Pandemics, Conflicts, Climate Change: New Roles and Challenges for National Public Health Institutes

Session 3

Pandemics, Conflicts, Climate Change: What Have We Learned from the Past Three Years?

December 1, 13h30-15h00
Introductory Speech
Strengthening The Global Architecture For Health Emergency Preparedness, Response & Resilience (HEPR)
Learning from the devastating effect of COVID-19 & other emergencies

<table>
<thead>
<tr>
<th>Category</th>
<th>Impact</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>+8M Estimated deaths¹</td>
<td></td>
</tr>
<tr>
<td>Economy</td>
<td>$16T Estimated revenue losses in international sectors²</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>1.6B Students out of school³</td>
<td></td>
</tr>
<tr>
<td>Climate</td>
<td>-30% Investment in clean energy transition⁴</td>
<td></td>
</tr>
<tr>
<td>Poverty</td>
<td>+135M People pushed into poverty by 2030⁵</td>
<td></td>
</tr>
</tbody>
</table>

Pandemics are increasing in frequency & impact

In addition, +300 million people in need of humanitarian assistance as a result of climate disasters & geo-political crisis
Engaging all of society & embedded in strengthened health systems

Health system

Animal health & agriculture

Economics & finance

Environment

Social welfare & protection

Disaster management & national security

Health system

Primary healthcare

Health promotion

Health security

One Health

Science & Innovation
Grounded in resilient communities & primary healthcare

All health emergencies begin & end in communities …

Patient 0
Outbreak
Epidemic
Pandemic

Local
Regional
National
Global

… require resilient communities & primary healthcare systems …

… Supported by national, regional & global networks for prevention, preparedness, readiness & response
10 proposals to build a safer world together

Based on independent reviews, synthesising +300 recommendations ...

... developed in consultation with Member States & partners, presented at the World Health Assembly May 2022

Strengthening the Global Architecture for Health Emergency Preparedness, Response & Resilience (HEPR)

1. Leadership
2. Regulation (IHR)
3. Accountability
4. Capacity
5. Coordination
6. Collaboration
7. Finance-Health coordination
8. Preparedness financing (incl. Pandemic Fund)
9. Response financing
10. WHO strengthening
Inter-connected systems & networks of capacities & capabilities

- Integrated disease, threat & vulnerability surveillance
- Laboratories & diagnostics
- Collaborative intelligence & analytics

- Fast tracked research & development
- Scalable manufacturing
- Coordinated supply chains & equitable access

Emergency Coordination

Collaborative Surveillance

Community Protection

Access to Countermeasures

Safe & Scalable Care

- Risk communication & infodemic management
- Environmental & population interventions
- Social welfare & economic protection
- Emergency clinical care
- Health workers & patient protection
- Maintained essential health services

- Health emergency workforce
- National action plans for prevention, preparedness & readiness
- Rapid alert & response coordination
Consultation process for proposals to strengthen global architecture for HEPR

- **WHO 150th EB**
  - Request to consolidate proposals for strengthening HEPR in consultation with MS & partners
  - **January 2022**

- **March 24th 2022**
  - Concept note including an outline of draft proposals published on WHO website

- **May 23rd 2022**
  - 1st draft of proposals published as a white paper for consultation with MS

- **June 24th 2022**
  - Updated white paper published for further consultation

- **Today**
  - MS Consultation Update on on-going MS consultation processes

- **October-December 2022**
  - MS Consultation (incl. INB), discussions with Regional Committees

- **January 2023**
  - Consultation draft submission

- **May 2023**
  - 75th WHA Final draft submission

**Other consultation processes**

- Feedback from MS via online platform & Informal consultations with MS
- Continuous work through existing intergovernmental & independent expert processes (incl. G7, G20, ACT-A, GAP)

**Publication(s)**

- Concept note
- 1st draft of proposals
- Updated white paper
- MS Consultation
- Other consultation processes
Report on the IANPHI Europe Meeting 2022:

“Preparing for and Responding to Crises: What role for National Public Health Institutes?”

Thursday, December 1
IANPHI Europe Meeting
Tallinn, May 2022
1974:

Today:
Themes in Tallinn meeting:

- War in Ukraine and its impacts
- What has covid thought NPHIs and preparing for future crisis
Prof. Mark Bellis
Director, WHO Collaborating Center on Investment for Health and Well-being, Public Health Wales

Health implications on collective violence
Dr. Igor Kuzin
Ukraine’s Deputy Minister of Health

Devastating impact of war on health of Ukrainians and on national health system, infrastructure and workforce
COVID-19
Prof. Duncan Selbie, President of IANPHI in Tallinn meeting:

We also need to feel good about what we do
Case Study:

INSP's contribution to the management of the Covid-19 pandemic in Burkina Faso
Presentation outline

• Burkina Faso's INSP model

• INSP/BF's responses to COVID-19

• Current epidemiological situation

• Best practices and challenges
What do NPHIs do?

**Ministre de la santé**

**Secrétariat Général**

**Institut National de la Santé Publique**

1. Départements des centres de recherche pour la santé
   - Organe de coordination des centres de recherche publics existants (Centre Muraz, Centre de recherche de Nouna et Centre de recherche sur le paludisme)
   - Compétences de base clés pour chaque centre
   - Éviter la duplication dans les activités de recherche
   - Alignement sur les priorités de recherche

2. Département du laboratoire central de référence
   - Organe de coordination et contrôle de qualité pour tous les laboratoires nationaux de référence
   - Définition et mise en œuvre de solutions à l'échelle du système pour relever les défis communs rencontrés par les laboratoires de référence (gestion des déchets, biosécurité, transport d'échantillons, etc.)

3. Centre des opérations de réponse aux urgences sanitaires (CORUS)
   - Élaboration des plans de riposte et plans de contingence
   - Organisation d'exercices de simulation
   - Formation des différents intervenants impliqués dans les procédures : Media, équipe de réponse district etc.
   - Organisation de la réponse aux urgences sanitaires

4. Observatoire de la santé de la population
   - Enquêtes de santé à grande échelle
   - Information sur le système de santé et les conditions de santé de la population
   - Évaluations de programmes de santé publique à grande échelle
   - Guichet unique, pour des informations factuelles et des connaissances sur la situation sanitaire et les tendances dans le pays

**PLAN STRATEGIQUE 2020-2024**
**Epidemiological situation in Burkina Faso: Mapping of confirmed cases by district 10/31/2022**

Epicenter of the epidemic of Covid-19:

- **N= 21 886**
  - 8 049 women
  - 13 837 men
  - Death = 395 persons
  - 3 regions
  - 8 districts
<table>
<thead>
<tr>
<th>Sanitarian Region</th>
<th>Total population 2022</th>
<th>People vaccinated with one dose</th>
<th>% of people vaccinated with one dose</th>
<th>People with complete vaccination</th>
<th>% of people with complete vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOUCLE DU MOUHOUN</td>
<td>2 032 464</td>
<td>433 273</td>
<td>21,3</td>
<td>350 148</td>
<td>17,2</td>
</tr>
<tr>
<td>CASCADES</td>
<td>882 482</td>
<td>156 823</td>
<td>17,8</td>
<td>109 186</td>
<td>12,4</td>
</tr>
<tr>
<td>CENTRE</td>
<td>3 340 720</td>
<td>350 174</td>
<td>10,5</td>
<td>277 721</td>
<td>8,3</td>
</tr>
<tr>
<td>CENTRE-EST</td>
<td>1 700 143</td>
<td>239 305</td>
<td>14,1</td>
<td>151 935</td>
<td>8,9</td>
</tr>
<tr>
<td>CENTRE-NORD</td>
<td>2 040 743</td>
<td>266 447</td>
<td>13,1</td>
<td>195 898</td>
<td>9,6</td>
</tr>
<tr>
<td>CENTRE-OUEST</td>
<td>1 786 200</td>
<td>454 011</td>
<td>25,4</td>
<td>338 926</td>
<td>19,0</td>
</tr>
<tr>
<td>CENTRE-SUD</td>
<td>836 859</td>
<td>142 964</td>
<td>17,1</td>
<td>93 554</td>
<td>11,2</td>
</tr>
<tr>
<td>EST</td>
<td>2 121 102</td>
<td>281 681</td>
<td>13,3</td>
<td>181 227</td>
<td>8,5</td>
</tr>
<tr>
<td>HAUTS BASSINS</td>
<td>2 432 240</td>
<td>525 546</td>
<td>21,6</td>
<td>357 825</td>
<td>14,7</td>
</tr>
<tr>
<td>NORD</td>
<td>1 860 352</td>
<td>233 965</td>
<td>12,6</td>
<td>158 099</td>
<td>8,5</td>
</tr>
<tr>
<td>PLATEAU CENTRAL</td>
<td>1 053 429</td>
<td>175 348</td>
<td>16,6</td>
<td>129 031</td>
<td>12,2</td>
</tr>
<tr>
<td>SAHEL</td>
<td>1 154 991</td>
<td>127 272</td>
<td>11,0</td>
<td>104 976</td>
<td>9,1</td>
</tr>
<tr>
<td>SUD-OUEST</td>
<td>942 727</td>
<td>209 640</td>
<td>22,2</td>
<td>152 818</td>
<td>16,2</td>
</tr>
<tr>
<td>BFA</td>
<td>22 184 452</td>
<td>3 596 449</td>
<td>16,2</td>
<td>2 601 344</td>
<td>11,7</td>
</tr>
</tbody>
</table>
Best practices

Screening and surveillance of variants for COVID control
- FHV
- Rotavirus
- Influenza
- Meningitis, Meningitis
- Measles
- Papilomas virus
- Mycobacteria
- AMR
- HIV

Incident Management System
- Thematic archiving

An instrument for decision-making

Research more aligned with priorities: seroprevalence

- Certification

Infectious diseases
- Diseases with epidemic potential
- Sexual and reproductive health

CNRFP
- Parasites and vectors, Plants and innovations

CMURAZ
- Chronic diseases, climate change and the environment
- Information system

CORUS
- activated
- functional

Certification
Best practices

- Mobilization of the health reserve
- Devolution of Covid-19 management in the routine system
- Establishment of a mechanism to fight rumors
- A call center for signal detection and advice
Challenges

• The need for the INSP to act as an essential public health operator in the field of public health through the continuous production of innovative interventions: data to action

• The need to strengthen the integration of the One Health strategy in epidemic management

• Strengthening of global operational capacities (infrastructure, digital, etc.)

• The development and use by the health system of integrated instruments for monitoring public health events taking into account IDPs, populations facing security and climate challenges,

• Strengthening genomic surveillance with a key role for the Biobank and NRLs
Website link: www.insp.gov.bf
Case Study:

Public health system in Ukraine in wartime. New challenges and new lessons learned
24.02.2022

ANNUAL MEETING
NOVEMBER 30 - DECEMBER 2, 2022 | HYBRID

Full-scale invasion
Challenges due to the full-scale invasion of the Russian federation in Ukraine

- Active hostilities on a large territory of Ukraine.
- Mass displacement of the population (including medical workers).
- Interruption of logistics for delivery of vaccines and medical devices.
- Limited understanding of population size per age group
Challenges due to the full-scale invasion of the Russian Federation in Ukraine

- Shelling and occupation. Access to the medical care of the population.
- Restriction of laboratory examination of the population.
- Crowding of people in places of temporary stay.
- Rapid increase of NCDs
- Understaffing.
- Data collection.
Since the beginning of a large-scale war, the enemy purposefully has been destroying the medical system of Ukraine, 1153 medical facilities have already been damaged within 9 months of war.

29 civilian doctors were killed and more than 100 injured.

During the same time, 98 medical facilities have been completely restored, 204 - partially.
# Ruined and Damaged Healthcare Facilities *

<table>
<thead>
<tr>
<th>Region</th>
<th>Ruined</th>
<th>Damaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donetsk</td>
<td>14.09 b.</td>
<td>11.84 b.</td>
</tr>
<tr>
<td>Zaporizhzhia</td>
<td>2.49 b.</td>
<td>6.55 b.</td>
</tr>
<tr>
<td>Kyiv</td>
<td>1 b.</td>
<td>5.04 b.</td>
</tr>
<tr>
<td>Luhansk</td>
<td>3.55 b.</td>
<td>3.28 b.</td>
</tr>
<tr>
<td>Sumy</td>
<td>0.28 b.</td>
<td>1.95 b.</td>
</tr>
<tr>
<td>Kharkiv</td>
<td>7.04 b.</td>
<td>2.58 b.</td>
</tr>
<tr>
<td>Chernihiv</td>
<td>2.58 b.</td>
<td>2.58 b.</td>
</tr>
<tr>
<td>Zhytomyr</td>
<td>1.95 b.</td>
<td>1.95 b.</td>
</tr>
<tr>
<td>Mykolaiv</td>
<td>0.95 b.</td>
<td>0.95 b.</td>
</tr>
<tr>
<td>Kherson</td>
<td>0.29 b.</td>
<td>0.29 b.</td>
</tr>
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</table>

*As of 22.06.2023*
<table>
<thead>
<tr>
<th>Public health risk</th>
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<th>Public health risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental health and psychosocial support</td>
<td>HIV</td>
<td>Pneumococcal disease</td>
</tr>
<tr>
<td>Injury/trauma and sequelae (wound infections, antimicrobial resistance)</td>
<td>Cardiovascular disease (CVD)</td>
<td>Rabies, Leptospirosis</td>
</tr>
<tr>
<td>Radio-nuclear hazards</td>
<td>Chronic noninfectious respiratory diseases</td>
<td>Hepatitis A and Hepatitis E</td>
</tr>
<tr>
<td>COVID-19</td>
<td>Cancer</td>
<td>Typhoid</td>
</tr>
<tr>
<td>Measles</td>
<td>Influenza and other acute infectious respiratory diseases</td>
<td>Vector-borne diseases (CCHF, WNF, epidemic typhus)</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>Poliomyelitis, Tetanus, Rabies</td>
<td>HBV and HCV, STIs</td>
</tr>
<tr>
<td>Cholera</td>
<td>Mumps, Pertussis, Rubella,</td>
<td>Maternal and neonatal health</td>
</tr>
<tr>
<td>TB</td>
<td>Varicella,</td>
<td>Malnutrition</td>
</tr>
</tbody>
</table>

**Red:** Very high risk. Could result in high levels of excess mortality/morbidity.  
**Orange:** High risk. Could result in considerable levels of excess mortality/morbidity.  
**Yellow:** Moderate risk. Could make a minor contribution to excess mortality/morbidity.
- Mobile clinics
- Mobile vaccination teams
- New logistics routes and transportation procedures
- Hotlines and chat bots
Network of disease prevention and control centers

Regional CDCs

And Laboratories
LAW OF UKRAINE NO. 2573 ON PUBLIC HEALTH
CMU
10 REQUIRE REVISION
14 NEW DOCUMENTS

MoH
22 REQUIRE REVISION
39 NEW DOCUMENTS
War is:

painful and suffering...
people lose their homes...
destroyed infrastructure...
Priority areas of the recovery plan

Recovery and development needs – EUR 14.674 billion

- Strengthening policies and institutes
- Medical care financial stability: EUR 17.2 billion for 2023-2024
- Transformation of a healthcare facility network: EUR 12.6 billion

- Health services resulting from the war: EUR 265 million
- Human resource development: EUR 700 million
- E-health services: EUR 209 million
- Public health and response: EUR 423 million
- Health quality and expertise management: EUR 11.6 million
- Pharmaceutical sector and access to medicines: EUR 11.6 million
Overcoming the challenges of war in the context of public health

- Providing medical care and public health services
- Prevention of the infectious diseases spreading
- Ensuring the sustainability of the entire health care system
- Improvement preparedness and response component

European integration

- The need for technical and expert support on preparing implementation documents
- Providing example of implementation documents from another countries

Staff training

- Different types of training and topics (trainings, lectures, simulation exercises)
- Involvement of specialists at the regional level
- Cascade training activities
Recovery stages

2022
- Provision of medical care in wartime
  - Urgent aid
  - Renewal of medical care services at de-occupied territories
  - Assessment of damaged infrastructure
  - Regional hospital plans
  - Maintaining human resources – decent salaries
  - Sending patients abroad

2023 - 2025
- Public health system recovery
  - Development of hospitals of a capable network
  - Investments into the network
  - Affordable services on rehabilitation and mental health
  - Harmonization of legislation with the EU legislation
  - Quality assurance agency
  - National provider of pharmaceuticals
  - De-papering and new electronic services for patients

2026 - 2023
- Expanding the human resource capital, raising the quality of medical care, technology development
  - A capable network of hospitals is developed
  - The network of university hospitals and the new quality of education
  - Psychological rehabilitation centres
  - Effective network of Disease Prevention and Control Centres
  - The network of blood collection centres is operational
  - Medical tourism development
  - IT-Innovations and artificial intelligence in medicine
  - National pharmaceutical sector is the leader of the Ukrainian economy

Quantitative indicators of results

Reduction of the share of people’s expenses in total public health expenses up to 30%

The new capable network of hospitals:
- 215 general hospitals (per 50,000 – 80,000 people)
- 165 cluster hospitals (per 150,000 – 200,000 people)
- 52 supra-cluster hospitals (multidisciplinary regional hospitals)

National network of public health laboratories:
- 4 laboratories of BSL-3 and the 1st level of chemical safety; 21 laboratories of BSL-2 and the 2nd level of chemical safety
- 10 university hospitals

Biocluster ‘Biological Safety and Development of Biological Technologies’

The country has a 6-month stock of pharmaceuticals.

Localized production of pharmaceuticals, transfer of technologies to Ukrainian enterprises
STAND WITH UKRAINE!

Public Health Center of the MOH of Ukraine
+380 44 425 43 54
info@phc.org.ua
Case Study:

Impact of COVID-19 and Climate Change and Conflict in Somalia
The numbers....

- In 2020, flooding caused 919,000 displaced, devastated 144,000 hectares of farmland.
- At the same time, Somalia also saw the largest Desert Locust invasion in 25 years.
- 7.8 million (> 50%) people affected by the current drought.
- 1 million people displaced (84% women, children and elderly people).
- 300,000 people face the risk of famine between Oct – Dec 2022 (catastrophic food insecurity).
- 1.8 million children acutely malnourished (513,000 severely malnourished).
- 2.4 million people live in hard-to-reach areas.
Timeline and trends

- **Famine** kills nearly 300,000 people and displaces 20% of the population.

- **1992**
  - Flooding kills 2,500, followed by outbreaks of Rift Valley Fever and Cholera.

- **1997 to 1998**
  - Extreme flooding: Up to 1.4 million were adversely affected, including about 650,000 who were displaced between October and December 2006. Subsequent outbreak of Rift Valley Fever.

- **2006**
  - The East Africa Drought and famine kills more than 250,000 people, half of them children under the age of five and pushed almost a million refugees into neighbouring countries.

- **2009 to 2011**
  - A further devastating drought and famine: 5.4 million people in need of humanitarian assistance and over a million people were displaced. In 2017, more than 1.2 million children were acutely malnourished.

- **2015 to 2017**
  - Extreme flooding, displacing over 280,000.

- **2018**
  - Floods again devastate large areas, displacing around 420,000.

- **2019 to 2020**

Somalia’s famine of 2010–2012 was the worst in its crisis-ridden history. Nearly 260,000 people died. The international community’s failure to respond to warning signs exacerbated the tragic death toll.

The next famine, in 2017, was handled better, with a successful emergency mobilization of support and money. However, investments to build resilience were neglected. So, now, in 2022, we are facing the same risk.

The IPC analysis conducted by the Somalia IPC Technical Working Group and reviewed by the IPC Famine Review Committee shows concrete indications that famine may occur in two areas in the Bay region (Baidoa and Burhakaba districts) in South-Central Somalia between October and December 2022.
Confronting a once in a century public health disaster

Risk of reversal of health gains in one of the most fragile and vulnerable settings
COVID-19 and disruption of essential health services

20% reduction in life-saving vaccination coverage

4% reduction in facility-based health care delivery

13% increase in childhood mortality

Source: World Health Organization
Response to COVID-19

- Despite the pandemic overwhelming an already weak health system in Somalia, the Ministry of Health, together with its partners, has been able to respond.

**Strengthening Laboratory Capacity**
- Supply of essential laboratory equipment and medicines (e.g., genome sequencing machines, PCR machines, and other supplies)
- Training laboratory technicians

**Provision of Medicines**
- Covid-19 medicines distributed across the country.
- PPEs, WASH and IPC supplies
- Interagency Emergency Health kits

**Live-saving Equipment**
- Supply of PSA oxygen plants
- Thermal scanners at main points of entries.
Technical team undertaking training on genome sequencing at the National Public Health Lab in Hargeisa

Technical staff undertaking sample testing for COVID-19 by PF-PCR at National Public Health Reference Lab

Technical team undertaking training and sample checking on genome sequencing at the National Public Health Lab in Garowe

Offloading of IEHK kits to WHO Warehouse, Mogadishu
PSA oxygen plants at a main Covid-19 center in Mogadishu

PSA oxygen plants at a regional hospital, Galmudug state

PSA oxygen plants at a regional hospital, Jubbaland, Somalia
Climate projections for Somalia

- Threefold increase in climatic events since 1990
- 3 major droughts since 2010
- Locust swarms
- Air temperature over Somalia is very likely to rise by 1.4 to 3.4°C by 2080.
- The sea level at the Somalian coasts is projected to rise with high certainty. Between 36 and 42cm by 2080.
- Per capita water availability for Somalia can be expected to decline by half by 2080
- Four consecutive failed rainfall seasons, facing the possibility of a fifth
- Over 1.6 million internally displaced people (IDPs) who need humanitarian aid continue to experience physical and mental health issues as a result
Some of the main projections for climate shock in Somalia

- More frequent and intense weather events
- Increased wetter years (floods) AND drier years (droughts)
- Higher temperatures, increased heat-related deaths (human and livestock)
- Resurgence of diseases and climate-attributed deaths and disability
- Agricultural crop loss, livestock loss
- Internal displacements
- Extreme food hunger and malnutrition
- Climate security implications
SDG goals and Somalia: currently off track

• **No poverty**: 69% of the people live below the poverty line
• **Zero hunger**: 79% of the population experiences either moderate or severe food insecurity
• **Good health and well-being**: Universal health services coverage is 27 out of 100
• **Clean water and sanitation**: 32% of the people using safely managed sanitation services; 52% of the people using safely managed drinking water
• **Climate action**: People facing the extreme climatic shock
Health systems suffer if food systems are not working for health

- **Malnutrition**
  - Increased risk of negative health outcome - CFR
  - Increased vulnerability to diseases due to malnutrition
  - Inadequate diets & feeding practices
  - Food insecurity, loss of livelihoods and assets

- **Morbidity**
  - Increased risk of malnutrition due to diseases
  - Increased health risks
    - Reduced/Delayed access to preventive and curative health care
    - Increased Conflict over resources
    - Increased risk of gender based violence, domestic and sexual violence
    - Engagement into risky activities
    - Displacements, deteriorated living conditions, hygiene and sanitation

- **Health services**
  - Increased health care needs
  - Decreased/Delayed access to Health Care
    - Increase of financial barriers to health care
    - Deteriorated Health Seeking Behaviors
    - Competitive Needs – Change in resource allocation and care practices
Impact of Drought

- 4-5 fold increase in childhood diseases like measles, cholera and pneumonia
- 2-fold increase in severe acute malnutrition
- Extreme hunger, water shortage severe food insecurity and malnutrition
- Slowing down of economic growth by estimated 0.4 %
- Below optimal performance of productive sectors
- Exponential increase of conflicts and internal displacements leading to people living in extreme poverty (Approx. 7 in every 10 Somalis live below $1.90 a day)
- Increased vulnerability for marginalized women and youth with informal roles within food systems e.g., the fish value chain
Food Security & Nutrition: Essential Ingredients to Build Back Better

- Intensify **multi-sectoral efforts** to combat the effects of climate change
- Support scaling up of **social protection** programs
- **Build health system resilience** and make health and nutrition an integral part of inclusive economic recovery
- **Promote durable solutions** that benefit populations in displacement settings by strengthening resilience and avoiding negative impacts on critical livelihood and access to land and natural resources
- **Stimulate markets and provide livelihood opportunities** for rural people
- Advocate for the **inclusion of women and youth** as food systems actors
Thank you.
Case Study:

The added value of Behavioural Sciences
The Netherlands in March 2020

THE ADDED VALUE OF BEHAVIOURAL SCIENCES
The Netherlands in March 2020
**Fase 1: Acute**

1a Risk evaluation
- Susceptibility and severity vs benefits of risk behavior

1b Response efficacy
- Belief that adhering to advice reduces infection risk

1c (Social) barriers & self efficacy
- Discomfort and cost vs trust that one can overcome this
die te overwinnen

1d Cue to action
- Internal or external trigger: social norm, media, healthcare worker

**Fase 2: Adherence**

2a Motive
- Positive affect, intrinsic reasons, consistency with identity

2b Self-regulation
- Overcoming old habits, reward, learning, correction

2c Habits
- Remove cues of old habits, introduce cues for new habits

2d Capability
- Psychological and physical capability to adhere to measures

2d Social and physical environment
- Opportunity, incentives, social support

Behaviour: uptake
- Whether advice is followed or not

Behaviour: adherence
- Whether behaviour is continued or not
Independent scientific advisory board & expert teams

- Review all our work
- Rapid expert consensus

Collaboration with all regional public health services (ggd)

- First 90,000 respondents, 2/3 joins cohort, 1/3 interviews
What research have we done?

- Routine mixed-method data collection
  Monitoring a cohort across 20 rounds & (representative, cross-sectional)
  1. Behaviour, beliefs, affect
  2. Well-being
What research have we done?

Routine mixed-method data collection
Monitoring a cohort across 20 rounds & (representative, cross-sectional)
1. Behaviour, beliefs, affect
2. Well-being
3. Trust, procedural justice
What research have we done?

- Routine qualitative data types
  1. Interview cohort (20 months), focus groups and ad-hoc on specific topics
  2. Open text coding from surveys

- Non-routine data collection
  1. Intervention research
  2. Narratives (35, 90 interviews) and 3 focus groups
  3. Scenario studies – peoples preferences
Behavioural strategy: 3C intervention model

- Agenda setting
- Information
- Motivation

- Physical environment
- Social environment
- Facilitation

- Clear rules
- Push
- Enforcement

Realistic & Relevant
who what where when
Lessons learned

- Give voice to the ‘silent majority’
- Team-up with the civil society
- Formulate behavioral insights accessibly and practically.
- Involve scientific experts, national collaboration and outsourcing of research.
- Flexibility to respond quickly to a changing situation
- With a strong foundation consensus can be reached rapidly (deadlines 6-48 hours)
- Strong foundation requires: frequent data collection, using models, research, updating literature.
To close

Behaviour is key to the spread of infections.

If we measure & understand behaviour, knowledge Integration generates relevant insights for policy and communication.

These inform (behavioural) interventions and reduce number of infections (now and in future).

And can do so much more
Thank you!

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Session 3:

Pandemics, Conflicts, Climate Change: What Have We Learned from the Past Three Years?