner during lockdown, the impact of COVID-19 in pregnant women. Other questions raised reflected the context of the Eastern Cape more particularly, such as, how to wash your hands without running water, and what to do if people fall ill when considering it would usually take 3 hours for an ambulance to reach them. Trust was already built, but maintaining honesty in answering difficult questions - such as the one about the ambulance - was crucial in preserving that trust. The care of the research team came across in the way the messages were communicated to such an extent that our NGO partners called to thank the researchers because they were made visible, they felt that they were part of a community that cared for them. Two important lessons emerged from this communication effort in rural areas. First, the importance of personal communication in working with communities rather than relying on messaging via impersonal means of mass communication such as pamphlets or even text messages in maintaining community trust. And second, the value of spending time with community members to answer their concerns and questions, a value often overlooked both in the busyness of modern academic life and in the rush of disaster management communication.

Figure 2: PhD student Theodore Duxbury conducting a health promotion workshop in a rural village in the Eastern Cape. Photo: Anon.

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Within the peri-urban context, we have been working as part of the science communication team at Rhodes University. These efforts of this group comprise another attempt to set good practice guidelines amidst the COVID-19 pandemic when working with local communities. As a local University, the information shared by the institution has increased credibility in the eyes of the local population, but this relationship could easily be destroyed within the context of the pandemic if not managed correctly. While focusing on content and delivery of information, two of the main concerns of the team have been the validity of the information and how the information will be conveyed in order to ensure that community members are made visible and included rather than isolated or alienated during the messaging campaign. As a peri-urban area, communication has to reach widely different audiences and the way to do that, once the content is decided on, is to have different delivery methods. The same message is delivered in different languages - English, Afrikaans and isiXhosa, but again a personal voice despite social distancing measures is critical within this context. In addition to the use of social media and radio, the team has been traveling around areas in which there is low internet penetration using a loudhailer (Figure 3) and distributing printed media in the local languages. Distributing information in this way gives a human face to the messages distributed and enhances their credibility, allowing for a dialogical relationship between the messenger and receivers in the community. This relational aspect built into a communication strategy can also serve to reduce panic in a community that could be induced through anonymous/disinterested institutional messaging which does not allow receivers to sense the tone of the message or ask questions to alleviate knee-jerk panic responses. Another critical aspect of the communication effort has been that of continuity: information has to be shared on a daily basis. This continuity also reinforces care and trust established through the previous steps, and is particularly valued when members of the team on the ground are seen to be in the community on a continuing basis rather than retreating from the community after having offloaded information in a 'once-off' session. Finally, all the information communicated has been tailored to be relevant and relatable to the local context. This way the information shared can easily be understood, is often seen in action as operationalised by the messengers, and, if necessary, can lead to a change in public behaviour through positive and credible public health communication.

Figure 3: Community Engagement NGAP Lecturer Thandiswa Nqawana using the loudhailer to share information about COVID-19 in Makhanda, Eastern Cape. Photo: Diana Hornby

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Communication in a time of disaster management is always challenging. The existing problems of the local context in Makana make the situation even more difficult. But not impossible. By tailoring the content and delivery of messages to ensure they meet the needs of these contexts so that they reach the wider population without causing panic, alienation and ostracisation, some gaps are being addressed and public health communication is being held accountable to important standards of social and epistemic justice.

Acknowledgements and listing of collaborators

References:

Beaubein, J. 2020. 'African Countries Respond Quickly To Spread Of COVID-19'. *National Public Radio* 21 March 2020 7:53 AM ET https://www.npr.org/sections/goatsandsoda/2020/03/21/818894991/african-countries-respond-quickly-to-spread-of-covid-19 [Accessed: 09/04/2020]

Cohen, M. Mbatha, A. 2020. 'South Africa Declares Disaster as Coronavirus Cases Increase'. *Bloomberg* 15 March 2020, 18:08 GMT https://www.bloomberg.com/news/articles/2020-03-15/south-africa-declares-national-state-of-disaster-on-coronavirus [Accessed: 16/03/2020]

ECSECC. 2017. Makana Local Municipality Socio Economic Review And Outlook, 2017. https://www.ecsecc.org/documentrepository/informationcentre/makana-local-municipality_67455.pdf [Accessed: 09/04/2020]

Ellis, E. 2020. 'Tanks, tents and testing: Eastern Cape responds to the Covid-19 pandemic'. *Maverick Citezen* 17 March 2020 https://www.dailymaverick.co.za/article/2020-03-17-tanks-tents-and-testing-eastern-cape-responds-to-the-covid-19-pandemic/ [Accessed: 18/03/2020]

Gevisser, M. 2020. How Can You Social Distance When You Share a Toilet With Your Neighbor? *New York Times* 03 April 2020 https://www.nytimes.com/2020/04/03/opinion/coronavirus-south-africa.html [Accessed: 11/04/2020]

Kass, N., Kahn, J., Buckland, A., Paul, A., and the Expert Working Group. 2019. *Ethics Guidance for the Public Health Containment of Serious Infectious Disease Outbreaks in Low-Income Settings: Lessons from Ebola.* https://bioethics.jhu.edu/wp-content/uploads/2019/03/Ethics20Guidance20for20Public20Health20Containment20Lessons20from20Ebola_April2019.pdf [Accessed: 25/03/2020]

Lloyd-Sherlock, P., Ebrahim, S., Geffen, L., McKee, M. 2020. 'Bearing the brunt of covid-19: older people in low and middle income countries'. *BMJ* https://www.bmj.com/content/bmj/368/bmj.m1052.full.pdf [Accessed: 26/03/2020]

Nini, A. 2020. 'Eastern Cape hardest hit by drought' *Dispatch Live* 07 January 2020 https://www.dispatchlive.co.za/news/2020-01-07-eastern-cape-hardest-hit-by-drought/ [Accessed: 09/04/2020]

Nordling, L. 2020. 'A ticking time bomb': Scientists worry about coronavirus spread in Africa. *Science Mag* March 15 2020 7:00PM https://www.sciencemag.org/news/2020/03/ticking-time-bomb-scientists-worry-about-coronavirus-spread-africa [Accessed: 16/03/2020]

WHO. 2020. World Health Organization, Open Courses, 'Comunicação de Risco: Recursos para trabalhadores na linha de frente'. https://openwho.org/courses/comunicacao-de-riscos [Accessed: 10/04/2020]

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COVID-19: EXPERIENCES FROM KASHMIR BY SHAZANA ANDRABI

Head of the Department of International Relations at the Islamic University of Science and Technology in Kashmir.

When I was a kid, my grandmother would tell me a story where a hunchback was granted one wish by an angel. I would naturally think that he would wish a straight back for himself, but he wished a hunched back for all people of the world. As most of the world reels under an unprecedented lockdown, it reminds me of this story. Of course we did not wish for the world to be like us (under different levels of lockdown, that is), but I could not help but remember this story. For the last thirty years, we have been under different forms of curfews, both 'civil' and government-imposed, one in the name of resistance and the other in the name of security.

For us in Kashmir, this lockdown is a continuation of what started on 5th August, 2019. We lived under a total communication blockade (including the telephone and internet) for several months, after which internet was restored at a speed of 2G. I find it essential to share this background to elucidate that this lockdown under which the whole world has been caught unaware, has not riled us the way it has other countries and individuals. Of course this is not a common 'law and order curfew', but as a society that has been in conflict for around three decades, we have evolved emergency mechanisms and a communitarian perspective of readiness for such eventualities. While some people in other parts of the world were fighting over toilet paper, we knew what it meant to 'stock essentials'. Food items that would last longer were stocked (not hoarded), and there were very few or no empty shelves in departmental stores. The government swung into action to ensure that essential commodities including food and medicine were not in short supply, as did the NGOs that went from door to door offering deliveries of food. Many NGOs have started manufacturing masks and PPEs on small scales to meet local demands. Restrictions have turned stricter and people can no longer venture out of their houses. Again, some semblance of order has been brought by departmental stores that have demarcated zones within 3 kms where they deliver orders (thankfully, whatsapp works on a bandwidth of 2G).

Schools and offices have been closed in Kashmir as in other parts of the world. However, in Kashmir we suffer differently. Where educational institutions all over the world are busy organising and delivering online classes, our kids are denied this 'luxury'. They cannot access online lectures or any educational resources without full access to the internet. Nor can they play online interactive video games with their friends to pass their time and create mental diversions for themselves. That which is a necessity in normal times and a lifeline in these circumstances is denied to millions of Kashmiri youth stuck inside their homes. Still, these are problems that can be lived with, of course with major long term mental and physical repercussions. There are some problems that come with the lockdown that are existential crises in the most extreme forms. A spike in cases of domestic violence and women being stuck with their abusers can lead to major problems and mental breakdowns. In my earlier research related to extended periods of lockdown and its effects on gender-based violence in Kashmir, I had found that there was a steep spike in the reported cases of domestic violence during such times in Kashmir. Since there is no way of getting data on this during the current lockdown, the patterns of behaviour strongly suggest that this could be the case even now. More physical violence and subsequent long-term or permanent psychological damage can prove fatal when coupled with the stresses of ordinary life in a conflict zone.

Then there is the economically marginalised population who are most vulnerable to ill health, low immunity and starvation even during normal times. Such people fall between the cracks of government subsidies and other benefits of regularised labour. Many of them, who earn during the day and have no savings whatsoever, face starvation. May labourers have complained that if coronavirus didn't kill them, hunger definitely would. They are forced to move out of their homes to find work or sell their wares. As they move out, they get beaten up by the police due to the curfew in force. If they stay at home, they and their families face certain starvation. Many migrant workers who come to Kashmir during spring and summer months are

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either stuck here or unable to arrive. The ones who want to leave Kashmir and go back home have no avenues to do so. Road traffic has been suspended and state borders sealed. Living in cramped quarters, five to six people sharing a room, they do not have the luxury of social distancing or quarantine. If one of them goes out, they are all vulnerable, especially due to living in such close proximity with one another. The novel coronavirus may not have brought 'novel' problems with it, but it has most certainly exacerbated the existing inequalities and stresses that Kashmiris have been dealing with, particularly for the last three decades.

I will conclude by reminding the reader of the same story that I began with. However, unlike the hunchback, we Kashmiris would like the whole world to come out of the lockdown, and pray that we come out of it permanently as well.

Editor's note: The upate on the number of overall cases of COVID19 in India and its individual states can be found at: https://www.mygov.in/covid-19/ (website accessed on 16th April 2020).

COVID19 SITUATION IN CROATIA BY SNJEZANA KNEZIĆ

(Submitted on April 10, 2020, Accepted after editorial review on April 16, 2020)

As of the 10th April 2020, The status of infected, hospitalized and deaths due to covid-19

Total cases: 1.495
Total deaths: 21
Hospitalized: 343

- The rate of spreading the last week: do not know
- How many are tested out of the total population

14.612 out of 4.076.000 (estimation for 2019)

- What kind of protection measures are done by the government

Travel restrictions, both inside and outside the country. Quarantine or self-isolation (14 days), as well as testing, is mandatory for persons coming from abroad. Inside the country commuting is partially limited, people should have employer's or local authorities' permission to travel from between municipalities/cities. Permissions are given based on meaningful reason via e-citizen system. Islands are protected so only residents can travel from islands to the mainland and vice-versa. Schools, universities, restaurants, hotels and other similar facilities and services are lockdown. Education goes on-line, as well as food delivery. Food stores are open but with limited functionality. People should remain indoors as much as possible and gathering more than two persons in public places are not welcome, more than 5 is prohibited. Minimum 2 meters distance rule is in place. Persons who experience mild COVID-19 symptoms or have been in contact with infected persons should be self-isolated at least 14 days, and they are being checked by police.

- Experience so far – the number of persons infected daily is relatively stable.
- Shortages of any kind to deal with testing and the hospitalized – no significant shortages so far.
- Plans for the future – if the number of persons infected daily shows decreasing trend several days in a row the measures will be eased gradually. Oppositely, measures can be strengthened if number will increase.
- And other issues of importance of learning to be shared with others: nothing particular.

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COVID19 SITUATION IN BELGIUM BY CARMELO DIMAURO

The status of infected, hospitalized and deaths due to covid-19

Since the beginning of the pandemic, 31.119 cases of Covid-19 infections have been detected. Furthermore, the situation is as follows:

- A total of 5 536 patients have been admitted to hospital.
- A total of 1 223 patients have been admitted to intensive care units.
- Since March 15, 2020, 6 868 patients have recovered and have been discharged from hospital.
- A total of 4 157 people have died.
- Of the 4 157 people who died, 52 % died in hospital, 46 % in a rest and care home, 0.4 % at home, 0.5% in another place, 1.2% in an unknown place. All deaths in hospital are confirmed cases. Deaths in rest or care homes are either confirmed or suspected cases.
- A total of 2 149 people have died in hospital., an increase of 90 in the last 24 hours.
- A total of 1 919 people have died in rest or care homes. Among them 58 people are confirmed Covid-19 cases and 1 861 are suspect cases.

The data below are based on the data collected by Sciensano (Belgian Institute for Public Health)

COVID-19 confirmed cases in Belgium by gender and age

Age	Male	Female	n/a	Total
90+	657	1,555	4	**2,216**
80–89	2,104	3,032	7	**5,143**
70–79	2,063	1,680	4	**3,747**
60–69	2,070	1,429	3	**3,502**
50–59	2,224	2,754	7	**4,985**
40–49	1,524	2,581	9	**4,114**
30–39	952	2,101	7	**3,060**
20–29	688	1,683	5	**2,376**
10–19	109	144		**253**
0–9	95	83	7	**185**
n/a	25	22	19	**66**
Total	**12,511**	**17,064**	**72**	**29,647**
Source: data collected by *Sciensano*, as of 2020/04/11.				

COVID-19 confirmed cases in Belgium by gender

Classification		Cases		Deaths		Lethality
		Number	%	Number	%	%
Sex	Male	12,511	42.20	1,484	41.22	11.86
	Female	17,064	57.56	1,214	33.72	7.11
	n/a	72	0.24	902	25.06	n/a
All		29,647	(100.0)	3,600	(100.0)	12.14
Source: data collected by Sciensano, as of 2020/04/11						

COVID-19 deaths in Belgium by gender and age

Age	Male	Female	n/a	Total
85+	578	646	6	1,230
75–84	520	383	2	905

65–74	254	123	4	381
45–64	124	54		178
25–44	6	7		13
0–24		1		1
n/a	2		890	892
Total	1,484	1,214	902	3,600
Source: data collected by Sciensano, as of 2020/04/11				
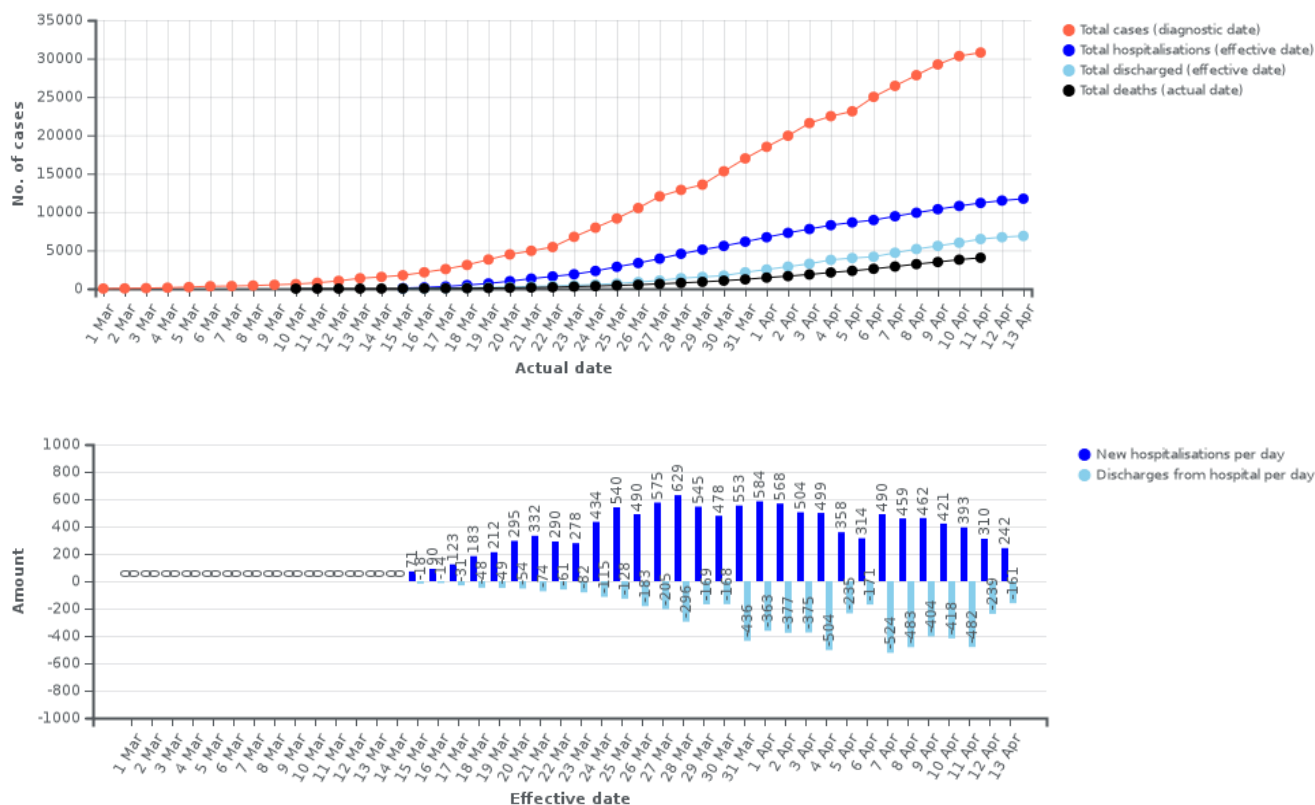
How many are tested out of the total population

COVID-19 confirmed cases in Belgium @ 13 April 2020

		Total
Cases		**31.119**
Belgium	Flanders	18.066
	Brussels	3.309
	Wallonia	9.293
	Unknown	451
Deaths		4.157
Hosp. adm		11.722
Hosp. disch		6.868
Tested	%	27,13
	Total #	112.613

What kind of protection measures are done by the government

The National Security Council of March 27, 2020 which was extended to include the Ministers-President, decided to extend the measures taken earlier by two weeks, i.e. until April 19, 2020. After that, they can then be extended a further two weeks, i.e. until May 3, 2020. In any case, the situation will be monitored constantly. The National Security Council will meet regularly for this purpose.

As a reminder, details of the measures are available on the website www.info-coronavirus.be (link is external).

Regarding physical outdoor activities, these are still recommended, with respect for social distancing and only for the duration that is really necessary to conduct the activity. In other words, people are only allowed to be outside as long as it takes to run, walk or cycle. People also need to keep moving (and not sit around in the parks for hours, for example). The so-called lockdown parties which some people are organising jeopardise all of our efforts and continue to pose a risk with significant health consequences, as the facts show. Such parties are still not allowed, obviously. Regarding schools, and especially their activities during the Easter holidays: The rules will remain the same. Also during the Easter holidays, schools need to provide day-care. If that really proves impossible, a different form of day-care can be organised, under the following conditions: The children who have been in day-care together so far should remain in day-care together, and should not be mixed with other children. If possible, the children should be cared for by people they have recently been in contact with. As always, the decisions are based on recommendations of the scientific experts, who met earlier today.

Violations will be punished. In addition, we will soon introduce a system for the immediate collection of fines.

The April 6, 2020 Belgium launched the second part of the Federal Plan for Social and Economic Protection to support all Belgium's economic actors: companies, employees and the self-employed.
The plan is **based on three pillars:**
- measures to protect the **spending power** of employees;
- measures that directly support the **self-employed**;
- measures to support **companies** in these difficult times.

Additional socio-economic and health measures were lunched the April 11, 2020.

Experience and lesson learned so far
While the COVID-19 was already spreading to all regions of Italy in late February, the Belgian government has been criticised for its lack of action. As in many other countries around the world, Belgium has faced a shortage of personal protective equipment such as respirators, surgical masks or face shields and testing kits.

References
https://www.sciensano.be/en (website accessed on 13th April 2020).

COVID19 SITUATION IN LUXEMBURG BY CARMELO DIMAURO

(Submitted on April 13, 2020, Accepted after editorial review on April 16, 2020)

The status of infected, hospitalized and deaths due to COVID-19

Residents: 23.873
Non-residents: 5.292

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Deaths: 66
Median age: 85 years
Hospitalisations (COVID-19 and suspected cases): 214

Standard care: 183
Intensive care: 31
Hospital discharges: 465

The week April 3-9 , 2020 registered the first figures indicating a slowdown of the COVID infections from the beginning of the contamination in Italy (i.e. February 21, 2020). The number of people in quarantine at home increased of 23,4% (from 52.579 on April 3, 2020 to 64.873 on April 9, 2020), while hospitalized with minor symptoms decreased of 1,2% and, more important, cases in critical care passed from 4.068 to 3.605 (-11.4%). However situation remains dramatic with 3.598 deaths in this 7 days (+24,5%).

How many are tested out of the total population?

People tested positive for COVID-19: 3.281
Residents: 2.685
Non-residents: 596
Average age: 46 years
Ratio men / women: 50,5% / 49,5%
Tests carried out since the beginning of the crisis: 29.165

What kind of protection measures are done by the government?
As of March 11, 2020, the World Health Organisation (WHO) has qualified the COVID-19 as a global pandemic. Moreover, the European Centre for Disease Prevention and Control (ECDC) published an updated risk assessment on March 12, 2020, underlining the 'necessity of an immediate targeted action' in order to dampen the impact of the pandemic. On March 17, 2020, the Government of Luxemburg has declared the state of crises on the national territory (Memorial: A165 - Grand-Ducal Regulation of March 18, 2020 introducing a series of measures as part of the fight against Covid-19). The main measures are related to:

- Travel restrictions for the public
- Measures concerning public establishments
- Limitation of economic activities

The regulation guaranties the operability and social support related vital infrastructure services.

Experience and lesson learned so far
Much of Luxembourg's workforce comes on a daily basis from neighboring countries. The restrictions applied at the different national borders had to be agreed for the management of workers from abroad. The Luxembourg government has issued a specific work certificate which makes commuters exempt from border crossing restrictions. This aspect has required the verification of different types of agreements with foreign workers and with the governments of the countries of origin, especially with regard to health protection and respect for salary and tax compliance.

Shortages of any kind to deal with testing and the hospitalized
No particular problem are recorded at the moment

References
https://msan.gouvernement.lu/en/dossiers/2020/corona-virus.html (website accessed on 13th April 2020).

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COVID19 SITUATION IN THE NETHERLANDS BY CARMELO DIMAURO

(Submitted on April 13, 2020, Accepted after editorial review on April 16, 2020)

The status of infected, hospitalized and deaths due to covid-19

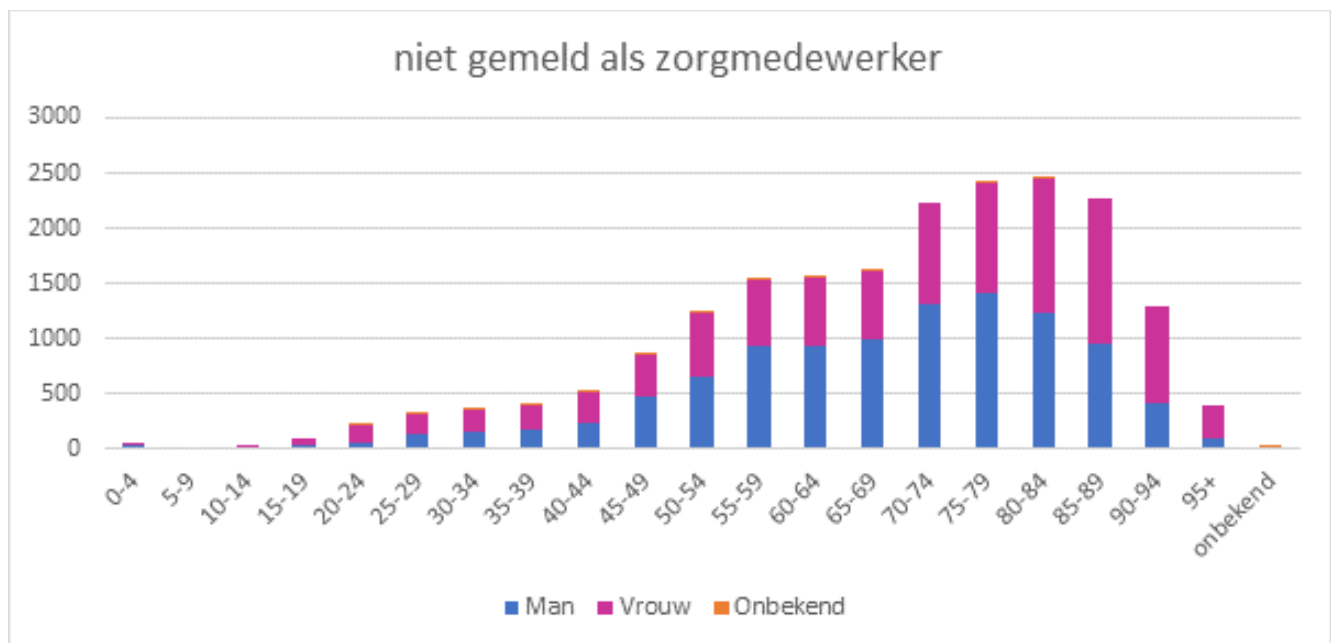Positive tested persons: 27,419*
Admitted to hospital: 8,939
Reported deaths: 2,945**

The actual number of infections with the novel coronavirus is higher than the number mentioned here. This is because not everyone who may be infected is tested for the virus.
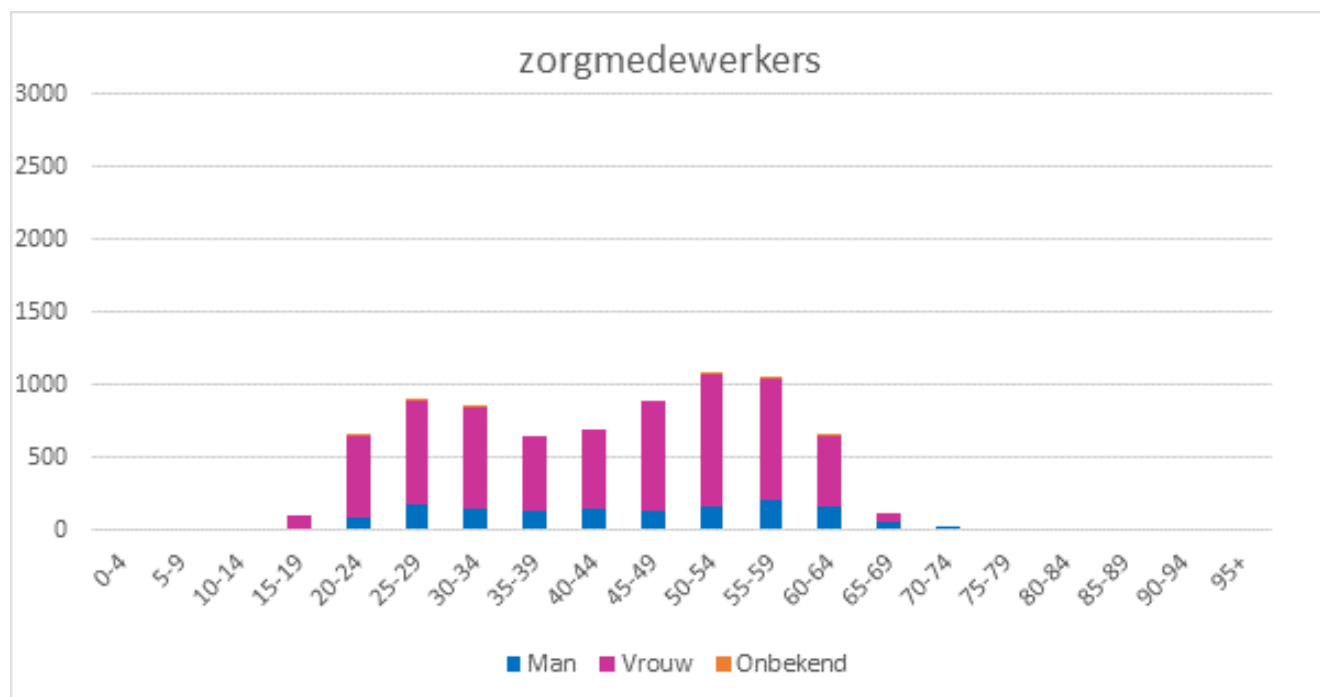
*** There is a delay between the day of hospital admission or the day of death, and the day on which those figures are reported.*

Up to 28% of the confirmed COVID-19 patients reported to RIVM are known to be healthcare workers. The relatively high percentage of healthcare workers among patients with COVID-19 is explained by the fact that the testing policy is partly focused on this professional group. The age distribution and the male/female ratio amongst care workers is different from that of other COVID-19 patients. Of all reported healthcare workers with COVID-19, half are 44 years and younger, and 81% are women. Looking at the other patients, half are 72 years and up, and 48% are women. The following charts show the number of confirmed COVID-19 patients per age group for both healthcare workers and other patients. The blue line shows the number of men and the purple line shows the number of women.

Without considering the health care workers

Man = Man; Wrouw=Woman; Onbekend = Unknown

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Healthcare workers

Man = Man; Wrouw=Woman; Onbekend = Unknown

The rate of spreading the last week

The following graph show the number of Municipal Health Service and reported COVID-19 patients per day. Some of the positive results are only reported one or a few days later. For that reason, the numbers from a few days ago are sometimes adjusted (the yellow numbers show the new numbers). The actual number of COVID-19 patients is higher than the number of reports in the surveillance, because not everyone is tested with possible infection.

Patients reported to the GGD
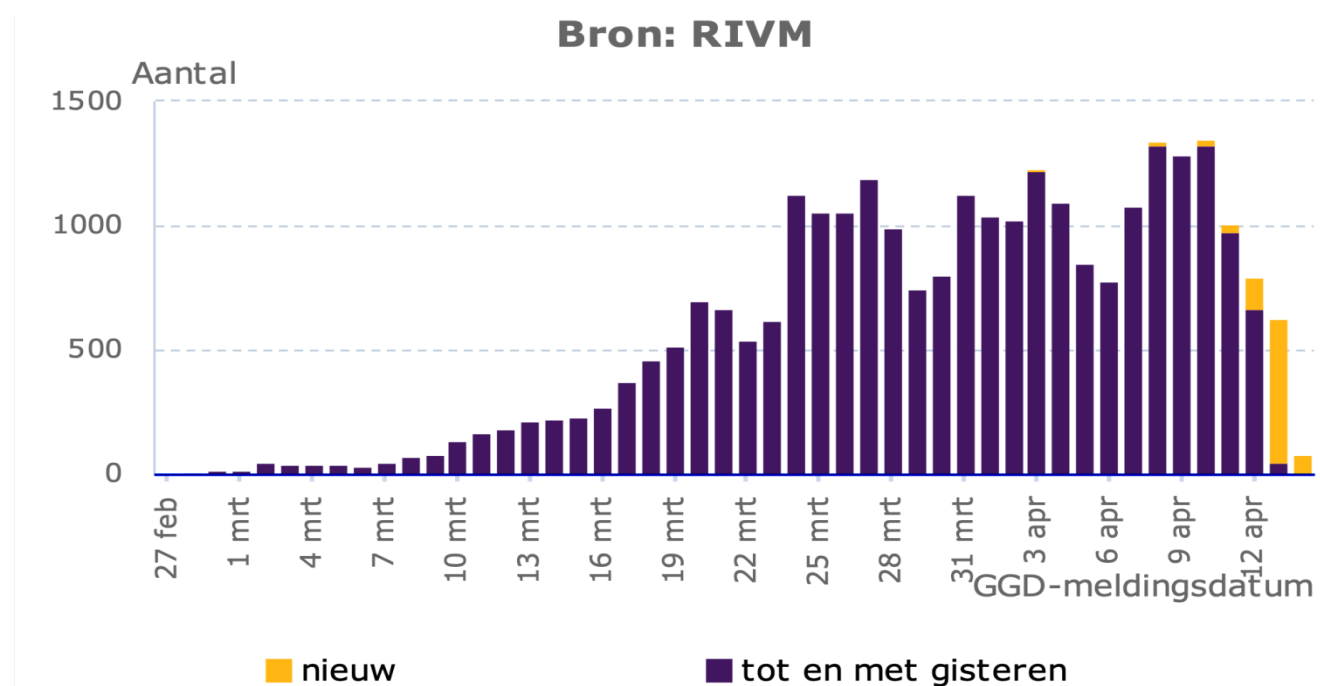
Hospitalized patients

Bron: RIVM

Aantal — nieuw — tot en met gisteren — GGD-meldingsdatum
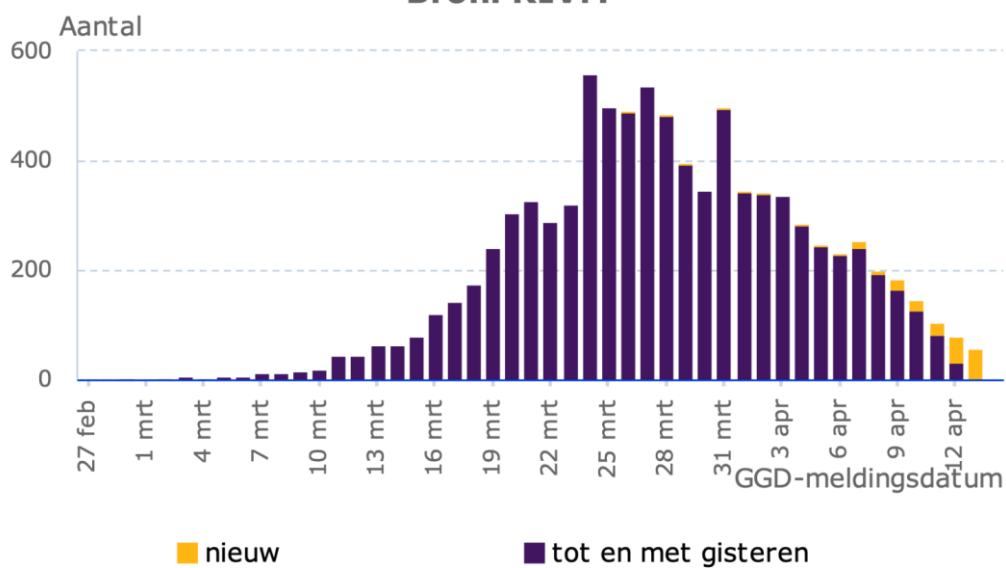
Number of deceased by date of death

Bron: RIVM

Aantal — nieuw — tot en met gisteren — Datum van overlijden
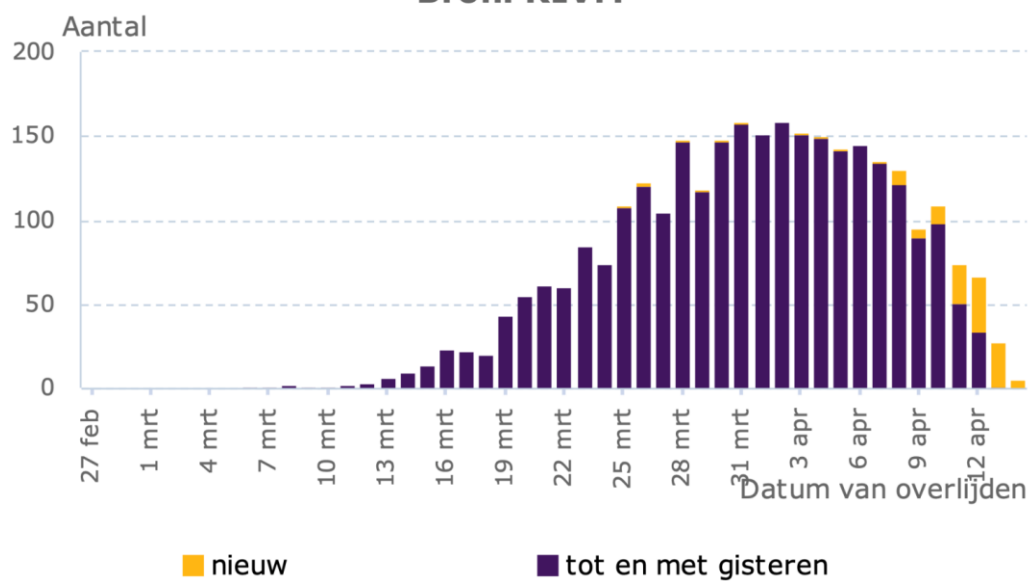
Number of deaths by age and gender

Bron: RIVM
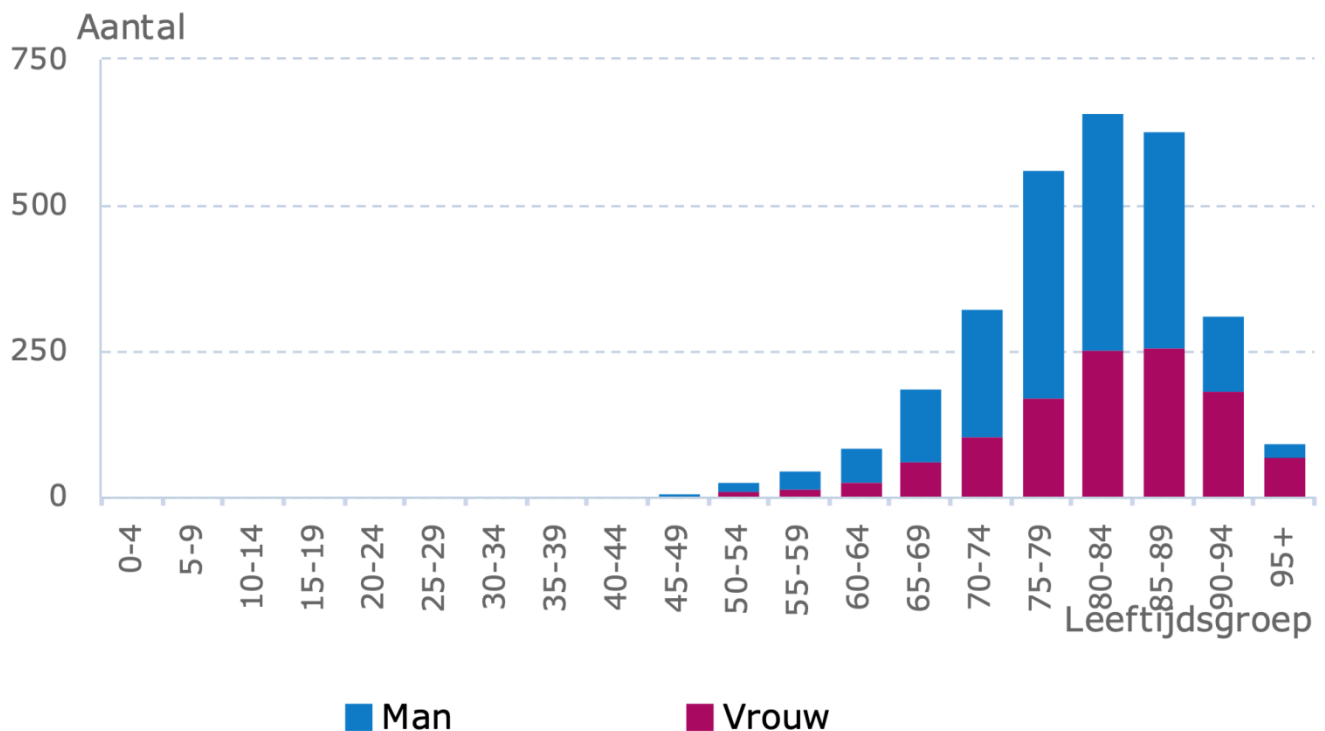
What kind of protection measures are done by the government

By now, many laboratories in the Netherlands can test whether people are infected with the coronavirus. As of 6 April, it is therefore possible to start testing more widely for COVID-19, but it remains important to use the test capacity wisely. Vulnerable groups are people who have a higher risk of severe illness from COVID-19. These people can be tested if they develop symptoms, and confirmation of whether or not they have COVID-19 is important to determine the correct treatment or care. People with symptoms may also be tested because it is important to protect other people in the immediate vicinity of these patients. This applies to the following groups of people:

- people aged 70 years and up;
- people aged 18 years or older with underlying health conditions, such as chronic heart disease, abnormalities and disorders of the respiratory tract and lungs, diabetes, severe kidney disease or severe immune disorders;
- people with serious behavioural problems in a residential institution;
- people with physical disabilities who need significant care.

When operating at full capacity, the Netherlands can handle about 17,500 tests per day. If necessary, the labs can increase testing capacity to about 29,000 tests per day. Testing capacity depends on people and resources.

References

https://www.rivm.nl/en/novel-coronavirus-covid-19/current-information-about-novel-coronavirus-covid-19
(website accsse on 13th April 2020).

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COVID19 SITUATION IN ITALY BY SANDRO BOLOGNA, SIMONA CAVALLINI, VITTORIO ROSATO

The status of infected, hospitalized and deaths due to covid-19

In Italy the first case of COVID19 was officially detected on 21st February 2020, although preliminary findings from the on-going study carried out with the support of the Sacco Hospital (one of the two Italian health infrastructures selected to address issues generated by bio-terrorism and infective emergencies) indicate that COVID19 was already in some areas of the country in January. According to the official data provided by the Italian Ministry of Health, after around 1,5 months (i.e. on 9th April 2020) in Italy the total number of infected people reached 143.626 units. Among them, 96.877 are still infected (67,5%), 28.470 (19,8%) recovered and deaths amount to 18.279 (12,7%). According to John Hopkins University data on the COVID19 contamination in the world by country, on 9th April Italy ranks third for infected cases (after USA and Spain) but unfortunately first for both the number of deaths and the dead rate. Looking at the actual number of infected, 64.873 (67%) are in quarantine at home, the other third is hospitalized. Among hospitalized people more than 11% (3.605) is in critical care. It is relevant to highlight that COVID19 contamination is not homogeneously distributed on the Italian territory. On 9 April, the five most affected regions (i.e. Lombardia, Emilia Romagna, Piemonte, Veneto and Toscana) registered 74,8% of the total COVID19 cases. 54.802 cases (38,3%) in Lombardy region only.

The rate of spreading the last week

During the week 3-9 April 2020 the first figures indicating a slowdown of the COVID19 contamination from the beginning of the contamination in Italy (i.e. 21st February 2020) were registered. The number of Italians in quarantine at home increased of 23,4% (from 52.579 on 3rd April to 64.873 on 9th April), while hospitalized with minor symptoms decreased of 1,2% and, more important, cases in critical care passed from 4.068 to 3.605 (-11.4%). However the situation remains dramatic with 3.598 deaths in these 7 days (+24,5%).

How many are tested out of the total population

On 9th April 2020 853.369 COVID19 tests were carried out in Italy (which population overpass 60 million inhabitants) and at present, COVID19 test coverage on population varies across the 20 Italian regions depending on different factors. Among them: the different strategies taken to monitor the COVID19 infection by the regional authorities (that in Italy have institutional governance of most of the health policies on the territory) and on capacities of laboratories to analyze an unexpected high number of COVID19 tests. For example, on 9th April number of buffers in Lombardy region and Veneto region was almost the same (around 175.000), but population in Lombardy region (around 10 million inhabitants) is double of the one of the Veneto region (4,9 million inhabitants) and number of COVID19 cases in Lombardy region (54.802) was four time higher than the Veneto one (12.933).

What kind of protection measures are done by the government

Starting from the beginning of March the Italian government has gradually taken decisions towards social distancing in order to limit as much as possible COVID19 contamination across population. A number of decrees of the President of the Council of Ministries imposed to all Italians restrictions affecting individuals' daily life as well as socio-economic activities of the entire country. The Italian Civil Protection was in charge of coordinating the emergency management. After a first period of few days in which only a few areas of the Lombardy region were considered "red zones", measures aimed at limiting the freedom of movement were extended all over the Country. Such decisions were taken having as top priority citizens safety and, at the same time, guaranteeing a sufficient care capacity of the Italian Health System to face urgent hospitalizations of an unexpected high number of patients requiring intensive care: a large pressure on Emergency Units in the Hospital has followed due to the large number of people requiring an oxygen support through pulmonary ventilation. Measures to limit freedom of movements were adopted to maintain interpersonal distance (of at least 1 meter) in public spaces. This led to a number of decrees of Italian Presidency of the Council of Ministries (DPCM) reducing occasions of social gathering. Among them, the

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DPCM imposing the closure of all the educational institutions starting from 5th March (DPCM on 4th March 2020) and the DPCM allowing workers belonging to a limited number of economic activities (selected through NACE codes and defined as "essential activities") to access to job place to (DPCM on 22nd March 2020).

Experience and lesson learned so far (including shortages to deal with testing and the hospitalized)
One of the major weaknesses of suffered during the response phase in Italy was the lack of Personal Protective Equipment (PPE) such as protective masks, gloves, disinfection products for large use, particularly due to the fact that production of such devices/products have been dismissed from the national industry and mostly allotted to import from eastern countries. As countermeasures, a solicit financial public support has been given to the Italian enterprises capable of converting part of their activities to rapidly produce such PPE (e.g. fashion enterprises started to produce protective masks) and a proactive approach was taken by the Italian government to favor bilateral agreements with other countries to increase import of such devices/products.

A second major weakness, as previously cited, concerned with the lack of beds in Intensive Care Units (ICU) in hospitals in the most affected regions. Situation of beds in ICU in Italy is of 3.2/1000 inhabitants, to be compared with an average at EU scale of 5/1000 inhabitants, with peaks of 8/1000 (in Germany) but also low figures in some northern EU Countries (2.5/100 and 2.2/1000 for UK and Sweden, respectively). As a countermeasure, additional ICU beds have been created particularly in the regions with a large COVID19 incidence (i.e. Lombardia, Veneto and Emilia-Romagna), some of them from scratch, other by the support of private health infrastructures. In that, the Italian electro-medical industrial area has been particularly stressed to rapidly produce ICU instruments (e.g. pulmonary ventilator systems) needed to face COVID19 medical complications (primary and interstitial pneumonia).

A further relevant weakness was the shortage of pharyngeal swabs needed to test people positivity to the presence of COVID19. This has been a major problem for at least two orders of problems:
(1)   the small national production capacity of swabs and the rely on import in a period in which their demand has been stressed and increase worldwide
(2)   laboratory processing of pharyngeal swabs is a lengthy process (a few hours to be completed) which can be poorly parallelized. Moreover, it usually requires a security set up of at least level 2 (Biological Security Level 2, BSL2) to be performed: this is usually achieved in Public Hospital Laboratory, whereas private Laboratories in Italy do not comply with this standard. Public Hospitals in Italy have thus represented the bottleneck of the whole screening process. Countermeasures to take over this problem consisted in supporting a number of private laboratories to achieve a compliance with the BSL2 standard and allowing them to participate to the screening process.

A further problem has been represented by the regional cost-saving policies in the last decades taken by several Italian Regional Authorities that aimed at concentrating most of the ICU in General Hospitals based in the largest cities, leaving part of the territory with a small capacity to provide intensive cares for the patients. This setting has produced a large clustering of patients in the few Hospital which became epidemic outbreaks. Short-term solutions to this are quite complex as they stem on a long-term strategy adopted by most of the Italian Regional Authorities aimed to save costs of Public Health Service with the countereffect to largely reduce the territorial health supply for the intensive care of patients. A major role in the high number of casualties in Italy has been taken by RSA (Residenze Sanitarie Asssistenziali, i.e. Nursing Homes) where elderly (and thus largely vulnerable) people are assisted. A large number of them in Italy are privately managed and although provided of professional care givers not obliged to be compliant to all the requirements imposed to public health infrastructures. To prevent COVID19 contamination RSA have been totally isolated allowing only personnel to access them.

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Ideas for the future

A number of lessons have been learned by the current events in Italy: some of them relate to the Epidemical Surveillance, others on the Health Service strategy and on the industrial setting in relation of urgent and essential devices needed in large scale disasters.

<u>Epidemic surveillance system</u>. As many other countries, epidemic surveillance and alerting is made through the use of General Hospital and Medical Doctors (dispersed on the territory) who catch anomalous signals from their cared patients. Reporting of these data should be done to a centralized insitution (in the case of Italy to the National Institute of Health – Istituto Superiore di Sanità, ISS) to which is allotted the task of making an assessment of the sanitary situation in the areas where the onset of epidemic outbreak (e.g.. a periodic flu, a local scale epidemic) is discovered. The ISS thus alerts the Italian Ministry of Health which takes the needed actions/countermeasures.

This strategy (which is widely diffused in many Countries) if, on one hand, can produce reliable results as it analyses "patients" (i.e. people with clear symptoms of some disease) and thus can provide clearer assessments on a specific disease, on the other hand, just because it considers people only after contamination negatively impact on promptness of the public authorities to take the necessary countermeasures.

A possible breakthrough could be achieved in the national Epidemic Surveillance by shifting backward (i.e. to the level of healthy people) the task of locating anomalous signals of infective diseases, i.e. well before they become patients. If, on one hand, this will imply a much more complex data elaboration to catch the signal form the "sanitary noise", on the other hand it could trigger much in advance possible signals of incoming infective diseases and provide a longer time to the authorities to set up appropriate countermeasures. The limitation of this strategy (i.e. the complexity of the extraction of "early" signals from the sanitary noise) could be reduced by using a large number of voluntary people (i.e. a large cohort of people able to reproduce the national population fabric) which can be regularly screened by the National Health Service.

<u>Health Service coverage strategy</u>. The centralization of ICU only in the major cities has revealed to be a major limit in these situations. The take-over of such limitation is under study. Possible way-outs will be in the imposition to private health structures (Private Clinics) to deploy a limited amount of ICU to be used in case of severe emergencies occurring in scarcely populated areas. In addition, the creation of Civil Protection protocols for the rapid setting up and deployment of such structures (ICUs) as well as mechanisms to resort to the capability/structures of the Army to support quickly the management of civil emergencies are under analysis.

<u>Industrial issues</u>. National industry has been supported to rapidly produce all PPE needed to cover an extraordinary large consumption of devices and of products whose use becomes relevant and extremely diffused in these types of Emergency. Also in this case, the Army capabilities have been deployed (Istituto Farmacologico Militare, Pharmacological Military Institute) for the production of of a certain amount of PPE and chemical products. Despite the activation of such production channels, most of the national needs of PPE and chemical products has been still related to import. In such a stress situation, the international market was not promptly or fully available to sustain the Italian demand: thus a deep rethinking of these topics is on the way, in order to ensure a stable (and autonomous) capability of answering the demand in similar circumstances.

Other issues of importance of learning to be shared

Italy has been the first European country experiencing COVID19 outbreak, just after China, South Korea, Hong Kong, where different approaches were taken to face this emergency. This puts in evidence at least five important aspects when designing and implementing actions to face COVID19:

➢ How to define mid-term strategies against the COVID19 diffusion in a full democratic country (i.e. the political strategies in Italy take place through the parliament with a multi-party system) in which citizens' rights, including freedom of movements, are guaranteed.

➢ How to take measures against the COVID19 diffusion at national level in a country (i.e. Italy) where some policies and their governance and implementation (e.g. health ones) are defined at sub-national level (i.e. at regional level).

➢ How to sustain to economic sectors essentially made by small enterprise not included in the lists of "essential services" and in which smart working is not applicable. Crucial economic activities in Italy are for instance those related to tourism such as hospitality services, food production/distribution and handicraft.

➢ How to combine Epidemic Surveillance Systems with privacy issues such as those regulated in the General Data Protection Regulation (GDPR) adopted in the European Union.

➢ How to better exploit opportunities provided by information and communication technologies (ICT) in partially ease current restrictions (e.g. social distancing, limited access to job places) taking into account the digital divide among countries and between different regions inside one country (e.g. the internet access and mobile device applications in Italy is less than in the rest of Europe and much less than in South Korea).

However, any suggestion about the adoption of specific actions, such as a specific Pandemic Plan for Preparedness and Emergency Response proposed by the World Health Organization (WHO), should take into account distinctions from country to country such as those mentioned above.

References

- *"C'è la prova: il Coronavirus era in Italia da gennaio" ("Evidence found about Coronavirus in Italy during January"),* https://www.ilsole24ore.com/art/coronavirus-italia-circola-gennaio-confermata-origine-cinese-ADQK6x

- Official page of the Johns Hopkins University (JHU) on COVID19 data and world maps, https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6

Official page of the Italian Ministry of Health on the spreading of Coronavirus on 9 April 2020, http://www.salute.gov.it/portale/nuovocoronavirus/dettaglioNotizieNuovoCoronavirus.jsp?lingua=italiano&menu=notizie&p=dalministero&id=4431

A PRELIMINARY ANALYSIS OF COVID-19 EMERGENCY RESPONSE IN UKRAINE

Fighting the SARS-CoV-2 Pandemic as of 15th of March 2020
by Andre SAMBERG and Olena MASLYUKIVSKA

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1.   Main facts about Ukraine

Ukraine is the Eastern European country. It is also the associated member state of the European Union. (1) The capital is Kyiv. (Fig. 1)

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Figure 1. Administrative map of Ukraine and non-government controlled territories in eastern Ukraine (DNR, LNR) (on the right side) and the Crimean Peninsula (Crimea) (at the bottom)

As of 1st of February 2020, the estimated population excluding the non-government controlled territories is about 42 million people. (2) The President of Ukraine is the head of the state. The government, the Cabinet of Ministers of Ukraine (*in Ukrainian, Кабінет Міністрів України*) (3), exercises executive power in Ukraine. The Prime Minister heads the Cabinet. The Ukrainian parliament is called the Verkhovna Rada (*in Ukrainian, Верховна Рада України*) (4). Presently, the Verkhovna Rada has 450 members, elected for a five-year term. The Verkhovna Rada initiates legislation, ratifies international agreements, and approves the budget. Due to the existing administrative and territorial division, there are 24 primary administrative units (oblasts, *in Ukrainian, область*) (*in Ukrainian, Обласна Державна Адміністрація*) in Ukraine.

2. The structure of the COVID-19 emergency response organization

Presently, there are 17 different ministries. Regarding the COVID-19 emergency response in Ukraine, the key ministries are the following:
- Ministry of Health of Ukraine (*in Ukrainian, Міністерство охорони здоров'я України*) (5)
- Ministry of Finance of Ukraine (*in Ukrainian, Міністерство фінансів України*) (6)
- Ministry of Internal Affairs of Ukraine (*in Ukrainian, Міністерство внутрішніх справ України*) (7)
    o The State Emergency Service of Ukraine (SESU) (*in Ukrainian, Державна служба України з надзвичайних ситуацій ДСНС*) (8)
    o Border Guards (*in Ukrainian, Державна служба України з надзвичайних ситуацій*) (9)
    o National Guards (*in Ukrainian, Національна гвардія України*) (10)
- Ministry of Economic Development, Trade and Agriculture of Ukraine (*in Ukrainian, Міністерство розвитку економіки, торгівлі та сільського господарства України*) (11)
- Ministry of Social Policy of Ukraine (*in Ukrainian, Міністерство соціальної політики України*) (12)
- Ministry of Foreign Affairs of Ukraine (*in Ukrainian, Міністерство закордонних справ України*). (13)

In addition to the directly involved abovementioned ministries, the following state bodies are involved in the process of the COVID-19 disaster response and the disaster relief too:
- The Office of the President of Ukraine (*in Ukrainian, Офіс Президента України*) (14)
- The State Commission on Technogenic and Environmental Safety and Emergency Situations (*in Ukrainian, Державна комісія з питань техногенно-екологічної безпеки та надзвичайних ситуацій*)
- The National Security and Defense Council of Ukraine NSDC (*in Ukrainian, Рада національної безпеки і оборони України РНБО*) (15)

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Ministry of Digital Transformation of Ukraine (*in Ukrainian, Міністерство цифрової трансформації України*) (16) provides the digitalization support to the state players.

Furthermore, each regional administration has own regional commission on technogenic and environmental safety and emergency situations.

In accordance with the Code of Civil Protection (*in Ukrainian, Кодекс цивільного захисту України*) (17), the State Emergency Service of Ukraine (SESU) is responsible for the state-wide emergency management. However, there are no evidences that the SESU have been actively exploiting its mandate in fighting the COVID-19 pandemic. Rather the Ministry of Health of Ukraine has spontaneously taken the leadership, and looks like everybody has silently accepted this as *de-facto* although the legal advisors have a strong doubt that such a way of emergency management is correct and entirely in line with the existing Ukrainian laws and the Constitution. There is no Marshall law in place as of 15th of April 2020 although there is an ongoing public debate on that. While waiting for the reaction to the COVID-19 situation and the guidelines from the central government, a number of the regional administrations have decided to act proactively and declared themselves a state of emergency and announced the restrictions locally:

Chernovitska oblast - 17 March 2020
Zhytomyrska oblast - 17 March 2020
Kyivska oblast – 18 March 2020
Dnipropetrovska oblast – 20 March 2020
Ternopilska oblast – 20 March 2020
Ivano-Frankivska oblast - 20 March 2020
separately the capital Kyiv – 20 March 2020
Kharkivska oblast – 21 March 2020
Donetska oblast – 21 March 2020

3.   The adaptation of the Ukrainian legislation to the COVID-19 outbreak as of 15th of April 2020

A quarantine is recognized as a force majeure circumstance by the Ukrainian Parliament. Following some plans to fight the COVID-19 virus, several laws were adopted to the new situation in society. There are some examples below, although this list is getting longer every day and may be extended at the moment of the publication of this preliminary report.

The nationwide quarantine was imposed by the Resolution No. 211 "On the prevention of propagation in the territory of Ukraine acute respiratory disease COVID-19 caused by SARS-Cov-2" of the Cabinet of Ministers of Ukraine on 11th March 2020 (*in Ukrainian, Про запобігання поширенню на території України гострої респіраторної хвороби COVID-19, спричиненої коронавірусом SARS-CoV-2*) (18).

This CMU resolution No. 211 states the following:
-       The need to carry identification documents will allow to check whether a person should be on self-isolation or in observation. It will also enable law enforcement agencies to apply administrative liability to quarantine rules violators.
-       Everyone must be wearing a mask or a respirator in all public places. Public place – is a location to which all of the public have access, i.e. part of any building to which the citizens have access, including for a fee (entrances, pedestrian subways, stadiums; parks, public gardens, playgrounds, public transport stops, elevators, government agencies, medical institutions and more). The list of public places can be expanded by local authorities. For example, in Kyiv city, the public places are considered public transport stops and a 50-meter area around them; the churches and a 50-meter area around them; closed and open trade establishments, in particular rows of shopping stalls and markets; cinemas and the surrounding area; etc.
-       For violation of quarantine rules, a fine of UAH 17,000 (á 570 EUR) up to UAH 34,000 (á 1,140 EUR) is envisaged (the author's note: the minimum salary is UAH 4,723 or á 150 EUR, and the typical pension is

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about UAH 1,700 or á 55 EUR). If one violates sanitary rules and regulations for the prevention of infectious diseases, he/she may be brought to criminal responsibility.

- The Government does not close the churches, but mass and religious gatherings are prohibited.
- The Ministry of Internal Affairs and the National Guard will monitor compliance with the quarantine rules in public places.
- Citizens must gather only in a group of two in the streets. An exception is accompanying children regardless of their number.
- People over 60 years old must stay at home. They are at high risk and therefore need self-isolation. What does it mean? First, they must stay in the determined place of self-isolation. Second, they must refrain from contacting others - other than those with whom they reside.
- People on home isolation (other than COVID-19 infected) who are not cared for are allowed to visit shops and other places of commerce located within 2 kilometers of the place of self-isolation. These people must adhere to the regime of wearing a face mask. In addition, the Government instructed regional state administrations to take additional measures to identify and serve single elderly and persons living alone, disabled citizens, persons on self-isolation and to arrange for relevant social support.
- It is banned to gather in a group of more than two people and to go to parks/public gardens, recreation areas, etc.
- Children under the age of 14 are recommended to go out only with their parents or foster parents. Resolution No. 211 states that children are not allowed to be in public places without adults. It is recommended that children do not leave home without an adult.
- Visits to parks, public gardens, recreation areas, forest parks and coastal areas are prohibited. This is only allowed if one needs to walk a pet or in case of work exigency.
- Citizens are still allowed to walk their pets, but gathering no more than two. Only one person is allowed to walk a pet in parks and public gardens.
- The quarantine measures are currently in effect until April 24, which is why all educational institutions have been transferred online. On the initiative of the President, the project "All-Ukrainian School Online" is launched. The start of the broadcast is April 6.
- No, it's not true. Establishments and shops authorized to operate during the quarantine period only have to control that visitors are only in masks and respirators in buildings and on the premises. It is the visitors' responsibility to protect themselves with masks.

The Law of Ukraine (bill No.2538) – "On amendments to certain legislative acts of Ukraine aimed to increase availability of medications, healthcare products and other goods bought by a person entitled to make purchases in the field of health care"

Main points:
- Ministry of Health established a new public legal entity (The Purchasing organization) for purchasing drugs at the expense of public funds,
- This Purchasing organization is allowed to directly buy drugs from domestic and overseas suppliers.

The Law of Ukraine (bill No.3219) – "On amendments to legislative acts of Ukraine aimed to prevent the occurrence and spread of the coronavirus disease (COVID-19)"

Main points:
- The quarantine is to be lawfully treated as force majeure circumstances,
- All pharmaceuticals imported to fight the COVID-19 disease are customs and VAT exempts,
- Employees might either switch over to remote working or get a quarantine-long unpaid leave,
- Expedited purchases of goods, works and services needful for combating the COVID-19 virus through the agency of a simplified purchase procedure – without resorting to electronic tenders,
- The law establishes administrative responsibility for unauthorized leaving of observation locations – a fine of 1,000 to 2,000 non-taxable minimum incomes, as well as 2,000 to 10,000 ones for government officials;

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- The law provides for restriction of liberty up to 3 years or prison time up to 3 years for violating the rules set to prevent the epidemic and other infectious diseases, if such actions entailed, or could entail, the spread of these diseases. Such actions also entail a fine amounting from 1,000 to 3,000 non-taxable minimum incomes, if same actions inflicted death or other grave consequences, they are punishable by imprisonment from 5 to 8 years.

The Law of Ukraine (bill No.3220) – "On amendments to the Tax Code of Ukraine and other legislative acts of Ukraine aimed to support taxpayers during the period of taking measures against the occurrence and spread of the coronavirus disease (COVID-19)"

Main points:
- No punitive penalties for tax offenses committed within the period from March 1 till April 30, 2020
- No revisions/inspections within the period from March 18 till April 30, 2020
- The filing period for annual property and income declarations is extended until July 1, 2020
- Land use fees are not to be charged and levied within the period from March 1 till April 30
- The deadline for mandatory introduction of cash registers for solopreneurs is extended until January 1, 2021 (and even April 1, 2021 in certain cases).

The Law of Ukraine (bill No.3320) – "On amendments to the Law of Ukraine 'On protection of the population against infectious diseases' to prevent the spread of the coronavirus disease (COVID-19)"

Main points:
- Offers the opportunity for heads of healthcare institutions to involve the following categories in the provision of medical care - such as scientific and pedagogical workers of higher (postgraduate) education institutions providing training in the healthcare sector, other persons with a specialist medical certificate and an appropriate medical category.
- The norm, necessary for the processing of personal data of citizens, is temporarily introduced in order to introduce modern anti-epidemic measures. For the period of establishment of quarantine or restrictive measures and within 30 days from the date of its cancellation, processing of personal data is allowed without the consent of the person, including data regarding the state of health, place of hospitalization or self-isolation, last name, first name, middle name, date of birth, place of residence and work.
- Provides the local executive authorities and local authorities with the right in the territories where quarantine is established to create a special regime of entry, exit not only throughout the quarantine territory, but also in separate administrative and territorial units, and, if necessary, to conduct a sanitary inspection of property items, baggage, vehicles and cargo.
- provided for the possibility by local authorities to create checkpoints at the entrances, exits from it and at separate administrative-territorial units located on the quarantine territory, as well as to attract military personnel, workers, logistics and vehicles of enterprises, institutions for work at these points organizations regardless of ownership, units and subdivisions of the central executive authorities of the Ministry of Defense.

The Resolution № 336-p of the Cabinet of Minister of Ukraine "The changes in the list of the members of the Cabinet of Minister of Ukraine" of 25 March 2020 defines the updated list of the members of the State Commission on Technogenic and Environmental Safety and Emergency Situations. (*in Ukrainian, "Про зміну складу Державної комісії з питань техногенно-екологічної безпеки та надзвичайних ситуацій"*) (19) Unfortunately, there are no experts in virology or/and medical microbiology on board of this commission as of 15th of April 2020.

The private health care sector is prohibited to conduct the COVID-19 testing although they were the first who started to deliver this service, discovered and publicly reported about the first COVID-19 positives in the beginning of the COVID-10 crisis in Ukraine while the government refused to admit the problem. At the moment, only one state laboratory is authorized. It is the State Enterprise "Public Health Center of the

Ministry of Health of Ukraine" (*in Ukrainian, Державна установа «Центр громадського здоров'я Міністерства охорони здоров'я України»*) (20) The results of the COVID-19 testing from the private health care service providers are ignored. Now the private health care sector is accused, and, furthermore, their top management is accused of the threatening the national security and being the traitors. There are the known cases where the State Secret Service of Ukraine fired the case against them and already had several interrogations in a prison. (27)

On 11th of March 2020, the National Academy of Sciences of Ukraine (NASU) has established the working group to create the vaccine against SARS-CoV-2. (21) This group is chaired by the Academician Prof. Dr. (biology) Sergiy Komisarenko who is the chair of NASU Department of Molecular Immunology and the Director-General of the O.V. Palladin Institute of Biochemistry. His team announced the developed own cheap COVID-19 testing kit, successfully tested on own expenses and offered this product to the government. Soon after that the personnel of this research entity were sent on the unpaid leave. At the same time, the government announced the deal and purchasing the much expensive COVID-19 testing kits from abroad. (26) Regarding the official COVID-19 statistics in Ukraine, on 8th of April 2020, Prof. Komisarenko has estimated that those figures are, at least, 10 times less than it is reported by the government. (27) One of the reasons, why the number of the COVID-19 causalities is underestimated because there were not testing for a long period, and now not everyone is tested.

There is no state sanitary-epidemiological service which was discontinued on 29th of March 2017. Despite the strong public demand during the COVID-19 crisis in Ukraine, this service has not been restarted. The Department of Disaster and Crisis Modelling in the State Research Institute of Civil Protection was dismissed in 2017 too. Thus, since 2017, the entire sanitary-epidemiological and disaster modelling system was considered as unnecessary in the future.

4. The COVID-19 treatment protocol

On 10th of April 2020, Minister of Health of Ukraine issued the Decree "The changes in the COVID-19 treatment protocol dated 2nd April 2020" (*in Ukrainian, Наказ Про внесення змін до протоколу «Надання медичної допомоги для лікування коронавірусної хвороби (COVID-19)» від 02 квітня 2020 року № 762*). (22) Among 19 members of the working group for this decree, there is only one expert, who is an infectious disease expert! There are no experts in virology or/and medical microbiology on board. This Decree sets the COVID-19 treatment protocol. According to this protocol, hydroxychloroquine is considered as the main drug for healing those who are in the critical condition. In addition, in some cases, an anti-viral agent Favipiravi (*in Ukrainian, Фавіпіравір;*), known also as Avigan or T-705, is recommended. The COVID-19 positives, but not in the bad condition, are recommended to be treated with an antibiotic, antifungal agents, chloroquine and lopinavir.

On 15th of April 2020 in the morning, during the online press-conference in Facebook Minister of Health of Ukraine exceptionally admitted publicly that the number of the infected medical personnel is already almost 700 persons, and the sad number of the dyed medical personnel is 90 persons. As of 15 of April 2020, the official statistics is the following: COVID-19 infected 3,764, deaths 108, recovered 143, and positive 13,197. However, the official figures are not trustable because there is a number of the examples where the National Federal Investigation Agency and the police have filed the cases where the medical personnel either have hidden the COVID-19 positive cases, if the infected person was a medical personnel itself, or accepted the bribe in order to change the testing results to the COVID-19 negative. (23-25) Furthermore, when the COVID-19 wave hit Europe, at least, hundreds of thousands of Ukrainians crossed the border and entered the country from the centers of the COVID-19 epidemy in China, Italy and Spain, where they worked and lived. They were never COVID-19 tested and monitored on the border or later.

5. The conclusions

The COVID-19 crisis in Ukraine is still underestimated. There is obviously the still ongoing inside political game when the governments and the ministers of health change frequently. (28-30) For example, in August 2019, the telephone conversation leaked into the media, where the president of the private clinic "Boris"

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admitted a secretly planned arrangement when he supposed to become the ministry of health. After this story was published, he withdrawn and was nominated as the chair of the Committee of Health, Medical Care and Medical Insurance of the Parliament. On 4th of March 2020, a new minister of health was appointed. After three weeks later on 30th of March 2020, another minister of health was appointed again. (28-30)

Private health care service providers are put aside, and feel the pressure from the domestic law enforcement agencies. Their much advanced resources and capabilities are not fully exploited. As reported in multiple example stories on the nationwide TV news broadcasts and in social media, they are treated like the competitors of someone who is close to the government or even a higher level. The future research should be more focused on analyzing socio-economic impacts on society and the development of the post-COVID-19 recovery strategy. Ukraine has been the biggest labor supplier to the Western market. When the EU re-opens the EU borders how can we ensure that the returning workers from Ukraine are healthy and not the COVID-19 hosts?

References

[1]   https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22014A0529(01) &from=EN
[2]   http://www.ukrstat.gov.ua
[3]   https://www.kmu.gov.ua/uryad-ta-organi-vladi/team
[4]   https://rada.gov.ua
[5]   http://www.moz.gov.ua
[6]   http://www.minfin.gov.ua
[7]   http://mvs.gov.ua
[8]   https://www.dsns.gov.ua
[9]   https://dpsu.gov.ua
[10]   http://ngu.gov.ua/ua
[11]   http://www.me.gov.ua
[12]   http://www.msp.gov.ua
[13]   http://www.mfa.gov.ua
[14]   https://www.president.gov.ua
[15]   https://www.rnbo.gov.ua
[16]   https://www.e.gov.ua
[17]   https://zakon.rada.gov.ua/laws/show/5403-17 (in Ukrainian)
[18]   https://zakon.rada.gov.ua/laws/show/ 211-2020-%D0%BF (in Ukrainian)
[19]   https://zakon.rada.gov.ua/laws/show/336-2020-%D1%80#n7 (in Ukrainian)
[20]   https://phc.org.ua
[21]   http://www.nas.gov.ua/ legaltexts/DocPublic/P-200311-90-0.pdf (in Ukrainian)
[22]   https://moz.gov.ua/uploads/4/20030-dn_10042020_852_protokol.pdf (in Ukrainian)
[23]   https://www.umj.com.ua/article/172907/covid-19-politsiya-pochala-dosudove-rozsliduvannya-proti-medikiv (in Ukrainian)
[24]   https://zik.ua/news/crime/na_zakarpatti_prokuratura_rozsliduvatyme_prykhovuvannia _diahnozu_covid_19_965207 (in Ukrainian)
[25]   https://www.ukrinform.ua/rubric-regions/3000439-medpracivnicu-z-berdiceva-mogli-zaraziti-rodici-aki-buli-za-kordonom.html (in Ukrainian)
[26]   http://www.nas.gov.ua/UA/Messages/Pages/View.aspx?MessageID=6308 (in Ukrainian)
[27]   http://nrcu.gov.ua/news.html?newsID=93149 (in Ukrainian)
[28]   BBC News (31 August 2019). https://www.bbc.com/ukrainian/news-49534920
[29]   https://hromadske.ua/posts/rada-vidpravila-u-vidstavku-ministra-ohoroni-zdorovya-yemcya   (in Ukrainian)
[30]   https://zaxid.net/verhovna_rada_priznachila_ministriv_finansiv_i_ohoroni_zdorovya_ n1500113 (in Ukrainian)

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CORONAVIRUS DISEASE 2019 (COVID-19) SITUATIONS IN THAILAND BY CHERDSAK VIRAPAT[3] *ET AL.*

As requested by Mr. K. Harald Drager, President of The International Emergency Management Society (TIEMS) to provide factual information of the coronavirus disease 2019 (Covid-19) and its spreading, and experience and lessons learned to be shared around the world in a Special Issue of TIEMS Newsletter, I and team Thailand are pleased to provide such information as part of the TIEMS global network. The information provided in this documents has been referred to some references of World Health Organization (WHO) South-East Asia (http://www.who.int/thailand/emergencies/novel-coronavirus-2019/situation-reports), Thailand's Department of Disease Control (DDC), Ministry of Public Health (http://www.ddc.moph.go.th/viralpneumonia/eng/news.php), Research and Knowledge Emergency Operation Center (RKEOC)[4], Ministry of Higher Education, Science, Research and Innovation (http://www.nrct.go.th/covid19).

- The status of infected, hospitalized and deaths due to Covid-19 from 7 March 2020 to 18 April 2020 by WHO South-East Asia and DDC, Thailand.

A daily report to public is televised by designated speakers of Center for Covid-19 Situation Administration (CCSA) in Thai and English.

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[3] Outgoing Executive Director, International Institute for Trade and Development-ITD (Public Organization), Ministry of Commerce, Thailand (1 April 2020) and Incoming Director-General, Centre of Integrated Rural Development for Asia and the Pacific (CIRDAP), Bangladesh (6 July 2020)

[4] RKEOC has been established in 2020 under National Research Council of Thailand (NRCT) to coordinate with all relevant agencies of MHESRI for knowledge management mechanism which can be linked to Ministry of Public Health and to provide effective and up-to-date information to the general public in a timely manner such as infographic and VDO clips in collaboration with WHO.

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- The rate of spreading

The rate of spreading had increased prior to announcement of Emergency Law on March 26, 2020 due to traveling of people from Bangkok to countryside. The new cases had been fluctuated from 91 cases to 143 cases per day till the curfew announcement from 10 pm to 4 am has been issued on April 3, 2020. Since then the new cases have shown a declining trend to 33 cases on April 18, 2020.

- How many are tested out of the total population?

Thailand has administered more than 30,000 tests and recently increased tests to 1,000 a day. Thailand has carried out the tests in according to its monitoring, control and surveillance on known cases based on identified criteria of symptoms and those who are particularly linked to risk groups. This is to meet availability and financially of medical resources of the country.

- What kind of protection measures are done by the government?

The Thai Government has applied adaptive management on protection measures which has resulted in a well control over spreading of the Covid-19 on a timely manner. These measures are:

1. Public health measures
   1.1 Prevention measures prior to infection such as public health promotion to increase people immunity, wearing a face-mask, personal hygiene (consume hot food, not sharing spoons, wash hands frequently with soap) and social distancing;
   1.2 Prevention measures during the infection such as examination, diagnosis, and interactive treatments, quarantine, isolation of patients, disinfection of various places with (possible) links to Covid-19 infections, and communication with public at large on cause and effects and symptoms of the disease, proactive trace and search of high-risk cases and all necessary preventive actions, Protection and support of medical staff are highly importance;

2. Legal measures
   This includes Government policy and laws in implementing public health measures and enforcement by establishment of a central command center so-called "**Center for Covid-19 Situation Administration (CCSA)**" chaired by the Prime Minister to provide effective risk communication with public and all provincial administration, sufficient production and distribution of face shields to medical staff and people, coordination mechanism among Government interagency departments, support adequate funding sources for quarantine and purchasing of medical equipment and materials, inform people to strictly follow the public health policy and guidance.

   Under the Emergency Decree on Public Administration in Emergency Situation, B.E. 2548, the Government announced the state of emergency by issuing series of announcements concerning protection and proactive measures across Thailand from the midnight of 25 March 2020 until 30 April 2020. The measures include close of food court and restaurants, malls, and discouraged activities to limit the spread as well as public campaigning on staying at home/work from home. Foreigners are banned from entering the kingdom at all points with the exception of diplomats, shippers, drivers, pilots, and other permitted by the Prime Minister. Thai nationals stranded in other countries will still be allowed to return provided that they have a fit-to-fly health certificate. Government offices, financial institutions/banks, hospitals, and shops selling food (take away only) or necessary consumer products remain open. Later on, Thailand night curfew from 10 pm to 4 am has started from April 3, 2020 onwards.

3. Community-based adaptive learning on protective measures at the community level
   A group of public health volunteers signed a joint declaration of intent to monitor and prevent the spread of the Covid-19 and to provide knowledge on protective measures to their families and community members. Public health volunteers play an important role in taking care of community

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members' health and improving their daily hygiene. The Ministry of Public Health provided guidelines on ways to protect themselves from the virus and taught them how to make their own protective masks and hand sanitizers. This knowledge will be passed on to members of their communities (http://thainews.prd.go.th/en/news/detail/TCATG200214095029332).

To mitigate impacts on people's livelihood and economy, the Thai Government also provided financial aids for the low income (temporary workers, freelance not registered under Social Security System) as well as additional measures through Bank of Thailand to assist SMEs affected by Covid-19 outbreak such as to pause payments of both principle and interest for 6 months for SMEs with a line of credit with a commercial bank or a specialized financial institution, to provide tax breaks, soft loan and to stabilize the cooperate bond market, etc. It can be noted that the Thai economy was expected to contract by 5.3 % in 2020 according to estimates by the Bank of Thailand, but would recover and expand 3.0 percent in 2021. The economy would remain at a level below its potential throughout the forecast horizon. This was mainly owing to the severe impact of the Covid-19 outbreak. It will be challenging for Thailand Government of Thailand to implement measures to alleviate the impact of Covid-19 on Thailand's economy. Striking the right balance despite being unable to offset a significant contraction in aggregate demand will be one of the main challenges (http://www.bot.or.th/English/Pressandspeeches/press/2020/pages/n2163.aspx).

In addition, Government will provide next steps mitigation measures for medium and long-term impacts and plan for future actions such as development of vaccines, appropriate uses of medicine, adaptive management on preventive measures, preparedness and response to the next levels of disasters, as well as provide further steps to ease restrictions and transition once key criteria guided by WHO are met.

- Experience and lesson learned so far

Some experiences are such as strictly enforcement of Government announcement on closing of activities which can promote spreading of the disease (boxing events, sports, places of gathering by high number of people) and curfew. Movement of massive amount of people from Bangkok to countryside after knowing about announcement of emergency situations in Bangkok. Lessons have been learned about the combination of active monitoring, control and surveillance, quarantine and isolation of people traveling in/out of the identified high-risk countries into Thailand since the beginning of the disease outbreak as this has led to significant spreading of the disease in the early day of outbreaks in Thailand.

- Shortages of any kind to deal with testing and the hospitalized

In the early day of the disease outbreaks, Thailand ran shortage of face-mask, gloves and personal protective equipment (PPE) for medical doctors, nurses and staff. This has been solved by assistances of various Governmental agencies, private sector, individual, associations and volunteer organizations. Despite the relatively low number of new cases, hospitals are already reaching capacity in dealing with patients that need intensive care unit treatment and ventilators (only 200 ventilators are available). With anything more than 100 cases a day will make it trouble for these hospitals to handle.

- Plans for the future

The Thai Government has carefully observed the situations before the next measures will be issued. Transition to a 'new normal' during the COVID-19 pandemic must be ensured and guided by public health principles (http://www.euro.who.int/en/media-centre/sections/statements/2020/statement-transition-to-a-new-normal-during-the-covid-19-pandemic-must-be-guided-by-public-health-principles).

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- Other issues of importance of learning to be shared with others

Government policy in implementing public health measures and enforcement by establishment of a central command center so-called "Center for Covid-19 Situation Administration (CCSA)" chaired by the Prime Minister to provide effective risk communication with public and provincial administration and announcement of night curfew seem to be effective strategy to manage the Covid-19 situations on a timely manner. Few key measures in reducing a new case of infection are on social/physical distancing as well as personal hygiene. Closing of schools, universities and places where people can gather in a crowd with high risks should be strictly made. Work from home mechanism for certain public and private sector units should be carried out to minimize the risks. Cooperation by communities on Government measures will make the preventive efforts possible and become more effective. This can be strengthened through community-based adaptive learning on protective measures at the community level implementing by group of public health volunteers in Thailand.

COVID-19 SITUATION IN THE USA BY GEARY SIKICH

Currently in the US there are two major "hot spots" of concern:

New York - 248,431 confirmed cases
New Jersey - 85,301 confirmed cases
Cook County, Illinois (Chicago) - 21,277 confirmed cases

The current "Stay At Home" and "Social Distancing" orders are in effect, however they vary slightly from state to sate. Mask wearing is recommended and in a few states it is mandatory to wear some kind of mask when going to the grocery store, etc. The variance in application of the Federal guidance is of concern as there is no universal standard that has yet to be applied. Unrest in the form of protest marches have occurred over the weekend in several states. People in general are adhering to guidance and recommendations. Smaller segments of society are taking advantage of the situation to confront legal authorities in order to voice their concerns.

Assessment of AEI National Coronavirus Response Document
An ambitious roadmap (plan) with lofty goals that does not reflect the realities of today (Gottlieb et al., 2020). While I agree with the basic construct of the document (roadmap) and the phases that are proposed an initial analysis leaves me grasping for the means and methods that would be required to implement such a roadmap in a timely manner.

Some Key Observations
On page 4 of the document the writers discuss increasing diagnostic testing capacity and building data infrastructure for rapid sharing of results. The cite that "a national capacity of at least 750,000 tests per week would be sufficient to move to case-based interventions.

Analysis
> There are approximately 360 million people in the USA. Based on the 750,000 tests per week assumption we are looking at roughly 480 weeks or 9.23 years to accomplish screening at the scale that they are proposing. This also assumes a stable population with no growth or decline. Even if one were to segment the population by age categories, eliminating or furloughing certain age groups this is still a massive undertaking. Additionally, one must consider the requirement for trained testers (healthcare workers not registered nurses?). The testing organization would need to be

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geographically situated to accommodate the population requiring testing (high density locations, medium density, low density, remote/rural). Mobile testing facilities could facilitate some of the testing requirements; however, this would require a sizable infrastructure of staff, vehicles, testing equipment and logistics support. The question of certification and accreditation of the testers also becomes an issue. Are they to be trained healthcare workers? Or do instead we require Registered Nurses (RN)? Either option requires a significant investment in education, training and competence. How long would it take to assemble a trained cadre? Then there is the issue of initial costs and maintenance costs to keep the system robust and responsive to current, new and unanticipated threats.

On pages 4, 5 the authors present an outline for acute-care hospital access, ventilators, mobile healthcare infrastructures, vast supplies of persona protective equipment (ppe), comprehensive surveillance systems, contact tracing, isolation and quarantine.

Analysis

Is there a plan for acute-care hospital construction for the next 5 years? How will stockpiles be managed; certain products have expiration dates and would need to be replenished periodically. What would happen to unused/expired materials; some may require special waste handling (considered medical waste?) and disposal in special facilities (current medical waste systems would have to be assessed for capacity, location, logistics, etc.).

What are the cheaper testing tools that are mentioned in bullet 1)? Do these exist at present? From the write-up it appears that these are proposed, perhaps under development, but not yet approved by Food and Drug Administration (FDA). So, we again are faced with the prospect of time to develop, resources to commit and trained, educated and capable people to staff the effort.

The authors propose a massive scaling up of contact tracing and isolation and quarantine to accommodate thousands of daily cases and tens of thousands of daily contacts. They state that public health infrastructure will need to be dramatically scaled up throughout the country. Where is the staffing going to come from? Where is the money for this dramatic scaling coming from? We need to assess how much time is required to educate and gain competence as a healthcare worker – RN, Doctor, Nurse Aid, etc. What universities/higher education institutions have offerings in these areas? Can they be scaled up? You need professors, educators to staff the scaled-up operations. You also need students who desire to be in the profession. Are we going to have to establish a compulsory system (like the draft or Works Program Administration [WPA]) to compel students to register for this needed skill training? Of course, the authors make no mention of how this will be funded.

Voluntary local isolation and quarantine is presented by the authors stating "Comfortable, free facilities should be provided for those who choose treatment away from home. Field hospitals, dormitories, hotels and military barracks are proposed. There is little consideration being made in the document for the commercial/daily use of these facilities. Are we to assume that dormitories, hotels and military barracks will be relinquished without compensation to the owners? What about the decontamination of these facilities when people move out of isolation? How will sanitation, food service, waste disposal, housekeeping be managed? Once repurposed can these facilities be recovered and restored to their original use (i.e., do you want to stay at the "VIRUS HOTEL"). With regard to decontamination, what standards will be established and how will inspections to certify decontamination be accomplished?

On page 8, the authors propose that we accelerate the development of therapeutics. They cite that early investments in commercial scale manufacturing be made.

Analysis

What is the development cycle for therapeutics? We have been told that it could be one year to 1.5 years for a COVID19 vaccine to be developed. What is the danger of "fast-tracking" development of therapeutics? How will liability issues be addressed? Currently there are many lawsuits for things like

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talcum powder, Zantax and other drugs. Would there be a resolution passed that would not allow lawsuits? The amount of time required to settle the legal issues could be well in excess of the normal development time for therapeutics. What is the time required to scale up manufacturing, build new facilities, expand facilities and equip them to produce therapeutics? Manufacturing the necessary equipment will require time. Are the manufacturing facilities available? Are they domestic? Where is the funding to come from?

On page 11 the authors call for mass vaccinations or therapeutic distributions – when the supply is abundant. Do we not run into the same issues we saw above with testing (see my first comments on the time it will take)? And, what of the logistics for such an operation?

Phase IV presents a sequence of topics for rebuilding for the next pandemic. The authors propose that we develop vaccines in months not years; Modernize and fortify the Health Care system, establish a National Infectious Disease Forecasting Center and address Governance issues.

Analysis

The proposal to develop vaccines in months instead of years has been a theme in all four of the phases of the roadmap presented in the AEI document. Is it scientifically feasible to develop vaccines faster? Is FDA approval process outdated and cumbersome? Are there too many legal pitfalls that can be fallen into? How do we address liability for negative side effects?

Modernization of the Health Care system has been debated ad nauseum with little traction gained over the years. Is a National Health Care System feasible in the USA with our capitalist structure? Where is the money that will be necessary for modernization come from? Will healthcare costs go up as a result of modernization? Who will have access to the improved and modernized system? How will the modernized system be staffed – it takes years to train doctors, nurses, etc.; shall we accelerate their training much like the acceleration of vaccine development? How will people be induced to seek education and employment in the healthcare system? Will educational deferments be offered to offset the cost of school for the healthcare workers?

Will establishing a National Infectious Disease Forecasting Center do anything more than is already done by Centers for Disease Control (CDC)? Will the forecasting center operate independent of CDC? How will conflicts be dealt with (forecast vs. CDC medical evidence, other sources of information – WHO). Who will staff this center? Again, we encounter the issue of capabilities, competencies and capacity that need to be addressed. Staffing is a theme that I have raised throughout this document. Without belaboring the issue, we see the same concerns as previously cited.

Governance is recommended with a move away from a decentralized system that promotes unequal implementation of preparedness measures across the nation. Can a centralized authority actually function in an effective manner? We see the issue of states rights thrown around today with the COVID19 pandemic. Will the 50 states agree to adhere to a central authority?

Conclusion

This is a nicely composed document that offers some interesting ideas presented as a roadmap to reopening. A good roadmap shows a lot of detail, such as elevation changes, way-stops, lodging, etc. Here we have a document that shows the road from a high-level perspective, such that we do not know if the road is paved with concrete, macadam, gravel or is an unimproved dirt track subject to the vagaries of weather and wind.

References

Gottlieb, S., Rivers, C., McClellan, M. B., Silvis, L., Watson, C. (2020). National Coronavirus Response: A ROAD MAP TO REOPENING. *American Enterprise Institute*, Washington, D.C., United States.

Call for papers

TIEMS 2020 ANNUAL CONFERENCE

CONFERENCE

CITIZENS AND CITIES FACING NEW HAZARDS AND THREATS

18th to 20th of November 2020

Auditorium de la Fédération Française de l'Assurance (FFA),
26 boulevard Haussmann - 75009 Paris

The International Emergency Management Society (www.tiems.org)
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The TIEMS annual conference will take place the *18th to 20th of November 2020* in Paris (Fédération Française de l'Assurance, 26 boulevard Haussmann – 75009 Paris).

INTRODUCTION

Today, nearly 70% of the EU population lives in urban areas, and the figure is likely to increase over the next few decades. Cities are main centers for all economic, social and cultural activities in Europe and create around 80% of the EU's gross domestic product. According to a European Parliament policy study "Mapping Smart Cities in the EU" (January 2014), the core idea of Smart Cities is to better connect human capital, social capital and ICT infrastructures in order to generate greater and more sustainable economic development and a better quality of life for citizens. Over the past few years, projects and programs have multiplied at local, national and European level and some lessons can already be drawn from past experiences.

However, new technologies have also created new risks for citizens, which are still poorly taken into account. The aim of the conference will therefore be to provide an overview of the risks generated by smart cities and to find solutions, as far as possible.

The main topic is:

"Citizens and cities facing new hazards and threats"

The following topics will be discussed (not limited):

• Smart and resilient cities towards natural and technological disasters

• Climate change and adaptation of rescue and response forces• Resilience policies for cities: Definition, goals and indicators

• Cyber security issues for emergency management operations

• All and new technologies in civil protection area• Safety and security of (new) energies for first responders

• Value of responders' actions on saving lives and properties

• Focus on EU civil protection and international mechanisms

• Other subjects related to the previous topics

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CALL FOR PAPERS

Two types of abstracts can be submitted to one of the tracks above:

• Completed or ongoing academic research (max 1000 words).
• Practitioners talk (from 200 to 500 words): we strongly encourage submissions describing real-world experiences and case studies and lessons learnt for this TIEMS conference.

Once submitted, all articles will be distributed for evaluation among the pool of reviewers according to their domain of expertise and the topics addressed by the paper. Practitioner submissions will be reviewed according to relevance and ability to contribute to discussions rather than by standard academic criteria.

Accepted papers will be organized in conference sessions that will be distributed among the tracks.

Please, to submit an abstract for a Paper or Poster, click here **Easy Chair**

Instructions for authors here: **Template paper**

Template abstract

• Abstract submission: June 1, 2020
• Notification of acceptance: June 30, 2020
• Full paper submission: September 15, 2020

The best papers will be published through TIEMS and HCFRN websites. Videos will be available on HCFRN website.

SCIENTIFIC COMMITTEE

• Meen Bahadur Poudyal Chhetri, President of the Nepal Center for the Disaster Management (NCDM), **chair of the committee**
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• Laurent Verneuil, Ag Professor at the Technical Institute of the Limoges University, Firefighter Officer & CBRNE Technical Advisor.

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LOCAL ORGANIZING COMMITTEE:

Resilience France

The TIEMS 2020 Annual Conference is organized on the 18th to 20th of November by the French Chapter, and more particularly by Resilience France. Resilience France is a non-profit organization which helps its members to improve the security, safety and resilience of public and private organizations, regarding the major risks and threats. It contributes to the protection of populations and to the objective of national resilience. It is a platform for exchanges between the Government, parliamentary assemblies, local authorities, companies and experts on issues relating to security, safety and organizational and structural resilience.

Christian Sommade is the General Delegate of Resilience France (HCFRN).

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PRESS RELEASES

DRIVER+ PROJECT DELIVERS CRISIS MANAGEMENT INNOVATION, SUPPORT AND COOPERATIVE NETWORKS

- **Project promotes Technological Innovation, Capability Building and Networking in era of Climate Change Emergencies and Coronavirus Pandemic.**
- **Culminating conference celebrates major achievements and successes, launches Trial Guidance Methodology and DRIVER+ CMINE group, CMINE backs Covid 19 psychosocial support project.**

www.driver-project.eu

The DRIVER+ Advanced Crisis Management Conference was held in Brussels on the 18th, 19th and 20th of February, bringing together over 300 Crisis Management specialists, policy makers, academics and technology developers from throughout Europe and beyond.

The DRIVER+ Advanced Crisis Management Con-ference, brought together over 300 Crisis Mana-gement specialists, policy makers, academics and technology developers.

The conference was the culmination of several years of intense work by many partners across Europe, involving 4 large-scale crisis scenario **Trials** and a final trial/demonstration. These were used to evaluate a range of advanced technological solutions (including interoperability-enabling solutions) and were also used to test the development of the unique **Trial Guidance Methodology** itself.

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Specialist speakers attended from world leading organisations, covering topics such as the Tyndall Centre for Climate Change Research on climate change and wildfires, the Danish Red Cross on Psychological First Aid training for volunteers, and Patrick Meier of WeRobotics Flying Labs on the promotion of drone flying and mapping skills among local populations for improved crisis response throughout the non-European world.

The project's outputs, achievements and long-term legacy benefits for all European and international Crisis Management organisations were also praised by senior European Commission officials and conference delegates.

Threats to public safety, property and the environment have been highlighted in recent months by catastrophic, climate change-induced wildfires in Australia and the Amazon, as well as by serious global threats to life caused by the spread of the Covid 19 Coronavirus.

The DRIVER+ project was set up and supported by the European Union to improve the pan-European response to such threats, as well as severe flooding, earthquakes and industrial chemical spills.
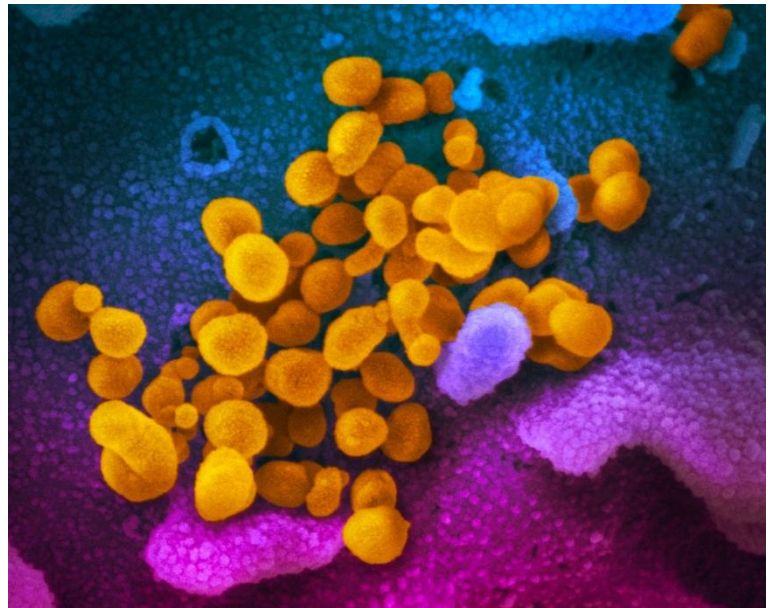
It set out to do this by exploring and promoting new, innovative ways to improve Crisis Management response, with technological innovations, new, more systematic and objective

A scanning electron microscope image – from the National Institute of Allergy and Infectious Diseases' (NIAID) Rocky Mountains Laboratories (RML) – in false colour, showing the COVID-19 virus from a patient in the US.

ways to evaluate the effectiveness of Crisis Management solutions in highly realistic trials, an open source Portfolio of Solutions and the creation of a new network of Crisis Management professionals, which is already enhancing a shared understanding across Europe.

This work is already benefitting communities with support for an initiative by a DRIVER+/CMINE partner, the Inter-Agency Standing Committee Reference Group for Mental Health and Psychosocial Support in Emergency Settings. This partnership is creating a book to share with children during the COVID-19 pandemic. The purpose of the book is to help children talk about and cope with their fears and worries regarding COVID-19. DRIVER+/CMINE promoted the initial survey work and will support the book's digital distribution when it is ready.

In this regard the IASC MHPSS RG sought the urgent support of regional and country offices and web platforms to reply to 2 short surveys through digital means with parents and caregivers through their networks. DRIVER+/CMINE supported this survey work.

The deadline to reply to the surveys was Monday 16th March 2020, Midnight. The 2 surveys collected information about 1) how children are feeling about COVID-19 and 2) what activities they are doing to pass the time in isolation/quarantine. These surveys will form the content of the book mentioned above, and DRIVER+/CMINE will support its digital distribution when it is published.

This **Trial Guidance Methodology** (with TGM Wheel) provides the tools to design and run an objective Trial that can be used to assess objectively, and select, the best solutions for specific emergency management tasks. The DRIVER+ Trial Guidance Methodology is supported by the **Test-bed Technical Infrastructure** (TTI) for interoperable

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systems integration, so that the practitioners participating in the Trial can actually use and evaluate the solutions in a simulated disaster scenario.

Research was also undertaken to accelerate innovation in Crisis Management throughout Europe, in particular in connection with climate change related-events such as wildfires and flooding as well as medical emergencies and industrial accidents.

The project has also fostered the establishment of a network of **Centres of Expertise** to promote Crisis Management capability development and innovation. Furthermore, it has set up a pan-European platform, the **Crisis Management Innovation Network Europe (CMINE)** to foster knowledge sharing, networking and cooperation. https://www.driver-project.eu/cmine-project/

The establishment of a network of DRIVER+ **Centres of Expertise** to ensure the sustainability of project outputs has been a major achievement, with 7 Centres signing letters of agreement at the conference - Entente Valabre (France), the Main School of Fire Service (SGSP, Poland), L3CE (Lithuania), The Resilience Advisors Network (RAN, Ireland), SRC-PAS (Poland), the Estonian Academy of Security Sciences (EASS), and the Austrian Red Cross (ARC). www.driver-project.eu/centres-of-expertise-coe/

Representatives of the first seven DRIVER+ Centres of Expertise with Marcel van Berlo, project technical coordinator (third from right), after signing letters of agreement at the conference. The establishment of a network of DRIVER+ Centres of Expertise to ensure the sustainability of project outputs has been a major achievement, with 7 Centres signing letters of agreement at the conference – Entente Valabre (France), the Main School of Fire Service (SGSP, Poland), L3CE (Lithuania), The Resilience Advisors Network (RAN, Ireland), SRC-PAS (Poland), EASS (Estonian Academy of Security Sciences), and the Austrian Red Cross (ARC).

Another output from the project is the DRIVER+ **Portfolio of Solutions** – an online database of advanced Crisis Management technologies. All DRIVER+ outputs are free and open source, available from the DRIVER+ website. www.driver-project.eu

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For more information or to download reports and other project outputs go to:

www.driver-project.eu   www.driver-project.eu/final-conference

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20 March 2020

FLYING LABS SPREADS INNOVATIVE DRONE OPERATIONAL SKILLS AND CRISIS MANAGEMENT EXPERTISE THROUGHOUT THE WORLD

One of the keynote speakers at the DRIVER+ Advanced Crisis Management Conference, held in Brussels in February 2020, was Patrick Meier, co-founder and joint CEO of WeRobotics/Flying Labs.

Flying Labs is a growing network of highly trained drone operators based around the world who can provide drone expertise for local crisis management efforts.

Data gathered from drone flights allows crisis managers to gather highly targeted, up-to-the-minute emergency data to help local emergency responders act more precisely and effectively in delivering support to local populations, often in remote, hard-to-reach and unmapped areas. The data gathered can also be used to map disaster zones and support a Common Operational Picture for all agencies involved.

All of this means that in the immediate period after a disaster event, local emergency services do not have to wait for foreign emergency responders to arrive; the expertise is already on the ground and able to deploy quickly and with greater local knowledge.

Patrick Meier, co-founder and joint CEO of WeRobotics/Flying Labs, a growing network of highly trained drone operators based around the world who can provide drone expertise for local crisis management efforts.

Flying Labs build local drones, data and AI skills through the provision of training for local groups, such as government services, not-for-profit organisations, research centres and universities. They also support these organisations in implementing their pilot projects and create replicable use cases for the humanitarian, health, environment and development sectors.

WeRobotics/FlyingLabs states that its mission is 'to shift power from the global back to the local by ensuring that local experts with local knowledge and lived experience have the leadership opportunities they seek to implement technology for good projects themselves. This inclusion is key to accelerating the positive impact of aid, health, development and environmental efforts.

'We co-create and facilitate a network of local knowledge hubs in Africa, Asia and Latin America to build on existing expertise in drones, data and AI, the Flying Labs network. The goal of Flying Labs is to accelerate the positive impact of humanitarian, health, development and environmental solutions locally. Flying Labs also expand local markets by creating new jobs and businesses that offer robotics as a service and support local ecosystems.'

The WeRobotics/FlyingLabs organisation has several strands to its work:

AidRobotics

For improving disaster risk management by localising appropriate robotics solutions while developing the policy, coordination and data solutions necessary to ensure safety and effectiveness. These efforts include disaster risk reduction, preparedness, disaster response and recovery.

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HealthRobotics

For improving public health services in remote areas by field testing and implementing appropriate cargo drone solutions while developing the policy, technical and data solutions necessary to ensure safety and effectiveness. These efforts include testing and improving a wide range of cargo drones solutions across different use-cases and environments.

EcoRobotics

EcoRobotics aims to e improve environmental efforts by localising appropriate robotics solutions while developing the policy, technical and data solutions necessary to ensure safety and effectiveness. These efforts include sustainable agriculture and fishery practices, nature conservation and climate change resilience.

DevRobotics

DevRobotics aims to improve professional development opportunities in the use of appropriate robotics solutions by developing the policy, technical and data solutions necessary to create local "Drones-as-a-Service" markets and ecosystems. This reduces inequalities by addressing infrastructure needs and creating new local economies using emerging technologies.

www.driver-project.eu

https://werobotics.org

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GEMMA PROJECT

Selected for € 14.2M H2020 Funding by the European Commission
To identify potential targets for the personalized treatment and prevention of Autism Spectrum Disorders

Bio-Modeling Systems, with its operational *CADI™ Discovery* platform, is the Integrative Biology partner of this ground-breaking autism research project to explore the interaction between microbiome, metabolome, epigenome and immune function to provide possible diagnostic and preventive approaches.

Paris October 10, 2018: Autism Spectrum Disorders (ASD), which affect 1 in 59 children (1 in 37 boys and 1 in 151 girls) worldwide (a ~40-fold increase since 1960), are a major concern for individuals, families and healthcare systems. According to a study from the London School of Economics, ASDs carry larger societal costs than cancer, heart disease and stroke combined.

As the world faces an ASD pandemic of high-impact proportions, the research community is struggling to understand the multifactorial risk factors leading to its onset. As of today, there are no proven biomarkers of ASD and diagnosis relies entirely on behavioral evaluations. The picture is even bleaker for children born into a family with a sibling already suffering from ASD, as they have a 10 times higher risk of developing ASD. There are currently no preventive steps to reduce or potentially eliminate this risk.

GEMMA (Genome, Environment, Microbiome and Metabolome in Autism) will be the first project to combine a multi-omic approach with robust environmental data to exploit the analysis of the composition and function of the microbiome for personalized treatment and, ultimately, disease interception in at-risk infants.

GEMMA has assembled a team of scientists from *EBRIS; Bio-Modeling Systems; Nutricia Research; Medinok; Euformatics; Theoreo; National University of Ireland Galway; Azienda Sanitaria Locale Salerno; Massachusetts General Hospital for Children (teaching hospital of Harvard Medical School); Consiglio Nazionale delle Ricerche; INRA; INSERM; Utrecht University; University of Tampere; Imperial College London and John Hopkins University.*

The project has duration of 5 years and a total budget of €14.2M.

The goal of GEMMA is to provide solid insights into ASD's onset and its progression in relation to dynamic changes in abnormal gut microbiota and develop targets for possible treatment and prevention. Observations of these epigenetic modifications that control gut barrier and immune functions will be based on the in-depth evaluation of 600 infants at risk observed from birth and followed over time. These data will be integrated with pre-clinical studies to mechanistically link human microbiota composition and/or function with clinical outcome through mouse models that have been transplanted with stool from human subjects. In the context of a unique EU-US collaboration network, the project results will be validated on large international ASD networks and integrated with large-scale omics data repositories. Clinical trial data will be shared and harmonized with other international, large-scale omic databases. This research will contribute to the overarching goals of determining the interaction between the dynamic changes over time of the microbiome

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with the genome and its epigenetic changes, the metabolome, mucosal integrity and immune response that lead to ASD.

The project will support novel patient stratification (personalized treatment) and disease interception (primary prevention) approaches that attempt to modulate gut microbiota to re-establish/maintain immune homeostasis. The biomarkers identified in this project will contribute to a better understandingof the pathogenesis of ASD in at-risk children and the possibility of manipulating the microbiota through pre/pro/symbiotic administration for prevention and treatment, a complete paradigm shift in ASD pathogenesis and early intervention.

The BMSystems' CADI™ Discovery scientific program is placed under the leadership of, **Dr. François Iris**, Founder & CSO of BMSystems and **Dr. Thanos Beopoulos**, Integrative Biologist at BMSystems.

About the Project Coordinator:

European Biomedical Research Institute of Salerno (EBRIS) Foundation
The *EBRIS* Foundation's mission is to serve as a unique, multidisciplinary research hub focused on using cutting-edge technologies to understand the molecular basis of human diseases in order to translate basic discoveries made in the laboratory into novel therapeutic and preventive interventions, new models of human disease, pioneering therapies, and drug delivery systems that can benefit patients with various diseases. The objective of the EBRIS Foundation is to network with other European research groups to create a top-level research network through the development of projects focused on the interplay between host and environment. Clinical models such as celiac disease, type 1 diabetes, autism and schizophrenia are thoroughly investigated to determine how environmental factors, especially during the first years of life, influence the microbiome, some specific metabolic patterns, and the mechanisms that govern the switch between tolerance and immunity in autoimmune diseases.

About Bio-Modeling Systems (BMSystems):
Bio-Modeling Systems, founded in 2004 and profitable since 2006, is with its operational **"Augmented Intelligence"** CADI™ Discovery**"** platform the first and, to date, only company to successfully create in-silico heuristic models validated in-vivo that successfully create in-silico heuristic models validated in-vivo. BMSystems' models have been built by its biologists using an integrated IT solution called CADI ™ (Computer Assisted Deductive Integration) and have led to discoveries and patents in the fields of infectious diseases, oncology, neurology, psychiatry, dermatology, immunology, metabolic disorders, innovative bioprocesses for industrial biotech and the creation of new companies exploiting these patents. BMSystems' models describe the biological phenomena involved in pathological states and provide novel mechanistic integrations to explain the cause of certain diseases, identify and select predictive biomarkers, offer new combinations of molecules and new therapeutic strategies, thereby contributing to the development of Mechanism-Based Medicine.

Bio-Modeling Systems, **the world's first Mechanisms-Based Medicine Company, generated 14 successes independently validated by our clients/partners of which: 1 therapeutic spin-off in antibiotic resistance and 1 exclusive out-license in CNS, 4 issued patents, 10 publications.**

Two new therapeutic programs in CFS-Low-grade inflammation and Parkinson's disease are ready forclinic validation.

For more information and access to presentations & publications, please visit
http://www.bmsystems.net.
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Next TIEMS Newsletter

The next TIEMS Newsletter is planned for August 2020

TIEMS issues its electronic newsletter quarterly, and it is distributed to more than

100 000 experts worldwide, with articles on global emergency and disaster management events and

activities, TIEMS news, etc.

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Contributions are welcome for the next issue. Please, contact one of the editors or TIEMS Secretariat if

you have news, an article of interest, or like to list coming events of interest for the global emergency

and disaster community or like to advertise in this issue.