

HIV and AIDS Management for the Primary Care Provider

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October 24th, 2009**

Primary Care for Patients with HIV/AIDS What makes it different?

- Drug-drug interactions relatively more prevalent
- Stigma remains a major obstacle to care
- Improved treatment options and prognosis (patients/providers unaware of excellent prognosis)
- Lack of provider confidence in co-managing
- Lack of specialist confidence with providing primary care
- Patients at risk for different problems depending on CD4
- Geography
- Lack of a relationship with local specialty providers
- Strict medication adherence of more importance

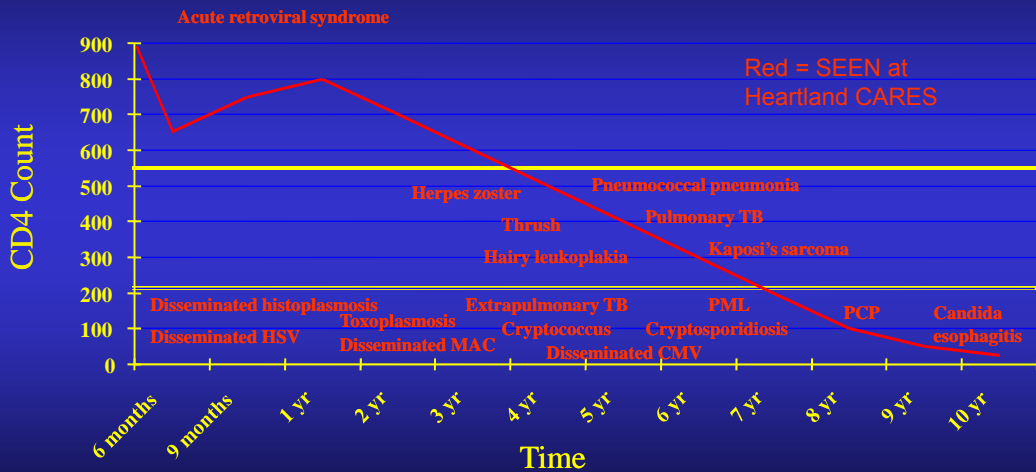
Primary Care for Patients with HIV/AIDS

Goals for Talk

- Demonstrate how to use CD4 count to help guide differential diagnosis in evaluating patient symptoms or illness
- Demonstrate both some similarities and differences in providing primary care for HIV patients
- Review some common medical conditions and discuss management
- See how geography presents challenges for the primary care of patients with HIV/AIDS
- Generate interest in the co-management of patients with HIV

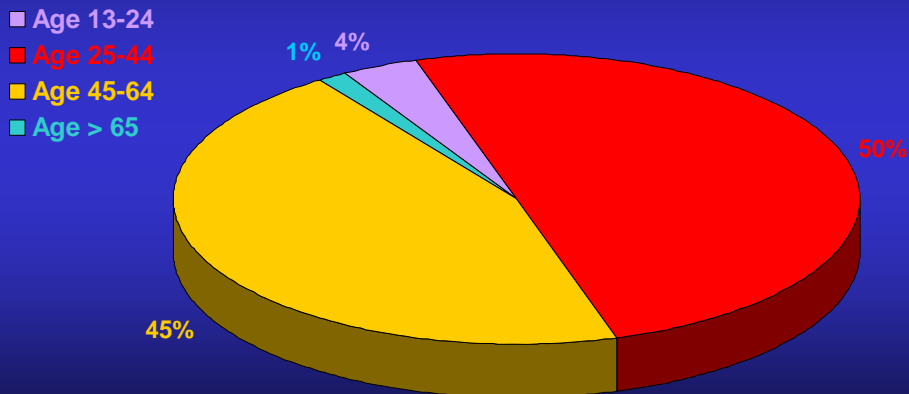
CASE

Infectious Complications and CD4 Count Disorders Seen in Heartland CARES Patients



Adapted - *Medical Management of HIV Infection*: Bartlett JG, Gallant JE; Johns Hopkins University; 2001; page 2.

Heartland CARES – Patient Age (Approximately 350 patients in Care)



Primary Care for Patients with HIV/AIDS

Causes of Death among Persons with AIDS in the Era of HAART

- All adult NYC residents with AIDS 1999-2004
- Cohort analysis, death certificates
- Non-HIV deaths ↑32.8% (19.8-26.3, p=.0015)
 - Substance abuse – 31%
 - CVD – 23.8%
 - Cancer – 20.8%
- Age-adjusted mortality for AIDS ↓49.6/10,000/year (p<.0001)

Sackoff JE, Hanna DB, Pfeiffer MR, Torian LV. *Ann Intern Med.* 2006;145:397-406

Primary Care for Patients with HIV/AIDS

Cardiovascular Disease

- Veterans Affairs Quality Enhancement Research Initiative for HIV *N Engl J Med.* 2003;343:702-10
 - Rates of admissions for and deaths from CVD declined after HAART
- Strategies for Management of Atriretroviral Therapy (SMART) *N Engl J Med.* 2006;355:2283-96
 - Interruption or conservation - ↑OI, death, CVD (60%) at 16 months
- AIDS Clinical Trials Group 5152S *Circulation.* 2005;112:II-237
 - Improved endothelial function on any regimen at 24 weeks

Primary Care for Patients with HIV/AIDS Cardiovascular Disease

Data Collection of Adverse Events of HIV Drugs (DAD)

- Prospective study of 95,000 person-years
 - 39 y/o, 78% white, 24% women, 61% tobacco, 42% dyslipidemia
- Cardiac event rate = 3.65 per 1000 person-years
- Adj for cardiac RF: ↑RR 16%/year HAART
- PI use may ↑ risk after adjustment for age and other RF
 - Endothelial dysfunction
- Risk present even when not on PIs
 - Endothelial dysfunction
- PI use associated with carotid atherosclerosis

Fris-Moller N, Sabin CA, Weber R, et al. *N Engl J Med.* 2003;349:1993-2003

Primary Care for Patients with HIV/AIDS Cardiovascular Disease

- All PLWH should be evaluated for CAD risk
 - Traditional risk factors
 - tobacco, HTN, dyslipidemia, family history
 - Emerging risk factors
 - weight, HAART (PIs)
- Treatment
 - Lifestyle modification
 - smoking cessation
 - Treat diabetes, HTN, dyslipidemia
 - Low CV-risk HAART

CASE

Cardiovascular Disease Risk Reduction Strategies

Same approach for HIV (+) and HIV (-) patients

Lifestyle Strategies

- Smoking cessation
- Dietary recommendations
- Alcohol reduction
- Exercise

Combined Lifestyle and Therapeutic*

- Lipid lowering therapy
- Blood pressure control
- Diabetes management

*attention to drug-drug interactions

Unique in the Management of HIV patients

Change the Highly Active Antiretroviral Treatment Approach

Dyslipidemia Screening and Definition

- Screening
 - Before initiating HAART
 - 3-6 months after changing a HAART regimen
 - Follow standard recommendations for patients who are HIV seronegative
- Definition of dyslipidemia
 - TC \geq 200
 - LDL \geq 130
 - Triglycerides \geq 150
 - HDL $<$ 40
 - TC/HDL ratio \geq 6.5

Dyslipidemia Risk Stratification

- Factors evaluated in risk factor assessment
 - Age
 - Smoking
 - Elevated total cholesterol
 - Low HDL
 - Family history of premature coronary disease
 - HTN
 - Menopausal status

Dyslipidemia - Treatment Goals

NCEP Treatment Goals Based on Serum LDL Levels			
Risk Category	LDL cholesterol level, mg/dl		
	Treatment Goal	Initiate Lifestyle Modification	Consider Drug Therapy
CHD or Equivalent	<100	≥100	≥130
≥2 Risk Factors & 10 year risk 10-20%	<130	≥130	≥130
≥2 Risk Factors & 10 year risk < 10%	<130	≥130	≥160
0-1 Risk Factors	<160	≥160	≥190

JAMA 2001; 285:2846 and CID 2003; 37:613.

Dyslipidemia Choice of Agent in Patients on HAART

Lipid Abnormality	Therapy	
	First Choice	Alternative
Elevated LDL-C or elevated non-HDL-C and triglyceride 200-500 mg/dl	Statin (B1)	Fibrate (C1) Niacin (C3)
Elevated LDL-C or elevated non-HDL-C and triglyceride > 500 mg/dl	Fibrate (B1)	Fish Oil (C3) Niacin (C3)

UpToDate and CID 2003; 37:613.

Dyslipidemia

Choice of Agent in Patients on HAART

Don't Use

- Simvastatin (Zocor®)
- Lovastatin (Mevacor®)
- Cholestyramine (Questran®)
- Colestipol (Colestid®)

Consider Use

- Atorvastatin (Lipitor®)
- Ezetimibe (Zetia®)
- Niacin (Niaspan®)
- Ω -3 Fatty Acids (Omacor®)

Preferred

- Pravastatin (Pravachol®)
- Rosuvastatin (Crestor®)
- Gemfibrozil (Lopid®)
- Fenofibrate (Lofibra®)

Insulin Resistance and Diabetes

- Insulin resistance and glucose intolerance reported in up to 50% of patients on HAART (PI)
- HIV (+) men on HAART are 4X more likely to develop diabetes compared with HIV (-) controls
- Symptoms may develop within a few weeks of starting treatment
- Factor in risk factors for DM in choosing HAART strategy

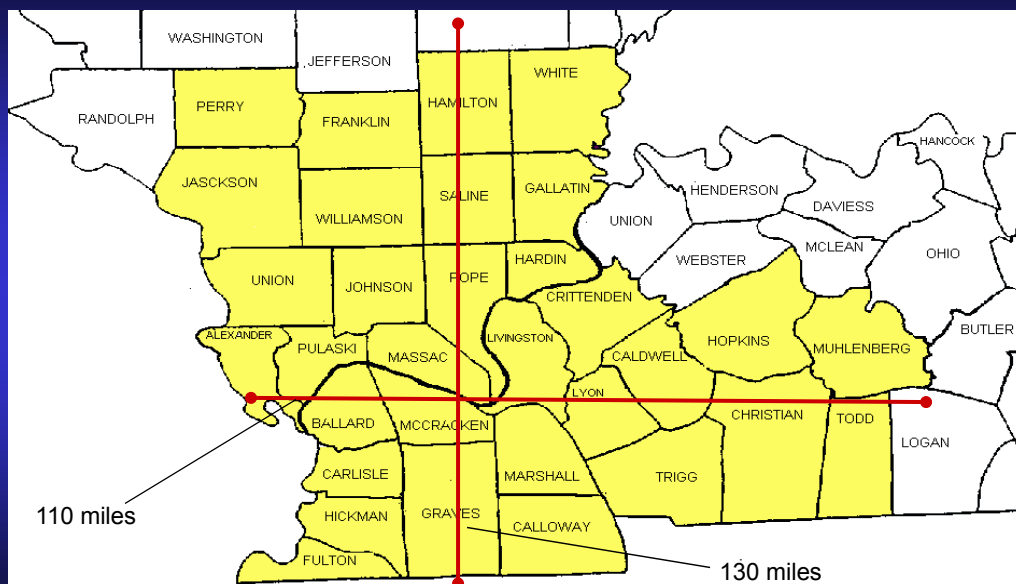
Grinspoon S, Carr A. Cardiovascular Risk and Body-Fat Abnormalities in HIV-Infected Adults. *NEJM*. 2005;352:48-62
AAHIVM Fundamentals of HIV Medicine 2007, 845-6

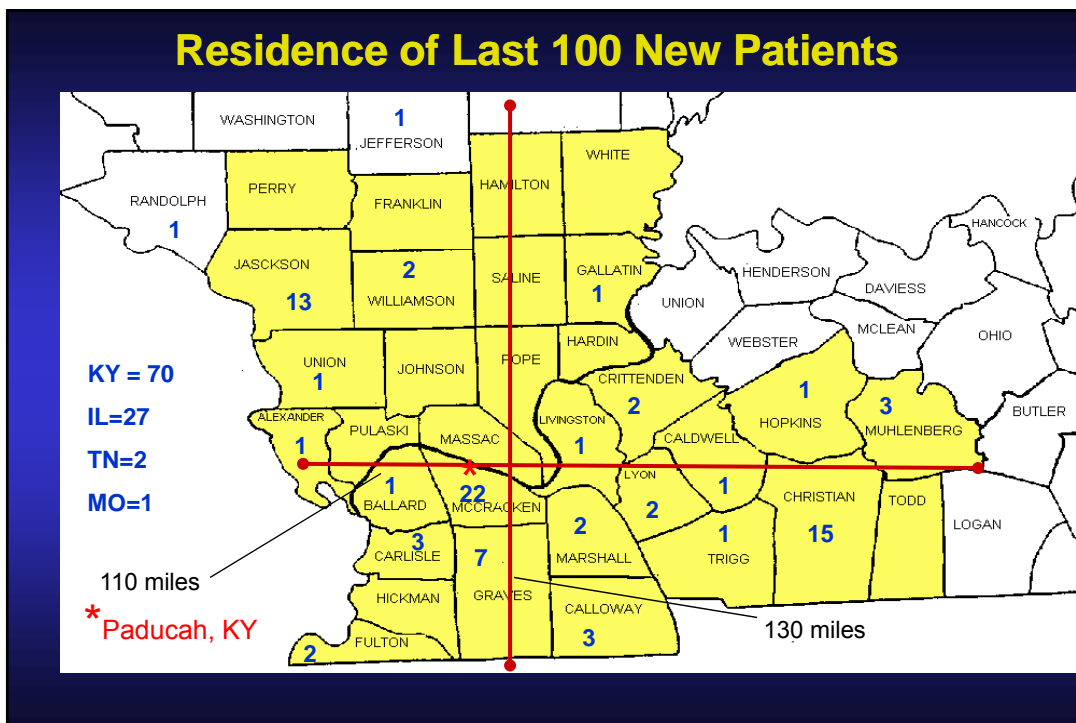
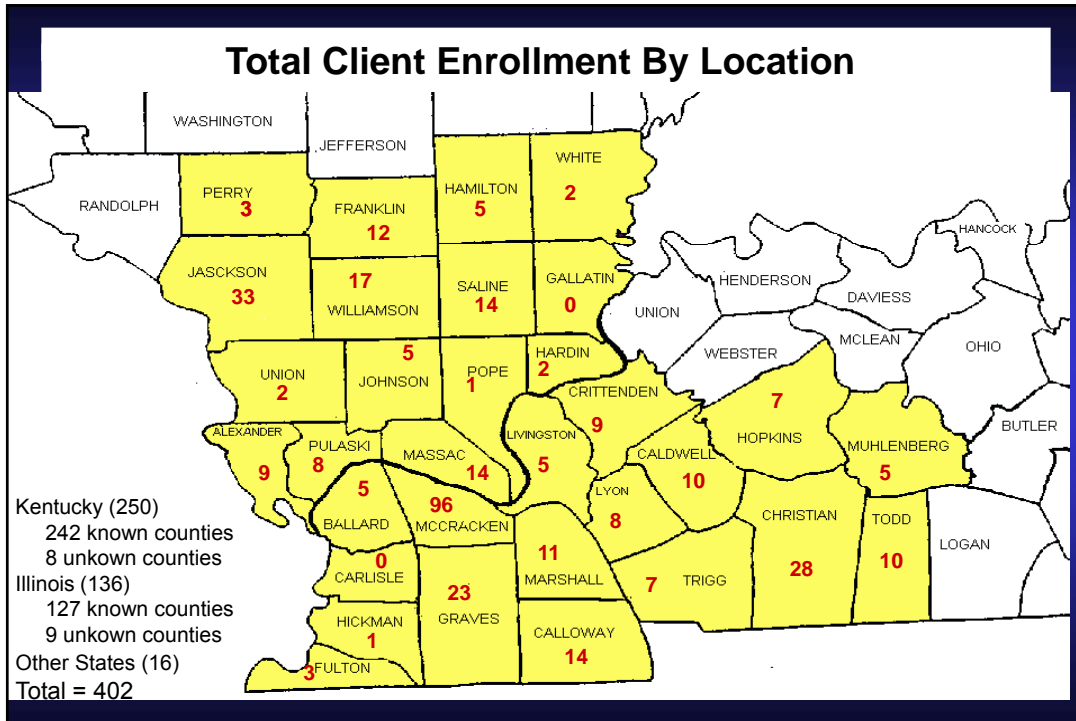
Treatment of Diabetes Mellitus

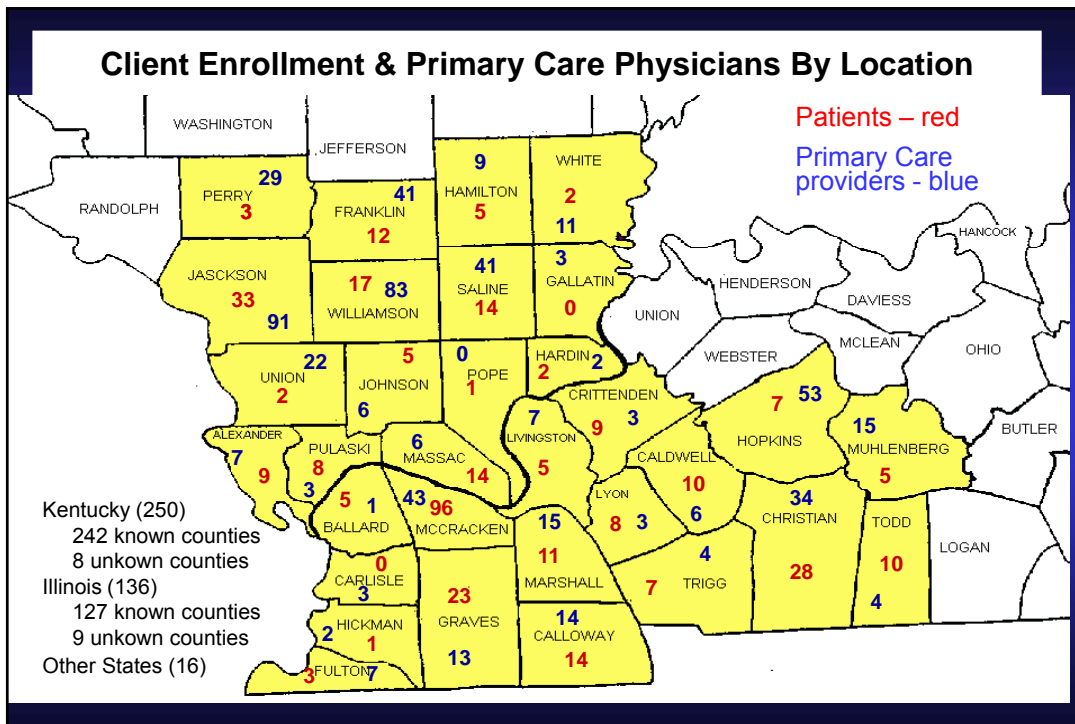
- Alter HAART to try to discontinue the most likely offending agent
- Manage in the same manner as for HIV (-) patients
 - Diet and lifestyle modification
 - Insulin sensitizing agents are the oral hypoglycemics of choice in HIV (+) patients
 - Metformin disadvantage of GI distress
 - Rosiglitazone disadvantage of cholesterol effects

Aberg JA. Management of Dyslipidemia and Other Cardiovascular Risk Factors in HIV-Infected Patients. *Topics in HIV Medicine*. 2006. 14(4):134-139

Service Area







CASE

Bone Disorders

- High prevalence of osteopenia and osteoporosis (patients on or not on HAART)
- One osteoporosis prevalence study in treatment naïve patients:
 - 23 to 28% higher than HIV(-) controls
- Study osteoporosis rates in patients on treatment:
 - 50% in patients receiving PI
 - 23% in HIV patients not on PI
 - 29% in matched controls
- One study
 - High prevalence (4.4%) osteonecrosis of the hip (asymptomatic patients)
 - Symptomatic osteonecrosis of the hip 100X higher than the general population

Metabolic and Skeletal Complications of HIV Infection. *JAMA*. 2006;296:844-854.
AAHIVM Fundamentals of HIV Medicine 2007, 845-6

Bone Disorders

- Factors associated with increased bone loss in HIV-infected cohorts
 - Low body weight
 - Low body mass index
 - Smoking history
 - Duration of HIV infection
- Traditional risk factors for development of osteopenia and osteoporosis
 - Increasing age
 - Heavy alcohol consumption
 - Steroid exposure

Bone Disorders

- Treatment strategies
 - Maintain dietary calcium and vitamin D
 - Incorporate weight bearing exercise
 - Bisphosphonate therapy combined with calcium and vitamin D
 - Joint replacement therapy

CASE

Primary Care for Patients with HIV/AIDS Fatigue – Differential Diagnosis

General Causes	Medication Side Effects	Psychiatric Disorders
<ul style="list-style-type: none"> •Opportunistic Infection •Hypogonadism •Adrenal insufficiency •Myopathy •Anemia •Pain •Hypothyroidism •Sleep apnea •CHF •Lactic acidosis 	<ul style="list-style-type: none"> •Antihypertensives •Benzodiazepines •Antidepressants •Narcotic analgesics •Antipsychotics •Antiemetics •Antiretroviral agents 	<ul style="list-style-type: none"> •Depression •Alcohol abuse •Substance abuse

Primary Care for Patients with HIV/AIDS Fatigue – Initial Evaluation

History	Medication Review	Mental Status Examination	Laboratory Evaluation
<ul style="list-style-type: none"> •Timing of onset •Duration •Severity •Associated symptoms 	<ul style="list-style-type: none"> •Current •Recent •Past 	<ul style="list-style-type: none"> •Depression screen •Dementia screen •Substance abuse screen 	<ul style="list-style-type: none"> •CMP •CBC •TFT •SaO2 •ABG •Testosterone

Primary Care for Patients with HIV/AIDS Depression and Adjustment Disorders

- Prevalence of current major depression in the HIV infected population
 - 4 to 21%
- Prevalence of adjustment disorder
 - As high as 20%
- Untreated depression:
 - Contributes to non-adherence with clinic visits
 - Contributes to non-adherence with HAART
 - Associated with HIV disease progression
 - Can contribute to high-risk behavior

Primary Care for Patients with HIV/AIDS Depression and Adjustment Disorders

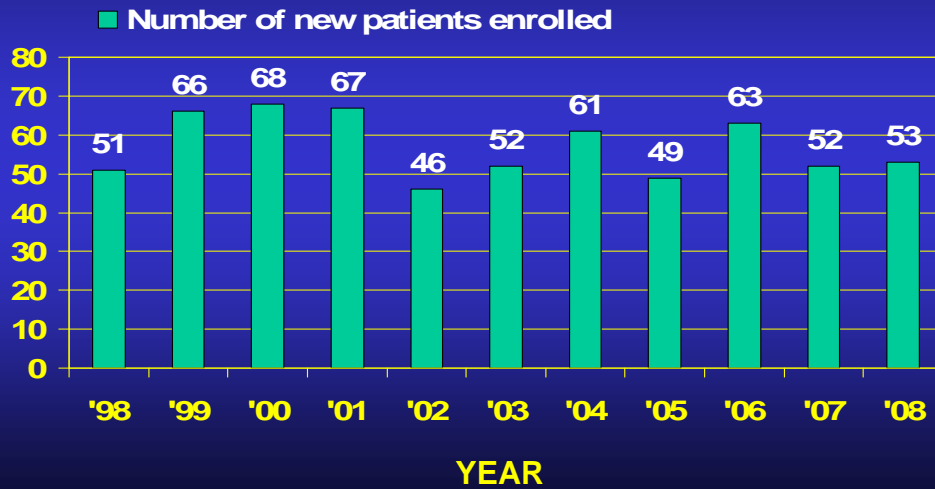
- Major Depression
 - Inability to feel pleasure or satiety
 - Diminished vital sense; somatic complaints
 - Generalized reduction in feelings of self-worth and hopelessness
 - Neurovegetative symptoms
 - Often no precipitating event
 - Family history present
- Adjustment Disorders
 - Able to feel pleasure when distracted from demoralizing event
 - Generally feel healthy
 - Rarely experience global changes in self-attitude
 - Neurovegetative symptoms to a limited degree
 - Precipitating event often identifiable
 - No family history

Primary Care for Patients with HIV/AIDS Depression and Adjustment Disorders

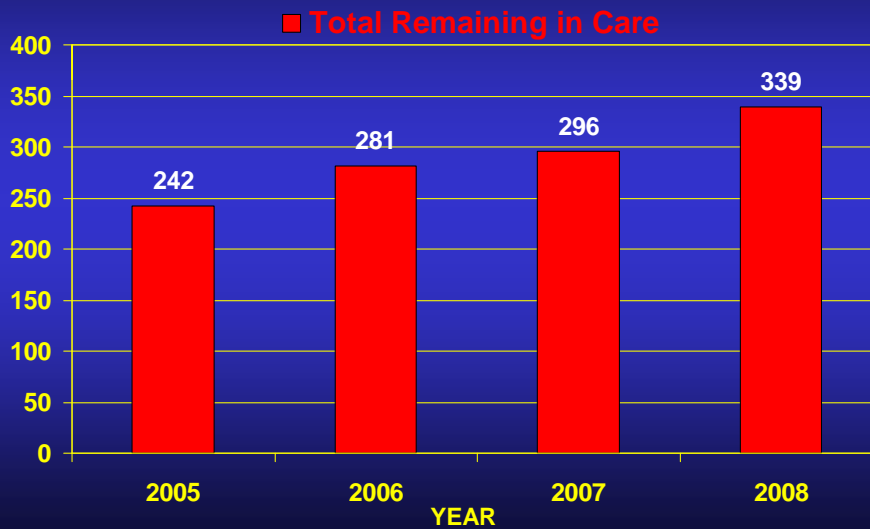
- Treatment

CASE

New Patient Enrollment by Year



Patient Retention in Care Heartland Clinic, Paducah KY



CONCLUSIONS

- Many of the management strategies are the same
- Because of geography partnering is going to be critical
 - Better chronic disease management
 - Better patient satisfaction
- HIV specialists and primary care providers can teach/improve each others care delivery
- The longer people are living the relatively more important local care becomes
- Co-Management can help chip away at issues of stigma
- Co-Managing HIV patients will provide a tremendous service and not overwhelm your practice

END