



Ambulatory Care Pharmacy Practice

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Introduction



How it all started ...

Trevecca Nazarene University



Samford University McWhorter School of
Pharmacy



Rotations

Ambulatory Care Rotation

- Kirkland Clinic, Birmingham, AL
- Pharmacist-run Anticoagulation Clinic

What I loved ...

On to residency ...

- Primary Care Specialty Residency
 - Durham VA Medical Center; Durham, NC
- And
- UNC School of Pharmacy; Chapel Hill, NC
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Residency Experiences

- Pharmacist-run Smoking Cessation Clinic
 - Pharmacist-run Hypertension Clinic
 - Interdisciplinary Lipid Clinic
 - UNC Skills Lab
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Memories of patients ...



AU faculty position in Tuscaloosa

- Rural Health Care
 - Hale County Mobile Health Clinic
 - Hypertension Management
 - Medication Assistance
 - Lipid Program
 - Physician Offices in Pickens County
 - Pharmacotherapy evaluation
 - Patient counseling
 - Drug information
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Interdisciplinary Patient Care



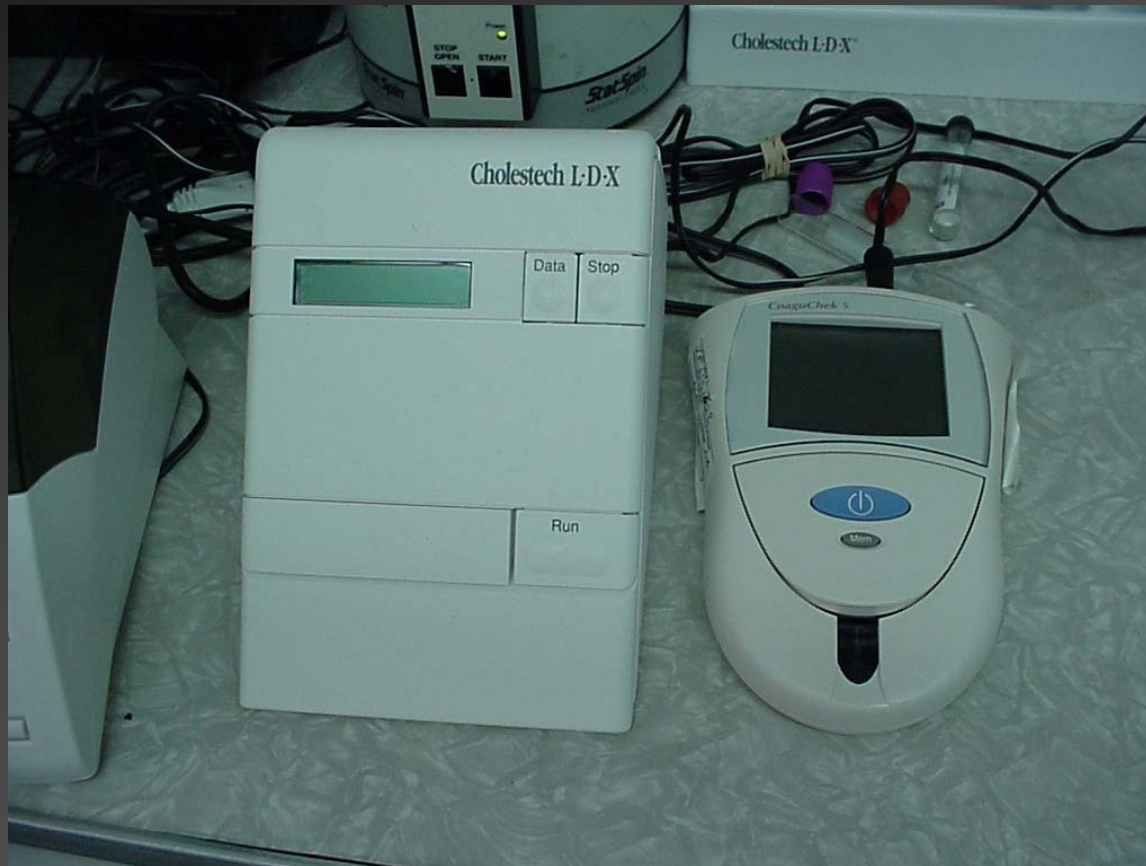
Rural Health Care continued...

- Nurse Practitioner Clinic in Parrish, AL
 - Lipid management
 - Anticoagulation managed
 - Smoking cessation
 - Medication assistance
 - Patient counseling
 - Drug information
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Capstone Rural Health Center: Parrish, Alabama



Point-of-care lipids and INRs





Memories of patients ...



Current practice

- UAB-Huntsville Family Medicine Center
 - Physicians: 36 Family Medicine Residents and 10 Attending Physicians
 - Family medicine patients:
 - Pediatrics
 - OB
 - Geriatrics
 - Everything in between!
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Current services

- Diabetes
 - Anticoagulation
 - Hypertension
 - Dyslipidemia
 - Smoking Cessation
 - Asthma
 - Polypharmacy/Adherence
 - Rounding with residents
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A patient visit

- Comprehensive history (medications, diet, exercise, blood glucose, relevant preventative care)
 - Comprehensive education (disease state, medications, diet, exercise, glucometer teaching, injection teaching, inhaler teaching)
 - Full assessment of chronic diseases
 - Medication changes, monitoring, recommendations and follow-up
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Typical Day

- Half-day
 - Patient appointments
 - Rounding with residents
 - Half-day
 - Working-up patients, reviewing with students
 - Writing SOAP notes in EMR
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Example Patient and SOAP

SUBJECTIVE

- HPI:

- JC is a 22 yo WM who presents on 7/13/09 for f/u of type 1 diabetes
- He was diagnosed in April 2009 with diabetes and DKA. Associated vomiting resulted in acute esophageal rupture which lengthened his hospital stay
- On 6/22/09 he was seen by the PharmD for diabetes counseling

- CC: none today

SUBJECTIVE: Medical history

- Active problems: type 1 diabetes, dyslipidemia
 - PMH: allergic rhinitis
 - Family history:
 - Asthma
 - HTN
 - CAD
 - DM
 - Migraine HA
 - Seizure disorder
 - Stroke syndrome
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SUBJECTIVE: Social history

- Alcohol: (-)
 - Tobacco: (-)
 - Illicit drugs: (-)
 - Occupation: works at Walmart (1-10 pm)
 - Exercise: plays basketball several times per week, walks at work
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SUBJECTIVE: Diet history

- Breakfast: sausage biscuits (around 10am)
 - Lunch: 2 packs of Lunchables (at work, between 4-6pm)
 - Dinner: Campbell's soup, or pork chop with green beans or pinto beans (after work, around 9-10pm)
 - Snacks: none
 - Drinks: diet drinks, Koolaid with Splenda
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SUBJECTIVE

- Current medications:
 - Pravastatin 20 mg: 1 po qday
 - Humalog: 12 units sq tid ac
 - Lantus: 55 units sq hs
 - Allergies: PCN (reaction unknown)
 - Immunizations:
 - Pneumovax (4/17/2009)
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SUBJECTIVE: HBG log

- Morning (fasting): 63 to 354
 - Mid-day (pre-prandial): 78 to 354
 - Evening (pre-prandial): 70 to 302
 - Bedtime: 92 to 337
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OBJECTIVE: Vital Signs

Date	BP	Pulse	Weight (lbs)	Height (inches)	BMI
7/13/09	125/76	73	277	69.5	40.3
6/22/09	114/71	75	288	69.5	
6/2/09	119/71	75	290	69.5	
5/18/09	136/75	77	292	69.5	
5/4/09	132/71	80	298	69.5	
4/22/09	130/80	85	303	69.5	44.1

OBJECTIVE: Labs

- 6/22/09
 - Urine microalbumin: 3.5
 - 4/16/2009
 - A1C: 14.3
 - Lipid panel
 - TC: 219
 - LDL: 130
 - HDL: 37
 - TG: 261
 - LFTs: WNL
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ASSESSMENT: Diabetes

- Uncontrolled based on ADA guideline goals of A1C < 7%, fasting BG 70-130, and 2h PP BG < 180
 - Overall, HBG readings have improved since last visit
 - Reports compliance with insulin and correct administration
 - Reports a few incidences of symptoms of hypoglycemia which were corrected appropriately
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ASSESSMENT: Diabetes (cont)

- Will not be able to increase insulin very rapidly due to hypoglycemia
 - Has decreased meals from 4 to 3 a day, and is eating less carbs, but still has room for improvement
 - Is increasing exercise
 - Foot exam UTD
 - Vaccines UTD
 - Has not had eye exam yet
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PLAN: Diabetes

- Continue Humalog 12 units sq tid ac
 - Increase Lantus to 60 units sq hs
 - Check 2h PP BG several times each week to assess if Humalog dose should be increased
 - Reinforced education on HBG monitoring, diet, exercise, hypoglycemia, and importance of eye exam
 - F/u with MD in 2 weeks (and recheck A1C) and PharmD in 4 weeks
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ASSESSMENT: Lipids

- Uncontrolled based on NCEP-ATPIII goals of TC < 200, LDL < 100, TG < 150 and HDL > 40
 - Began pravastatin about 3 weeks ago
 - Reports compliance and no ADRs (such as muscle pain or weakness, brown colored urine)
 - LFTs were WNL at baseline
 - Has begun lifestyle modification
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PLAN: Lipids

- Continue pravastatin
 - Reinforced education on importance of diet and exercise
 - Will recheck lipid panel and LFTs in 1-2 months
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Benefits of an Ambulatory Care Position

- Establish long-term relationships with patients
 - Time to counsel patients regarding multiple aspects of care
 - Opportunities to collaborate with physicians and other health care providers
 - Work schedule usually M-F, 8-5
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How to pursue and Ambulatory Care position

- Request additional Primary Care rotations (selective and elective rotations)
 - Join ACCP and the Am Care PRN
 - Pursue PGY1 residencies with strong ambulatory care component
 - Consider PGY2 ambulatory care specialty
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