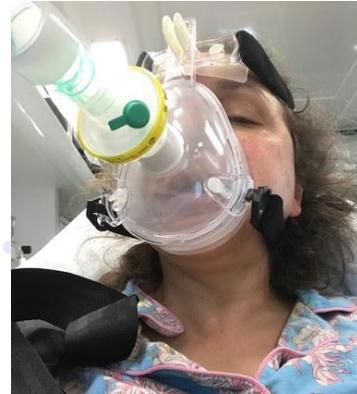


# Simulering v/Covid-19

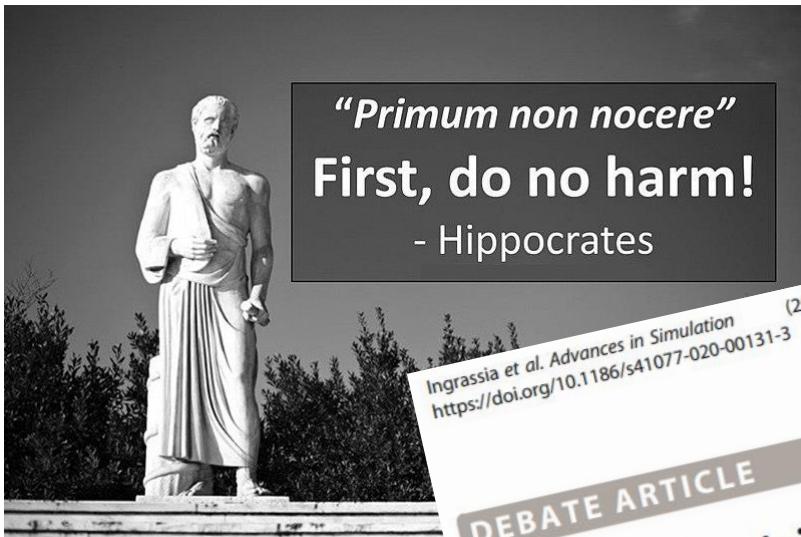
- Sigrun Qvindesland, RegSim/SUS/SAFER



Jon Ingemundsen, Aftenbladet 2020



# Simulering ved pandemi



Ingrassia et al. Advances in Simulation  
<https://doi.org/10.1186/s41077-020-00131-3> (2020) 5:13

Advances in Simulation

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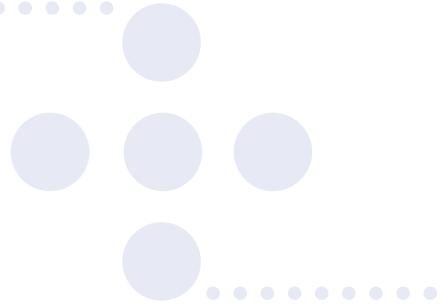


COVID-19 crisis, safe reopening of  
simulation centres and the new normal:  
food for thought

Pier Luigi Ingrassia<sup>1\*</sup> , Giorgio Capogna<sup>2</sup>, Cristina Diaz-Navarro<sup>3</sup>, Demian Szyl<sup>4</sup>, Stefania Tomola<sup>5</sup> and  
Esther Leon-Castelao<sup>6</sup>

Train as you Fight!

# Planlegging



- Målgruppen
  - Rolleavklaring
  - Individ? Team? Avdeling?
- Emne
  - Ferdigheter? Utstyr? Covid-19 kliniske utfordringer?  
Samhandling? Økende # Covid-19 pasienter?
- Kvalifisert utdanningspersonell
- Sted?
- Evaluering og tilbakemelding til systemet til forbedring



Organisasjonen

Systemforbedring

„Vi“ Teamet

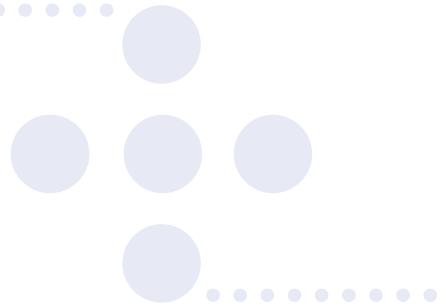
Problemløsning –  
Kompetanse

Arbeid

„Jeg“

After Wehner

# Fokusområder



- Pasienten/Pårørende
- Opplæring - Kompetanse:  
(Gjen) kvalifisering av personnel til å fungere rask i diverse roller:
  - Individet i et
  - Intensiv Team (Covid-19: kommunikasjon/hygiene/smitte mm)
- Systemfokus:  
Forstå og optimalisere arbeidsflyt, flaskehalsar: prosedyrer, endringer
- HMS fokus:  
Tiltak for å støtte helsepersonell ved endringer, belastninger, egen risiko: „Psychological PPE“

# Forbedre behandlingstid og lære om sikkerhetsaspekter

- One week of simulation **training** allowed us to **identify** numerous latent **safety threats** and to adjust our institution-specific protocols to **mitigate** them.
- It also helped our physicians and nurses to practice relevant **tasks** and **behavioral patterns** (eg, proper donning and doffing PPE, where to dispose potentially contaminated equipment) to **minimize their infectious exposure** and to adapt to the new situation.

Kurz, M. W., Ospel, J. M., Daehli Kurz, K., & Goyal, M. (2020). Improving Stroke Care in Times of the COVID-19 Pandemic Through Simulation: Practice Your Protocols! *Stroke*, STROKEAHA120030091. doi:10.1161/STROKEAHA.120.030091

# Tren kollegaer og forbedre systemet

- Increased levels of **confidence**  
For responding to MET / arrest calls  
With Covid-19 patients

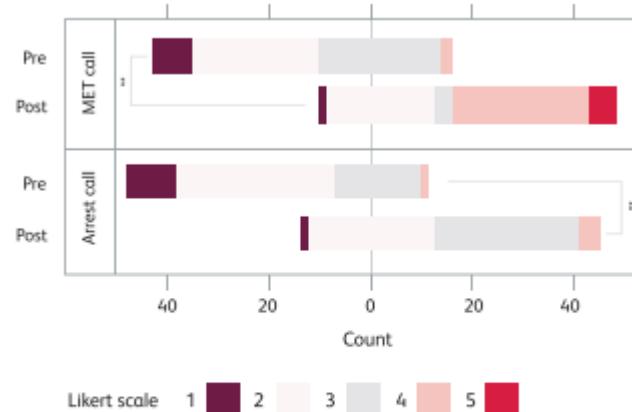


Fig 2. The responses on a Likert scale (1: completely unprepared, 5: completely prepared) for responding to COVID MET/arrest calls pre- and post-simulation. \*\*\*\* p<0.001. The 'Count' axis is aligned such that response 3 ('Somewhat prepared (eg still unsure on aspects)') is equally distributed either side of 0.

- Numerous challenges were identified along the themes of **equipment, personnel, communication and procedures**.

Wenlock, R. D., Arnold, A., Patel, H., & Kirtchuk, D. (2020). Low-fidelity simulation of medical emergency and cardiac arrest responses in a suspected COVID-19 patient - an interim report. *Clin Med (Lond)*. doi:10.7861/clinmed.2020-0142

# Observe safety threats and test possible solutions with in-situ simulation

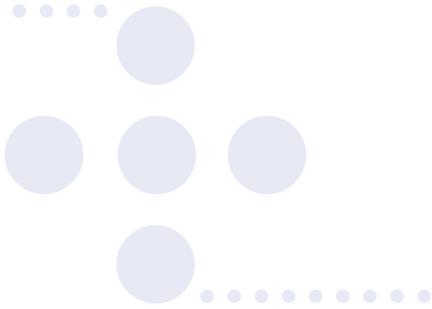


Table 1 Observed safety threats recorded during debriefing and response actions taken to eliminate or minimise the specific safety threat identified. AIIR, airborne infection isolation room; HCW, healthcare workers; PPE, personal protective equipment.

Observation	<u>Improper donning technique</u> Cuffs of waterproof gowns frequently not tucked securely under the gloves
	<ul style="list-style-type: none"><li>• Improper donning</li><li>• Before intubation</li><li>• During intubation</li><li>• Transition to mechanical ventilation after intubation</li><li>• Improper doffing</li></ul>

## Procedures Equipment

Choi, G. Y. S., Wan, W. T. P., Chan, A. K. M., Tong, S. K., Poon, S. T., & Joynt, G. M. (2020). Preparedness for COVID-19: in situ simulation to enhance infection control systems in the intensive care unit. *Br J Anaesth.* doi:10.1016/j.bja.2020.04.001

REVIEW

Open Access



## Preparing your intensive care unit for the COVID-19 pandemic: practical considerations and strategies

Ken Junyang Goh<sup>1\*</sup> , Jolin Wong<sup>2†</sup>, Jong-Chie Claudia Tien<sup>2</sup>, Shin Yi Ng<sup>2</sup>, Sewa Duu Wen<sup>1</sup>, Ghee Chee Phua<sup>1</sup> and Carrie Kah-Lai Leong<sup>1</sup>

To achieve sustainable ICU services:

- Prepare and implement rapid identification and isolation **protocols**, and a **surge in ICU bed capacity**
- Ensure a **sustainable workforce** with a **focus on infection control**
- Ensure adequate **supplies** to equip ICUs and **protect healthcare workers**
- Maintain quality clinical management as well as effective communication
- It is equally important to maintain critical care services for **non-COVID-19 patients**, **protect HCWs**, and consider the **ethical and social implications of triaging** during a crisis.

Goh, K. J., Wong, J., Tien, J. C., Ng, S. Y., Duu Wen, S., Phua, G. C., & Leong, C. K. (2020). Preparing your intensive care unit for the COVID-19 pandemic: practical considerations and strategies. *Crit Care*, 24(1), 215. doi:10.1186/s13054-020-02916-4

# Modelling the resources available

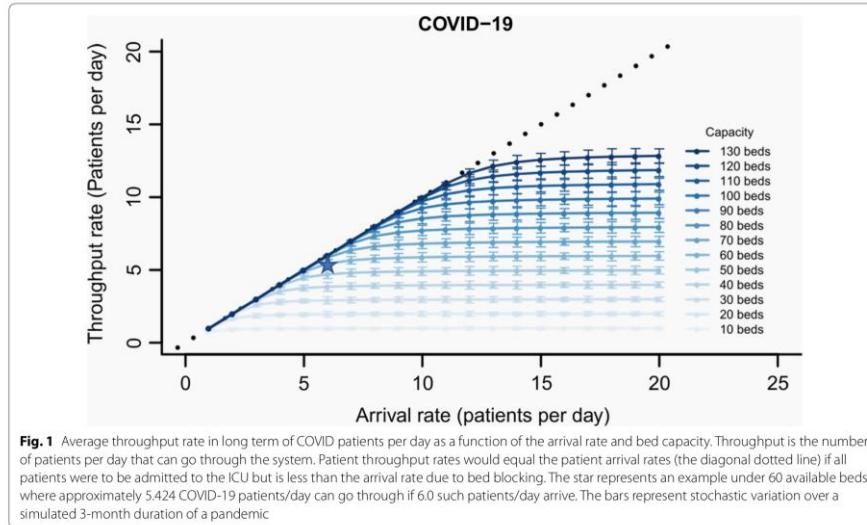
<https://andres-alban.shinyapps.io/icu-covid-sim/>

LETTER

## ICU capacity management during the COVID-19 pandemic using a process simulation



Andres Alba<sup>1</sup>, Stephen E. Chick<sup>1,2\*</sup> , Dave A. Dongelmans<sup>3</sup>, Alexander P. J. Vlaar<sup>3</sup>, Danielle Sent<sup>4</sup> and Study Group



Alban, A., Chick, S. E., Dongelmans, D. A., Vlaar, A. P. J., Sent, D., & Study, G. (2020). ICU capacity management during the COVID-19 pandemic using a process simulation. *Intensive Care Med.* doi:10.1007/s00134-020-06066-7



# Øvelser på opptrappingsplan

- Fase 1 ved # Covid-19 pasienter
- Fase 2 ved ## Covid-19 pasienter
- Fase 3 ved ### Covid-19 pasienter
  
- Kan vaktsykepleiere og vaktleger planene? – ØV!



# Advances in Simulation

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## The use of simulation to prepare and improve responses to infectious disease outbreaks like COVID-19: practical tips and resources from Norway, Denmark, and the UK

[Peter Dieckmann](#) , [Kjetil Torgeirsen](#), [Sigrun Anna Qvindesland](#), [Libby Thomas](#), [Verity Bushell](#) & [Hege Langli Ersdal](#)

[Advances in Simulation](#) 5, Article number: 3 (2020) | [Cite this article](#)

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### Abstract

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# Kildeliste

Ingrassia PL, Capogna G, Diaz-Navarro C, Szyld D, Tomola S, Leon-Castelao E (2020). COVID-19 crisis, safer reopening of simulation centres and the new normal: food for thought. *Advances in Simulation* 5: 13. <https://doi.org/10.1186/s41077-020-00131-3>

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Dieckmann PD; Torgeirsen K, Qvindesland SA, Thomas L, Bushell V, Ersdal HE (2020). The use of simulation to prepare and improve responses to infectious disease outbreaks like Covid-19: practical tips and resources from Norway, Denmark, and the UK. *Advances in Simulation* 5: 3. <https://rdcu.be/b3CDR>