

The costs of adopting and maintaining an electronic health record system can seem overwhelming to a small practice.

The New York City Department of Health and Mental Hygiene has established the Primary Care Information Project to help health care providers in New York City's medically underserved areas adopt electronic health records.

Small Practice Economics

Improve Quality of Care Through Electronic Health Records
For more information, visit www.nyc.gov/pcip

Electronic Health Records: Getting a Return on Your Investment in Quality Care

This information is being provided to help your practice understand the costs of implementing an electronic health record (EHR) system, and how, if used properly, your system can pay for itself over time.

The adoption of an EHR system requires both upfront and long-term financial investment. Practices must purchase computer hardware and software licenses, provide adequate network and Internet connections as well as cover the costs of training, system maintenance and support. However, many EHRs can help practices get a return on their investment by enhancing revenue through more complete and accurate documentation for billing, reducing the need for chart storage space and transcription services, and enabling participation in Pay-for-Prevention initiatives.

In order to understand the financial costs and benefits of an EHR system, you must first understand server models, and the costs associated with the type of server model your practice chooses.

Server Models

When adopting EHRs, practices typically select from two types of server models, each having different associated costs. Server models determine where the practice's data is stored.

1. Application Service Provider (ASP) Model – An external party stores and maintains the practice's data.

- > Health care providers pay monthly fees for their EHR system and an external party (in many cases, the EHRs vendor) hosts their data.
- > Health care providers access the application through the Internet.
- > Access from home or other remote sites can be easier with an ASP model.
- > The ASP site is responsible for storing and backing-up data on a regular basis.
- > The monthly fee typically includes all licensing, maintenance and support costs.

2. Client Server Model – The practice stores and maintains its own data.

- > Health care providers purchase licenses for their EHR system in advance.
- > Health care providers purchase and maintain their own server.
- > The practice is responsible for storing and backing-up their own data.
- > Health care providers access the application over a local network.
- > There is an additional yearly fee for system maintenance and support.

Practices that choose the Client Server Model need additional IT support in order to keep their servers in working order at all times. Small practices may find the ASP Model more attractive because they do not have to purchase or maintain a server, although a reliable broadband Internet connection is critical.

Some EHR systems may use additional technologies such as Citrix software to enable an ASP implementation of client-server software. When you inquire about an ASP implementation, make sure to find out if you need Citrix licenses, as this can substantially increase hardware and software costs.



Three Year Cost Comparison: Sample Practice Two Full-Time Health Care Providers and Two Full-Time Office Staff

To understand the full cost of adopting an EHR system, practices should consider all elements of implementation, not just the cost of the software licenses. A three year cost breakdown for both the ASP and Client Server Models of the eClinicalWorks (eCW) package for New York City primary care providers is provided for comparison. Use the blank column to determine the costs for the EHR system(s) your practice is considering.

	eClinicalWorks Client Server Model	eClinicalWorks ASP Model	Costs: Your EHR
HARDWARE			
Laptop or Tablet Computer for each Medical Provider	(\$2,000 x 2) = \$4,000	(\$2,000 x 2) = \$4,000	
Desktop Workstation for each Full-Time Office Staff Member	(\$1,000 x 2) = \$2,000	(\$1,000 x 2) = \$2,000	
Network Printer w/ Multiple Trays	\$500	\$500	
1 High Speed Scanner	\$900	\$900	
Server (This only applies to the Client Server Model)	\$5,000	N/A	
NETWORK INFRASTRUCTURE			
Broadband Internet Service (DSL or Cable)	(\$80/month x 36 months) = \$2,880	(\$80/month x 36 months) = \$2,880	
Modem	\$100	\$100	
Router	\$600	\$600	
Wireless Access Point	\$600	\$600	
Dedicated Analog Phone Line	(\$30/month x 36 months) = \$1,080	(\$30/month x 36 months) = \$1,080	
Extra Internet Connection (or higher service level)	\$0	\$3,580	
IT SUPPORT COSTS			
Back-up and Storage (Client Server Model only)	(\$1,000 per year x 3 years) = \$3,000	N/A	
IT Services for Hardware and Network Maintenance	(4 hours per provider/month x 2 providers, at \$100/hour for 3 years) = \$28,800	(2 hours per provider/month x 2 providers, at \$100/hour for 3 years) = \$14,400	
Hosting Fees (ASP Model only)	N/A	(\$100 per provider/month x 2 providers x 36 months) = \$7,200	
Clearinghouse Fee (billing)	(\$59 per provider/month x 2 providers x 36 months) = \$4,248	(\$59 per provider/month x 2 providers x 36 months) = \$4,248	
EHR SOFTWARE AND SERVICES			
Software License			
Data Interfaces			
IMPLEMENTATION AND TRAINING FEES			
Installation and Training			
Data Migration			
ANNUAL EHR MAINTENANCE AND SUPPORT FEES			
EHR System Maintenance	First two years included. (\$900 per provider/year, x 2 providers x 1 year) = \$1,800	First two years included. (\$900 per provider/year, x 2 providers x 1 year) = \$1,800	
EHR Software Support	First two years included. (\$600 per provider/year, x 2 providers x 1 year) = \$1,200	First two years included. (\$600 per provider/year, x 2 providers x 1 year) = \$1,200	
TOTAL 3 YEAR COST	\$77,820 (\$64,708 for eligible practices)	\$66,200 (\$53,088 for eligible practices)	
ANNUAL COST (3 years divided by 3)	\$25,940 (\$21,570 for eligible practices)	\$22,067 (\$17,696 for eligible practices)	

The Department of Health and Mental Hygiene has negotiated a flat rate for NYC primary care providers for a Take Care New York Package of eCW Software and Services including: data migration, data interfaces, installation, training, and two years of maintenance and 24-hour support. (\$10,556 per provider x 2 providers) = \$21,112. Practices in underserved areas may be eligible to receive this package at a reduced price.

Ways to Recoup Your Investment

Once you have implemented your EHR system the practice may recoup its investment by enhancing revenue and increasing efficiency. It is estimated a practice can achieve a return on their EHR investment within an average of two and a half years.

Financial benefits of EHRs include:

1. Revenue enhancement through better and more thorough documentation.

- > EHRs collect billing information directly from the patient encounter and progress note sections. Procedure codes for laboratory tests, preventive health measures, diagnostic exams and other treatment options are automatically linked to your EHR's billing system, enabling you to bill seamlessly for all services you provide.
- > Practices no longer lose out on billable services due to improper transcription or third party documentation.

2. Integrated practice management solutions that promote better tracking and management of billing processes.

- > EHRs can check insurance eligibility and collect co-payments.
- > The "claims scrubber" checks for and reduces errors in claims before you submit them.
- > EHRs can submit, track and manage claims.
- > You can query your EHR system to identify patients with outstanding balances and produce a mass mailing.

3. Cost savings through the reduction of storage space and transcription.

- > P4P initiatives provide financial rewards for participating health care providers based on the health outcomes of their patients.
- > EHRs can enable easy, efficient tracking of quality indicators so that health care providers can participate in P4P programs and maximize their P4P revenue through quality improvements.

Three Year Savings and Revenue Enhancement for EHR Practices* Sample Practice, Two Full-Time Health Care Providers

	Savings on Fee-for-Service Patients	
2% increase in charge capture	(2% x \$383,100 per provider/year x 2 providers x 3 years)	= \$45,972
78% reduction in billing errors	(78% x \$9,700 per provider/year x 2 providers x 3 years)	= \$45,396
Savings in chart storage	(\$2 per square foot of storage/month x 126 sq ft x 36 months)	= \$9,072
Reduction in chart pulls by 600 charts per provider/year	(\$5 per chart x 600 charts per provider/year x 2 providers x 3 years)	= \$18,000
28% reduction in transcription costs	(28% x \$9,600 per provider/year x 2 providers x 3 years)	= \$16,128
TOTAL 3 YEAR SAVINGS		\$134,568

*Adapted from Wang SJ, Middleton B, Prosser LA, et al. A cost benefit analysis of electronic medical records in primary care. *Am J Med.* 2003;114(5):397-403.

Recent federal laws allow hospitals to subsidize EHR systems for affiliated health care providers. Access the Stark Law Exception by viewing Federal Register Volume 71, No. 152 at access.gpo.gov/su_docs/fedreg/a060808c.html.

If you are thinking about an EHR system, check with your local medical societies and the New York City Department of Health and Mental Hygiene for new and current funding opportunities.