



## Learning Module “COVID-19”

### Description

In early December 2019, the first pneumonia cases of unknown origin were identified in Wuhan, the capital city of Hubei province. The pathogen has been identified as a novel enveloped RNA betacoronavirus that has currently been named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which has a phylogenetic similarity to SARS-CoV. Patients with the infection have been documented both in hospitals and in family settings.

A majority of the patients (58.0%) received intravenous antibiotic therapy, and 35.8% received oseltamivir therapy; oxygen therapy was administered in 41.3% and mechanical ventilation in 6.1%; higher percentages of patients with severe disease received these therapies (Table 3). Mechanical ventilation was initiated in more patients with severe disease than in those with nonsevere disease (noninvasive ventilation, 32.4% vs. 0%; invasive ventilation, 14.5% vs. 0%). Of these 204 patients, 33 (16.2%) were admitted to the ICU, 17 (8.3%) underwent invasive ventilation, and 5 (2.5%) died. Extracorporeal membrane oxygenation was performed in 5 patients (0.5%) with severe disease.

The concept of training with simulation means, that the participant can learn how to adjust the ventilator in different clinical situations. The trainee can gain “experience” without harming the patient. He/she learns how to recognize the different controls and display items of any type of ventilator. The LM consists of several scenarios and cases, which are installed in the AQAI SIS software – ready to use.

All scenarios are documented:

- Scenario description for the instructor
- Recommended materials
- Learning goals
- Patient’s history for the participants
- Patient’s acute status
- Actual LAB, ECG and XRay findings
- References, guide lines if appropriate





## Contents

- Information about AQAI SIS
- Installation and User Manual
- Review COVID-19: A Disease Definition Basics
- Various Scenarios
  - Introduction TestChest®
  - Noninvasive Ventilation and high flow oxygen
  - Intubation, Invasive Ventilation
  - Protective Ventilation
  - Recruitability, Recruitment of COVID-19
  - Severe Hypoxia
  - PEEP titration
  - PV Loop diagnostics
  - Prone Position
  - Phases of the disease
  - Various anonymous cases for self-training without instructor
- All Materials printed and on file (pdf)
- Scenario files for each case to be used with the TestChest® stand alone or with LLEAP® simulator combined with TestChest®

## Requirements for using the learning module

- AQAI SIS software
- TestChest® (obligatory) connected to Laerdal simulator (optional)
- Laerdal LLEAP® simulator in ICU bed; ICU workplace

