Use of an Anesthesia Database for the Estimation of Surgery Duration

Antoine LAMER, Julien De JONCKHEERE, Michel DELECROIX, Régis LOGIER

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Introduction

Currently, surgery rooms' planning is scheduled based on general duration of types of surgery, independently of surgeons or the used technique. Moreover, these mean times are not regularly assessed and don't take into account the evolution of surgery techniques or surgeons' experience. Consequently, management of operative rooms is not optimized.

1. Methods

Thanks to the anesthesia data warehouse developed in the CHRU of Lille, we managed to extract surgery times and grouped them by sort of surgery and by surgeon. In this study, we focalized on the orthopaedic department for year 2012.

2. Results

1591 interventions were extracted and surgery durations were determined for the medical acts with more than 10 interventions and for the 11 surgeons of the orthopaedic department. As an example, mean (standard deviation) duration for a total hip replacement surgery is respectively of 155.26 min (48.92 min) and 111.29 min (26.78 min) for two different surgeons (p < 0.0001).

3. Discussion

Such a solution could facilitate the schedule of surgical procedures and improve the surgery room frequenceation. The next steps will consist on optimizing operating room scheduling through these surgery times computed method. At least, economical aspects of such an optimisation method should be assessed.