How We Make it Happen:
Patient Monitor Deployments

Introduction

Physiological monitors are a core component of any healthcare organization. The ability to accurately measure and assess patient vitals information is crucial to ensuring your patient population is correctly diagnosed and treated. Whether in a high acuity, low acuity, or emergency environment, these devices need to have the correct functionality, integration, and overall setup to achieve your organizational goals and needs.

Often, physiological monitoring deployment is paired with a need for remote monitoring and telehealth capability to provide continuous and seamless patient monitoring. A series of monitoring vendors, models, and various technologies are required as patients are diagnosed, receive acute care, and receive post-acute care. Planning for and rolling out this equipment is a large complex project which can strain an organization's Project Management Office.

Challenge/Situation

In the current fast-paced environment, it is ever increasingly important that your organization navigate through product selection and implementation as rapidly as possible, while maintaining a high level of confidence in your end product.

Physiological monitor purchases are interdisciplinary ventures that require collaboration and consensus from all parties involved including nursing, physicians, Biomed, clinical engineering, IT, security, material services, supply chain management, and procurement.

Health systems often encounter the following challenges when going through the selection and implementation processes for physiological monitors:

- **Internal Scheduling**: the areas that most need these machines are also some of the busiest in an organization. It's essential to coordinate between the various groups to get decisions made and create an implementation plan and timeline.

- **External Scheduling**: much like everything in the healthcare world, timeliness is key when selecting and deploying these physiological monitors. Manufacturers are

under increased strain to meet the demand of the needs in this area, so it is crucial to make decisions promptly – as lead times can be as long as 16 weeks for certain monitors

- **Peripherals**: whether this is cabling, regulatory compliance, construction that needs to be completed prior to go-live, or ordering consumables to be ready for day 1, there are many elements that can be easily overlooked. It is imperative for a smooth deployment that all of these small details be considered when planning out your deployment strategy.

- **Changing Technology**: It is imperative that you understand your vendor's sunset and support plans to ensure that your organization will be properly supported throughout the lifespan of the monitors you select.

- **Infrastructure**: when determining which vendor will suit your needs, it is not just the end-user hardware that needs to be assessed. For most vendors, you will need to have compatible wireless networks and storage solutions.

Our Approach

Due to the unique challenges of these projects, it is critical that they be well managed by people with this specific experience. By taking the time in the early days of the project to fully understand all your needs, we give you accurate estimates on the time, costs, and resources needed for deployment.

Once a product is selected, and even as part of the product selection process, HDM is experienced in collecting information that might affect the end decision – including network requirements, hardware considerations, and security assessments. HDM will provide your organization with our scope template which we will tailor to your specific needs. With all this information, HDM will create a customized project plan which takes all these factors into account. We will engage with the appropriate teams to pull in experts on each of these areas and fully assess your organization's needs to curtail our plans to your specific requirements.

There are six key areas that we will work with your institution to ensure you have a success physiological monitor deployment project:

Product/Vendor Selection

Selecting the right vendor and product for your needs is essential to a successful implementation of your new physiological monitoring equipment. It is critical that you determine upfront how the decision will be made. Depending on your organization, this

may be selection by committee, selection by unit, or some other method that functions within your organizational structure. Whatever path you take for making the decision, it's critical to collect feedback from the end-users on which devices work, and more importantly, which devices will not work, for their workflow and their job function.

One of the best ways we've found to determine the pros and cons of various equipment is a Product Selection Fair. Each vendor brings their product to a multi-day event where all stakeholders can have hands-on experience with the product and ask questions of the vendor's clinical specialists and sales representatives. We work with your Subject Matter Experts to define the specific criteria that will meet your organization's needs and create a custom survey for everyone who will come to the fair. We collect this information and compile it into a comprehensive such as the following.

#	QUESTION	CAMPUS 1		CAMPUS 2		CAMPUS 3		TOTAL	
		VENDOR 1	VENDOR 2	VENDOR 1	VENDOR 2	VENDOR 1	VENDOR 2	VENDOR 1	VENDOR 2
1	Do you currently perform EKGs? Yes/No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	How frequently do you perform EKGs? N/A, Daily (D), Weekly (W), Monthly (M), Rarely (R)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	Do you have experience with the previous EKG machine? Yes/No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	On a 1-5 scale, how would you rate the workflow as it would pertain to your job function?	4.17	4.67	4.25	4.50	4.57	4.79	4.42	4.71
5	On a 1-5 scale, how would you rate the overall user experience on the device?	4.00	4.67	4.00	4.75	4.57	4.79	4.33	4.75
6	On a 1-5 scale, how intuitive is the device?	4.00	4.50	4.00	5.00	4.57	4.93	4.33	4.83
7	On a 1-5 scale, how well does the device accommodate 12 versus 15 lead workflows?	4.33	4.50	4.25	4.50	4.86	4.71	4.63	4.72
8	On a 1-10 scale, what is your overall impression of the device?	8.17	9.17	8.75	9.00	8.86	9.29	8.67	9.21
9	If you had to choose a system today, which system would you choose?	2	5	2	3	6	11	10	19

Integration and Interfaces

One of the primary complexities of physiological monitor deployment is the extensive integration and interfaces required.

- Your organization will need to complete a full analysis of the various integration and interfaces that are needed to achieve your workflows and provide clinicians with the information that they need. The most standard interface that you will use will be an HL7 interface to send orders, results, or patient information from one system to another. Your team will need to work with the vendors to identify the HL7 segments and ensure that all interfaces meet your organization's security standards.

- Once you have identified which integrations and interfaces are needed, you will need to engage each of those teams and incorporate these into your timelines - this will include build, testing, and go-live support. It is crucial that you engage with the appropriate IT teams early in the process. Your project manager should ensure that there are regular meetings with the interface and vendor teams to coordinate these various efforts.

- Since our PMs have experience with both hardware deployment and EHR implementation, we can bridge the gap between both vendors and software packages to ensure your final product can integrate or interface with your organization's EHR system.

Vendor Engagement and Management

HDM has experience with most vendors in the physiological monitor field and has built working relationships to ensure your implementation is on time and on budget. We will work closely with the chosen vendor and manage the timelines to ensure that your physiological monitors are shipped on time. Additionally, we hold the vendor accountable to the following:

- Scope Development (devices, consumables, construction, cabling, etc.)

- Project requirements

- Invoice completion

- Purchase order accuracy and completion

- Shipping dates and tracking information

- Training planning and execution

- Floor support

Procurement Tracking

After the product has been selected and you are ready to move forward, HDM will assist with managing the oversight of the procurement process. We will work with your procurement team to ensure best practices are followed and then track the progress of the procurement process to ensure that there are no delays in receiving the equipment. Our proprietary Logistics Tracker provides a one-stop-overview of the project to ensure that equipment is being tracked from the vendor to deployment.

Logistics Planning and Tracking

Logistic planning is one of the most crucial elements of any project. Due to the interconnected and complex nature of ensuring equipment shows up on-site when it is supposed to, HDM coordinates to ensure that all parties involved understand their role in the execution of your physiological monitor replacement plan. We will make sure the vendor, the shipping company, your organization's receiving department, your

organization's facilities department, and your organization's Biomed team are all on the same page for efficient delivery and installation.

Training

A key element of any deployment strategy is ensuring that end-users are adequately trained and feel comfortable with the changes to their equipment and workflows. HDM works with both vendors and hospital training staff to execute training strategies that cover all impacted staff. HDM's training plans ensure that current and future staff are all appropriately trained.

HDM has also designed creative solutions to effectively train staff on new equipment deployments while maintaining social distancing and other COVID-19 best practices. Regardless of your unique training challenges, we can ensure that all providers are effectively trained prior to go-live.

Proven Results

Health Data Movers has been part of over 30 physiological monitoring implementations in the Emergency Department, Anesthesia/OR, Cardiology, Interventional Radiology, ICUs, and PACUs at a variety of clients ranging from single hospital organizations to multi-campus, multi-year implementations. These product/vendor selections typically lead to high-dollar, high-impact projects that affect multiple disciplines within an organization. Through our proven methodology, HDM has been able to save clients upwards of $100,000 on projects by ensuring that we thoroughly review and vet vendor invoices to avoid delays to project timelines and to ensure our clients are fully prepared for their implementations.

At one San Francisco based organization, we executed a multi-year, multi-facility deployment strategy to successfully replace the entire fleet of physiological monitors. This effort entailed the replacement of over 400 physiological monitors in both high and low acuity settings. In addition to the physiological monitor replacement, HDM managed all dependent projects needed to fully execute this deployment, including network updates, re-cabling, construction, and pre-deployment work for each department.

As a response to COVID-19, HDM was able to lead the effort to outfit new COVID-19 ICU units with physiological monitoring equipment on an expedited 6-week timeline. Our established processes and tools allowed us to successfully coordinate with all involved teams to produce outstanding results and implement on-time and on-budget.

Engaging HDM

Whether you need help with vendor selection, need to implement the physiological monitors, or want to hand off the entire project, we are ready to help. When we run a full physiological implementation project, from the selection of a vendor to the deployment of the devices, it will involve almost every area of your organization. The HDM project team includes an account manager and one or more project managers depending on the scope of the project. You will also need organizational buy-in from your clinical leadership, IT leadership, and your finance department.

We find it's often most effective to use a mixed onsite/remote approach for these projects. While some activities require a hands-on approach, others can be completed virtually very successfully, thereby reducing travel costs. We will work with your team upfront to ensure we are well-coordinated but are flexible to adapt to the ever-changing environment to ensure that your organization is fully supported.

For more information, contact your Health Data Movers Account Manager, or contact us at:

- Phone: 608-618-DATA (3282)

- Email: solutions@healthdatamovers.com