

# Foothills medical center in calgary, alberta

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This case study concerns the development and application of information technology at the Foothills Medical Center in Calgary, Alberta. (Mitchell, no date). It focuses on two new technologies. The first is ResolutionRD which is described as a tool which “ allows interactive, high-quality visualization of large medical image data sets on standard Apple desktop and notebook computers” (Mitchell, no date, 3). The second is ResolutionNeuro which “ allows interactive generation of quantitative maps of blood flow in the brain” (Mitchell, no date, 3). The aim of these technical innovations is to improve the usability of MAC based hardware and software, and speed up imaging processes, with a resulting increase in the productivity of the medical teams, and improvement in patient care.

The field in which this study operates is that of Biomedical Informatics, which can be defined as “ the interdisciplinary, scientific field that studies and pursues the effective uses of biomedical data, information, and knowledge for problem solving and decision making, motivated by efforts to improve human health.” (AMIA website, 2011) The problem which the case study addresses is the fact that diagnosis and treatment of strokes is hindered by the difficulty in interpreting medical images. There is not so much a lack of information, as a lack of systems and skills to make the best use of the huge amount of information that technologies like MRI and CT scans can provide. In the case of stroke, the complexity of scans can delay diagnosis and treatment and this is a serious problem because, in the treatment of strokes, the brain is progressively damaged and “ every second counts.” (Mitchell, no date, 5) The new ResolutionRD technology can produce a “ real time rendering” of the inside of the patient’s brain, thus gaining valuable time for <https://assignbuster.com/foothills-medical-center-in-calgary-alberta/>

treatment options to be used. In a similar way the ResolutionNeuro technology allows a quantitative map of blood flow to be produced in two mouse clicks, rather than through the previous method which involved technical data inputting of parameters.

The design of the software in both was expressly tailored to the needs of clinical users, with clear and easy interfaces, large buttons, and no complex processes that would require the users to consult a manual. (Mitchell, no date, 13) Click and drag techniques make it easy for the user to manipulate the software. The author provides technical explanation of the code used to make the software, and the decision to have the rendering done on the graphics card of the Mac computer. The author reveals that the two innovations were initially created by graduate students in a matter of months each time.

There is very little detail in the case study about what the users felt about the technology, despite this being an absolute necessity in the introduction of new systems and technology in a clinical setting. There was an attempt, to “anticipate clinician needs... and fit into the user’s workflow” (Kovner and Knickman, 2005, p. 499) but no clear description of how this was done. There are no statistics on performance to indicate how successful the introduction of the technology was. It is assumed that it went well. The case study mentions the ethical difficulties involved in storing confidential patient information but does not fully follow this up. In short, therefore, this case study is much more concerned with the technicalities of the innovations than their actual application, and this is a serious weakness in the report. The technology is described in great detail but it was not evaluated in the clinical context with due consideration of the part that people play in its application.

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## References

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