



DOCUMENTING AND UNDERSTANDING SLEEP ENVIRONMENTS

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LEARNING OUTCOMES



Understand

infant safe sleep best practices



Identify

Common unsafe sleep environments and their risks

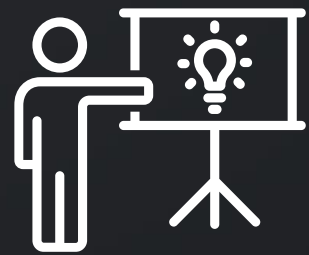


Recognize

Considerations regarding infant sleep products



LEARNING OUTCOMES CONTINUED



Demonstrate

Best practices in recognizing sleep settings



Implement

Techniques for documenting sleep environments with precision



Identify

Strengths and limitations of various technologies used in documentation



THE "ABC'S" OF SAFE SLEEP



A

Alone: Infant sleeps alone



B

Back: Infant placed on their back for every sleep



C

Crib: In a crib, bassinet, or play yard



D

Dry & Draft-Free: Avoid overheating and drafts



E

Clear of soft bedding, loose items, and clutter

UNDERSTANDING INFANT SLEEP PHYSIOLOGY & RISKS

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Understanding infant sleep physiology is crucial for preventing tragic sleep-related deaths by highlighting a baby's unique vulnerabilities and the critical importance of a safe sleep environment.

01

Deep Sleep Cycles

Infants spend more time in deep sleep than adults

03

Head Control

Limited in young infants, making suffocation risk high

02

Arousal Response

Impaired by soft surfaces, rebreathing CO₂

04

Overheating

Increases metabolic rate, reduces arousal

05

Firm Surface

Mitigates suffocation, positional asphyxiation



Ideal Safe Sleep Environments

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CRIB, BASSINET, OR PLAY YARD

FIRM, FLAT MATTRESS

FITTED SHEET ONLY

ABSENT OF CLUTTER

SHARING SLEEP SURFACE UNACCEPTABLE

COMMON UNSAFE SLEEP ENVIRONMENTS:

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Adult beds

01

Risks

Suffocation, entrapment,
overlay

02

Hazards

Soft mattress, loose bedding
(pillows, blankets), gaps
between
mattress/headboard/wall

03

Caregiver Factors

Exhaustion, substance
impairment, medication use,
disproportionate caregiver
size



COMMON UNSAFE SLEEP ENVIRONMENTS:

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Couches/Recliners

01

Risks

High risk of entrapment,
wedging, suffocation

02

Hazards

Soft cushions, crevices, back
of furniture, caregiver
overlay

03

Caregiver Factors

Often result from accidental
fall asleep while
feeding/comforting or lack of
proper sleeping
arrangements



COMMON UNSAFE SLEEP ENVIRONMENTS:

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Car Seats & Swings

01

Risks

Asphyxiation due to airway obstruction (positional asphyxia)

02

Hazards

Semi-reclined position allows head to fall forward, compressing airway

03

Misuse

Designed for transport/awake time, not routine sleep



INFANT SLEEP PRODUCTS:

Safe vs. Unsafe



SAFE

Cribs, bassinets, play yards
(JPMA certified, current
safety standards)



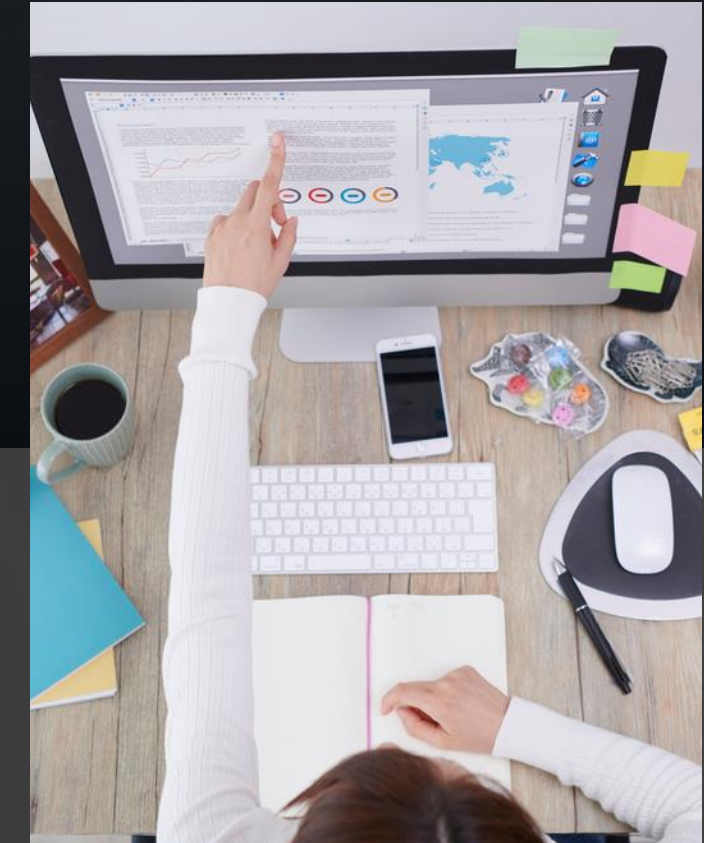
SAFE ACCESSORIES

Firm mattress, fitted sheet,
sleep sack/wearable blanket



UNSAFE/HIGH RISK

Bumper pads, soft bedding
(blankets, pillows), sleep
positioners, incline sleepers, co-
sleeper beds that attach to adult
bed



RECALL AWARENESS

Check for recalled products

CONSIDERATIONS FOR SLEEP PRODUCTS IN INVESTIGATIONS



CONDITION

Damage, assembly,
cleanliness



PLACEMENT

Of child, sleep surface,
environmental hazards, etc.



CONTENTS

What's inside the
crib/bassinet?



PRODUCT RECALLS

Verify if item has been
recalled



CAREGIVER

EXPLANATION

How was the product typically
used? Sleep arrangements?
Last known alive/placed vs
found position?

RECOGNIZING SLEEP SETTINGS: INITIAL SCENE ASSESSMENT

01

Primary Sleep Area

Where was the infant
routinely sleeping?

03

Indicators of Sleep

Temperature, cleanliness,
odors, clutter

02

Incident Sleep Area

Where was the infant
sleeping at the time of
death? (May differ)

04

Environment

Temperature, cleanliness,
odors, clutter

05

Impact of SDOH

Social Determinants of Health
Clues to broader living
conditions (e.g., makeshift sleep
areas due to poverty)

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DOCUMENTATION BASICS:

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The Three Pillars

Goal: Recreate the scene for
someone who wasn't there

01

Written Narrative

Comprehensive, objective,
chronological

03

Scene Sketch, Reenactments

Spatial relationships,
measurements, key items

02

Photography

Detailed, varied
perspectives, high quality



WRITTEN NARRATIVE:

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Best Practices

01

Objective Language

Describe what you see, not
what you infer

03

Chronological Order

Follow the flow of the
investigation

02

Detailed Descriptions

Specificity over
generalizations

04

Inclusion of Negatives

Document what was not
present (e.g., 'no other
bedding')

05

Contextual Information

Include relevant environmental
and SDOH observations

PHOTOGRAPHY:

01

High-Resolution Camera

Not just a cell phone

03

Composition

Frame shots to include context (e.g., surrounding furniture)

02

Lighting

Use external flash or supplemental lighting to eliminate shadows

04

Focus

Ensure crisp, clear focus on all important details



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Getting the Shot
Right

PHOTOGRAPHY:

01

Overall

Show entire room,
relationship of objects

04

Overhead

Unique perspective,
especially for sleep surface

02

Mid-Range

Focus on specific areas (e.g.,
the crib, bed)

05

Perspective

From caregiver's eye-level

03

Close-Up

Detail of infant position,
bedding, injuries, product labels

06

Scale

Ruler or other measuring device
next to key items

.....

Essential Angles and Shots

PHOTOGRAPHY:

01

Unaltered Scene

Photograph before any disturbance, if possible

03

Remove Items Strategically

Document in situ, then from various angles

02

Remove Items Strategically

Document removal process for layers

04

Caregiver's Interaction

Capture the broader context if family present

05

Follow-up Photos

If changes occur or new information emerges

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Special Considerations



Comprehensive Documentation: Putting it Together

TRIANGULATION OF INFORMATION

CROSS-REFERENCING

LABELING

TIMELINESS

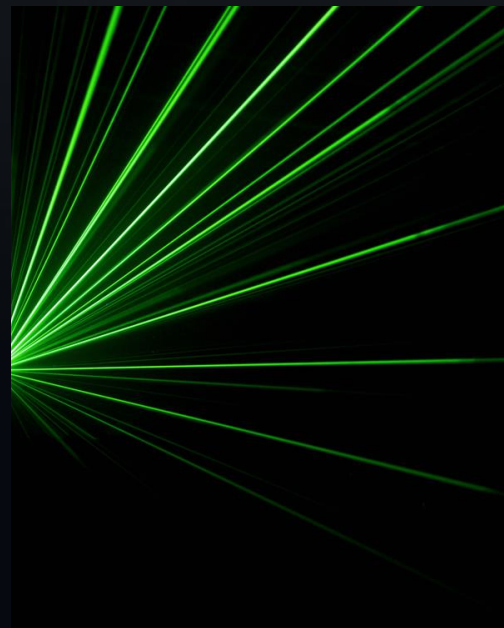
REVIEW & VERIFY

TECHNOLOGY IN THE FIELD: AN OVERVIEW



BASIC

Digital cameras, measuring tapes, notebooks



ADVANCED IMAGING

3D laser scanners, photogrammetry



SPECIALIZED TOOLS

Alternative Light Sources (ALS), portable fuming kits



DIGITAL TOOLS

Tablets for direct data entry, dictation software



REMOTE TOOLS

Drones (for outdoor/large areas)

ADVANCED TECHNOLOGY:

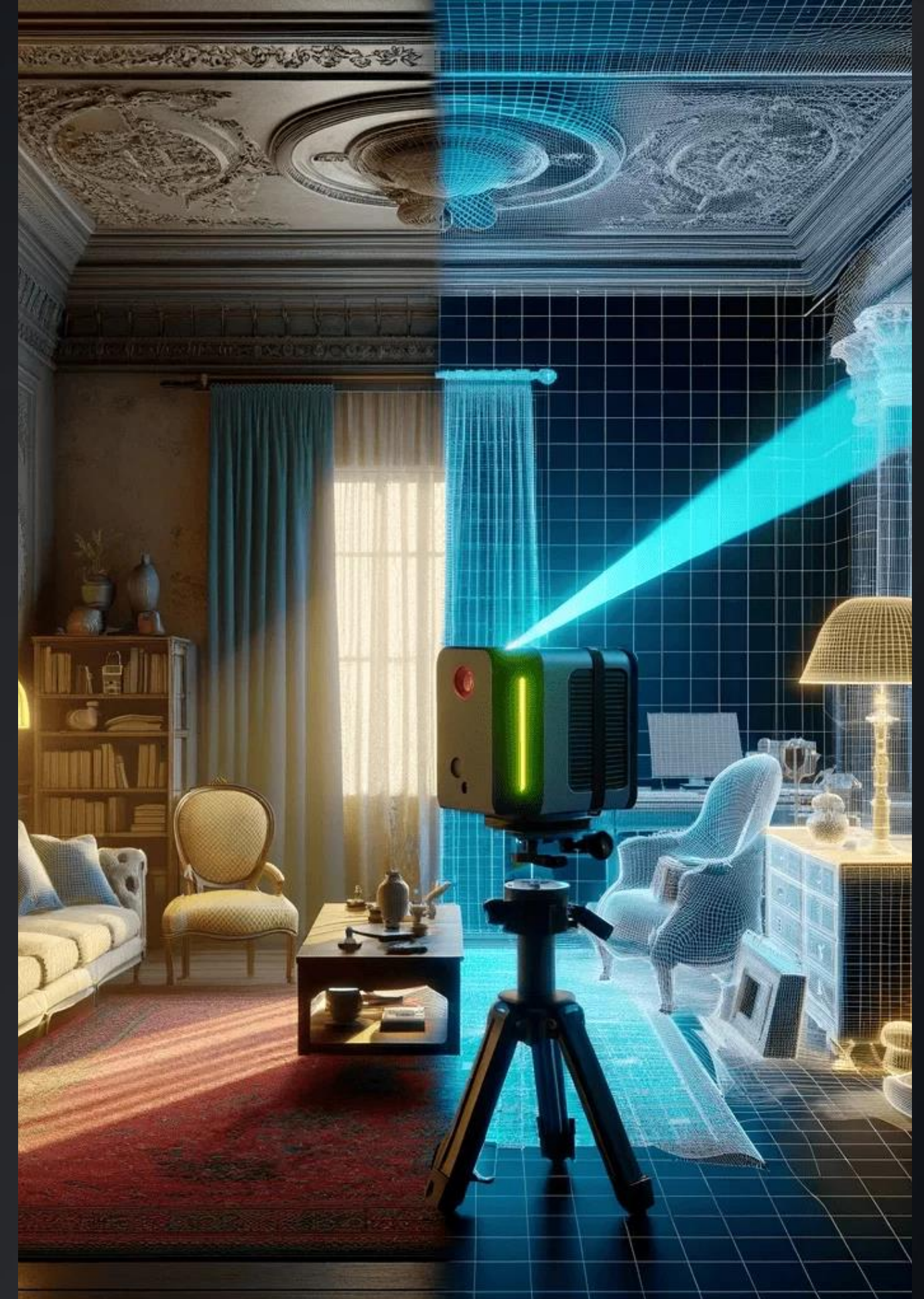
3D Laser Scanners & Photogrammetry

3D Laser Scanners: Capture millions of data points, create precise 3D models.

- Strengths: Extreme accuracy, measurable from anywhere, non-destructive, comprehensive.
- Limitations: Cost, training required, processing time.

Photogrammetry: Uses multiple overlapping photos to create 3D models.

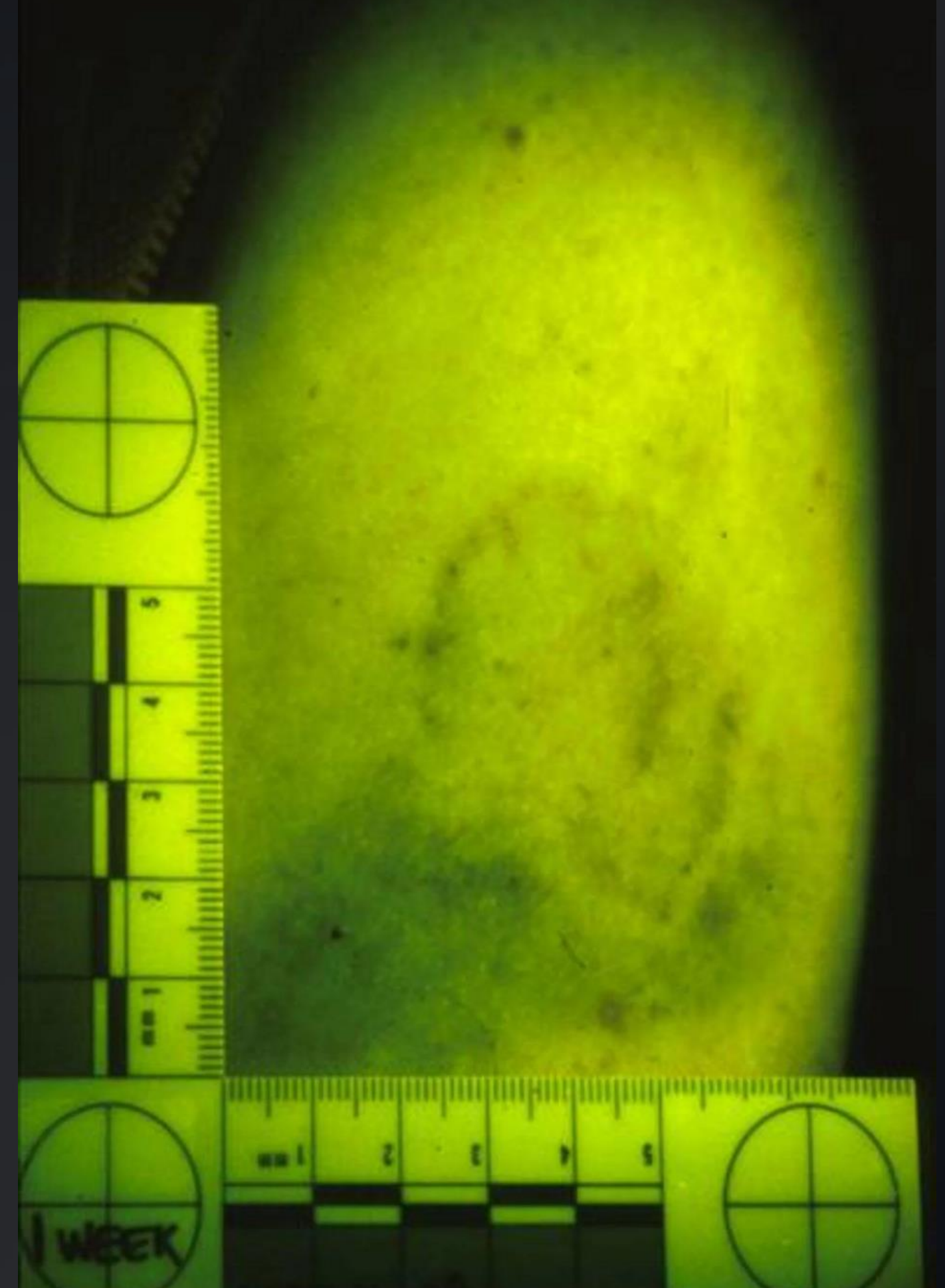
- Strengths: More affordable than laser, uses standard camera.
- Limitations: Requires specific photo capture, processing power, less precise than laser.

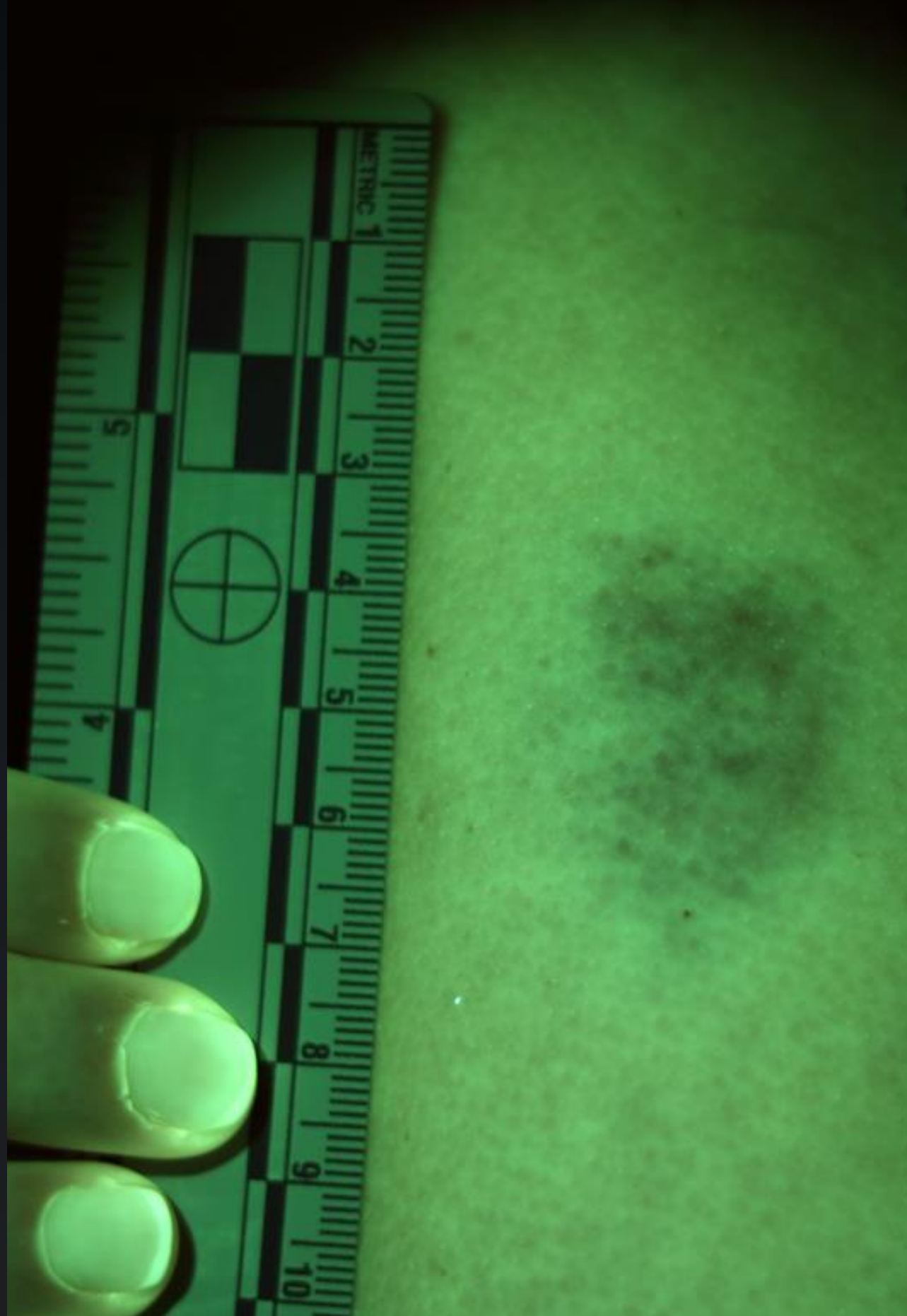


SPECIALIZED TOOL:

Alternative Light Sources (ALS)

- Purpose: Detect evidence not visible to the naked eye.
- Mechanism: Different wavelengths of light cause substances to fluoresce or absorb light.
- What it Detects:
 - Biological Fluids: Semen, saliva, urine (fluoresce under specific ALS wavelengths).
 - Bruising: Subdermal bruising, often missed on infants, can appear enhanced.
 - Fibers/Trace Evidence: Can be highlighted.
 - Patterned Injuries: Can sometimes be better visualized.
- Infant Application: Crucial for detecting subtle injuries on delicate infant skin.





Documenting ALS Findings

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PHOTOGRAPHY

REFERENCE PHOTOS

WRITTEN NARRATIVE

BODY MAPPING

INTERPRETATION

DIGITAL TOOLS FOR EFFICIENCY AND ACCURACY

01

Tablets, Ruggedized Laptops

Describe what you see, not
what you infer

03

Cloud Storage/Secure Sharing

Follow the flow of the
investigation

02

Specialized Apps/Software

Specificity over
generalizations

04

Digital Dictation

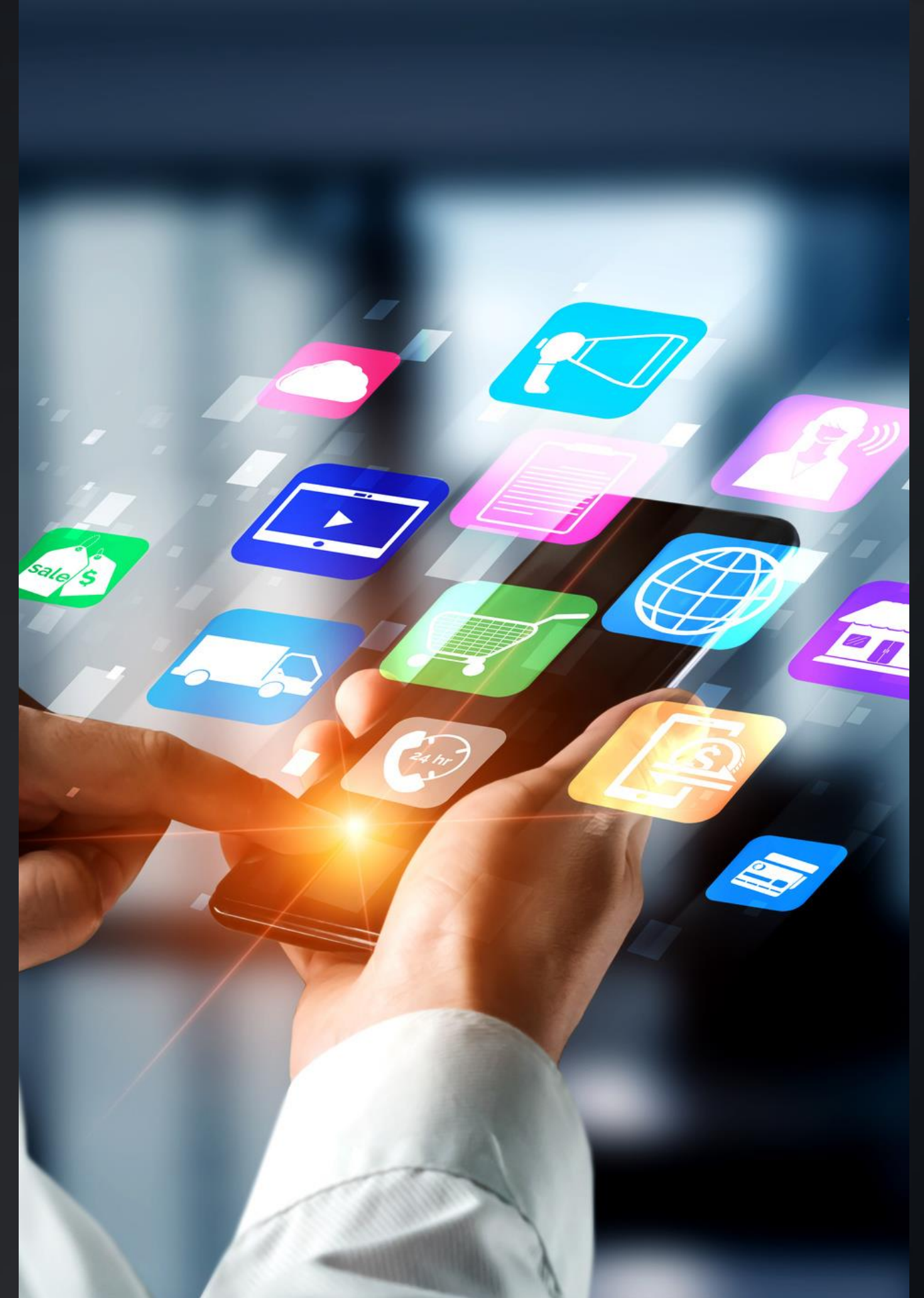
Document what was not
present (e.g., 'no other
bedding')

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Benefits: Reduced errors, faster
processing, improved
collaboration

STRENGTHS AND LIMITATIONS OF TECHNOLOGIES

- Photography:
 - Strengths: Visual record, objective snapshot.
 - Limitations: Can be misleading without context, lighting issues, only 2D.
- Sketch:
 - Strengths: Spatial relationships, measurements, simplified view.
 - Limitations: Subject to human error, less detailed than photos.
- 3D Scanning:
 - Strengths: High accuracy, measurable, immersive.
 - Limitations: Cost, training, processing time.
- ALS:
 - Strengths: Reveals hidden evidence, non-invasive.
 - Limitations: Requires training, specific lighting, potential artifacts.





Ethical Considerations in Documentation

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DIGNITY OF THE DECEASED

PRIVACY OF FAMILY

ACCURACY & OBJECTIVITY

CHAIN OF CUSTODY

RETENTION & SECURITY



Preparing Your Documentation for Review

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ORGANIZE LOGICALLY

CLEAR INDEXING

NARRATIVE OVERVIEW

EXPLAIN ANOMALIES

READINESS

CASE STUDY DISCUSSION: APPLYING DOCUMENTATION SKILLS

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Scenario: Infant found unresponsive on a twin-size mattress on the floor in a small bedroom. Two adult pillows and a heavy quilt are nearby. No crib in the room. Room temperature appears high.

Tasks

01

Identify key items/areas to photograph



03

What details would you include in your sketch?

02

What initial observations would you note in your narrative regarding the sleep environment?

04

What questions might this raise about the 'why'?

POSSIBLE RESPONSES

- Photos:
 - The infant in situ from multiple angles before moving it.
 - The entire sleep area, including the mattress, pillows, and quilt, to show their proximity to the infant.
 - A wide-angle shot of the room to document the overall environment, including the lack of a crib and the apparent high temperature.
 - Close-up photos of the infant's face and body, especially noting any physical signs, and the position relative to the surrounding bedding.
- Observations:
 - The infant was found on a twin-size mattress on the floor.
 - Two adult-sized pillows and a heavy quilt were in close proximity to the infant.
 - There was no crib or safe sleep environment in the room.
 - The room temperature felt high and could be a contributing factor.
- Sketch:
 - Layout of the room, including the location of doors, windows, and any furniture.
 - The exact position of the infant on the mattress.
 - The precise location and orientation of the two adult pillows and heavy quilt in relation to the infant.
 - Measurements of the room and the distance between the infant and surrounding items.
- Questions about the 'why?'
 - Why was the infant not in a crib or a dedicated safe sleep space?
 - How did the heavy quilt and large pillows get so close to the infant? Was there an adult or older child sleeping with the infant?
 - Why was the room temperature so high? Could this have led to overheating?
 - Was the infant's position on the mattress intentional or a result of movement during sleep?



Common Pitfalls to Avoid

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LACK OF DETAIL

ASSUMPTIONS

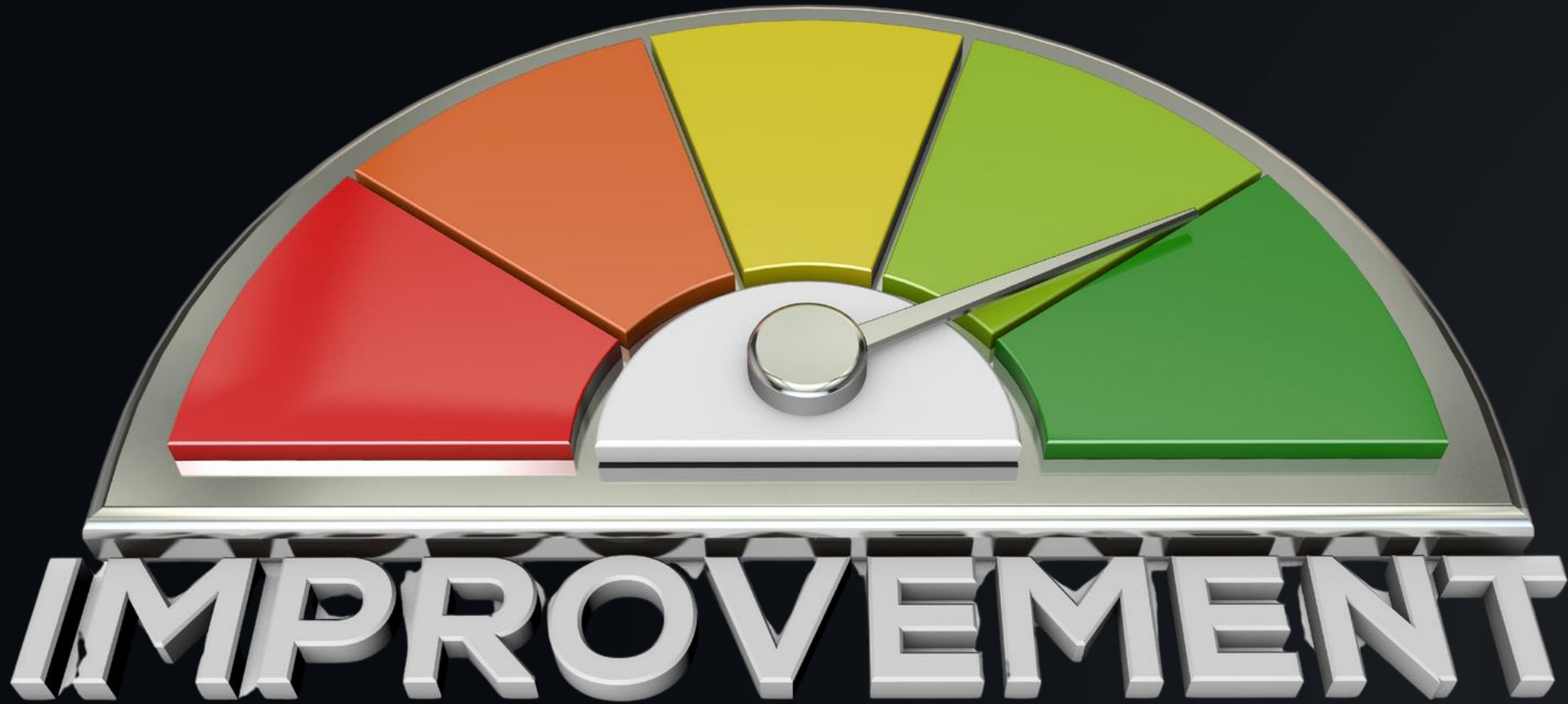
INCOMPLETE PHOTOGRAPHY

POOR ORGANIZATION

BIAS IN OBSERVATION

Continuous Improvement in Documentation

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PRACTICE

FEEDBACK

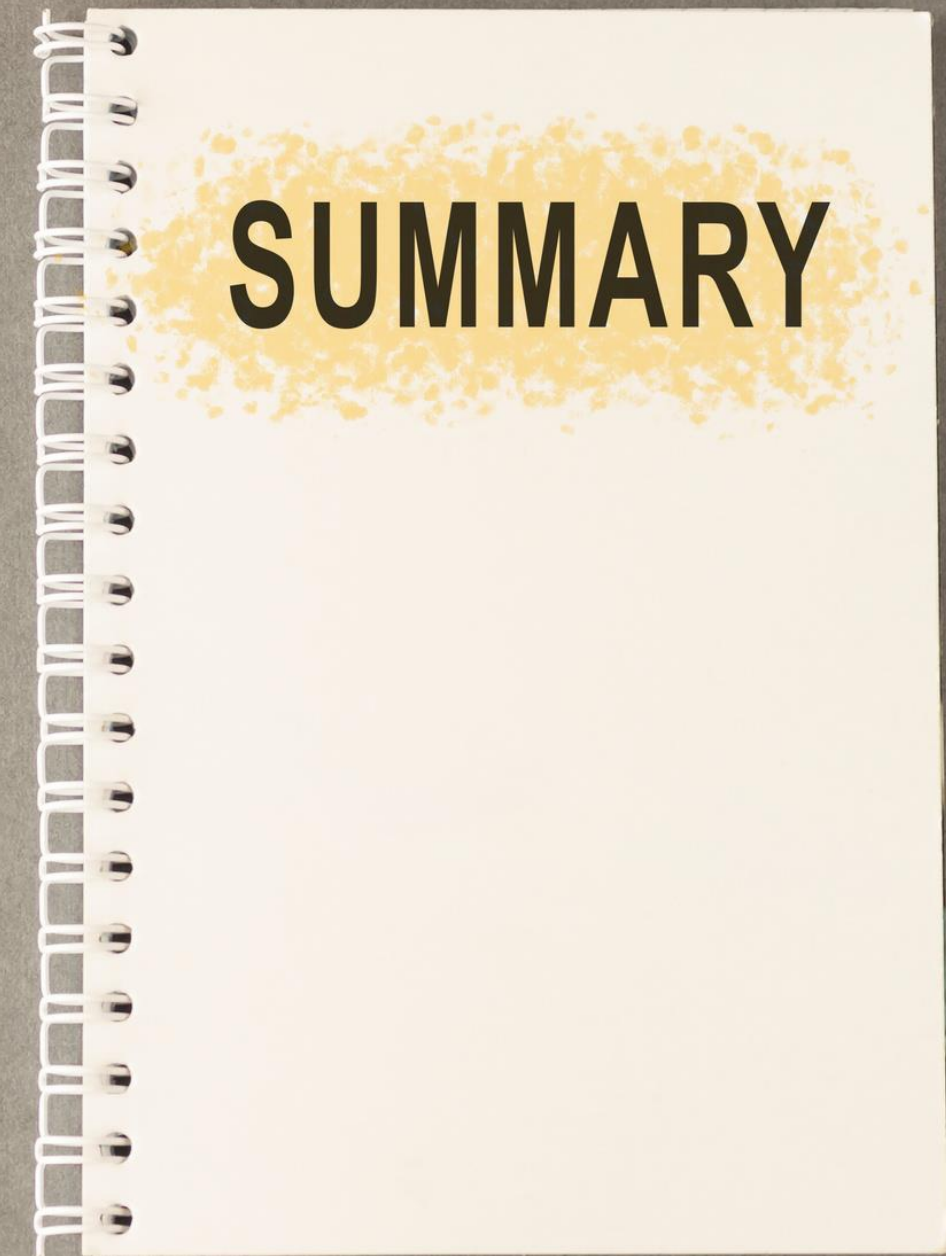
UPDATES

TRAIN

INVEST

KEY TAKEAWAYS

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- Safe Sleep Basics: ABCs are fundamental.
 - Unsafe Environments: Identify common hazards (bed, couch, car seat).
 - Product Knowledge: Distinguish safe from unsafe/misused items.
 - Documentation Pillars: Narrative, photography, sketch/reenactment are critical.
 - Precision is Key: Detail, objectivity, multiple perspectives.
 - Leverage Technology: Understand strengths and limitations of tools like ALS.
 - Ethical Documentation: Maintain dignity, privacy, and integrity.



RESOURCES FOR FURTHER LEARNING

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01

**American Academy
of Pediatrics (AAP)
Safe Sleep
Guidelines**

<https://www.aap.org/en/patient-care/safe-sleep/>

03

**Consumer Product
Safety Commission
(CPSC)**

<https://www.cpsc.gov/SafeSleep>

02

**National Center for
Fatality Review &
Prevention (NCFRP)**

https://ncfrp.org/wp-content/uploads/State-Docs/AL_safesleep.pdf

04

**IN Dept. of Health
Safe Sleep Program**

<https://www.in.gov/health/safesleep/safe-sleep/safe-sleep-program/>

THANK YOU

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