

ASHP CLINICAL SKILLS COMPETITION PHARMACIST'S PATIENT DATA BASE FORM

Demographic and Administrative Information																																																																									
Name: PH		Patient ID: 995544																																																																							
Address: 1900 Rocky Mountain Pkwy Denver, CO 80220		Clinic Team: Red																																																																							
Date of Birth: 9-1-40		Primary Care Physician: Smith																																																																							
Height: 5'4" Weight: 170 lbs		Pharmacy: Cornell Rx (17 th Ave) Denver, CO																																																																							
Gender: female		Race: African American																																																																							
History of Present Illness (10/1/05 – Today)		Vitals & Other Tests																																																																							
PH is 65-year-old woman who measures her BP and BG values at home frequently. Home BG log shows measuring BG 2 to 3 times daily; values consistently between 140 and 199. Her average AM fasting is 153, average pre-evening meal is 158, and average bedtime is 162. Has been seen by a Certified Diabetes Educator several times in the past, and is very educated and compliant with her ADA diet (says she limits carbohydrates), monitoring, checking of feet, etc. Has had proteinuria in the past. Measures BP daily in the morning, average values are 146/80 with a high of 170/92 and low of 120/74. Peripheral neuropathy with 3 or 4 out of 10 pain on most days and experiences intense lancinating 7 or 8 out of 10 pain when putting on her shoes. Acetaminophen only partially relieves pain on days when pain is more intense. Reports no chest pain or sublingual nitroglycerin use over the past 6 months. She recently had a bone densitometry test measured to assess bone health.		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th></th> <th>10/1/05 (today)</th> <th>3/1/05</th> <th>12/7/04</th> <th>10/9/04</th> </tr> <tr> <td>BP</td> <td>130/78</td> <td>132/80</td> <td>154/86</td> <td>150/80</td> </tr> <tr> <td>HR</td> <td>62</td> <td>64</td> <td>70</td> <td>68</td> </tr> <tr> <td>Temp</td> <td>98.6</td> <td>97.8</td> <td>99.0</td> <td>98.7</td> </tr> <tr> <td>Resp</td> <td>16</td> <td>14</td> <td>18</td> <td>14</td> </tr> <tr> <td>Pain</td> <td>6/10</td> <td>3/10</td> <td>1/10</td> <td>4/10</td> </tr> <tr> <td>A1C</td> <td>7.8</td> <td>7.6</td> <td>8.3</td> <td>9.1</td> </tr> </table>			10/1/05 (today)	3/1/05	12/7/04	10/9/04	BP	130/78	132/80	154/86	150/80	HR	62	64	70	68	Temp	98.6	97.8	99.0	98.7	Resp	16	14	18	14	Pain	6/10	3/10	1/10	4/10	A1C	7.8	7.6	8.3	9.1																																			
			10/1/05 (today)	3/1/05	12/7/04	10/9/04																																																																			
		BP	130/78	132/80	154/86	150/80																																																																			
		HR	62	64	70	68																																																																			
		Temp	98.6	97.8	99.0	98.7																																																																			
		Resp	16	14	18	14																																																																			
		Pain	6/10	3/10	1/10	4/10																																																																			
		A1C	7.8	7.6	8.3	9.1																																																																			
Past Medical History		Serum Chem																																																																							
Type 2 Diabetes Mellitus (2001) Hypertension (1998) Dyslipidemia (2000) Diabetic Nephropathy (2003) Peripheral Neuropathy (2003) Status-post Myocardial Infarction (2000) Chronic Stable Angina (2000)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th></th> <th>10/1/05 (today)</th> <th>3/1/05</th> <th>12/7/04</th> <th>10/9/04</th> </tr> <tr> <td>Na</td> <td>139</td> <td>140</td> <td>138</td> <td>140</td> </tr> <tr> <td>K</td> <td>4.6</td> <td>4.2</td> <td>4.2</td> <td>4.5</td> </tr> <tr> <td>Cl</td> <td>100</td> <td>101</td> <td>99</td> <td>100</td> </tr> <tr> <td>CO2</td> <td>24</td> <td>22</td> <td>26</td> <td>24</td> </tr> <tr> <td>Gluc</td> <td>152</td> <td>149</td> <td>148</td> <td>187</td> </tr> <tr> <td>BUN</td> <td>20</td> <td>24</td> <td>26</td> <td>30</td> </tr> <tr> <td>SCr</td> <td>1.6</td> <td>1.7</td> <td>1.6</td> <td>1.8</td> </tr> <tr> <td>Calcium</td> <td>9.1</td> <td>9.0</td> <td>8.5</td> <td>9.0</td> </tr> <tr> <td>Albumin</td> <td>3.7</td> <td>3.8</td> <td>3.9</td> <td>3.6</td> </tr> <tr> <td>AST</td> <td>19</td> <td>20</td> <td>28</td> <td>20</td> </tr> <tr> <td>ALT</td> <td>18</td> <td>22</td> <td>24</td> <td>16</td> </tr> <tr> <td>Total Bili</td> <td>1.0</td> <td>0.8</td> <td>0.4</td> <td>1.0</td> </tr> <tr> <td>Dir Bili</td> <td>0.1</td> <td>0.2</td> <td>0.0</td> <td>0.1</td> </tr> </table>			10/1/05 (today)	3/1/05	12/7/04	10/9/04	Na	139	140	138	140	K	4.6	4.2	4.2	4.5	Cl	100	101	99	100	CO2	24	22	26	24	Gluc	152	149	148	187	BUN	20	24	26	30	SCr	1.6	1.7	1.6	1.8	Calcium	9.1	9.0	8.5	9.0	Albumin	3.7	3.8	3.9	3.6	AST	19	20	28	20	ALT	18	22	24	16	Total Bili	1.0	0.8	0.4	1.0	Dir Bili	0.1	0.2	0.0	0.1
			10/1/05 (today)	3/1/05	12/7/04	10/9/04																																																																			
		Na	139	140	138	140																																																																			
		K	4.6	4.2	4.2	4.5																																																																			
		Cl	100	101	99	100																																																																			
		CO2	24	22	26	24																																																																			
		Gluc	152	149	148	187																																																																			
		BUN	20	24	26	30																																																																			
		SCr	1.6	1.7	1.6	1.8																																																																			
		Calcium	9.1	9.0	8.5	9.0																																																																			
		Albumin	3.7	3.8	3.9	3.6																																																																			
		AST	19	20	28	20																																																																			
		ALT	18	22	24	16																																																																			
		Total Bili	1.0	0.8	0.4	1.0																																																																			
Dir Bili	0.1	0.2	0.0	0.1																																																																					
Family History		Fasting Lipid Panel																																																																							
Father: deceased: myocardial infarction at age 50 Mother: deceased: type 2 diabetes, died of kidney failure at age 61 Sister: alive: type 2 diabetes, chronic stable angina: age 68 Brother: alive: hypertension: age 62		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th></th> <th>10/1/05 (today)</th> <th>3/1/05</th> <th>12/7/04</th> <th>10/9/04</th> </tr> <tr> <td>Total Chol</td> <td>197</td> <td>207</td> <td>222</td> <td>249</td> </tr> <tr> <td>HDL</td> <td>41</td> <td>42</td> <td>40</td> <td>35</td> </tr> <tr> <td>Trigl</td> <td>240</td> <td>250</td> <td>260</td> <td>380</td> </tr> <tr> <td>LDL</td> <td>108</td> <td>115</td> <td>130</td> <td>138</td> </tr> </table>			10/1/05 (today)	3/1/05	12/7/04	10/9/04	Total Chol	197	207	222	249	HDL	41	42	40	35	Trigl	240	250	260	380	LDL	108	115	130	138																																													
			10/1/05 (today)	3/1/05	12/7/04	10/9/04																																																																			
		Total Chol	197	207	222	249																																																																			
		HDL	41	42	40	35																																																																			
		Trigl	240	250	260	380																																																																			
LDL	108	115	130	138																																																																					

ASHP CLINICAL SKILLS COMPETITION PHARMACIST'S PATIENT DATA BASE FORM

Social History <u>Smoking:</u> none <u>ETOH:</u> one glass of red wine most days week <u>Illicit Drugs:</u> none <u>Caffeine:</u> coffee 2 cups/day <u>Occupation:</u> clerical worker <u>Status:</u> married: husband is age 66 with hypertension and arthritis <u>Children:</u> 3 sons: 7 grandchildren <u>Physical Activity:</u> walks her dog 2 to 3 miles daily <u>Diet:</u> following ADA diet	Spot Urine <table border="1"> <tr> <td></td><td>10/1/05 (today)</td><td>3/1/05</td><td>12/7/04</td><td>10/9/04</td></tr> <tr> <td>Alb:Creat Ratio</td><td>320</td><td>-</td><td>315</td><td>330</td></tr> </table> Other Tests <table border="1"> <tr> <td></td><td>10/1/05 (today)</td><td>3/1/05</td><td>12/7/04</td><td>10/9/04</td></tr> <tr> <td>Thyroid Stimulating Hormone</td><td>1.8</td><td>-</td><td>-</td><td>2.0</td></tr> </table> Echocardiography 9/25/05 Findings: Ejection Fraction is 55%, normal appearing mitral valve, no doppler evidence of mitral stenosis, normal left atrial size, normal right heart size and function, mild concentric LVH and global hypokinesis Impression: 1) Preserved left ventricular systolic function despite mild LVH, 2) apparently normal diastolic function, 3) no significant valve abnormality or prolapse.		10/1/05 (today)	3/1/05	12/7/04	10/9/04	Alb:Creat Ratio	320	-	315	330		10/1/05 (today)	3/1/05	12/7/04	10/9/04	Thyroid Stimulating Hormone	1.8	-	-	2.0
	10/1/05 (today)	3/1/05	12/7/04	10/9/04																	
Alb:Creat Ratio	320	-	315	330																	
	10/1/05 (today)	3/1/05	12/7/04	10/9/04																	
Thyroid Stimulating Hormone	1.8	-	-	2.0																	
Procedures Total abdominal hysterectomy (1975)	Central Bone Densitometry 9/25/05 FINDINGS: T-score: Left hip -2.8 Lumbar spine -2.5																				
Complete Physical Exam (10/1/05 - today) Overweight female appearing to be older than stated age VITALS: BP 130/78 (128/76 and 132/80 when repeated); HR 62; T 98.6; RR 16 SKIN: overall dry but intact HEENT: some chronic ophthalmic changes (cotton wool exudates, AV nicking), neck supple, thyroid palpated with no mass noted BREASTS: normal, patient performs self-breast examinations LUNGS: clear bilaterally with no wheezing, no ronchi, no rales CARDIOVASCULAR: normal rate, S1 and S2, no S3, no gallop noted ABDOMEN: normal GENITOURINARY: patient deferred RECTAL: patient deferred EXTREMITIES: no pitting edema, 10-gauge Monofilament test 3 of 10 tested sites without sensation bilaterally, 6 of 10 tingling and burning pain bilaterally that is worse with touch, dorsal and pedal pulses present bilaterally, skin intact with no ulcerations NEUROLOGICAL: cranial nerves II - XII intact, deep tendon reflexes normal																					

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

Allergies/Intolerance's		Prescription Coverage	
enalapril (cough), lisinopril (cough), amitriptyline (sedation and dry mouth), desipramine (dry mouth)		Insurance: PacifiCare	
		Copay: \$10 generic; \$25 brand	
		Cost per month:	
		Annual Income: > \$100,000 (combined with husband)	
Current Drug Therapy			
Drug Name/Dose/Strength Route	Prescribed Schedule	Duration Start-Stop Dates	Compliance/Dosing Issue
1. glyburide/metformin 5/500 mg	2 tabs BID	10/9/04-present	
2. pioglitazone 45 mg	daily	10/9/04-present	
3. amlodipine 10 mg	daily	12/7/04-present	
4. hydrochlorothiazide 12.5 mg	daily	January 1998-present	
5. metoprolol XL 100 mg	daily	May 2000-present	
6. simvastatin 40 mg	daily	12/7/04-present	
7. gabapentin 400 mg	BID	3/1/05-present	
8. acetaminophen 500 mg	1 or 2 tabs QID	January 1998-present	
9. enteric-coated aspirin 325 mg	daily	May 2000-present	
10. nitroglycerin 0.4 mg	SL prn chest pain	May 2000-present	
11. calcium carbonate/vit D 600mg/200IU	BID	January 1998-present	
12.			
13.			
14.			
15.			
16.			
Medication History			
Diabetes has been managed with oral agents; last year glyburide/metformin was increased from 5/500 mg, 1 tab BID, to 2 tabs BID and pioglitazone was increased from 30 mg daily to 45 mg daily. Amlodipine started last year for blood pressure lowering, has been intolerant to two ACE-inhibitors. Simvastatin has been the only agent used for dyslipidemia and has been increased to present dose of 40 mg daily. Gabapentin started at lower dose and titrated up to current dose, acetaminophen used as needed for several years, and experienced intolerable side effects to amitriptyline and desipramine.			

**ASHP CLINICAL SKILLS COMPETITION
PHARMACIST'S CARE PLAN**

Clinical Significance	Healthcare Need	Pharmacotherapeutic Goals	Recommendations for Therapy	Monitoring Parameter(s)	Desired Endpoints	Monitoring Frequency
Most Clinically Significant Problem	Contraindication to metformin due to elevated SCr (> 1.4)	Prevention of lactic acidosis	D/c metformin	None, other than glycemic control for Type 2 diabetes plan below (no need to measure lactic acid serum concentration)	Avoid lactic acidosis	None specifically
Major Clinical Significance	Type 2 diabetes: poor glycemic control	- Achieving glycemic control (A1C $< 7\%$) - Preventing or decreasing progression of chronic complications	- D/c metformin (as is above) and continue glyburide and pioglitazone at current doses - Add insulin (can start either NPH or glargine as basal insulin at bedtime) – possibly consider adding acarbose or miglitol - Continue exercise and improve diet regimens	- FBG - A1C	- FBG 80-120 mg/dl - A1C $< 7\%$	- FBG up to 3 times daily (including fasting AM) - A1C Quarterly
Major Clinical Significance	Diabetic nephropathy: not on sufficient drug therapy	- Goal blood pressure $< 130/80$ - Stop progression of kidney decline	Add an ARB (e.g., losartan, irbesartan)	- BP - Serum electrolytes - Urinary protein - SCr	- Maintain BP $< 130/80$ - Prevent progression of proteinuria and kidney decline	- BP and electrolytes in 4 weeks - Urinary protein in 3 months - SCr in 4 weeks

**ASHP CLINICAL SKILLS COMPETITION
PHARMACIST'S CARE PLAN**

Clinical Significance	Healthcare Need	Pharmacotherapeutic Goals	Recommendations for Therapy	Monitoring Parameter(s)	Desired Endpoints	Monitoring Frequency
Major Clinical Significance	Diabetic neuropathy: symptomatic pain despite current therapy	• Decrease pain • Preserve sensation	• Improve glycemic control • Increase gabapentin to a maximum of 1400 mg daily due to kidney impairment (est CrCl 30-60 ml/min), or change to/add duloxetine 60 mg daily, or switch to a different anticonvulsant (e.g., Carbamazepine, valproic acid), or add a narcotic • Continue acetaminophen as needed, avoid NSAID therapy due to kidney disease • Educate regarding self-foot examination	• Diabetic foot exam including Monofilament test • Pain severity (using 10 point scale) • SCr	• Preserve peripheral nerve sensation to avoid microvascular complications • Relief of pain	• Diabetic foot exam including Monofilament test and pain assessment at each visit • SCr in 3 months
Major Clinical Significance	Dyslipidemia: primary target (LDL) not at goal	• Prevention of cardiovascular events • Attaining LDL goal of <100 mg/dl with option of <70 mg/dl (considered very high risk because of diabetes and CHD)	• Intensify LDL lowering by one of the following: increase simvastatin to 80 mg daily, switch to atorvastatin 40 mg daily or rosuvastatin 10 mg daily, adding ezetimibe 10 mg daily or switching to ezetimibe/simvastatin 10/40mg daily	• Fasting lipid panel • ALT (hepatic transaminase) • Symptoms of myopathy (muscle aches, pains, weakness)	• Primary target LDL < 100 mg/dl with option of <70 mg/dl (considered very high risk because of diabetes and CHD) • Secondary target of non-HDL reduction not appropriate until LDL goal achieved	• Lipid panel in ~6 weeks and periodically thereafter • ALT (hepatic transaminase) in 6 weeks and periodically thereafter • Creatine kinase only if patient has symptoms of myopathy
Major Clinical Significance	Osteoporosis: based on T-score	• Prevent fractures, disability, and morbidity/mortality from fractures and their complications	• Continue calcium/vit D • Add bisphosphonate using treatment dose (alendronate, risedronate, ibandronate)	• BMD	• Reduced risk of fracture • Stabilize rate of BMD decline	• BMD in ≥ 2 years

**ASHP CLINICAL SKILLS COMPETITION
PHARMACIST'S CARE PLAN**

Clinical Significance	Healthcare Need	Pharmacotherapeutic Goals	Recommendations for Therapy	Monitoring Parameter(s)	Desired Endpoints	Monitoring Frequency
Minor Clinical Significance	Need for vaccinations	• Prevent Pneumococcal pneumonia and influenza virus infection • Avoid hospital admission and illness	• Pneumococcal vaccine now (if not already given) and again within 5 years • Influenza vaccine now (if not already given this season) and again every fall	• Clinical symptoms of respiratory illness (e.g., fever, chills, cough dyspnea) • Adverse reaction from injection (e.g., pain, swelling)	• Prevent Pneumococcal pneumonia and influenza virus infection	• Clinical symptoms of respiratory infection at each visit • Evaluate for influenza vaccination yearly