



Trends of forensic nursing and medicine

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Abstract

Today forensic and criminal investigations have an importance and reached at a certain point and goal of knowledge for the facts of true justice. The forensic science is the involvement of many different disciplines to solve a crime and to get the justice. Forensic nursing is the application of nursing science to public and legal proceedings. It provides treatment for trauma or death to victims and the perpetrators of abuse, Violence, Criminal offenses, Traumatic accidents and events of nature. Forensic science is the branch of scientific knowledge and methodology for criminal investigation and legal problems and its complications.

Forensic medicine are also called as legal medicine, is the medical speciality which applies the principle and practice of medicine to the elucidation of questions in judicial proceedings. In our modern and increasingly complex society the 2 professions of law and medicine can no longer continue in their tranquil and separate way. Forensic science is a multidisciplinary subject. It comprises with various field and branches of science such as medicine, engineering, social science and different investigation. In forensic science crimes analyse with physical evidences such as blood DNA, Fingerprint, cause of death, time of incidence that are definite witnesses which are very enough to prove for the true justice of criminal in the court of law.

Keywords: Forensic science, forensic medicine, investigation, legal, knowledge, branch of science

Introduction

Today forensic medicine become a large medical field that includes many areas. Generally, when we think about the associate problems it immediately connect with death, autopsies and other related problems. Yet, this is the only one part of legal medicine, as new approaches and subspecialties are realized because of the advances in medical science and socio-political changes around the world. Forensic medicine a bridge between 2 complementary sciences (forensic pathology and Forensic anthropology). The origin of forensic medicine remain lost in distant past, whenever the principles of medical science met those of law and justice, it begin with the code of Hammurabi, which imposed sanctions for errors in medical surgical practices. Forensic pathology "is a branch of medicine that applies the principles and knowledge of the medical sciences in the field of law".

Modern forensic investigation utilises novel tools and advanced technologies to solve criminal and civil cases. Forensic imaging is a powerful tool in this new era, forensic science comprises a diverse array of disciplines, from fingerprint and DNA analysis to anthropology and wildlife forensic, Research in forensic science have regularly been raised among and outside the forensic science community. While research has been uniformly identified as crucial to continuously improve and develop forensic science, there seem to be a disparity of opinion about the type of research considered as vital for forensic science. There is also a gap between what research should be carried out and what is

actually undertaken. For some, quality management and technical innovation need to be prioritised while for others forensic science fundamental principles or practice oriented research should be addressed in priority.

Definition

Forensic Nursing: It is the application of nursing sciences to public and legal proceeding. It provides treatment for trauma or death to victims and the perpetrators of abuse, Violence, Criminal offenses, Traumatic accidents and events of nature.

Forensic Investigation: It is an investigation that involves some form of scientific method or other skill, such as accounting or valuation expertise and looks retrospectively to make a determination about something that happened in the past.

Forensic Science: It is a critical element of the criminal justice system. Forensic scientists examine and analyze evidence from crime scenes and elsewhere to develop objective findings that can assist in the investigation and prosecution of perpetrators of crime or absolve an innocent person from suspicion.

The same type of punishment also existed in Persia. Later on, the Visigoths promulgated laws that punished poisoning, infanticide and homicide. Which is describing as a medical trunk that serves the administration of justice, forensic medicine has different branches. Forensic pathology is

probably the most emblematic one. The forensic pathology is often so broad that they would fit better into forensic medicine as a whole than in this single branch. It is “a branch of medicine that applies the principles and knowledge of the medical sciences in the field of law.” An even larger conception of forensic pathology considers it the study of diseases and injuries of the community, because it involves the knowledge of diagnosis and treatment in every medical and health specialty, but also requires information in many nonmedical areas, such as chemistry, physics, criminalities and police science, motor vehicle and highway conception, politics, sociology, and even the way of life of a society. Closer to its objectives and limits, define forensic pathology as a specialized branch of pathology (pathology being the study by scientific methods of disease and tissue injury) that relates within a legal framework to the effects of trauma, poisoning, occupational hazards, and natural disease.



The type of evidence collected will vary with the type of crime. In the case of a burglary, for example, it would be common to perform tasks in the order listed below. This will help ensure that evidence isn't inadvertently damaged or destroyed:

1. Photograph and document the scene.
2. Collect trace materials (especially from probable points of entry).
3. Collect low-level DNA evidence by swabbing areas of likely contact.
4. Collect other items that may contain biological evidence.
5. Locate and collect latent fingerprints.

Who examines crime scenes?

The number and type of professional(s) responsible for investigating a scene and collecting evidence largely depends on the type of crime and the resources of the law enforcement agency. Larger agencies often have dedicated, highly trained crime scene specialists, while smaller agencies may require that first responders or detectives process the scene in addition to their other duties.

In many instances, a case will be investigated by a detective who is responsible for interviewing persons of interest and victims, pursuing leads and piecing together the information that is developed from the materials collected at the scene. The detective works in tandem with a team of crime scene personnel who search the scene and collect the evidence. The crime scene investigation team may consist of crime scene photographers and evidence collection personnel

Samples that may be collected at a crime scene

A wide variety of physical evidence can be collected at a scene that is deemed valuable (“probative”) for collection and investigation:

- Biological evidence (e.g., blood, body fluids, hair and other tissues).
- Latent print evidence (e.g., fingerprints, palm prints, foot prints).
- Footwear and tire track evidence.
- Trace evidence (e.g. fibres, soil, vegetation, glass fragments).
- Digital evidence (e.g., cell phone records, Internet logs, email messages).
- Tool and tool mark evidence.
- Drug evidence.
- Firearm evidence.

specializing in gathering specific evidence such as latent prints, DNA, trace evidence and the like.

In the United States, there are no national requirements that must be met to serve as a crime scene investigator; however, investigators can achieve four levels of certification through the International Association for Identification (IAI) that demonstrate their proficiency:

- Certified Crime Scene Investigator.
- Certified Crime Scene Analyst.
- Certified Crime Scene Reconstructionist.
- Certified Senior Crime Scene Analyst.

Other certifications commonly achieved include the Evidence Photographer Certification from the Evidence Photographers International Council, Inc. and Board Certified Medico-legal Death Investigator of the American Board of Medico-legal Death Investigators (ABMDI).

How a crime scene investigation is conducted

The circumstances that investigators encounter at the scene will largely dictate the approach used to process the scene. A homicide will likely require different treatment and processing than a burglary. However, to ensure a thorough process, the seven steps outlined below are often followed. These steps can be conducted in a different order, combined or even skipped altogether to meet the needs of the situation.

1. Establish the scene dimensions and identify potential safety and health hazards

Investigators initially locate the “focal point” of the scene, the main area of disturbance. This could be a ransacked

bedroom, the area where an attack occurred, or the room in which a victim was found. Radiating out from that point, investigators establish an area that is sizeable enough to likely contain all relevant physical evidence that may be present. It is easier for investigators to condense the size of a scene at a later point than to discover that sensitive evidence outside the scene has been damaged or destroyed by other responders, media or onlookers. In addition, potential paths of perpetrator entry/exit are identified. Safety is of paramount importance during the initial approach to the scene. Weapons, biohazards, chemical hazards and even intentional traps could be waiting for responders. If medical, fire or coroners will be on scene, they will need to be advised regarding evidentiary issues as well.

2. Establish security

According to Locard's Exchange Principle, every person who enters or exits the scene will add or subtract material from the crime scene, so it's crucial to quickly secure the area. To control access, the scene may be cordoned off with yellow crime scene tape, cones or by other means. In addition, a common entryway is often established that all crime scene personnel will use to enter and exit the scene and all people entering or leaving the scene are documented once the boundaries have been established. Additional areas for consultation and evidence storage may also be established if necessary.

3. Plan, communicate and coordinate

Before collecting evidence, investigators must first develop a theory regarding the type of offense that occurred. Knowing the type of crime will help investigators anticipate the evidence that could be present. This may require gathering information from witnesses or persons of interest. Based on this information, the crime scene team will

develop an evidence-collection strategy taking into consideration weather conditions, time of day and other factors. Additional forensic resources may also be requested to handle special situations.

4. Conduct a primary survey/walkthrough

An initial survey of the scene is then conducted to prioritize evidence collection. During this walkthrough, the lead investigator will identify potentially valuable evidence, take notes and capture initial photographs of the scene and the evidence. The crime scene is documented to record conditions such as whether lights were on or off, the position of shades and doors, position of movable furniture, any smells present, the temperature of the scene, etc. To facilitate this process, crime scene specialists may create an evidence-free pathway leading to the primary area of interest by conducting a thorough sweep for evidence in that area.

5. Document and process the scene

With a plan in place, the crime scene team conducts a thorough, coordinated investigation of the scene, collecting all probative evidence. This entails detailed documentation with digital and video cameras or, if available, a 3-D scanner. For some situations, sketches and diagrams are also created. During the evidence-collection process, it is crucial that the crime scene investigator follow proper procedures for collecting, packaging and preserving the evidence, especially if it is of a biological nature. Biological evidence can be destroyed or damaged by weather conditions, individuals can inadvertently contaminate it, or it can be overlooked entirely if alternate light sources are not used to inspect the scene.



6. Conduct a secondary survey/review

To ensure that the scene has been thoroughly searched, a second survey of the area is conducted as a quality control step.

7. Record and preserve evidence

To make certain that all evidence is accounted for, an inventory log is created. The descriptions recorded into the

log must match the photo of the evidence taken at the scene and the description included in the crime scene report. For instance, if a gun is collected, the serial number of the firearm in the evidence log must match the serial number shown in the photo that was taken at the scene. This paper trail establishes the chain of custody that will follow the evidence throughout the lifecycle of the case.

How and where tests on the evidence are conducted

The most probative evidence will be sent to either a forensic laboratory or, if the laboratory does not have an expert in that forensic discipline, to an outside analyst for examination. To help identify the evidence that is most valuable, the crime scene personnel may conduct initial screening tests, called presumptive tests, at the scene. These tests can be useful in determining the type of substance present—whether it's a toxin or a drug, a stain that contains body fluids, or even whether a dried red substance found in the kitchen is blood or ketchup.

Presumptive tests allow investigators to narrow the field of possibilities to a certain class of substance, but they are not specific enough to confirm the presence of specific compounds. In addition to helping provide clues to indicate how the crime occurred and who may have been involved, presumptive tests can also help reduce the quantity of evidence that is submitted to the lab to include only the most important items. This helps to expedite processing at the laboratory.

Conclusion

Medicos who want to follow forensics present only small differences concerning their inherent features, beliefs, reactions, emotions and attitudes compared with the rest of their Fellow Medicos.

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