



Application Service Provider (ASP) based Electronic Health Records (EHR): Benefits for Small Physician Practices

EHR technology can be implemented using either a Client/Server (C/S) or an Application Service Provider (ASP).

In the traditional C/S model, the technology is located in the physician's office using server hardware and PC client workstations. The server stores and processes data. The client PC sends and retrieves data, presenting the data to the user in an appropriate fashion. C/S equipment is connected using different types of wired and/or wireless connections creating a Local Area Network (LAN).

In an ASP model, the data is housed off-site on the vendor's server. PC workstations in the physician office connect to the server through the Internet.

Potential Benefits of ASP Models for Small Physician Practices

Reduced Initial Cost - Up to 30% can be saved in initial hardware and reduced IT labor cost (server purchased and maintained by vendor and less technical requirements for local PCs). The typical pricing model also includes a monthly subscription fee per physician, either transaction based or a fixed amount, which must also be taken into consideration. The fees cover regular upgrades and maintenance.

Easier and Less Expensive Implementation - Local PCs are installed with minimal or no vendor involvement. Training can be conducted on-line and scheduled according to office staff availability.

Off-site Maintenance - System problems can be resolved quickly and without practice workflow disruption.

Flexible Contract Commitment - After the initial contract, typically 1 year, the physician's office can choose to discontinue the contract and move the data to another server.

Potential Barriers of ASP Models for Small Physician Practices

Speed - The type of Internet connection directly affects application speed (screen reloading). Having a DSL connection is adequate, however, a cable Internet Service Provider (ISP) will increase EHR application performance.

Security & Privacy - Accessing Protected Health Information (PHI) over the Internet increases the possibility of unauthorized access (e.g., hacking). Vendors implement data encryption, authentication and use of the Virtual Private Networks (VPN) to reduce the risk of interception.

Data Location and Ownership - Physician practices should have complete data ownership specified in their contract. Contracts should include how and in what format (standard & interoperable) data will be returned to the physician practice at contract termination.

Things to remember when considering and evaluating an ASP EHR solution:

Many EHR vendors offer both C/S and ASP solutions. In some instances, an ASP solution may lack some of the functionality found in the C/S counterpart.

If you are considering an ASP solution from a vendor who provides both C/S & ASP, request an on-site demonstration of the ASP based product.

Evaluate your Internet Service Provider (ISP). Measure the actual speed of your Internet connection on different days and at different times. To test your Internet connection, visit: <http://us.mcafee.com/root/speedometer/default.asp>

If financial constraints and/or technical support issues are barriers to EHR adoption, an ASP based EHR system may offer alternative solutions.