

# The University of New Mexico

College of Pharmacy, 2008

## PHARMACY 770 CLINICAL TOXICOLOGY ADVANCED EXPERIENTIAL PROFESSIONAL PRACTICE

### I. Goal and Objectives.

- A. Goals – To familiarize students with: the acute toxicity in humans of common drugs, chemicals and household products; the management of poisonings with these substances; the prevention of poisoning, and the role of pharmacists as providers of poison information.

This goal will be achieved through the completion of didactic and experiential exercises as well as direct patient care experiences under the supervision of the New Mexico Poison & Drug Information Center staff. This clerkship will provide initial training and exposure to Pharm.D. candidates who are considering the poison center or clinical toxicology as a career focus.

- B. Objectives: - Upon completion of this rotation the student will be able to:

1. demonstrate appropriate management of telephone consultations for acute or chronic exposures to potentially toxic agents for persons of all ages. It includes an ability to:
  - a) obtain an accurate and complete history from poison center clients.
  - b) obtain accurate and complete follow-up information from poison center clients.
  - c) demonstrate proficiency in the use of poison information resources.
  - d) appropriately assess the severity of poisoning.
  - e) develop an appropriate management plan based on the expected severity of poisoning.
  - f) communicate with poison center clients using prioritization of questioning, active listening, suggested techniques to establish immediate rapport, and appropriate terminology and tone throughout the contact.
2. demonstrate a broad knowledgebase in clinical toxicology by participating in didactic educational sessions, completing an in-depth review of a topic in clinical toxicology, and presenting the topic to the poison center staff.

## II. Faculty.

- A. Blaine E. Benson, Pharm.D., DABAT (NM Poison Center, HSCL 130, 272-4261, [jebenson@salud.unm.edu](mailto:jebenson@salud.unm.edu)).
- B. Staff of the New Mexico Poison & Drug Information Center

## III. Description of Activities.

### A. Rounds

You are expected to attend patient rounds each day. Round usually begin about 8:30 in the poison center. Please make sure to wear your labcoat. You will also be rounding on patients in the hospital.

### B. Readings and group discussions

The required text for this clerkship is Goldfrank LR et al, editors. Goldfrank's toxicologic emergencies. 8th ed. New York (NY): McGraw-Hill; 2006. This book is available at the UNMHSC Bookstore. It is also available electronically via UNM HSC Library & Informatics Center, through eBooks/Stat!Ref/Table of Contents. The procedure for accessing this resource is:

- 1) Go to UNM Library Home Page: <http://hsc.unm.edu/library/>
- 2) Click on "ebooks" hyperlink under "Resources" on left-hand side of the page
- 3) Click on "Stat!Ref" at the bottom of the page.
- 4) Accept conditions of use (first-time use).
- 5) Click on "Table of Contents" tab.
- 6) Click on "Goldfrank's Toxicologic Emergencies" and read desired chapters. These may be read online or printed out.

After you have accepted the conditions of use, you can access Goldfrank's via the following hyperlink:

<http://online.statref.com/TOC/TOC.aspx?SessionId=A15AE4QNALZGCJFX>

Reading assignments from the text and from materials included in the rotation notebook will be made several days in advance of the group discussion covering the material (see appendix A for complete reading list). During the group discussion, the student will be expected to have read all of the assigned materials and to be prepared to serve as a discussion leader for the topic.

1. During the sessions students must recall **from memory** the available forms of the poisoning agent, principle mode of toxic effect, pharmacokinetics of agent, classic symptom complex, methods for assessing severity of poisoning (toxic/lethal dose, laboratory assessment, patient assessment), and useful treatments.
2. Each student will receive up to 5 points for each discussion session as detailed in appendix B.

C. Call handling.

Students will be assigned to work alongside the staff of the New Mexico Poison and Drug Information Center (NMPDIC) in receiving and responding to poison information requests from health professionals and the public. Each student is expected to spend two hours per day, five days per week handling calls. The student will work under the direct supervision of the Specialist in Poison Information (SPI) on duty at NMPDIC during the assigned blocks and will not provide any responses until they are approved by the supervising SPI. Call handling will progress as follows: follow-up (first week), history taking on incoming calls (second week), history and assessment (third week), history, assessment and recommendations (fourth week). All questions, responses and recommendations will be documented using NMPDIC's Toxicall® system. All calls will be recorded and monitored by clerkship faculty. The evaluation of this part of the clerkship is presented in appendix C.

D. Clinical toxicology monograph.

Within the first 2 days of the clerkship, each student will be assigned a topic to develop an in-depth monograph for. This topic will be presented as a fully referenced written paper. A copy of all supporting reference materials shall be turned in with the monograph. The evaluation form and accompanying criteria for the paper are presented in appendix D. The format for the monograph be as follows:

1. Identifying features, to include:
  - a) Generic and chemical names
  - b) FDA approved and off-label uses
  - c) Commercial availability, including trade names and manufacturers, countries where the agent is available, and dosage forms.
2. Pharmacologic actions of the agent
3. Therapeutic dosing
  - a) Adults
  - b) Children
  - c) Elderly
4. Pharmacokinetics of agent
  - a) Absorption
  - b) Distribution
  - c) Biotransformation and excretion
5. Adverse effects of the agent, to include:

- a) Side effects associated with therapeutic doses
  - b) Effects of chronic use or exposure
  - c) Occurrence of hypersensitivity reactions
  - d) Contraindications to use of the agent
6. Fetal effects, to include:
- a) Transplacental transfer
  - b) Teratogenesis
  - c) Third trimester effects
7. Toxicity of the agent, to include:
- a) Historical and epidemiological factors
  - b) Toxic and lethal doses
  - c) Pathophysiology of acute intoxication
  - d) Symptoms of acute intoxication
  - e) Significance and availability of analytical toxicologic determinations
8. Treatment of toxic exposures, to include:
- a) First aid measures to terminate toxic exposures
  - b) Supportive care measures
  - c) Methods for enhancing elimination
  - d) Antidotal care
9. Proposed poison center protocol for handling acute exposures to agent. **The protocol must use the same design as the flowchart style used by the New Mexico Poison Center.** It must identify threshold triage values for treatment at home and treatment in the emergency department for both children and adults. It must outline basic treatments and follow-up times.

E. Literature Evaluation

Within the second week of the clerkship, each student will choose an emerging topic in clinical toxicology and will critically evaluate of the current literature on this topic. The topic may not be one that the student has researched or presented before and must be approved by Dr. Benson. The topic will be developed as a fully referenced paper.

The scoring sheet and evaluation criteria for the literature evaluation are shown in appendix E.

F. Verbal presentation of topic.

Each student will verbally present their monograph or literature evaluation paper to the staff of the New Mexico Poison & Drug Center at both of their regularly scheduled Clinical Toxicology Review Sessions. The presentation to the staff must be accompanied by a presentation outline. The outline must contain a sample case that illustrates the poisoning to

be discussed and three multiple-choice review questions. A copy of the evaluation form and grading criteria are shown in appendices G & H.

- G. All written work produced during this clerkship will conform to the style guidelines presented in: American Medical Association manual of style: a guide for authors and editors. 9th ed. Baltimore: Williams & Wilkins; 1998. All reference citations will be numbered consecutively in the order of their appearance in the manuscript and, once numbered, a reference will continue to be cited by that number throughout the manuscript. Reference style will conform to the style presented in: International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. Ann Intern Med 1997;126:36-47. For journals with continuous pagination throughout the volume, omit the month and issue number from the reference. **A copy of all references cited must be turned in at the same time the papers are turned in.**
- H. All written projects will conform to the following standards.
  - 1. Printed on white, 8.5 x 11 inch paper.
  - 2. Margins will be 1 inch all around. Body text line spacing will be either 1.5 lines or double-spacing, except for the references, which will be single spaced.
  - 3. Font: conventional serified font; no smaller than 10 point, no larger than 12. Reference citations will be superscripted.
- I. UNM is ADA-compliant. Students with special needs should make an appointment with Dr. Benson to make reasonable accommodation.
- J. Confidentiality. The activities of this clerkship will expose the student to a considerable amount of patient-specific information through cases and projects handled by the student and through the regular work of the NMPDIC being conducted while the student is present. This information is confidential and any breach of confidentiality will be grounds for dismissal from the clerkship and grounds for disciplinary action consistent with the College of Pharmacy Student Code of Conduct.

IV. Grading. Final grades will be assigned according to the following plan:

A =  $\geq 90\%$  of available points  
B = 80% - 89%  
C = 70% - 79%  
D = 60% - 69%  
F =  $< 60\%$

Student performance scores will be posted at least weekly and will be calculated according to the following plan:

Discussion sessions	56 points (or 4 points/per session)
Call responses	56 points
Monograph	56 points
Literature Evaluation	60 points
Verbal presentation	36 points

## APPENDIX A

### ASSIGNED READING

<b>Date</b>	<b>Topic</b>	<b>Goldfrank Chapter(s)</b>
	General Management	3, 4, 8, 10, A2, A3, A4
	Opioids	38, A7
	Cough & Cold Preparations	50
	Caustics and Hydrofluoric Acid	100, 101, A27
	Acetaminophen	34, A5
	Anticonvulsants	47
	Antipsychotics	67
	Alcohols and glycols	75, 103, A28, A29
	Sedative Hypnotics and Lithium	72, 68
	Salicylates	35
	Antidepressants	70, 71
	Pesticides (Insecticides & Herbicides)	109, 110, A30, A31, 111
	Iron	40, A8
	Stings & bites	115, A32, 117, A33
	Cardiovascular agents	58, 59, 62, A18, A19

**APPENDIX B**

**CLINICAL TOXICOLOGY REVIEW SESSION  
SCORING SHEET**

- \_\_\_\_\_ Communication – Able to obtain history and appropriately respond to mock client. (1-0)
- \_\_\_\_\_ Accuracy of Content – Knew all major content areas. (1-0)
- \_\_\_\_\_ Completeness of Content – Did not miss a major content area. (1-0)
- \_\_\_\_\_ Application – Able to apply the information to the mock scenario used during session. (1-0)

Topic \_\_\_\_\_

student's name \_\_\_\_\_

evaluator \_\_\_\_\_

## APPENDIX C

### POISON INFORMATION RESPONSE SCORING SHEET

#### History

- \_\_\_\_\_ Active listening – Did not need to ask for information twice. (1-0)
- \_\_\_\_\_ Completeness – Obtained all essential information. (1-0)
- \_\_\_\_\_ Prioritization of questioning – Obtained most important information first. (1-0)

#### Written Documentation

- \_\_\_\_\_ Data coding – Case properly coded according to NMPDIC guidelines. (1-0)
- \_\_\_\_\_ Completeness – All essential information included in inquiry write-up. (1-0)
- \_\_\_\_\_ Organization – Response is structured with a logical flow of information. (1-0)
- \_\_\_\_\_ Accuracy – Response was correct (1-0)

#### Verbal Response

- \_\_\_\_\_ Completeness – All essential response information communicated to client. (1-0)
- \_\_\_\_\_ Organization – Response is structured with a logical flow of information. (1-0)
- \_\_\_\_\_ Terminology – Obtained history using terminology appropriate to the educational level of the client. (1-0)
- \_\_\_\_\_ Timeliness – Complete response occurred within a reasonable time period. (1-0)
- \_\_\_\_\_ Correlation to documentation – Verbal response correlated to written documentation. (1-0)

#### Communication Skills

- \_\_\_\_\_ Courtesy – Courteous to client while obtaining details of inquiry. (1-0)
- \_\_\_\_\_ Rapport – Able to establish immediate rapport with client. (1-0)

\_\_\_\_\_ TOTAL POINTS (14 points possible)

Case Number \_\_\_\_\_

student's name \_\_\_\_\_

evaluator \_\_\_\_\_

**APPENDIX D**

**CLINICAL TOXICOLOGY MONOGRAPH SCORING SHEET**

1. \_\_\_\_ Completeness of monograph. (8-4-0)
2. \_\_\_\_ Accuracy of monograph. (8-4-0)
3. \_\_\_\_ Completeness of research. (8-4-0)
4. \_\_\_\_ References. (8-4-0)
5. \_\_\_\_ Validity of proposed protocol. (8-4-0)
6. \_\_\_\_ Organization of the written report. (8-4-0)
7. \_\_\_\_ Writing technique. (8-4-0)

\_\_\_\_ TOTAL POINTS (56 points possible)

comments:

student's name \_\_\_\_\_

evaluator \_\_\_\_\_

## CRITERIA FOR EVALUATING CLINICAL TOXICOLOGY MONOGRAPH

### 1. Completeness of monograph

All sections of the proposed monograph format were addressed completely. (8 pts)

Left out information in 1-2 monograph sections. (4 pts)

Left out information throughout monograph. (0 pts)

### 2. Accuracy

Information presented was consistent with supporting literature. (8 pts)

A few instances where monograph was not consistent with the supporting information. (4 pts)

Numerous instances where the monograph was inconsistent with supporting information. (0 pts)

### 3. Completeness of research

Student completed an extensive literature search and extensively utilized information from the primary literature. (8 pts)

Student did not utilize all potential articles from the primary literature. (4 pts)

Extensive use of tertiary literature. Little use of primary literature. (0 pts)

### 4. References

Report was well referenced with regard to stated facts or interpretations of results. Copies of all referenced articles were included and in the required format. (8 pts)

Report was referenced but student failed to cite references consistently or references were not in required format or student failed to include copies of selected references. (4 pts)

There were many essential points for which references were not provided or the references were not retrievable. (0 pts)

### 5. Ability create a valid protocol for handling acute exposures to agent

Student was able to present a valid protocol based on and supported by a careful evaluation of the available literature. Protocol was concise and followed department format. (8 pts)

Student's protocol was less than complete, or did not completely follow the supporting information presented in the monograph. (4 pts)

Student's protocol was not consistent with supporting information and/or was not practical. (0 pts)

### 6. Organization of the written report

The report was organized in a logical fashion proceeding along prescribed format guidelines. (8 pts)

Report was somewhat organized but had sections misplaced. (4 pts)

Report was highly disorganized and hard to follow; bounced around from one area to another. (0 pts)

### 7. Writing technique

The report was well written; it was legible and used correct spelling, punctuation and grammar. It was concise, but included all essential information. (8 pts)

Quality of written work was less than desirable. It was either not legible or contained errors in spelling, punctuation or grammar, or lacked expected conciseness. (4 pts)

Quality of written work was poor enough to interfere with reading. Included much nonessential information and multiple errors in spelling, punctuation and grammar. (0 pts)

**APPENDIX E**  
**LITERATURE EVALUATION SCORING SHEET**

1. \_\_\_\_ Understanding of problem (7-4-0)
2. \_\_\_\_ Appropriate background information (7-4-0)
3. \_\_\_\_ References (7-4-0)
4. \_\_\_\_ Evaluation of available literature – technique (9-4-0)
5. \_\_\_\_ Evaluation of literature – interpretation of findings (7-4-0)
6. \_\_\_\_ Ability to reach a valid conclusion and resolve the problem (9-4-0)
7. \_\_\_\_ Organization of the written report (7-4-0)
8. \_\_\_\_ Writing technique (7-4-0)

\_\_\_\_ TOTAL POINTS (60 points possible)

comments:

student's name \_\_\_\_\_

evaluator \_\_\_\_\_

**APPENDIX F**  
**CRITERIA FOR EVALUATING LITERATURE EVALUATION PAPER**

1. Understanding of problem

Problem defined succinctly; significance of problem appreciated. (6 pts)

Attempted to define problem but did not appreciate significance or dealt with it only peripherally. (3 pts)

Problem was not defined or the point was missed altogether. (0 pts)

2. Appropriate background information

Background information appropriate to recipients of report was included and was complete and concise. (7 pts)

Some background information was included but it was incomplete, not concise or was not appropriate to the level of the recipients. (4 pts)

Failed to include background information needed for the subject. (0 pts)

3. References

Report was well referenced with regard to stated facts or interpretations of results. All references were retrievable and in the required format. (7 pts)

Report was referenced but student failed to cite references consistently or references were not in required format. (4 pts)

There were many essential points for which references were not provided or the references were not retrievable. (0 pts)

4. Evaluation of available literature -- technique

Student evaluated studies in terms of experimental design, protocol, instruments of measurement and handling of results. Student contrasted data from studies and attempted to make comparisons in a logical manner. (9 pts)

Student evaluated literature but did a less than complete job or either ignored or did not attempt to account for conflicting reports. (4 pts)

Student failed to evaluate literature and simply quoted results. Where conflicting data were reported, he/she did not attempt to analyze. (0 pts)

5. Evaluation of literature -- interpretation of findings

Student was able to present data and interpret clinical significance of results as they related to the assignment. Student reported assessments of literature concisely and did not include irrelevant or unessential information. (7 pts)

Student did not present relevant data or reported on assessments that were not essential to the problem or student's understanding of clinical significance was incomplete. (4 pts)

Student was unable to pick out essential issues and formulate an assessment; included extraneous information or student failed to evaluate to literature. (0 pts)

6. Ability to reach a valid conclusion and resolve the problem

Student was able to reach a valid conclusion based on and supported by a careful evaluation of the available literature. Student reported this conclusion in a concise manner and made sound recommendations for resolution of problem. (9 pts)

Student was able to reach some conclusion based on evaluation of literature but was unable to "tie things together" and come up with a sound recommendation for resolving the problem. (4 pts)

Student did not reach a conclusion and the problem was not resolved, the student's conclusion was not based on the data presented, or the resolution is not within the range of practicality. (0 pts)

7. Organization of the written report

The report was organized in a logical fashion proceeding from clear definition of the problem through interpretation of the available literature to conclusions and recommendations. (7 pts)

Report was somewhat organized but had sections misplaced. (4 pts)

Report was highly disorganized and hard to follow; bounced around from one area to another. (0 pts)

## 8. Writing technique

The report was well written; it was legible and used correct spelling, punctuation and grammar. It was concise, but included all essential information. (7 pts)

Quality of written work was less than desirable. It was either not legible or contained errors in spelling, punctuation or grammar, or lacked expected conciseness. (4 pts)

Quality of written work was poor enough to interfere with reading. Included much nonessential information and multiple errors in spelling, punctuation and grammar. (0 pts)

**APPENDIX G**  
**VERBAL REPORT SCORING SHEET**  
**(MONOGRAPH PRESENTATION)**

1. \_\_\_\_ Understands information presented (6-3-0)
2. \_\_\_\_ Completeness of presentation (6-3-0)
3. \_\_\_\_ Ability to field questions (6-3-0)
4. \_\_\_\_ Organization (6-3-0)
5. \_\_\_\_ Ability to justify a valid, useful protocol (6-3-0)
6. \_\_\_\_ Presentation technique (6-3-0)

\_\_\_\_ TOTAL POINTS (36 points possible)

comments:

student's name \_\_\_\_\_  
evaluator \_\_\_\_\_

## APPENDIX G

### CRITERIA FOR EVALUATING VERBAL DRUG INFORMATION PROJECT (MONOGRAPH PRESENTATION)

1. Understands information present

Student understands all facets of the information presented. (6 pts)

Several aspects of the topic elude the presenter. (3 pts)

Consistently unable to grasp main concepts or ancillary concepts. (0 pts)

2. Completeness of presentation

All essential facts were included with no unnecessary material added. (6 pts)

Occasionally left out essential facts or sections. (3 pts)

Consistently left out sections or essential facts (0 pts)

3. Ability to field questions

Student was capable of answering questions from the audience regarding the assigned subject matter. Student was confident giving evidence that he/she was well informed in the area and was able to cite additional references if needed. (6 pts)

Student had occasional trouble answering questions directly related to the topic. (3 pts)

Student could not field questions directly related to assigned subject matter and had to admit that he/she did not know the answer, or, worse yet gave an incorrect response. (0 pts)

4. Organization

Presentation was organized in logical fashion, was easy to follow and flowed. (6 pts)

Presentation was somewhat organized, but student tended to skip from one subject area to another. However, all essential features were presented. (3 pts)

Presentation was highly disorganized and almost impossible to follow. Confused the audience. (0 pts)

5. Ability to construct a valid, useful protocol

Student was able to justify protocol presented. Protocol was simple to use and followed department guidelines. (6 pts)

Student had trouble justifying certain aspects of the protocol. Could not cite supporting literature and/or rationale for recommendations. (3 pts)

Student's protocol was not consistent with supporting information and/or was not practical. (0 pts)

7. Presentation technique

Student appeared confident, could be heard and understood, used changes in voice tone to emphasize importance, was a convincing presenter. (6 pts)

Student failed to meet one of the expectations for full credit. (3 pts)

Student failed to meet two or more of the expectations for full credit (0 pts)

**APPENDIX H**  
**VERBAL REPORT SCORING SHEET**  
**(LITERATURE EVALUATION)**

1. \_\_\_\_ Understanding of problem (6-3-0)
2. \_\_\_\_ Background information (6-3-0)
3. \_\_\_\_ Evaluation of available literature (6-3-0)
4. \_\_\_\_ Organization (6-3-0)
5. \_\_\_\_ Ability to reach a valid conclusion and resolve the problem (6-3-0)
6. \_\_\_\_ Presentation technique (6-3-0)

\_\_\_\_ TOTAL POINTS (36 points possible)

comments:

student's name \_\_\_\_\_

evaluator \_\_\_\_\_

**APPENDIX H**  
**CRITERIA FOR EVALUATING VERBAL DRUG INFORMATION PROJECT**  
**(LITERATURE EVALUATION)**

1. Understanding of problem

Nature and scope of problem clearly defined; significance stated clearly to audience. (6 pts)

Nature and scope of problem clear to presenter but not clearly communicated to audience. (3 pts)

Failed to define nature scope of problem or presenter did not understand it. (0 pts)

2. Background information

Background information appropriate to the level of the audience was presented; essential facts were included with no unnecessary material added. (6 pts)

Background information appropriate to the level of the audience was presented, but not completely or extraneous material was included. (3 pts)

Background information was not presented or was inappropriate for the level and needs of the audience. (0 pts)

3. Evaluation of available literature

Available literature on problem was cited and assessments based on evaluation of the literature were reported. (6 pts)

Available literature on problem was cited, but student just reported results of various studies without regard for evaluation. (3 pts)

Student was unable to cite available literature; cannot report on findings. (0 pts)

4. Organization

Presentation was organized in logical fashion, was easy to follow and flowed smoothly from definition of problem through background information and assessment of available literature to conclusion. (6 pts)

Presentation was somewhat organized, but student tended to skip from one subject area to another. However, all essential features were presented. (3 pts)

Presentation was highly disorganized and almost impossible to follow. It left doubt in the audience's mind as to the nature of the problem and conclusions. (0 pts)

5. Ability to reach a valid conclusion and resolve the problem

Student was able to reach a conclusion based on a complete search and careful evaluation of the available literature. Student reported this conclusion in a concise manner and made sound recommendations for resolution of the problem. (6 pts)

Student was able to reach some conclusion based on evaluation of literature but was unable to "tie things together" and come up with a sound recommendation for resolving the problem. (3 pts)

Student did not reach a conclusion and the problem was not resolved, the student's conclusion was not based on the data presented or the resolution is not within the range of practicality. (0 pts)

6. Presentation technique

Student appeared confident, could be heard and understood, used changes in voice tone to emphasize importance, was a convincing presenter. (6 pts)

Student failed to meet one of the expectations for full credit. (3 pts)

Student failed to meet two or more of the expectations for full credit. (0 pts)

## How To Do Well On Calls

### V. Written Documentation

#### *How To Do Well On This Section*

- Data Coding: The case should be coded according to TESS definitions.
- Accuracy: The assessment and treatment should be consistent with medically approved poison center protocols and retrievable information addressing the poisoning.
- Organization/Completeness: The auditor will be looking for the following elements:
  - Subjective Information (History)
    - Patient's age and sex, substance, amount/dose, time since exposure, patient's manifestations, pertinent negative physical findings, treatments instituted, pertinent prior medical conditions

Example: A 19 yo male ingested 300 Extra-Strength Tylenol, 2 hours ago. He complains of nausea. There is no history of alcohol abuse and he takes no other medications regularly.

- Objective Information
  - This section usually only apply to hospitalized patients. In these instances pertinent objective (measurable) information should be recorded.

Example: The patient's vital signs are BP 100/60, HR 60, RR 22, Temp 99 F

- This section might also include pertinent laboratory information. When recording drug levels, include the time since ingestion the level was drawn, the drug concentration, the appropriate units, and your interpretation of the level.

Example: 14:40 acetaminophen level (4 hours post ingestion) = 78 mcg/ml (non-toxic)

- Assessment
  - The purpose of this section is to describe and justify the level of risk to the patient. To do this effectively, the assessment should identify the toxic agent, the dose the patient was exposed to, and a comparison of the dose to a dose that has produced life-threatening effects. In cases where there is a protocol, it is acceptable to compare the patient's dose to the home treatment or emergency department triage dose.

Example: 500 mg APAP/tab. Patient ingested 20 gms if hx correct. 15 gms is a potentially lethal dose. Pt's manifestations are consistent with early signs of APAP poisoning.

- Plan
  - Summarize the treatment plan as it was discussed with the caregiver. Use numbers to order separate elements of the plan.

Example: 1. Administer AC & cathartic 2. Wait one hour 3. Initiate NAC therapy (140 mg/kg load, 17 doses of 70 mg/kg). 4. Draw LFT's, bilirubin, PT, and electrolytes daily.

## VI. History

This section emphasizes the extent to which histories are complete and accurate, and obtained using prioritization of questioning, active listening, and terminology at a level appropriate to the caller, based on an audit of at least eight calls during the evaluation period

### ***How To Do Well On This Section:***

The auditor will be looking for the following elements:

- **Prioritization of questioning:** This involves asking the most important questions first. Typically, this means asking how the patient is doing first (to ensure that there isn't a problem with airway, breathing or circulation). The least important questions are epidemiological (where did the exposure take place, relationship to patient, county).
- **Completeness:** Obtain all the essential patient assessment information before putting the caller on hold. Typically, this means knowing the patient status, age and sex, substance, amount/dose, time since exposure, patient's manifestations, pertinent negative physical findings, treatments instituted, pertinent prior medical conditions and the caller's telephone number.
- **Active listening:** Obtain the information the first time it is spoken. Do not ask for information the caller has already given you (it frustrates callers), unless you need clarification. The auditor will be listening for instances where you asked for information already given to you.

## VII. Verbal Response

This section emphasizes the extent to which assessment/treatment information is communicated in a complete, well organized, accurate, and succinct manner, and communicated at a level appropriate for the caller, based on an audit of at least eight calls during the evaluation period.

### ***How To Do Well On This Section:***

This part of the audit examines your ability to construct and communicate a poisoning risk assessment. The auditor will be looking for the following elements in the assessment:

- **Completeness:** The communicated assessment must directly address the patient's risk of toxicity. To do well on this section, you should give a brief justification for their plan that addresses risk of toxicity. For example you might begin with, "I'm going to recommend that you take your child to the emergency department. This dose has produced significant toxicity in the past... including seizures." For the public, it is important to explain the rationale for recommendations. For patients being referred to a health care facility it is preferable to cover the same risk assessment that is written in the patient assessment portion of the medical record. Treatment recommendations should highlight all important aspects of immediate care. For hospitalized cases this should include pertinent labwork, supportive care measures, methods to prevent absorption, techniques to enhance elimination, and antidotes. For home treatment the treatment plan is usually shorter and includes treatment instructions, manifestations to watch for, and an appropriate follow-up plan.
- **Organization:** There should be natural flow of information in an organized manner. Assessment precedes treatment plan so usually you start with the "bottom line" and then give recommendations that support your assessment. One potential organizing scheme for

hospitalized patients is supportive care measure, prevention of absorption, enhancing elimination, and antidotal care.

- Succinctness: Keep it short -- one to two sentences will usually be all that is necessary for most exposures. More complex exposures (hospitalized cases) may require a fuller explanation.
- Terminology: Communication at the level of the caller: Avoid medical terminology for lay callers. Words like “gastrointestinal decontamination”, “nystagmus” and “irrigation” may not be suitable for most lay clients (assume an 8th grade education). On the other hand, it is important to use such terminology when communicating with healthcare professionals.
- Correlation to documentation: Extent to which case documentation matches the call content based on a comparison of poison center tape recording to corresponding written Toxicall case entry.

## **VIII. Courtesy**

Extent to which you establish immediate rapport, and you are reassuring and courteous to clients.

### ***How To Do Well On This Section:***

The auditor will be looking for the consistency with which the following positive elements:

- Establishing immediate rapport with client by sharing your name and asking for their first name.
- Thanking callers for waiting on hold
- Checking back with callers on hold for more than two minutes to let them know you are still working on their call
- Establishing immediate rapport by using the first name of the caller and volunteering your first name
- Concluding calls by asking if they have any more question, thanking the caller for using the service, and asking them to call back if they have questions or concerns.