Medical Device Procurement in Our New Environment

BY: Stephen Ellithorpe, CHTM



Agenda / Key Topics

- Welcome & Session Description
- Introduction to Providence
- Problem Statement
- Goal Statement
- > Our Approach
- Reference Architecture
- Service & OS Lifecycle
- Closing the Gaps
- What's Next
- Conclusion & Questions

Description

Medical device procurement has become increasingly more complex due to growing technical debt and device integration needs. Moving the procurement process at the speed of business and clinical operations has never been more important. This presentation is intended to present an end-to-end view to the medical device procurement process which identifies barriers, defines new review elements, and considers where new partnerships are required.

Have you ever been lost?



Ever "known" where your are and still be lost... or at least confused?





Providence

Problem Statement

Disassociated and siloed procurement processes for medical devices, applications, and IT Technology used in the clinical space are creating variance, integration and security challenges, service issues, and additional cost.

Why is this a problem?

- Limited capital dollars
- Technical debt and cyber vulnerabilities
- Misaligned priorities across enterprise
- Barrier to innovation
- Resource drain

Goal Statement

Establish an end-to-end medical device selection, procurement, and implementation process with required reviews and approvals to enable a more clear and efficient process and improve service delivery to our clinical caregivers.

What does this resolve?

- Purpose vs Preference
- Informed planning for Capital funds
- Standards alignment / clinical care-medical devices-security-infrastructure
- Speed of business
- Enables innovation

Approach toward desired state

- 1. Establish a single procurement process or workflow / reduce the "inputs"
- 2. Align clinical care and technology standards / "End-to-End"
- 3. Ensure engagement of key stakeholders
- 4. Establish standards in key modalities and equipment types
- 5. Simplify process for caregivers
- 6. Provide feedback and progress
- 7. Consistent and repeatable
- 8. Develop a capital lifecycle & technology roadmap

What we found on the journey...

The "Challenge"



Purpose vs Preference

Organizational Goals Clinical, Technology, & Data



Reference Architecture / Physiological Monitoring Devices



Monitors, modules, telemetry, wireless, and central surveillance

Aggregate, integrate, convert, transfer, archive, and distribute, plus alarms and alert communications

Reference Architecture / Clinical Care & Data Alignment to clinical needs & driving care innovation



Objectives:

- ✓ Create a standard for each Care Area to be used across all 51 Ministries (e.g., ICU, ED, Peri-Op, Tele)
- ✓ Increase automation to reduce nursing (staff) burden
- ✓ Better visualization of data for clinical action
- \checkmark Ability to flex up or down and support shifting patient acuities as needed
- ✓ Centralize across ministries or geographies

Reference Architecture / Infrastructure



New Costs in the Capital Lifecycle

Service & Support Lifecycle		Support Year																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Manufacturer Useful Life																	
	Manufacturer End-of-Life																	
	Manufacturer End-of-Support																	
Equipment / Modality	Providence Useful Life																	
Service Lifecycle	Providence Typical Use																	
	Providence End-of-Life																	
	OS Lifecycle																	
	Software Lifecycle																	

- **\$** Operating System (OS) management may occur multiple times during lifecycle
- \$ Operational/control software refresh to align to current clinical standard
- **\$** Software/hardware refresh adders to service maintenance agreements
- \$ Service software support licensing
- S Impacts of software, system, and/or infrastructure updates within the "chain" / End-to-End

Closing the gaps / What more do teams need?



What's next?

- Building and Refining the Process
 - □ End-to-End
 - Dynamic elements
 - □ Alignment of clinical, technology, and technical strategies (future state)
- Capturing the Data
 - Visibility to technical standards
 - Visibility to medical device standards / catalog
 - □ Access to completed work
 - □ Vendor partnerships and innovation
- Building Partnerships
 - □ Internal & external
 - □ Strategic vendor partnerships

Questions??

