

## Abstract

**Background.** To address the increasing number of long-term ventilated patients by improving the treatment of weaning from the ventilator, weaning boards could be a useful intervention. These are planned to be interprofessional consultations of experienced healthcare professionals of weaning centers for healthcare professionals of intensive care units to support optimal weaning and exploit the weaning potential of prolonged weaning patients. The project Prevention of invasive Ventilation (PRiVENT) will implement multiple interventions in German inpatient care including weaning boards. Since there is currently no international evidence for this specific intervention, this study, which is a part of the project PRiVENT, aims to develop a concept of weaning boards and to identify associated contextual factors of implementation.

**Methods.** Data was collected through semi-structured, open-ended interviews with physicians, nurses, respiratory therapists, and physiotherapists of weaning centers and intensive care units in Baden-Wuerttemberg, Germany. Participants were asked to share their views on required characteristics of weaning boards and the current care of weaning patients in their wards. Interviews were audiotaped, pseudonymized, and transcribed verbatim. After an inductive de novo coding of the data, the codes were classified into four components (*What? Who? How? and When and How much?*) of the Template for Intervention Description and Replication checklist and three domains (*Characteristics of Individuals, Inner Setting and Outer Setting*) of the Consolidated Framework for Implementation Research.

**Results.** Heterogenic answers of the interviewees but at the same time their consistent demand for flexibility in weaning boards resulted in a rough guideline. Required characteristics consisted of (1) time, personnel, and financial preconditions, (2) a potential procedure and meeting content, (3) participating professionals, and (4) an adaptable time frame. Identified contextual factors were related to (1) individual characteristics, including different competencies, positive beliefs about the intervention's effects but also critical issues regarding the implementation of weaning boards, (2) ward characteristics, including similar interprofessional rounds but different structural characteristics and communication difficulties, and (3) healthcare system characteristics, including general challenges in weaning patients, interactions between clinics, and disincentives due to the German reimbursement system.

**Conclusion.** The developed guideline for weaning boards can be used as a starting point but needs to be specified. Further research should address the availability of professionals and an adequate time frame. Within the project PRiVENT, weaning boards will be defined in detail and then implemented and tested. Weaning boards could be a useful tool to advance knowledge sharing between professionals and to support patient-oriented care. When implementing weaning boards, the attitudes of participants, structural characteristics of wards, and interprofessional communication need to be considered.

**Keywords:** Invasive ventilation; Intensive care; Weaning center; Interprofessional care