Cost Saving Strategies for Hospitals and Health Systems

A Look at Short and Long-Term IT Opportunities

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DIVURGENT

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Introduction

After caring for patients through the worst of the COVID-19 pandemic, hospitals, health systems, and their teams are now battling another crisis – the economy. The financial strain and challenges facing the healthcare industry today are staggering and continue to be a top issue for most, if not all, healthcare CEOs[1].

As a whole, the healthcare industry has been experiencing difficult clinician shortages for years, with hospitals and health systems operating in the red largely due to a competitive labor market requiring expensive labor contracts. Patient volume has also increased causing industry pressure, partly due to patients choosing differing modes of care – a new shift that's demanding organizations to improve productivity and spending. Adding to this is the already high expenses for drugs and medical supplies, mixed with rising inflation and declining operating margins, leaving the healthcare industry in a financial crisis.

These unprecedented challenges hit the industry hard in 2022 and are expected to affect organizations well into 2023. There are now many hospitals and health systems entering 2023 with credit downgrades and revisions that is mostly based upon their increased labor costs, resulting in negative cash flow[2]. And in a recent McKinsey study, the estimated annual US national health expenditure, due to inflation, is likely to be $370 billion higher by 2027 compared to pre-pandemic times[3]. These stressful financial situations have left healthcare systems increasingly focused on discovering critical cost saving opportunities to not only keep themselves afloat, but to continue providing care to their communities.

Who Should Read This?

IT leaders looking to reduce spending within their departments

Healthcare system executives focused on cost saving opportunities that help retain staff and increase patient experiences

Anyone who is interested in options for **improving the cost of healthcare IT**

[1] Gooch, K. (2023, February 13). *The No. 1 Problem Keeping Hospital CEOs Up at Night*. Becker's Healthcare. https://www.beckershospitalreview.com/hospital-management-administration/the-no-1-problem-keeping-hospital-ceos-up-at-night.html

[2] Thomas, N. (2023, March 16). *10 Hospital and Health Systems Hit with Rating Downgrades, Downward Revisions*. Becker's Healthcare. https://www.beckershospitalreview.com/finance/10-hospital-and-health-systems-hit-with-rating-downgrades-downward-revisions.html

[3] Fleron, A., Krishna, A., & Singhal, S. (2022, September 19). *The Gathering Storm: The Transformative Impact of Inflation on the Healthcare Sector*. McKinsey & Company. https://www.mckinsey.com/industries/healthcare/our-insights/the-gathering-storm-the-transformative-impact-of-inflation-on-the-healthcare-sector

What Healthcare Leaders Can Do

What then can healthcare leaders do to help alleviate some of these challenges and realize cost savings for their organization?

With health systems largely focused on managing their costs, it is important that healthcare systems find the right balance between providing a quality patient experience and finding organizational cost realization. According to Harvard Business Review, health systems that cut spending in staffing, equipment, and supply areas actually hinder delivering quality patient experiences[4]. Equally vital is to avoid preemptively cutting jobs, especially in an already fragile workforce environment, until all cost saving opportunities have been examined and implemented. Otherwise, you risk creating a burn-out environment, with distracted and overburdened providers and staff, and providing poor patient experiences, who potentially could experience increased treatment costs or safety risks as a result.

Knowing that many organizations will be faced with cost control measures and budget cuts in these upcoming years, an investment in the right technology, and a proper audit of already acquired tech, can greatly assist in the identification of opportunities and realization of cost savings in both the short and long-term. Organizations should focus first on their short-term cost saving capabilities and then turn to the long-term cost saving opportunities.

Short-Term Cost Saving Opportunities

To start, healthcare systems must identify what top key areas of opportunity they should invest time and efforts in, based on the expectations of return and outcomes of cost savings that best meet their needs.

Decommission Systems

It is not uncommon for healthcare organizations to need access to legacy applications when implementing new systems, such as an electronic health record (EHR). If any of these systems are either still in use for more than a year post-replacement, or even just sitting idle, it is time to decommission these systems and stop paying for maintenance and licensing. It is highly unlikely that useful clinical data is still needed after a year – if information is needed, there are processes that can be implemented to reduce access to requests from health information management (HIM) rather than broadly deploy and

[4] Kaplan, R. S., & Haas, D. A. (2014, November). *How Not to Cut Health Care Costs*. Harvard Business Review. https://hbr.org/2014/11/how-not-to-cut-health-care-costs

license the applications. Some systems have legal requirements for data retention and will require archiving while others can simply be decommissioned.

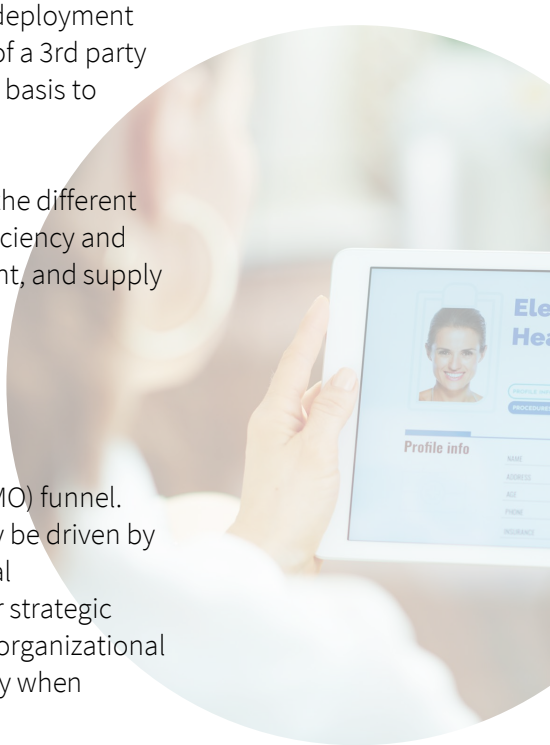
The benefits gained through this effort include decreased licensing and maintenance costs, decreased application environment complexity, and decreased cybersecurity risk.

EHR & ERP Top of Use

It's important to leverage the EHR and enterprise resource planning (ERP) to their fullest extent within the enterprise – unused capabilities within the organizational scope of needs are unmet opportunities for efficiency, growth, and cost savings. At the same time, no organization should pay for functionality it does not need or try to find a use for technology just because it is licensed. Instead, you should take time to trim unnecessary functionality from your licensure, use what you need to its greatest extent, and carve out what is not needed[5].

With the maturity of the newest EHR versions by Epic, Cerner, and Meditech, there is often little reason to use 3rd party solutions where the EHR has embedded functionality. Similar to having staff work at the top of licensure to drive cost efficiencies, leveraging all the capability of your enterprise EHR can lessen the complexity of your application portfolio, decrease 3rd party licensing costs, and simplify both application deployment and integration needs. There will be the occasion where a unique function of a 3rd party solution is necessary, but these decisions should be revisited on a recurrent basis to identify the right time to move to an embedded solution.

ERP systems can be just as complex to operationalize as an EHR. Ensuring the different systems are set up to leverage the power of a modern ERP is key to both efficiency and visibility to operational opportunities in finance, human capital management, and supply chains.



Retool PMO and Digital

Health systems seldom lack projects in their project management office (PMO) funnel. Organizations without objective and formal project approval processes may be driven by politics, the loudest voice, dilemma-of-the-day, or a first-in first-out approval methodology. None of these methods look at value, expected outcomes, or strategic alignment. Implementing a project approval process that strongly weights organizational value in the form of cost savings and revenue generation should be a priority when looking to manage spend.

[5] Bossert, O., Nocker, F., Schrey, C., & Soganic, M. (2023, February 9). *The ERP Platform Play: Cheaper, Faster, Better.* McKinsey Digital. https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-erp-platform-play-cheaper-faster-better?stcr=EF4E5AF93B1F4192A9BE66BE0D9B3594&cid=other-eml-alt-mip-mck&hlkid=3d86a501aea84034bb57ffec75acf6c9&hctky=14094962&hdpid=883b4a68-b63b-44dc-9fdb-72d34c17da78

Similarly, an organization's digital transformation strategy should be documented, aligned with value and strategic goals, and ultimately shared. Because digital programs tend to be many smaller projects coming together for a specific vision for consumer engagement and ease of use, sequencing and timelines are important. A conscious strategy starting with value, looking at dependencies, and sequencing to minimize throwaway work or non-value added work should be first priority within the governance for any digital program.

Once an organization is aligned on strategy, the human elements of a digital program need to be considered to drive success. Rarely can technology be implemented for technology's sake where people seek it out to embed it into their work processes. Thoughtful human-centered design is an often-missed key to success. Spending time creating consumer personas, journey mapping, and tying that all into the consumer experience ensures the technology will be successfully, openly, and consistently used for the long term.

Healthcare IT programs typically operate using waterfall methodologies for projects. Today's need to match the speed of digital and innovation in a PMO drives a need to adopt more Agile project management approaches. With the right project controls and agile methodologies, cultural change can be successful within healthcare IT to speed development, foster more collaboration, and keep up with market trends.

Drive Operational Efficiency

Lack of operational efficiency leads to increases in labor costs, decreases in opportunity for revenue generation, and contributes to burnout through requiring staff to complete mundane or non-value adding work. Team members feel fulfilled when performing engaging work and feeling valued for that work. Below are four opportunities to fight burnout, disengagement, and improve productivity:

Business Accountability in Clinical Areas

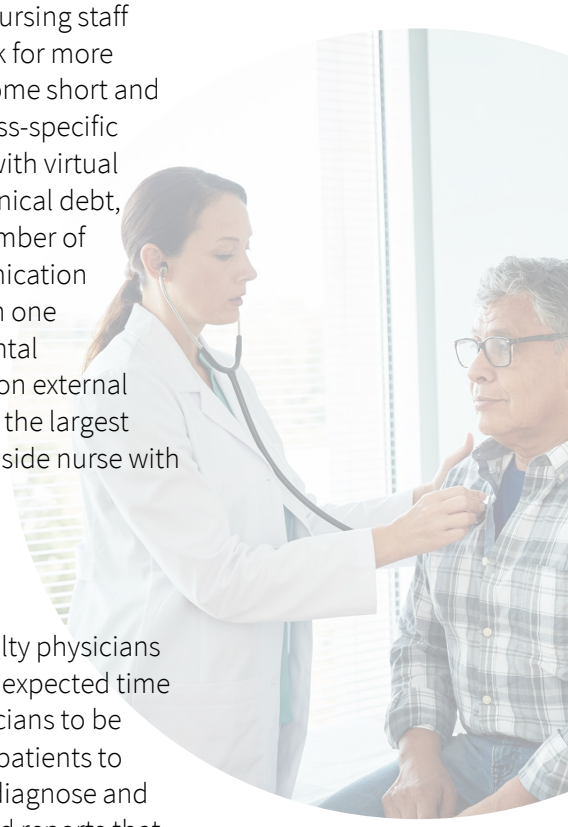
One thing that for-profit hospitals tend to do better than the not-for-profits is having front line managers on the clinical side of the house understand how their departments both generate revenue and incur expenses. Either building or revising management reports to visualize the areas of expense and revenue can provide a much-needed transparency to the managerial layer in understanding their business in addition to patient care. Creating accountability for these metrics also drives the continued application and attention to them. Some gains may be small, such as savings on low-cost supplies, but larger opportunities can be found where costs are missed completely or individuals with a closer eye on operations can identify workflow changes that can make a big difference to the organization.

Automation

Both a driver of dissatisfaction and inefficiency are the repeatable, repetitive, and redundant tasks pushed to individuals that could be automated. Robotic Process Automation (RPA) is used in healthcare, but often as an embedded tool in specific software solutions. There are now purpose-built RPA toolsets to assist in automation of tasks outside of those specific embedded solutions.
Take time to survey and interview progressing leaders and informal front-line leaders to identify mundane and repetitive tasks that staff perform. Journey mapping internal resources work processes will also identify opportunities for automation. Building automation around these tasks is typically low effort with high value. Gains can be made with productivity as well as staff job satisfaction.

Nursing Efficiency and Teleservices

The high cost of travel nursing needed to fill gaps in nursing schedules has crippled the personnel budgets at many health systems. To help combat this, ensure nursing staff have effective training and use efficient workflows that set the groundwork for more advanced initiatives. Post-pandemic training needs to be retooled to become short and targeted. Ideally, learning provides necessary training in the form of process-specific micro-learnings. Classroom instructor-led training can often be replaced with virtual instructor-led training (VILT) to gain back inefficiencies of travel time, technical debt, physical space leases, power, and HVAC and maintenance. There are a number of systems that can be used to improve department-to-department communication regarding staffing needs and overages. Instead of calling off a staff nurse in one department and then bringing in a travel nurse in another, intradepartmental communication to share staff where skills align can decrease the reliance on external staff. Newly popular is using technology as a nurse extender. Telesitting is the largest use-case, but telenursing has other potentials to give back time to the bedside nurse with patient education, admissions, and discharges[6].



Physician Efficiency

Many communities have severe shortages of both primary care and specialty physicians and the patient demands can't be met with the available resources within expected time periods. Physician burnout compounds this problem. We need our physicians to be working efficiently as possible and be given back time to spend with their patients to engage, build trust, and have access to the necessary data in real time to diagnose and treat patients. Major EHR vendors have physician efficiency scorecards and reports that can be leveraged to identify workflows that need to be redesigned, physicians or groups needing additional training, or opportunities to personalize for improved throughput. Evaluation of the data gathered, as well as input from physician's themselves, can identify if issues are workflow related or if training or personalization is needed.

[6] Carbajal, E. (2023, February 13). *5 Ways Hospitals Are Giving Nurses More Flexibility.* Becker's Healthcare. https://www.beckershospitalreview.com/nursing/5-ways-hospitals-are-giving-nurses-more-flexibility.html

Pulse Project Needs

Often the default answer to projects that do not have available staffing, whether approved or not, is to delay or deny the projects from moving forward. A shift in mindset can assist in moving projects forward rather than causing large backlogs of work, sacrificing maintenance or upkeep for new projects, or not meeting the organization's strategic goals. First is to stop saying "no" to projects but saying "yes, if".

If project resources necessary to staff and execute a project are not available internally, answering "yes, if the project budget can support the contracted resources to complete the work" can present a path forward. Additionally, experienced contracted help can add lessons learned as well as project accelerators to improve the project's success. Choosing one or two key partners that can understand your organization, fit with your culture, and quickly identify resources is a solid strategy.

Long-Term Cost Saving Opportunities

It is more important than ever for health systems to not only discover what cost saving opportunities can be considered right now, but to also find cost saving opportunities that can reduce expenses and maintain financial stability long-term. By identifying and pursuing these sustainable opportunities – such as application rationalization, managed services, and business resilience – healthcare organizations can continue to provide high-quality care and experiences to their patients.

Deeper Application Rationalization

Control of the application portfolio is the goal for long-term efficiency on application licensing and maintenance spending. Apart from personnel, this is the highest cost category for an IT department. Decommissioning the low-hanging fruit applications, or using your electronic health record (EHR) and enterprise resource planning (ERP) efficiently and to their maximum capabilities, are the first steps towards this goal. Going deeper into application rationalization requires more time and effort, but there undoubtedly exists cost saving opportunities for any healthcare organization. This is especially true for those that have undergone any merger or acquisition activity.

The first step is to gain a good understanding of your entire application portfolio. Often organizations believe they have a good handle on this, but they admittedly don't apply the diligence needed for continued maintenance of application documentation. Beyond having IT contracts and application inventory documents, performing network scans, and interviewing key operational and IT leaders can true up this inventory. Identification of key functionality and uses for the applications, as well as their capabilities, requires

industry knowledge and experience to look for opportunities to consolidate instances, replace applications, expand application usage, and identify pockets of shadow IT outside of the department.

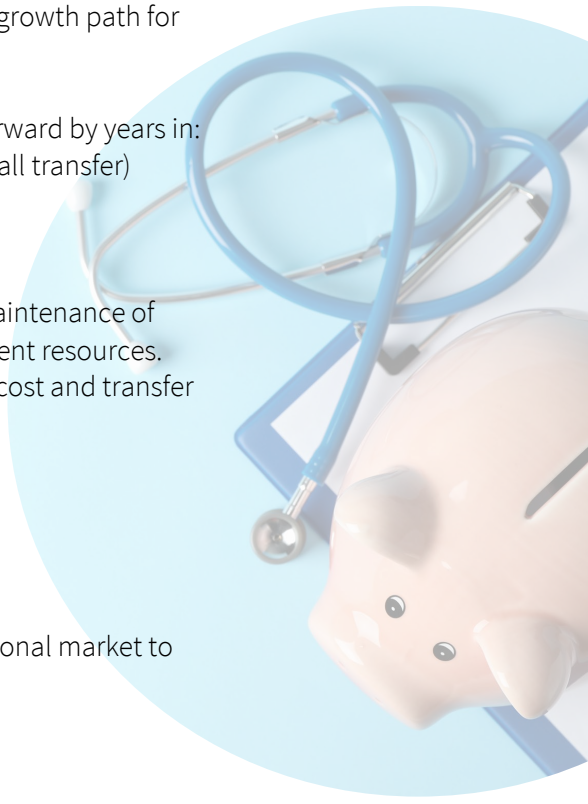
The key to completing application rationalization is making it a focused initiative instead of a one-time project. Identified opportunities should be road mapped and scoped for execution with KPIs tied to cost reductions that are measured on a semiannual basis. As new applications are added to the portfolio, proactive processes need to be implemented to prevent unnecessary growth of the application portfolio. Currently implemented and licensed software must also be used at its highest potential.

Managed Services

The largest expense for IT is typically the staff. Efforts such as robotic process automation (RPA) and pulse contracted staffing for project needs beyond internal capacity can optimize internal staffing levels. But what if you need to do more?

Outsourcing used to be an unpleasant concept. This is because outsourcing in the 90's was simply about saving dollars at the expense of quality. Today, outsourcing can still be about cost savings, but it's also about risk, service, and accountability. It also allows organizations to strategically outsource specialties in order to reduce their overhead and focus hospital dollars in other critical function areas, such as investing in needed clinicians and technology. Using managed services with a partner that understands healthcare is critical to success. The right partner in managed services can flatten the cost curve as well as meet KPIs and service levels better than internal teams. Consider the following capabilities for a managed support desk:

- Better access to hospitality and application training (provides a growth path for staff)
- Business accountability to service metrics and KPIs
- Greater access to advanced tech, springing your organization forward by years in:
  - Recording and collaboration tools (listening, whispering, and call transfer)
  - Real-time and retrospective analytics
  - Access to bots, chat tools, and real-time sentiment monitoring



The managed services partner also takes on the risk for performance, maintenance of needed technology, and staffing - including the onboarding of replacement resources. Additional managed services in healthcare IT, with similar reductions in cost and transfer of risk, include services for:

- Application Issue Management
- Upgrade Management
- Clinical Desktop Support

All of these services have the ability to discover resources across the national market to build knowledgeable and experienced teams.

Business Resilience

With a quick look at the headlines, one can understand both the direct and indirect business and health impact costs caused by downtimes or cyber-attacks. Where redundancy and backups used to be enough, we must now turn to more proactive alerting of risks and prevention of downtimes.

Resilience

Resilience is more than just the ability to recover from a failure or cutover to a redundant system. It's about early warnings, predictions, and other actions to prevent or fight off degradation or interruptions in technology services. Strategies that can be taken to build resiliency include:

- Observability. Using data from IT systems and applications to inform both real-time and predictive analytics in necessary scaling, alerting, failure risks, and integrated or cooperative needs across systems.

- Auto-Remediation. An IT systems ability to respond to observability data in order to avoid issues before the users are affected.

- Site Reliability Engineering (SRE). Ensuring that service level metrics are in place and are actively measuring, risks have mitigation plans, what can be automated is automated, proactive observability is implemented, and a mature development lifecycle is in place.

- Testing (Including Artificial Intelligence and Chaos Engineering). There are a number of emerging providers of artificial intelligence (AI) testing. The premise is that AI and machine learning (ML) are better at pattern recognition and anomaly identification than humans. Incorporating chaos engineering, also known as reverse testing, is testing that tries to break the systems being testes through false scenarios, bad data, or malicious activity. It can be easy to build IT or software systems that work when the correct data is presented or steps are followed, but chaos engineering answers the "what if" scenarios and provides a robustness for testing. This adds the opportunity to build systems that can recognize and deal with scenarios that don't follow the intended flows.

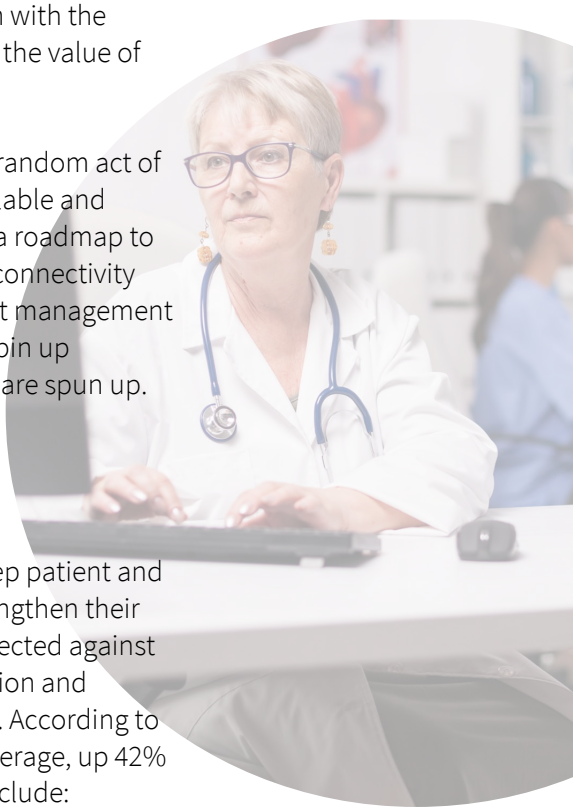
Cloud Strategy

The cloud provides several opportunities to enhance resilience. Scalability and agility are the new normal in healthcare, and that extends to IT. Organizations need a technology stack that grows when demand increases and shrinks again when demand falls off. The classic approach of building technology capacity to accommodate maximum utilization 100% of the time requires investments in infrastructure and talent that don't make sense if we are looking to optimize spend. While some applications in healthcare still are not

architected to maximize this scalability, we are seeing evolution in that direction and healthcare organizations need to continue to pressure application vendors to accelerate these efforts.

Another area of opportunity is outside of the classic compute and storage infrastructure plays in the cloud. Cloud vendors today offer a wealth of non-infrastructure services, ranging from contact center capabilities to advanced analytics, that organizations can consume on demand and based on their consumption model. Consider a scheduling call center that may see peak demand during flu season, while other times the volume drops off. With on demand contact center capabilities, the costs of things, like telephony and chat bots, can flex with the demand, allowing expenses to somewhat track to revenue.

One other consideration with the cloud is the economic shift. Healthcare's acquisition of infrastructure and applications has historically been very capital intensive, demanding large amounts of cash up front with a somewhat indirect return on investment (ROI). Moving to a cloud model allows organizations to free up that capital for investments with a more direct ROI, such as investing in new diagnostic centers or surgery suites. This shift from capital to operational spend is something that requires conversation with the financial stakeholders in the organization and discussions should include the value of cash on hand to help offset the impact to direct operational expenses.



Every organization should have a cloud strategy, but this should not be a random act of technology or an overnight move. Instead, progressively integrate the scalable and flexible capabilities of the cloud into your tech stack. Organizations need a roadmap to follow and should begin with contracting that goes through security and connectivity before any cloud services can be connected, trialed, or implemented. Cost management is another important factor in a cloud roadmap. As convenient as it is to spin up resources in the cloud, it is just as easy to spin up too many or forget they are spun up. This results in an end of month invoice surprise.

Advancing Cybersecurity

Healthcare is among the most targeted industries for cyberattacks. To keep patient and organizational data safe, it is vital for hospitals and health systems to strengthen their cybersecurity posture. Organizations must be ready to detect and be protected against cybersecurity threats, such as data breaches and theft of patient information and intellectual property, all in which can result in significant monetary losses. According to IBM, a data breach event costs the healthcare industry $10.1 million on average, up 42% since 2020[7]. Strategies that can be taken to advance your cybersecurity include:

- Train Team Members. Every team member in your organization plays a vital role in cybersecurity, not just those in an IT department. Incorporating company-wide cybersecurity trainings will provide essential information that empowers your team members to recognize potential threats and vulnerabilities, understand how to handle them, and participate in basic cybersecurity best practices, such

[7](n.d.). *Cost of a Data Breach 2022*. IBM. https://www.ibm.com/reports/data-breach

as creating strong passwords and identifying phishing scams. Phishing attacks are becoming increasingly sophisticated. Many organizations opt to participate in phishing simulations, where the IT department, or a third-party vendor, sends fake phishing emails to team members and tracks who clicks on the links. The team members who fall for the fake phishing emails are then required to watch training videos or attend further educational programs.

- Audit and Maintain IT Assets. An organizations security posture has no foundation without a proper, up-to-date inventory of owned IT assets – whether they're older systems or currently in use, on-premise or in the Cloud. Conduct and maintain an inventory audit of your IT assets and identify what technologies have not been approved of, or are unknown of, to your IT leaders. And simply knowing what assets exist is not enough; these networks, software, and systems must also be maintained and updated to ensure they have the required support needed to stay protected and effective at detecting threats.

- Regularly Conduct Security Risk Assessments. A security risk assessment is the process of identifying, prioritizing, and estimating the risk to organizational operations, assets, and individuals, as well as other organizations and the Nation, that result from the use of information systems. These risk assessments are based on your organization-wide assumptions, constraints, risk tolerances, priorities, and trade-offs, and use the calculated results of identified threats and vulnerabilities to determine the likelihood of risk occurrence and level of impact towards your organization. Conducting an initial risk assessment is significantly beneficial to your organization and it will behoove you to keep a current and up-to-date assessment. This allows senior leaders and executives the ability to perform real-time risk management as well as continuously support the organization's risk monitoring efforts and reduces future assessment costs.

- Implement an Incident Response Plan. Not only is having an incident response plan required by HIPAA under the Security Incident Procedures standard, but it's also vital in recovering from a security breach. To mitigate risk and ensure that the plan is functionally successful, it is important for organizations to develop a comprehensive, tailored response plan and practice it regularly. Organizations should also include encrypted data backup procedures, a disaster recovery plan, an organization-wide emergency mode of operation plan, and a communication strategy between IT and legal teams as part of the response plan. There are too many negative consequences to allow for a half-baked, underprepared, and unpracticed plan to exist. Data breaches are costly, they can damage the reputation of healthcare organizations, and can detrimentally disrupt patient care – many times resulting increased mortality rates[8].

- Track Security Metrics. It is important to understand where a hospital or health system's security sits compared to the healthcare industry as a whole. Utilizing

[8] Akpan, N. (2019, October 24). *Ransomware and Data Breaches Linked to Uptick in Fatal Heart Attacks.* PBS News Hour. https://www.pbs.org/newshour/science/ransomware-and-other-data-breaches-linked-to-uptick-in-fatal-heart-attacks

metrics to collect data gives organization's these insights as well as shows how a security team is functioning overtime and gives IT leaders the quantitative information needed to make critical improvements.

Some key security metrics to track include:

- Percentage of unknown and known devices logged onto your network
- Number of critical vulnerabilities, found by penetration testing
- Number of team members who've undergone cybersecurity training
- Number of fully patched and up-to-date devices on the network
- Number of known vulnerable assets
- Number of times bad actors tried to gain access without authorization
- Length of time that security threats went unnoticed (Mean Time to Detect)
- Length of time it took a security team to respond once a threat was detected (Mean Time to Resolve)
- Length of time taken to deactivate former employee access credentials
- The frequency of third party accessibility to the network (and the eventual cancelation of accessibility)

- Adopt a "Zero Trust" Model. Cybersecurity is also rapidly moving to "zero trust" models. These models essentially say "never trust and always verify" users and devices that want to access your network and data. These zero trust approaches are the best way to secure networks in our modern world. Zero trust also has ROI benefits. According to Cybertalk.org[9], zero trust has the potential to:

  - reduce data breach costs by $1.76 million
  - free up nearly 40 person-hours per week
  - make it 2x more likely to avoid critical outages due to attacks

Conclusion

With the convergence of high labor costs, burn-out, job dissatisfaction, lower numbers of clinicians entering medical schools, and the continued cost pressures on care while maintaining quality, now is the time to look to technology as a tool to drive efficiency and identify unnecessary spend to maximize the viability of healthcare organizations. Provider organizations should look at the immediate opportunities as well as long-term efforts to decrease the cost of care delivery. Technology will not replace the needs for our dedicated and caring clinicians and operational staff in healthcare, but it can serve to extend their abilities, improve the continuum of information across care modalities, and improve the safety and effectiveness of our delivery systems.

[9] (2022, August 5). *12 Illuminating Zero Trust Statistics and Trends in 2022.* Cybertalk.org https://www.cybertalk.org/2022/08/05/12-zero-trust-statistics-and-trends-in-2022/