



Contributor:

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SUCCESSFUL IT INFRASTRUCTURE UPGRADE AND EHR IMPLEMENTATION THROUGH CAREFUL ASSESSMENT AND PLANNING

Category:

Organizational Efficiencies

Organization Name:

United Methodist Homes of New Jersey

Other Partners:

HealthMEDX

Aruba Networks

Organization Description:

United Methodist Homes of New Jersey (<http://www.umh-nj.org>) provides Christian quality and caring services to seniors in the state of New Jersey through Independent Living, Residential Living, Assisted Living, Assisted Living +, Skilled Nursing, Memory Support Care, Respite, Hospice Services, and Affordable (HUD) Housing. Today, the Homes serves 1,400 residents, over 1,000 employees and 105 years of Excellence in Senior Living.

ProviNET Solutions (<http://www.proviNET.com>) is a full-service Information Technology consulting company offering a vast array of IT products and services and has been in business since 1991. With over 80 employees that provide a wide breadth of knowledge and expertise in technology, they serve 300+ clients. ProviNET provides technical service and support tailored to Long Term Care and has assisted many organizations with their IT assessments, EHR planning, implementation and support as well as other technology solutions.

ProviNET Solutions was born out of a long-term care provider and is very familiar with the strict demands and urgent needs of the long-term care marketplace. ProviNET started out as the internal IT department for Providence Life Services, headquartered in the greater Chicagoland area and has been supporting them since the late 1980's. Providence Life Services (<http://www.providencelifeservices.com>) owns and operates more than a dozen senior living communities and places a high emphasis on utilizing technology to streamline operations and provide premium care to its senior residents.



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Project Description:

United Methodist Homes of New Jersey (UMHNJ) engaged ProviNET Solutions in a comprehensive Information Technology audit. UMHNJ had recently welcomed a new CEO who was quickly losing faith in IT because of some technical challenges. Conclusions from the IT discovery included recommending a complete overhaul of the wide area networking, local area networking, datacenter environment and software applications. ProviNET and UMHNJ then collaborated to develop a strategic technology plan for improving the architecture and implementing an electronic health record at five senior living communities.

Solutions and Embodiments Implemented:

Following the discovery, ProviNET immediately worked with UMHNJ to create a comprehensive networking plan that included a Multi-Protocol Label Switching (MPLS) network with redundancy to each of the senior living communities in the state of New Jersey. This MPLS network allowed each community to join a common network and easily exchange information and resources through the Wide Area Network (WAN).

After a successful implementation of new WAN connections, ProviNET and UMHNJ proceeded to implement enhancements to the local area networks (LANs) by recommending, installing, and configuring all new managed switches enabled with virtual local area network (VLAN) technology. Additionally, ProviNET developed a WiFi networks with the help of Aruba Networks (www.arubanetworks.com) and using Aruba Network's WiFi planning tool. The wireless networks were put in place for multiple purposes. Today, caregivers connect wireless point-of-care devices to the network and document real time activities of daily living (ADL) and vital information about the resident, and residents connect their personal devices to the wireless for internet connectivity. All of this was done while adhering to HIPAA and a variety of other security measures to assure that Protected Health Information remained protected.

Furthermore, UMHNJ leaned on ProviNET to assist in developing datacenter space at UMHNJ's corporate office and virtualized physical servers on new virtual hosts with shared storage. The new servers host the UMHNJ domain, e-mail, application databases (for resident management, billing, finance, HR, donor management and marketing), and a distributed file system where all of the organizations' files are shared across the five senior living communities.

These updates and upgrades combine to ensure that UMHNJ had a robust computing foundation that the organization could depend on to support the

implementation of a comprehensive electronic health record.

UMHNJ worked with ProviNET to identify EHR vendors in long-term care. With the CAST EHR selection tool (<http://www.leadingage.org/ehr/search.aspx>) and a software functionality selection criteria document, UMHNJ vetted several vendors for electronic health records, ultimately arriving at a new partnership with HealthMEDX (<http://www.healthmedx.com>). ProviNET continues to assist UMHNJ through the implementation of HealthMEDX to ensure long-term success with the application.

Ongoing Support Services:

From the beginning, both UMHNJ and ProviNET Solutions realized the value of having a strategic technology plan to methodically improve information technology and build a foundation on which future technology could be supported.

Throughout the process, ProviNET provided UMHNJ with consulting services and support in a variety of facets, including:

- Outsourced/ virtual Chief Information Officer CIO/ vCIO
- Outsourced Network Administrator
- Outsourced 24x7 helpdesk support
- EHR Clinical & Financial Consulting Services

Business Model:

Aging services organizations have limited budgets and limited resources available to spend on capital, much less on technology infrastructure that has a Return on Investment (ROI) that is difficult to calculate. While use of technology increases spending/costs in the short-term and requires oversight with a high degree of technical knowledge, it has become a business imperative and there are ways for providers to save money during this process.

The best approach for getting approval for the acquiring technology is to have a defined direction, which requires planning and strategy. Rather than surprise the organization with last minute capital projects, it is better to take the time to plan out all components, stages, and costs associated with each stage. Prepare a short-term project plan as well as a long-term strategic plan that includes all aspects of the short-term projects, including capital requirements, one- time upfront costs to implement as well as ongoing support and maintenance of the systems.

Communication is key to success and must include collaborating with key decision makers as well as

management who might have their budgets affected by a large-scope project like EHR implementation. This type of project takes careful planning and upfront time to complete, but once complete, a project plan will help your organization see the total costs.

Key Area to Consider:

Infrastructure:

- Technology infrastructure requires a high level of sophistication to support and maintain an EHR at optimal levels. Enterprise-grade components for networking, computing, and connectivity should be used, especially if accessing the EHR from the cloud.
- Any given community will have to maintain all of the new technologies selected, whether touchscreens, mobile devices, wireless infrastructure, or other point-of-care devices. This will add costs, both for the management of the environment and for maintaining and replacing the equipment as it ages.
- IT teams will have to assure adequate wireless coverage and typically include a private wireless networks for Protected Health Information (PHI) and a public wireless network for residents, families and staff.
- With the increased reliance on technology, companies will need to put redundant systems in place (or as fail safe as possible) in preparation for any potential disaster that might arise.

Support:

- The technical team will need to support the new and expanded network and the users who rely on it:
- IT staff will now have to support mobile units and a variety of mobile uses at many levels. This adds another level of expertise as well as the need for good technology solutions as well as policies and procedures to address HIPAA and other security measures.
- As providers fully implement the EHR, round-the-clock IT support is no longer optional; it is required. Some organizations treat the extended support hours as “emergencies,” which can cause confusion from the end-user’s perspective.
- Good monitoring tools will be needed to assure that systems are functioning properly. These solutions have the ability to alert the IT team so that they can

respond more quickly and efficiently to risks or should something fail.

Integration and Health Information Exchanges:

- Integration, interoperability and health information exchange needs cannot be afterthoughts. They need to be considered when planning and selecting solutions.
- The access to data and the ability to mine that data in meaningful way is very important, as is the need to have disparate systems interact and exchange data. The expertise to perform these functions needs to be considered.
- Organizations will need to place a high emphasis on building Health Information Exchanges and information security to effectively communicate and exchange data with hospitals, pharmacies, physicians, and other providers. This will require collaboration between operations, IT, and other teams and will require an added level of expertise to build and maintain such interfaces.

Advantages to the Approach:

Cost Savings:

One of the prime areas for potential cost savings is virtualization and cloud computing. Cloud computing generally includes outsourcing of the data center, specific application, or desktop software. It reduces the capital investment in servers, server rooms, back-up and recovery as well as the cost of maintaining and upgrading such infra-structure. On the application side, this is commonly referred to as a software as a service (SaaS) model. Instead of making a large up-front capital purchase for application software, organizations can pay per-use and over of time. Many EHR providers refer to this as “term licensing.” While this can be complicated when considering exit strategies, the short term savings realized by the SaaS model should be considered as part of the entire selection process to see which method is best for your organization.

Consulting Expertise:

Staff outsourcing is growing in popularity among many providers, especially in areas where a local presence is not required. There are many tangible benefits for outsourcing. One of the most important advantages is that it becomes the responsibility of the vendor to provide the needed staffing, which eliminates any turn-over issues that would otherwise be the provider’s concern. Many of the services that a provider needs from the IT department are not full-time equivalents. The right outsourced team can

provide and manage the necessary staff based on the actual workload or potential project. The result is that you only pay for what you need, as long as you need it.

Collaborative Diversity:

Another advantage to outsourcing is the breadth of knowledge and experience available. The right partner can provide solutions on a wide range of IT issues, including:

- From the support side, leveraging the **Helpdesk Team** and **Call Center**.
- The **Software Support Team** provides end-user support and training for the software applications.
- On the technical side, leveraging the **Engineers and Technical Staff** who maintain the servers, run data centers and deliver the technical solutions.
- A **Networking and Communications Team** can deliver and support hardware for Wi-Fi coverage, telephone systems, cabling, and internet access as well as life safety systems.
- The **Development Team** provides database administration, integrations, and custom software development.
- The **Client Care Team** provides customer service and helps clients with acquiring hardware or other services.

Outcomes:

Today, United Methodist Homes of NJ has a robust IT infrastructure with a modern electronic health record and has positioned itself to securely share information with other providers, while continuing to build on its IT platform. Today, associates of UMHNJ have better collaboration through technology, are more productive because of less downtime and faster computing platforms, and have assurance of higher security through new IT policies and procedures.

Larry Carlson, CEO of United Methodist Homes, explains the benefits of strategic IT planning and the partnership as follows: *“ProviNET’s technical expertise has provided our organization with a state-of-the-art technology platform that will enable both the short-term and long-term success of our organization. The only reason that our implementation of an Electronic Health Record has been so successful is because of ProviNET’s involvement.”*

Joe Velderman, Director of Consulting Services, ProviNET Solutions, summarizes the relationship, *“The partnership between ProviNET and United Methodist Homes allowed both entities to strategically plan and implement a robust technology architecture capable of supporting electronic health records and future technologies meant to enable*

quality care for the residents served. Each organization was very supportive of each other and advocated for these improvements.”

Challenges and Pitfalls to Avoid:

Changing the mindset about the role of technology is the biggest challenge!

Acceptance of the use of technology starts at the top. For some organizations, the “top” might be an administrator or executive director for a campus; for others, it might be a board, CEO, or president. Leadership support of technology is the linchpin that holds any IT project together, and in most cases, successful implementations can be traced back to buy-in from the top.

Long-term care organizations no longer have a choice whether to adopt and use technology or not! It’s simply a matter of when. Many organizations struggle for a true champion for the success of technology. If leadership understands, embraces, and supports the value of technology, many barriers to success are removed. This cannot be underestimated; many technology initiatives fail not because of the technology, but because of the lack of support within the organization.

Lessons Learned:

For those organizations considering a complete Electronic Health Record, the task might be a daunting one. There is hope! The actual choice of which EHR software vendor to choose is a very important component, especially from the operations perspective, but there are a variety of other items that need to be considered prior to carrying out the actual implementation.

The EHR selection process starts with a detailed assessment of a provider’s current state of technology and the desired state they would like to get to, based on the organization’s strategic business goals. Successful EHR implementations need to start with a good plan that contains a detailed road map of how to get from “Point A” to the final completed and fully functional EHR. This assessment should detail the company’s current physical infrastructure, the technical expertise of the existing staff, an inventory of all existing systems and software that is currently in use, existing policies and procedures, and an assessment of the capability for a provider to support the ongoing needs that any EHR will require.

Advice to Share with Others:

Find a trusted partner who has experience in the full spectrum of technology that is needed in this era of Electronic Records and Health Information Exchanges.

When selecting a technology partner, providers should consider these criteria:

- A broad product portfolio – this minimizes the number of vendors required, reducing complexity from planning through deployment. When components can be sourced through a single vendor, clients have a single source of contact. Integration will be simplified and the solution will be launched faster, with less business disruption and risk.
- Industry expertise – a vendor with a richer industry experience will provide more insight and value. With intimate knowledge of pain points, industry best practices, changing regulations and compliance challenges, such a vendor is able to provide solid strategic direction.
- Responsiveness – in a mission-critical environment, clients need a vendor that can consistently provide the appropriate level of attention and response required during every phase of the project, from the design of wireless network to ongoing end-user support.
- Longevity – solutions become an integral part of operations. To ensure robust support, the vendor should demonstrate ‘staying power’ and today, with so much need for these services, the vendor should be growing.
- Due Diligence – don’t short cut the process; be sure to spend the time up front to evaluate where your company is today with regards to technology and technology acceptance.

LeadingAge Center for Aging Services Technologies:

The LeadingAge Center for Aging Services Technologies (CAST) is focused on accelerating the development, evaluation and adoption of emerging technologies that will transform the aging experience. As an international coalition of more than 400 technology companies, aging-services organizations, businesses, research universities and government representatives, CAST works under the auspices of LeadingAge, an association of 6,000 not-for-profit organizations dedicated to expanding the world of possibilities for aging. For more information, please visit LeadingAge.org/CAST