# Securing PPE during Covid-19 pandemic, experiences from Rigshospitalet Denmark

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## The Covid-19 pandemic became a health-war

- The whole society was affected in every way
- Huge logistic and organisation with many stakeholders
- Not only the healthcare system
- And not just infection-control staff was required to carry out the task
- But some with decision-making skills and money
- PPE (all) and hand-disinfection was stolen in departments and on its way from the stocks, and was never delivered when ordered



## **Marts 2020**

## Establishment of a Task Force group in Rigshospitalet

- Chairman was a center director on Rigshospitalet
- 2 clinical doctors
- 2 infection control nurses
- 1 from the purchasing department

With reference to the crisis management in the region

The task for the group:

- to ensure we got enough protective equiment and hand disinfection, as the whole world required
- assement of ppe in practical use, testing and review of certfications and EN standards, or equivalent approved by Danish Safety Authority

Outbidding on given orders was a threat to whether we got the order. Americans buy in cash (we don't- only when delivered and approved)

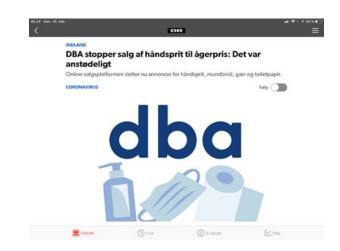
suddenly we lost 2 mio masks in spring 2020, and only 10 % was delivered

Rigshospitalets collaboration with Bestseller and Mærsk resulted in a direct non-stop flight from China to CPH, to avoid Frankfurt, where PPE was sold to the highest bidder

## Security of supply and storage

- 10 % of what is purchased are delivered
- Some are rejected after test
- Outbidding from others despite contracts
- Stolen on its way from manufacturer/ stocks to departments
- Hoarding
- Protective equipment locked in, in the basement RH
- Consumption and stock are closely monitored









## PPE procurement with requirement in EN-standards

- Gowns
- Coveralls
- Gloves
- Masks
- Respirators FFP2-3 +/- valve
- Respirators with air-supply
- Eye protection
- Hand disinfection
- Cleaning-and disinfektion cloths



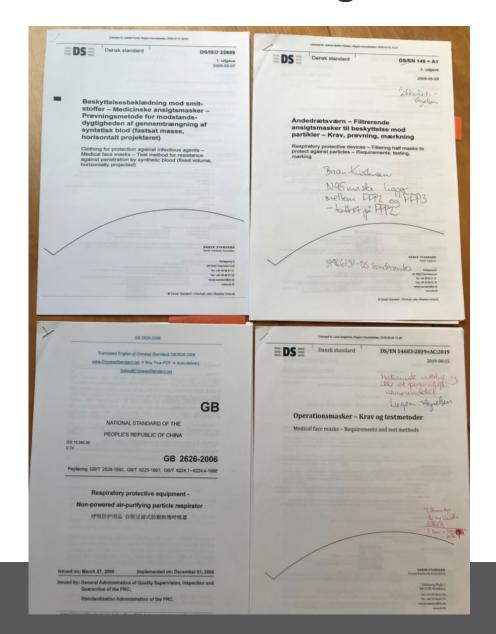


## Under Covid-19, suppliers could not deliver and we ordered directly from the manufacturer

- Normally PPE is purchased via regional & municipal procurement, and supplier guarantees that PPE meets requirements
- China produces most PPE. Task-force members looked at certifkations and test-results. Before final purchase TF assessed the fit. Gowns are assessed for liquid tightness, liquid barrier and sleeve cuff.
- Only PPE that meets the standard and fit, is purchased
- Hand desinfektion also had to meet EN requirement and not smell bad or like gin, tequila...
- We had to learn different standards and test methods and requirement, before we could evaluate certifikates and test results.



## Standards in english (frontpage in Danish)- certificates in chinese





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## Test test test test- in the headquarter

NOT 24/7

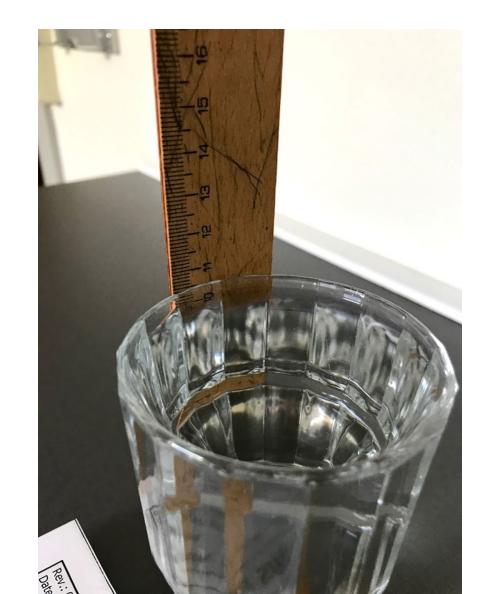
But between 7 og 24, 7 days a week

Prizes might be doubled, or lost order to others

"Wild west"
Protective gear had become the new gold



## 





## What did we do, not to run out of PPE

- Collection of FFP3 masks, for distribution if needed
- Delivery locally
- Visor, reused for one shift and for personal use
- Disposable gowns are replaced with a plastic apron for other forms of isolation (VRE, MRSA)
- Ensures delivery all way to the departments
- Fasten installed protective equipment, e.g. hand desinfektion



nye aftaler med store og små virksomheder, siger regionsformand Stephanie

ge nu er lav, er der et stort antal værnemidler under-

sen og regionerne er der ner kitler på vej til hospita



## Did we run out of PPE

- No
- But-there could be problems with the distribution to departments
- The ordersystem failed by many reasons
- We had an extra warehouse (because of the collection from departments), in the basement at Rigshospitalet, in case of emergency
- We still need FFP3 to measels, MDR TB- and we couldn't risk that staff not could be protected



## NFOS (National supply of PPE) and RescEU

- April 2020: Establish NFOS in the region capital will be responsible for the purchase of PPE throughout in Denmark ("Task-Foce from Rigshospitaler" are still a part of the group)
- NFOS is helping to ensure that Denmark and the EU have sufficient stocks of PPE for future pandemics
- April 2021: Establish RescEU- 10 warehouses in Europe (1 in Denmark)

## **NFOS** task:

- Meets once a week
- Fokus on security of supply
- Prepare requirements specifikations for future tenders?
- Ensures the quality of PPE from all suppliers
  - Must meet applicable standards
  - All companies are tested, including current suppliers (goods that were under agreement before the pandemic)
  - Masks and respirators- every new batch- new test at an accreditated test center in Austria or Denmark
  - Close collaboration with clinicians on test, instruction, communications and if any complaints.

Rigshospitalet Diagnostisk Center

