HIV/AIDS Basics

- Human Immunodeficiency Virus (HIV) reduces CD4 lymphocyte cells, needed to combat infection
  - CD4 count < 200, or selected diagnoses, considered to be Acquired Immune Deficiency Syndrome (AIDS)
- Treatment protects CD4 cells, immune system
- At any level, person is contagious and should be educated re precautions
HIV/AIDS importance

- Estimated 1.2 million persons living with HIV/AIDS (PLWHA)
- Disproportionately affects minorities, women, persons living in the South
- Could it become a *rural* disease?
  - Prevalence in rural America
  - Service availability in rural America
Prevalence: Data sources

- County data retrieved from state department of health web sites, 2008 data
  - 28 states, 2,012 counties
  - SCRHRC Study, available at rhr.sph.sc.edu

- County data from 2013 RWJ County Rankings data base, 2009
  - Data provided by CDC’s National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

- County-level data from AIDSVu, 2010 data, also from CDC

- Limitations: non-reporting and data suppression
Big picture

- HIV is present in rural as well as urban counties
  - “High” is in relation to the national median rate.
- HIV tracks closely with poverty and with minority race/ethnicity
- HIV rates in rural are growing
HIV/AIDS prevalence, 28 states, 2008

Rates per 100,000

Source: HIV/AIDS in Rural America, rhr.sph.sc.edu
HIV Prevalence, 2010, by rurality

Source: SCRHRC analysis of AIDSVu data (aidsvu.org)
Tiny changes may be harbingers

- Kansas, Oklahoma 2009
- Kansas, Oklahoma 2010
Rural/urban HIV prevalence, 28 states, 2008

States:
- Iowa
- Minnesota
- Michigan
- Ohio
- Vermont
- Kansas
- Missouri
- Oregon
- Oklahoma
- Indiana
- Maine
- Washington
- New Hampshire
- Pennsylvania
- Texas
- California
- Colorado
- Arizona
- New York
- Massachusetts
- Illinois
- Virginia
- Maryland
- North Carolina
- Florida
- Louisiana
- Mississippi
- South Carolina

- Statewide Prevalence of HIV/AIDS
- Prevalence of HIV/AIDS in Rural Counties

HIV/AIDS Cases per 100,000 population
Rural/urban HIV prevalence, 16 states, 2010
(Data from AidsVu.org)

HIV+ per 100,000

Source: AIDSVu. Restricted to 16 states with complete county data
HIV treatment

- Chronic treatment with antiretroviral medications costs about $10,000 - $12,000 per year
- Nearly half of PLWHA receive care through the Ryan White program
  - Current funding ~ $2.1 billion
  - 30% of Ryan White funding specifically directed to urban areas (Part A)
- Ryan White providers a proxy for care availability
- Limitation: no information VA, other providers
Why worry? Distance may matter

- Norton KS to Wichita KS:
  - 268 miles
- Guymon OK to Oklahoma City:
  - 263 miles
Conclusions

- Few Ryan White providers in rural counties
  - Research is needed to assess effects of local service availability on remaining in care, health outcomes

- Research is needed to assess use of other providers in rural areas
  - CHC’s, health departments may help, but:
    - HIV is a complex condition requiring specialized knowledge
  - VA addresses non-specialist quality of care through telemedicine and tele-education