

Photography for Forensic Nurses

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ABSTRACT

Photography is an important tool for documentation and it is equally true for documentation by nurses. It becomes important for the nurses to know the different types of cameras, different techniques of photography, different lighting options and different types of scenarios where these techniques can be useful for the solution of criminal events. Judicial decisions are based upon pieces of evidence in criminal cases and photography is an important medium to record this evidence in a manner acceptable to the courts. In this paper, basic techniques of photography are going to be discussed with an introduction to advanced photographic technology so that forensic nurses can know the basics of forensic photography and be aware of the advanced technology so that utilizing these techniques will give them experience and they will be able to use forensic photography with confidence for the benefit of society.

Keywords: Forensic photography; forensic nursing science; forensic nurse, alternative light sources.

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INTRODUCTION

Forensic Photography

It is photography that helps deliver justice by photographically documenting the details of the evidence utilizing the technical knowledge and skills of photography.

It is the presentation of the crime scene in totality to the prosecutors, defense attorneys, jury and judges who most likely will never go to a crime scene.

Digital Photography

In the present scenario, it is digital imaging only as digital cameras are being used exclusively in the crime scene investigation and for this DSLR cameras are very commonly used.^{1,2}

To learn forensic photography, it is important to know and understand the basics and advanced ways of photography which are aptly described in Langford's basic photography and this can help its application in an academic manner as well as in different criminal scenarios.³

Photographs of the crime scene are permanent evidence and are also comprehensive pieces of evidence acceptable in the court. In these photographs, there are pieces of evidence that may not seem important immediately but later on, may become relevant.⁴

Types of forensic photography

Forensic photography is of two types. Reactive and Proactive photography. Reactive is for documentation as in the case of crime scene photography and photography of the various exhibits. The right amount of contrast and colour balance is taken care of in the right amount of lighting. Proactive is for examination quality and is used in cases of fingerprints and shoeprints. The forensic photographer should know Which type of photography to be used in a specific situation to avoid artifacts.¹

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DSLR Camera

These are the cameras that are commonly used for forensic photography.² In this, photosensors are used to capture the evidence.⁵ Because of the single lens in this camera it should be chosen according to the needs.⁶ compact digital cameras are less expensive but for better results, professional digital cameras are preferred, especially for crime scene investigations.⁷ These cameras can be bundled with some other lenses. It records light electronically on the semiconductor devices which can be converted to digital data in the computer.⁸

Lenses

The use of lenses can enhance the quality of the image, which may be wide angle lenses (good for interiors giving wider views), telephoto lenses (Short from 85–150 mm and long from 200 mm and above) have advantage of magnification but field becomes narrow and is good for outdoor photography; Macro lenses are where magnification is needed especially of small items e.g., fingerprints, tool marks and shoe prints. Extension tubes are used to magnify the images but will reduce the field's depth. Closeup filters and lenses also magnify but the quality is reduced. Teleconverters help in increasing focal length. Shift lenses or perspective control lenses are used to control perspectives. Fisheye lenses are very wide-angle lenses and are good for 360-degree or immersive photography. There are lenses with vibration reduction (VR) and lenses with image stabilization (IS).

Flashes

Flashes help to illuminate the fields where light is less, increase the depth of the field and have the details in the areas of the shadows.

Though DSLR cameras are commonly used, another type of photography is also used in special circumstances. Some of these are described below.

Aerial photography

Aerial photography can be very important in situations of criminal incidence and inability to reach the crime scene promptly due to high-rise buildings, inaccessible terrain and unsafe environment. UAV can do this photography and may be very convenient in certain situations rather than normal photography.⁹

Drone Photography

Now drones are commonly used for photography in celebrations and functions. These can be used for elevated photography, especially where it is difficult to reach or not possible to take a good photograph due to big crowds or societal disruption of the lanes.^{2,10}

This is especially good for accident reconstruction and is used efficiently for this purpose¹¹ and is being used increasingly for mapping the crime scene.¹²

UAVs and AI are being used to document crime scenes especially bomb blasts, fire and car crashes and a machine flying at a height of 50 feet can shoot with a 20-megapixel camera and have clarity as seen by the eye at the crime scene. UAV when used with Artificial Intelligence can map the area, and plan without disturbing the crime scene which an investigation officer may do.¹³

Satellite and remote sensing satellites

There can be satellite and remote sensing satellites which can help to solve crime and many crimes have been solved and recorded.¹⁴ Some remote sensing systems have visual systems and can be installed on airborne or spaceborne systems.¹⁵

CC TV videography

CC TV is commonly used in crime scene investigation.⁽²⁾ where photographic images are produced to collect evidence, documenting the scene, and subsequently, be used as a reference for criminal case investigation and prosecution process. Using systematic literature review (SLR CCTV is becoming part of life now.¹⁶ It helps in identifying suspects and charging these suspects.¹⁷

CCTV role is becoming proactivity and it will help with its Licensed numberplate reading and facial recognition capabilities in the future though at present mostly it is the passive role when these are being used after the crime has happened to know the details of the crime and identify the suspects.¹⁶

The colour of the cloth and shoes may change in CCTV if IR illuminates it at night time. This should be kept in mind.

Colour changes at night times may be due to a shortage of chrominance.¹⁸

Selfie photography

even the photographs taken in selfies can help in the identification of cases of mass disasters.¹⁹

Selfies can even link a person to a scene²⁰ and that can be even a crime scene. Even an app has been developed which helps in identification from selfie photographs.²¹

3D photography

3D photography can be a complimentary tool in the investigation of crime but is not being used commonly as it is expensive and needs experts. This can be good for crime scene documentation. A crime scene can be analyzed after the crime. It can also be used to study the scenario for the prevention of crime and is also a good way to teach forensic photography of the future and to be used in virtual reality.²²

A crime scene can be beautifully reconstructed by using 3D photography. Investigators and judiciary people can use this without the expertise and costly equipment and can see all the details very minutely. There may be a need to develop guidelines for this technology use so that courts can accept it without any doubts.²³

A 3D database of the faces can help in facial recognition for identification and can help to distinguish the face from the photo.²⁴

Therefore, 3D sensors are going to be quite helpful in the days to come in the criminal investigation system.²⁵

Panoramic (Immersive or 360-degree)

This makes a virtual scene. In this fish eye or very wide-angle lens is used and it creates results as standing inside a sphere and wherever we see there is an image in front of us. it can also produce high-quality stills and sound information can also be embedded. Bespoke Panoramic Camera can be used for this.

3D LASER scanners are also used.

These cameras have lenses, a tripod stand and a computer in a kit. It can be fitted with its LED lighting system for low-light situations.

There are Digital Single Lens Reflex 360 cheaper degrees.

It can record the crime scene very quickly before it is contaminated and later on also after it is contaminated.²⁶

Using alternate light sources can detect biological fluids at the crime scene which contains DNA and which can be very useful for criminal investigations and is a good method for screening crime scenes for biological fluids.²⁷

Elevated Imaging

These are from aerial platforms and connected with computers to do the settings, see what they are recording, and adjust what needs to be recorded. These can be ground-based devices as well as drones.

UAVs can be used for elevated imaging of the crime scene.¹³

Terminologies of digital photography

Some of the terminologies used in forensic photography are important and forensic nurses should be well-versed in these as follows:



Pixels

resolution is measured in PIXELS; more the pixels, more details can be recorded, and a larger print can be obtained without losing the details.

RAW images are those which have not been processed or at least processed by the camera itself.

Processing: MATLAB, Image Pro and V++, Image J, GIMP, Adobe Light and Apple Aperture are some of the applications better for forensic photography.

Image cropping can be used to crop the useful part and remove the unnecessary view.

Image resampling or resizing will change the pixel value.

Image flipping will produce a mirror image. Flipping and rotating at 90 degrees will not change pixel value. But rotation at other degrees may change the pixel values.

Noise

When the backgrounds are patterned, it may hide the details in the evidence and is considered a noise in forensic photography. Noise can be reduced by a Blur filter, Median filter, or Gaussian filter which reduces noise but preserves the details; an original copy of the photograph should always be kept. Sharpening filters can also increase the contrast and make it better visible. But over the employment of this filter can introduce the artefacts. A history log helps to audit the trail, especially in Photoshop. If changes are done in layers, it is the better way as the original will remain available.

The file format for saving photographs

In DSLR cameras it can be JPEG (Joint Photographic Experts Group) or (.JPG) or raw format (this is the data from the image sensor which is unprocessed or minimally processed) which depending upon the brand of camera can be different e.g., in Nikon it is.NEF and for Cannon.CR2. Raw files are digital negatives. In the case of scanners in addition to these JPEG, it can be saved in TIFF (Tagged image file format) format. If file compression is to be done, it should be lossless as there is a data loss in this. JPEG + Raw files are difficult to transfer, so they can be saved anywhere and transferred as JPEG. All the data should be traceable, reproducible, and authentic with integrity. SOPs greatly help to be authentic.¹ Home office digital imaging procedure is the best reference point for this.²⁸

While printing images some details may be lost as most of the printers do not have capabilities as the resolution of the printers is usually less. Storing of images depends upon the longevity of the files and the longevity of the storage medium.

Weathers and lighting

Sunlight may cause shadows and reflections. where shadows are there flash can be used. In the sunlight, it is better to use UV filters on the lens to prevent UV harm to sensors and prevent dust from the lens.

In rain waterproof housing for the camera and a lens hood can be used. An umbrella on the tripod can also be used.

When fog is there supplementary flash at an angle of fewer than 45 degrees can be used.

In snow, extreme contrast and reflection are the issues. Cold condensations are the problem and cold can flatten the batteries if left overnight so batteries must be kept in a warm place.

In winds, a sturdy tripod stand be used and the speed of the shutter can be increased to stop the blurring of images of shaking articles or the angle can be changed to avoid such articles in the frame.¹

Videography

It is a better way to record the crime scene when the narration of the crime scene by the investigating officer can also be recorded. All the details of the crime scene can be captured. If anything is missed initially, it will also be captured which can be seen later on.

Suspects statements can also be video graphed as the suspect then cannot deny the version narrated earlier. It will also help later on in identifying the suspects.

It can also be used to record the dying declaration or dying deposition.

The procedure of videography remains the same as in photography. Zooming out should be done at the same place where the zooming in has been done. The focus should be sharpened when zooming in. Always slowly zoom in and slowly zoom out for a better understanding of the facts.

Always video graph when the body has been turned over and record all the belongings on the dead body, including jewelry and all those things which can help in identification, especially if the face is disfigured.

Videography is now very much desirable in India while doing an autopsy of dowry deaths and when the deaths have occurred in custody.^{29,30}

Videography has the advantage that it will preserve the entire crime scene, which can be reviewed at any time and presented in the courts for better understanding of the court officials. It can also help in supporting or contradicting a statement or confession and conditions of the crime scene, including lighting at the crime scene.

Camera recording should always be done as videography cannot replace good crime scene photography.

Precautions

The crime scene should be disturbed as little as possible and care should be taken not to contaminate the crime scene.

The photograph's date, time of location and compass direction should be mentioned. Weather conditions should also be mentioned. Focal distance should also be mentioned. Light conditions should also be documented. The make of the camera and who took the photographs should also be recorded. Digital disks should remain with the photographer till it is given to the lab for printing and the chain of evidence must be recorded.

Photographers should also try to protect themselves from the crime scene from infections and if needed can use a Personal Protective Equipment kit. This may be especially needed when the scene is contaminated with body fluids e.g., blood which may or may not be visible at times and may be visible only under proper lights.

At fingerprint photography at a crime scene, wearing black cotton gloves is better as they can protect from UV or LASERS and absorb sweating. Black latex gloves can also be used. Gloves and PPE should be disposed of as if they were contaminated and should never be reused. Tripod stands and other photographic kit material, including cables should also be sanitized.

The photographer must inform about his shoe marks or fingerprints if left anywhere to avoid unnecessary investigation. It is better to use plastic stepping plates.

A linear scale prevents ambiguity about the dimensions of an article. It is better to use two linear scales at the right angle to each other. ABFO scale 2 is normally used in bitemark cases as it gives two-dimensional clarity of dimensions.

Artifacts need to be avoided. Removing even the artifacts in the picture will be manipulation.

When taking photographs of the victim, ensure having a police person or a third person present to avoid any risk as the victim may be angry or in shock. It is preferable to use flash, especially when photographing injuries.

Photography should not be done against the source of light.

Proper speed and aperture should be used during photography to have good results.

The background should be plain and non-reflective. Start from top to bottom. If injuries to the eyes take one photograph with open eyes and the other with closed-eyed.

For injuries on the private parts, same gender photographer or a person of the same gender must be present.

Consent must be taken for the photography of the victims. For prisoners, the permission of the concerned authorities must be taken.

Photography of the injuries

If correctly photographed, injuries can throw light on the weapon caused by these. These can also tell the relative position of the assailant too in some cases. Photographs can tell to some extent the age of the injuries. Photographs sometimes can also help identify the assailant by excluding the suspects as in case of bite marks if good quality photographs.

Lighting is very important for the clarity of the injuries and simple cross-polarised lights can help greatly in this which can reduce the sheen on objects. This produces colored saturated images with enhanced pigmentation maximizing details. Another important thing is to have clear photography with good contrast.

In bruises, photographs after a few days show better details as the swelling decreases rather than taking photographs immediately.

For swelling always use comparison with another half.

In the case of burns, different details can be very well documented by photography. Even when the surface is not showing burns UV reflective photography can still document burns in the skin in fair skin. In darker skin, cross polarised light is more helpful.

In cuts and abrasions, details may be masked by swellings due to associated bruising and after a few days, more details

may be visible in the photography after the swelling and redness are reduced.

In bites, photography is very helpful and one of the very good ways to document the injuries of bite marks. It is done by keeping ABFO2 Scale in the frame along with the bitemarks but taking care that bitemarks are not obscured. When the surface has healed, UV Photography and induced fluorescence can be helpful even up to 6 months.

Photography of the injuries using prime lenses or locking the zooms helps to have the photographs from the same focal length and focus can be done by moving the camera backward and forward.

Always keep a scale in the frame as it helps to know the dimensions in a better way. Keeping colored checker charts in the frame also helps to know the change in color during photography. If external lighting is being used see to it that it does not cause shadows on the injury. Choose the aperture to have more depth. Photograph the injury in such a way that it gives an orientation of the position of the injury by including some body parts. Do not take injury larger than life size as it gives the wrong impression about the injury.

In forensic photography, infrared, long-wave ultraviolet and deep blue fluorescence have a role that cannot be denied. Special cameras are needed when UV or IR photography is being done as new digital cameras are such that they block unwanted UV or IR rays.

As far as lighting is concerned, using two balanced dual-mounted flashguns on either side of the camera will reduce the shadows. Ring flash also serves the same purpose.

Brightly colored backgrounds should be avoided. Grey cloth or a portable backdrop (Lastolite) should be used to provide a neutral backdrop.

Fingerprint photography

Foster and Freeman's DCS5³¹, the Integrated Rapid Imaging System (IRIS)³² or FISH (Forensic Information Scanning Hub)³³ are automated systems to capture fingerprints and are frequently used by different agencies around the world. UVL is the system of recovery of latent marks where UV, visible and LASER are used. Photography is done with 105 mm lenses and can be done before the application of powder.

Shoe Prints Photography

These can be seen on the soil, the floor with dust and prints of shoes soaked with blood. Photography is done with macro lenses usually with 60 mm lenses with appropriate lights, tripod stands and a spirit level. Oblique lighting at 45° or less is good. In the case of latent shoe mark oblique lighting at degree can be 1-2°.

3D footwear impression capture will also help in the identification of the suspects which 3D scanners and modified methods can do.³⁴

Blood stains, Seminal stains, Erased ink

All these can be visualized by the use of LASER illumination and photography. The point of origin of blood stains can also be determined by using LASER.^{35,36}



Blood also glows blue when comes into contact with a mist of luminol. It reacts with iron in the hemoglobin.³⁷

Shotgun residues

This can be visualized by IR Photography. It is a non-destructive and nontoxic chemical imaging technique that is highly visual.³⁸

Sexual assaults

When cases of sexual assaults are being examined, taking a photograph of the victim will depict the demeanor and clothing of the person to be examined which cannot be described in many words.

All the injuries on the body should be photographed, taking all the precautions required in such cases.

Genital injuries be examined by colposcope and those injuries in the vagina which are not visible can be made visible by applying Iodine and spraying with 1% acetic acid when these injuries are stained blue and these injuries can be photographed with the help of the colposcope.

Special equipment for photography

- Peripheral cameras:
- Object modeling
- Multi-spectral imaging camera
- High-speed photography
- UVC photography.

Peripheral Cameras

These cameras are good for photographing circular surfaces e.g., fingerprints on cups in which it is rolled flat photographically.

Object modeling

The object is placed on the turntable, photographed and rotated. It can be played back in the court.

Multi-spectral imaging camera

When fingerprints are on distracting backgrounds. Cri Nuance camera5 is one of the multi-spectral cameras whose fingerprints on the colored notes can be studied.

When a finger is pressed it becomes flat due to blood color changes, which a multi-spectral Imaging camera can detect and it increases biometric security as it cannot be fooled by artificial fingers.³⁹

High-speed photography

This is used in the case of firearms to study the discharge from the weapon e.g., recording muzzle flash.

UVC photography

When every lighting technique fails, UVC photography can be tried depending upon the surface of the exhibit to photograph fingerprints by using shortwave UVC radiation. This can be a great health hazard and should be used cautiously. This gives dark fingerprints against a light background. This technique is

usually for smooth, high-quality white paper and cards. It needs electronic viewing and recording device.

Crime scene photography Location

It can be outdoor or indoor. When it is an outdoor location surrounding area of the crime scene should also be photographed to show relation to the crime scene. If the area is bigger than the aerial photographs are much better to show the relationship.

In the indoor crime scene relationship of the surrounding is also important, and several photographs may be needed. Photographs of the scene and the body should be taken, showing the relationship of the body to the different items in the room. It is important to take over all photographs of the building and surrounding buildings, entry to the house, the path leading to the crime scene, entry to the crime scene room and surrounding rooms, doors, windows of the room, furniture and closets, and bathrooms attached to the crime scene room. Backyards and front yards should also be photographed.

Taking good photographs of the dead body at the crime scene is very important. General photographs and close-up photographs should be taken to show their relation to different objects and details on the dead body. All the injuries, and different types of stains and foreign objects on the body should be photographed in detail. Defence wounds are especially important to be photographed as it helps in proving a homicidal case.

For identification of the body facial photographs should be taken. If the body is disfigured, all the features that can help in the identification should be photographed, e.g., scars, tattoos and other congenital or acquired abnormalities.

Photographs of the injuries should be taken before and after the cleaning of the wounds. A scale must be kept when taking a photograph of the injuries. It helps a lot in bitemarks when the photographs are to be made life-sized for comparison.

At the crime scene, it is always better to have photographed at eye level so that these looks similar to what is seen and described at eye level.

Photographs of the suspects also help to record the injuries and trace pieces of evidence on the suspects e.g., Injuries and blood stains. The photographs should be taken as early as possible as the suspects can wash stains. Consent of the suspect is required if the suspect is not arrested.

It is recommended that entry to the building, entry to the apartment, entrance to the room, a minimum of two photographs of the body one from each side, two photographs showing the relationship of the body to the surroundings, entrance and escape route of the suspect, closeup and area view of evidence at the crime scene, including weapon if present, photographs of the suspects and photographs of the witnesses.⁴

Scales used in the photography

ABFO scale 2 and colored scale are used in photography to compare the dimensions and colors in the photographs

Tripod stands: gives stability to the cameras and avoids shaky photographs. It also helps to have the photographs from the same angle.

Proper lighting

Alternate Light Source (ALS)

Flash is good for general lighting. ALS may be good in certain situations and includes all light sources which are not used standardly. It may even be a torch or a LASER for latent evidence.

Specialized light sources are used at the crime scenes for the retrieval of latent pieces of evidence.¹

Electromagnetic spectrum EMS

In this UV and infrared (IR) can be utilized in forensic cases. UV has health hazards, especially to the skin and eyes and PPE should be used or a UV flashgun should be used. Now UV torches are also available but should be used with caution.

LASERS are also used for latent evidence but must be used carefully as they can cause blindness.

LED lights or CRIME LITES have a range of lights from UV to deep red. There are tuneable light sources (Crime scope). Not good for scenes where DNA profiling is to be done as it can contaminate DNA from one scene to another.

ALS are good for body fluids stains, fingerprints and shoe marks, and erased wiring which can glow in ALS.

Fluorescence is also used. For induced fluorescence, long bandpass filters are used. These can be used on latent marks of fingers and shoeprints. Standard flash is substituted and a filter is fitted to the lens. Standard lenses are used.

On the cadavers, continuous output sources can be used to search the injuries on the body and should be done before PME otherwise dimensions of the injuries may change as the skin will become lax after PME. This should be done in a dark place after removing the clothing of the body.

Correct filters are also equally important as are the ALS to visualize the stains or marks of body fluids. Safety goggles will prevent damage to the eyes also. These filters can be short band pass, long pass, interference, or bandpass filters. Low-quality wrap-round colored plastic goggles are used to save money instead of filters. Safety should be taken into consideration as they are not very safe.

IR is used to reveal gun residues, write on burnt documents, and alter inks. Vascular disorders can be seen with it.

With UV old injuries by bites, tools and burns can be visualized. With UV much sharper images can be obtained as there is no scattering of light on the skin therefore, surface damage can be seen clearly. Xenon flash tubes can provide UV illumination.

UV/IR cameras are good for recording with these ALS

White light is also important for ALS. The ring light is especially good for fingerprints. Lightboxes are also available. Schott-type inspection lamps are also available for fiber-optic purposes. Torches too are available.

Sequence of photographs

Photography should start from the periphery and then come to the central area. After this close shots should be taken. Never mark the area with chalk till all the desired photographs in the long and close shots have been taken. If required, these lines

can be marked later on, especially for smaller objects and then re-photographed.

Number of Photographs

It is always better to have a greater number of photographs rather than a smaller number of photographs.

Photologs should be properly documented and the photographer should maintain photo logs. In the investigator's notebook, the investigator should also mention these.

Printing of the photographs

In the management of prints, color reproduction can be good if good color management is employed and this can be done by achieving a good white balance. It is good to have a reference color scale so that later on we can find any color changes during the photography as a device-independent reference and it will be a good objective scale.¹

Utilization

Crime scene photography is very valuable as it provides accurate information and provides evidence when fragile evidence has been lost. It helps to recreate and review the crime scene whenever desired and refresh the memory of the investigator. It also helps the witness to refresh the memory before giving evidence to the court in a better way as all the details of the crime scene will be refreshed. It is absolute proof of the injuries sustained by the victims to be shown to a jury or presiding officer. Something physical evidence being presented in the court can be compared with the article in the photograph.⁴

Lab receiving

the disks must also document the date time and name of the person, his rank and ID number. Handing over the data. The lab should also document how many prints are ordered and the location of digital disks. Labs should also document similarly who received the prints and digital disks.

If the prints are made from a commercial shop, they should be from a reputable shop taking all the precautions mentioned above.

The information must be recorded on the back of the photographs if physical prints are obtained.

Acceptability in courts

Integrity and reliability of the photographs are very important to be accepted as primary evidence.¹

The RAW format must be preserved. The trail of the process must be preserved.

It should be the first thing to take photographs before handling the crime scene. i.e., before moving or touching anything at the crime scene, but before taking photographs, the photographer must be aware of the legal requirements and admissible techniques.

Do not place markers or draw chalk lines around the body until preliminary general and specific photographs have been clicked.



MATERIAL AND METHODS

In this paper google scholar has been used to find out the relevant papers and the missing links have been searched on Google search. Forensic Photography: A practitioner guide has been extensively consulted for the basics of forensic photography. In addition to this crime scene investigation has also been a good resource for this write-up.

DISCUSSION

Sometimes investigators may guide what they wish to be photographed; at other times, they may not have any clue. Forensic photographers must have photographs in the night if an incident happened at night and during the day, as that will give a more correct picture of the environmental circumstances. But whenever feasible, it should also be taken as early as possible as some circumstances may alter later on and mentioning it when giving photographic evidence and documenting the time correctly.

The judiciary requires shreds of evidence that are convincing and photography and videography are such pieces of evidence which can clear many doubts and convincingly present the truth to the judges provided that care is taken for the trail of photographic pieces of evidence and a copy is preserved of the RAW data.³⁰

360-degree imaging has changed the scenario dramatically and made it very easy for the stakeholders to understand the crime scene.

CONCLUSION

Photography is an excellent means of documentation of pieces of evidence at the crime scene. Digital photography has replaced conventional photography with photographic films. DSLR camera is being used, which has the advantage that additional filters and lenses can be utilized with this camera for better results. Taking precautions will give better results and safeguard forensic nurses when they are using the opportunities to photograph the evidence of a crime. Depending upon the weather, additional safeguards are needed to prevent damage to equipment and get good photographs. Using alternate light sources enhances the quality of the photographs and can capture the evidence when the ordinary light source cannot pick up the evidence. Photography of the crime scene can be done by different methods and elevated or aerial photography can be an alternate method when it is difficult to do it otherwise. 360⁰ or immersive photography is the photography of the present and future and will help to see the crime scene any time in the virtual reality and shreds of evidence which may have been overlooked initially can always be looked for and further analyzed.

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