

Integrating users' activity modeling in the design and assessment of hospital electronic patient records: the example of anesthesia

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This article argues that standard, task-oriented, usability studies do not allow for the identification of major cognitive problems. Instead, to develop an effective health information interface, you need to look at the "complex cognitive processes underlying the actual activity." The authors argue this point by analyzing the development of a Tabellar, an anesthesiology medical record system.

Our group agreed with the authors that to be effective, health information systems must easily integrate into anesthesiologists' daily work environments and take into account the cognitive processes underlying their daily activities. However, we questioned the author's methods for developing Tabellar.

First, our group questioned why the creators of Tabellar stuck so closely to the existing paper format for taking anesthesiology notes. It seemed to us that moving to a electronic system was a perfect opportunity to develop a new interface from scratch that modeled anesthesiologist's needs. Although the learning curve at first for such a system would be difficult, in the end it would most likely create a more effective experience. We also discussed how Tabellar did not seem to take advantage of a number of the opportunities inherit in moving to an electronic patient record system. Specifically, there is great

opportunity for including diagnostic help systems and displaying images through an electronic medical record.

Second, our group questioned the design of Figure 2, a model of the anesthesiologist's activity for information gathering and recording during the consultation. It seemed to us that if this graphic was divided into two depictions — one for novice and one for expert anesthesiologists — it would be easier to understand.

Last, our group had a number of questions about the origin of the nine field anesthesiology form. The authors mention that the anesthesiologist's record is a legal document but they do not clarify whether this specific layout is required by the government. We also do not know whether this specific form is standard to one hospital or all hospitals in France. In addition, it would have been useful for the study to include a discussion of how anesthesiologists' records compare across countries. Related to this, our group would have appreciated an English translation of an example record. It was difficult to ascertain the meaning of each field.

In summary, our group felt that the subject of this article — designing electronic medical record interfaces — was an important, relevant topic. In addition, we agree with the authors that any decisions about how to design electronic medical records must be based in the needs of the users of the system. In this case, it is incredibly important to make sure that an electronic medical record system meets the needs of its anesthesiology users. We felt that this article could be improved if the authors had justified why they decided to

make Tabellar have the same categories as a paper record, and also further explained the anesthesiologist's activity model and consultation paper file.