

Planning a Nurses Station in the Emergency Department

It's 4:00 p.m. in the ED. Do you know where all your charts are?

How many times a day does your staff spend time looking for a patient's chart?

How many times have you tried to devise a system to maintain a chart flow process?

Have you ever had a "Let's clean up the nurse station" campaign?

Do you ever have too many people clustered in one spot in your ED nurse station? Are they all around the unit secretary?

If you answered yes to one or more of these questions, the following can be of help.

From the time a patient enters the ED, either at triage or by ambulance, a paper trail has begun. The most common method to tell what's happening in the department and where the patients are located is to use a locator board and stacks and/or racks of charts. These systems are supposed to help the staff stay on top of what is going on with their patients. But do they? With these systems, how often do charts become not exactly lost but "missing in action"?



Example of a typical chart management system

The Cost of Lost Charts

An Emergency Department that has 50,000 visits per year averages 137 new charts a day. There are, of course, peaks and valleys in those hours, but the complexity of the chart process and the sheer volume of charts only add to potential inefficiencies.

One study shows that it can average two employees searching 45 minutes (1.5 labor hours) to find a missing chart. At an average salary of \$12 per hour for administrative help, that's \$18 per missing chart. In an ED, one missing chart per day would equal \$126 per week or \$652 per year. And chart hunting is not exactly a reimbursable activity.

Traditional Nurse Station Planning

Traditional nurse station planning focuses on the number of people using the station and/or how much space can be allocated. Planning for charts is usually just asking "How many charts do you need to store?"

The rest of the planning process, such as where to put charts with orders, is generally only addressed AFTER move-in. Then paper trays or racks may be added, or other "creative ways" are devised to establish a chart flow process. Many times the chart process has to be meshed with the cabinets and furniture instead of the other way around.

Planning for Chart Flow and Chart Management

We have found that the EDs with the most efficient nurse stations begin with planning for chart flow and chart management. Once this process is mapped out, the remainder of the station is easier to plan.

So, this is your opportunity to step back and take an objective look at what is taking place in your nurse station.

When you are analyzing the needs and work flow of your nurse station, have the staff walk through the patient's path in your department. This will help identify possible "bottlenecks" in the patient and chart flow.

Planning a Nurses Station in the Emergency Department cont'd.

Since every ED has its own unique needs and issues, the example presented here is a generic situation based on our collective experience with many projects over the years. Our goals are to help you to improve patient care and save time and money.

Most Emergency Departments still utilize paper charts on clipboards, so we will focus on this system. Computerized documentation is emerging, but at this point it is still not the norm.

Efficient chart management is twofold:

- **Chart process:** What are the various steps that occur with the chart from patient admission to discharge?
- **Chart placement:** Where are the critical designated spots within the nurse station that charts reside during the patients' stay?

Chart Process

Since each patient contact is a new visit followed by discharge or admission, the complete life cycle of an active chart takes place within the ED. Looking at the chart flow process in a diagram can help you identify your own process. The diagram at left is typical of the process in many EDs.

Chart Placement

Once the process has been identified and documented, chart placement within the station can be planned. The following five-step chart flow can be used to ensure better organization and efficiency. The basic flow within the nurse station is circular in nature, beginning and ending with the unit secretary. Refer to the nurse station diagram/chart placement system on page 3 for recommended locations.

Step 1 – Patients To Be Seen

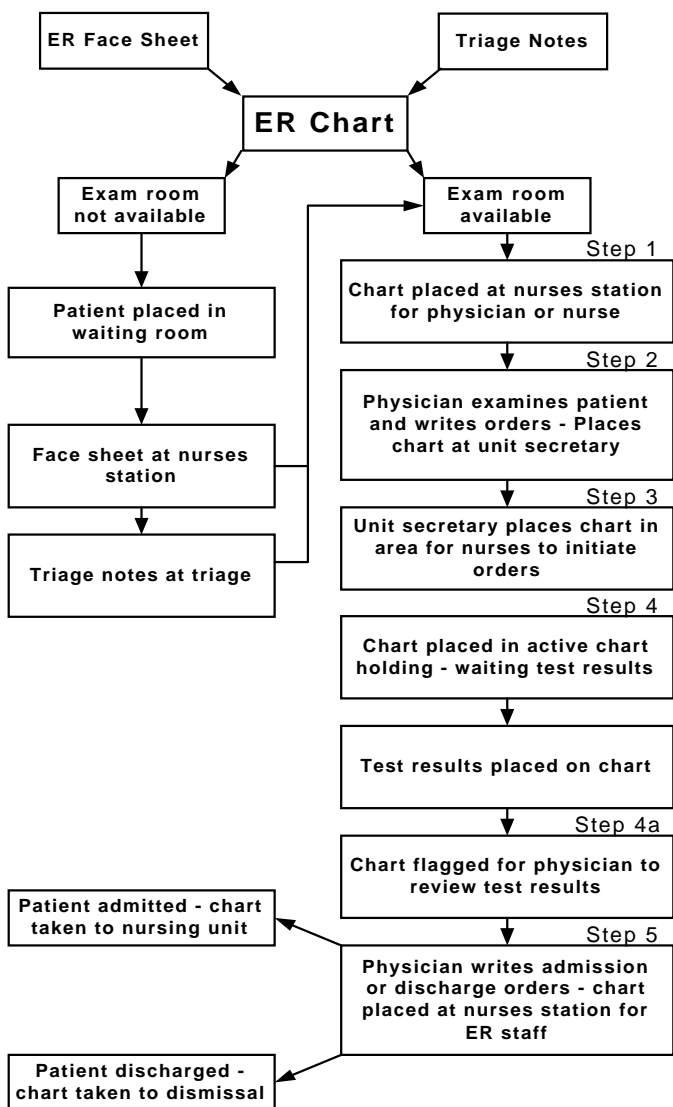
The patient has been placed in an exam room. The chart is held here for pick-up by the physician prior to seeing the patient. Many facilities organize the charts at Step 1 by the patient's level of acuity rather than by their arrival time.

Recommended location – A highly visible spot for staff as they are circulating in and around the nurse station. In many facilities, this may be near but not in the unit secretary station. Clipboard charts can be positioned in a horizontal or vertical method depending on your space constraints.

Step 2 – Order/Entry

The physician has seen the patient, written orders, and needs a place to leave the chart with the unit secretary.

Recommended location – A spot at the unit secretary station where a stack of clipboards can be easily organized and segregated from the rest of the work area. The size and number of slots depends on your individual needs. A minimum of two linear feet of shelf or counter space is recommended.



Example of a typical chart process

Planning a Nurses Station in the Emergency Department cont'd.

Step 3 – Nurses To Do

The unit secretary has entered orders and passes them on to the nursing staff to review and provide the next step in the patient care process.

Recommended location – Since this is a shared responsibility between the unit secretary and nursing, a spot that is near both zones is optimal. Visibility for the nursing staff is critical. Depending on the layout of your unit and nurse station, this spot is sometimes divided into geographic zones; i.e., acute and major treatment areas.

Step 4 – Active Chart Holding

Nursing completes the order(s) and places the chart in the chart rack until all results are complete and returned. This chart rack is organized by bed/room number and needs a slot for every bed.

Recommended location – Ideally, this spot is in a central location within the nurse station. If you have a 30-bed ED, you may need as much as 10 linear feet of shelf space. This could be a double row of shelves. Visibility and access by all caregivers is important for this spot.

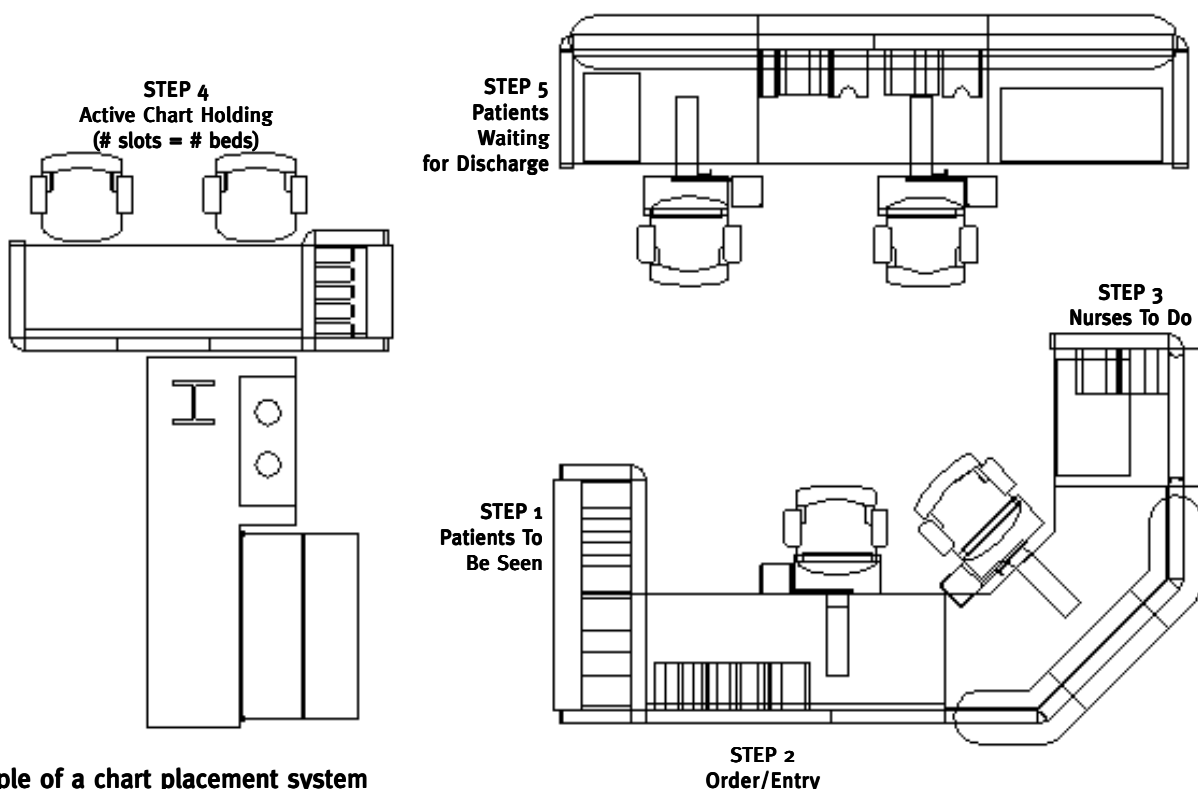
Since this is an active chart holding area, there are different systems for communicating patient status within this step. The following are examples of “steps within a step” that are required to keep track of activity.

- 4a. Once all results are returned and placed on the chart, the chart is flagged for physician review and a decision is made regarding the patient’s disposition. If further treatment is required, the physician writes additional orders and places the chart back into **Step 2-Order/Entry**, and the process continues.
- 4b. If a consult is ordered, the physician gives the chart with the order to either the nurse or the unit secretary to make the contact. The chart is then returned to **Step 4-Active Chart Holding**.

Step 5 – Patients Waiting for Discharge

If no further treatment is needed or if the patient is not admitted, discharge orders are written, and the physician places the chart in this spot. Both the unit secretary and the nurse need access to this spot.

Recommended location – This step has the smallest volume of charts at any given time compared to all other steps. A spot visible to the unit secretary and nurse is needed. Charts will likely still be on their clipboards.



Example of a chart placement system

Planning a Nurses Station in the Emergency Department cont'd.

Recommendations for Planning Work Zones

Unit secretary

In an ED, the unit secretary station will require:

- Space for working with charts
- Place for charts with orders to be stored
- Forms storage

Basic equipment for the unit secretary includes:

- Computer
- Addressograph
- Telephone
- Nurse call console

Other potential equipment may include:

- Lab printer
- Label printer
- Fax machine
- Additional computer terminal for electronic tracking system

Each unit secretary should have a minimum of 6 to 8 linear feet of workspace. In addition to the space needed for equipment, space is also required for multiple charts to be worked on at one time.

Charting Space

There never seems to be enough charting space in a nurse station for all the people that may be in the station at one time. With more and more technology being added, space is becoming even more critical.

Generally, 30 to 36 inches of charting space per person is needed if there is no computer. With a computer, a minimum of 4 feet per space for writing, a chart, and a computer terminal will be needed.

Whether the charting spaces are generic or are designated for a specific function such as physician or nursing staff, using linear feet or inches of space is a more accurate guideline than just placing as much seating as possible within the station.

Physician Charting and Dictation

Physician work areas and dictation stations will vary with each ED; however, most ED physicians will want to be near the charts labeled "Active Chart Holding." It's best to locate physician areas toward the interior of the station or the back wall away from "hallway traffic" where visitors would have easy access to physicians while they are working on charts and phones. Use the above charting space guidelines for planning this work area.

Radio/EMT Communications Center

This is the location in the nurse station for radio communication with incoming ambulances. Communication typically occurs between the ER staff and EMTs. Usually, 4 to 6 linear feet of space is needed depending on the type of equipment. How centrally located this communications center is positioned in the station is based on individual preference. However, it should be placed so that someone is always available to answer the calls/radios.

Locator System

This may be a board on the wall (usually 4 to 6 feet square). If a computer-based tracking system is used, additional spaces will need to be planned for computer monitors.

Equipment Center

A fax machine, copier, and printers should be placed near the unit secretary. The equipment should be accessible to other staff without being in the unit secretary's workspace. If there are vertical walls in the nurse station, such as a column or wall, work surfaces can be stacked to consolidate most of the equipment and not take up valuable horizontal charting space.

Monitors

Typically, monitors tend to be thought of only as cardiac monitors. Today's monitors, however, are capable of monitoring a number of body vital signs and may be referred to as physiologic monitors. Each monitor has the capacity to handle several patients' readings at one time. Monitoring in EDs occurs in the trauma or major treatment rooms as well as the cardiac room(s). The trend is to monitor every bed in the ED. The monitors need to be visible to the staff. Often they are wall or ceiling mounted.

Digital Radiography and X-Rays

Digital radiography is an emerging technology now being seen in EDs around the country. Space for the rather large computer terminals should be included in your planning. Since X-Ray films will still be used for quite sometime, if digital terminals are used, they should be located close to the view box area.

In conclusion, the nurse station in an Emergency Department is the most complex station of any patient care environment. It is chart intensive and has more functional zones than other nurse stations. The high volume of patients and the unpredictability of patient needs require that this work environment have a high degree of organization. A well planned chart management system is key towards meeting this goal.

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