

MAXIMIZE MEDICAL DEVICE UTILIZATION

Optimizing Healthcare Efficiencies and
Budgets in the World of Connected Medical
Devices



REAL-TIME | DATA-DRIVEN

Healthcare providers and hospitals constantly face budget challenges and are in constant pursuit of maximum efficiency. The emergence of connected medical devices and its explosive growth is challenging HTM (Health Technology Management) and Clinical Engineering teams who strive to stay efficient and control costs. A recent study shed light on the challenges in the world of connected medical equipment.

- Underutilized, with the most expensive equipment sitting idle an average of 58% of the time¹
- Unaccounted, with only some assets recorded centrally – and rarely tracked in real-time. Nurses typically spend more than 20 minutes per shift simply looking for needed equipment²
- Need for Metrics for central planning processes – purchases, renewals, EOL, leases etc. The fact that 58% of the equipment are idle is not always factored in¹
- Fragmented, with facilities acting independently instead of taking organization-wide decisions

The Ordr SCE is a fully automated solution that arms HTM and Clinical Engineers with meaningful insights in real-time to help optimize the operational efficiency of their expensive equipment and make data-driven decisions on maintenance, capital planning and avoidance:

- Real-time asset Inventory and utilization details tells teams not only how a device is being used but exactly where an under-utilized medical equipment is located; this saves time for doctors and nurses.
- Utilization insights enlighten HTM and Clinical Engineering teams on when to schedule preventative maintenance and/or patching.
- Utilization insights can help provide support for capital equipment or device leasing decisions (or avoidance).
- Utilization insights can ensure that expensive medical equipment are not sitting idle but are being utilized appropriately for better efficiencies. Increasing efficiencies of medical equipment delivers cost savings.

¹ *Out of Control – How clinical asset proliferation and low utilization are draining healthcare budgets*

² *Ibid*

REAL-TIME INVENTORY

It all starts with accurate inventory of all medical and IoT devices. The Ordr SCE gathers real-time inventory information in a fully automated way, but using a passive approach that does not impact the device. Ordr sees the device the moment it becomes active in the network, records operational activity, and records the time it goes offline. Real-time inventory information is extremely useful in many ways.

Device information from type/model/modality, serial numbers to software information can provide the following insights:

- Automatic categorization for ease of management
- Devices that are connected vs in use, for how long and their activities
- Device network location information for tracking and comparison

CLASSIFICATION PROFILES

The screenshot displays a grid of 21 device classification profiles. At the top, it indicates 'Total 60 Profiles match text filter' and a search filter for 'medical'. Each profile includes a device image, a title, a count of devices, and a status icon (Learning or Active).

| Device Name | Count | Status |
|----------------------------|-------------|----------|
| Baxter-35700BAX-Spectru... | 276 devices | Learning |
| Masimo-Pulse Oximeter | 95 devices | Learning |
| NovaBiomedical-Glucose ... | 44 devices | Learning |
| Rauland-Nurse Call Syst... | 17 devices | Learning |
| Zebra-Mobile Computer | 12 devices | Active |
| Pacsgear-Medical Workst... | 9 devices | Active |
| Philips-7C70 | 9 devices | Learning |
| HewlettP-Medical Workst... | 6 devices | Active |
| Philips-Azilion-Xray An... | 2 devices | Learning |
| SiemensH-Diagnostics | 5 devices | Learning |
| Vmware-Medical Workstat... | 4 devices | Active |
| Bayer-Certegra-Medical ... | 3 devices | Active |
| GE-OEC-9900-CSP-Xray An... | 3 devices | Learning |
| GE-Optima XR220 | 3 devices | Learning |
| Siemens-Fluorospot Comp... | 3 devices | Learning |
| Abbott-i-STAT-Portable... | 2 devices | Learning |
| GE-Definium5000-Digital... | 2 devices | Learning |
| GE-Discovery XR656-Digi... | 2 devices | Learning |
| GE-Vivid E9-Ultrasound | 2 devices | Learning |
| GE-Xray Angiography | 2 devices | Learning |
| GEMEDICA-Nuclea | 2 devices | Learning |

TRACK UTILIZATION OF HIGH-CAPITAL EQUIPMENT

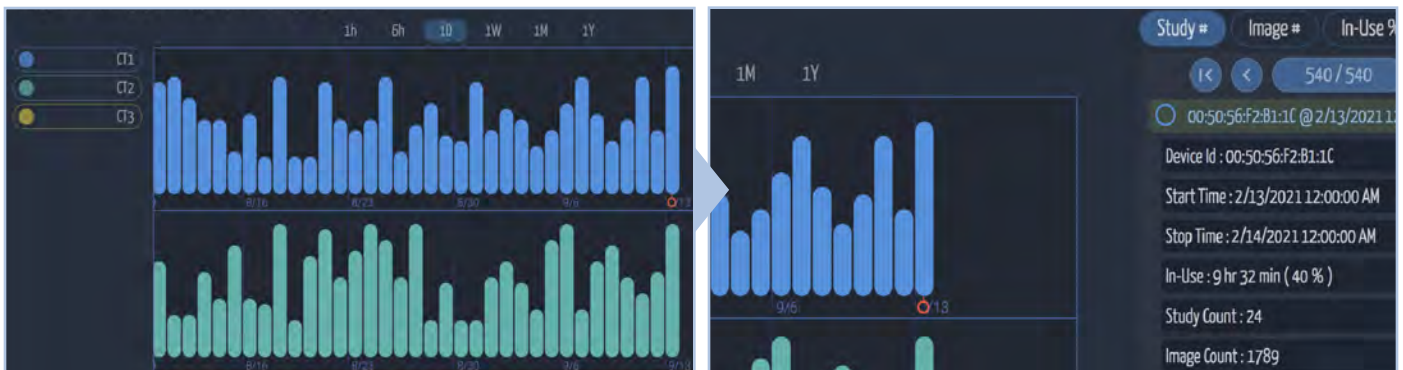
DEVICES UTILIZATION



High capital imaging devices like MRI, CT Scanners, and X-Ray machines are investments that need to be used effectively for better ROI. The Ordr SCE is always ON and gathers this information from the network in real-time that is otherwise very hard to track. These detailed usage insights provided by the Ordr SCE greatly improves capital planning and avoidance:

- Identify underutilized high-capital equipment to increase the utilization by 25% or more
- Provides Study count and Image count which could be used to optimize maintenance/parts-replacement schedule and potentially increase the life span of the medical devices
- Reduce re-setup time with the “Body parts examined” metrics
- Compare and contrast device utilization across different facilities to identify and improve operational efficiency of under-utilized equipment
- Understand the usage patterns along with ordered physician name providing insights to adjust working hours/schedules

UTILIZATION DETAILS AND COMPARISON



TRACK UTILIZATION OF FLEET EQUIPMENT

Medical devices like Infusion pumps, Patient monitoring systems, ECG's have different characteristics and challenges. Ordr SCE's highly customizable user interface does auto grouping of fleet devices to present fleet utilization. The utilization is customizable for the working hours of the hospitals/departments in order to provide meaningful data:

- Consistent high usage or bursty usage help decide whether to buy or rent fleet equipment
- Compare across facilities and decide how well they can be distributed
- Identify fleet devices that are offline and put them back in service
- Reduce detective work for nurses and technicians, potentially saving 20 mins per shift per employee

UTILIZATION OF INFUSION PUMP



PUTTING IT ALL TOGETHER

To make it all work, HTM and Clinical Engineering teams need a flexible way to manage the medical devices operation schedule in order to get accurate utilization information.

ACTIVE DUTY SCHEDULER

Schedule Name: Extended Hours

| Hour | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Info |
|----------|--------|--------|---------|-----------|----------|--------|----------|------|
| 6:00 AM | 13% | 12% | 11% | 12% | 12% | 11% | 11% | |
| 7:00 AM | 12% | 12% | 12% | 12% | 15% | 10% | 11% | |
| 8:00 AM | 11% | 11% | 11% | 11% | 12% | 11% | 11% | |
| 9:00 AM | 12% | 11% | 13% | 12% | 12% | 11% | 10% | |
| 10:00 AM | 12% | 12% | 11% | 12% | 11% | 11% | 11% | |
| 11:00 AM | 11% | 11% | 12% | 11% | 11% | 11% | 10% | |
| 12:00 PM | 11% | 11% | 11% | 11% | 12% | 10% | 11% | |
| 1:00 PM | 11% | 11% | 12% | 11% | 10% | 11% | 10% | |
| 2:00 PM | 10% | 11% | 11% | 11% | 12% | 10% | 9% | |
| 3:00 PM | 12% | 10% | 11% | 11% | 12% | 10% | 10% | |
| 4:00 PM | 11% | 11% | 10% | 11% | 14% | 10% | 10% | |
| 5:00 PM | <1% | <1% | <1% | 1% | 2% | 1% | 1% | |
| 6:00 PM | <1% | <1% | <1% | <1% | 2% | 1% | 1% | |
| 7:00 PM | <1% | <1% | <1% | <1% | 1% | <1% | <1% | |

Cancel Changes Save Changes

To make the right comparison, Ordr SCE provides the ability to filter and compare between facilities.

COMPARISON OF DEVICE UTILIZATION BETWEEN FACILITIES

Summary Imaging Devices

All Locations

Fremont
Menlo Park
Monterey
San Jose - North
Sunnyvale

| Assigned Color | No. | Device Mac | Device Label | Location | Profile | Utilization | Actions |
|----------------|-----|-------------------|------------------|------------------|----------------------------|--------------|---------|
| | 12 | | | | | | |
| All Devices | | Underutilized | Normal | Overutilized | | | |
| 12 | | 0 0% | 12 100% | 0 0% | | | |
| | 1 | 44-4B-5D-3E-F7-75 | CT.cprhealth.com | Fremont | GE-HighSpeedCTi-CT | 28% (Normal) | |
| | 2 | 44-4B-5D-0B-4E-04 | CT.cprhealth.com | Fremont | GE-HighSpeedCTi-CT | 26% (Normal) | |
| | 3 | 44-4B-5D-2B-49-42 | CT.cprhealth.com | San Jose - North | GE-HighSpeedCTi-CT Scanner | 23% (Normal) | |
| | 4 | 44-4B-5D-19-0D-64 | CT-2A | Fremont | GE-HighSpeedCTi-CT Scanner | 26% (Normal) | |
| | 5 | 44-4B-5D-1A-D2-EC | CT.cprhealth.com | Sunnyvale | GE-HighSpeedCTi-CT Scanner | 25% (Normal) | |
| | 6 | 44-4B-5D-1D-65-02 | CT.cprhealth.com | San Jose - North | GE-HighSpeedCTi-CT Scanner | 25% (Normal) | |

Month Week

REDUCE DOWNTIME AND IMPROVE ROI

Wouldn't it be wonderful to:

- Reduce the service calls by 25%
- Keep a million-dollar scanner in service for couple more years
- Keep the down time to few hours instead of days
- Reduce CAPEX

Ordr SCE's utilization and analytics metrics can be used to determine the longevity of certain medical devices.

- Extend the life of certain medical devices based on study or scan count instead of pure timelines
- Extend the service duration or component replacements based on scan or study count accurately
- Preventive maintenance based on actual usage of highly utilized equipment to avoid unexpected down-time
- Schedule upgrades and patches on light usage days/hours to minimize disruption of operation
- Make better investment decisions - buy/rent/reallocate

CONCLUSION

The annual spend on medical devices runs into the multi-millions every year and is the bulk of total spending of any hospital. Armed with real-time and accurate utilization data from the Ordr Systems Control Engine, HTM and Clinical Engineering teams can confidently make key decisions to optimize device usage for increased cost saving and a better patient experience.



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