

Enablers and barriers to nuclear medicine



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Introduction:

Nuclear medicine has emerged because of advances in the field of nuclear technology. This is a branch of medical studies that uses a small amount of radioactive substances, for purposes of diagnosing and determining the nature of disease that an individual is suffering from. This type of medical practice is normally used for purposes of treating chronic diseases such as heart diseases, cancer, neurological and endocrine disorders, and other abnormal conditions within the body of an individual (Moniuszko & Patel, 2011). This field of nuclear medicine is used by a variety of medical experts, and this includes, oncologists, radiologists, gynecologists, radiotherapists, endocrinologists, etc. There are three major types of people who are working and under the field of nuclear medicine, and they include, the nuclear physician, the nuclear medicine technologist, and the nuclear pharmacist. The nuclear physicians are responsible in diagnosing and treating a patient. Furthermore, they have the responsibility of carrying out research in this field of nuclear technology.

The technician on the other hand, works with a patient, and he or she is a specialized individual who assists the physician in diagnosing and treating a patient. The pharmacist on the other hand, involves himself in the procurement, control, and distribution of radio-pharmaceutical products (Laake, Benestad & Olsen, 2007). This is an indication that this field on nuclear medicine is an independent specialty, and well organized, and hence it can cater for the needs of its patients. This paper is a proposal on the researcher to be carried out on the enablers and barriers to the practice of nuclear medicine. This paper takes a stand that in as much as there are

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some factors responsible for promoting the practice of nuclear medicine, there are also some barriers.

Research Problem:

One of the major challenges facing nuclear medicine is based on the dangers of radiation. Radiation is a very serious issue, and can have a very negative impact on the health of an individual. This includes the development of chronic diseases such as cancer, which are always difficult to treat.

Furthermore, it is highly expensive to train nuclear medicine experts, and this is the reason there is a shortage of nuclear medicine practitioners in the world (Moniuszko & Patel, 2011). There is also a dilemma on where to place this field of nuclear medicine. This is because there is confusion on whether to categorize nuclear medicine under the field of medicine, or to give it an independent specialty. Failure to address these concerns and issues that are brought forth in regard to nuclear technology can have an impact in limiting the emergence and growth of nuclear technology in the world.

It is therefore necessary for policy formulators to come up with methods and measures that can be used for purposes of encouraging the growth and use of nuclear technology (Prekeges, 2013). One method is to encourage extensive research in this field of nuclear medicine. Furthermore, there is a need of issuing scholarships to needy but bright students, so that they may pursue a study in the field of nuclear technology. Failure to achieve these objectives would result to limiting the growth and development of the field of nuclear medicine. This would in turn increase the deaths of people, because of an increase in the number of people suffering from chronic diseases or

illnesses. It is therefore necessary to address the barriers to the practice of nuclear medicine, and create more enables to the practice.

Aims of the Research:

This research aims at achieving the following three aims,

- Analyzing the enablers to the practice of nuclear medicine.
- Analyzing the barriers to the practice of nuclear medicine.
- Coming up with a solution on how to practice nuclear medicine.

Objectives of the Research:

- To analyze the various literatures concerning nuclear medicine.
- To understand the various barriers to nuclear medicine.
- To understand the various enablers to nuclear medicine.
- Having an understanding of this concept of a nuclear medicine practitioner, from a primary source.

Literature Review:

Nuclear medicine is an important field of study, and this is basically because it helps in the treatment of chronic diseases. These diseases include diseases such as cancer, and other abnormal conditions (Feld & Roo, 2003).

Therefore, the practice of nuclear medicine is segmented in nature, and this includes professionals such as radiologists, cardiologists, neurologists, nephrologists, etc. Cardiology is also the largest profession in the field of nuclear technology, and this is as per the year 2013. Furthermore, nephrology is also a field nuclear medicine, and it is the largest growing field in this practice (Powsner, Palmer & Powsner, 2013). The reason for the

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emergence cardiology as the largest field of nuclear medicine is based on the facts that there is an increase in aging population, cardiac ailments, and a preference for diagnostic procedures that are non-invasive. Cardiologists play a role in the treatment and diagnoses of these ailments (Donohoe & Van Den Abbeele, 2011). However, there are a number of barriers that plays a role in affecting the efficient practice of cardiology. One major barrier to an efficient practice of this field of medicine is based on the fact that it is very expensive to train professionals in this field.

Cardiologists are highly trained and experienced medical practitioners, and these skills are gained over a long period of time. This time factor and the amount of money spent in the training of a cardiologist, limits the number of people who can train and work as a cardiologist. Furthermore, there are numerous risks involved, for people practicing this type of medicine, and this includes the high rates of deaths for people suffering from the disease (Donohoe & Van Den Abbeele, 2000). For instance, people suffering from heart failures have a high chance of dying, and this makes the efforts of an oncologist to be futile. However, scholar disagrees with this fact. This is mainly because of the view that oncologists play a significant role in protecting and preserving the lives of other people, or patients. Furthermore, scholar explains that the high costs depicted in training cardiologists, is based on the high costs of equipments used, and it is beyond the control of medical practitioners (Elgazzar, 2011).

Through these assertions, Biersack & Freeman (2007) explains that the best method of solving issues regarding to the training of oncologists, is based on the intervention by the government. This involves lowering taxes on

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products and tools that can be used for purposes of cardiology. Another barrier to the practice of cardiology is based on the accessibility of the doctors responsible for practicing cardiology (Elgazzar, 2011). It is very expensive to access these doctors, majorly because of the high consultation fees that they charge. Furthermore chances are high that an individual may suffer from depression, majorly because of the high volume of work they are undertaking, and the minimal chances of survival that a patient has (Mettler & Guiberteau, 2012). This depression is bad, majorly because it may lead to the development of chronic diseases such as heart attacks, and even the thought of committing suicide.

In fields such as oncology, nephrology, and radiology, is also faced with a variety of challenges. These challenges emanates from an increase in the complex medical cases that emerge. However, the British government has realized on the challenges that exist, in regard to the practice of cardiovascular medicine (Cherry, Sorenson & Phelps, 2012). Therefore, the government has resorted to resorted to the building of more institutions responsible for training experts in nuclear medicine, and this includes, fields such as radiology, oncology, cardiology, etc. In the year 2005, in a bid of the British government to enhance the practice of nuclear medicine, the government formed an organization referred to as the modernization of medical careers. This movement specifically targeted the field of nuclear medicine, and it sought to enact changes to this field, so that it would be easy for people wishing to pursue a career in it, to pursue it.

This is an indication that the British government supports the development of the practice of nuclear medicine. Take for example in the year 2007. To <https://assignbuster.com/enablers-and-barriers-to-nuclear-medicine/>

the year 2010, the British government was able to change the curriculum used in teaching nuclear medicine, and reduced the number of years, from four to three years. This applied to cardiovascular medicine. The effect of this, is that it was able to make it possible for people studying cardiology to graduate after three years of intensive training, and hence filling in the gaps, that existed in the shortage of experts in the field of nuclear medicine (Dawson, 2002). Kuwait is also another country that is encouraging the development and practice of nuclear medicine. For instance, the government of Kuwait has established a cancer control unit that is responsible for using nuclear technology for purposes of treating its patients. This is an indication that the government of Kuwait values this field of nuclear medicine, and it has developed measures at promoting its practice. This is specifically, in the treatment of cancer (Ziessman, O'malley, Thrall & Fahey, 2014).

Methodology:

This paper will use both primary and secondary methods of data collection. Under the primary method of data collection, this paper would use both surveys, and structured interviews. For instance in the process of data collection, the researcher would seek to interview various professionals in the United Kingdom and Kuwait, for purposes of finding out the level of satisfaction that they are deriving, through their practice of nuclear medicine.

Primary Methods of Research:

Interviews:

The following are the questions that the researcher would use, for purposes of carrying out an interview,

Interview Questions:

- What are the challenges you are facing, in your pursuit of the field of nuclear medicine?
- What conditions are making possible for you to practice the field of nuclear medicine?
- Why did you choose to practice this field of nuclear medicine?
- What policies do you recommend for purposes of improving the manner which nuclear medicine is practiced, this is with reference to United Kingdom and Kuwait?
- Who are the major stakeholders in this field of nuclear medicine?
- What are the qualifications for an individual to pursue a career in nuclear medicine?

A detailed and careful answer to the mentioned questions would help in providing information that would meet the aims of this research. There are a number of advantages of using a structured interview for purposes of collecting information/data. One advantage is that the researcher will maintain a face to face conversation, and hence it would be easy to read the body language of the interviewee (Abramson & Abramson, 2013). This is for purposes of getting any unwritten and unintended information that the interviewee did not want to convey. Another advantage of using an interview is based on the fact that it is possible to collect the right information and store it, without any distortion. This is by using a digital tape recorder, or a

mobile phone. This data would later be used in the process of analyzing the results of the interview.

Despite the advantages of using a structured interview, it has various disadvantages. One such disadvantage is the difficulty of finding the interviewee (Jacobsen, 2013). These people are very busy people; hence there is a need of making an appointment, for purposes of getting an interview with them. Furthermore, the appointments may be declined, and restructured, and this may have an effect of tampering with the timetable of the researcher. Another disadvantage is that carrying out an interview is an expensive process, mainly because the interviewee may demand some allowances for taking their time.

Surveys:

The use of surveys would also be a very useful method of carrying out this research. However, the researcher would use the online surveys for purposes of collecting data for this research. Online surveys are a useful method for data collection, basically because they have the capability of reaching a large number of people (Jacobsen, 2012). The target group for these surveys would be doctors and other people in the field of nuclear medicine. The major disadvantage of the use of online surveys is based on the fact that chances are high that the target population may ignore them, hence failing to get the necessary information needed. To mitigate on this problem, the researcher would design only five questions that would be easy to answer. The following are the five questions contained in the online surveys,

- What are the barriers of practicing nuclear medicine?

- What are the enablers of practicing nuclear medicine?
- Who are the stakeholders in the field of nuclear medicine?
- How can we overcome the barriers of practicing nuclear medicine?
- Kindly provide at least two recommendations that can be used to encourage the practice of nuclear medicine.

Secondary Methods of Research:

The secondary methods of research in use would basically be library research. The researcher would rely on books, journals, and articles for purposes of collecting information on the enables and barriers in the practice of nuclear medicine (Mettler & Guiberteau, 2012). Under books, the researcher would analyze various literatures on the practice of nuclear medicine. The focus of the researcher would be, on cardiovascular, radiology, and oncology medicine (Shi, 2008). This is because; these sections of medical practice constantly use the nuclear technology for purposes of treating their patients. The researcher would also use journals, which are very important tools of data collection. This is basically because they are peer reviewed, and hence the information contained in them is reliable and accurate.

Time Frame:

Name	Number of Words	Time Frame
Introduction	2000	2 weeks
Literature Review	3000	3 weeks

Methodology	2000	2weeks
Analysis of Data	2000	2 weeks
Recommendation and conclusion	1500	1 week
Total	10, 000 words	10 weeks

Conclusion:

In conclusion, this research method aims at finding out the barriers and enables in the practice of nuclear medicine. It is important to explain that there are a number of careers in this branch of medicine, and these include, cardiology, radiology, oncology, etc. Nuclear medicine involves the use of radioactive elements for purposes of treating an individual, and hence it is an important method of treating chronic diseases. By understanding the various barriers that are affecting an efficient practice of this field of nuclear medicine, then chances are high that proper policies would be enacted, that would help in promoting its practice.

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