

2007
ASHP National Clinical Skills Competition
CASE

2007 ASHP Clinical Skills Competition

NATIONAL COMPETITION CASE

Directions to Clinical Skills Competition Participants

Identify the patient's acute and chronic medical and drug therapy problems. Recommend interventions to address the drug therapy problems using the forms supplied (Pharmacist's Patient Data Base, Drug Therapy Assessment Worksheet [DTAW], and Pharmacist's Care Plan).

IMPORTANT NOTE: Only the Pharmacist's Care Plan will be used for evaluation purposes. The Drug Therapy Assessment Worksheet is simply a tool to assist you in the decision-making process.

**ASHP CLINICAL SKILLS COMPETITION
PHARMACIST'S PATIENT DATA BASE FORM**

Demographic and Administrative Information																																															
Name: VP		Patient ID: 351356																																													
Address: 145-14 53 street Woodside, NY		Room & Bed: Outpatient Diabetes Clinic																																													
Date of Birth: 4/10/1950		Physician: Tanner																																													
Height: 167.64 cm (5'6") Weight: 113.9kg		Pharmacy: Unique Chemists																																													
Gender: Male		Race: Hispanic																																													
History of Present Illness		Vitals & Other Tests																																													
<p>Patient presents to the diabetes clinic after not being seen for 4 months due to his noncompliance with clinic visits. At his last clinic visit (8/28/07) his fasting finger stick revealed to be 155 mg/dL, and he was instructed to take repaglinide 2 mg tid as opposed to bid and start taking exenatide 5 mcg SQ bid to simultaneously assist in weight reduction. In addition amlodipine was increased from 5 mg daily to 10 mg daily for additional blood pressure lowering. He appears anxious, agitated, and sweaty, with edema of the feet. He reports to the nurse that he doesn't feel right.</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>12/1/07 (today)</th> <th>8/28/07</th> </tr> </thead> <tbody> <tr> <td>BP mmHg</td> <td>146/88</td> <td>158/90</td> </tr> <tr> <td>HR</td> <td>74</td> <td>78</td> </tr> <tr> <td>Blood sugar (finger stick) mg/dL</td> <td>55</td> <td>155</td> </tr> <tr> <td>Actual Body weight</td> <td>113.9 kg</td> <td>106.9 kg</td> </tr> </tbody> </table>		12/1/07 (today)	8/28/07	BP mmHg	146/88	158/90	HR	74	78	Blood sugar (finger stick) mg/dL	55	155	Actual Body weight	113.9 kg	106.9 kg																														
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Past Medical History		Chem (ALL FASTING)																																													
<p>Diabetes Type 2 (2002) Hypertension (2004) Dyslipidemia (2004) Cerebrovascular accident –ischemic (2005) Renal Insufficiency (2005) Obesity (2001)</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>12/1/07</th> <th>8/28/07</th> </tr> </thead> <tbody> <tr> <td>Na mmol/L</td> <td>142</td> <td>137</td> </tr> <tr> <td>K mmol/L</td> <td>4.0</td> <td>4.2</td> </tr> <tr> <td>Cl mmol/L</td> <td>103</td> <td>100</td> </tr> <tr> <td>CO2 mmol/L</td> <td>27</td> <td>31</td> </tr> <tr> <td>Gluc mg/dL</td> <td>60</td> <td>155</td> </tr> <tr> <td>BUN mg/dL</td> <td>57</td> <td>43</td> </tr> <tr> <td>SCr mg/dL</td> <td>2.8</td> <td>2.6</td> </tr> <tr> <td>Calcium mg/dL</td> <td>8.4</td> <td>8.0</td> </tr> <tr> <td>HbA1c</td> <td>9.2</td> <td>9.5</td> </tr> <tr> <td>Albumin g/dL</td> <td>3.4</td> <td>3.6</td> </tr> <tr> <td>AST units/L</td> <td>25</td> <td>17</td> </tr> <tr> <td>ALT units/L</td> <td>20</td> <td>13</td> </tr> <tr> <td>Total Bili mg/dL</td> <td>0.2</td> <td>0.2</td> </tr> <tr> <td>Dir Bili mg/dL</td> <td>0.1</td> <td>0.1</td> </tr> </tbody> </table>		12/1/07	8/28/07	Na mmol/L	142	137	K mmol/L	4.0	4.2	Cl mmol/L	103	100	CO2 mmol/L	27	31	Gluc mg/dL	60	155	BUN mg/dL	57	43	SCr mg/dL	2.8	2.6	Calcium mg/dL	8.4	8.0	HbA1c	9.2	9.5	Albumin g/dL	3.4	3.6	AST units/L	25	17	ALT units/L	20	13	Total Bili mg/dL	0.2	0.2	Dir Bili mg/dL	0.1	0.1
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Family History		Urinalysis																																													
<p>Father: alive (age 85); MI at age 65, HTN, dyslipidemia, type 2 diabetes Mother: alive (age 82); type 2 diabetes; hypertension Sister: alive (age 47); HTN, Impaired Fasting Glucose Brother: alive (53); type 2 diabetes; hypertension</p>		<p>Appearance: clear Color: amber yellow pH: 6.2 Protein 172 mg Specific gravity: 1.010 Leukocyte esterase: neg Ketones: none Nitrites: none Glucose: negative</p>																																													

**ASHP CLINICAL SKILLS COMPETITION
PHARMACIST'S PATIENT DATA BASE FORM (Cont.)**

Social History <u>Tobacco</u> : denies <u>ETOH</u> : denies <u>Illicit Drugs</u> : denies <u>Caffeine</u> : denies <u>Occupation</u> : retired <u>Status</u> : married <u>Children</u> : none <u>Physical Activity</u> : limited ambulation <u>Diet</u> : reports to eat cake a few times a week; wife reports that he does not adhere to diet, and eats anything he wants <u>Other Conditions</u> : dyslexia, low literacy (speaks English fluently, and reading capability is below average)	Fasting Lipids <table border="1" style="width: 100%; text-align: center;"> <tr> <td></td> <td>12/1/07</td> <td>8/28/07</td> </tr> <tr> <td>Total -C</td> <td>267</td> <td>256</td> </tr> <tr> <td>Triglycerides</td> <td>482</td> <td>280</td> </tr> <tr> <td>LDL</td> <td>-</td> <td>178</td> </tr> <tr> <td>HDL</td> <td>22</td> <td>22</td> </tr> </table>		12/1/07	8/28/07	Total -C	267	256	Triglycerides	482	280	LDL	-	178	HDL	22	22
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Physical Exam (12-1-07) – Today Obese hispanic male appearing anxious, agitated, sweaty, with limited ambulation. <u>VITALS</u> : BP 146/88; HR 74; T 98.8; RR 18 <u>SKIN</u> : Normal in appearance and texture; noted sweaty appearance <u>HEENT</u> : Pupils equally round, 4 mm, reactive to light and accommodation, sclera and conjunctiva normal. <u>LUNGS</u> : clear bilaterally with no wheezing, no ronchi, no rales <u>CARDIOVASCULAR</u> : Normal carotid pulsations without bruits. Normal S1 and S2. No S3 or S4. <u>ABDOMEN</u> : normal <u>EXTREMITIES</u> : 2+ pedal edema <u>NEUROLOGICAL</u> : cranial nerves II – XII intact, deep tendon reflexes, muscle tone and strength, coordination and gait, reflexes, and sensory normal
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Allergies/Intolerance's	Prescription Coverage
Diarrhea secondary to metformin administration	Insurance: HIP (Health Insurance Plan)
	Copay: \$10.00
	Cost per month: ~\$100.00/month

Current Drug Therapy			
Drug Name/Dose/Strength/Route	Prescribed Schedule	Duration Start–Stop Dates	Compliance/Dosing Issue
1. metoprolol tartrate 50 mg	1 PO bid	5/07/05 - present	
2. amlodipine 10 mg	1 PO daily	3/28/07 - present	
3. simvastatin 40 mg	1 PO daily	7/20/06 - present	
4. lisinopril 10 mg	1 PO daily	2000 - present	
5. aspirin 81 mg	1 PO daily	2000 - present	
6. exenatide 5 mcg	5 mcg SQ bid	3/28/07 - present	Receives drug company assistance
7. repaglinide 2 mg	1 PO tid	3/28/07 - present	
8. glyburide 5 mg	1 PO bid	5/07/05 - present	
9. pseudoephedrine 30 mg	1 PO prn	7/24/07 - present	Purchased last week for cough and cold and is currently still taking.

Medication History At the last clinic visit (8/28/07), repaglinide was increased from 2 mg bid to tid; exenatide was initiated for the additional benefit of weight loss; and amlodipine was increased from 5 mg daily to 10 mg daily. His wife reports that she gives him his medications whenever she is at home (she works 10 hour days), however he at times opts not to take them. When she is not there to assist him with taking his medications she feels that he is non compliant, since numerous times she finds his pills for the day left in the medication box that she prepares weekly for him. Also, she reports that on multiple occasions he refuses his evening exenatide injection. In addition, she reports that she worries about leaving him home alone because he has experienced hypoglycemic events in the past. His wife also reports that he took all of his medications this morning. When the patient was queried what his breakfast usually consists of, he reports that usually he skips breakfast (as he did this morning).

Drug Therapy Assessment Worksheet (DTAW)

The Drug Therapy Assessment Worksheet (DTAW) will serve as a guide to identify any drug-related problems that your patient may have. You may make notes on the DTAW. **However, the Drug Therapy Assessment Worksheet will not be scored.** As you proceed through all the questions on the DTAW, you will accumulate a list of drug therapy problems. All of these problems should be assessed on your Pharmacist's Care Plan. Drug-related problems may be listed as separate items on your Pharmacist's Care Plan or addressed in your recommendations for therapy of the acute or chronic disease states that the medicines are being used to treat. Teams will be evaluated on identifying and making appropriate recommendations for drug-related problems in the following areas below:

1. Correlation between drug therapy and medical problems
2. Appropriate drug selection
3. Drug regimen
4. Therapeutic duplication
5. Drug allergy or intolerance
6. Adverse drug events
7. Interactions: drug–drug, drug–disease, drug–nutrient, and drug–laboratory test
8. Social or recreational drug use
9. Failure to receive therapy
10. Financial impact
11. Patient knowledge of drug therapy

ASHP CLINICAL SKILLS COMPETITION DRUG THERAPY ASSESSMENT WORKSHEET (DTAW)

Type of Problem	Assessment	Presence of Drug-Related Problem	Comments/Notes
Correlation between Drug Therapy and Medical Problems	<p>Are there drugs without a medical indication?</p> <p>Are any medications unidentified (are any unlabeled or are any—prior to admission/clinic visit—unknown)?</p> <p>Are there untreated medical conditions? Do they require drug therapy?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	
Appropriate Drug Selection	<p>What is the comparative efficacy of the chosen medication(s)?</p> <p>What is the relative safety of the chosen medication(s)?</p> <p>Has the therapy been tailored to this individual patient?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	
Drug Regimen	<p>Are the prescribed dose and dosing frequency appropriate—within the usual therapeutic range and/or modified for patient factors?</p> <p>Is pm use appropriate for those medications either prescribed or taken that way?</p> <p>Is the route/dosage form/mode of administration appropriate, considering efficacy, safety, convenience, patient limitations, and cost?</p> <p>Are doses scheduled to maximize therapeutic effect and compliance and to minimize adverse effects, drug interactions, and regimen complexity?</p> <p>Is the length or course of therapy appropriate?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	
Therapeutic Duplication	<p>Are there any therapeutic duplications?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	
Drug Allergy or Intolerance	<p>Is the patient allergic to or intolerant of any medicines (or chemically related medications) currently being taken?</p> <p>Is the patient using any method to alert health care providers of the allergy/intolerance (or serious medical problem)?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	

ASHP CLINICAL SKILLS COMPETITION DRUG THERAPY ASSESSMENT WORKSHEET (DTAW)

Type of Problem	Assessment	Presence of Drug-Related Problem	Comments/Notes
Adverse Drug Events	Are there symptoms or medical problems that may be drug induced? What is the likelihood that the problem is drug related?	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	
Interactions: Drug-Drug, Drug-Disease, Drug-Nutrient, and Drug-Laboratory Test	<p>Are there drug-drug interactions? Are they clinically significant?</p> <p>Are any medications contraindicated (relatively or absolutely) given patient characteristics and current/past disease states?</p> <p>Are there drug-nutrient interactions? Are they clinically significant?</p> <p>Are there drug-laboratory test interactions? Are they clinically significant?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	
Social or Recreational Drug Use	<p>Is the patient's current use of social drugs problematic?</p> <p>Could the sudden decrease or discontinuation of social drugs be related to patient symptoms (e.g., withdrawal)?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	
Failure to Receive Therapy	<p>Has the patient failed to receive a medication due to system error or noncompliance:</p> <p>Are there factors hindering the achievement of therapeutic efficacy?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	
Financial Impact	<p>Is the chosen medication(s) cost effective?</p> <p>Does the cost of drug therapy represent a financial hardship for the patient?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	
Patient Knowledge of Drug Therapy	<p>Does the patient understand the purpose of his or her medication(s), how to take it, and the potential side effects of therapy?</p> <p>Would the patient benefit from education tools (e.g., written patient education sheets, wallet cards, and reminder packaging)?</p>	<ol style="list-style-type: none"> 1. A problem exists. 2. More information is needed for a determination. 3. No problem exists or an intervention is not needed. 	

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Evaluated for competition

ASHP Clinical Skills Competition - Pharmacist's Care Plan

Problem Identification and Prioritization with Pharmacist's Care Plan

Team # _____

- A. List all health care problems that need to be addressed in this patient using the table below.
- B. Prioritize the problems by indicating the appropriate number in the "Priority" column below:
 - 1 = Most urgent problem (**Note:** There can only be one most urgent problem)
 - 2 = Other problems that must be addressed immediately or during this clinical encounter; **OR**
 - 3 = Problems that can be addressed later (e.g. a week or more later)

**Please note, there should be only a "1", "2", or "3" listed in the priority column, and the number "1" should only be used once.*

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints

ASHP Clinical Skills Competition - Pharmacist's Care Plan

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

Team # _____

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints

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ASHP Clinical Skills Competition - Pharmacist's Care Plan

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Problem Identification and Prioritization with Pharmacist's Care Plan

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