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Innovian[®] Anesthesia

The Challenges and Benefits of Implementing an Anesthesia Information Management System

I. Abstract

The purpose of this article is to define the expected benefits of a leading-class Anesthesia Information Management System (AIMS), Innovian[®] Anesthesia from Dräger Medical, and to discuss its easy and successful implementation in a leading academic medical center.

II. Background

In business, the use of information technology (IT) is ubiquitous. Businesses in nearly all sectors have realized the benefits of IT including improved customer service, decreased transaction time, increased tracking of market trends, and improved flow of products and ideas. When one is withdrawing money in a bank, for example, the banker never says "just wait right here while I transfer over your paper records." Yet in healthcare, paper-based records have persisted despite advances in technology. Shouldn't transactions in healthcare, where medical decisions can mean life or death, utilize the best available technology?

In healthcare, IT expenditures as a ratio of expenses lag significantly behind almost every business sector.¹ The technology gap in

healthcare will require billions of investment dollars to catch up. The Institute of Medicine has recommended IT as a necessary advancement to help reduce medical errors and decrease healthcare delivery costs.² Similarly, in 2001 the Anesthesia Patient Safety Foundation endorsed AIMS as a means to improve patient safety through data retrieval and analysis of outcomes.³

Conducting anesthesiology is often compared to flying a plane; there is takeoff (induction), cruising (maintenance), and landing (emergence). However, one of the major differences is that the aviation industry uses IT more effectively to improve safety. Data from the cockpit is captured in the "black box" flight data and voice recorder. This data can be analyzed off-line, particularly when something goes wrong. Applying the same principle to anesthesiology, the AIMS, which records data during surgery, becomes a logical and necessary advancement in the evolution of anesthesiology. Anesthesiologists, who are viewed as leaders in patient safety, need better IT tools to investigate and learn what happened and why it