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English 102

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Life at the Hands of a Robot

In 2013, I had to have pelvic surgery for possible endometriosis. In my research to identify the right surgeon for me, the names of two prominent minimally invasive surgeons came up. One major difference between these two surgeons is that the first performs advanced laparoscopic surgery by using a tiny camera to look inside the pelvis while he manipulates surgical instruments via small incisions. The second doctor performs a similar surgery, but instead of actually holding the surgical instruments in his own hands, he works via the da Vinci robot. In August 2013, Nick Glass and Matthew Knight wrote an article on CNN.com titled "Would you have surgery at hands of a robot?" with the aim to educate people on the use of the da Vinci robot for surgery. Their article hopes to reduce the fear that is innately associated with robotic surgery. The authors detail the basic structure of the robot—a four-armed machine with a vision system and console that is used by the doctor who is actually controlling the robot. They explain the many advantages of the robot and discuss the financial cost of this machine. While they do bring some interesting facts about the da Vinci robotic surgery, the authors fail in educating readers about the potential risks involving robotic surgery. In the end, this article fails in its purpose to properly educate readers on robotic surgery, as it does not provide a reliable variety of authoritative evidence.

In their article, Glass and Knight acknowledge that Americans are somewhat leery of undergoing robotic surgery, but they assure the reader that 1.5 million operations ranging from abdominal to lung procedures have been conducted. They explain that the robot is capable of minimally invasive surgery. The benefits of minimally invasive surgery are great to the patient as the recovery time is shortened and blood loss is kept to a minimum. The authors cite David Rosa, who is affiliated with the company Intuitive Surgical, which manufactures the da Vinci robot. According to Rosa, the robot doesn't "do anything on it's own. Every movement, all of its controls is controlled by a surgeon who sits at a console." Rosa later describes that the robot's 3-D vision abilities allows the surgeon to perform surgery in a unprecedented way. The authors also make room for a discussion on the financial aspects of the robot. The robot, worth 1-million-plus dollars, earned $2 billion in 2012. The article then cites a Dr. Curet, who has successfully performed operations with da Vinci robot on morbidly obese patients. According to Curet, she was extremely pleased with the results as such a successful surgery would not have been possible through more traditional means." Next, the authors bring in one testimonial from someone who does not whole-heartedly support the da Vinci robot. Dr. Martin Makary expresses concern over the limitations of the robot. The major limitation, Makary notes, is that the robot cannot "feel the tissue," and the surgeon can "inadvertently [injure] a major structure." Finally, the writers end the article in a hopeful tone, closing with a statement about the possibility of surgeons performing surgery on a patient from a remote location, one where they do not need to be in the same location as the patient.

One of the biggest problems with this article is the lack of valid resources and evidence. Of the three individuals interviewed by Glass and Knight, two of them are

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Margin annotations:

Writer clearly identifies that they are summarizing the article.

Cites key points without getting too technical.

The writer is intentionally summarizing pieces from the article that she will discuss later on.

The writer has minimized the use of quotes, and is relying more heavily on summary/paraphrasing.

When providing key examples and throughout the entire summary portion, the writer remains neutral

This is the 2nd of only 3 quotes used throughout the entire essay. Anymore quotes would have been inappropriate for this assignment. Also, notice that the writer is only using small portions of the quote here. This is good as it indicates that the writer is relying mostly on her WRITING/summaries, and not on quotes.

Good topic sentence. The writer indicates that she has decided to focus the bulk of her analytical criticism in this paragraph on the article's use of unreliable evidence.

financially vested with the da Vinci robot. Rosa, the primary witness used in the article, is

actually a Senior Vice President of Intuitive Surgical, the company who manufactures the

robot. For the writers to allow the article to rely so heavily on someone who has clear

financial interest in the success of the da Vinci robot is inappropriate. It should also be

noted that Glass and Knight never actually state that Rosa is a Senior Vice President of

Intuitive Surgical in their article. Such an oversight—whether intentional or not—

significantly weakens the credibility of the article. The second witness used to support the

da Vinci robot, Dr. Myriam Curet, is also vested as a member of the Intuitive Surgical

executive staff. Dr. Curet cites that the robot is successful in the surgery of a morbidly

obese patient, but because she offers no other examples, the writers imply that such

success is favorable across the board for all patients. It doesn't take a surgeon to realize

that performing surgery on an average body is not the same as performing surgery on

someone who is morbidly obese. Finally, the writers tout that 2,500 robots were sold in

2012, totaling $2 billion in sales. The authors assume that these numbers indicate the

success of robotic surgery, but such a correlation lacks actual evidence of real surgery

results. Clearly, this article is lacking in the use of valid resources. It is inappropriate for

the writers to use biased individuals as their sole form of evidence, to use only one example

of a successful surgery, or to assume that high sales translate into the da Vinci being

successful.

Another reason the article is weak in its unbiased discussion of the possible benefits

of the da Vinci robot is because the writers do not use sufficient counter-evidence. In the

52 lines of the article, only 8 lines are used to identify caution for the robot. Glass and

Knight cite Dr. Martin Makary who explicitly states that for most all the surgeries used by

the da Vinci robot, the benefit to the patient is minimal, if there are any benefits at all. Such a dreary prognosis should have been followed up with further insight of the possible risks involving robotic surgery. But immediately following the alarming testimony of Dr. Makary, the writers cite the high-revenue and sales of the robot. This use of the red herring fallacy, where the writers distract the readers from Makary's argument with information about da Vinci's revenues, is yet another indication that their article is flawed. Upon further investigation, the use of robotic surgery is indeed much more risky than Glass and Knight indicate. According to Dr. Paul MacKoul's patient education website titled "The Truth about Robotics in Gynecologic Surgery" robotic surgery "is not helpful to advanced laparoscopic surgeons for even the most difficult benign surgeries." MacKoul—a director in his field at two prominent hospitals—goes on to explain that gynecological surgeries performed by an advanced laparoscopic surgeon are far more beneficial to the patient than robotic surgeries. He explains that without the robot, the amount and size of incisions are smaller, surgery time and therefore financial costs are cut in half, and that recovery time is four times shorter. While Dr. MacKoul provides a cautionary perspective for gynecological surgeries alone, it leads readers to wonder in what other medical fields the robot is less successful. When such significant information about the dangers of robotics is so readily available, it is obvious that Glass and Knight fall short in successfully educating readers about the risks of the da Vinci robotic surgery.

In the end, I chose to do my endometriosis surgery with an advanced laparoscopic surgeon. To my great relief, my surgeon never found any endometriosis—which can only be identified during surgery. It took me a considerable amount of time—months even—to find the right doctor and to decide on the right kind of surgery for me, but because I made

the right choice for me, my recovery time was shorter than the time I spent researching surgeons and procedures. It is inappropriate for writers like Glass and Knight to share the great benefits of the da Vinci robotic surgery without properly presenting readers with both sides of the issue. Using witnesses who have financial interest in the company, providing sales as evidence of the success of the robot, and dedicating virtually no time to the potential risks of the robot leave the article weakened and in great need of more reliable evidence. In the end, readers may even wonder if Glass and Knight themselves hold financial interest in the company, especially when they have so clearly overlooked an opportunity to create a balanced and informative piece to their readers.

Works Cited

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