# Exploring Life Expectancy

Sarah Kelley (SK)
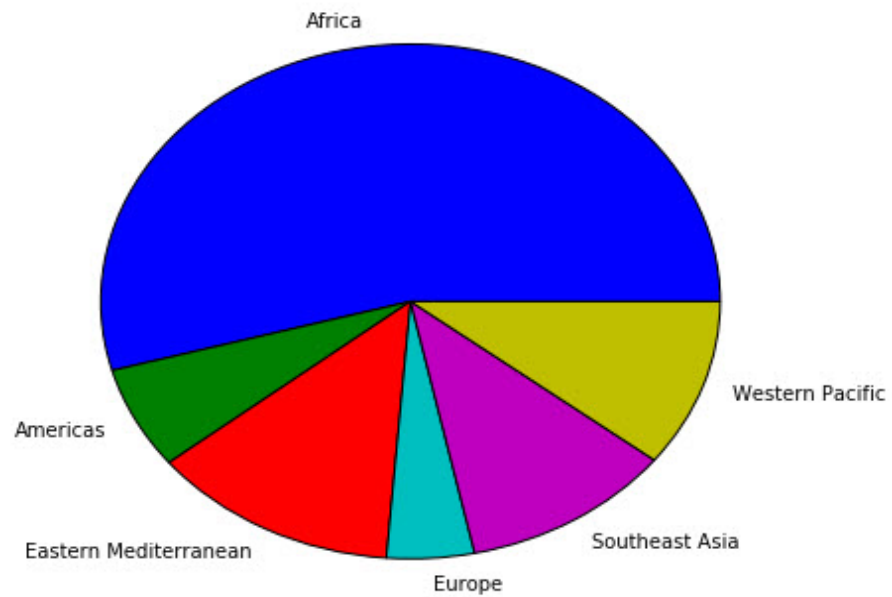Andrea Pope (AP)
Dominic Delmolino (DD)

# Introduction

- Focus: Relationship between life expectancy, life expectancy at age 60 and Healthy life expectancy with:
  - Access to clean water/sanitation
  - Aid spending
  - HIV prevalence
  - Government spending on health care
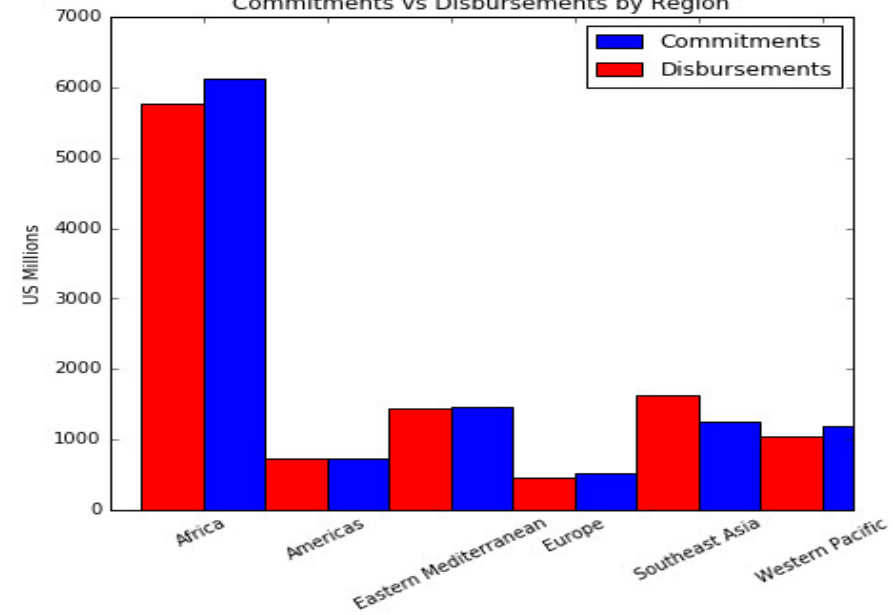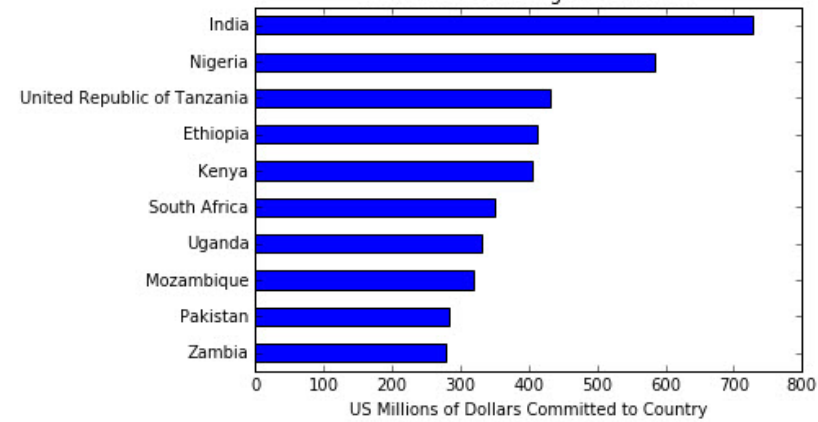- Source: World Health Organization
  http://apps.who.int/gho/data/node.home
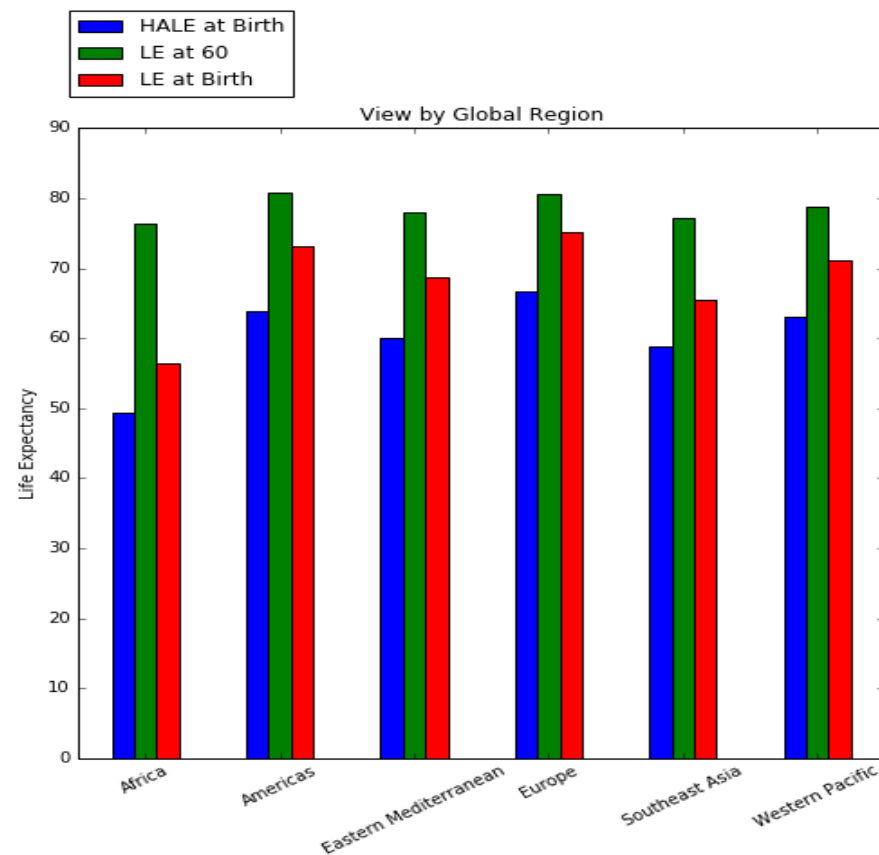
# Life Expectancy

# AID
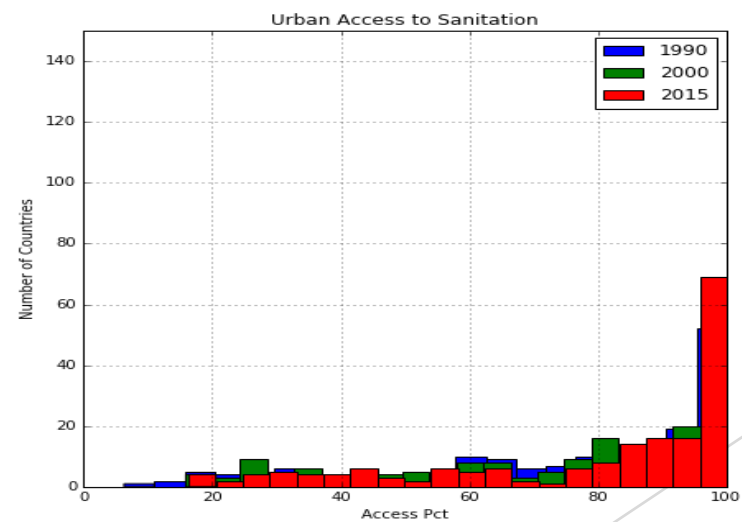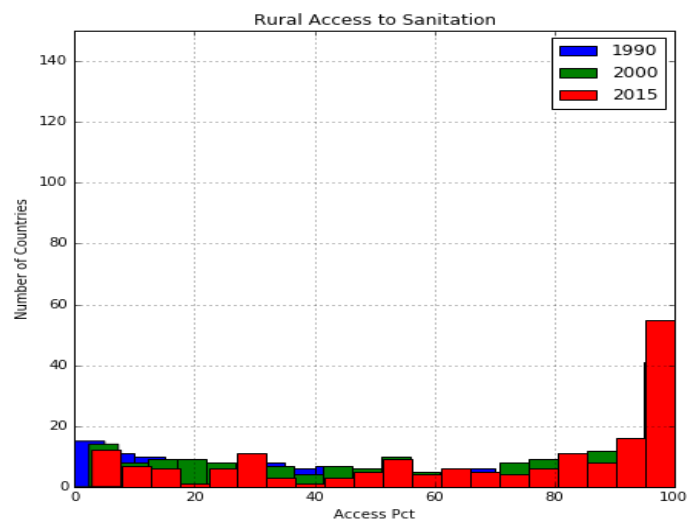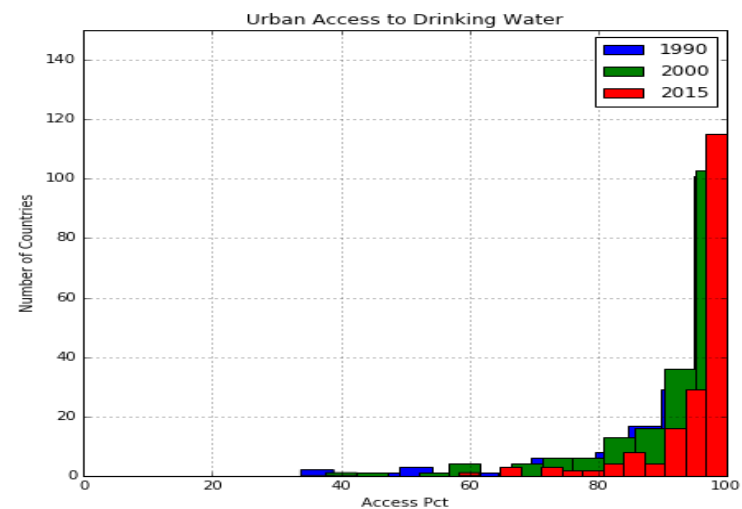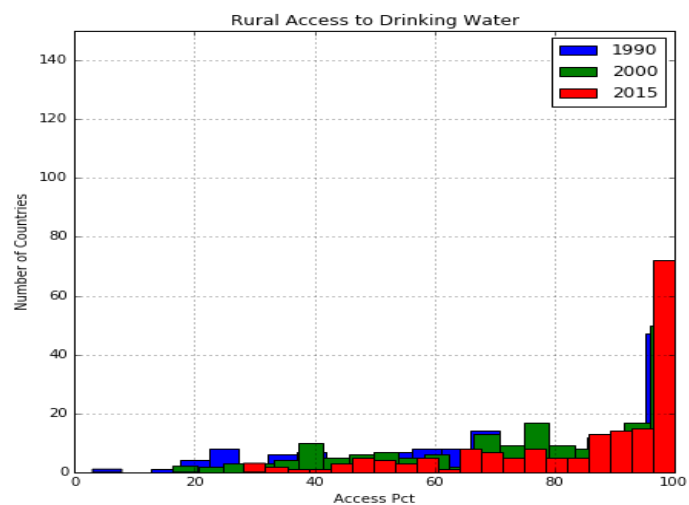
# Water and Sanitation

# Water and Sanitation



Changes in access over time
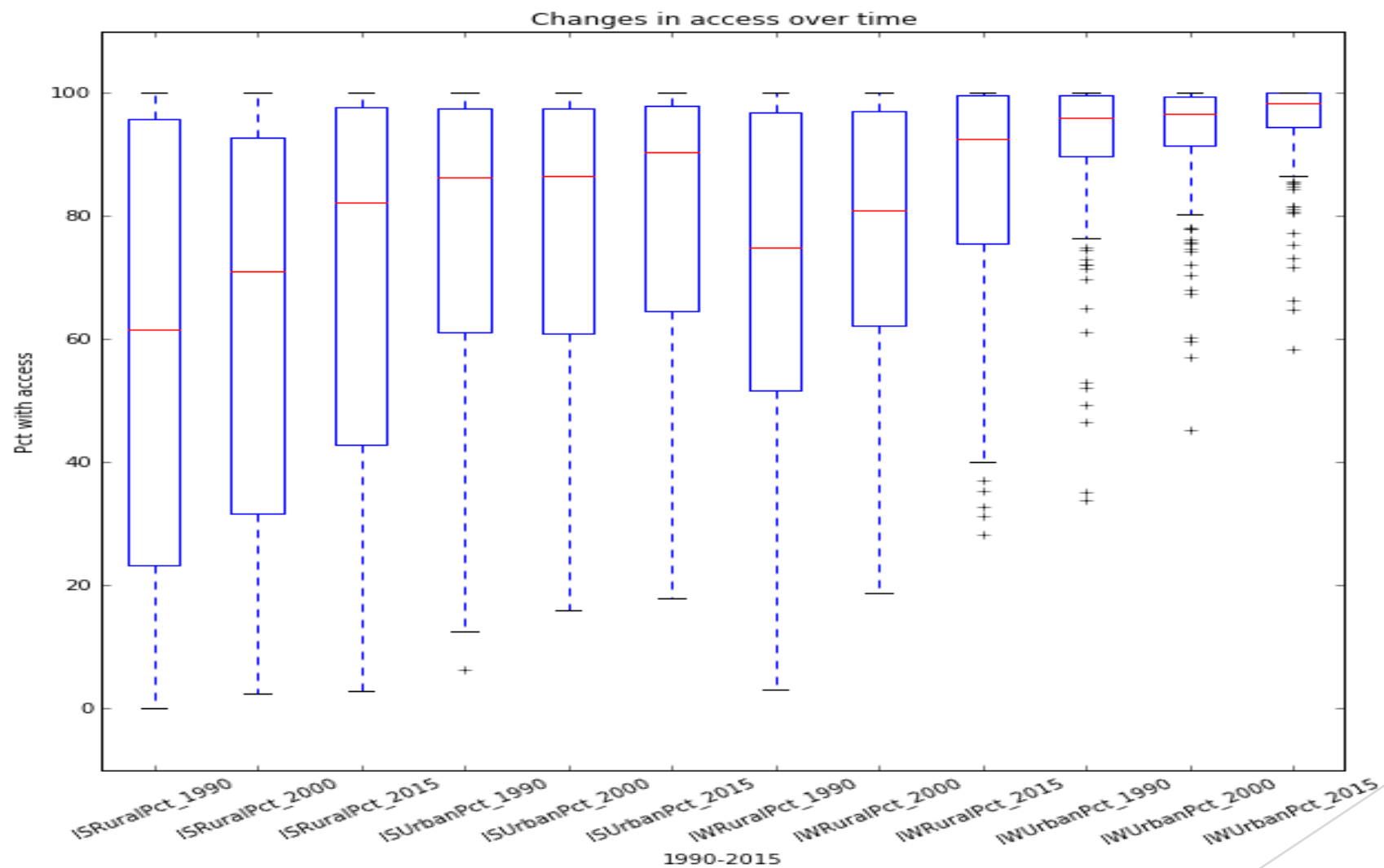
# Water and Sanitation

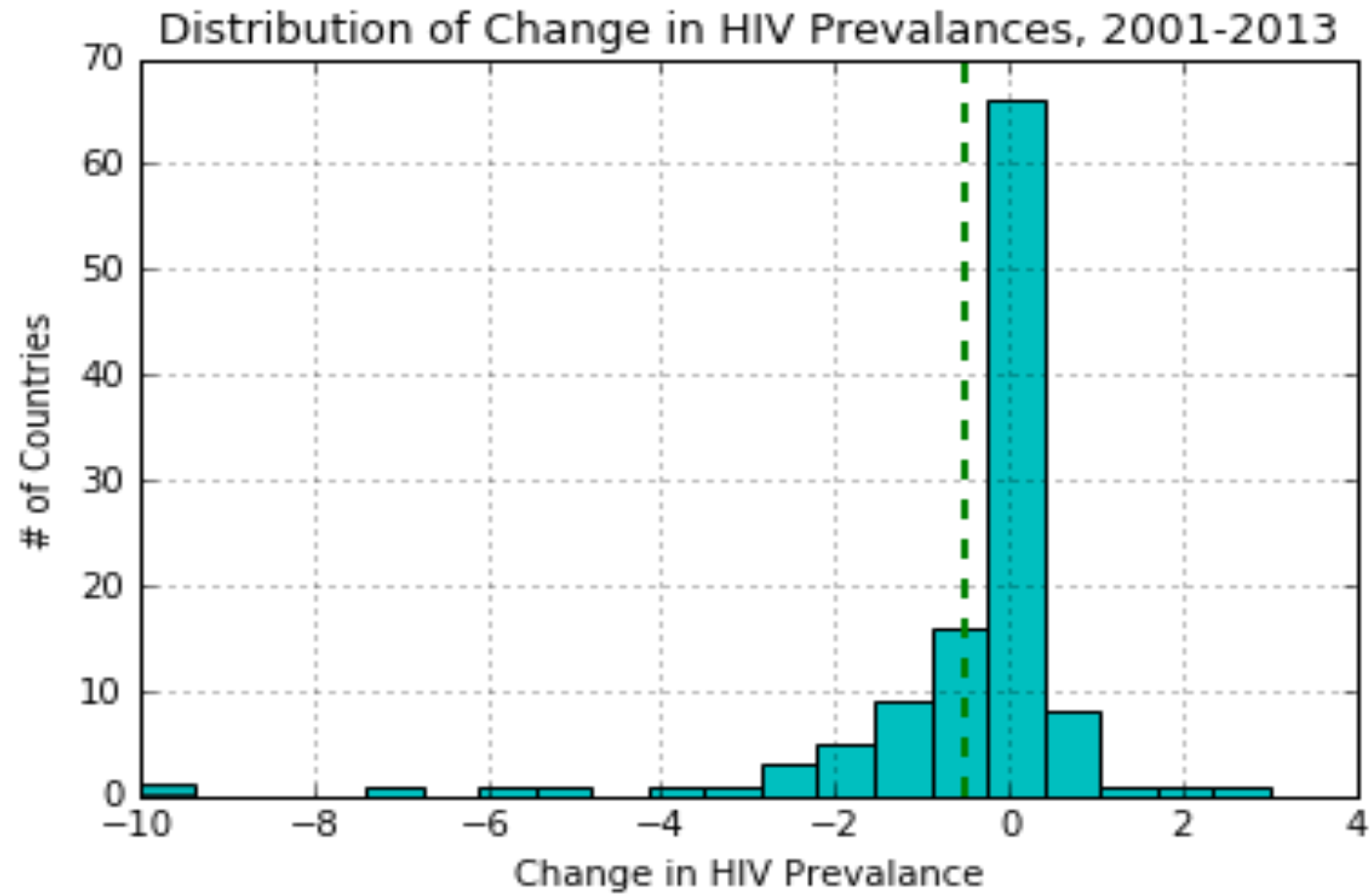|            | IWRuralPct | IWUrbanPct | IWPct    | ISRuralPct | ISUrbanPct | ISPct    |
|------------|------------|------------|----------|------------|------------|----------|
| HALEatBirth | 0.778963 | 0.630919 | 0.803787 | 0.831852 | 0.844142 | 0.861756 |
| LEat60     | 0.595615 | 0.514409 | 0.634142 | 0.654427 | 0.638081 | 0.679017 |
| LEat60-Adj | 0.595615 | 0.514409 | 0.634142 | 0.654427 | 0.638081 | 0.679017 |
| LEatBirth  | 0.772890 | 0.638578 | 0.811423 | 0.820131 | 0.834542 | 0.856440 |
| IWRuralPct | 1.000000 | 0.740516 | 0.956718 | 0.826171 | 0.783679 | 0.819344 |
| IWUrbanPct | 0.740516 | 1.000000 | 0.824008 | 0.632543 | 0.643147 | 0.658210 |
| IWPct      | 0.956718 | 0.824008 | 1.000000 | 0.802975 | 0.809191 | 0.840759 |
| ISRuralPct | 0.826171 | 0.632543 | 0.802975 | 1.000000 | 0.903372 | 0.973203 |
| ISUrbanPct | 0.783679 | 0.643147 | 0.809191 | 0.903372 | 1.000000 | 0.959781 |
| ISPct      | 0.819344 | 0.658210 | 0.840759 | 0.973203 | 0.959781 | 1.000000 |

# Aid & Life Expectancy
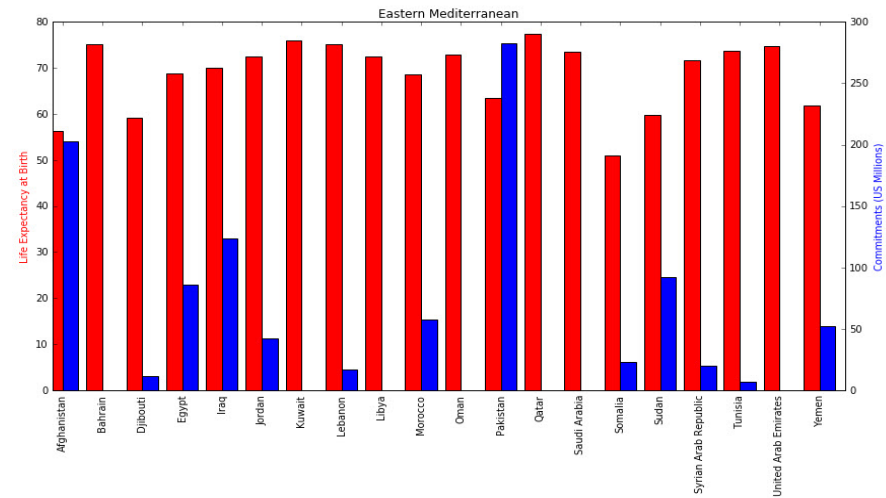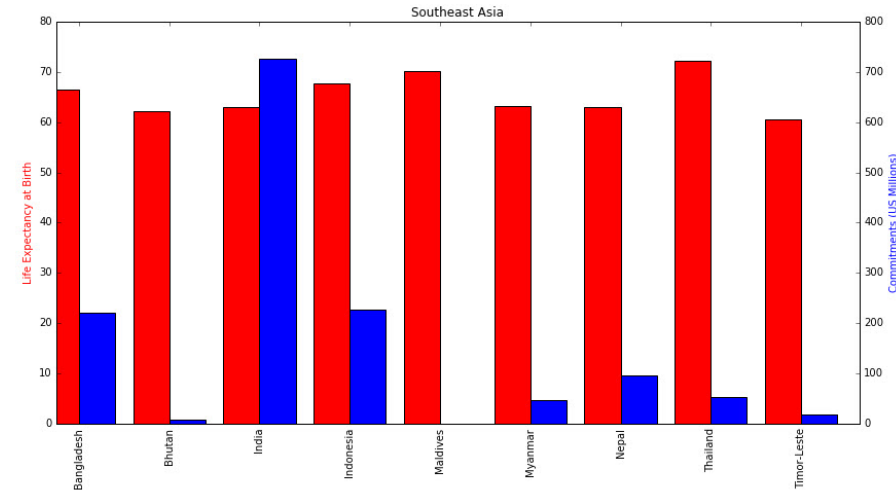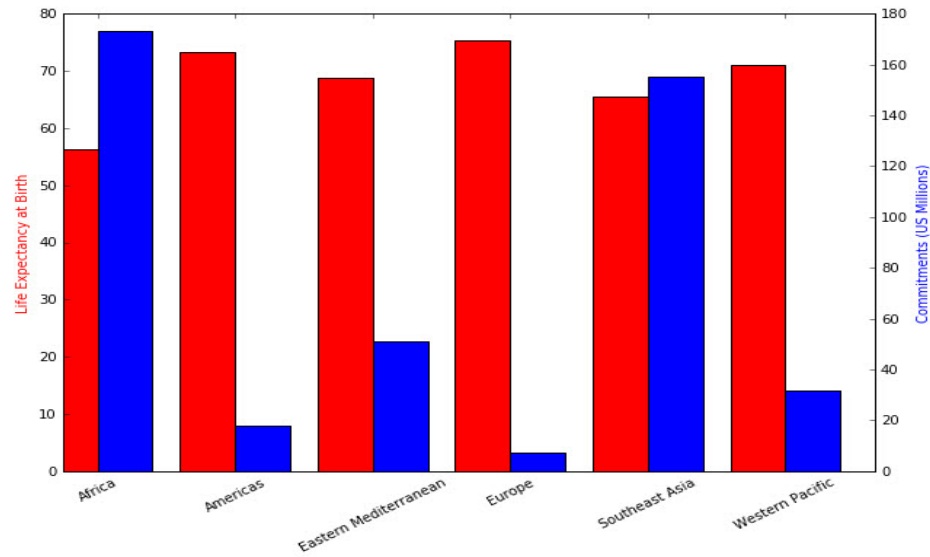
# HIV Prevalances

# Change in HIV Prevalance



Distribution of Change in HIV Prevalances, 2001-2013

# High HIV Countries



Changes over time in HIV Prevalance in Countries with High HIV Rates

Country
- Botswana
- Lesotho
- Namibia
- South Africa
- Swaziland
- Zambia
- Zimbabwe
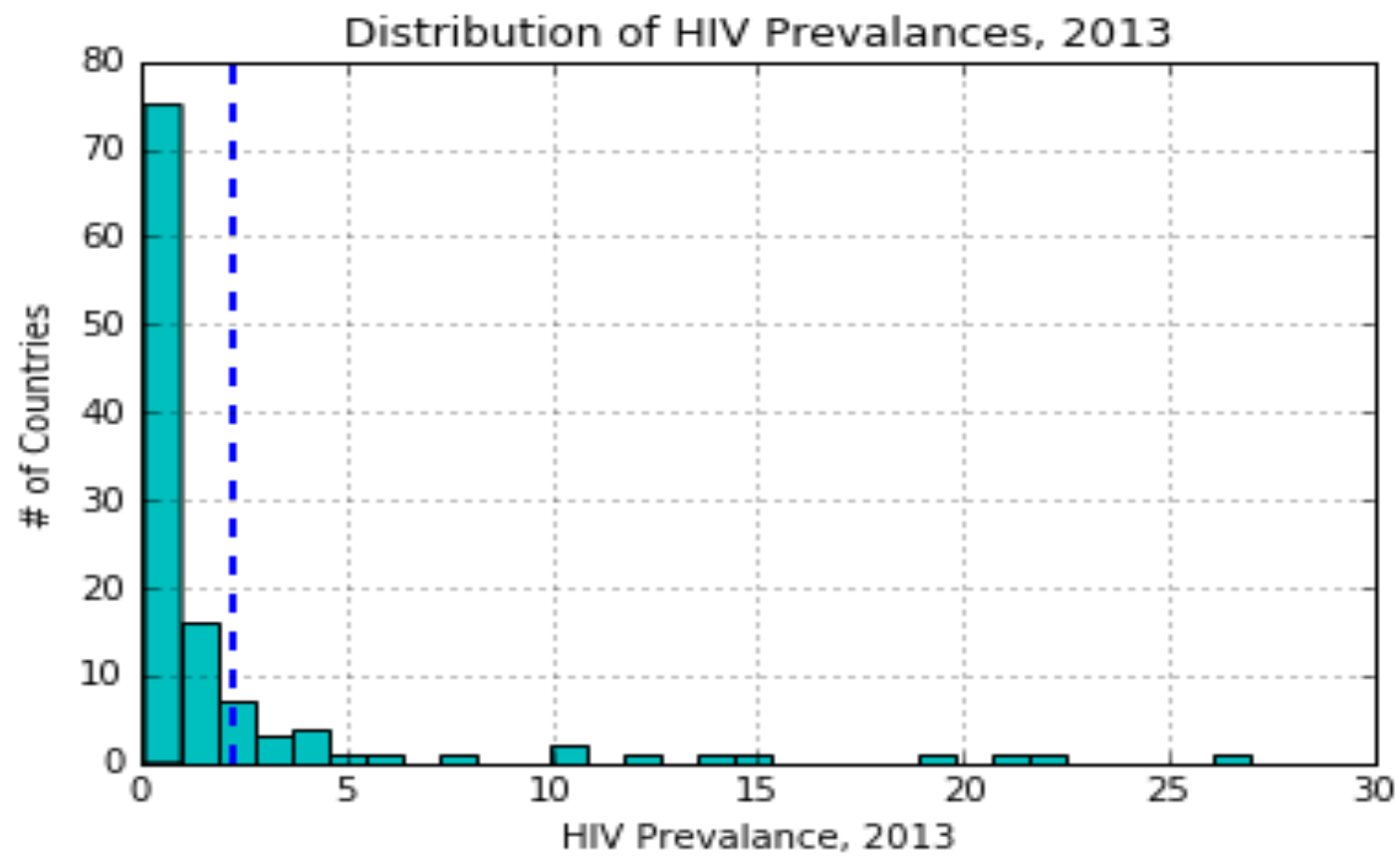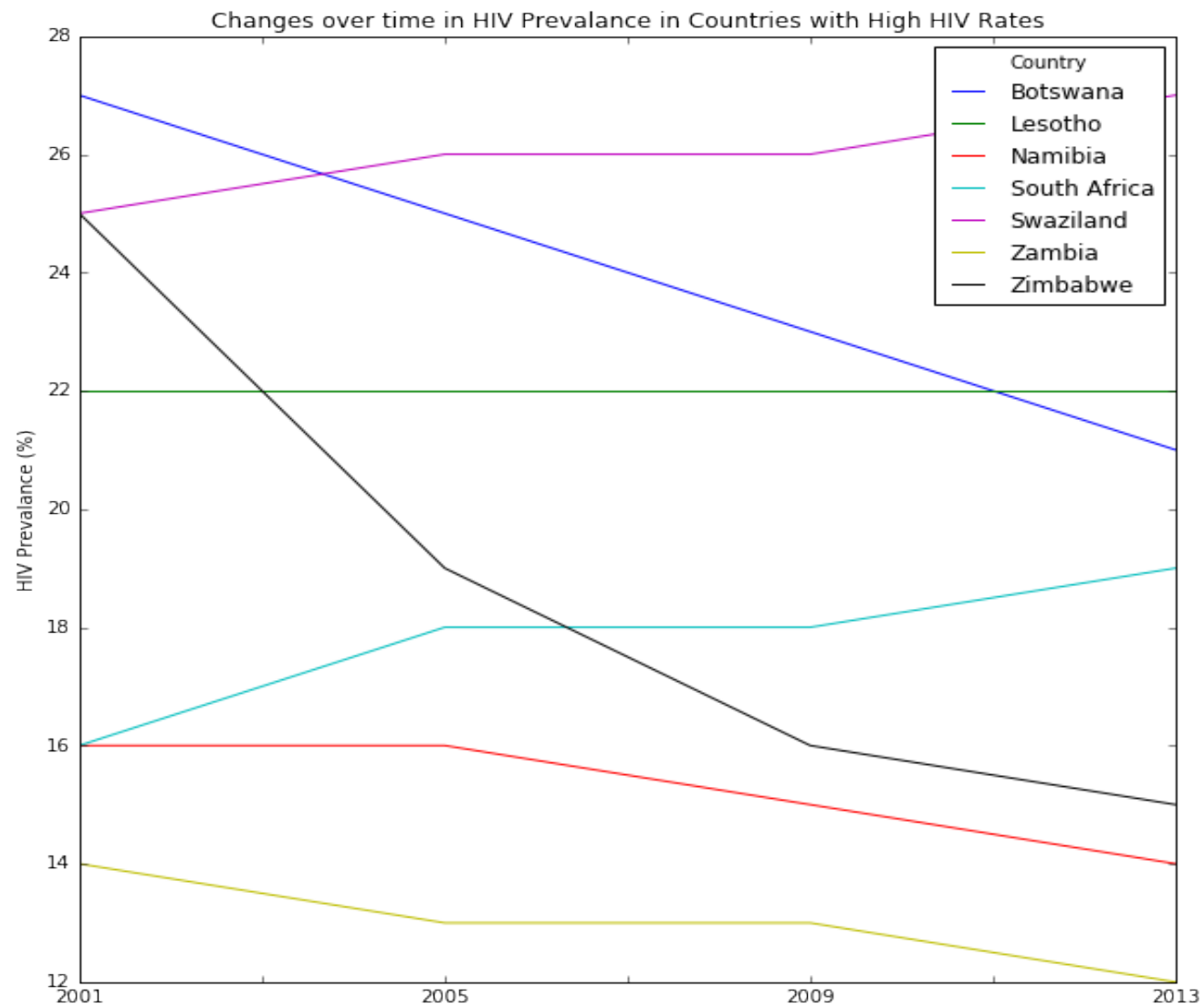
# HIV and Life Expectancy

# Health Expeditures
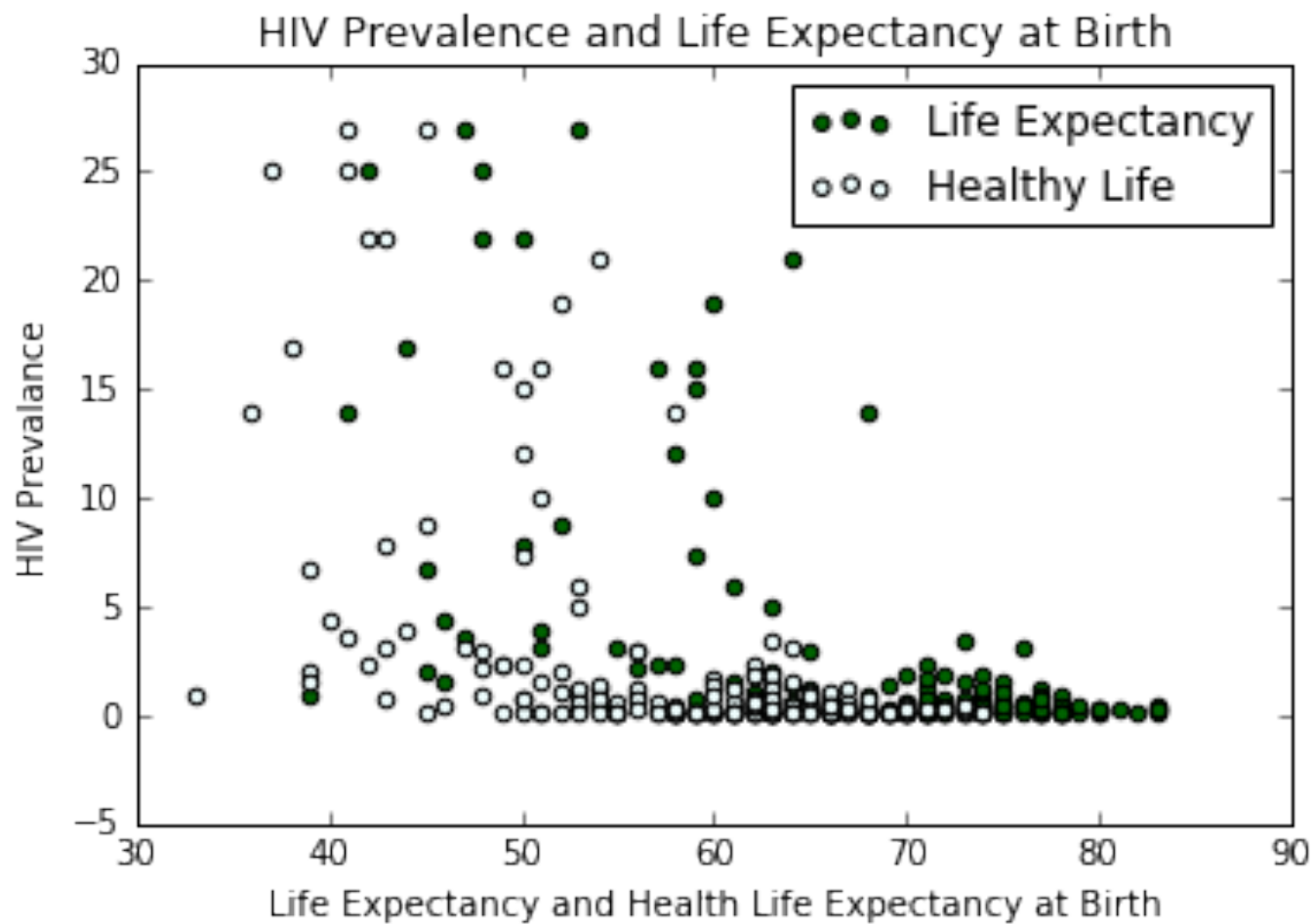


Distribution of Total Health Expenditures as a Percent of GDP
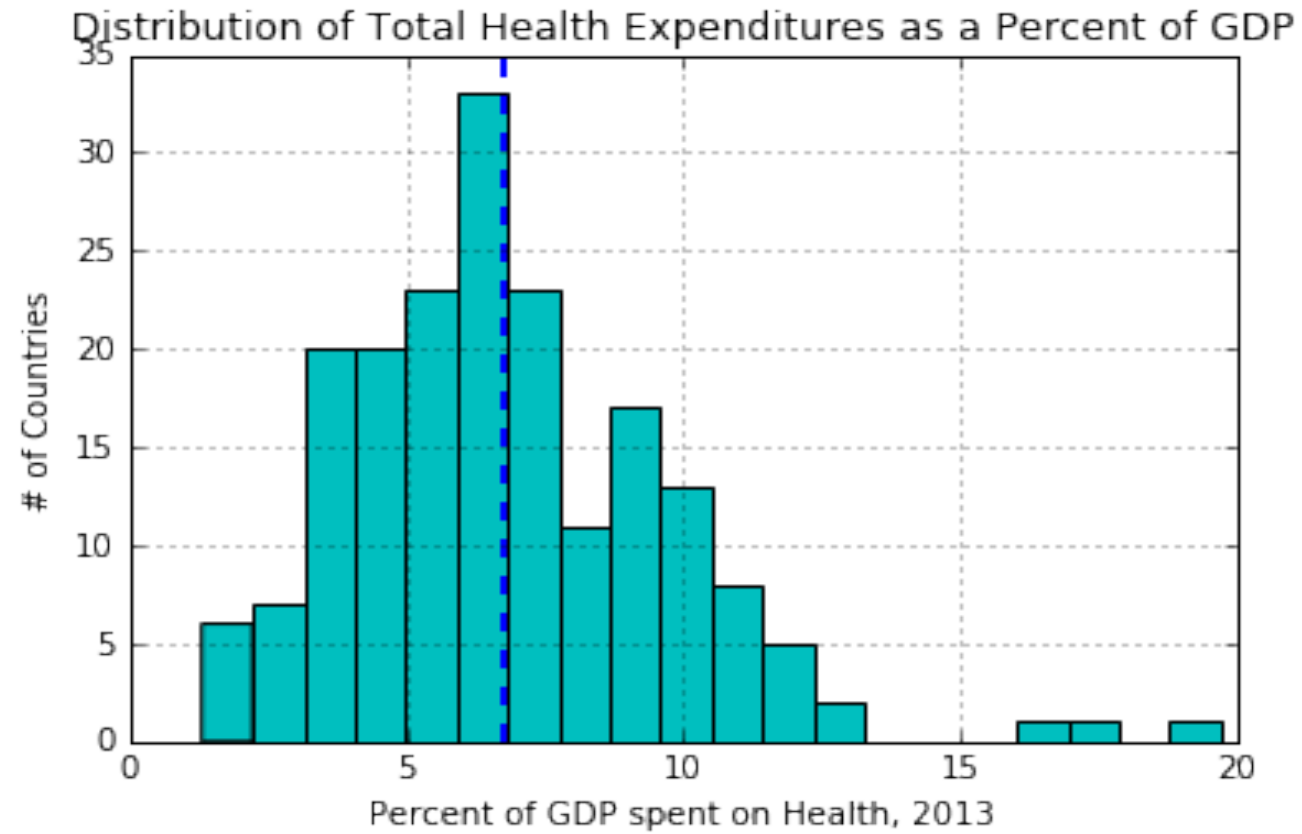
# Countries with High Health Expeditures



Countries with Overall Expeditures(% of GDP)
2 Standard Deviations above the Mean
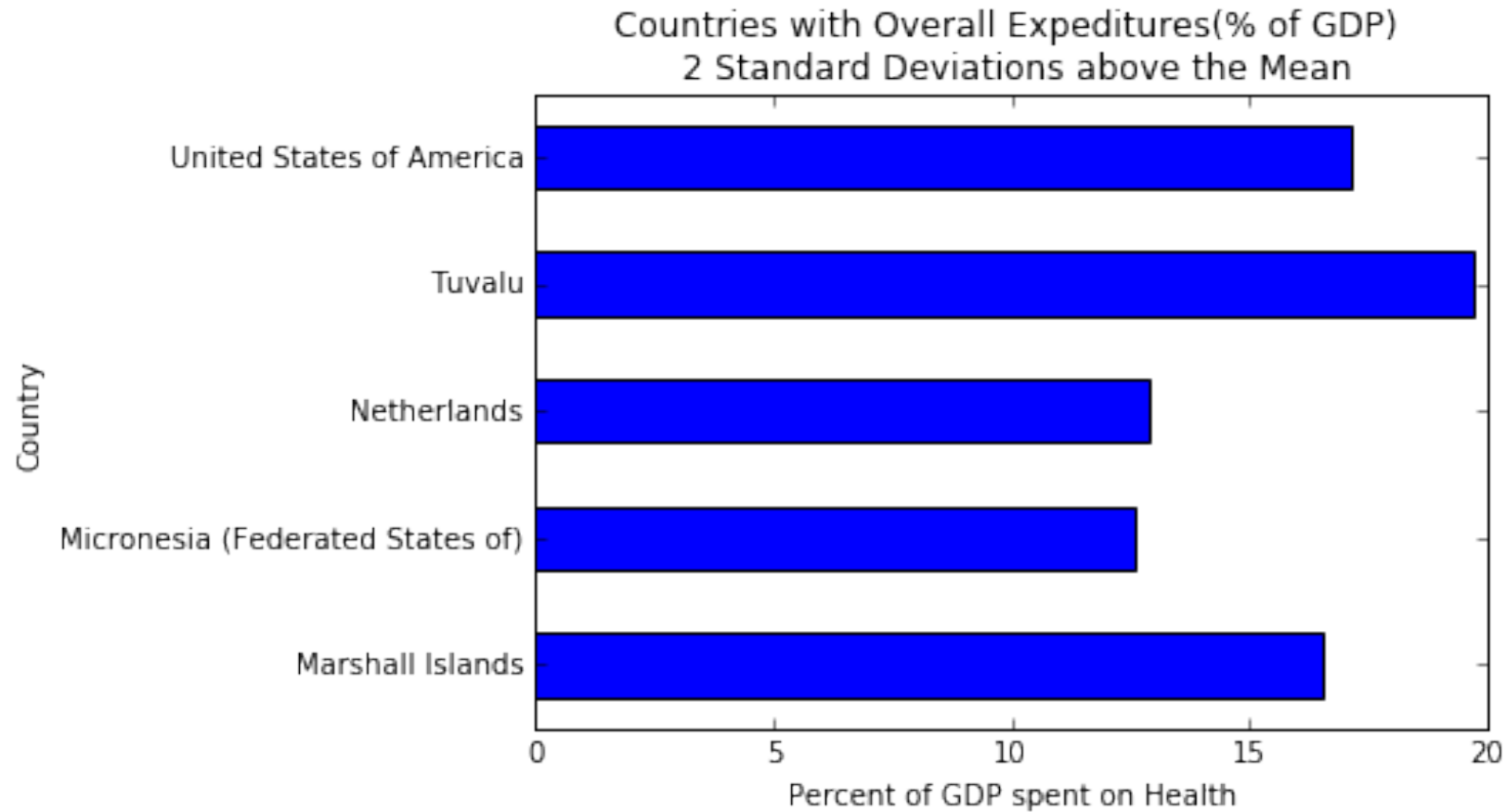
# Health Spending, HIV and Life Expectancy



Health Care Expenditures and Life Expectancy at Birth among High and Low HIV countries