The Electronic Medical Records (EMR) System
Planning Requirements

Purchasing an EMR can be a costly undertaking. It has been estimated that the cost of an EMR for an average three-physician practice can range between $50,000 and $75,000. The system's true cost is dependent on the desired functionality as well as number of providers and their support staff that will be using the system, and the degree of required customization. Regardless of cost, implementation of an EMR, as with any other system, requires a significant investment in planning. Caution is also recommended. Keep in mind that the vendor is as important as the product. Spend as much time as necessary researching each vendor under consideration. Look at their financial data – is the vendor financially sound? Look also at product support and research and development. A vendor may have been supplying an EMR product for a long time, but how often is the system updated and has it kept pace with new regulations, ways of doing business, and technical capabilities? Examine its' sales data. Identify its' clients and ask questions.

Not all EMR systems are created equal. Products that are similar on the surface may be significantly different once implemented due to a variety of issues like ease of use, configuration flexibility, and the degree of customization the vendor is willing to provide. A health center looking to purchase an EMR needs to devote time and resources in conducting the necessary analysis to ensure that the product being bought meets its stated requirements while providing the anticipated benefits.

First, ***before contacting any vendor***, develop a plan. The success of the project is dependent on this plan and how well it is adhered to. The plan outline that follows will help you get under way. Remember that these are the minimum steps that you should take (and stick to). Add additional tasks as required to meet your center's needs and requirements.

Finally, remember that cost is not the only criterion in the selection process. ***A vendor that underbids everyone is not necessarily the one that can provide the best product and support.*** An Electronic Medical Record is a clinician's tool. It helps manage all aspects of patient care. Look for systems that implement extensive online error detection and correction functions. These must check and crosscheck the diagnoses and procedures as well as other critical data against a host of known variables and prevent the user from continuing until the reported error has been

addressed. An error report produced hours after the original entry does not meet this critical requirement. The EMR system must also provide the means to look at data a myriad of ways whether they be trends in a given test value or real time alerts on medication allergies and contraindications, to real time warnings that a patient has not received scheduled or recommended tests or treatments.

Suggested EMR Implementation Plan

Define goals

a. What are the problems you want to solve by implementing an EMR?

- Examples:
    - Improve chart access
    - Enhance and/or increase productivity
    - Conduct outcome studies
    - Control cost

b. Identify potential users of the EMR and interview them. Ask each user to come to the interview with a list of problems he/she commonly encounters while performing his/her job.

c. Analyze each problem and determine the reason(s) it exists. Eliminate problems that are not solvable by implementing an EMR. For example: problems that exist because of lack of proper training are not likely to be solved by implementing an EMR and should be addressed outside the EMR system procurement process.

d. Determine if the problem is procedural in nature (i.e. can be solved by sound administrative or operational procedures). If it is, document it and recommend that the identified procedure(s) be changed or developed.

2. Determine if the services of a consultant are needed

a. Do you have the required skills in-house or do you need to augment your staff in order to conduct this work?

b. If the services of a consultant are needed, concentrate on finding someone with the following expertise:

- Planning skills
- Experience with MIS project management and vendor/product selection
- Experience in the health care industry
- Knowledge of Medical Records and EMR status and issues

3. Identify Key Office Processes

The implementation of an EMR system requires a great deal of preparation before the review of vendors and their products can begin. A careful review of office processes is critical as is the analysis of these processes.

a. Identify, analyze, and group all office processes. For purposes of this plan, the following groups are sufficient:

- Office management and administration
- Patient/Visit specific tasks

- Integration with external entities (consultants, other practices, reference labs, hospitals, etc.)

b. Conduct process analysis

- Analyze each process and document / determine its operational status using the following:
    - The process is working
    - The process is not working or is working poorly
    - The process is not available
- Review the processes and determine which ones need to be re-engineered
- Determine if new processes are needed. If so, list them.

c. Identify potential barriers to implementation, then classify them in the following groups:

- Workflow
- Data entry
- Integration / Interfacing
- Personnel

d. Interview the clinicians (providers, mid-levels, nurses) and determine / document:

- How they do their job and the information systems tools they need to do it.
- Analyze associated tools and / or procedures and group them (see 3b above)
- Desired EMR features

4. Formalize plan

At this point you should have sufficient documentation to support the plan and state the goals for the procurement and implementation of the EMR system. The next step is to re-examine the goals and formalize the plan taking care to include identified procedures and processes in need of development or re-engineering as well as their proposed start dates.

The documentation produced during this process and the formalized plan constitutes the guideline to help you get under way.