Addendum for a-IPC candidates after May 22, 2026

The a-IPC examination content outline was changed effective for candidates taking the exam after May 22, 2026. These changes included the addition of a few concepts, which include the following.

Blood Sample Collection

The requirements and practices for blood sampling vary widely, based on the characteristics of the patient and the specifics of the diagnostic test being used. In general, there are two types of blood collection systems:

- Closed. Blood is drawn directly from the patient into the tube used to collect, transport, and test the sample.
- Open. Blood is drawn, via needle and syringe, and then transferred to the transport vessel.

Closed systems are preferred as they are safer and do not expose the healthcare professional to bloodborne pathogens (HCP) and the open air.

The specific characteristics and best practices of blood donations will vary based on the collection site, as well. For example, the World Health Organization offers different guidance for each of the following collection types:

- Arterial
- Collection for Blood Donation
- Pediatric/Neonatal
- Capillary

In all cases, follow Standard Precautions and Transmission Based Precautions, manufacturer's instructions for use, and any guidelines indicated for the specific test that was ordered.

Source: https://pmc.ncbi.nlm.nih.gov/articles/PMC7915193/#:~:text=The%20differences%20between%20closed%20and,guarantee%20an%20accurate%20biochemical%20result., WHO guidelines on drawing blood: best practices in phlebotomy

Transportation of Dangerous Goods (TPG)

Movement of various materials related to the healthcare environment may be regulated under various statutes regarding the Transportation of Dangerous Goods (TPG). Examples include, but are not limited to:

- Medical waste, which may pose risk associated with transmission of communicable disease and hazardous chemicals and/or radioactive substances.
- Biological samples being transported for diagnostic testing
- Substances used for treating disease, such as those used for chemotherapy

Specific regulations regarding TPG will vary across different jurisdictions. It is important to follow all applicable laws and regulations, along with manufacturer's instructions for use.

Medical Record Documentation and Other Important Records

Medical record documentation takes many forms, which may be important or useful to the IP for various purposes, such as surveillance, outbreak investigations, and antimicrobial stewardship. As discussed, these include electronic health records (EHRs) and electronic medical records (EMRs). EMRs can include documents such:

- **Interventional documentation.** This records what actions are being taken to address specific conditions for a patient, such as wound care or antimicrobial prescription and use.
    - Interventional documentation in the Electronic Health Record (EHR) refers to the specialized, detailed, and often procedure-specific recording of diagnostic and therapeutic interventions, commonly associated with interventional radiology (IR), cardiology, and pain management. This type of documentation, often captured through electronic templates or structured forms, serves as the primary legal record of a procedure, justifies medical necessity for reimbursement, and ensures continuity of care.
- **Patient care notes.** These notes contain much of the same information as the above documentation, but also include additional information important to patient care and communication. These are often written using the SOAP method, which refers to:
    - **Subjective** – This includes the described experiences, personal views and feelings of a patient or someone close to them. This typically includes the chief complaint of the patient, the history of the present illness, other important histories (for example, medical, surgical, family), review of systems (symptoms organized by body system, i.e., dizziness when standing

headaches, shortness of breath and coughing), and current medications and allergies.
    - **Objective** – This section records measurable data from the patient's care, such as vital signs, exam findings, and diagnostic data.
    - **Assessment** – This area combines the prior two sections to prioritize issues and lists any potential diagnosis that have been identified.
    - **Plan** – This addresses any ordered testing, treatment plans, or future steps identified for the patient to take, and any other steps being taken to treat the patient.
- **Vital records.** Depending on context, this could refer to vital signs (heart rate, blood pressure, temperature, etc.) included in the SOAP acronym above, or may refer to things such as birth or death certificates.
- **Registries.** These are systems that record data in a method that allows for data extraction and analysis. They may be used to complement surveillance activities, though they are not necessarily used for surveillance reporting (such as to the NHSN). They may also be used to identify safety issues and to guide and inform quality and IP activities.

Source: https://www.aota.org/-/media/corporate/files/practice/practice-essentials/quality/maximizing-your-clinical-documentation.pdf

https://www.ncbi.nlm.nih.gov/books/NBK482263/

Practical vs Clinical Knowledge

IP knowledge spans many different areas and manners of application, but it is important to delineate the concepts of clinical knowledge and practical knowledge for IPs. Based on APIC (Association for Professionals in Infection Control and Epidemiology) resources and competency models, **clinical knowledge** refers to the scientific, evidence-based understanding of infections and pathogens, while **practical knowledge** (often called practice guidance) focuses on the application of that science in a clinical setting to prevent infections. Practical knowledge is the art of taking that understanding and applying it in practice, such as through the implementation of transmission-based precautions and in activities such as product selection and process validations.

Source: APIC Competency Model

Ethical Considerations in Research

Ethics are of the utmost importance across the entire medical field, including but not limited to medical research. According to the National Institute of Health Clinical Center, ethical guidelines exist to protect both patient volunteers and to preserve the integrity of the science. The NIH lists several influential codes of ethics and regulations that guide clinical research:

1. Nuremberg Code (1947)
2. Declaration of Helsinki (2000)
3. Belmont Report (1979)
4. CIOMS (2002)
5. U.S. Common Rule (1991)

The NIH uses these sources and others to produce seven main principles that guide the conduct of ethical research:

- **Social and Clinical Value.** Research studies should be designed to answer a specific question, the answers to which should contribute to the scientific understanding of health and improve methods used to prevent, treat, or care for individuals with a given condition. Example: Randomized Control Studies for chemotherapeutic drugs.
- **Scientific Validity.** Validity refers to how accurately a method measures what it is intended to measure**.** The study should ask questions that are answerable, use research methods that are valid and feasible, and the study should be designed with a clear scientific objectives and utilize accepted principles, methods, and reliable practices.
- **Fair Subject Selection.** Selection of individuals to participate in the study should be decided primarily on the scientific goals of the study. Individuals should be selected in a way that minimizes risks and enhances benefits.
- **Favorable Risk-Benefit Ratio.** A favorable risk-benefit ratio means the potential positive outcomes (benefits) of a medical treatment, drug, or research study significantly outweigh the potential negative effects (risks or harm) to the patient or participant. It is a core requirement for ethical approval in medical research, indicating that risks are minimized and justified by the likely benefits. Uncertainty exists as a definitional component of medical research, as with no uncertainty, there is no reason to undertake research. Risks, which may be physical, psychological, economic, and social, should be minimized to research subjects and the remaining risks should be offset by potential benefits to the individuals and society.

- **Independent Review.** Prior to initiating research, an independent review panel should review the proposal and ask important questions to ensure that the planned research has been designed ethically.
- **Informed Consent.** Individuals (or those legally trusted to make medical decisions on behalf of the individual) should be able to make their own decision as to whether or not to participate or to continue participating in medical research. This decision necessarily requires that the individual and/or their proxy are:
    - Accurately informed of the purpose, methods, risks, benefits, and alternatives to research
    - Understand the information presented to them and how it relates to their own clinical situation or interests
    - Make a voluntary decision about whether to participate.
- **Respect for Potential and Enrolled Subjects.** Individuals should be treated with respect from the initial approach and discussions about their participation, throughout the study, and after their participation ends, even if they refuse to enroll in the study. This includes:
    - Respecting their privacy and keeping private information confidential
    - Respecting their right to change their mind, to decide that the research does not match their interests, and to withdraw without penalty
    - Informing them of new information that might emerge in the course of research, which might change their assessment of the risks and benefits of participating.
    - Monitoring their welfare and, if they experience adverse reactions, untoward events, or changes in clinical status, ensuring appropriate treatment and, when necessary, removal from the study.
    - Informing them about what was learned from the research. Most researchers do a good job of monitoring the volunteers' welfare and making sure they are okay. They are not always so good about distributing the study results.

Source: https://www.cc.nih.gov/recruit/ethics

Cleaning Products for Selected Organisms

As is the case with all cleaning products, guidance, regulations, and manufacturer's instructions for use must be followed during use (including formulation, strength, and contact time) to ensure adequate cleaning and disinfection for a given piece of equipment. In the United States, the Food and Drug Administration maintains a registry of approved antimicrobial products and the pathogens for which they may be used.

Three pathogens of note and an overview of the permissible products include:

- *Clostridioides difficile*. *C. difficile* is a difficult organism to effectively kill due to its ability to form spores. Examples of active ingredients that may be used to kill *C. difficile* include:
    - Hydrogen peroxide
    - Peracetic acid
    - Sodium hypochlorite
- *Candida auris*. *C. auris* is a fungus that is often multi-drug resistant, making it more difficult to control and remove adequately. Examples of active ingredients that may be used to kill *C. auris* include:
    - Hypochlorous acid
    - Hydrogen peroxide
    - Sodium hypochlorite
    - Isopropyl alcohol and quaternary ammonium
- *Pseudomonas aeruginosa*. *P. aeruginosa* is a bacteria that is encapsulated, making it more difficult to kill.
- Effective disinfection for *Pseudomonas aeruginosa* requires targeting its protective biofilm with agents like sodium hypochlorite (bleach**)**, hydrogen peroxide, or peracetic acid.
- Traditionally, quaternary ammonium compounds (QACs) have been used to control *P. aeruginosa,* however, research in 2024 showed that all tested strains of *P. aeruginosa* (20 in total) showed some level of resistance to QACs, with 80% of them showing full resistance. The research indicated that a new compound, called quaternary phosphonium compound (QPC) was highly effective at killing all 20 of the strains tested.

It is important to remember that lists above are not comprehensive, and selecting the correct agent is not enough to guarantee effectiveness—proper application according to regulations, guidance, and manufacturers instructions for use must be followed. Failure to do so can lead to further development of resistance by surviving organisms, exacerbating the problem moving forward.

Source:

https://www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-candida-auris-list

https://www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-clostridioides

https://www.sciencedaily.com/releases/2024/10/241024130754.htm

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- https://www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-clostridioides
- https://www.sciencedaily.com/releases/2024/10/241024130754.htm
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