**4c: PHOTOGRAPHY**

The term photography, videography and imagery or photographs and images are synonymous. Photography and photographs will be the terms used in this guideline.

Why take photographs or video? No better method of objectively preserving and sharing visual memories exists than through photography. In contrast to sketches or drawings the camera can record perspective, detail, shape, color, texture and content with greater efficiency, objectivity and completeness. Sketches and drawings may facilitate communication and act as an adjunct to photographs but their quality is dependent upon the skill of the individual rendering the work and may take considerable time to produce. Modern cameras can be used by most individuals without complicated training and digital photography is relatively inexpensive. When photographs are obtained properly, the photographer can objectively document a scene or physical findings and visually communicate valuable information to other observers later.

**Camera Equipment**

The camera provided to the Coroner Investigator is a digital camera with several advanced features. The Coroner Investigator should become familiar with the owner’s manual for the camera and experiment by taking images in various lighting conditions to produce optimal results.

Know if camera has rechargeable or replaceable batteries. Rechargeable batteries will lose charge while idle. The Coroner Investigator must carry a freshly charged battery pack.

**Types of Photographs**

The best way to determine what type of photographs to take is to decide what needs to be communicated. As the photographer, the Coroner Investigator has the best opportunity to evaluate the whole subject. Don’t assume photographs of only specific areas of interest will effectively communicate all pertinent findings. All finding must be viewed in appropriate context. Forensic photography is utilized to tell a story and preserve findings so your photographs should include a sequence of images for orientation, detail and measurement. Consider the following variables when capturing images:

1. **VANTAGE POINT:** Your position relative to the subject to best depict pertinent findings begins with an overall view progressing to a detailed view by gradually moving closer to the subject matter. Your vantage point should be perpendicular to the subject whenever possible to decrease distortion due.

2. **EXPOSURE:** Exposure is determined by evaluating the light intensity reflecting from the subject of a photograph and utilizing the most appropriate combination of shutter speed and lens aperture re to record light, dark and intermediate values in the subject. Longer shutter speeds vs. Shorter shutter speeds increase exposure. Larger apertures vs. smaller apertures increase exposure. Proper exposure requires the right combination of shutter speed and aperture. Most commonly used cameras incorporate light meters and automatically adjust shutter speed and aperture to achieve the “correct” exposure. Depending on the color of the subject, surface reflectivity and lighting conditions the automatic exposure re may not render the values accurately/appropriately and therefore result in under exposure (image too dark) or over exposure (image too light). Digital cameras provide the photographer an opportunity the immediately review a photograph and therefore adjust the exposure while the photographer can do so. Failure to review image exposure will compromise the photographer’s ability to document a scene or evidence. Since each camera is different, use your camera’s instruction manual to learn how to increase or decrease exposure.

3. **FOCUS:** Focus is determined by adjusting the lens of a camera closer to or farther away from the image plane (digital sensor) to render the subject sharp. Cameras that are focused manually are available. Autofocus will be sufficient to render a subject sharp; however, in some instances autofocus will not record the desired subject sharply and thus the image will appear blurry. Since each camera is different use your camera’s instruction manual to learn how to focus your camera.

4. **FILE SIZE:** File size indicates the amount of data recorded by a digital camera. Simply stated, the larger the file size, the greater the amount of detail can be rendered by that file when viewed in print, monitor or projection form. An image size of 1600 pixels by 1200 pixels produces a photograph with sufficient detail.

5. **FILE TYPE:** All photographs will be saved in JPEG (Joint Photograph Experts Group) format.

6. **COLOR TEMPERATURE**: Visible light is a narrow band of electromagnetic radiation that exists from a wavelength of 400 to 700 nm and is subjectively interpreted as deep blue to red respectively. Most light sources represent a combination of wavelengths and vary considerably from source to source. Digital cameras provided to the Coroner Investigator have a default setting that automatically adjusts the white balance, also known as color temperature. Since each camera is different use your camera’s instruction manual to learn how to adjust your camera’s white balance.

7. **ILLUMINATION:** Besides the different characteristics of color temperature, the type of illumination available at the scene can have profound effects on photographic quality. In general, the three light types are: natural, artificial or ambient light. Natural light is regarded as outdoor light and artificial light is light produced by a manmade source. Ambient light is the consequence of natural and/or artificial light typical for a given scene such as a room with windows and incandescent light during daytime hours. Regardless of the light type used to illuminate a subject, light can further be classified as direct or diffuse. Direct light is typically a single discrete light source and will usually produce distinct shadows when illuminating three-dimensional objects. Diffuse light does not have a discrete source and will usually produce indistinct shadows when illuminating three-dimensional objects. The Coroner Investigator must keep lighting in mind to produce the best quality photograph.

**Lighting and Use of Flash**

1. **DAYTIME PHOTOGRAPHY OUTSIDE**: This is the easiest type of shot. In full sun use the flash to fill in shadows, if necessary. Your eyes constantly adjust to the different lighting situations, but the camera cannot. The bright sunlight will fool the meter in the camera to underexpose the dark or shadow areas. If you are photographing an overall scene at a distance, and the detail in the shadows is minimal, the flash will not be necessary. If the sun is directly behind you and the scene is well lit, you should not need the

Flash. Avoid having your shadow in any photograph.

2. **DAYTIME PHOTOGRAPHY INSIDE**: Use the flash even with room lights on. If you are going to photograph a highly reflective surface such as a mirror or a window, shoot it at an angle so the light will not bounce back into the camera.

3. **NIGHT PHOTOGRAPHY**: The camera’s flash, as the single source of light, presents a disadvantage for night scene photography. When trying to photograph a motor vehicle collision for example, one must attempt to get all vehicles involved in one shot for an overall photograph. However, the reach of the flash is limited. If possible, try to concentrate on the inside of the vehicle and specific areas of the vehicle such as the fender, the headlight, the windshield, etc. A photograph that depicts the location of the decedent at time of impact is important if the decedent has been moved for life-saving intervention.

**Scene Types and Suggested Photography**

1. **OVERALL GUIDELINES:** No two scenes will be exactly alike. The following sections provide basics only and each scene will need to be evaluated such that photographs taken will tell a story relating to the death being investigated. Avoid having other individuals in the photographs. Remove any artifact brought into the scene by others (except EMS). When taking photographs with a scale, shoot at a perpendicular to the scale. Use evidence markers as needed. Take one photograph of the decedent’s driver’s license and Social Security Card if available.
2. **NATURAL DEATHS:** In the case of presumed natural home deaths or hospital deaths, only an ID and one overall scene photographs are necessary. However, the Coroner Investigator should take additional photographs that depict lifestyle, supporting artifact or any other information that may be applicable to the investigation. If the decedent’s face is extensively damaged, try to shoot a profile. (The above information applies to ALL scenes.)
3. **MOTOR VEHICLE COLLISIONS (MVC**)**:** MVC's should be photographed systematically. In daylight, an overall of the vehicles involved should be taken at different angles. Day or night try to record points of impact and the decedent(s). Any pertinent articles should also be recorded, i.e., alcohol containers, skid marks, seat belt use, airbag deployment, etc.
4. **HOMICIDES:** Law enforcement officials may take hundreds of photographs to document a scene and the evidence. The Coroner Investigator is not concerned with all aspects of the scene rather only the decedent(s) and evidence directly related to the death. For example, the Coroner Investigator would not photograph footprints outside a house but would photograph footprints near the decedent if they showed the position of an assailant. A good order of shots is overall of scene, decedent and cause of trauma (weapons, etc.).
5. **SUICIDES:** In general, follow the same guidelines as for homicides. If it looks as though the decedent may have ingested or injected prescription medications or other drugs, photograph whatever is left or any empty containers. Try to document any pertinent objects directly related or contributory to the death. There are no clear-cut rules on what should or should not be photographed. The Coroner Investigator must employ best judgment, keeping in mind the above objectives.
6. **ON-THE-JOB DEATHS:** The safety of the Coroner Investigator is of the utmost importance. If the scene has been rendered safe by the appropriate individuals, proceed as with any other scene. A good
   1. Order of shots is: overall of scene, decedent and cause of trauma (weapons, etc.).
7. **FIRE RELATED SCENES:** Investigating fire related scenes is a time-consuming task requiring a considerable amount of physical work and attention to minute pieces of physical evidence. The Coroner Investigator will be responsible for investigating fire related fatalities because of motor vehicle accidents, structural fires or any circumstance whereby the decedent has died from thermal or inhalation injuries from a fire. The basic steps for photographing a fire scene are as follows:
   1. Structure Fires:
      1. Photograph the house, building or structure from all four sides if possible.
      2. Photograph any accelerant cans or evidence that might be helpful to determine cause of death.
      3. If the decedent is inside the structure, take an overall photograph of the room where the body is found.
      4. Take a full-length photograph of the body prior to moving the remains.
      5. Take a close photograph of the face and head.
      6. Use your discretion to take appropriate photographs of the structure inside that might contribute to a cause of death
   2. Motor Vehicle Fires:
      1. Take an initial photograph of the overall accident.
      2. Take photographs of the vehicle in which the body is in from all four sides.
      3. Take a photograph of the body position inside the vehicle.
      4. Take appropriate photographs of the vehicle interior involved in the fire. Pay attention
      5. To materials and articles that could have caused the fire.
      6. Document the license plate of vehicle.

*\*Fire photography considerations: Some things to consider are that dark subjects tend to require more light than lighter colored subjects. Dark subjects absorb more light; therefore, fire scenes tend to reproduce rather dark photographs, especially fire scenes photographed at night. It is possible with certain cameras, to override the automatic exposure setting and get good quality photographs. If your camera/flash combination is a simple manual set-up, then just open the lens one to two stops from what would be your normal setting. Since each camera is different use your camera’s instruction manual to learn how to adjust your camera’s exposure settings.*

1. INTERAGENCY PHOTOGRAPH REQUESTS: The Coroner Investigator will often be asked for copies of their photographs by law enforcement and other agencies. All photographs taken for the Union County Coroner’s Office and property of that office. Refer all requests for photographs to the Coroner.