

Master of Public Health

Applied Practice Experience

***Development and implementation of a tracer tool for
infection prevention in clinical laboratory settings***

by

Kira Higgins, MLS (ASCP)^{CM}

MPH Candidate

submitted in partial fulfillment of the requirements for the degree

MASTER OF PUBLIC HEALTH

Graduate Committee:

Margaret Kincaid, Ph.D.

Paige Adams, DVM, Ph.D.

Ellyn Mulcahy, Ph.D., MPH

Applied Practical Experience Site:

The University of Kansas Health System, Department of Infection Prevention and
Control

08/01/2024 – 11/01/2025

Applied Practical Experience Preceptor:

Maggie Reavis, MPH, BSN, RN, CIC, CPHQ, FAPIC

KANSAS STATE UNIVERSITY

Manhattan, Kansas

2025

Table of Contents

Chapter 1 - Portfolio Products.....	2
Table 1.1 Summary of Portfolio Products	3
Table 1.2 Portfolio Products and Competency Addressed	4
Chapter 2 - Competencies.....	5
Table 2.1 Summary of MPH Foundational Competencies	5
Table 2.2 MPH Foundational Competencies Course Mapping	9
Appendix 1 – Laboratory Tracer Template	11
Appendix 2 - Completed Laboratory Tracers.....	14
Appendix 2.1 – Green Hills Laboratory Tracer	14
Appendix 2.2 – Clinical Research Center Laboratory Tracer	19
Appendix 2.3 – Olathe Cancer Center Laboratory Tracer.....	23

Chapter 1 - Portfolio Products

This Applied Practice Experience (APE) project was completed with the Infection Prevention and Control (IPAC) department at The University of Kansas Health System (TUKHS) and focused on strengthening infection prevention practices within clinical laboratory settings. Although IPAC regularly conducts tracers in patient-facing areas such as inpatient units, operating rooms, and outpatient clinics, laboratory environments had not been included in these standardized audits. To address this gap, I designed and piloted a laboratory-specific tracer tool grounded in guidelines from the Association for Professionals in Infection Control and Epidemiology (APIC), the Centers for Disease Control and Prevention (CDC), and The Joint Commission (TJC).

The tracer was piloted across three cancer center laboratory locations to evaluate compliance in six domains: hand hygiene, PPE/staff safety, clean supply storage, soiled item management, environmental safety, and cleaning/disinfection. The design incorporated a binary scoring system (compliant/noncompliant) to allow for clear, quantifiable comparisons across sites and categories. Data were collected through direct observations of laboratory spaces and workflows.

Audit data were analyzed to calculate compliance rates by category and location, revealing key trends in laboratory performance. Strong adherence was observed in PPE availability, sharps safety, and disinfection practices, while lower compliance in hand hygiene and clean supply storage reflected broader, system-level challenges. Results were communicated directly to laboratory leadership, with actionable recommendations provided to address areas of noncompliance.

This project produced a standardized tracer tool that can be adopted for ongoing monitoring and established a framework for closer communication between IPAC and laboratory medicine. Feedback from IPAC leadership was crucial throughout development, guiding revisions to improve clarity, organization, and content relevance. The collaboration process ensured that the final product aligned with infection prevention priorities and external regulatory standards. This project addressed MPH foundational competencies in program evaluation, data interpretation, and leadership by applying evidence-based strategies to enhance system-level infection prevention. By creating a sustainable process for routine assessment, the project supports both immediate quality improvement and long-term public health outcomes. These efforts reduce the

risk of healthcare-associated infections, protect immunocompromised patients, and enhance overall biosafety within the health system.

Table 1.1 Summary of Portfolio Products

Portfolio Product		Description
A	Laboratory Tracer Template	A standardized audit tool developed to evaluate infection prevention and control practices in clinical laboratory settings. The template was designed using CDC, APIC, and Joint Commission guidelines and includes domains such as hand hygiene, PPE/staff safety, clean supply, and general environment. It provides a consistent framework that can be used by the IPAC team for future audits across laboratory sites, thereby strengthening health system capacity for infection prevention. This tool standardizes infection prevention auditing in laboratory settings and helps reduce the risk of hospital-associated infections and strengthens biosafety across the health system.
B	Completed Laboratory Tracers	Three completed tracer audits were conducted in cancer center laboratories using the newly developed tool. Each tracer includes documented compliance findings and qualitative data showing opportunities for improvement in photographs, such as of drinks stored with clean supplies, and comments. These tracers serve as baseline data for laboratory infection prevention practices and as resources for laboratory leadership to guide quality improvement efforts. They provide actionable data to enhance laboratory safety practices, directly supporting patient protection, staff safety, and system-wide infection prevention efforts.

Table 1.2 Portfolio Products and Competency Addressed

Portfolio Product		Number and Competency Addressed	
A	Laboratory Tracer Template	9	Design a population-based policy, program, project, or intervention
		11	Select methods to evaluate public health programs
		16	Apply leadership and/or management principles to address a relevant issue
B	Completed Laboratory Tracers	4	Interpret results of data analysis for public health research, policy, or practice
		9	Design a population-based policy, program, project, or intervention
		11	Select methods to evaluate public health programs
		16	Apply leadership and/or management principles to address a relevant issue
		18	Select communication strategies for different audiences and sectors

Chapter 2 - Competencies

Throughout the project, I applied and strengthened multiple MPH foundational competencies in ways that directly advanced infection prevention and quality improvement efforts within the health system. The tracer process required integrating technical knowledge of infection prevention and control (IPC) with skills in data interpretation, program evaluation, and strategic communication. Each stage, from tracer tool development to data analysis and result presentation, demonstrated the practical application of public health competencies. This process contributed to both my professional development and the advancement of infection prevention practices.

Table 2.1 Summary of MPH Foundational Competencies

Number and Competency		Description
4	Interpret results of data analysis for public health research, policy, or practice	Tracer audit data were compiled into compliance rates by location and category, which were then visualized graphically. This analysis led to the identification of both consistent strengths and recurring deficiencies in infection prevention practices. Interpretation of these findings revealed common themes where actionable recommendations could be made across the health system to improve policy.
9	Design a population-based policy, program, project, or intervention	I created a laboratory-specific infection prevention tracer tool as a structured project to evaluate compliance with infection control standards across multiple sites. The tool provided a standardized way to assess practices, generate baseline data, and engage laboratory leadership in quality improvement, supporting both immediate interventions and long-term monitoring. This project serves broader public health outcomes by contributing to the reduction of hospital-acquired infections and protection of vulnerable populations.
11	Select methods to evaluate public health programs	Tracer tool and subsequent audits serve as program evaluation method for infection prevention and control practices in laboratories
16	Apply leadership and/or management principles to address a relevant issue	This project required initiative and leadership in both the design and implementation of the tracer process. The tracer tool was developed independently. The audits were conducted by me, and findings were verbally communicated to onsite lab management. Leadership was demonstrated through the initiation of this process and dedication to laboratory improvement. I made recommendations to lab leaders and collaborated with them to develop solutions to put

		into practice, such as disposing of bodily fluids down toilet instead of sink.
18	Select communication strategies for different audiences and sectors	For the IPAC team, I shared the full tracer tool results along with the compiled analysis, so they had the technical information needed to use the data as a baseline for long-term planning. This allows future tracers to be compared against the initial compliance rates to monitor improvements in safety and infection prevention practices over time. With laboratory leadership, I prioritized in-person meetings after each tracer. During these meetings, I used a deliberate communication strategy where I highlighted a positive observation, then discussed a noncompliant finding along with a possible solution and closed with another positive point. This approach helped keep the conversation constructive, built trust, and positioned the IPAC team as a supportive partner rather than just an enforcement group. After the meetings, I followed up by sending the formal tracer form and a brief summary of the findings, while also offering ongoing support for improvements. This combination of tailored communication strategies fostered stronger relationships between the IPAC team and laboratory leadership and increased the likelihood of recommendations being implemented.

Competency 4: Interpret results of data analysis for public health research, policy, or practice.

The completed laboratory tracers served as the foundation for data interpretation and analysis. After collecting data from the three cancer center laboratories, I calculated category-specific and site-specific compliance rates to identify patterns in performance. This revealed both consistent strengths and systemic weaknesses. For example, while PPE availability was high across all sites, proper PPE use was inconsistent, suggesting behavioral and policy adherence gaps. Additionally, hand hygiene compliance varied and was often tied to environmental factors such as unclear sink labeling and supplies stored within splash zones. Clean supply issues, such as items placed on unlined bottom shelves or stored in biohazard bags, was a recurring concern and highlighted lapses in environmental infection control practices.

The interpretation of these findings went beyond descriptive reporting to identify why deficiencies occurred and how they could be remedied through system-level or site-specific interventions. For instance, inadequate PPE use indicated the need for reinforced PPE policies and targeted re-education to align staff practices with existing standards. The identification of

inconsistent sink labeling suggested that a standardized, system-wide labeling protocol could reduce confusion and improve compliance. Similarly, clean supply storage deficiencies emphasized the need to incorporate clearer environmental standards.

By interpreting the data in this way, the tracer results uncovered root causes and actionable themes in addition to providing numerical compliance scores. Comparative analysis across sites allowed me to differentiate between isolated lapses and broader organizational vulnerabilities, ensuring that recommendations were appropriately scaled. Through this process, I demonstrated the ability to interpret data for descriptive insight as well as to inform system-wide decision-making.

Competency 9: Design a population-based policy, program, project, or intervention.

I designed and implemented a laboratory-specific infection prevention tracer tool as a structured population-based project to evaluate compliance with infection control standards across multiple sites. The tracer tool template provided a standardized framework to assess key infection prevention domains, including hand hygiene, PPE use, clean supply storage, soiled item management, environmental safety, and cleaning/disinfection, across multiple laboratory locations. The completed tracers documented the application of the tool across sites, establishing baseline performance data that can inform both immediate corrective actions and long-term quality improvement initiatives. Improving infection prevention in cancer center laboratories strengthens system-wide infection control and protects both vulnerable patients and healthcare workers.

Competency 11: Select methods to evaluate public health programs.

The laboratory-specific tracer tool served as both an assessment and evaluation method for infection prevention practices. The tracer template provided a structured framework for consistent, system-wide evaluation, while the completed tracers documented observations and compliance results across multiple laboratories. The tool collected both quantitative data, such as compliance percentages, and qualitative data, such as photographs and comments related to specific environmental hazards. The ability to capture both quantitative and qualitative data resulted in deeper program evaluation. The data collected created a system-wide baseline and enabled tracking of improvements over time, supporting long-term evaluation. By structuring the tool to allow for subsequent assessments, I established an ongoing evaluation method that promotes continuous quality improvement in a public health program.

Competency 16: Apply leadership and/or management principles to address a relevant issue.

This project required consistent application of leadership and management principles throughout all stages, from tool development to audit implementation and follow-up communication. I independently created the tracer tool and piloted laboratory audits across multiple locations, generating completed tracers that served as the foundation for structured discussions with laboratory leadership. During follow-up meetings, I structured discussions to balance encouragement and accountability by beginning with observed strengths, addressing deficiencies, and concluding with actionable recommendations. For example, I recommended disposing of bodily fluids in toilets rather than handwashing sinks, directly mitigating infection risk and improving workflow safety.

This approach required decision-making, conflict resolution, and stakeholder management to achieve compliance without creating a punitive environment. By facilitating collaborative discussions between the IPAC team and laboratory leadership, I strengthened relationships, built trust, and facilitated adoption of best practices. The process demonstrates leadership through proactive problem-solving, cross-departmental engagement, and producing measurable improvements in laboratory safety and infection prevention. Laboratories benefitted from actionable feedback, increased awareness of infection prevention risks, and practical strategies to improve compliance and protect both staff and patients.

Competency 18: Select communication strategies for different audiences and sectors.

Communication was critical for the success of this project, and I selected strategies based on the unique needs and priorities of each audience. For the IPAC team, I provided completed tracer forms along with comprehensive compliance analyses, because this audience required detailed, technical material to inform strategic planning, monitor system-wide trends, and prioritize interventions. For laboratory leadership, I chose immediate, face-to-face communication following each tracer, using a structured “positive–challenge–solution–positive” framework. This approach was intentionally selected to convey feedback constructively, maintain engagement, and avoid a punitive tone, which can be counterproductive when promoting behavior change. After these meetings, the completed tracer was shared with laboratory leadership to reinforce key points, document accountability, and maintain open communication channels for follow-up and support.

By tailoring communication methods to the needs of each audience, I ensured that information was understood, accepted, and actionable. This demonstrates competency in selecting and implementing communication strategies that facilitate understanding and foster collaboration. These strategies increased the likelihood that findings would translate into policy and practice improvements, ultimately strengthening infection prevention and public health outcomes.

Table 2.2 MPH Foundational Competencies Course Mapping

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
Evidence-based Approaches to Public Health					
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	x		x		
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	x	x	x		
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	x	x	x		
4. Interpret results of data analysis for public health research, policy or practice	x		x		
Public Health and Health Care Systems					
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings		x			
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels					x
Planning and Management to Promote Health					
7. Assess population needs, assets and capacities that affect communities' health		x		x	
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs					x
9. Design a population-based policy, program, project or intervention			x		
10. Explain basic principles and tools of budget and resource management		x	x		
11. Select methods to evaluate public health programs	x	x	x		
Policy in Public Health					
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence		x	x	x	
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes		x		x	x
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations		x			x
15. Evaluate policies for their impact on public health and health equity		x		x	

Leadership					
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making		x			x
17. Apply negotiation and mediation skills to address organizational or community challenges		x			
Communication					
18. Select communication strategies for different audiences and sectors	DMP 815				
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	DMP 815				
20. Describe the importance of cultural competence in communicating public health content		x			x
Interprofessional Practice					
21. Perform effectively on interprofessional teams		x			x
Systems Thinking					
22. Apply systems thinking tools to a public health issue			x	x	

Appendix 1 – Laboratory Tracer Template

Tracer Observation Detail Report 2025 IPAC Laboratory Environmental Tracer

Site: **The University of Kansas Health System**
Program: **Hospital**

*Compliance percentage and totals display data from all questions in the observation.

Total Numerator: Total Denominator: Not Applicable Count: Total Question Count:

Observation Header			
Observation Title:			
Observation Status:		Location:	
Observation Date:		Department:	
Total Completed Observations:			
Note:			
Clean Supply/Items			
1. There are no expired or compromised supplies.			
	Num:	Den:	Comp%:
2. Bottom shelves are solid or have a liner.			
	Num:	Den:	Comp%:
3. Only clean supplies are found in clean utility area.			
	Num:	Den:	Comp%:
4. Primary shipping containers and corrugated cardboard are not used to store clean supplies.			
	Num:	Den:	Comp%:
5. All items are stored at least 18 inches below the ceiling.			
	Num:	Den:	Comp%:
6. No clean supplies are stored directly on the floor.			
	Num:	Den:	Comp%:
7. No clean supplies are stored in biohazard bags.			
	Num:	Den:	Comp%:
8. Open control solution bottles are labeled with open date and a discard date according to manufacturer's recommendation or per policy and are not expired or beyond the discard date.			
	Num:	Den:	Comp%:
PPE/Staff Safety			
9. Reusable lab coats are processed by an accredited healthcare linen company.			
	Num:	Den:	Comp%:
10. Staff have access to personal protective equipment for standard and BSL guidelines.			
	Num:	Den:	Comp%:
11. Staff are wearing and utilizing appropriate PPE to prevent exposure.			
a. Gloves are worn when handling specimens and changed when contaminated, integrity has been compromised, or when otherwise necessary.			
b. Lab coats are worn and closed while handling hazardous materials.			
	Num:	Den:	Comp%:
12. Lab coats are not worn in clean spaces. PPE is not worn outside of the laboratory space.			
	Num:	Den:	Comp%:
13. No food, drinks, or personal items in areas where body fluids could be located. Such items are stored in appropriate, designated locations.			
	Num:	Den:	Comp%:

14. Emergency eyewash solutions/plumbed eyewash station are readily available. Solution is not expired and/or plumbed stations are checked weekly by department and annually by maintenance.	Num:	Den:	Comp%:
15. Eye and face protection (goggles, mask, face shield or splatter guard) is used for anticipated splashes or sprays of infectious or biohazardous material when handled outside the BSC.	Num:	Den:	Comp%:
16. No mouth pipetting is performed. All pipetting is done via mechanical methods.	Num:	Den:	Comp%:
17. Phlebotomy procedures are exclusively performed using safety devices.	Num:	Den:	Comp%:
18. Biological Safety Cabinets are functioning properly, and HEPA filters are not expired.	Num:	Den:	Comp%:
19. All procedures involving the manipulation of infectious materials that may generate an aerosol are conducted within a BSC.	Num:	Den:	Comp%:
Soiled Items			
20. Reagent and Specimen refrigerators:			
a. Refrigerators or freezers containing blood, body fluids, or other potentially infectious materials are marked with biohazard sticker.			
b. No food, drink, medication, or clean items stored in same refrigerator or freezer as specimens and/or reagents.			
c. Inside of the reagent/specimen refrigerator is clean and defrosted.			
d. Reagent/specimen refrigerator is within temperature range and recorded on log if indicated.			
21. Sharps containers are readily available and used. Containers are puncture resistant, not overfilled, labeled with a biohazard label, and are secured to wall or in a caddy.	Num:	Den:	Comp%:
22. Biohazardous material is disposed of in appropriate containers (red bags in solid, red containers with tight fitting lid).	Num:	Den:	Comp%:
23. No biohazardous material is stored in break rooms.	Num:	Den:	Comp%:
24. Manual differential droppers are properly disposed of after single use.	Num:	Den:	Comp%:
25. All completed samples are capped and properly stored.	Num:	Den:	Comp%:
Hand Hygiene			
26. No items are stored in sink "splash zone" (18" from either side of faucet), or a splash guard is in place.	Num:	Den:	Comp%:
27. Supplies needed for hand hygiene are readily available. Includes soap and water, alcohol-based hand rub, and paper towels. Access is unimpeded.	Num:	Den:	Comp%:
28. Paper towels and other paper hygiene products are stored in a manner that prevents contamination.	Num:	Den:	Comp%:
29. Sinks are clearly designated as "clean" and "dirty" sinks.	Num:	Den:	Comp%:
30. Nothing is stored under sinks.	Num:	Den:	Comp%:
31. Artificial nails are not worn by direct care providers as defined in Hand Hygiene policy.	Num:	Den:	Comp%:

	Num:	Den:	Comp%:	
32. Phlebotomists don new gloves for each patient after performing hand hygiene.				
	Num:	Den:	Comp%:	
General Environment				
33. Area is free from visible leaks, stains, cracks, visible moisture, or evidence of mold growth.				
	Num:	Den:	Comp%:	
34. Area is free of dust, dirt, soil, trash, clutter, and hazards (fixtures, walls, ceilings, floor).				
	Num:	Den:	Comp%:	
35. Ceiling tiles are not stained; walls and paint are in good condition.				
	Num:	Den:	Comp%:	
36. Chairs and other furniture are free of tears and in good condition				
	Num:	Den:	Comp%:	
37. No carpet or rugs are present in the laboratory space.				
	Num:	Den:	Comp%:	
Cleaning/Disinfection				
38. Hospital approved disinfectants are readily available, appropriately labeled, and not expired.				
	Num:	Den:	Comp%:	
39. Other disinfectants are formulated and utilized per the manufacturer's instructions. Disinfectants are readily available, appropriately labeled, and not expired.				
	Num:	Den:	Comp%:	
40. Environmental surfaces are cleaned between patients.				
	Num:	Den:	Comp%:	
41. Staff can speak to contact time of disinfectants being used.				
	Num:	Den:	Comp%:	
42. Laboratory spaces have surfaces that are easily cleanable.				
	Num:	Den:	Comp%:	
43. All analyzers, including Point of Care instruments (unit and base), are clean and free of dust and stains.				
	Num:	Den:	Comp%:	
44. Point of care instrument control solutions and test strips are dated and not expired.				
	Num:	Den:	Comp%:	
45. Centrifuges are free of visible contamination by blood or body fluids. Specimens are capped while centrifuging.				
	Num:	Den:	Comp%:	

Appendix 2 - Completed Laboratory Tracers

Appendix 2.1 – Green Hills Laboratory Tracer

07/28/2025

Tracer Observation Detail Report 2025 IPAC Laboratory Environmental Tracer

Site: **The University of Kansas Health System**

Program: **Hospital**

*Compliance percentage and totals display data from all questions in the observation.



Total Numerator: **25** Total Denominator: **40** Not Applicable Count: **5** Total Question Count: **45**

Observation Header	
Observation Title: 2025 IPAC Laboratory Environmental Tracer – Higgins, Kira – 07/28/2025	
Observation Status: Complete	Location: Laboratory Locations
Observation Date: 07/28/2025	Department: Green Hills Cancer Center
Total Completed Observations: 1	
Note:	

Clean Supply/Items			
1. There are no expired or compromised supplies.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
2. Bottom shelves are solid or have a liner.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 — No liner on bottom shelves in clean supply area			
3. Only clean supplies are found in clean utility area.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 — personal cups stored amidst clean supplies			
4. Primary shipping containers and corrugated cardboard are not used to store clean supplies.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
			
5. All items are stored at least 18 inches below the ceiling.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
6. No clean supplies are stored directly on the floor.			

Page: 1 of 5

Compliant	Num: 1	Den: 1	Comp%: 100.00
7. No clean supplies are stored in biohazard bags.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
			
8. Open control solution bottles are labeled with open date and a discard date according to manufacturer's recommendation or per policy and are not expired or beyond the discard date.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
Expiration date not indicated on open control solutions; open date rubbed off and not legible on some			
PPE/Staff Safety			
9. Reusable lab coats are processed by an accredited healthcare linen company.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
10. Staff have access to personal protective equipment for standard and BSL guidelines.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
11. Staff are wearing and utilizing appropriate PPE to prevent exposure.			
a. Gloves are worn when handling specimens and changed when contaminated, integrity has been compromised, or when otherwise necessary.			
b. Lab coats are worn and closed while handling hazardous materials.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
No gloves or lab coats worn			
12. Lab coats are not worn in clean spaces. PPE is not worn outside of the laboratory space.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
13. No food, drinks, or personal items in areas where body fluids could be located. Such items are stored in appropriate, designated locations.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
Drinks not stored in appropriate locations			
14. Emergency eyewash solutions/plumbed eyewash station are readily available. Solution is not expired and/or plumbed stations are checked weekly by department and annually by maintenance.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
15. Eye and face protection (goggles, mask, face shield or splatter guard) is used for anticipated splashes or sprays of infectious or biohazardous material when handled outside the BSC.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
16. No mouth pipetting is performed. All pipetting is done via mechanical methods.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
17. Phlebotomy procedures are exclusively performed using safety devices.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
18. Biological Safety Cabinets are functioning properly, and HEPA filters are not expired.			
N/A	Num: 0	Den: 0	Comp%: _____
19. All procedures involving the manipulation of infectious materials that may generate an aerosol are conducted within a BSC.			
N/A	Num: 0	Den: 0	Comp%: _____
Soiled Items			

20. Reagent and Specimen refrigerators:			
a. Refrigerators or freezers containing blood, body fluids, or other potentially infectious materials are marked with biohazard sticker.			
b. No food, drink, medication, or clean items stored in same refrigerator or freezer as specimens and/or reagents.			
c. Inside of the reagent/specimen refrigerator is clean and defrosted.			
d. Reagent/specimen refrigerator is within temperature range and recorded on log if indicated.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
21. Sharps containers are readily available and used. Containers are puncture resistant, not overfilled, labeled with a biohazard label, and are secured to wall or in a caddy.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
22. Biohazardous material is disposed of in appropriate containers (red bags in solid, red containers with tight fitting lid).			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 – small biohazard containers with needles			
23. No biohazardous material is stored in break rooms.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
24. Manual differential droppers are properly disposed of after single use.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
25. All completed samples are capped and properly stored.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
Hand Hygiene			
26. No items are stored in sink “splash zone” (18” from either side of faucet), or a splash guard is in place.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 – slide staining setup within 18”			
27. Supplies needed for hand hygiene are readily available. Includes soap and water, alcohol-based hand rub, and paper towels. Access is unimpeded.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
28. Paper towels and other paper hygiene products are stored in a manner that prevents contamination.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
29. Sinks are clearly designated as “clean” and “dirty” sinks.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
Only one sink used as both dirty and clean			
30. Nothing is stored under sinks.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
31. Artificial nails are not worn by direct care providers as defined in Hand Hygiene policy.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
Phlebotomist with artificial nails			

32. Phlebotomists don new gloves for each patient after performing hand hygiene.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
General Environment			
33. Area is free from visible leaks, stains, cracks, visible moisture, or evidence of mold growth.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
			
34. Area is free of dust, dirt, soil, trash, clutter, and hazards (fixtures, walls, ceilings, floor).			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
			
35. Ceiling tiles are not stained; walls and paint are in good condition.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
			
36. Chairs and other furniture are free of tears and in good condition			
Compliant	Num: 1	Den: 1	Comp%: 100.00
37. No carpet or rugs are present in the laboratory space.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
Cleaning/Disinfection			
38. Hospital approved disinfectants are readily available, appropriately labeled, and not expired.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
39. Other disinfectants are formulated and utilized per the manufacturer's instructions. Disinfectants are readily available, appropriately labeled, and not expired.			
N/A	Num: 0	Den: 0	Comp%: _____
40. Environmental surfaces are cleaned between patients.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
41. Staff can speak to contact time of disinfectants being used.			
N/A	Num: 0	Den: 0	Comp%: _____
42. Laboratory spaces have surfaces that are easily cleanable.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
43. All analyzers, including Point of Care instruments (unit and base), are clean and free of dust and stains.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00



— visible blood on POC INR instrument

44. Point of care instrument control solutions and test strips are dated and not expired.			
N/A – not seen during audit	Num: 0	Den: 0	Comp%:
45. Centrifuges are free of visible contamination by blood or body fluids. Specimens are capped while centrifuging.			
Compliant	Num: 1	Den: 1	Comp%: 100.00

Appendix 2.2 – Clinical Research Center Laboratory Tracer

09/02/2025

Tracer Observation Detail Report 2025 IPAC Laboratory Environmental Tracer

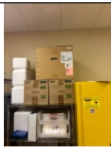
Site: The University of Kansas Health System
Program: Hospital

*Compliance percentage and totals display data from all questions in the observation.

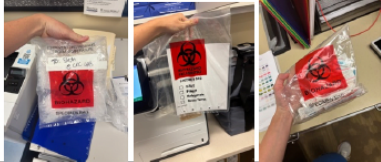


Total Numerator: 32 Total Denominator: 42 Not Applicable Count: 3 Total Question Count: 45

Observation Header			
Observation Title: 2025 IPAC Laboratory Environmental Tracer – Higgins, Kira – 09/02/2025			
Observation Status: Complete	Location: Laboratory Locations		
Observation Date: 09/02/2025	Department: Clinical Research Center (CRC)		
Total Completed Observations: 1			
Note:			

Clean Supply/Items			
1. There are no expired or compromised supplies.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
2. Bottom shelves are solid or have a liner.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 — clean supply storage area			
3. Only clean supplies are found in clean utility area.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 — boxes of sharps and biohazard trash near clean supplies			
4. Primary shipping containers and corrugated cardboard are not used to store clean supplies.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 — primary shipping boxes in clean supply area			
5. All items are stored at least 18 inches below the ceiling.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
6. No clean supplies are stored directly on the floor.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
7. No clean supplies are stored in biohazard bags.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00

Page: 1 of 4

			
8. Open control solution bottles are labeled with open date and a discard date according to manufacturer's recommendation or per policy and are not expired or beyond the discard date.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 — expired QC in fridge			
PPE/Staff Safety			
9. Reusable lab coats are processed by an accredited healthcare linen company.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
10. Staff have access to personal protective equipment for standard and BSL guidelines.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
11. Staff are wearing and utilizing appropriate PPE to prevent exposure.			
a. Gloves are worn when handling specimens and changed when contaminated, integrity has been compromised, or when otherwise necessary. b. Lab coats are worn and closed while handling hazardous materials.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
Lab coats not worn/not closed			
12. Lab coats are not worn in clean spaces. PPE is not worn outside of the laboratory space.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
13. No food, drinks, or personal items in areas where body fluids could be located. Such items are stored in appropriate, designated locations.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
14. Emergency eyewash solutions/plumbed eyewash station are readily available. Solution is not expired and/or plumbed stations are checked weekly by department and annually by maintenance.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
15. Eye and face protection (goggles, mask, face shield or splatter guard) is used for anticipated splashes or sprays of infectious or biohazardous material when handled outside the BSC.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 — no splash guard in front of slide staining station			
16. No mouth pipetting is performed. All pipetting is done via mechanical methods.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
17. Phlebotomy procedures are exclusively performed using safety devices.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
18. Biological Safety Cabinets are functioning properly, and HEPA filters are not expired.			
N/A	Num: 0	Den: 0	Comp%: _____

19. All procedures involving the manipulation of infectious materials that may generate an aerosol are conducted within a BSC.			
N/A	Num: 0	Den: 0	Comp%:
Soiled Items			
20. Reagent and Specimen refrigerators:			
a. Refrigerators or freezers containing blood, body fluids, or other potentially infectious materials are marked with biohazard sticker.			
b. No food, drink, medication, or clean items stored in same refrigerator or freezer as specimens and/or reagents.			
c. Inside of the reagent/specimen refrigerator is clean and defrosted.			
d. Reagent/specimen refrigerator is within temperature range and recorded on log if indicated.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
No biohazard sticker on reagent/specimen fridge			
21. Sharps containers are readily available and used. Containers are puncture resistant, not overfilled, labeled with a biohazard label, and are secured to wall or in a caddy.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
22. Biohazardous material is disposed of in appropriate containers (red bags in solid, red containers with tight fitting lid).			
Compliant	Num: 1	Den: 1	Comp%: 100.00
23. No biohazardous material is stored in break rooms.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
24. Manual differential droppers are properly disposed of after single use.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
25. All completed samples are capped and properly stored.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
Hand Hygiene			
26. No items are stored in sink "splash zone" (18" from either side of faucet), or a splash guard is in place.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
27. Supplies needed for hand hygiene are readily available. Includes soap and water, alcohol-based hand rub, and paper towels. Access is unimpeded.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
28. Paper towels and other paper hygiene products are stored in a manner that prevents contamination.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
29. Sinks are clearly designated as "clean" and "dirty" sinks.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
No sign designating dirty sink as "dirty"			
30. Nothing is stored under sinks.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
31. Artificial nails are not worn by direct care providers as defined in Hand Hygiene policy.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
32. Phlebotomists don new gloves for each patient after performing hand hygiene.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
General Environment			
33. Area is free from visible leaks, stains, cracks, visible moisture, or evidence of mold growth.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
34. Area is free of dust, dirt, soil, trash, clutter, and hazards (fixtures, walls, ceilings, floor).			
Compliant	Num: 1	Den: 1	Comp%: 100.00
35. Ceiling tiles are not stained; walls and paint are in good condition.			
Compliant	Num: 1	Den: 1	Comp%: 100.00

36. Chairs and other furniture are free of tears and in good condition			
Compliant	Num: 1	Den: 1	Comp%: 100.00
37. No carpet or rugs are present in the laboratory space.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
Cleaning/Disinfection			
38. Hospital approved disinfectants are readily available, appropriately labeled, and not expired.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
39. Other disinfectants are formulated and utilized per the manufacturer's instructions. Disinfectants are readily available, appropriately labeled, and not expired.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
40. Environmental surfaces are cleaned between patients.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
41. Staff can speak to contact time of disinfectants being used.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
42. Laboratory spaces have surfaces that are easily cleanable.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
43. All analyzers, including Point of Care instruments (unit and base), are clean and free of dust and stains.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
44. Point of care instrument control solutions and test strips are dated and not expired.			
N/A – not seen during audit	Num: 0	Den: 0	Comp%:
45. Centrifuges are free of visible contamination by blood or body fluids. Specimens are capped while centrifuging.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 — blood in centrifuge			

Appendix 2.3 – Olathe Cancer Center Laboratory Tracer

05/20/2025

Tracer Observation Detail Report 2025 IPAC Laboratory Environmental Tracer

Site: **The University of Kansas Health System**
Program: **Hospital**

*Compliance percentage and totals display data from all questions in the observation.

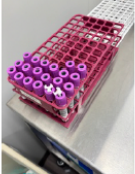


Total Numerator: **36** Total Denominator: **43** Not Applicable Count: **2** Total Question Count: **45**

Observation Header			
Observation Title: 2025 IPAC Laboratory Environmental Tracer – Higgins, Kira – 05/29/2025			
Observation Status: Complete		Location: Laboratory Locations	
Observation Date: 05/29/2025		Department: Olathe Cancer Center	
Total Completed Observations: 1			
Note:			
Clean Supply/Items			
1. There are no expired or compromised supplies.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
2. Bottom shelves are solid or have a liner.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
3. Only clean supplies are found in clean utility area.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
 – personal items stored with clean supplies			
4. Primary shipping containers and corrugated cardboard are not used to store clean supplies.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
5. All items are stored at least 18 inches below the ceiling.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
6. No clean supplies are stored directly on the floor.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
7. No clean supplies are stored in biohazard bags.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
			
8. Open control solution bottles are labeled with open date and a discard date according to manufacturer's recommendation or per policy and are not expired or beyond the discard date.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
PPE/Staff Safety			

Page: 1 of 4

9. Reusable lab coats are processed by an accredited healthcare linen company.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
10. Staff have access to personal protective equipment for standard and BSL guidelines.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
11. Staff are wearing and utilizing appropriate PPE to prevent exposure.			
a. Gloves are worn when handling specimens and changed when contaminated, integrity has been compromised, or when otherwise necessary.			
b. Lab coats are worn and closed while handling hazardous materials.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
Lab coats not worn/not closed			
12. Lab coats are not worn in clean spaces. PPE is not worn outside of the laboratory space.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
13. No food, drinks, or personal items in areas where body fluids could be located. Such items are stored in appropriate, designated locations.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
Drinks not stored in appropriate locations			
14. Emergency eyewash solutions/plumbed eyewash station are readily available. Solution is not expired and/or plumbed stations are checked weekly by department and annually by maintenance.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
15. Eye and face protection (goggles, mask, face shield or splatter guard) is used for anticipated splashes or sprays of infectious or biohazardous material when handled outside the BSC.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
16. No mouth pipetting is performed. All pipetting is done via mechanical methods.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
17. Phlebotomy procedures are exclusively performed using safety devices.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
18. Biological Safety Cabinets are functioning properly, and HEPA filters are not expired.			
N/A	Num: 0	Den: 0	Comp%:
19. All procedures involving the manipulation of infectious materials that may generate an aerosol are conducted within a BSC.			
N/A	Num: 0	Den: 0	Comp%:
Soiled Items			
20. Reagent and Specimen refrigerators:			
a. Refrigerators or freezers containing blood, body fluids, or other potentially infectious materials are marked with biohazard sticker.			
b. No food, drink, medication, or clean items stored in same refrigerator or freezer as specimens and/or reagents.			
c. Inside of the reagent/specimen refrigerator is clean and defrosted.			
d. Reagent/specimen refrigerator is within temperature range and recorded on log if indicated.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
21. Sharps containers are readily available and used. Containers are puncture resistant, not overfilled, labeled with a biohazard label, and are secured to wall or in a caddy.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
22. Biohazardous material is disposed of in appropriate containers (red bags in solid, red containers with tight fitting lid).			
Compliant	Num: 1	Den: 1	Comp%: 100.00
23. No biohazardous material is stored in break rooms.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
24. Manual differential droppers are properly disposed of after single use.			

Noncompliant	Num: 0	Den: 1	Comp%: 0.00
			
25. All completed samples are capped and properly stored.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
Hand Hygiene			
26. No items are stored in sink “splash zone” (18” from either side of faucet), or a splash guard is in place.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
27. Supplies needed for hand hygiene are readily available. Includes soap and water, alcohol-based hand rub, and paper towels. Access is unimpeded.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
28. Paper towels and other paper hygiene products are stored in a manner that prevents contamination.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
29. Sinks are clearly designated as “clean” and “dirty” sinks.			
Noncompliant	Num: 0	Den: 1	Comp%: 0.00
Only one sink used as both dirty and clean			
30. Nothing is stored under sinks.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
31. Artificial nails are not worn by direct care providers as defined in Hand Hygiene policy.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
32. Phlebotomists don new gloves for each patient after performing hand hygiene.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
General Environment			
33. Area is free from visible leaks, stains, cracks, visible moisture, or evidence of mold growth.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
34. Area is free of dust, dirt, soil, trash, clutter, and hazards (fixtures, walls, ceilings, floor).			
Compliant	Num: 1	Den: 1	Comp%: 100.00
35. Ceiling tiles are not stained; walls and paint are in good condition.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
36. Chairs and other furniture are free of tears and in good condition			
Compliant	Num: 1	Den: 1	Comp%: 100.00
37. No carpet or rugs are present in the laboratory space.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
Cleaning/Disinfection			
38. Hospital approved disinfectants are readily available, appropriately labeled, and not expired.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
39. Other disinfectants are formulated and utilized per the manufacturer’s instructions. Disinfectants are readily available, appropriately labeled, and not expired.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
40. Environmental surfaces are cleaned between patients.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
41. Staff can speak to contact time of disinfectants being used.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
42. Laboratory spaces have surfaces that are easily cleanable.			

05/20/2025

Compliant	Num: 1	Den: 1	Comp%: 100.00
43. All analyzers, including Point of Care instruments (unit and base), are clean and free of dust and stains.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
44. Point of care instrument control solutions and test strips are dated and not expired.			
Compliant	Num: 1	Den: 1	Comp%: 100.00
45. Centrifuges are free of visible contamination by blood or body fluids. Specimens are capped while centrifuging.			
Compliant	Num: 1	Den: 1	Comp%: 100.00