ACCE
AMERICAN COLLEGE OF CLINICAL ENGINEERING

MediMizer

The Data That Matters:
Building Better Clinical Engineering Decisions

August 20, 2026

Speakers

Tonya Pilcher
MediMizer

Mark Woodruff
MediMizer

Chris Hawkins
The Univ. of Kansas Health System

About the host/moderator

Ishtar Al-Tahir, P.Eng.
Clinical Engineer
Member, Education Committee

Ishtar Al-Tahir is a professional (P.Eng) Clinical Engineer at the Children's Hospital of Eastern Ontario (CHEO). She joined CHEO in the fall of 2022, however her Clinical Engineering career began at Service New Brunswick in early 2021. She has a Masters in Science in Electrical Engineering (MSc.EE) from the University of New Brunswick, where she defended her biomedical engineering research thesis at the Institute of Biomedical Engineering on myoelectric controlled prosthesis.

In her spare time, she enjoys reading, cooking, playing ultimate frisbee, and learning as much as possible about Clinical Engineering.

She volunteers her time with the ACCE and the Clinical Engineering Society of Ontario. Her passions also lie with promoting engineering and STEM fields to women and youth.

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Logistics

❖All attendees have their microphones muted during the presentation.

❖Questions to the panelists must be submitted via the "Q&A" feature in Zoom at any time. They will be addressed at the Q&A portion.

❖If there is any urgent issue, please use the "chat" feature to communicate with the host/moderator.

❖Please remember to complete the webinar evaluation after attending. A link will be provided at the end.

About the Speaker

Tonya Pilcher
Senior Product Manager

MediMizer

Tonya is the Senior Product Manager and Reporting Specialist at MediMizer, with more than 14 years of experience helping healthcare technology management organizations implement, support, and optimize CMMS solutions. Her work spans product management, customer implementations, data conversions, technical support, training, and developing reporting and data solutions that help HTM teams better understand and use their operational data.

With extensive hands-on experience in SQL, Crystal Reports, and CMMS data structures, Tonya specializes in turning complex equipment and service data into meaningful, actionable information. She works closely with both HTM professionals and the MediMizer development team to translate real-world workflows, reporting requirements, and customer needs into practical product improvements and solutions.

About the Speaker

Mark Woodruff
COO / CTO

MediMizer

I have worked for more than 40 years supporting hospital Biomedical Engineering and Healthcare Technology Management programs through the design and operation of CMMS systems. My experience includes consulting and on-site work with approximately 100 hospitals and healthcare organizations across six countries, supporting operational, compliance, and equipment management initiatives.

My work has involved preventive maintenance strategy, AEM evaluation, compliance reporting, contract and downtime analysis, and practical implementation of UDI and GUDID data. I have led the design of underlying SQL data structures supporting thousands of operational and regulatory business rules used in hospital equipment management workflows.

I focus on practical management and operational practices that improve consistency, reduce organizational risk, and allow HTM teams and service organizations to concentrate on maintaining medical equipment rather than managing software or administrative complexity.

About the Speaker

Chris Hawkins
Director of Biomedical Engineering

THE UNIVERSITY OF KANSAS HEALTH SYSTEM

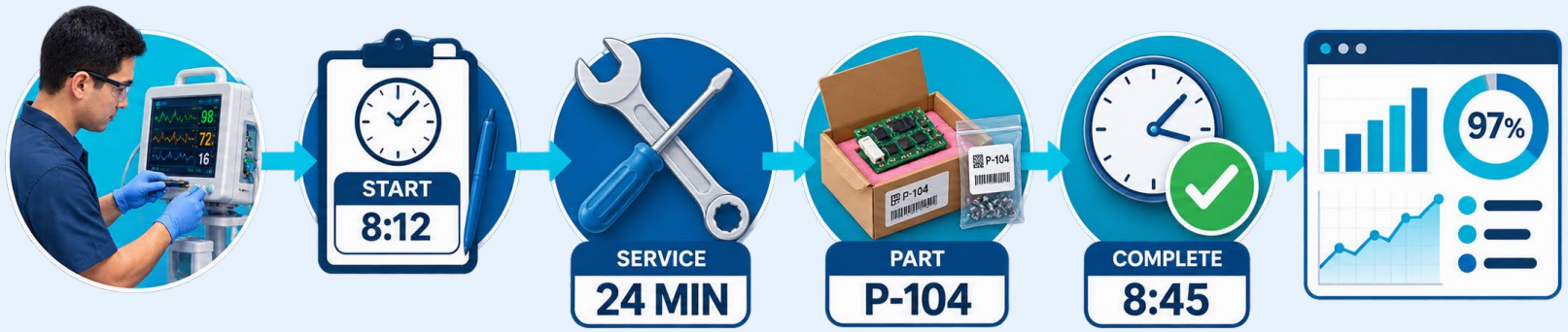
Chris Hawkins is a Director of Biomedical Engineering for The University of Kansas Health System with 36 years of Biomedical experience including 30 years of leadership.

He holds CBET and CHTM certifications and has served in various positions on the Board of HTMA-MW.

HTM departments use KPIs, dashboards, and reports to show performance, improve operations, and support management decisions.

This session examines core data elements of meaningful data collection and explore common challenges to gathering accurate information.

Reliable workflows ⟹ reliable information



Essential Equipment Information

- **What is it**
  - **Manufacturer / Model / Description (known as Type, Class, or Nomenclature)**
- **Where is it**
  - **Region, Facility, Department, Location, Floor, Room**
- **Service provider**
- **Warranty expiration**
- **Contract coverage**
- **Expected service life**
- **Manufacturer end-of-life notice**
- **Obsolescence**

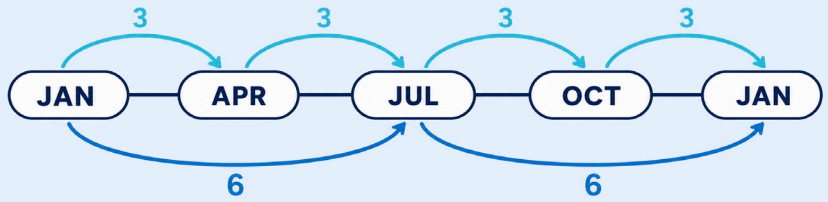
PM interval

PM month or start date

Last date completed

Next date due

Procedure / Checklist

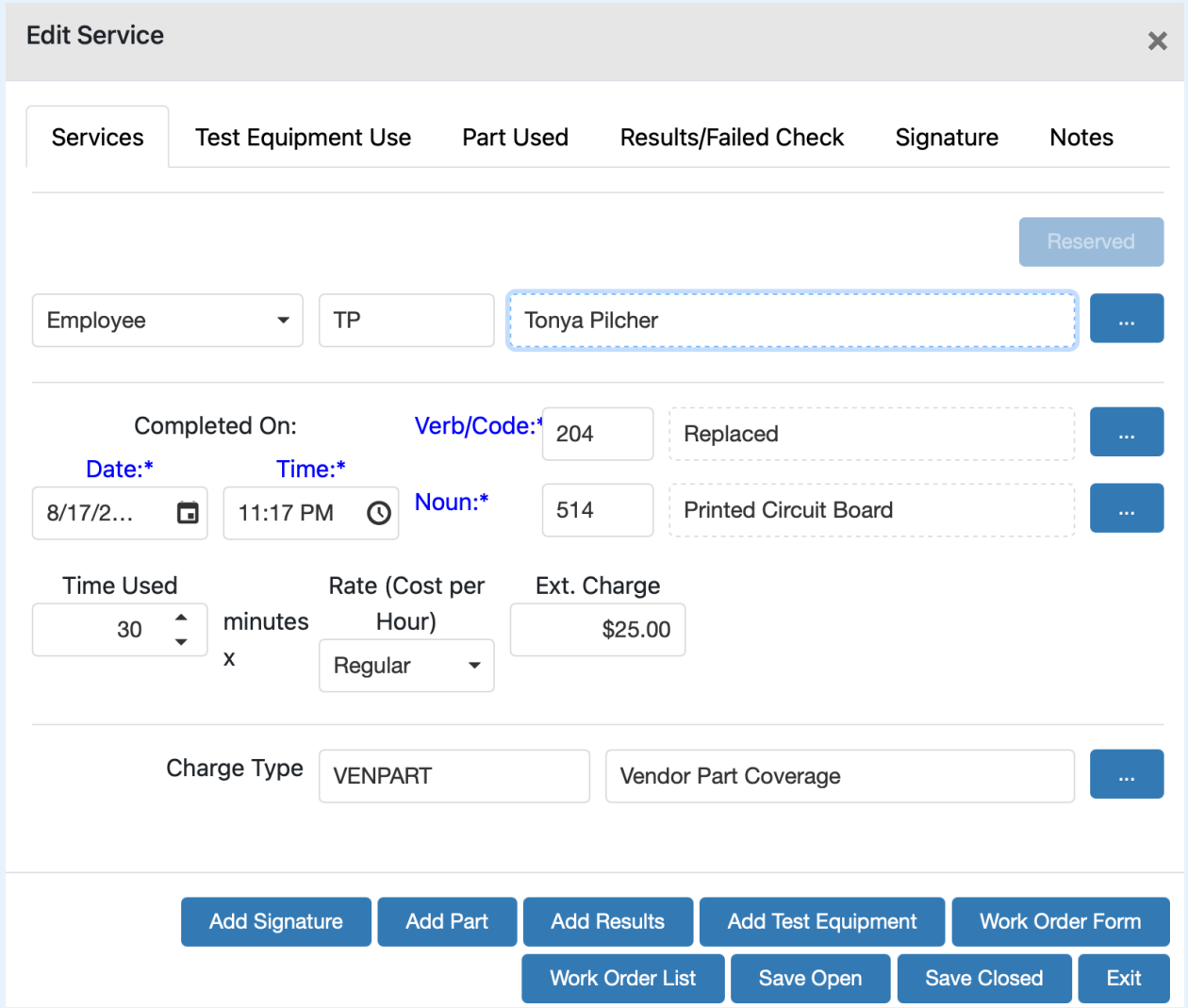


CHECK DESCRIPTION	TYPE	UNIT
INSPECT CONDITION OF POWER CORD AND PLUG.	P	
ELECTRICAL SAFETY: CHASSIS TO GROUND <300UA	N	uA
GROUND INTEGRITY: (RES <.5 OHMS) PLUG TO CHASSIS	N	OHMS
PHYSICAL INSPECTION. LOOK FOR LOOSE OR MISSING HARDWARE.	P	

AEM considerations

Essential Corrective Maintenance Information

- Issue reported, beyond “broken”
- Completion date
- Resolution
- Parts used
- Labor hours, Travel time?
- Downtime for some units
- Failure status, Cause of Failure



No Failure Associated with the WO
Failure Caused by Abuse or Negligence
Component Failure (Battery)
Calibration Failure
Network or Connectivity Failure
Failure Could Not Be Identified
Use Error
Failure Caused by Software
Failure Caused by Utility System
Accessory Failure
Component Failure (Not Battery)
Failure Caused by Maintenance
Failure Caused by Environmental Factor
Permanent Failure—Device Not Repaired

Data Collection Challenges

Equipment in use on patient

User error (Use Error)

Consistent cause codes

(failure / other causes)

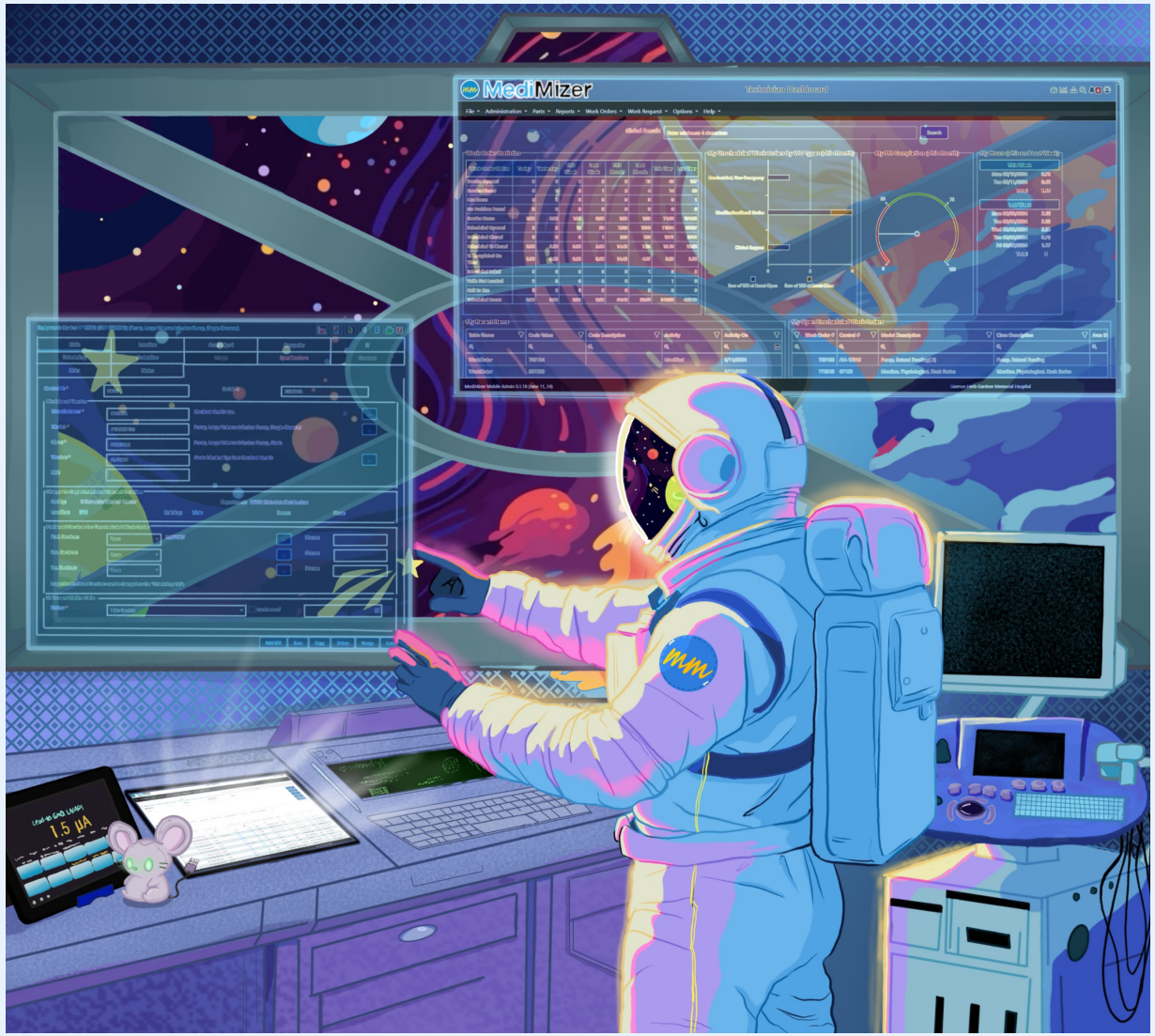
Missing data

(purchase cost, purchase or in-use date,

serial number)

True material cost.

True labor cost.



Risk Information

Collect risk factors even without formal risk scoring

Clinical function

Failure history

Detectability

Backup equipment available

Patient impact

Regulatory considerations

Function Descr	Function Value
Life Support	10
Therapeutic	8
Diagnostic	6
Laboratory	5

History Descr	History Value
Insignificant — less than 1 failure in 30 months	1
Minimal — 1 failure every 18–30 months	2
Average — 1 failure every 9–18 months	3
Moderate — 1 failure every 6–9 months	4
Significant — more than 1 failure every 6 months	5

Detect Failure Descr	Detect Failure Value
Not Detectable	3

Backup Units Descr	Backup Units Value
Replacement available	0
No replacement available	3

Environment Descr	Environment Value
Wet location / significant liquid exposure	5
Hazardous / extreme environment	5
High temperature or temperature extremes	4
High humidity / condensation	4
Chemical / corrosive exposure	4
Significant dust / contamination	3
Vibration / shock / frequent movement	3
Electromagnetic interference (EMI) exposure	3
Unstable / unreliable electrical power	3
Moderately challenging environment	2

Risk Injury Descr	Risk Injury Value
Potential patient death	5
Potential injury	4
Inappropriate therapy	3
Misdiagnosis	3
Equipment Damage	2
No identified risk	1

Turning Data into Information

PM compliance

Response and completion time

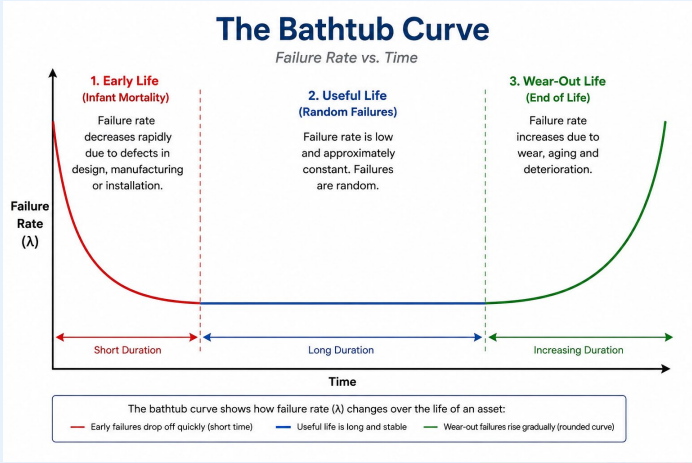
MTBF

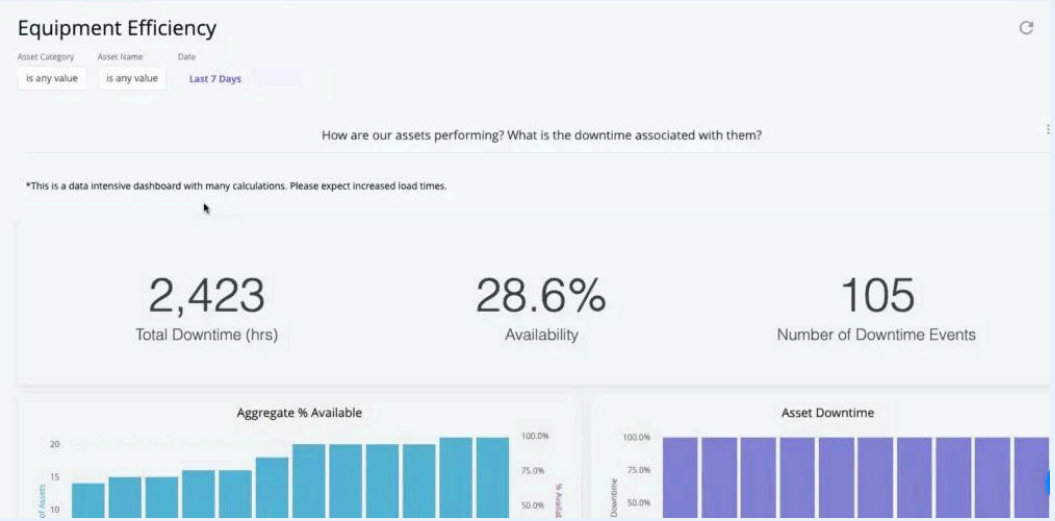
Downtime

Cost of ownership

Cost Of Service Ratio

Replacement planning





Key takeaway

Simple, consistent workflows

What to do first?

Questions

Questions?

Please type your questions
in the Q&A window

Thank You

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