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Forensic Recovery and Examination

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Critically evaluate the processes and procedures adopted by the First Attending Officer (FAO) at a crime scene in order to reduce the possibilities of cross contamination.

Evidence is the most crucial part of an investigation. Without the presence of any evidence, it is impossible to sentence anyone suspected as guilty. One of the key forms of evidence comes through the method of forensics recovery and examinations. Forensics recovery and examination is not only important for the current investigation, it is important for investigations in the past or potentially the future where the two crime scenes can have potential links or similarities. Forensics comes in many different methods and are all useful in their own ways suiting a variety of crimes committed. This

essay will include the different types of precautions and methods the first attending officer, FAO, will take when arriving at a crime scene to avoid any sort of cross contamination. Cross contamination is a process an first attending officer must avoid at all costs to preserve evidence. Cross contamination is when an officer does not follow direct protocol when handling evidence such as not wearing gloves, moving key parts of the crime scene. This can cause cross contamination if procedures are followed. 'The vial containing samples from the scene was in a container containing seven or eight other vials of evidence in other cases, and contamination occurred.' (Dodd, 2022)

Forensics comes with many risks and many pros and is very risky for the first attending officer at the scene as they are the key component to reducing and eradicating cross contamination and a vital element of scene preservation. One man, Dr Edmond Locard, had a theory regarding cross contamination. His theory had been named the theory of exchange, which revolved around the fact that all people who have been at the crime scene, take something away but always leave something behind. This comes through a variety of processes such as fingerprints, DNA, fiber and footwear marks. First and foremost, it is important for the officers to begin preservation of life procedures, whether that be an injured victim or the officer themselves and their colleagues. Preservation of life is vital not only to save lives but victims are also key witnesses at a crime scene as they are the victim and experienced the crime first hand. 'It is a rarity in the developed world that a criminal case is brought to court of law without being accompanied by forensic evidence. Therefore, safeguarding a crime scene from contamination.' (Farah, 2022) It is important for the officer to proceed into cordoning off the crime scene area

and wait for crime scene investigators to arrive. 'There are several reasons for securing the scene. It's a need to prevent contamination of the scene and any evidence in the scene.' (CastleViewUk, 2022) The process will carry on when the first attending officers starts to communicate with any witnesses or victims at the scene to gain a better understanding of the first attending officer's next steps. Both of these steps are vital in the beginning of an investigation as it is important for the scene to be protected and guarded to preserve any evidence and prevent any contamination from the public or unauthorized personnel. These steps are also important as the officer will need accounts from witnesses and victims to know what to do and what not to do when working in the crime scene and where the key areas are of the crime scene. This will make the investigation more effective and efficient.

It is important for the first officer to arrive to also ensure their safety, the public's safety and any further colleagues attending safety whilst remaining in touch with the control room to provide any updates along the way. By doing this, the control room and other colleagues can sort out whether any sort of backup is needed at the scene. This is a vital process needed to be taken by the first attending officer as if they are dealing with a seized firearm, they will need the firearms unit to come and assess the fire arm. The first attending officer no matter the rank becomes the lead of the investigation and should proceed to further direct colleagues to carry out tasks relating to the crime scene at hand. This can include sending other officers to interview any locals as they have the potential to be extremely key witnesses in the investigation process. It is important that the first attending officer at the scene explains to the officers that cross contamination is

easily carried out and should remind other officers to wear protective gear and to work with precaution. The first attending officer should also add an inner corner of officers to ensure no members of the public enter the crime scene and contaminate the scene as this can play a large damaging factor to the evidence collected by the forensics team. Cross contamination can be achieved in simple ways such as opening doors; however if any items or objects are moved or touched, it is important they remain in their new place rather than be touched again or moved back. It is important to note the move of the items of objects. This is important as it removes the possibility of cross contamination from the new area the object was moved to, to the original evidence finding area. This can occur by cross contamination of fibers and DNA. Once all of the above steps are taken, all officers including the first officer in attendance should proceed to leave the crime scene area under investigation and allow crime scene investigation, CSI, to proceed to work in the crime scene as it is their area of expertise and by all other officers being removed reducing the chances of cross contamination significantly.

For a first officer in attendance comes plenty of risks. This can include any worked up and potentially agitated victims or witnesses, any bodily fluids left over, hazardous objects such as glass and many more. It is important for the first officer on arrival to wear protective clothing to ensure safety and further prevent cross contamination. The officers' attending including the first officer on arrival will all be equipped with equipment such as a body worn camera to ensure their safety and the public's while also having a clear documentation of what procedures the officers take and a recording of the crime scene as a whole. 'Studies have shown that the presence of a camera can reduce the

potential for confrontation and, should an incident occur, provide vital evidence needed for a police investigation and ultimately prosecution.’ (Stone, 2022)

A case where cross contamination had occurred included the case of Amanda Knox. November 2nd, 2007, A currently studying college student, Amanda Knox had come back home to her flat one day and had found her shared bathroom with her current roommate, Meredith Kercher completely covered by her roommate's blood. This had completely shocked and agitated Amanda Knox, who had noted that her roommate was not messy and tidy. Amanda Knox had spent the night with her partner that night. Upon return to her flat she had attempted to get into her room mate, Kercher's room, which had appeared to have been locked where she had then asked her partner to force her roommates door where he had eventually failed, therefore making him call the police. It was found by the court that the police had not worn protective caps and gloves which had left their own hairs and DNA fingerprints to be left at the scene also. Although Amanda Knox's partner had left DNA on the bra of the murdered room mate, the polices actions by not being cautious of cross contamination had meant that forensics were not accurate in their findings which had later exonerated the room mate, Amanda Knox and her partner from murder. This case shows the importance of the procedures and processes that the police take in order to preserve any forensic evidence and prevent cross contamination.

To conclude, it is clear to see why there are so many steps in order for the first attending officers at a crime scene. ‘The ability of the first attending officer to perform their duties

accurately is vital for the outcome of evidence collection to be successful.'(Studymode.com, 2022) It is vital to preserve any evidence and the crime scene as a whole as without the evidence at the crime scene you can not pinpoint the potential suspects and what actually happened as a whole. And with the massive risk of cross contamination, any evidence found becomes not reliable and can completely close down a case and prevent any solid evidence from being accurate. It is important for the first attending officers to take charge and initiative when attending the scene as they are the first officers to witness the scene and have to ensure the safety of all involved and the crime scene as a whole.

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Critically analyse the methods in practice for the recovery and examination of forensic evidence at crime scenes evaluating the legislation, strategies, policies and procedures with regard to forensic recovery and examination

The recovery of forensic evidence to be examined is vital in the investigation during and after the crime scene was first attended. Forensic recovery is the whole driving force behind a successful investigation ranging from the collection of DNA, finger prints, foot prints and many more. There are specific organizations and forensic divisions throughout the United Kingdom which specialize in matching DNA and fingerprints whereas other evidence such as footprints are harder to tie to a suspect. 'The discovery of DNA has meant that the guilt or innocence of a person who is investigated for a crime can be determined.' (Treehozz.com, 2022) Throughout this part of the essay, areas such as the legislation, strategies, policies and procedures which all fall under forensic recovery and examination, will be critically analyzed thoroughly. 'This blend of science and technology has enabled forensic scientists to solve many crimes that once would have been deemed beyond resolution' (Shire, 2022) The constant improvement on technology used by the United Kingdom's forensics teams is getting better and more accurate by the year with many more methods of forensic recovery and examination being used and created each year. 'Short tandem repeat – STR technology is used to evaluate specific regions (loci) within nuclear DNA. Variability in STR regions can be used to distinguish one DNA profile from another.'(UKEssays, 2022) With criminals

finding more and more ways to adapt to the new forensic recovery methods it is vitally important the police forensic teams ensure they also adapt and maintain suitable forensic recovery methods to deal with the changes the criminals are making.

Crime scene investigations are carried out under PACE Code D. Code D is the revised code of practice for the identification of persons by police officers. Code D includes parts 4,5,6. Part 4 is the identification by fingerprints and footwear impressions. Part 5 includes examinations established through the process of photograph taking. Part 6 includes the identification by taking blood samples. It is vitally important that the crime scene investigators obtain samples to a correct level and relevant amount proportional to the crime and offenses committed. If the suspects and victims are not aged 18 or over, an adult or guardian should be present or if the suspect or victim suffers from being blind or mentally disordered. All consent must be recorded in full. Forensics teams will begin using a procedure in order to recap on the scene upon the arrival post first officers arrival and scene preservation. Forensics teams will begin their recovery by ensuring the scene is secure and all forensic team members use the correct equipment to avoid cross contamination. The forensics team will then do their best to update the team and provide different tasks to each member before moving on to searching and examining the scene. These steps are really important for the crime scene investigators as it can keep their team up to date and on their highest alert of potentially crime scene cross contamination.

The forensics teams will use a method abbreviated as CAP to navigate through the crime scene to reduce possibility of cross contamination. CAP stands for common approach path. 'A route should then be created for the investigation team that is away from these areas to limit disturbance of the scene' (Futurelearn.uk, 2022) Once evidence is secured by the forensics team and further bagged up, they will need to take precautions which include the following; stating where the evidence was found, where it was seized, the time of seizure, the date of seizure and who had seized it and where they had located the evidence post seizure. 'Effective collection and packaging of evidence is critical in a forensic investigation as this contributes to the successful completion of a case.' (Reynolds, 2022) Following on from that, the crime scene investigators at the scene will have a different variety of bags for certain types of evidence. For example, the crime scene investigators will not use a paper bag for any sharp articles found at the scene as it can cut through the bag and potentially cause harm to the officers recovering the article. Therefore the crime scene investigators will use a plastic tube or large box to recover the sharp article to ensure safety to the officer and a secure area for the dangerous article to not be tampered with. 'It is imperative that evidence is protected after it has been found and gathered. In order to prevent damage and cross-contamination.' (Laura, 2022) These steps are crucial as they will be used in the sentencing of the suspect if found guilty and will be crucial in the court for questioning. The crime scene investigators will work alongside many other units in order to maintain complete success. Some of which include detectives and the crown prosecution service. However, for these other times to arrive at the scene and enter it, it is vital that they log themselves in by entering a log into the scene log. This will then

have written evidence and a signature to show who attended the scene with a date and time of entry and time of exit. This step is vital as it can show any times of cross contamination and narrow down suspects if there are any signs of evidence tampering.

The crime scene investigators will begin their forensic recovery and examination process by taking a number of photographs of the crime scene and potential bits of evidence such as weapons or injuries. This is a vital step as these photos will be examined further by detectives and may play a large part in the court hearings of the suspect or suspects. 'Crime scene photographs are used in a number of ways, including to record the aftermath of an event as found, and the comparison of a variety of physical features' (Thompson, 2022)

The crime scene investigators will then take samples of DNA from suspects or victims at the scene by use of swab or seizure of hair to distinguish the DNA differences between the suspects and victims and to further compare it to DNA recovered in the future.

These samples taken can also show the suspect and victims drug and alcohol intoxication levels at the scene. Different samples are taken according to which crime is committed. For example, in the case of fraud, only samples of DNA, finger prints, handwriting samples and shoes will need to be seized as a sample.

Samples can also be taken at the scene of motor vehicle accidents where the officers can take swabs on alcohol and drug intoxication levels. This can come by roadside breath tests, urine samples, blood samples and tissue samples. 'In 2017, 325,887

roadside breath tests were carried out by the police, of which 44,893 drivers or riders (14% of those tested) failed or refused to take the test.' (Rospa.com, 2022) This is all examined in a specialist field of analysis and falls under the category of toxicology. This department of forensic recovery and examination can also gain an understanding of the causes of death or illnesses in a person. 'Approximately 85,000 people are convicted of drink driving related offenses each and every year in England and Wales alone.' (Drinkdriving.org, 2022)

Samples will also be taken from people when a person is found to be attempting to drive a vehicle even if their keys are not inserted into the ignition. This comes from following the process of adding together the intention and actions which does not need to be proved whether the person was actually capable of achieving their goal. A way

To conclude this essay, it is clear to see how much precaution crime scene investigators have to take in order to successfully recover and examine forensic findings. I believe each step is vital in the process of the investigation ranging from the beginning of finding the CAP, to a common approach path all towards the different types of bagging. 'This study was conducted by the Institute for Law and Justice and describes in detail in this report 28 cases in which DNA testing led to the exoneration of people previously convicted of murder or rape.' (Varshovski, 2022) Upon analysis of all precautions taken in the forensic recovery and examination process brings a knowledge and understanding into which the crime scene investigators have to ensure in their process and procedures in order to preserve and recover each and every bit of crime scene. The

crime scene investigators have to ensure they follow each step by word of legislation and understand and remain within human rights of suspects and victims whilst recovering their evidence without causing any cross contamination and evidence tampering.

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