

## CORONASYS INNOVATION SHEET 41

### ICU TRAINING VIDEO

#### Background

Although significant progress has been made in the treatment of Covid-19 over the last year, it continues to pose significant challenges for ICU teams. A team of researchers from the University of Tübingen<sup>1</sup> has now developed a training video that gives medical students and the interested public a comprehensive insight into the care of a Covid-19 patient.

#### Features

The [video](#)<sup>2</sup> was developed by doctors and medical students. Together with intensive care nurses, the developers realistically recreated the treatment of a Covid-19 patient in a replica of a fully equipped intensive care unit.

The video accompanies a (fictive) young Covid patient from hospital admission, through intubation to artificial oxygenation of the blood with the help of ECMO (Extracorporeal Membrane Oxygenation<sup>3</sup>) therapy and the subsequent recovery process. In between, insertions provide detailed information on the background of the individual treatment steps (like for example proning<sup>4</sup>, ventilation modes<sup>5</sup> <sup>6</sup>and ECMO-Therapy<sup>78</sup>) and medical devices used<sup>9</sup>.

#### Potentials

The video is to be used in medical teaching. It can also give medical laypeople an insight into how the care of a Covid patient actually unfolds and therefore help to generate awareness<sup>10</sup>. The video could also be helpful for staff assigned to ICU from other parts of the hospital to treat covid patients or for relatively inexperienced ICU staff.

#### Points to consider

As of now, the video is available in German and English only. It is also tailored to the context of very high-capacity intensive care medicine in highly developed and resource-rich countries.

#### Conclusion

Even apart from the particularly advanced treatment equipment and methods, the video can provide valuable insights into the actual treatment of Covid-19 patients. This can generate awareness of the severity of the disease and the care required, especially among medical laypeople.

**State of information:** 01/12/2021

**Launch :** November 2020

**Country:** Germany

**Focus area:** Treatment

**Developers:** University of Tübingen

**Beneficiaries:**

- General population
- Medical students
- ICU staff

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- <sup>1</sup> University of Tübingen. “Home | University of Tübingen,” 2021. <https://uni-tuebingen.de/en/>.
- <sup>2</sup> Sectio chirurgica, and University of Tübingen. DE Die COVID-19-Infektion: Intensivmedizinische Behandlung, 2020. [https://www.youtube.com/watch?v=b\\_V-mmmMxc&feature=youtu.be](https://www.youtube.com/watch?v=b_V-mmmMxc&feature=youtu.be).
- <sup>3</sup> ECMO ECLS. “Technical Information.” ECMO ECLS (blog), 2018. <https://ecmo-ecls.org/technical-information/>.
- <sup>4</sup> Bentley, Suzanne K., Laura Iavicoli, David Cherkas, Rikki Lane, Ellen Wang, Maria Atienza, Phillip Fairweather, and Stuart Kessler. “Guidance and Patient Instructions for Proning and Repositioning of Awake, Nonintubated COVID-19 Patients.” *Academic Emergency Medicine* 27, no. 8 (2020): 787–91. <https://doi.org/10.1111/acem.14067>.
- <sup>5</sup> Kluge, S., U. Janssens, T. Welte, S. Weber-Carstens, G. Schälte, B. Salzberger, P. Gastmeier, et al. “Empfehlungen Zur Intensivmedizinischen Therapie von Patienten Mit COVID-19 – 3. Version.” *Der Anaesthetist*, August 24, 2020, 1–12. <https://doi.org/10.1007/s00101-020-00833-3>.
- <sup>6</sup> Larsen, Reinhard, and Thomas Ziegenfuß. *Beatmung: Indikationen - Techniken - Krankheitsbilder*. 5., vollst. überarb. und erw. Aufl. Berlin: Springer Medizin, 2013.
- <sup>7</sup> Ma, Xiaochun, Menglin Liang, Min Ding, Weiming Liu, Huibo Ma, Xiaoming Zhou, and Hongsheng Ren. “Extracorporeal Membrane Oxygenation (ECMO) in Critically Ill Patients with Coronavirus Disease 2019 (COVID-19) Pneumonia and Acute Respiratory Distress Syndrome (ARDS).” *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research* 26 (August 6, 2020): e925364. <https://doi.org/10.12659/MSM.925364>.
- <sup>8</sup> Deutsches Ärzteblatt. “COVID-19: Mehrheit Der Patienten Überlebt Mit ECMO,” September 28, 2020. <https://www.aerzteblatt.de/nachrichten/116907/COVID-19-Mehrheit-der-Patienten-ueberlebt-mit-ECMO>.
- <sup>9</sup> Deutsches Ärzteblatt. “COVID-19: Lehrvideo zur Versorgung auf Intensivstation vorgestellt.” *Deutsches Ärzteblatt*, January 11, 2021. <https://www.aerzteblatt.de/nachrichten/120028/COVID-19-Lehrvideo-zur-Versorgung-auf-Intensivstation-vorgestellt>.
- <sup>10</sup> Deutsches Ärzteblatt. “COVID-19: Lehrvideo zur Versorgung auf Intensivstation vorgestellt.” *Deutsches Ärzteblatt*, January 11, 2021. <https://www.aerzteblatt.de/nachrichten/120028/COVID-19-Lehrvideo-zur-Versorgung-auf-Intensivstation-vorgestellt>.

### **Background on Innovation Sheet Series**

As part of a real-time evaluation of the SARS CoV 2 pandemic (with focus on epidemiological, medical, economical, societal, technical, and cultural developments in Germany and Armenia) the CoronaSys research team, under the leadership of Prof. Dr. Martin Voss, is conducting a continuous monitoring of developments and medical, technical, and social innovations concerning Covid-19.

Multiple national and international media outlets, research platforms, and scientific and organizational guidelines, briefs, and updates are screened to feed into this outlet. The rationale behind this is to support the projects' network partners in Armenia and Germany with short summaries of key developments and promising innovations that are shaping the global, German, and Armenian outbreak response and recovery.

The aim of these short briefs is to give condensed and structured information on selected innovations emerging out of the conducted horizon scanning. This could be mainstream big-ticket items or fringe subjects that are easily overlooked in the global flood of information. Some innovations will be followed through their evolution in time while others may only appear once. While subjectively selected, the briefs are descriptive in nature and leave analysis and critical interpretation to the reader. Network partners in both countries are invited to provide feedback on their interest areas and suggest particularly relevant topics for the CoronaSys Workshop series.

The CoronaSys Innovation Sheet Series is published by the [Academy of the Disaster Research Unit](#), which is, as a non-profit limited liability company, a spin-off of the [Disaster Research Unit](#) at the Free University of Berlin. The series is part of the research project "[CoronaSys](#): Addressing the corona pandemic in Armenia through systemic risk management", sponsored by the German Federal Ministry of Education and Research.

*If you have any questions, suggestions, or if you wish to be taken on (or off) the project mailing list for CoronaSys updates, innovation sheets, and workshop invitations, please send a message to Janina Schäfer ([schaefer@a-kfs.de](mailto:schaefer@a-kfs.de)). For general project inquiries, you may contact the team lead Sara Merkes ([merkes@a-kfs.de](mailto:merkes@a-kfs.de)) or the project lead Martin Voss ([voss@a-kfs.de](mailto:voss@a-kfs.de)).*

### Previous CoronaSys Innovation Sheets

- 1 "New" Antiviral Face Masks
- 2 "Dyphox" Surface Coating
- 3 MOVES SLC Portable ICU
- 4 Portable TRI- KLEEN 500UV
- 5 Convalescent Plasma Therapy
- 6 ASIC-App
- 7 BinaxNOW Antigen Test
- 8 Corona Traffic Light
- 9 Aproof at Home Antibody Test
- 10 IVAT Hygiene Tower
- 11 LY-CoV555 Antibody Treatment
- 12 4C Mortality Score
- 13 Regional Corona Prediction Model
- 14 Computer-designed Mini- Proteins
- 15 Covid-19 Simulator
- 16 Trimodulin
- 17 BNT162b2-Vaccine
- 18 SARS-COV-2 Rapidplex
- 19 European Corona- Map
- 20 FELUDA Paper Strip Test
- 21 Humanitarian Action Mapping Tool
- 22 IKKA Score
- 23 WHO Digital Implementation Investment Guide
- 24 RCCE Toolkit
- 25 Cough-Analyzing App
- 26 Follow Up on LY-CoV555 Antibody Treatment
- 27 Follow-up on BNT162b2-Vaccine
- 28 Lucira™ COVID-19 All-In-One Test Kit
- 29 COVID-19 Humanitarian
- 30 AI-Epidemiology-Model
- 31 Solar- Powered Steam Generator
- 32 Gadian CCV
- 33 Rapid Hospital Readiness Checklist
- 34 School Reopening Checklist
- 35 CURIAL AI Screening Test
- 36 Prioritization Roadmap
- 37 Ellume Test
- 38 TV Schooling
- 39 Octea Test
- 40 Prognostic Urine Test

All previous CoronaSys Innovation Sheets are available online:

<http://coronasys.a-kfs.de/category/innovation-stream/>

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