



POLITECNICO  
DI TORINO

# Honors thesis

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Master of Science in Sustainable Architecture

*Abstract*

**Humanizing emergency response. Analysis of implemented  
COVID-19 healthcare facilities.**

*Tutor/Correlator*

Prof. Francesca De Filippi  
Researcher Grazia Giulia Cocina

*by*

Chiara Ghislanzoni

February 2021

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**Backgrounds.** The COVID-19 pandemic has put into trouble the global healthcare system. A sharp increase of infections and critically ill patients has tested the resilience of healthcare infrastructures, forcing them to quickly adapt in order to face this extremely dangerous emergency.

Healthcare facilities were soon called to properly respond to a sudden demand for emergency care and Intensive Care Units beds in an exceptionally short time and, as a result, that different emergency strategies were speedily implemented.

With the aim of overcoming the lack of spaces in existing facilities, three main strategies have been adopted. Following the example of Wuhan, China, where an emergency hospital was built in a couple of weeks, a part of the world took the challenge of building temporary facilities from scratch, while the other part relied on existing buildings. If the second strategy mainly focused on implementing existing hospitals working on partial expansions and resilience of the structures, a third one tried to repurpose non-sanitary building typologies, such as convention centres, schools and hotels, into healthcare ones.

For the purpose of guaranteeing a complete response to Covid-19 emergency, all implemented structures had to satisfy complex requirements in terms of epidemic management and infection containment, in terms of building and constructive characters and in terms of users' psycho-physical well-being. Thanks to innovative technologies and fast assembled building structures building requirements were satisfied, while, at the same time, strict procedures implementation and PPE utilization contributed to contain infection spread. What actually was neglected, being thought of secondary importance, was the psycho-emotional well-being issue. That was soon reflected on many collateral problems, which involved scarce and fragmented communication, healthcare workers' mental exhaustion and patients' uneasiness and loneliness.

**Objective.** After studying the peculiarities which characterize healthcare facilities implemented in response to Covid-19 emergency, the objective of this thesis was to elaborate a multi-criteria analysis able to underline strength and weaknesses of healthcare building implementations. Having detected a lack of attention towards the humanization issue in emergency conditions, the next point of the thesis was to highlight applicable humanizing strategies for their implementation in future cases of emergency.

**Methodology.** The research was carried out through an examination of literature which allowed me to identify key elements implemented in the elaboration of the methodological analysis.

**Conclusion.** My research and analysis aim at contributing to provide a deeper understanding of the key factors involved in the implementation of resilient healthcare facilities with particular concern about elements able to users' guarantee psycho-emotional well-being and humanized cares even in emergency condition.