Presenting Chronologies, Timelines, and Medical Summaries

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1. Organizing Medical Records

Medical records may be scanned and sent to you on a CD or through email or you may receive paper copies through US Mail, Fed Ex, UPS and other delivery services. If the medical records come to you in an electronic form, look at the files to see if they are logically organized. For example, were the records scanned in sections and organized chronologically? If not, it may be very difficult to proceed with your analysis of the records. Consider printing them out.

The rest of this section assumes you are working with paper copies. Organize the medical records before beginning the chronology. This will provide an opportunity to determine if any sections of the chart are missing. Use prepared index tabs to separate the portions of the medical record into their component parts. Keep the paper within each section in chronological order. For example, the oldest physician orders at the beginning of a hospital admission are placed on the top of the stack of orders.

Physician office records may be organized into sections, including:

- Initial patient intake form
- Ongoing list of medications
- Office visits including history, examination, and plan of care
- Correspondence sent and received
- Copies of other physicians' records
- Diagnostic test results
- Hospital records (discharge summaries, consultations, histories and physicals, operative reports)
- Prescriptions for medications and therapy
- Return to or excuse from work forms
- Billing records

Organize every record in the same order. This will make it enormously easier to find documents within a record. The order of the sections may vary depending on the types of tabs that are used.

Discard exact duplicates of medical record pages after you check to make sure the duplicate pages match in all details. The addition of a signature makes the document different; this would not make it a duplicate page that could be discarded. For example, an operative report that is unsigned should be treated as a separate document from a signed operative report. Sometimes the addition of a signature or date is important within the context of the case.

Use colored sheets to separate component parts of the medical record within a category of documentation. For example, the nursing documentation may be separated into

sections for the admission assessment, the nursing care plan, the flow sheets, the patient education record, the narrative notes, and the transfer forms. Computerized medical records often prevent separation of nursing notes into various sections.

At times, it is worthwhile to number the pages so that specific pages may be referred to within the chronology. Be sure the attorney client agrees to this plan as the numbering of large volumes of medical records can significantly add to the cost of the project. Numbering can be accomplished with a Bates stamp machine or clear peel off labels that are placed on the same spot on every page. Be sure that the medical record is complete before numbering the pages, as it is awkward to attempt to insert additional pages within a numbered record.

This section is a brief of overview of the process of organizing medical records. Refer to my *Medical Legal Aspects of Medical Records* text [1] for entire chapters on obtaining, organizing and analyzing medical records.

2. Chronologies

Sometimes the terms chronologies and timelines are used interchangeably. For the purposes of this material, I am using a chronology to explain a document that is written in narrative form. Chronologies are written when you want to provide an ordered description of events.

The entire chronology should not be a verbatim transcription of the medical records (although you may choose to transcribe significant passages verbatim.) Use your nursing knowledge to spell out abbreviations, at least the first time they are used, and make complete sentences. You are focusing on events that occurred in the past, so use past tense.

Example

"Presents with c/o SOB x 2 days" in the medical record should be written by you as "She presented with complaints of shortness of breath (SOB) for two days."

Customize the chronology to the case facts and the purpose of its preparation. Is the purpose of the chronology to:

- focus on precise timing of events?
- correlate several factors?
- define deviations from the standards of care related to events?
- compare the observations of different providers?
- contrast deposition testimony with the events recorded in the medical record?
- Create a chronological description of symptoms and treatment?

If desired, page numbers may be referred to in a chronology and key documents may be identified as exhibits. They would each be assigned an exhibit number. Typically the

exhibit is photocopied and included with a cover sheet listing all of the exhibits. For example:

1. Nursing admission assessment, 1/25/09, Minor Medical Center
2. Physician telephone order, 1/25/09, Minor Medical Center

If a word cannot be deciphered, indicate this by using ___ or ??? (cannot decipher). These words may become clearer as depositions are taken and the person who wrote the entry is asked to read his or her record for that time period.

Proofread thoroughly. Look for errors in dates, in referring to the sex of the patient, and for words that the spell checker will gloss over because they are correctly spelled but wrong within the context of the sentence. Refer to Disk 6 for more information on proofreading.

3. Timelines

Timelines are useful for understanding relationships between events and providing a quick reference for locating dates and events. There are many possible ways to extract information from records to create a timeline. You may use one, two, three or more columns to present key elements.

In Chapter 10 of this LNC Writing Handbook, I gave you a sample report that discussed the pain and suffering of a woman who received an overdose of Methotrexate. Consider how you can present this information in another way. For example, the details of the death of Carol Lucite could be displayed in several formats. These include a timeline of:

- **Events** surrounding the ordering and administration of Methotrexate.
  Key parameters could be: date, time, and event.

- **Symptoms** as the patient became toxic
  Key parameters could be date, time, source of information (nursing notes, physician progress notes and so on) and clinical presentation.

- **Laboratory results**
  Key parameters could be date, time, laboratory result, meaning of the test, and normal range.

- **Deviations**
  Key parameters could be date, time, action taken by healthcare provider, and standard of care.

Figure 1: Chronology of Methotrexate Ordering and Administration

Date	Time	Event
1/25/09	10:00 AM	Mrs. Lucite was admitted to Minor Medical Center
1/25/09	12:30 PM	Dr. Kelley phoned in an order for Methotrexate 2.5 mgs 6 tablets per day.
1/26/09	Unknown	Dr. Erlinger dictated a consultation stating the patient was taking Methotrexate 2.5 mg six per week.
1/26/09	10 AM	First dose of Methotrexate was administered.
1/27/09	Unknown	Dr. Erlinger's consultation was transcribed and placed on the patient's medical record.
		Continued.....

Note, I like to add an extra blank line before and/or after each entry. Observe how the readability improves in the next example.

Figure 2: Chronology of Symptoms

Date	Time	Source	Clinical presentation
1/25/09	10:00 AM	Nursing admission assessment	The patient was intoxicated.
1/26/09	10:30 AM	Nursing notes	The patient was pleasant, cooperative, and somewhat shaky.
1/27/09	2:00 PM	Physician progress notes	The patient was cheerful and friendly.
1/28/09	12:30 PM	Group therapy notes	Cheerful and friendly behavior was apparent in group therapy today.
1/29/09	2:00 PM	Physician progress notes	She had no specific complaints.
1/30/09	12:01 AM	Nursing notes	The patient had a moist non-productive cough with wheezing heard throughout her lungs. Her wheezing was so loud that it could be heard without a stethoscope.
1/30/09	2:00 AM	Graphic record	The patient's temperature was 100.4˚. The patient was incontinent of urine.
1/30/09	4:00 AM	Respiratory therapy flow sheet	The pulse oximeter reading was 92% (normal is 95-100%).

Date	Time	Source	Clinical presentation
			Continued....

This example has an extra line before and after each entry. Compare it to Figure 2. Which format do you prefer?

Figure 3: Chronology of Laboratory Results

Date	Time	Test Result	Normal value	Significance
1/25/09	12:15 PM	White blood cell count: 6.3	4.2-10.8	This value is elevated during the presence of infection and reduced when the patient's bone marrow is not functioning well. The value of 7.5 is normal.
1/30/09	1:00 PM	Blood glucose: 25	80-120	This is a critically low value consistent with low blood sugar. The patient was not eating well due to sores in her mouth. Her diabetes was not under control.
2/2/09	2:55 PM	White blood cell count: 0.9	4.2-10.8	This critically low value reflects the toxic effects of the Methotrexate.
2/3/09	7:00 PM	Methotrexate level drawn		The actual results of the level are not in the medical record. A physician progress note on 2/4/09 referred to the result as showing a toxic level of Methotrexate.

Figure 4: Chronology of Deviations From the Standard of Care

Date	Time	Action	Standard of Care
1/25/09	10:00 AM	Lani Spitfire RN admitted the patient. The place on the admission assessment was blank for recording the medications that the patient took at home.	Mrs. Lucite's husband, who accompanied his wife to the hospital, should have been asked to provide the nurses with a list of medications with their frequencies and dosages, or to bring in the actual pill containers for the nurse to use to document this information. This information should then be used to compare with medications ordered in the hospital. Note that the Joint Commission's National Patient Safety Goal was in effect beginning 1/1/05: "Develop a process for obtaining and documenting a complete list of the patient's current medications upon the patient's admission to the organization and with the involvement of the patient. This process includes a comparison of the medications the organization provides to those on the list." There is no indication that the nurse who admitted the patient to the hospital, Lani Spitfire, RN, made any attempt to learn the names, frequencies and doses of the medications the patient was taking. This was a deviation from the standard of care.
1/25/09	12:30 PM	Telephone order from Dr. Kelley for Methotrexate 2.5 mg six tablets per day	Dr. Kelley was expected to obtain information from Dr. Erlinger about the patient's Methotrexate dose prior to admission, and to provide an accurate order consistent with her use of the medication. As a psychiatrist, he was unfamiliar with the usual dose of Methotrexate for treating arthritis.

Date	Time	Action	Standard of Care
			He failed to check the dosage of Methotrexate with a pharmaceutical reference.
	12:30 PM	Nurse Spitfire accepted the telephone order for a dosage of Methotrexate that exceeded the recommended dosage.	Nurses are expected to know the usual doses of medications they administer. The first opportunity to catch an inappropriate dose occurs when the nurse accepts or transcribes orders from a physician. Nurse Spitfire further deviated from the standard of care by accepting a telephone order for a medication that exceeded the recommended dosage. If Nurse Spitfire was unfamiliar with the indications for use of this drug and the expected dosage range, it was her obligation to consult standard pharmacology texts. The failure to question the Methotrexate order was a deviation from the standard of care.
1/27/09	Unknown	The consultation of Dr. Erlinger was placed on the chart.	Dr. Kelley failed to read the consultation of Dr. Erlinger, which documented the prior use of Methotrexate at 2.5 mg six per week. Dr. Kelley failed to note the discrepancy and recognize that he had ordered the Methotrexate at 2.5 mg six per day. The failure to read the consultation and recognize the overdose was a deviation from the standard of care.
			Continued...

4. Software

One of several software packages may be used to create a chronology or timeline. Each has strengths.

a. Word processors: Word, Word Perfect

Word processors may be used to create tables or summaries. The data may be entered in

no particular order, and then sorted to create a chronological listing of events. These programs are easy to use and familiar.

Practice Tip - I recommend staying current with purchasing and using the latest edition of Word. Although Microsoft issues files that convert the most current version's files into a lower version, I have found that not everyone installs the converters. It is annoying to receive a file that you cannot open, and it is also annoying to have to remember to save a file as a lower version.

b. TimeMap

TimeMap is graphing software produced by CaseSoft. See the website for information. http://www.casesoft.com/timemap/index.shtml

c. PowerPoint

A chronology or timeline may be created using a horizontal or vertical format. Images or symbols may be placed next to words describing key events.

d. Adobe Illustrator

Illustrator is a sophisticated program that enables the user to create images in layers. The program permits the assembly of icons or symbols to illustrate a timeline of events. There is a learning curve associated with the use of this program. See www.adobe.com.

e. Summation

Summation is a package that permits creation of timelines or chronologies through the process of entering data into fields. Each entry is a record, which can be compiled to create a large table. The fields can be sorted to create customized views of the data. Summation also enables the user to link an entry in the timeline to a scanned page of a medical record or to a deposition. http://www.summation.com/ Other presentation software packages on the market offer similar features.

5. Medical Summaries

There are many ways medical summaries can be formatted. The focus of the case will direct the way the data is organized and the data elements that are important. Medical summaries are different than chronologies in that they tend to aggregate information. For example, a personal injury medical summary might include in one section all statements documented by treating physicians that relate the symptoms to the incident. A chronology would include each statement within the chronological rendition of the records.

This is one way to organize the material for a personal injury case.

1. Name, address and phone number of plaintiff

2. Date of incident

3. Age at time of incident
4. File Number
5. Date file was reviewed
6. Description of the incident
7. Plaintiff's initial complaints
8. Treatment rendered at the time of the incident
9. Plaintiff's current complaints, including description of how incident has changed activities of daily living
10. Diagnoses made by the physicians, dentists, and other personnel, including date
11. Prognosis, as quoted in medical reports, including date of statement
12. Causality statements that link symptoms and injuries with the incident, including date
13. Pain and suffering, as quoted in the medical records, including date
14. Summary of findings of economic or vocational expert witness
15. Diagnostic tests with findings documenting the injuries
16. Treatment including surgeries, physical therapy, counseling
17. Medications, including pain medications, and others related to injury
18. Medical bills with name of provider, beginning and ending dates of treatment, and totals
19. Listing of medical reports in the file

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[1] Iyer, P. and Levin, B. (Editors), *Medical Legal Aspects of Medical Records, Second Edition*, Lawyers and Judges Publishing Company, 2010

This is from Patricia Iyer MSN RN LNCC, Writing Handbook for LNCs: How to Stand Out in a Crowded Field, available at www.patiyer.com.