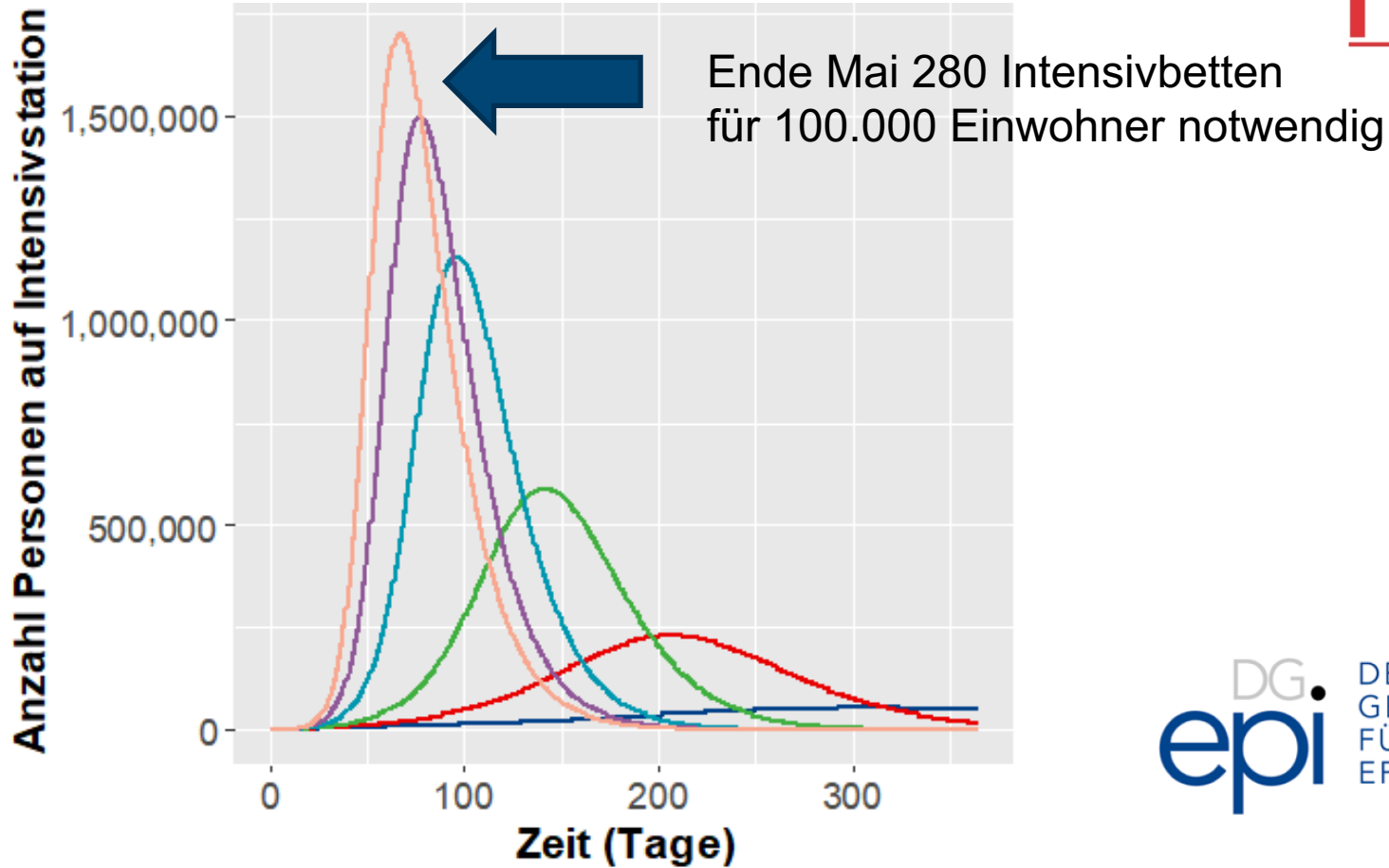


PD Dr. med. Ingo Gräff



R0 = Basisübertragungsrate

# Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand

Neil M Ferguson, Daniel Laydon, Gemma Nedjati-Gilani, Natsuko Imai, Kylie Ainslie, Marc Baguelin, Sangeeta Bhatia, Adhiratha Boonyasiri, Zulma Cucunubá, Gina Cuomo-Dannenburg, Amy Dighe, Ilaria Dorigatti, Han Fu, Katy Gaythorpe, Will Green, Arran Hamlet, Wes Hinsley, Lucy C Okell, Sabine van Elsland, Hayley Thompson, Robert Verity, Erik Volz, Haowei Wang, Yuanrong Wang, Patrick GT Walker, Caroline Walters, Peter Winskill, Charles Whittaker, Christl A Donnelly, Steven Riley, Azra C Ghani.

On behalf of the Imperial College COVID-19 Response Team

WHO Collaborating Centre for Infectious Disease Modelling  
MRC Centre for Global Infectious Disease Analysis  
Abdul Latif Jameel Institute for Disease and Emergency Analytics  
Imperial College London

Correspondence: [neil.ferguson@imperial.ac.uk](mailto:neil.ferguson@imperial.ac.uk)

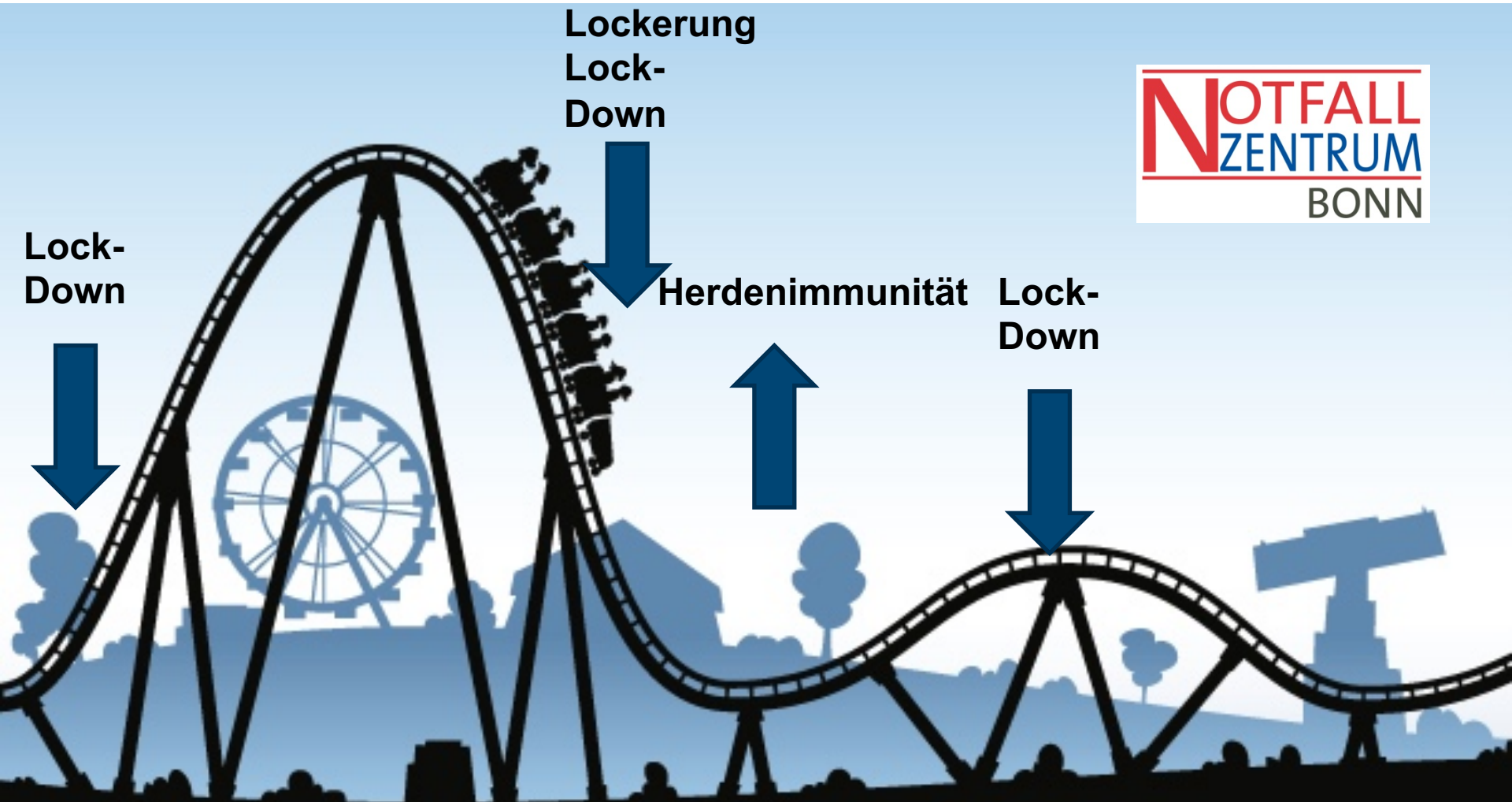
Szenario 1: Keine Maßnahmen = Mortalität  $\frac{1}{2}$  Millionen

Szenario 2: Verlangsamung = Mortalität  $\frac{1}{4}$  Millionen

Szenario 3: Unterdrückung = Keine ausr. Herdenimmunität / greift zu kurzfristig

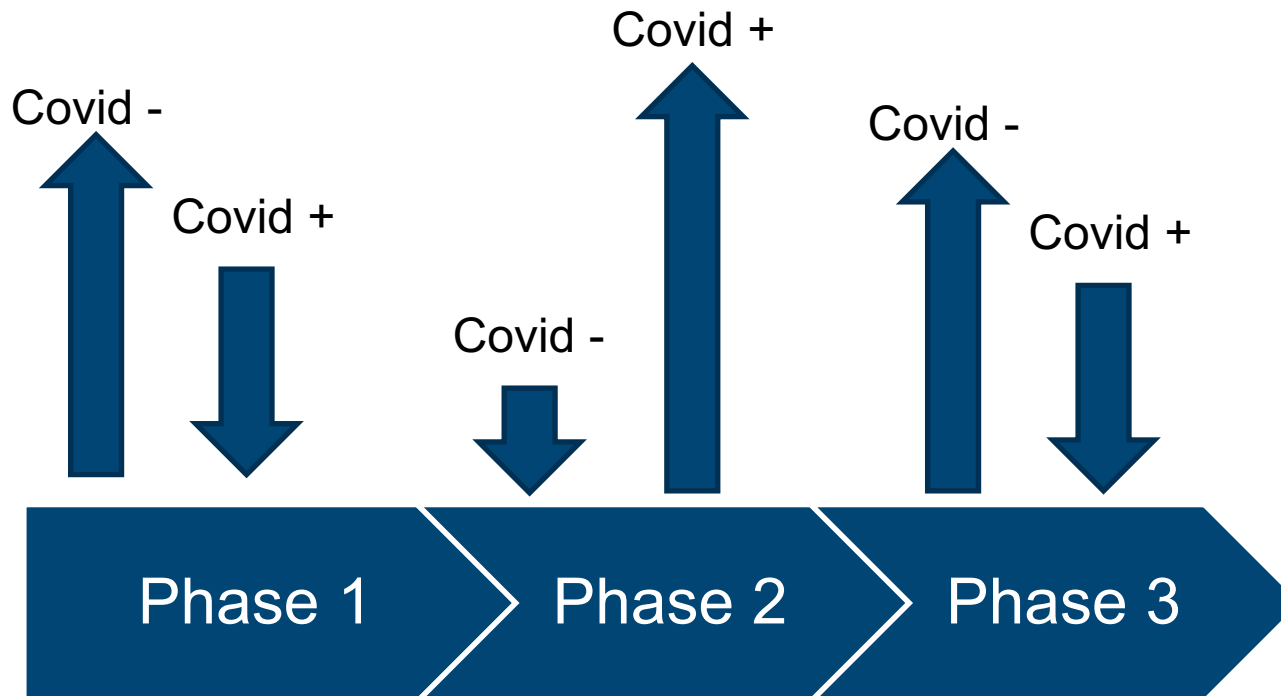
Szenario 4: Unterdrückung und Verlangsamung / Erfolgreich (Dauer 2 Jahre)

# Modell !!!!!



**NOTFALL**  
**ZENTRUM**  
BONN

1. Es wird dauern...
2. Drei Phasen...





# COVID 19 Raumaufteilung

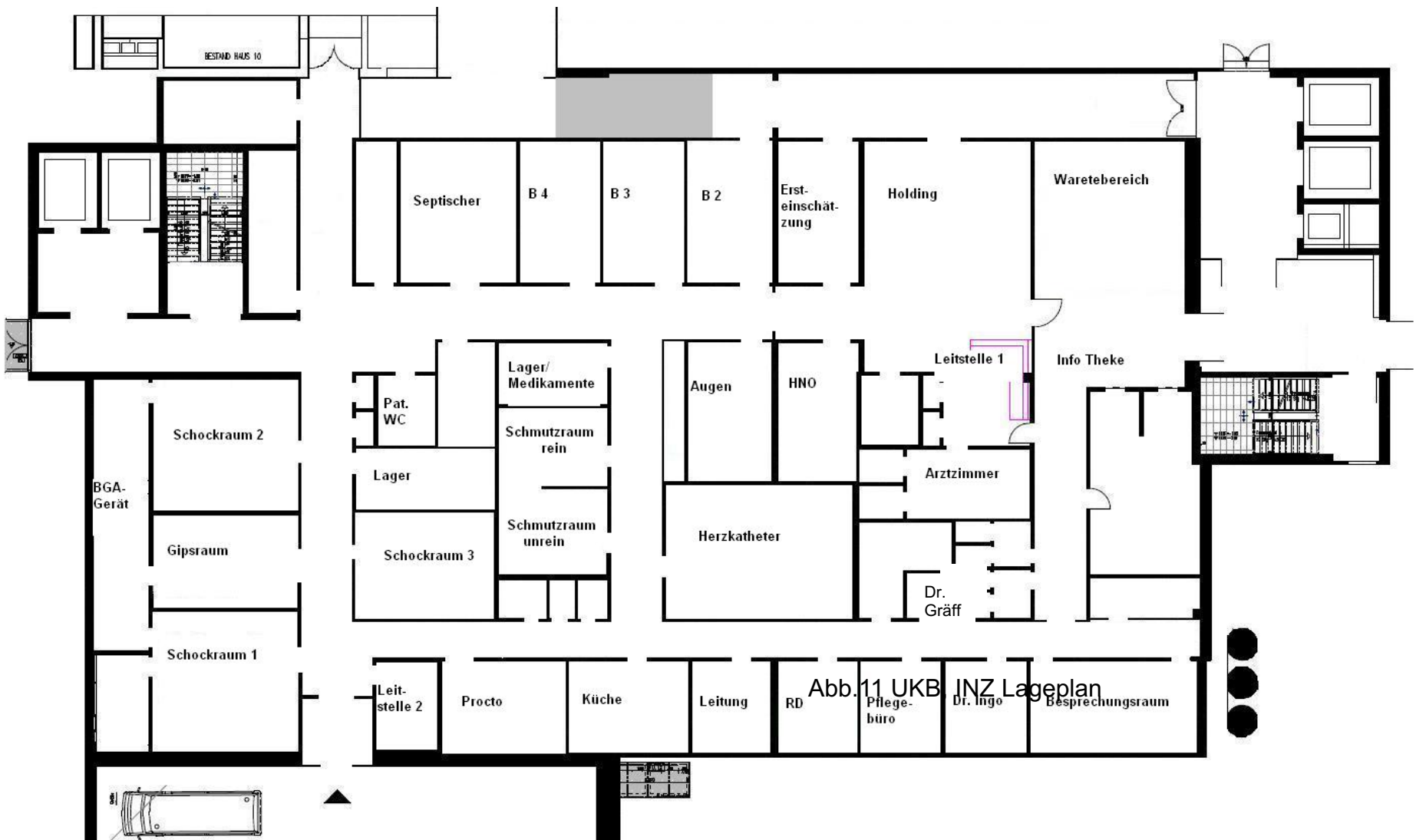
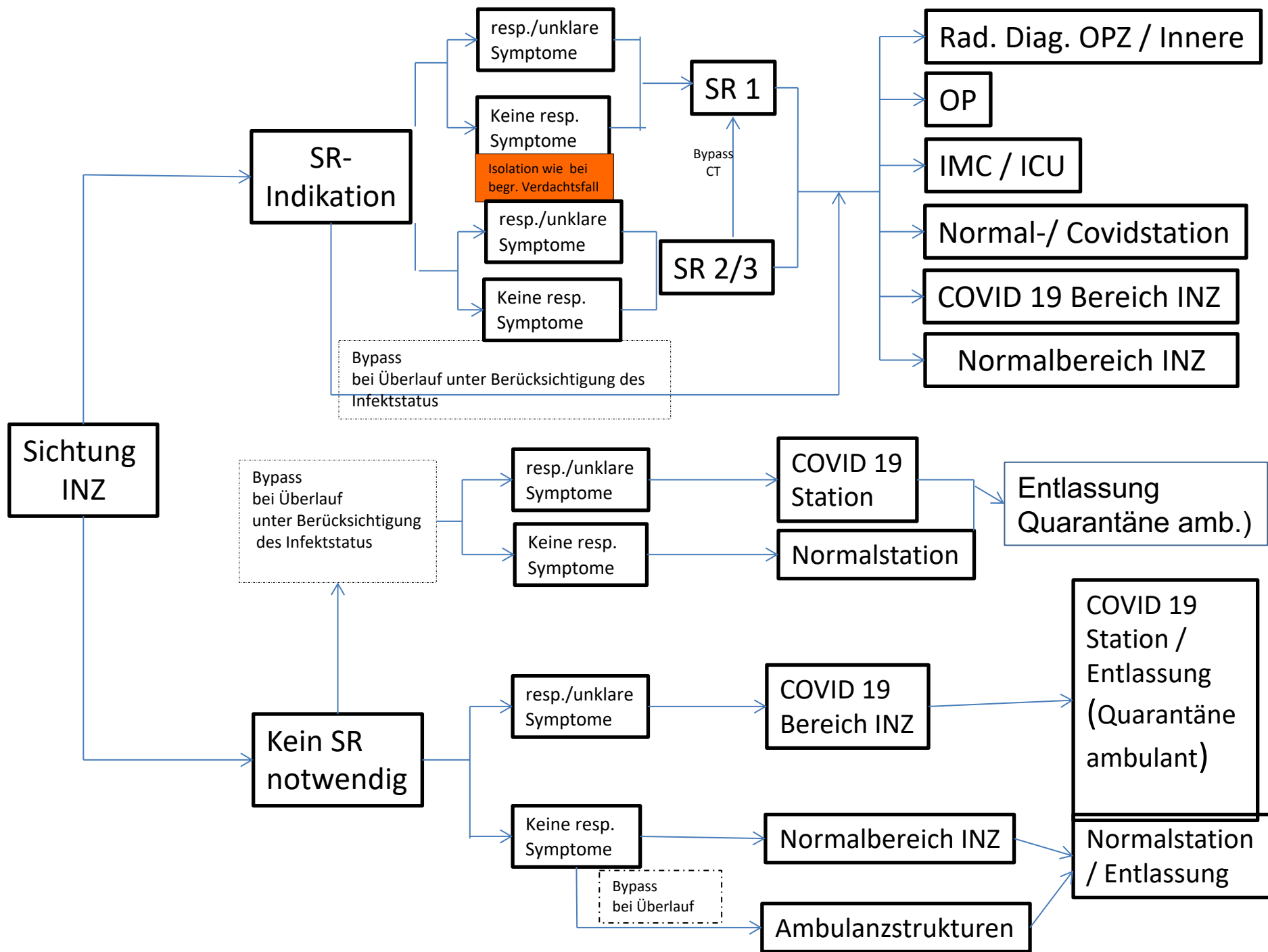


Abb. 11 UKB INZ Lageplan



# COVID 19-Raumaufteilung

**NOTFALL**  
**ZENTRUM**  
BONN

Covid Monitor  $\Sigma$  9  
Dual Use  $\Sigma$  7  
Normal Monitor  $\Sigma$  6  
Normal o. Monitor  $\Sigma$  8

**COVID 19**  
**Monitor n=5**

**COVID 19**  
**Monitor n=4**

RTX

**Normal ohne Monitor n=8**

**Dual Use n=7**

**Normal mit Monitor n=6**

Wartebereich

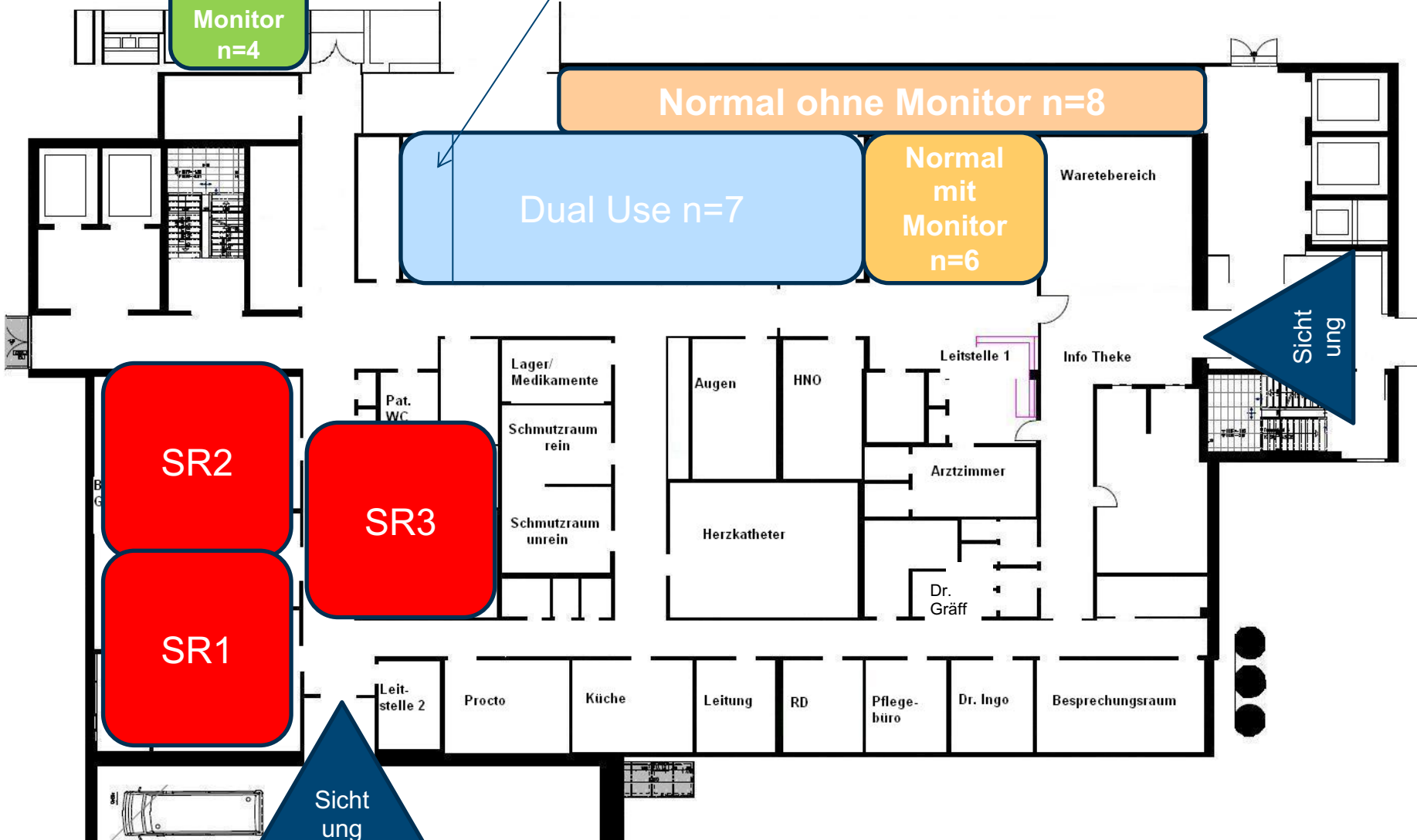
Sichtung

**SR2**

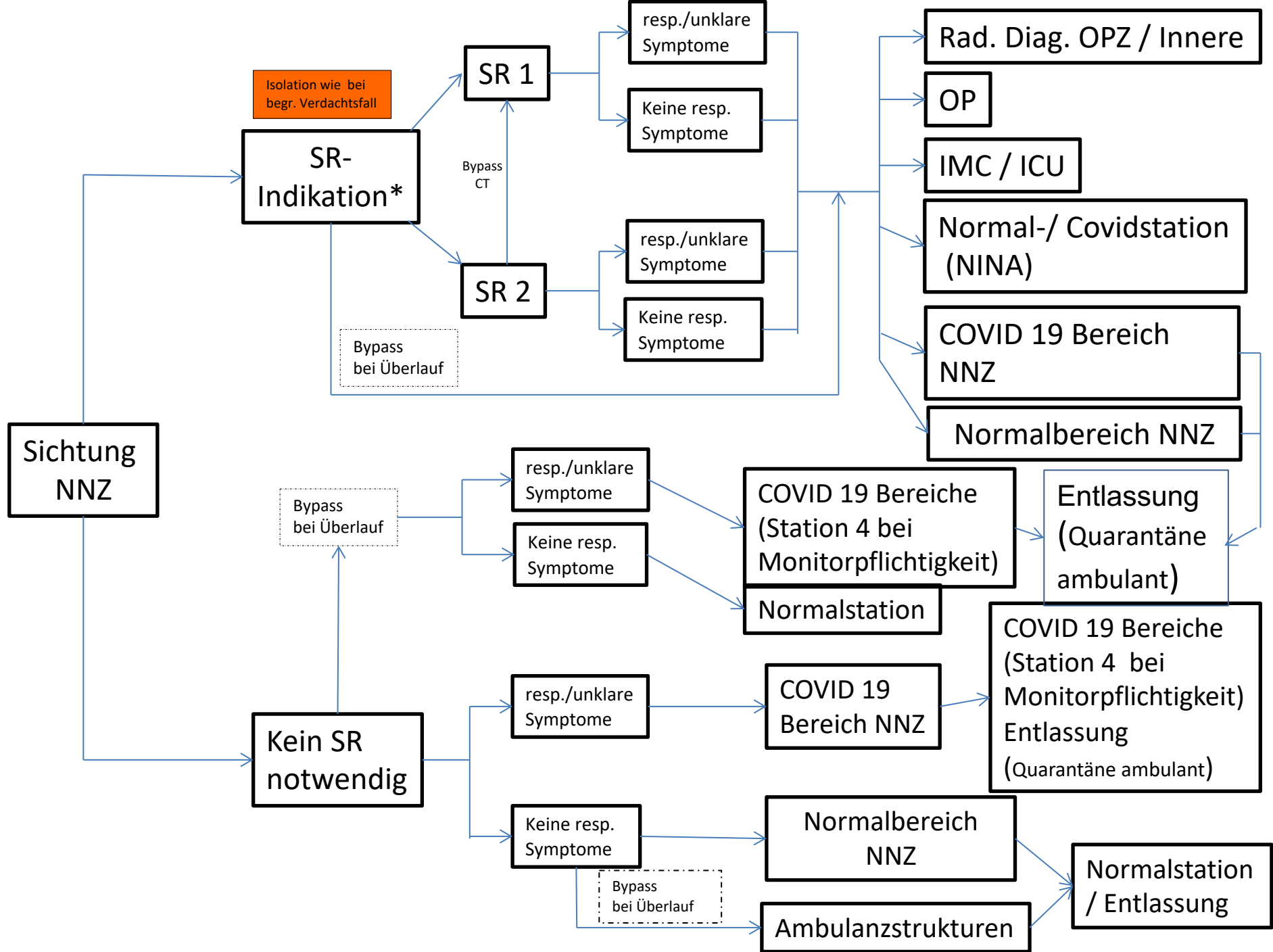
**SR3**

**SR1**

Sichtung







Trennung der beiden Patientengruppen im Wartebereich des NNZ durch Trennwände, Verteilung auf die Behandlungsräume nach Verfügbarkeit

resp./unklare Symptome  
**Nicht** monitorpflichtig

Covid 19 pos./  
**Nicht** monitorpflichtig

Vermehrtes Aufkommen von Covid 19 pos. Patienten/Covid 19 Verdachtsfällen

Behandlungsräume 2-5, Iso Raum (n=6)

Dual Use

resp./unklare Symptome  
**monitorpflichtig**

resp./unklare Symptome  
**Nicht** monitorpflichtig

Wartebereich  
/Triageraum 1

Holding (n=5)

Keine resp. Symptome,  
**Nicht** monitorpflichtig

Keine resp. Symptome  
**monitorpflichtig**

Covid-19 Monitor  $\Sigma$  5  
Covid-19 nicht Monitor  $\Sigma$  5  
Normal-Pat Monitor  $\Sigma$  5  
Normal-Pat nicht Monitor  $\Sigma$  1+Wartebereich

# Covid-19 Podcast from Italy with Roberto Cosentini. St Emlyn's

 Simon Carley on March 14, 2020



# Take away messages...

- Divide your department into resp patients and non-resp patients.
- Wear PPE and know how to use it.
- You will need clinicians who do not usually work in ED. Train and orientate them now (before you need them).
- Most patients are hypoxic and this responds to O2 and CPAP. You're going to need a lot of CPAP and how that happens could be tricky. They found hoods the best (Ed – but how many of those do we have?).
- Although hypoxic, patients have good lung compliance.
- They regularly saw diurnal variation with many patients presenting in the early afternoon.
- It's emotionally exhausting. Prepare yourself and your team psychologically and support them during the pandemic. Roberto's department has an embedded psychologist.
- Health care worker infections were quite low (because they wore PPE for all resp cases).
- Flow through the department and onto wards is absolutely vital.
- Flow out the the main hospitals to other units that can rehabilitate is vital.
- Decisions for ICU level care were similar to normal (in his hospital).