

EHR Recommendations

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Analysis: Organizational Overview: Organization

This organization is a hospital that has multiple service lines, each of which has its patient population, and must share information regularly. The hospital's other services include an emergency department, an outpatient rehabilitation facility, and community outreach programs. Alpha needs to transition from its outdated combination of paper documentation and electronic scheduling systems to a more robust EHR that can accommodate all of its service lines. The database should allow seamless sharing of information between all its service lines while remaining user-friendly enough not to alienate the dedicated staff members who will use it daily.

This will be a complex project with many stakeholders, and the database should be able to accommodate all of them. It will need to be user-friendly enough to avoid alienating staff currently using paper documentation and electronic scheduling systems. The database should allow the hospital to share information between its service lines seamlessly. However, it should also be able to track information about each patient's history to provide better care.

The database will need to be designed so that it can accommodate all of Alpha's medical specialties, including Outpatient surgery; Orthopedic surgery; Women's health; Pediatrics; Cardiology; Family practice clinics; Internal medicine clinics; Eye care clinic; Neurology clinic; Orthopedic and sports medicine clinic; Women's health clinic; Pediatric clinic; Pulmonary medicine clinics; Endocrinology clinic; Sleep disorders center; Gastroenterology clinic; Neurology clinic; Psychiatry clinic; Cardiovascular disease management program. The database must be designed in such a way that it can handle all of Alpha's service lines. If patients are to

receive the best care possible, their medical histories must be easily accessible by doctors and nurses at any location throughout the hospital.

Analysis: Organizational Overview: Services

Alpha is a 150-bed hospital that provides a wide range of services, including primary care, specialty care, outpatient surgery, women's health, pediatrics, cardiology, neurology, and orthopedics. The auxiliary services consist of five family practice clinics; two internal medicine clinics; one cardiology clinic; one neurology clinic; an eye care clinic; a women's health clinic; and a pediatric clinic. Alpha also has an inpatient rehabilitation program and a community wellness program. Alpha's variety of service lines indicates it is well-equipped to handle the full scope of healthcare needs for its community. This allows patients to receive all their necessary treatments in one location.

The auxiliary service lines supplement the primary care services offered by Alpha by allowing patients to see specialists without having to travel elsewhere. In addition to providing convenient access to specialists, they also allow patients to receive treatment without waiting until they are admitted to the hospital. This can significantly reduce the time spent waiting for treatment at emergency departments or urgent care centers because hospitals do not have as many appointments available as hospitals do.

However, there are some limitations associated with this type of arrangement because it can leave some areas underserved or underserved entirely. This is because the number of specialists in a given area is limited, and patients may need help finding one that accepts their insurance. In addition, patients who have managed to secure an appointment with a specialist often have to wait for days or weeks before they can see them.

Analysis: Organizational Overview: Stakeholders

The stakeholders in this selection process are the physicians and nurses at Alpha, who will use the EHR daily. The reason for including these stakeholders is that they are the ones who will be using the new system and need to understand how it works. If they are unhappy with how it functions, they will not use it properly or effectively, leading to problems. In addition, they can provide valuable input on what features they would like included or removed from the system.

The other stakeholders in this process are patients and their families. They are interested in seeing that Alpha has a high-quality EHR because it affects their experience at the hospital. If there are any issues with how the nutritional information is shared between departments or if there are problems accessing records online (for example), then patients may not receive appropriate care when they need it most—in an emergency room situation or when visiting specialists who practice at Alpha regularly (like cardiologists).

Design: Applications: Health Informatics

The EHR should include an application that allows staff to create, modify and access patient information. This application should also allow staff to view and change patient schedules. The EHR should also include a scheduling application that allows staff to view and make changes to patient schedules. This application should be integrated with the patient information system so that staff can easily see which patients are scheduled for appointments, surgeries, or other treatments.

The EHR should also include an alert system that notifies staff about upcoming events, such as upcoming surgeries or appointments. The alert system should be integrated with the

scheduling application so that it is easy for staff members to see what events they are scheduled for on any given day.

Design: Applications: Requirements

Alpha is looking for a solution that will allow it to share information between all of its service lines seamlessly and yet be user-friendly enough not to alienate its dedicated staff. In order to ensure that this can happen, we will need to define some requirements for our application. For example, we will need to ensure that the application adheres to regulations and standards by regulatory bodies such as HIPAA and HITECH. These regulations include things like:

- HIPAA's Security Rule (45 CFR 164) ensures that all electronically protected health information (ePHI) is encrypted and stored securely with limited access. This includes ensuring that only authorized users have access to ePHI data, ensuring that all systems containing ePHI are secure against unauthorized access or alteration, and providing audit trails of accesses to ePHI.
- HITECH's Breach Notification Rule (45 CFR 164) requires healthcare organizations to notify patients if their information has been compromised, including loss or theft of laptops containing patient records.
- HITECH's Privacy Rule (45 CFR 164) requires healthcare organizations to inform patients about how their personal information is being used by stating clearly what they will do with that information.

- HITECH's Security Rule (45 CFR 164) requires healthcare organizations to ensure that their electronically protected health information is secure against unauthorized access or alteration and provide audit trails of accesses to ePHI.

Design: Applications: Scope

The scope of functionality for the EHR will be dependent on applications that cover the following:

- Patient care alerts: The ability to quickly identify patients with certain conditions or at risk for certain diseases is essential for proper patient care. This also includes being able to notify staff when a patient's condition changes.
- Clinical guidelines: Clinical guidelines tell us what we should do when we do not have clear instructions or where there is conflicting information about how to treat a patient. These guidelines can be particular, such as how much medication needs to be given, or they can be more general, like how to handle a patient with difficulty breathing.
- Documentation templates: Documentation templates allow us to document our work more efficiently and consistently than by typing everything in manually. This makes it possible for any staff member at any location to complete their tasks without worrying about whether or not they are doing it correctly according to company policy. All that information has been included within the template itself.

Design: Applications: Data

The design of the EHR should take into account the organization's primary data and its secondary data. The primary data will include information on patients, doctors, and other hospital staff members who are part of the patient's care team. The secondary data will include

information about all of Alpha's services, both primary and ancillary, and this data should be accessible across all service lines.

The reason for this is that if a patient is admitted to one service line but may need another at some point during their stay (maybe orthopedic surgery after an injury), then the EHR needs to be able to access the information from both service lines in order to provide seamless care for that patient.

Design: Applications: Health Information Exchange

A Health Information Exchange (HIE) system allows healthcare providers to share information. This is especially important when sharing patient data and medical records. An HIE's goal is to ensure that all the information a patient needs to get the best possible care is available, no matter which healthcare provider they visit. To meet the needs of Alpha, the applications should be able to handle HIE. The hospital's choice of applications will help it achieve this goal.

Alpha could use various applications to handle HIE, but two, in particular, would be best suited for this task: Epic and Cerner. *Epic* is an EHR that includes an HIE module. This means that it has many features that allow users to share information with other hospitals and healthcare providers, making it an ideal choice for Alpha's needs. Cerner is another EHR that includes an HIE module. Like Epic, it also has many features that allow users to share information with other hospitals and healthcare providers, making it an ideal choice for Alpha's needs.

Design: Applications: Security

The security features for internal and external threats within the application will effectively protect patient information. The application will use a firewall to prevent

unauthorized access from the internet. It will also use encryption to protect any data stored on disk, in transit, or memory. This includes passwords and other authentication information. The application will also use multi factor authentication to prevent unauthorized access to the system. This could include something like a smart card or biometrics.

Design: Applications: Disaster and Recovery Planning

The security features within the application for disaster and recovery planning will effectively protect patient information. The application offers an encrypted cloud-based backup system that can be accessed by healthcare providers at any time, even if network access has been disrupted. The application also offers a virtual private network (VPN) connection that allows users to log into the application from anywhere in the world. This ensures that patients' records are secure even if there is a significant disruption at Alpha Hospital.

Design: Applications: Computer-Assisted Coding

The application selection should include computer-assisted coding capabilities. This project aims to create an integrated health information system that will allow for the seamless sharing of patient data between all of Alpha's service lines and auxiliary services. The application selection should also include a user interface that will be easy enough for non-technical staff to use while still being robust enough to accommodate the needs of more experienced users. The application selection should also include the ability to share information with different providers and facilities while maintaining the privacy and security of patient data.

Design: Applications: Capabilities

Computer-assisted coding capabilities will significantly benefit the EHR because they allow for more accurate and detailed documentation. The most important part of the EHR is what

is being recorded and how it is being recorded. When an employee can use an application that allows them to input their data in a way that makes sense, it saves time and prevents mistakes. This software has been shown to reduce errors in patient records by as much as 80%, which means fewer patients are getting incorrect diagnoses or treatments.

Design: EHR Selection: EHR

Epic Systems is the best fit for Alpha because it will provide the organization with a robust EHR solution that can accommodate all of its service lines while also being user-friendly enough not to alienate its dedicated staff. It will serve as a gateway for all patient information, including clinical documents and laboratory data, allowing Alpha to share information between its service lines seamlessly. In addition, it can be customized based on user needs and preferences.

Epic Systems is a healthcare industry leader, with over 2,000 hospitals worldwide using its software. With Epic Systems' EHR, Alpha can seamlessly share information between its service lines yet be user-friendly enough not to alienate its dedicated staff.

Design: EHR Selection: CMS Regulations

The Epic EHR system is a certified Electronic Health Records system that meets all of the requirements set forth by CMS regulations. The Epic EHR system has proven user-friendly and easy to use. It is essential because it will allow all of Alpha's staff members to access their records regardless of where they are in the hospital.

The Epic EHR system also meets all the requirements of CMS regulations regarding security and privacy. The data stored on the Epic EHR system is encrypted and secure, preventing unauthorized individuals from accessing patient information. In addition, the Epic

EHR system meets all of the requirements set forth by CMS regulations regarding interoperability. It supports seamless sharing between Alpha's service lines and auxiliary services, allowing quick access to patient information when needed.

Design: EHR Selection: Type of EHR

The EHR selected for the organization is Epic Systems. The type of EHR chosen for Alpha is a comprehensive EHR because it will allow them to seamlessly share information between all of their service lines and provide user-friendly interfaces that will not alienate their dedicated staff (Epic, 2019). In addition, the comprehensive EHR will provide an array of benefits to Alpha. This includes:

- Accurate documentation of the patient's medical history and treatment plans
- Improved communication between teams and providers
- The ability to easily view patient records from any location
- A secure environment for storing patient information

Design: EHR Selection: Patient-Centered Technology

The EHR will support patient-centered technology through portals, allowing patients to access their medical records and make appointments directly from the portal. This will allow patients to view their information and make appointments online rather than calling the office or visiting in person. The portal will also allow employees to securely access patient information from their mobile devices to view and update a patient's information while onsite at Alpha.

Design: EHR Selection: Peripherals

The user interface design should be simple, intuitive, and easy to use. The design should be consistent across all applications and peripherals. The design should allow users to navigate

between screens within an application or peripheral easily. The design should allow users to move between applications or peripherals without having to exit one screen and repeatedly enter another.

Implementation: Data Entry

Determining how data entry will be completed is essential to the implementation process. The system should facilitate data capture in a way that's efficient for users and easy for them to navigate. Form design should be simple and intuitive so that users can quickly enter data without getting lost or confused.

This approach also needs to consider the location of the data entry forms on the screen since this can also affect user efficiency. Screen design should follow best practices for form design but also consider other factors like the number of fields on each screen (if appropriate), what information needs to be displayed, etc. A good practice is to ensure that any required fields are marked as such. In contrast, unnecessary ones are left blank or removed altogether—this helps prevent users' confusion about what they need to fill out when entering data into a particular field.

Implementation: Testing

Testing should be performed throughout the process to ensure functionality and eliminate bugs. Alpha's IT team can use the following approach to testing their new EHR: initial testing should include evaluating the proposed solution's ability to meet current needs and requirements by performing a gap analysis. The results of this analysis will help determine what additional functionality is needed before moving forward with implementation. Testing can also be carried out by creating a pilot program that allows users across multiple departments to test new features

as they become available during implementation. This will help identify issues before going live with full deployment across all departments or units within Alpha's organization.

Implementation: Education and Training

Alpha's implementation of the Epic EHR system will begin with a detailed training process. A team of instructors will be hired to travel to Alpha and train all staff members, who will then be required to pass a test on their new knowledge before being allowed to use the system. This training will cover everything from how to use the software to navigate the electronic medical record and make edits and additions to how to communicate with other physicians using the system. The training will last for one week, after which all employees will be required to complete an online certification test before accessing any patient records.

In a nutshell, we have determined that Epic Systems is the best fit for Alpha. Epic's wide range of services and user-friendly interface make it an ideal solution for Alpha's needs. We are confident that this EHR will help Alpha create a more efficient environment in which to care for its patients while at the same time allowing staff to feel more comfortable using technology.

Epic is a comprehensive system that will work with all Alpha's service lines, including family practice, internal medicine, cardiology, neurology, orthopedic and sports medicine, eye care, women's health, pediatrics, and cardiology. The system also allows for the seamless sharing of information between different medical professionals and departments within the hospital.

Reference

Epic. (2019). *Software* | *Epic*. Epic.com. <https://www.epic.com/software>