The IP and AI

ESA-recipient presentation on lessons learned at APIC26

PALOMAR | UC San Diego Health

Take It Easy! Artificial Intelligence Will Be Your New Best Friend!

- *Bassel Molaeb, MPH, CIC, FAPIC, AL-CIP*
- Learning Objectives:
  - Describe how artificial intelligence (AI) could leverage infection prevention and control (IPC) strategies.
  - Address how infection preventionists can embrace these AI-driven innovations to enhance their day-to-day practice and make more informed decisions.
  - Discuss examples of current AI models integrated into HAI surveillance, education and training, environmental cleaning, and IPC process monitoring.

Leveraging Generative Artificial Intelligence to Improve Manufacturers' Instruction for Use Adherence

- *Jessica Alicdan, MPH, AL-CIP, CIC*
- Learning Objectives:
  - Upon completion, participant will be able to demonstrate how generative AI can streamline MIFU interpretation, training, and competency development.
  - Upon completion, participant will be able to apply AI-driven insights to inform future-ready SPD and reprocessing room design aligned with MIFU requirements.
  - Upon completion, participant will be able to conduct implementation improvements in MIFU usability in infection prevention practices related to medical devices.

From Boring to Brilliant: Making Infection Prevention Memorable Using Artificial Intelligence

Jessica L. Fargher, BA

Learning Objectives:

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- Describe how aligning infection prevention content with visual, auditory, reading-writing, and kinesthetic learning modalities enhances engagement and retention across diverse healthcare roles.
- Demonstrate how artificial intelligence tools can streamline the creation of audience-specific, multisensory education while supporting educator creativity and efficiency.
- Develop practical artificial intelligence competency to streamline and enhance the creation of audience-specific, multisensory education while supporting educator creativity and efficiency.

Key Takeaways

- **AI as Decision Support Tool, Not Replacement**
  - "Augmentation over replacement"
- **Practical High-Impact IPC Applications**
  - Streamlining Manufacturer Instructions for Use (MIFUs)
  - Elevating Staff Education on Infection Prevention
- **Prompt Engineering**
  - Work Instructions, Conversations
- **Readiness and Ethical Considerations**
  - Appraising/verifying outputs for accuracy and logical consistency
  - Spotting hallucinations… misinformation, deep fakes

Six Practical IP Use Cases

1. HAI Surveillance & Case Finding	Triage and structured first-pass reviews for CAUTI, CLABSI, and SSI.
2. Predictive Analytics	Patient and unit risk-scoring for targeted prevention.
3. Process Monitoring	Automated tracking of hand hygiene, PPE donning/doffing, and environmental cleaning.
4. Outbreak & AMR Intelligence	Synthesizing micro data, genomics, and patient movement patterns
5. Training & Education	Adaptive simulations, competency generation, and frontline micro-learning.
6. Administrative Support	Policy comparisons, audit summaries, and leadership briefs.

Streamlining Manufacturer Instructions for Use (MIFUs)

- Operationalizing Complex Documentation
- Generative AI for Frontline Training
- Gap Analysis & Technical Validation

Elevating Staff Education on Infection Prevention

Current Applications

- **Problem** outdated 20-minute education for contractors performing construction and renovation activities within a healthcare facility; no resources, time, etc.
- **Prompt + Inputs** create a short educational video for construction personnel using the standards of practice in this hospital procedure as learning objectives

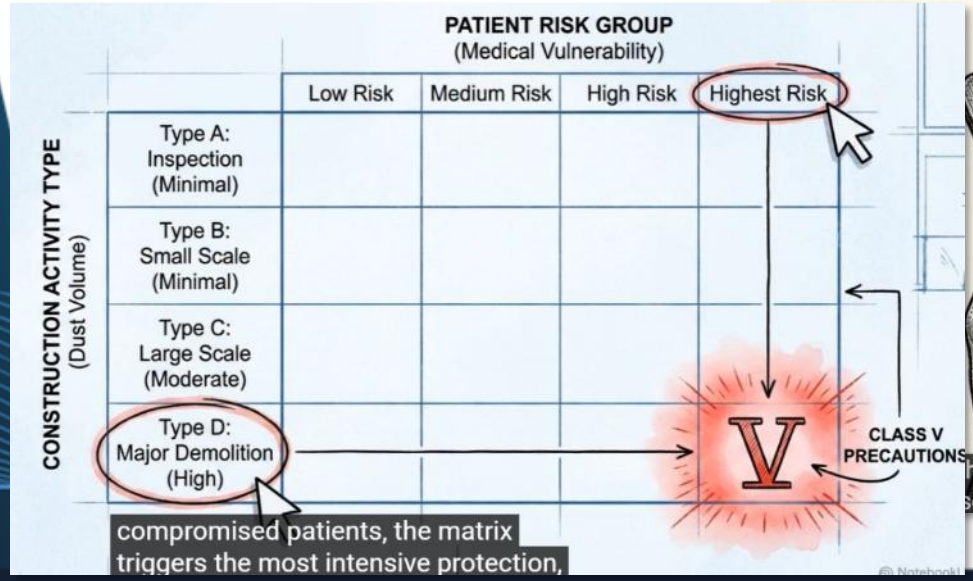


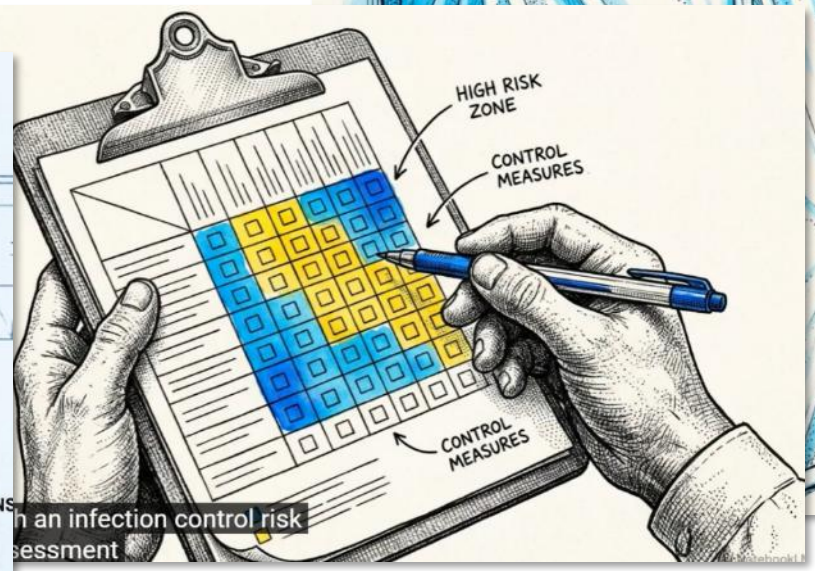




Output

- https://youtu.be/LOvtFkOynM4?si=_FubKf4JELISNDCY
- "Anatomy of a Containment Zone" 3:47 minutes
- Several hallucinations





Current Applications

- **Problem** time-consuming monthly feedback (pdf report cards) to staff on their hand hygiene compliance
- **Prompt + Inputs** [conversation] create an interactive html dashboard of this data (78k rows)…

	A	B	C	D	E	F	G	H	I	J	K	
	Year-Quarter	Month	Facility	Department/Unit	Discipline	Before patient conta	After patient conta	Shift	MD (enter name)	Modified Staff? (Y/N)	Year	Patient Care A
467	2026Q2	June	Escondido	9W	TRANS	Y	Y	1		y	2026	
468	2026Q2	June	Escondido	9W	NURSE	Y	Y	1		y	2026	
469	2026Q2	June	Escondido	7W	NURSE		N	1		y	2026	
470	2026Q2	June	Escondido	7W	RAD	Y		1		y	2026	
471	2026Q2	June	Escondido	7W	NURSE	N		1		y	2026	
472	2026Q2	June	Escondido	5E	NURSE	N	N	1		y	2026	
473	2026Q2	June	Escondido	5E	NURSE	Y		1		y	2026	
474	2026Q2	June	Escondido	5E	NURSE	Y	Y	1		y	2026	
475	2026Q2	June	Escondido	5E	NURSE	N	Y	1		y	2026	
476	2026Q2	June	Escondido	5E	TRANS	Y		1		y	2026	
477	2026Q2	June	Escondido	5E	LAB	N		1		y	2026	
478	2026Q2	June	Escondido	5E	NURSE		Y	1		y	2026	
479	2026Q2	June	Poway	MS4	NURSE	N	N	2		y	2026	
480	2026Q2	June	Poway	MS4	LAB	N	N	2		y	2026	
481	2026Q2	June	Poway	MS4	NURSE	Y	Y	2		y	2026	
482	2026Q2	June	Poway	MS4	NURSE	Y	Y	2		y	2026	
483	2026Q2	June	Escondido	9E	NURSE		Y	1		y	2026	
484	2026Q2	June	Escondido	9E	EVS	Y	Y	1		y	2026	
485	2026Q2	June	Escondido	9E	NURSE	Y	Y	1		y	2026	
486	2026Q2	June	Escondido	9E	NURSE	Y	Y	1	CNA	y	2026	
487	2026Q2	June	Escondido	6E	NURSE		Y	1		y	2026	
488	2026Q2	June	Escondido	6E	NURSE	N	Y	1		y	2026	

Output

Palomar UC San Diego Health Hand Hygiene Compliance Dashboard - June 2026.html

