DESIGN FOR DUCHENNE.
Guidelines for dwellings’ construction or renovation for muscular dystrophy-affected families.

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Duchenne is a rare form of muscular dystrophy that affects 1 boy out of 3500. The first symptoms appear around 2-5 years of age and result in a total muscles paralysis. A conclusive therapy has not been found yet, but there are many trial researches ongoing; thanks to these experiments patients’ quality of life has considerably increased and as such their future prospects.

The Italian legislation on accessibility of spaces and services is rather outdated and not entirely relevant for the specific needs of Duchenne Muscular Dystrophy (DMD)–affected children. This research aims to offer a practical guide to renovation or new-construction projects that can be useful for parents of DMD-affected children, designers and experts. The covered aspects include the design of residential buildings’ spatial and functional architectonic elements and the connected design of furniture. Both aspects are conceived having in mind key accessibility requirements by users with limited mobility. The purpose is to improve users’ quality of life, with a specific focus on DMD-affected children and their families. The research follows the methodological approach called design for all which strives to include and satisfy the greatest majority of the users possible. Specific aspects drawn from key-informant interviews and focus group discussions with families, therapists, doctors and physiotherapists were elaborated and constitute the backbone of this research. The user-friendly format of these guidelines allow for an inclusive and vast audience.

The data analysis relies on the Quality Function Deployment (QFD) framework which was selected given the fact that the tool conceived in Japan at the end of the Sixties is still one of the most sophisticated and widely used.

Because of the extremely complex set of specific needs deriving from DMD, the recommendations and suggestions presented throughout this work could be translated and applied also to the dwellings of persons with limited mobility due to other causes or factors. Therefore, the results of the present research could be highly interesting for researchers, practitioners and people directly concerned by issues revolving around accessibility and inclusiveness.