1

What are the COVID-related changes?

- IPC got the attention of everyone (!)
  - including media and the man on the street
    - The Dutch now have 17 mil experts
- IPC was considered as important
- IPC professionals having a new status
- COVID-related IPC research got funding
- Money was no issue to realize needed changes
  - "Never waist a perfect storm (aka pandemic) to finally get what you always needed"

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2

3

Help wanted

- Public health services “swallowing” infection control capacity
- Market shares with regard to diagnostic and prevention of infectious diseases changed
  - Public health entering especially long-term care who (finally) recognized the importance of IPC for their clients
  - IPC professionals choosing to render their services as private cooperation instead of healthcare employee
  - Commercial ”bulk labs” entered the market to help with testing

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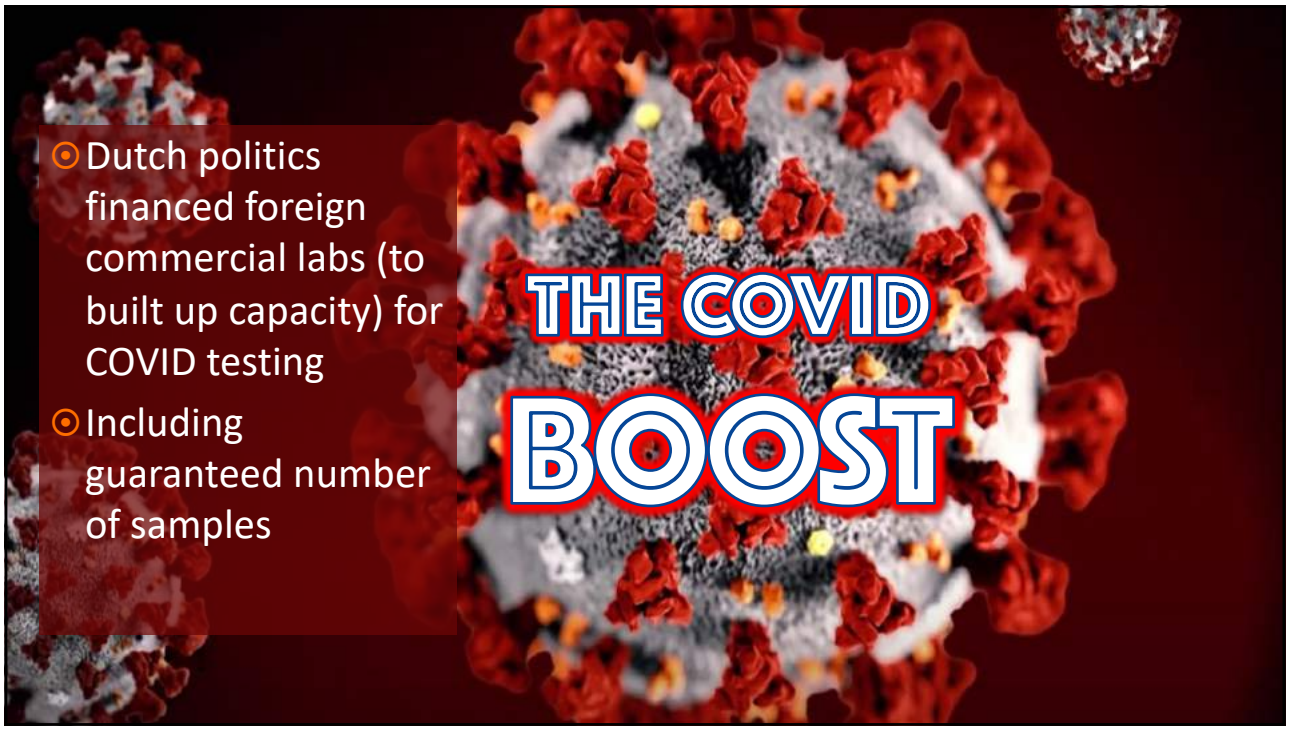
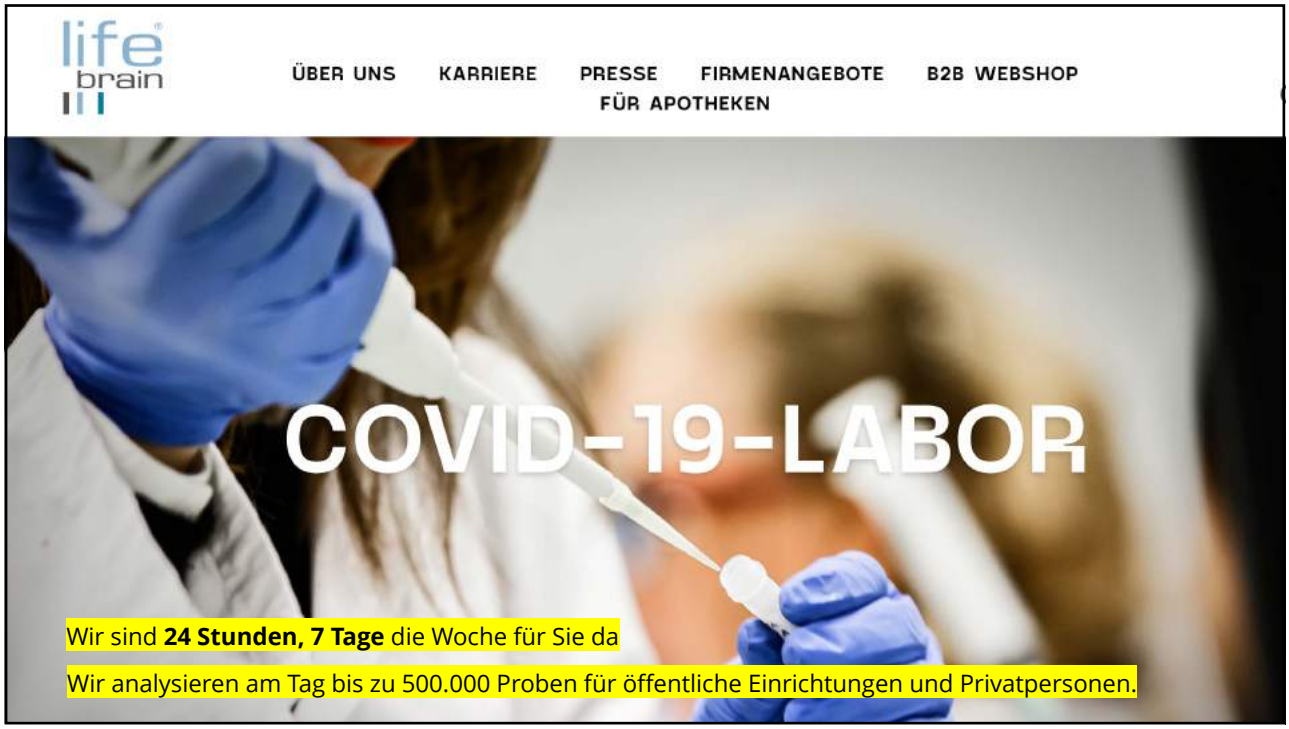


- Dutch politics financed foreign commercial labs (to built up capacity) for COVID testing
- Including guaranteed number of samples

5



6

PPE “in the picture”

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… certainly masks and the difference among them became a hot topic

7

8

What are the negative COVID-related changes?

- Protection of HCWs themselves became an important motivator to follow IPC guidelines
  - During SARS-1 in Hong-Kong reason for MRSA outbreaks
- When scarcity hit healthcare all rules and habits changed
  - continued use of masks and gowns
  - re-use of all kind of materials e.g. masks, gowns, ventilation tubes, instruments, …
    (my [old] hospital had 48 items previously for single use converted to re-sterilization/-use, in light of the procurement issues)

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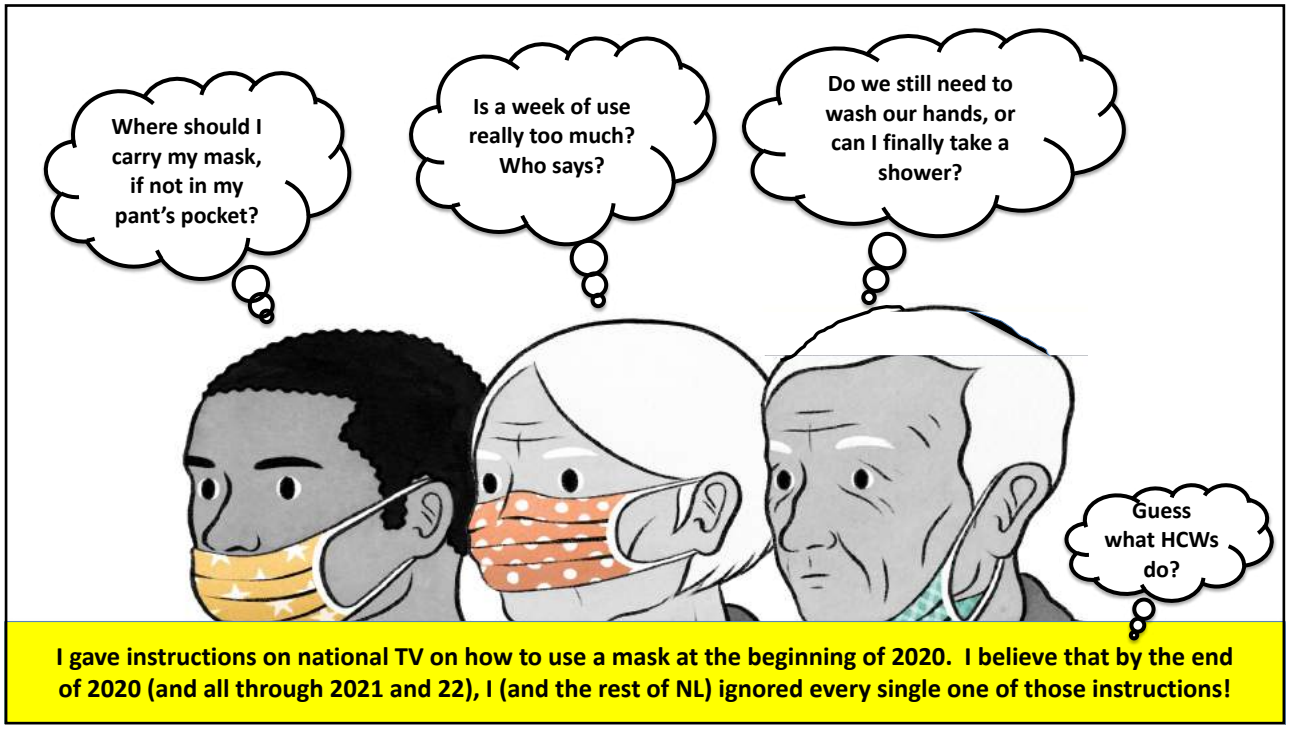

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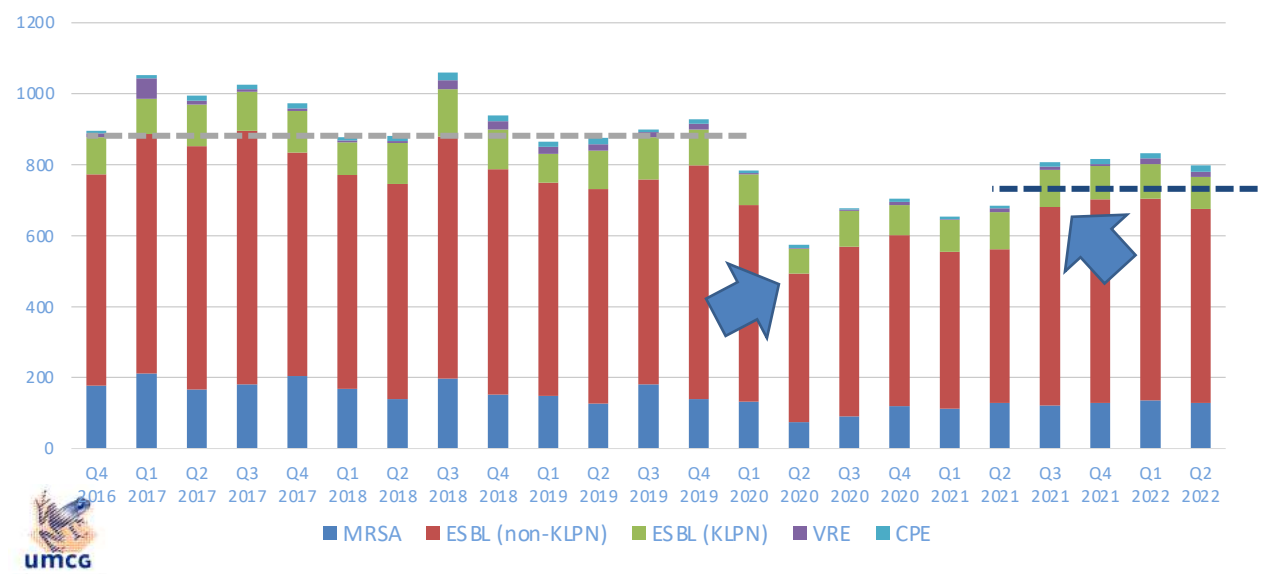
MDRO in Northern region (ESBL)



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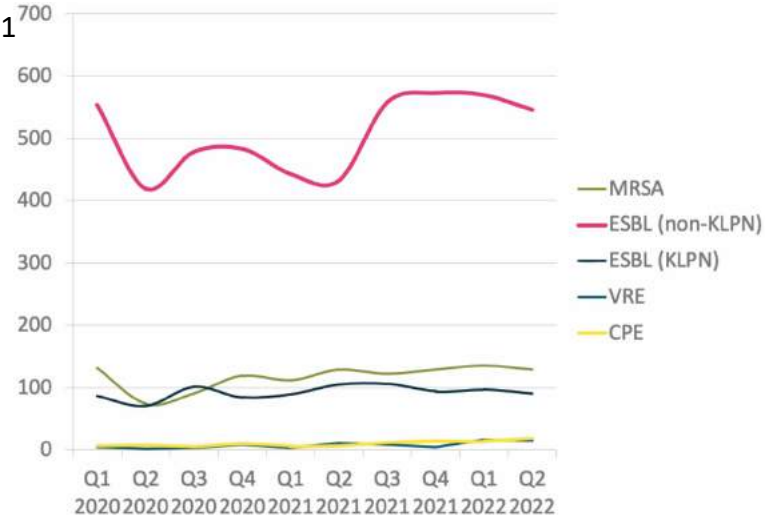
Increase of ESBL in the Northern region

- Relative increase as of Q2 2021
- More or better tests?
- Change im population mix

COVID not the only change



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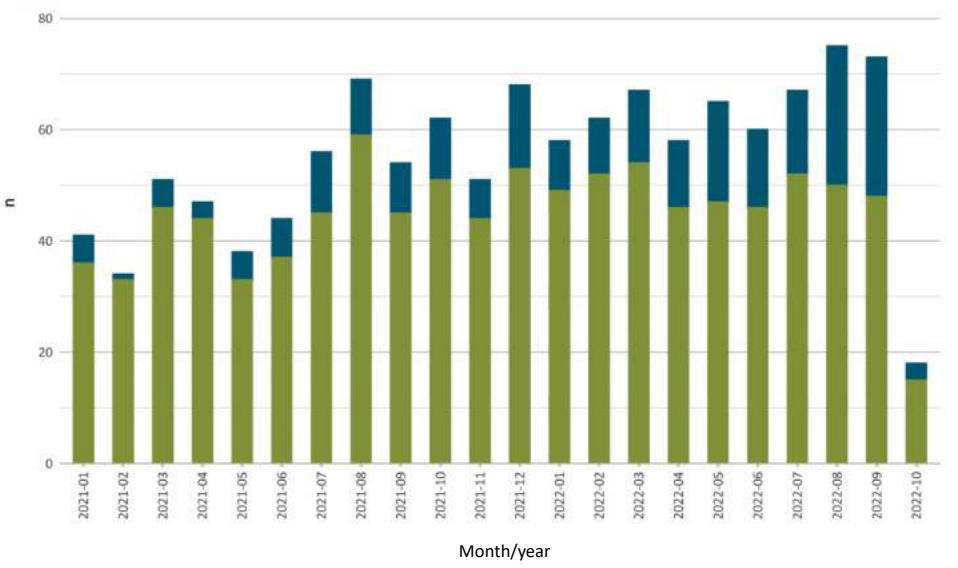
"Increase" of ESBL in Groningen/Drenthe

Non-citizin
Citizin

* based on citizin-number or the lack of it



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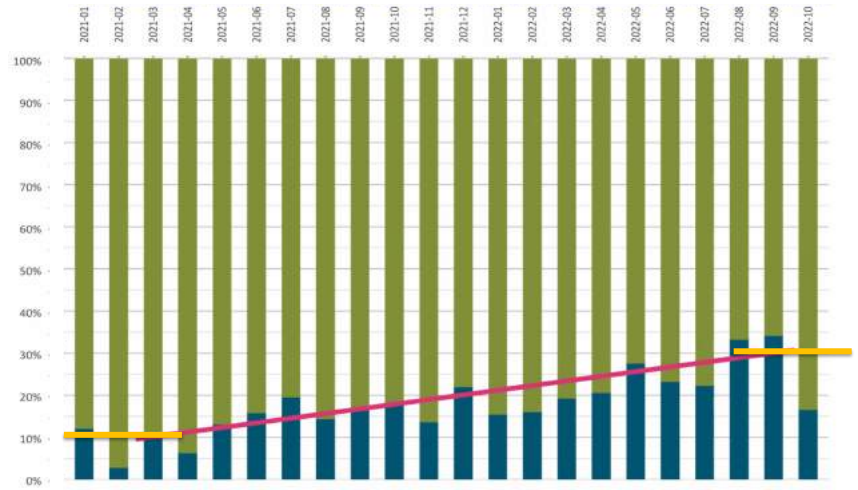
Shift of ESBL in Groningen/Drenthe

Non-citizin
Citizin



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Month/year

15

ECDC

1.2 Considerations for hospitalised patients

According to media and information provided to ECDC by the bordering countries, designated hospitals will receive the wounded from Ukraine for treatment.

High rates of antimicrobial resistance (AMR) are reported in Ukraine, particularly in gram-negative bacteria. For example, Ukraine reported the following AMR proportions in invasive gram-negative bacteria isolates (most bloodstream infections) to the Central Asian and European Surveillance of Antimicrobial Resistance (CAESAR) network for 2020: *Escherichia coli*, resistance to third-generation cephalosporins, 53% (24/45); *Klebsiella pneumoniae*, resistance to carbapenems, 54% (53/99); *Acinetobacter* spp., resistance to carbapenems, 77% (37/48). For *Staphylococcus aureus*, the proportion of meticillin-resistant isolates (i.e. MRSA) was 18% (15/83) [36].

Operational public health considerations for the prevention and control of infectious diseases in the context of Russia's aggression towards Ukraine - EN - [PDF-966.77 KB]
Also available in: CS HU PL RO SK UK

https://www.ecdc.europa.eu/en/publications-data/operational-public-health-considerations-prevention-and-control-infectious

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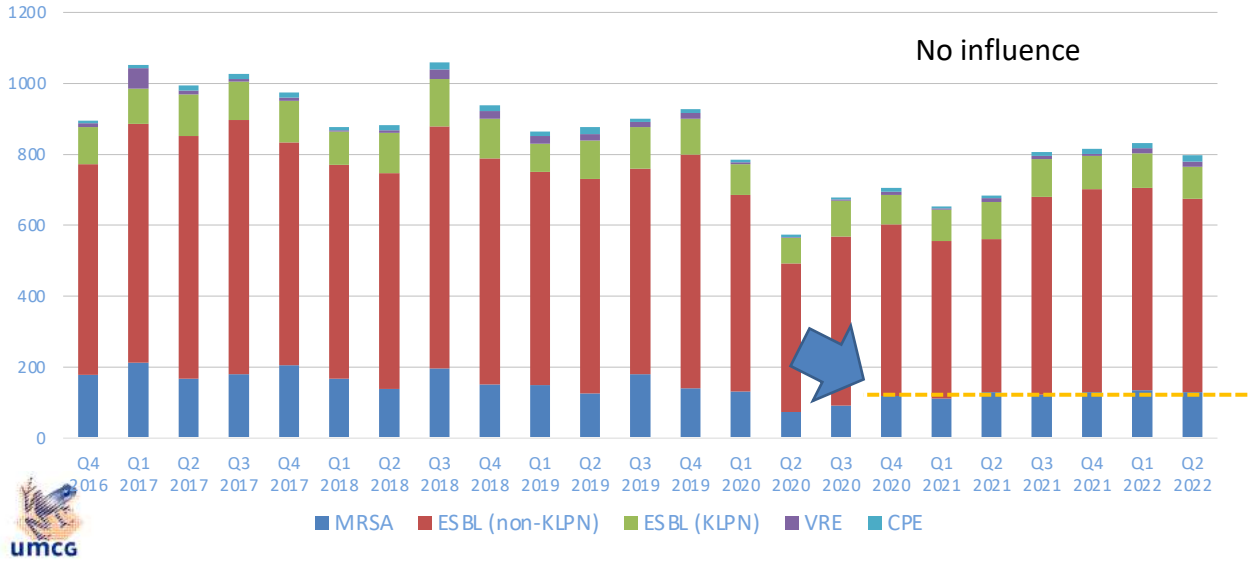
MDRO in Northern region (MRSA)



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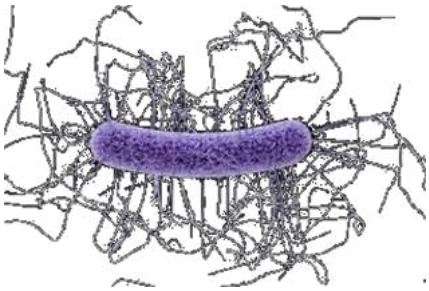
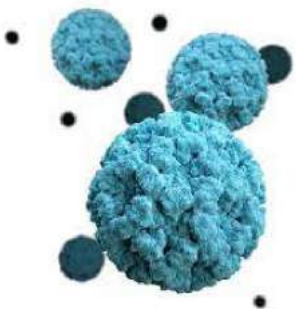
SARS-CoV-2 measures leading to decrease



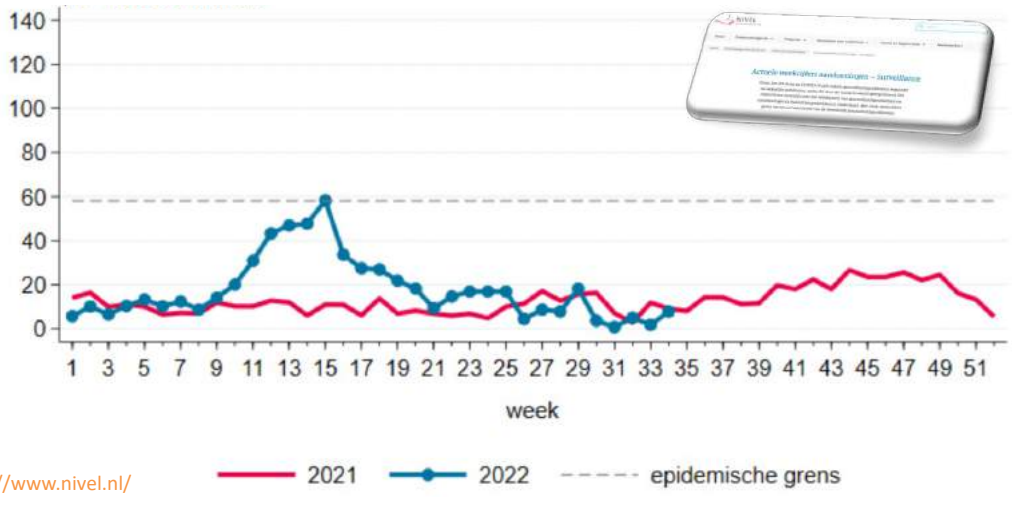
Clostridium difficile



Norovirus

Influenza 2021 and 2022

Number of patients visiting GP's with Influenza like symptoms, per week per 100,000 inhabitants



umcg https://www.nivel.nl/

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How to stop the bad habbits?
STOP
BAD HABITS
*handhygiene might be the one thing that improved

21


Politics, the public, and even health-care admistrators will forget how usefully IPC was.
Or, feel that by now enough of the valuable rersources were “dumped” into COVID measures and IPC in general

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Social impact

- Support for infection control measures in the public vanished
  → this may impact HCWs behavior
  (or the other way round – use of essential positive HCWs)
- Continuing discussions about the use of masks and the differences between regions and countries are demotivating
- Priority in healthcare settings changing to catch-up with previously postponed care
- High number of sick HCWs leading to extreme workload, which generally is bad for infection control

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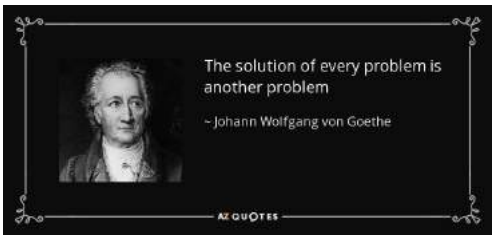
How to stop bad habbits?

- Create awareness
- Adress the problem among each other ("safety culture")
- Training, training, training



- Sustainable movement
- Not replacing less sustainable materials but changing the rules (ignoring existing guidelines)

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With regard to handhygiene in the NL

- The extreme frequent use of ABHR in test- and vaccination-streets of the public health service led to an RIVM rapport on toxicity of ethanol
  → getting occupational health active, who now tell everyone about the increases risk of cancer
  → HCWs dubious about all ABHR including those not based on ethanol
  → lower compliance

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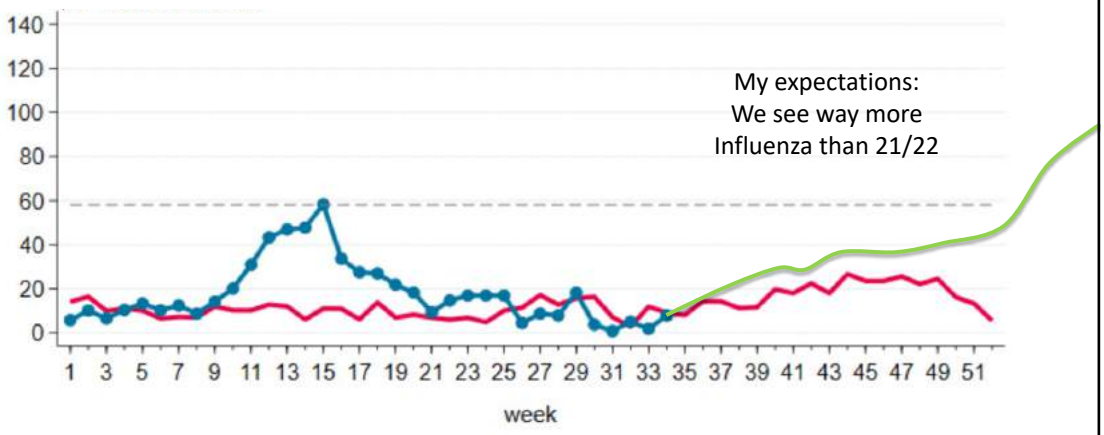
Influenza 2022/23

Number of patients visiting GP's with Influenza like symptoms, per week per 100,000 inhabitants



https://www.nivel.nl/

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My hope before COVID with regard to ILI and sick-leave

PLOS ONE

Sick-leave policy management, and PPE use, in addition to encouraging the uptake of influenza vaccine.

We just started to allow SRAS-CoV-2-pos HCWs to work with PPE use when fit-to-work … ☹

RESEARCH ARTICLE

Not sick enough to worry? "Influenza-like" symptoms and work-related behavior among healthcare workers and other professionals: Results of a global survey

Ermira Tartari[1,2,3☯*], Katja Saris[4,5,6☯], Nikki Kenters[4], Kalisvar Marimuthu[7,8,9], Andreas Widmer[10], Peter Collignon[11], Vincent C. C. Cheng[12,13], Shuk C. Wong[13], Thomas Gottlieb[14], Paul A. Tambyah[15], Eli Perencevich[16], Benedetta Allegranzi[2,17], Angela Dramowski[18], Michael B. Edmond[19], Andreas Voss[4,5,6], on behalf of the International Society of Antimicrobial Chemotherapy Infection and Prevention Control (ISAC-IPC) Working Group[¶]

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For those thinking COVOID-19 = influenza already

- Population attack rate in susceptible persons
  - COCID-19 50-70%
  - Influenza 03-11% (11% = epidemic year)
- Attack-rate of COVID-19 this 7x higher
- Little know about long-term morbitity (Long-COVID)
- Even if mortality is identical, we should expect 7x more people to die due to COVID-19 as compared to epidemic influenza season

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Markt force/competition and concentration of labs

- Com-labs to built capacity for SARS-CoV-2-PCR testing, with a budget BIGGER than the yearly budget of all other Dutch MMBL's for the complete range of 24/7 ID diagnostic, consultancy and infection control
- What to do with high-output labs?

umcg Heiman Wertheim en Alex Friedrich, Trouw juli 2022

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Influence on IPC by changes in laboratory-landscape

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By taking over bulk-work and low complex tests, the (unpaid) IPC service of e.g. Dutch hospital labs might be in danger of getting reduced or rendered

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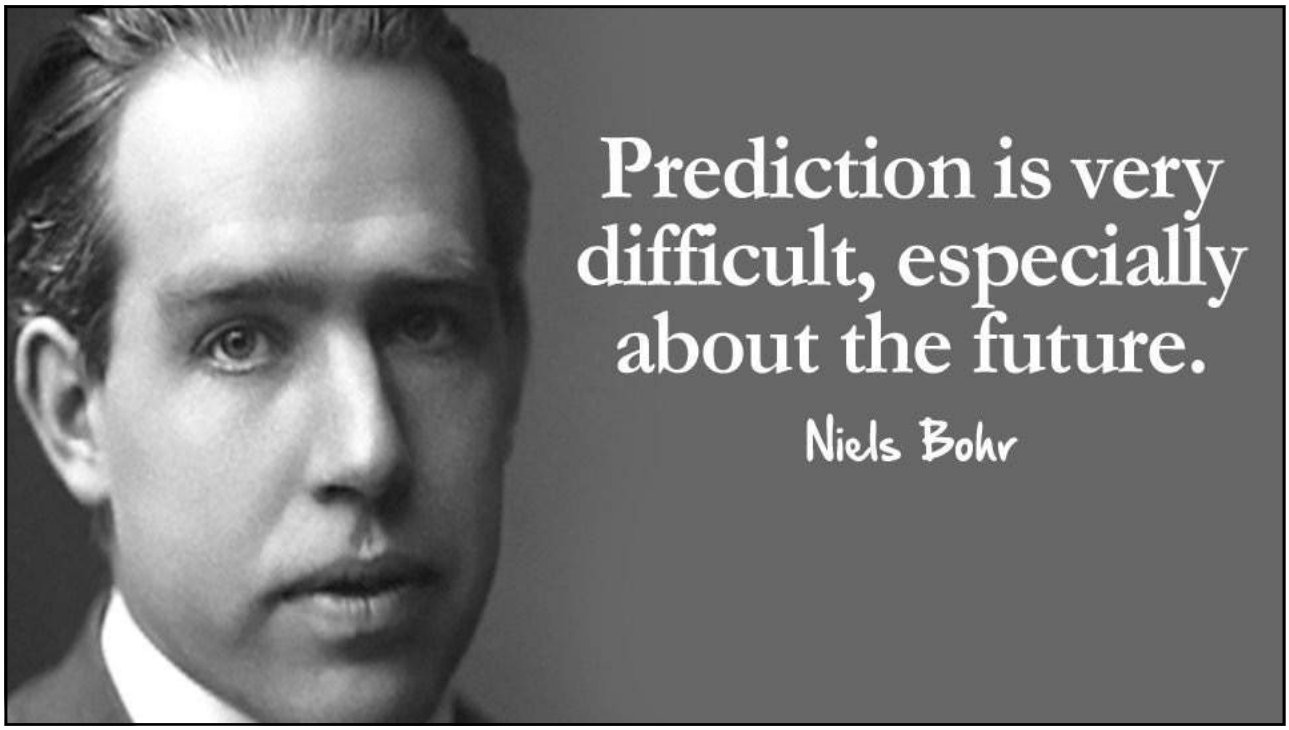

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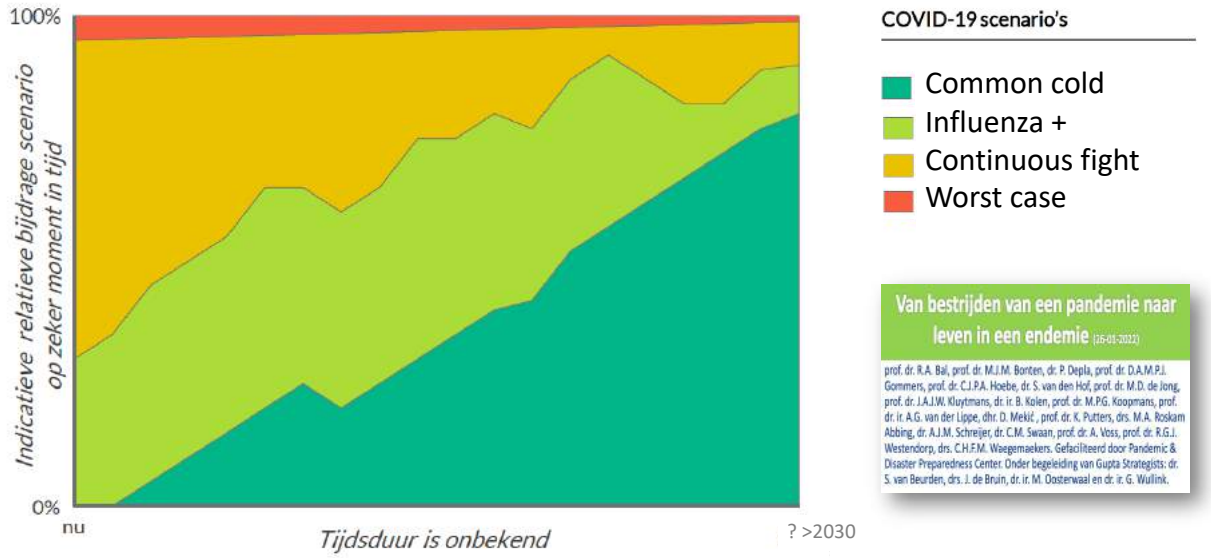
COVID scenario's over time



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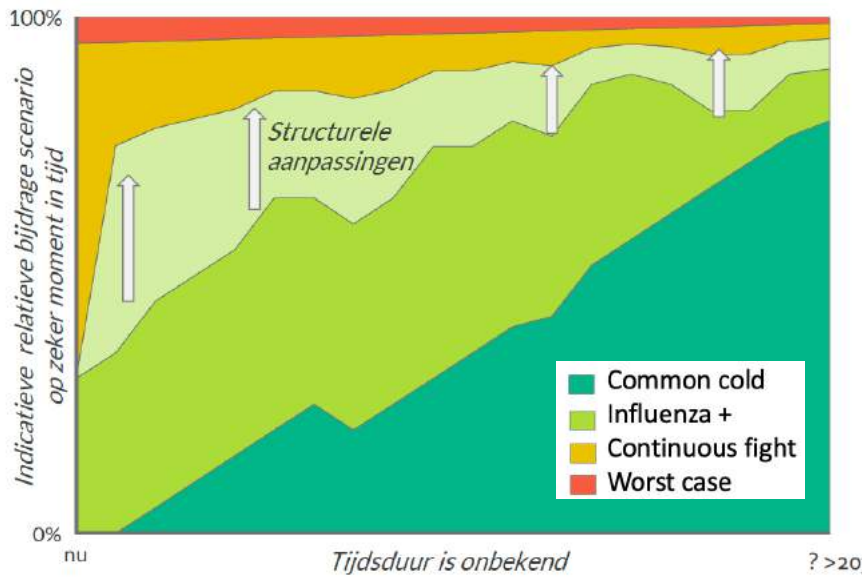
COVID scenario's over time



With a new variant all is possible

We need to keep some of the good COVID measures and change our old ways to keep a scenario of "continuous fight" at bay for an Influenza + scenario

If we achieve that MDRO's may stay at bay, too …

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Post-COVID changes with regard to MDRO's

- Once molecular test capacity is freed, we might start surveillance for VRE again and thus finding them
- MRSA should stay the same due to some IPC improvement and because everyone finds it important
- *C. difficile* and norovirus will follow normal patterns and are up compared top 2020/21
- CRE and other Gram-neg MDRO's will increase but not due to COVID but due to increasing refugee relocation

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Take Home Message

- The image of IPC has changed, but for how long?
- All goed habbits with regard to PPE use are “out the window”
- The main changes with regard to MDRO’s are in-part doe to the lack of (molecular) screening
- Doe to better IPC measures Noro and CDAD decreased
- Still hoping for more attention for other respiratory Ids, such as influenza
- The microbiology landscape changed with possible influence on ABR-stewardship and IPC

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