Master of Public Health

Applied Practice Experience

A STEP-BY-STEP OVERVIEW OF THE DEPARTMENT OF THE ARMY'S FOOD INSPECTION PROCESS IN FT. RILEY, KANSAS

by

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Introduction to Fort Riley Department of Public Health, Kansas

The Fort Riley Department of Public Health (DPH) is a comprehensive entity, encompassing various divisions, each with distinct responsibilities. Together, these divisions form the core authority overseeing public health services at Fort Riley. The primary responsibilities of each division include the following:

- **Environmental Health** (EH): Tasked with diverse responsibilities to safeguard public health from natural and unnatural environmental hazards. Its activities include monthly food safety inspections, water quality checks, insect surveillance, medical waste inspections, and hazardous waste disposal through collaboration with local healthcare facilities.[1]
- **Army Wellness Center** (AWC): offers behavioral health counseling services, incorporating assessments like total weight, body fat percentage and fat-free mass (BodPod) scans, and YMCA fitness tests/measures of individual cardiovascular (aerobic) fitness level. Additionally, stress management and smoking cessation classes are part of their undertakings.[2]
- **Industrial Hygiene** (IH): It is responsible for inspecting industrial factories (motor pools, waste recycling plant), monitoring indoor air quality, addressing public health initiatives, and collaborating with the Army Health Promotion (AHP) on sound decibel levels.[3]
- **Occupational Health** (OH): focuses on monitoring the health of prospective employees by conducting pre-employment physicals and regular health assessments of employees based on job requirements.
- **Army Hearing Program**: Aims to protect military and civilian personnel from noise exposure, providing earplugs and conducting annual hearing tests and health recommendations.
- **Public Health Nursing (PHN):** PHN tracks and reports diseases, offering counseling services and engaging the community through health fairs.

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[1] Moeller, *Environmental Health*.

[2] Rivera et al., "An Evaluation of Army Wellness Center Clients' Health-Related Outcomes."

[3] Spellman, *Industrial Hygiene Simplified*.

- **Veterinary Services** (VS): Conducts food facility evaluations, disease monitoring, and the identification of zoonotic diseases. i.e., ensure food that enters the commissary from the suppliers meets all the set military health standards.

In 2016, the Fort Riley Public Health Department demonstrated proactive leadership by becoming the first military Public Health Department to seek national accreditation from the Public Health Accreditation Board.[4] This involved a pledge to deliver the ten essential public health services defined by the Centers for Disease Control and Prevention (CDC), reflecting a dedication to comprehensive and effective public health initiatives.[5] Currently, the department remains actively involved in the process of re-accreditation, showcasing an ongoing commitment to assess, improve, and validate its practices and ensure it remains at the forefront of providing quality public health services to the Fort Riley community.

Having developed an interest in conducting my field experience with the Fort Riley Public Health Department, I successfully negotiated my field experience with them and Dr. Kastner starting from February 2023, ultimately securing placement on April 3, 2023. The Public Health Department conducted background validation and occupational health verification, culminating in my internship from August 21, 2023, to October 23, 2023. My field experience primarily focused on military procedures and regulations on food safety, food-borne pathogens, and control measures in their dining facilities and commissary. Through collaborations among the public health sections, I gained insights into each section's role in advancing food safety, providing me with valuable hands-on experience. The overall experience was incredible; in addition to enriching my skill set, it further allowed me to contribute meaningfully to the goals of the Ft. Riley Public Health Department.

Portfolio Products

I was eager to pursue the following learning objectives during the Applied Practice Experience (APE):

- To examine specific threats to the food system and scientifically investigate how each can be prevented, controlled, and/or mitigated in the food production system.
- To understand different food safety laws, regulations, regulatory bodies, and their unique legislative authorities, missions, and jurisdictions.

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[4] Melton et al., "Public Health Accreditation of Army Preventive Medicine Departments."

[5] Melton et al.

- To identify food safety and bio-security technical needs of different stakeholders and make judgments as to the appropriate methods of collaboration in the food system.

Detailed in Table 1.1 is a summary of Portfolio Products, created as part of these learning objectives.

Table 1. 1 Summary of Portfolio Products

Portfolio Product		Description
A	A Step-by-Step Overview of the Department of the Army's Food Inspection Process	Submission of information regarding the inspection of food operations in an Army Dining Facility (DFAC) in compliance with the food inspection regulations outlined in TB MED 5-30, specifically utilized in the Department of Defense. (See ILE Appendix B)
B	Poster of experienced gained while conducting internship	Creating an Applied Practical Experience poster for presentation to public health agency staff, preceptors at Fort Riley-K-State Public Health and Military Science Department, or other public health audiences. This will potentially be shared during Public Health Week at K-State during Spring 2024. (See ILE Appendix C)

Table 1.2 outlines how each portfolio product addressed a competency related to public health. Chapter 3 further explains how the portfolio products relate to the competencies.

Table 1.2 Portfolio Products and Competency Addressed

Portfolio Product		Number and Competency Addressed	
A	A Step-by-Step Overview of the Department of the Army's Food Inspection Process	8.	Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
A	A Step-by-Step Overview of the Department of the Army's Food Inspection Process	9.	Design a population-based policy, program, project or intervention.
A	Perform effectively on interprofessional teams.	21	Perform effectively on interprofessional teams.

B	Poster of experienced gained while conducting internship	18	Select communication strategies for different audiences and sectors.
B	Poster of experienced gained while conducting internship	19.	Communicate audience-appropriate public health content, both in writing and through oral presentation

Weekly Log of Activity

Week 1: August 21 - August 25 (In processing/onboarding)

Day 1: I actively participated in essential activities aimed at acquainting myself with the Public Health Department at Ft. Riley. The journey kicked off with a meeting with my preceptor, Captain William Nuessle, who serves as the Chief Environmental Health Officer. During this meeting, we engaged in a comprehensive discussion about my background, covering aspects such as my college major and the motivations that fueled my interest in the Public Health Department at Ft. Riley.

This initial meeting served as a valuable opportunity to establish a foundation for our working relationship. It allowed us to set expectations, align goals, and create a framework for practical learning experiences that would contribute to my professional development within the Public Health Department.

Day 2-3: A significant milestone during the in-processing phase was the attainment of security access to the organization's computer systems the issuance of an access badge after a background check and the successful completion of required online classes facilitated through the Fort Riley Health Department education platform such as (SERE, Cyber awareness, Antiterrorism awareness, DOD Mandatory Controlled Unclassified Information (CUI) Training, active shooter, HIPAA and OPSEC.

The online training played a crucial role in enhancing my understanding of and compliance with public health physical and information security protocols. Additionally, it equipped me with the necessary digital tools to navigate the organization seamlessly, ensuring a smooth integration into the operational aspects of the Public Health Department.

Day 4-5: This phase involved an orientation to various departmental heads, each representing a distinct unit of the Public Health Department. The departments included Industrial Hygiene, Public Health Nursing, Occupational Health, Environmental Health, and the Epidemiology section, which holds paramount importance in the organizational structure although not a standalone department. These orientation sessions were comprehensive, shedding light on the historical backgrounds, staff orientation, and the specific tasks undertaken by each unit. During these briefings, the focus was on how their functions aligned with my core competencies. This strategic approach ensured that I comprehended the organizational landscape and learned the synergies between the different departments. Resources were provided during such briefs, such as journals handbooks for future reference.

In summary, week one focused on my processing in phases, i.e., two phases marked by a strategic blend of personal introduction, digital preparedness, and comprehensive departmental orientation. The synergy between these components laid a robust foundation for my integration into the Public Health Department at Ft. Riley, ensuring that I am not only well-equipped with the necessary tools but also intricately connected with the various facets of the organization.

Week 2: August 28 - August 31 (Epidemiology)

I delved into the framework for disease reporting to the public health department, specifically regarding service members visiting military hospitals or clinics such as Irwin Army Community Hospital and Custer Hill Clinic. In this process, service members undergo examinations by healthcare providers who, upon diagnosing, may order laboratory tests and administer treatment. Subsequently, the results of these laboratory tests are transmitted to the Public Health Department.

Upon receiving the results, the Public Health Department initiates communication with the service member, addressing details related to the diagnosis. For instance, in the case of sexually transmitted infections (STIs), inquiries may include the number of sexual partners, usage of protection, medical attention sought, contacts, barracks building numbers, or units served in (contact tracing). Counseling takes place either over the phone or through in-person appointments, covering essential topics like the importance of obtaining and taking prescribed medications, adhering to the prescribed dosage, and practicing sexual abstinence during and after specific medication periods.

This comprehensive approach extends beyond individual cases to include surveys on various public health issues, such as dog bites (rabies) or tobacco cessation. These surveys contribute to the development of patient profiles, creating a clustered database of health concerns. Over time, this data is analyzed and utilized to generate health reports through the Military Health System Population Health Portal (MHSPHP).

The reports generated from this process serve as valuable resources for Fort Riley's public health, garrison, Irwin Community Hospital, and the Geary County Health Department. Collectively, these entities use the insights to advise the Fort Riley Commanding General on the most effective course of action, ultimately contributing to the improvement of the health of both military personnel and civilians within the military base.

In summary, my emphasis during week two was on acquiring skills related to epidemiological surveillance and performing epidemiological consults, abbreviated as EPICONS. This involved the acquisition of knowledge and proficiency in tasks such as generating data, conducting analyses, and producing reports. These activities were carried out utilizing the Army's centralized, secure, web-based population health management system Portal, known as MHSPHP.

Week 3: September 4 -September 8 (Environmental Health)

The Chief Environmental Public Health Officer assigned me to work with the Fort Riley Food Inspector, Robert Omann. Throughout the inspection process, I shadowed him as we evaluated all the dining hall food and restaurants on the base. These inspections, occurring monthly, typically lasted around 4-6 hours, encompassing both the inspection itself and the subsequent report-writing. During this assignment, I became acquainted with the military's food inspection regulation book, specifically TB MED 5-30, and received instruction on its proper utilization.

The inspections were scheduled over two weeks. Initially, the food inspector guided me through a comprehensive food inspection class, providing instruction on the step-by-step process of inspecting dining facilities or restaurants. This training covered various aspects, including preparation, initial observation, personnel practices, food storage, food preparation, serving areas, dining areas, equipment, documentation, and follow-ups. As we progressed into week three, our primary focus shifted to dining hall inspections. This phase culminated in the examination of six specific locations: Cantigny, Whiteside, Devil’s Den, Outpost Kiosk, Outpost Culinary Food Truck, and Fast Eddie's Grab-n-Go Warrior Restaurant.

During the final two days of the week, the emphasis shifted towards attending ServSafe class training, which was conducted by the food inspector. This training was specifically designed for culinary specialists working in dining facilities, whether they required recertification or were new to the job. All trainees underwent examinations, with a minimum passing score of 70% being the target. Individuals who scored below this threshold were required to be rescheduled for the next class.

Week 4: September 11 - September 22 (Environmental Health)

Day 1 and 2: I continued to shadow Fort Riley Food Inspector Robert Omann. Our main focus was checking civilian restaurants on the Fort Riley Base, like Subway, QDOBA Mexican Eats, Burger King, Domino's Pizza, Charley's Cheesesteaks, Popeyes Louisiana Kitchen, and Panda Express for two days. We also inspected four child development centers—Forsyth, Whiteside, First Division, and Warren.

During these inspections, we made sure that the food storage rooms and kitchens followed the rules from TB MED 5-30. We also checked individual rooms for infants, pre-toddlers, toddlers, and pre-kindergartens. We looked for things like cleanliness (no cobwebs, no expired food cans), made sure utensils were clean, checked water fountains and toilets, and ensured play areas were. The overall goal was making sure child development centers are safe and clean for children.

The last three days were all about learning how to make sure the water at Ft Riley is safe. For the month of September, the Gym's, Dental clinics, portable water containers for soldiers (water buffalos), Ice dispensers and bins in Dining facilities and Weapon qualification Range (range 18) sites were marked for tests.

We checked things like if the water chlorination systems were working, tested the water's pH and chlorine levels (which were at 0.94). If we found anything not quite right, we reported it to the Department of Public Health at Fort Riley so they could fix it.

We also collected water samples, labeling them with the time, location, and building number. These samples were sent to the entomology lab at the Public Health Department building for analysis of bacteria like *E. coli* and *Staphylococcus*.

The main goal of water surveillance is to make sure the water is good quality for the people living at Ft Riley.

I also learned about mosquito surveillance. Environmental health personnel set mosquito traps in specific areas on post every designated day and month and collect them every other day. The mosquitoes trapped are sent for observation and analysis at the Fort Riley public health Entomology lab to figure out aspects such as breed collected etc.

Week 5: September 25 - September 29 (Industrial Hygiene)

<u>Day 1</u>: I worked with the Chief Industrial Hygiene Officer and his team, and they taught me about their role in supporting the public health department through a basic class.

We discussed various issues, such as injuries and illnesses related to work exposure, ensuring the well-being of workers, evaluating workplaces for ergonomic needs, testing respirator fits, assessing noise levels, and evaluating occupational exposures. They also covered consultations on asbestos and lead-based paint, surveys of ventilation systems, evaluations of personal protective equipment, assessments of new workplace processes, and space utilization. We went through how their activities are regulated by organizations like the National Institute for Occupational Safety & Health (NIOSH), the Occupational Safety and Health Administration (OSHA), and the Army Public Health Program (AR 40-5).

I also learned how to collect, label, and store basic samples for lab evaluation. For example, if there's a need to check for the presence of substances like lead, asbestos, or silica. Most samples from the Industrial Hygiene lab are sent to the Army laboratory at Aberdeen, Maryland, and the timeline for results varies depending on the substance or the level of urgency.

Molds were highlighted as a common occurrence, especially at soldier barracks and soldiers housing, and their cause of action when reported if it’s not in great magnitude is to clean it up using bleach as it’s the most effective cause of action.

Day 2: I got to know the equipment used by the Industrial Hygiene team during a visit to their lab. These included noise meters, air samplers, and equipment for testing mold, asbestos, dust, lead, and silica. Most of the equipment have to be calibrated before use.

Days 3-5: We did noise surveillance at the Fort Riley Recycle plant and selected motor pools. This involved attaching a noise dosimeter to employees or soldiers as they went about their duties for 8 hours. The dosimeter collects and measures sound in decibels, and anything above 70 is considered hazardous. We made safety recommendations based on the measurement results. Employees were also provided with N-95 masks and earplugs for protection as needed.

We conducted thorough inspections of selected buildings to ensure they were safe for their occupants. This included checking for updated Safety Data Sheets, testing the ventilation systems (paper test), ensuring good quality air without dust or harmful substances like carbon monoxide (common in welding shops), and addressing any concerns brought to our attention. It's all about making sure the workplace is safe for everyone.

Week 6: October 2 - October 6 (Army Public Health Nursing)

Day 1: I spent time with Major Tua, who is an Army Public Health Nurse. On the first day, she showed me the different services they provide and how they fit into the Public Health field. They do a lot of important things like keeping an eye on and preventing the spread of diseases like COVID-19 and HIV. They also review and manage cases related to blood, handle programs for tuberculosis, including tests and prescriptions, work on preventing and controlling rabies and animal bites through vaccinations, and provide health services for children, youth, and schools.

They also focus on promoting overall health and wellness, helping people quit tobacco, overseeing and managing influenza vaccinations, preparing for emergencies and disasters, and offering advice on travel medicine. This is particularly important for people traveling to places where certain diseases, like malaria in Asia and Africa, are common. They even make sure to check in on Fort Riley child development centers, making sure there's proper documentation about children with allergies (both to drugs and food), preventive measures are in place, and there's a plan in case a child has an allergic reaction—an algorithm to follow.

Day 2-3: We mainly focused on planning for overseeing influenza vaccinations. This was already scheduled for the staff at Irwin Army Community Hospital. Our tasks involved making sure the people tasked with administering the vaccine (a mix of soldiers and civilian medics) received the necessary training and kept their medical certifications up to date. We also took care of transporting and setting up all the equipment needed things as syringes, needles, vaccines, computers, chairs, and tables. Questionnaires were used to check if the people targeted for the vaccine had any medical conditions that might stop them from getting vaccinated. All the activities, including preparing the personnel and equipment were done based on the Fort Riley Army nurse office standard operating procedures.

Day 4-5: were all about making sure the vaccination event went smoothly. We checked the screening forms to see if the people met the criteria for getting the vaccine. We made announcements and sent memos and emails to make sure everyone at Irwin Army Community Hospital knew about it and came out to get their flu vaccines. Our goal was to have as many people as possible participate.

The medics also made sure to follow the "five rights" of giving medication: the right person, the right vaccine, the right dose, the right way of giving it, and the right time.

Major Tua, the Army Public Health Nurse in charge, took care of answering any questions from the staff getting vaccines and picked up the vaccines from the hospital pharmacy. She played a big role in making sure everything went smoothly.

Week 7: October 9 - October 13 (Occupational Health)

I worked with the public health occupational nurses, learning about the services they provide in the broader public health department on the base. It was evident that they work closely with industrial hygiene, and their responsibilities are quite similar.

They do a variety of tasks, like checking the health of new employees before they start, doing regular health check-ups for specific jobs (for example, x-ray staff), and exams when someone leaves their job. They also keep track of any potential dangers for pregnant soldiers and make suggestions to reduce their workload. Additionally, they handle things like hearing and vision protection, work-related injuries and illnesses, monitoring needlestick incidents, and giving immunizations. The week I spent with them wasn't very busy, so I mostly had question-and-answer sessions to understand their work better.

Week 8: October 16 - October 17 (Week 8 Medical waste management)

<u>Day 1</u>: I met with my preceptor again and learned about Hospital Waste Management. This means understanding how hospitals handle their waste and following specific codes, laws, and rules.

<u>Day 2</u>: I visited Irwin Army Community Hospital's pharmacy section. They taught me how they organize and get rid of different types of medical waste. They use colors to mark containers: red for biohazardous stuff like blood, black for dangerous waste like radioactive materials, yellow for chemotherapy waste, and blue for safe, over-the-counter medications.

I saw the place where they keep store hospital regulated waste. It's a small building outside the hospital that stays locked and under controlled temperature. All the health, dental clinics, and pharmacies in Fort Riley use this place to store their waste until it's full. Then, it gets sent to a disposal area in Kansas City, where it's burned in an incinerator.

Week 9: October 23 (Out-processing)

I had a meeting with the Head of the Public Health Department at Fort Riley. We talked about what I learned during my internship time, and I shared the results through a survey link. We discussed how to keep improving things. After that, I started the process of out-processing which involved turning in my security badge, etc.

Chapter 3 - Competencies

As demonstrated in Table 1.2, I addressed five competencies throughout my APE, which are reiterated in Table 2.1. I addressed Competency 22 by developing a systems thinking tool, which is introduced in Table 2.2.

Table 2.1 Summary of MPH Foundational Competencies

Number and Competency		Description
8.	Planning and Management to Promote Health	Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
9.	Planning and Management to Promote Health	Design a population-based policy, program, project or intervention.
18.	Communication	Select communication strategies for different audiences and sectors.
19.	Communication	Communicate audience-appropriate public health content, both in writing and through oral presentation
21	Interprofessional Practice	Perform effectively on interprofessional teams.

I achieved Competencies 8 and 9 by formulating the food inspection process in a military dining facility. The existing procedures, though non-prescriptive, serve as guidelines for food inspectors to develop tailor-made steps based on the prevailing circumstances while ensuring compliance with the TB Med 530 Tri-Service Food Code.

Competencies 18, 19, and 21 were acquired by creating an informative poster intended for circulation to the Public Health Department of Fort Riley, Kansas State University, and the Military Science Department. Additionally, the internship process involved engaging professionally with various departmental staff at Fort Riley Public Health and collaborating with scholars from diverse disciplines during the 40th *Frontier* Field Trip.

Table 2.2 Application of Systems Thinking Tools to a Public Health Issue

Use of Systems Thinking Tools

Systems Thinking Tool	**Description of Use**
Process mapping	Set of tools, such as flow charts, to provide a pictorial representation of a sequence of actions and responses. Their use can be flexible, such as to make clear current processes, as a basis for identifying bottlenecks or inefficient steps

The food inspection process employed by the Department of the Army is a multifaceted procedure designed to uphold standards of safety and hygiene for military personnel. This process is conducted through a series of defined steps, as illustrated in Figure 2.1:

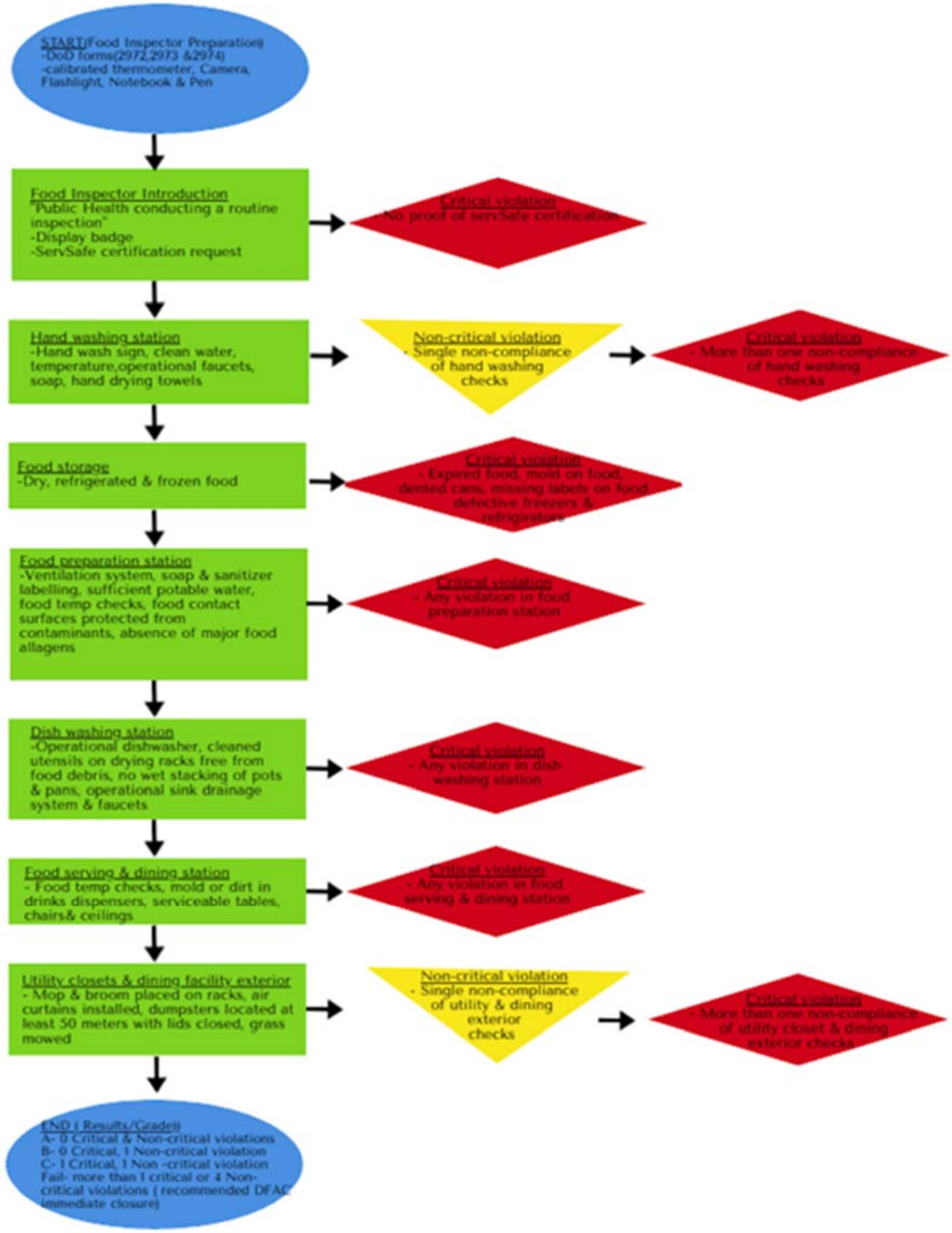

Figure 2.1 Flow chart outlining a step-by-step overview of the Department of the Army's food inspection process. For a full portfolio product, see the ILE report's appendix.

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