

NMTCB 2013 Task Analysis Report

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Since its inception over thirty five years ago, the Nuclear Medicine Technology Certification Board (NMTCB) has endeavored to develop and administer a high quality, nationally recognized certification examination for nuclear medicine technologists. A key focus of the original examination and its successors has been to allow qualified technologists the opportunity to demonstrate their knowledge of relevant topics in the field as it is being practiced today. The NMTCB has a fiduciary responsibility to the profession to maintain high standards of reliability and validity for the examinations it offers. The NMTCB takes this duty very seriously, and continually strives for its examination to remain relevant yet comprehensive. In keeping with this particular aim, the NMTCB periodically performs a task analysis. In keeping with the goal of remaining relevant, the current task analysis updates will be published in 2014 and will begin being tested on in 2015.

The task analysis procedure has three main components which ultimately manifest changes to the content of the entry-level nuclear medicine technology examination the NMTCB offers. First the NMTCB develops an instrument, and a random survey is conducted. Second, the results of the survey are analyzed and assessed for their criticality in current practice of nuclear medicine technology. Finally the results of the data analysis are incorporated into the documents that outline the content of the examination. There are three main documents that the NMTCB uses the information from the task analysis to update. They are the task list, the detailed equipment and procedures list and the components of preparedness statement (COPS).

The COPS document can be most useful to educators and candidates preparing for the examination. The COPS is a detailed description of the basic tasks involving the items listed in the more concise task list. This includes nuclear medicine equipment, procedures and pharmaceuticals that a nuclear medicine technologist working in a variety of settings could likely be exposed to.

Once in publication, the new COPS will be sent to all known nuclear medicine technology educational programs. New programs or those that has recent changes in location or accreditation should contact the NMTCB directly to ensure timely delivery of updated information. The most current iterations of these documents will also be available on the NMTCB website at www.NMTCB.org.

The survey instrument that was used to conduct the task analysis was developed based on the content of the current task list, detailed equipment and procedures lists and the COPS. It also incorporated items that were considered to be possible additions to the content base. The survey form was delivered online using Open Source LimeSurvey software (<http://www.limesurvey.org>) An email invitation to participate in the survey was sent to all NMTCB certified nuclear medicine technologists for whom an email address was available. The questions on the survey required respondents to rate the frequency with which they performed each task. Participants were also asked to indicate the equipment, pharmaceuticals and procedures that were routinely utilized at their facilities. Equipment, pharmaceuticals, and procedures were not subjected to a frequency scale due to the fact that many, by

nature, are not performed with great frequency, such as I-131 RISA, red cell studies, and others. Of the 19,022 invitations distributed, 1586 surveys were completed online by the end of September 2013. Approximately 8.3% of surveys were completed, which yielded an acceptable response rate. The data that the respondents provided were then analyzed by the NMTCB Board of Directors. During the fall 2013 Board meeting, the results of the survey were presented by the Task Analysis Committee. A discussion was held by the full Board as to what changes to the examination content should be made. No set nominal cutoff was used in determining the changes to be made. Rather, the Task Analysis Committee relied on a combination of numerical parameters to identify which, if any, items should be considered for modification. Items were then evaluated based on the expert opinion of the Task Analysis Committee and other Board members further guided the decision of whether items were to be added to or removed from examination content.

The items that will be added to the radiopharmaceuticals lists for both the CNMT and NMAA examinations beginning in April 2015 include Tc-99m Tilmanocept, P-32 and Ra-223 Dichloride. F-18 Flutemetamol, F-18 Flubetapir and F-18 Florbetaben will be added to the NMAA and PET exams only.

The items that will be removed from all examination content include all films (thermal/dry) from the Display Media list, Microscope from the Laboratory Equipment list, and EDTA was removed from the Miscellaneous Non-Radioactive Agents list.

The respondent population was comprised of 76% working in technologist position, where 26% were also NCT certified and 13% were also PET certified. The remaining 24% of respondents were distributed primarily among the roles of administrators, educators, radiation safety officers and radiopharmacy workers.

As displayed in Chart 1 below, more than half of the respondents work in a hospital setting.

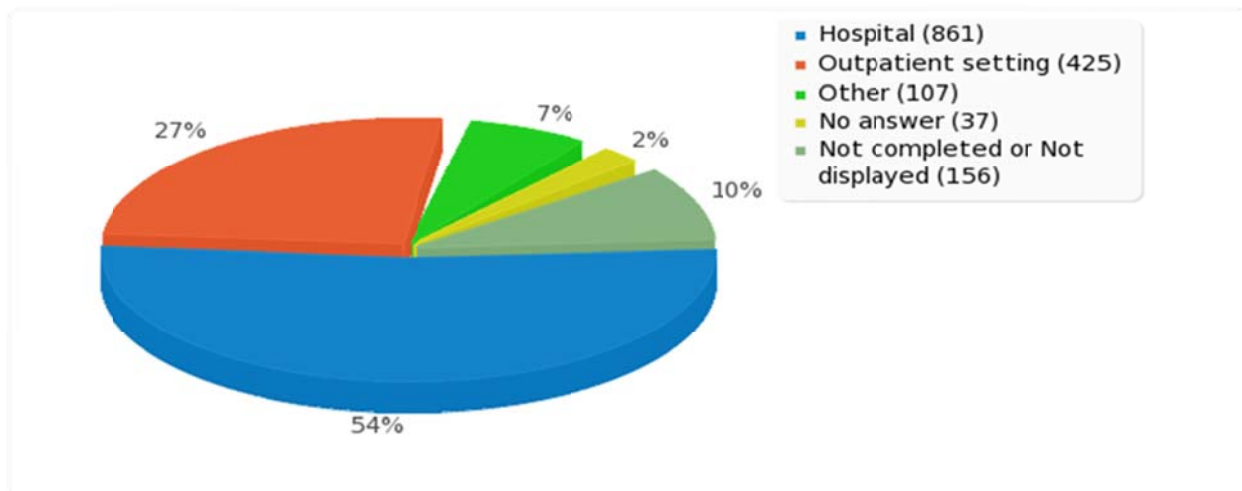


Chart 1 – Describe the primary setting in which you work.

In addition, the most noticeable statistics were in reference to technologists who work on hybrid scanners with regard to whom performs the CT imaging. The results are as follows:

If CT scans are performed on a hybrid SPECT/CT or PET/CT scanner for attenuation correction, who operates the CT scanner portion of the device?

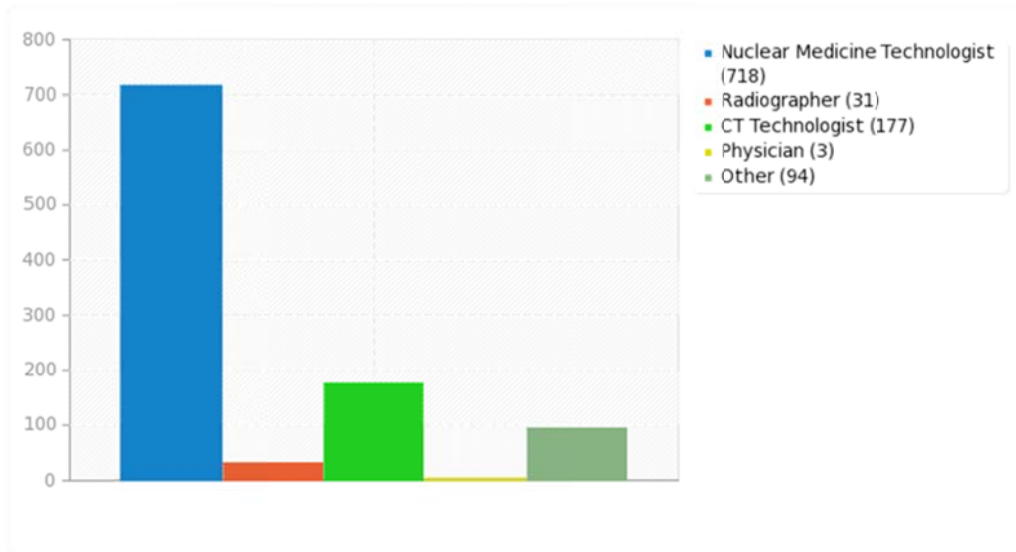


Chart 2 – Who operates the CT scanner portion of a hybrid scanner

From this chart, we can see that more than 77% of the CT imaging on hybrid devices is being performed by the nuclear medicine technologist.

The NMTCB worked very hard this year to make the Task Analysis Survey much more user friendly. In the past, a survey consisting of a few dozen pages was sent to prospective participants who were then asked to fill in the appropriate answers on a scannable answer sheet. The task was laborious and time consuming. This year's survey was online, required just mouse clicks, and could be completed in 10-15 minutes. We truly appreciate those that took the time to complete our survey and help ensure that the NMTCB Nuclear Medicine Certification Exam remains relevant and up-to-date.

Thank you!