# **Endoscopic Ear Surgery Needs Analysis**

# **Literature Search**

**Research Question:** Why have ear surgeons not adopted the endoscopic ear surgery approach? What are the major technical barriers of endoscopic ear surgery and what technological advances would encourage surgeons to adopt the technique?

**Relevant Papers:** (Vancouver Style)

[1]

[1] H. J. Marcus, T. P. Cundy, A. Hughes-hallett, Z. Yang, A. Darzi, D. Nandi, and D. Phil, “Europe PMC Funders Group Endoscopic and Keyhole Endoscope-assisted Neurosurgical Approaches : A Qualitative Survey on Technical Challenges and Technological Solutions,” vol. 28, no. 5, pp. 606–610, 2015.

[2] K. C. Hsiao, Z. Machaidze, and J. G. Pattaras, “Time Management in the Operating Room : An Analysis of the Dedicated Minimally Invasive Surgery Suite,” pp. 300–303, 2004.

This article is a qualitative survey on endoscopic neurosurgical approaches. It gives an outline of how my Needs Analysis should be conducted, how to send out the questionnaire, what questions should be asked, how many people should be asked and how the responses should be analysed and then presented in an article. It asked the surgeons how much experience they have in the field, what are the major technical barriers and what technological advances would improve the safety and efficacy of endoscopic neurosurgical outcomes.

Took records of 50 patients who underwent laparascopic procedures between a two-year time period. Paper gives a method of how to select and present results of studying the efficiency of different types of procedures where they recorded various time points, which are described. Comparing a traditional to a minimally invasive surgery. Explains the statistical analysis. Relates the time to cost based on standard operating room time charge.

# Interoperative efficiency in minimally invasive surgery suites.

http://journals2.scholarsportal.info.myaccess.library.utoronto.ca/pdf/09302794/v23i0010/2332\_ieimiss.xml

analyzed preoperative setup and postoperative breakdown times in the conventional OR and minimally invasive OR in an experimental and clinical setting for a standard laparoscopic cholecystectomy and a complex laparoscopic sigmoid resection. This was not a surgical time flow study but still gives an idea of how to conduct a time flow analysis. Explained the steps and what they consisted of. Gives statistical data analysis method as well when comparing two types of surgical setups. This time flow study will just be representing the steps for endoscopic surgery by different surgeons. Presented data in a table with mean, mean difference, standard error and p value for t-test between the conventional and minimally invasive surgical setup. Had two observers, each for different surgery recordings, and matched up their data to show reproducibility of results.

# Preclinical Feasibility of a Technology Framework for MRI-guided Iliac Angioplasty

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4675134/

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| My research question: |  |  |  |  |
| Places to search for information: |  |  |  |  |
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| List of sources searched: | Date of search | Search strategy used, including any limits | Total Number of Results found: | Comments |
| PubMed | 22-Sep-2016 | endoscopic ear surgery AND (needs analysis OR question\* OR survey) in PubMed search | 157 |  |
| Papers from students in my lab |  |  | 1 |  |
| U of T library search website |  |  |  |  |
| Google search | 28-Sep-2016 | time management surgery procedure | 4.6 million | Was trying to find a ‘time flow analysis’ paper and was having trouble finding the right words so tried google first. |

Concept: time flow analysis related term: time management, procedure time, procedure length

Concept: survey related term: question\*, needs analysis