

Nathan Jung

Mr. Speice

ISM I

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A Deep Dive into the Original Work Project

Assessment 9 - Research

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Subject: Interventional Radiology

MLA 8 Citations:

Hynes, Daniel, et al. "Role of Interventional Radiology in the Management of Infection."

Seminars in Ultrasound, CT and MRI, W.B. Saunders, 14 Oct. 2019,

www.sciencedirect.com/science/article/pii/S0887217119300691.

Assessment:

The intention for this assessment was to kick off the deep dive into the original work research. Lots of research has already been done, however, this will assess the information learned so far, specifically from this one article. This article covers the topic of management of infections, specifically using drainage placement, which is the type of procedure that Dr. Chen recommended that I research for my original work. This assessment will target the information about drainage placement specifically.

First, the main goal for this assessment was to figure out how to apply this research into the original work project. To start off this discussion, it must be noted that this information can serve as a base knowledge for even deeper research into specific procedures for this original

work project, such as the transjugular liver biopsy recommended by Dr. Tang. For example, this article provided great and detailed information for a procedure called percutaneous cholecystostomy, which is directly applicable to the original work project and can be an idea for further research. This article provided a great and detailed overview of the management of localized infections, and mentioned drainage placements, which was the targeted information in this article, frequently. It listed vital information, such as where percutaneous interventions are necessary and when percutaneous drainage tube insertion was necessary. The procedures listed where drainage tube insertion was necessary will be great starting points for future and deeper research in the future, especially in the spring where a physical prototype is hopeful to be developed from the computerized design created in the fall. Additionally, this article gave examples of procedures that cannot wait and need to be completed quickly, such as external percutaneous transhepatic biliary drainage. Thus, an extra hand to hold wires and catheters and to manage the clutter of everything will be useful. This once again increased my confidence in how much the original work project will benefit the profession. Another trend being noticed in this article is the frequent mentioning of tube insertions and catheters, which is great since that field of wires and catheters is the targeted information in this article since the original work project needs to be based around procedures that use lots of wires and catheters, especially long ones. In addition, this article's mentioning of the sizes of different catheters served as a good reminder that the original work project needs to be able to hold all diameters of wires and tubes. Another great idea gained from this article is that it should be easy for the IR to remove the tubes from the arm and to place them back in because the drains must be replaced. Furthermore, an additional idea gained is to make the arms on the table mobile to be able to hold wires and catheters connecting to all sorts of body parts.

Another goal of this assessment was to answer some questions that rose up before, during, and after the analysis of this article. The first goal was to add onto the large list of known terminology in order to widen the base for the original work project and for future research. Specific issues that required percutaneous drainage tube insertions, such as cholangitis, combined urosepsis, and hydronephrosis were learned about and thus added to the bank of terminology. It should also be noted that, after the three interviews done, I have come to a realization that it was extremely useful to know the terminology that I did in order to understand what the professionals were saying and to have detailed conversations that went beyond the surface level. I do intend to work more with these professionals, including my future mentor, of course, on my original work project and gaining the necessary terminology will be critical in conducting in-depth interviews and research over the procedures that my original work project will be based around. Another goal was to look for any trends in the profession mentioned in the article. It was discovered that clinical activity is growing in importance in the daily IR practice since interventional radiologists are key in helping referring teams determine whether an IR procedure should be done, weighing the risks and benefits. The last goal was to see if there were any bits of information that would provide information about the interventional radiologist profession as a whole. This article reflected the fact that interventional radiologists are expected to analyze the conditions of the patient and also to perform a procedure on that same patient based on their initial diagnosis and the analysis done post-diagnosis.

Another goal, possibly one of the most important, was to analyze how this article affected my understanding of the topic. One piece of information that stood out as surprising was that some interventional radiology procedures are done to clean up the mistakes from a previous procedure performed by another interventional radiologist. It highlights the fact that

interventional radiologists are human and can make mistakes, which, even though it may seem obvious, it was something that I had never really thought about before. It also makes me recall that, in all three of my interviews, I had asked the question, ‘what are the hardest parts about your job,’ and all of them listed losing a patient at least once. Again, this bit of information demonstrates one of the harder parts of this profession, however it should be known that this does not, in any way, affect my desire to pursue this career. Another surprising piece of information is that, to recognize whether or not a postoperative infection or abscess is present, imaging alone will not suffice. It needs a combined clinical and imaging criteria. That was surprising because I have never heard of a diagnosis in interventional radiology that cannot rely on imaging alone. It was a great and interesting new piece of information. Again, even more surprising information surfaced. It was discovered that there can be too many drains without clinical benefit. Before, I had no idea that a physician could unnecessarily drain too many times. One of the other things that this article highlighted about the profession was that the interventional radiologists commonly study a case and then end up working on the case that they studied and made a diagnosis for. This reminds me of my interview with Dr. Chen, where she confirmed that fact when I asked her about it and she noted that it occurs frequently and is not unusual at all.

All in all, this research assessment successfully accomplished all of the desired goals. This article provided tons of great and detailed information and lots of ideas to base the original work project off of, as well as ideas for further research into the original work. Excitement for the original work project is rising and this was a great way to sum up a large amount of my original work research thus far.

Notes:

[Role of Interventional Radiology in the Management of Infection](#)