








An Addendum to “Normative modeling for COVID-19: a BPMN diagram of the STAKOB guidelines”

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This document is an addendum to the paper “Normative modeling for COVID-19: a BPMN diagram of the STAKOB guidelines”. In this paper, we describe a BPMN model of the medical process of treating COVID-19 patients, drawn from the “*Ständigen Arbeitskreis der Kompetenz- und Behandlungszentren für Krankheiten durch hochpathogene Erreger*” (STAKOB)¹ guidelines (“Permanent working group of competence and treatment centers for diseases caused by highly pathogenic agents”).

The repository for the aforementioned paper² contains the following files:

- ‘Addendum.pdf’: The present document.
- ‘STAKOB COVID-19.bpmn’: this file contains the BPMN³ model subject of the paper. This file, in .bpmn format, has been created with Signavio⁴ and is readable from any software compatible with the BPMN standard⁵. This model closely follows the guidelines, has been validated by physicians from the COVID-19 ward of the Uniklinikum Aachen, and may be used for conformance checking, simulation, and other types of analysis concerning the COVID-19 pandemic.
- ‘STAKOB COVID-19.pdf’: this file contains a vectorial .pdf export of the aforementioned model, so that it may be inspected visually. The schematic of the process model includes three nested subprocesses:
 - *Inpatient care* (reproduced in Figure 1): indicated in blue, this is the main part of the process. It encompasses all the operations related to the diagnosis and hospitalization of COVID-19 patients.
 - *Intensive care* (reproduced in Figure 2): patients in need of transfer to an intensive care bed traverse this subprocess in the model. All Intensive Care Unit (ICU) operations are described here.
 - *Respiratory support* (reproduced in Figure 3): this is an important subprocess of the *Intensive care* section of the process. Here, the model describes all operations needed to assist the patient’s respiration. Includes treatments such as mechanical ventilation, proning, and Extracorporeal Membrane Oxygenation (ECMO).
- ‘LICENSE.md’: A license declaration for all files contained in the folder. All mentioned files are distributed according to the terms of the Creative Commons “Attribution-NonCommercial 4.0 International” license⁶.

¹https://www.rki.de/DE/Content/Kommissionen/Stakob/Stakob_node.html

²<https://github.com/marcopegoraro/pm-healthcare/tree/main/stakob>

³<https://www.bpmn.org/>

⁴<https://www.signavio.com/>

⁵<https://www.omg.org/spec/BPMN/>

⁶<https://creativecommons.org/licenses/by-nc/4.0/deed.en>

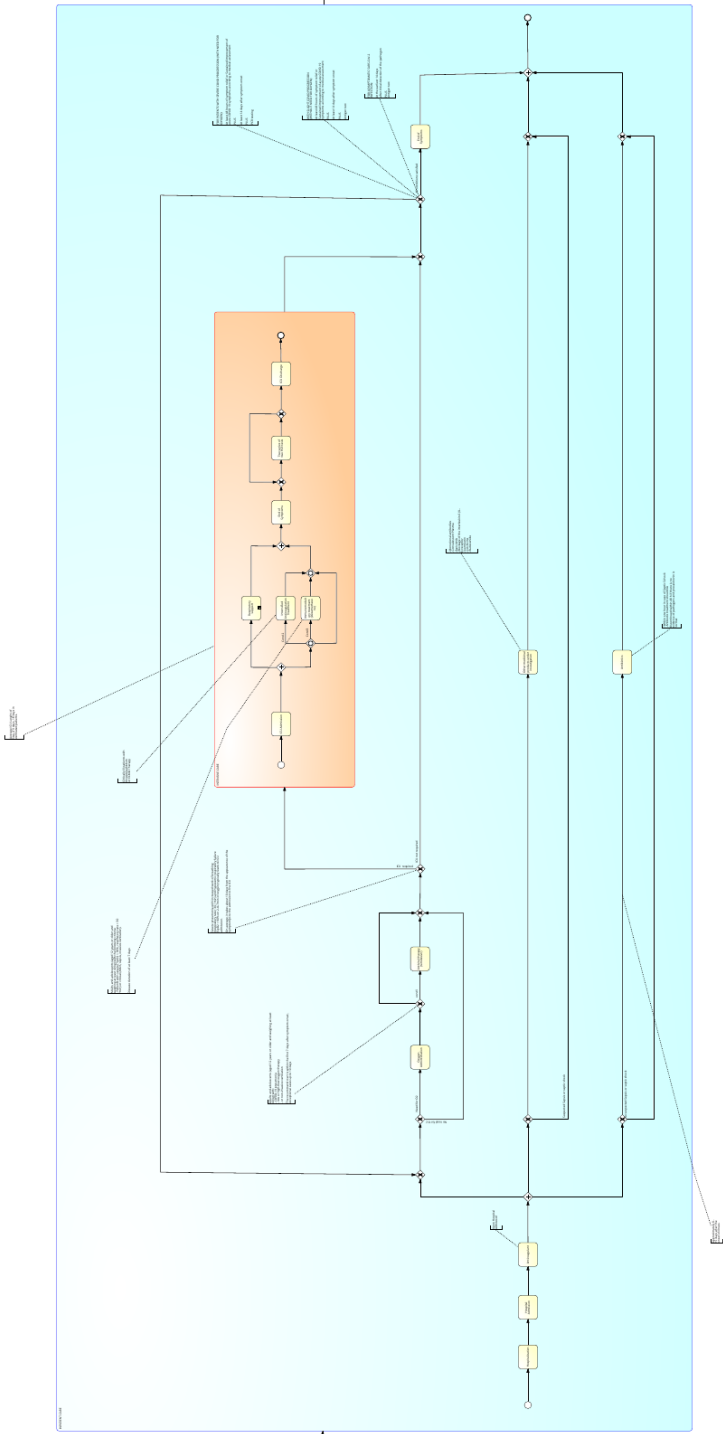


Figure 1: Testbild 2

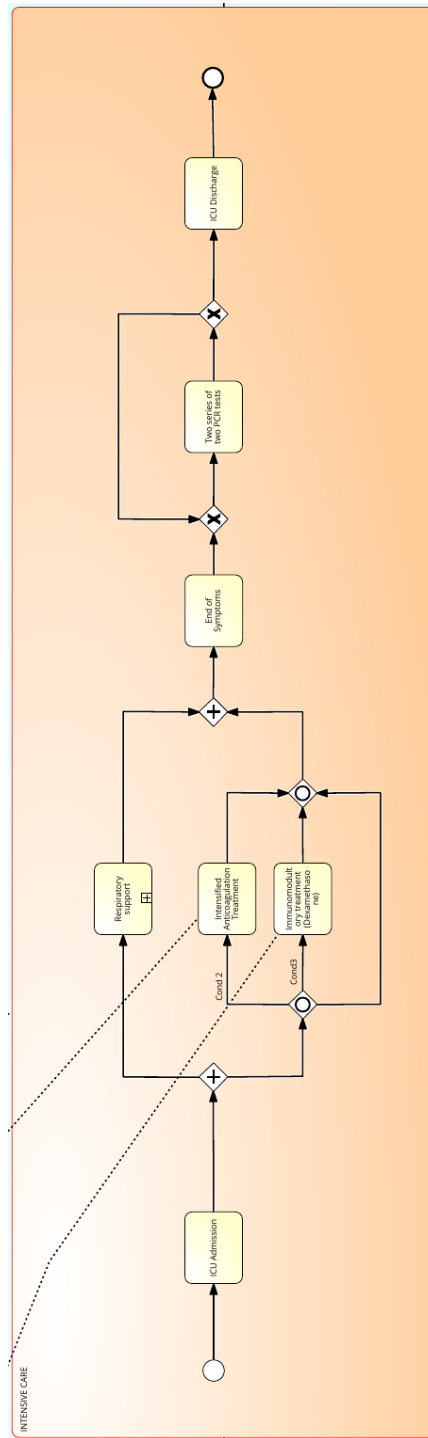


Figure 2: Testbild 2

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