

Electronic Medical Records

How Can You Afford (Not) To Have One???

Electronic Medical Record lecture slideset is available at:

wellcon.net

Some Things Just Change How We Work



The Need

- Correctional Healthcare
 - ✦ Large numbers of patients
 - ✦ Required documentation on each
 - ✦ Acute care generates a disproportionate amount of paper compared to other encounters
 - ✦ Defense of budget and staffing requires good data

Our Crisis

- Only 40% of paper charts available at physician encounter
- Filing backed up for months
- Ran out of storage space for paper
- Non-existent nursing documentation because they couldn't find charts
- Nurses would create multiple charts as path of least resistance

The Political Hurdles

- Money
- "Need vs. Want"
- Technological
- Information Services

Salt Lake County Setup

- Client-server model with data-center in Nashville hooked by T-1 line
- 65 terminals
- 2 high-speed paper scanners
- 2 FTE Transcriptionists
- Digital Dictation System for providers
- Digital Xray scanner
- Interfaces with custody and lab

Efficiency Study

- Before-and-After study to assess impact of an electronic medical record
- 2 observers collected all data
- 962 patient encounters
- Study design was direct observation of staff as they performed work tasks

Booking Data

- Total time in booking
- Total time for medical screening
- Backlog of patients waiting for medical screening
- Number of data points collected

Medical Records Data

- Time to access each chart for any healthcare function
- Percentage of charts located
- Time required to create new chart
- Lag time for filing booking screening

Physician Productivity

- Time required to complete note (handwritten vs. dictated)
- Number of words in note
- Percentage of charts available at visit
- Lag time for filing labs, notes
- Time from verification of medications to order written

14-day Evaluations

- Timeliness of evaluation
- Number of clinical data points per evaluation

Other Data

- Percentage of PPD's placed that were actually read
- Percentage of patients receiving nursing treatment with clinical documentation

Booking Results

<u>Parameter</u>	<u>Before EMR</u>	<u>After EMR</u>
Time in booking	190.2 min	187.3 min
Medical screen	6.91 min	6.71 min
# data points	24 items	56 items
Bullpen	1.48 people	1.73 people

Medical Records Results

<u>Parameter</u>	<u>Before EMR</u>	<u>After EMR</u>
Time to find	21.3 min	2 seconds
% located	56%	100%
Time for new chart	7.4 min	None
Filing lag time	13 days	< 24 hrs

Physician Results

<u>Parameter</u>	<u>Before EMR</u>	<u>After EMR</u>
Time for note	9.6 minutes	2.1 minutes
# lines / note	14	29
% chart available	56%	99+%
Verified Rx lag time	2.4 days	<16 hours

14-Day Eval Results

<u>Parameter</u>	<u>Before EMR</u>	<u>After EMR</u>
% completed on time	43%	99 + %
# data points	23	70

Other Data

<u>Parameter</u>	<u>Before EMR</u>	<u>After EMR</u>
% of PPD's read on time	47%	98%
% patients receiving nursing treatment <u>with</u> documentation	6%	96%

Arguing for Success

Quality Demonstration

Arguing for Success

The Money

Staff Shifting

- Medical Records staff on paper = 20 FTE to maintain same functionality
- Medical Records staff on computer = 7 FTE
- Wage of medical records clerk = \$9.78 /hr + 34% benefits = \$13.11 / hr

Staff Savings

- 13 FTE's not needed with EMR
- Yearly savings = $13 * 2080 * \$13.11 = \$354,494$

Cost of System

- Initial Software Licensing \$375,000
- Training 40,000
- Hardware (1500 * 65) 97,500

- TOTAL \$512,500

Return on Investment

- Cost of System \$512,500

- Staff Savings \$354,494

- Simple Return On Investment = 1.45
years

Summary From Our Experience

- EMR can revolutionize your facility
- No significant reverse engineering identified
- Gains in efficiency are well beyond what we had hoped
- Gains in quality are remarkable
- Documentation has been helpful in several lawsuits already
- System paid for itself in 1.45 years

The Take Home Message

- Financially you CAN afford an Electronic Medical Record system
- Quality-wise, you CANNOT afford NOT to have an EMR
- Go Forth and Conquer

Electronic Medical Record lecture slideset is available at:

wellcon.net
