



Institute for
Health Metrics
and Evaluation

Antiretroviral Therapy in Zambia

Costs, Patient Characteristics and Implications
for Further Scale-Up

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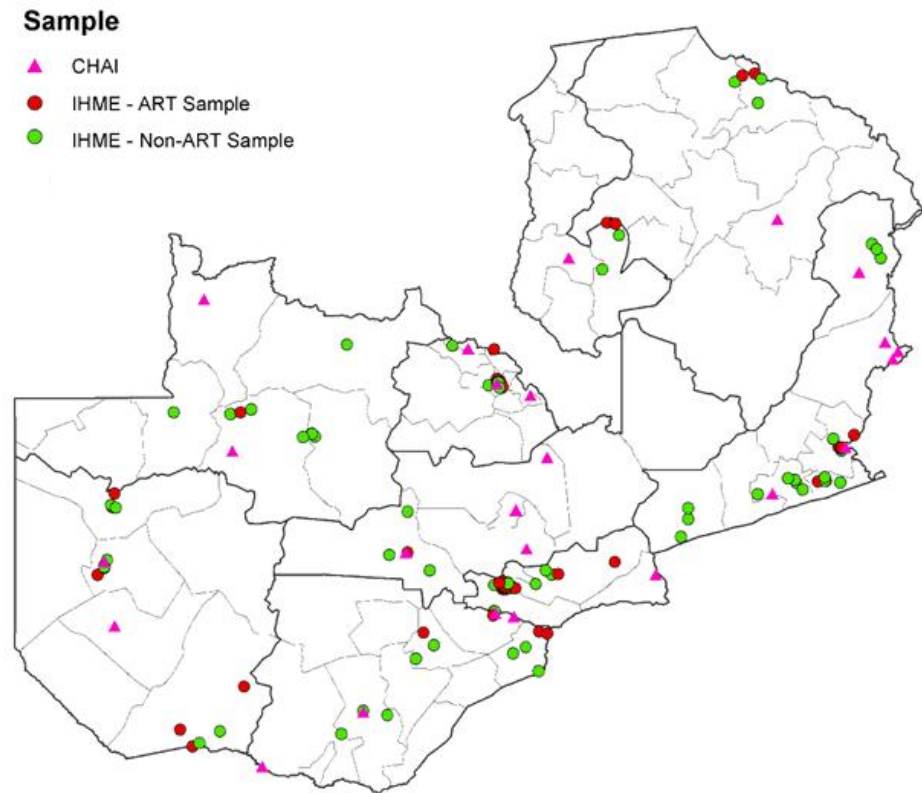
UNIVERSITY *of* WASHINGTON

Facilities

- 24 districts
- 189 facilities
- 43 ART-specific

ART patients

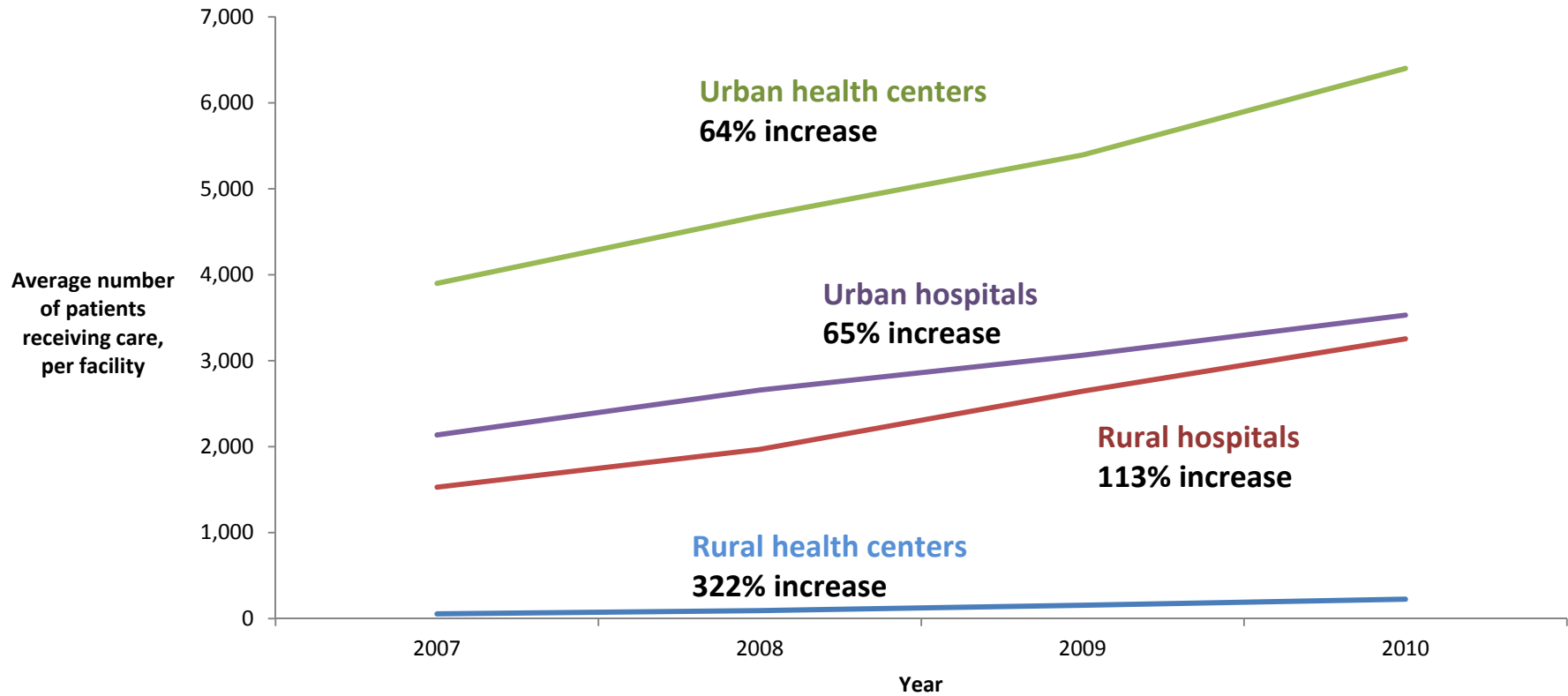
- 8,420 records



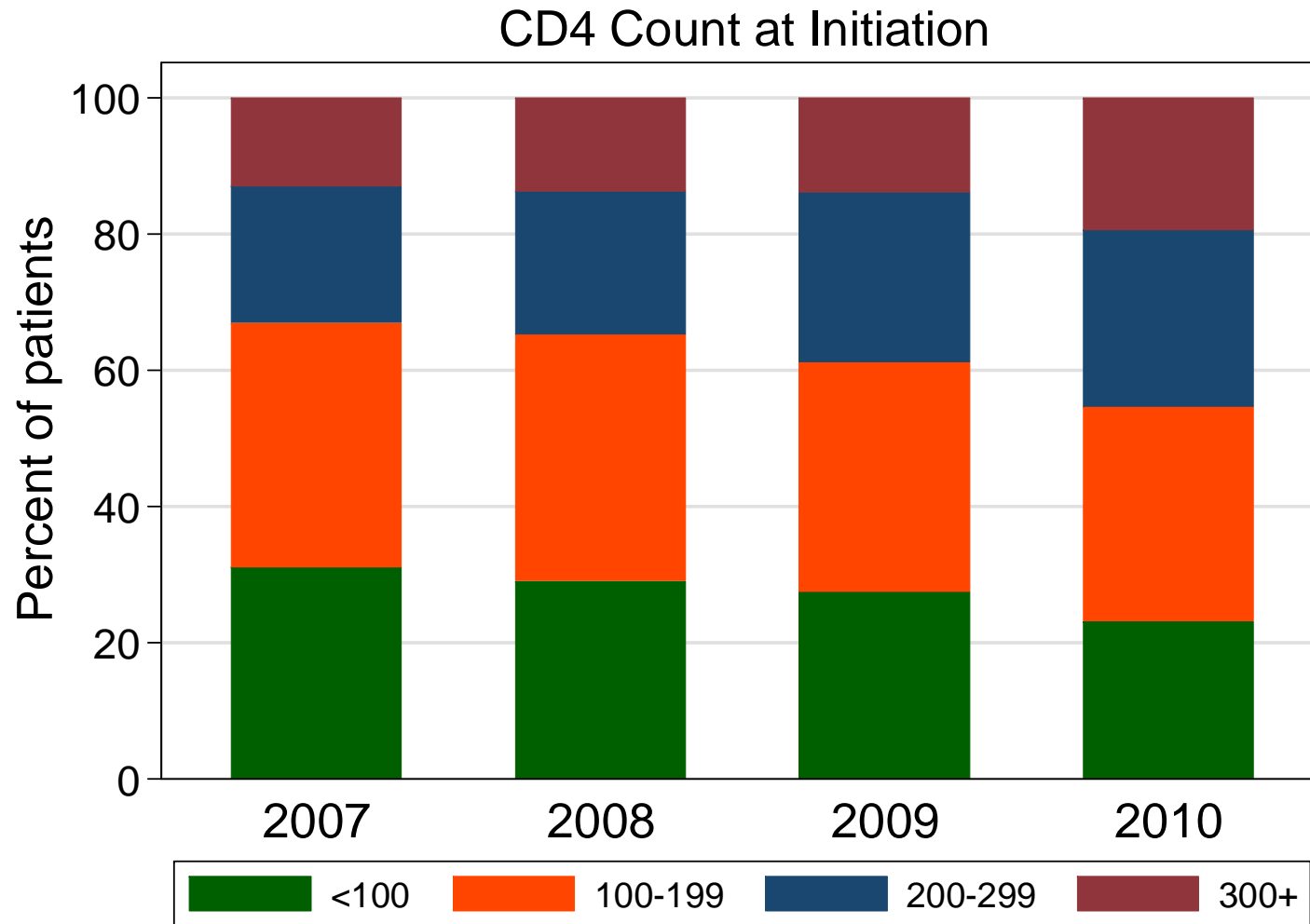
Unique features of the study

1. Data on both ART and other services
2. Data from non-ART facilities
3. Data over time, from 2007 to 2010

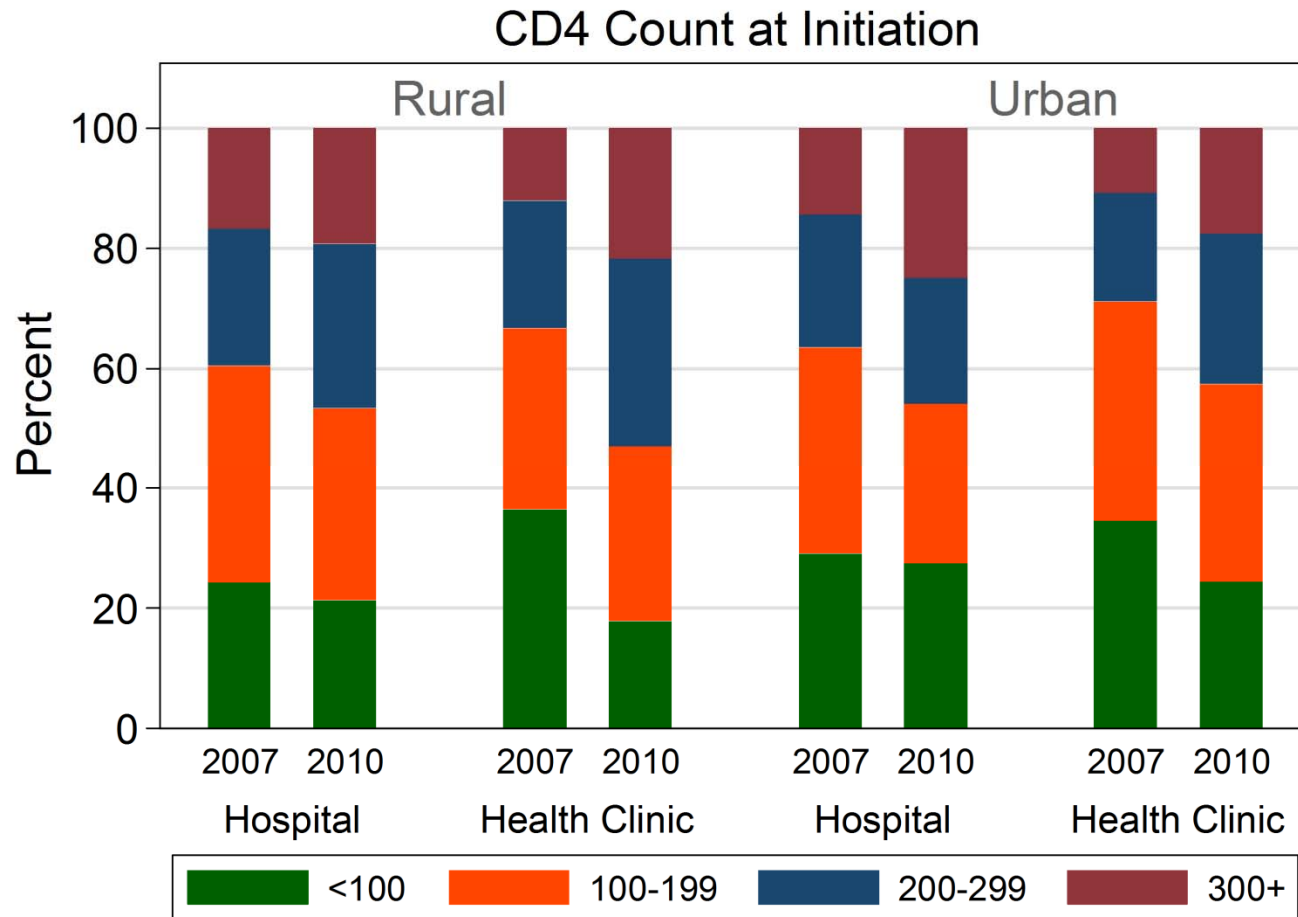
ART patients receiving care



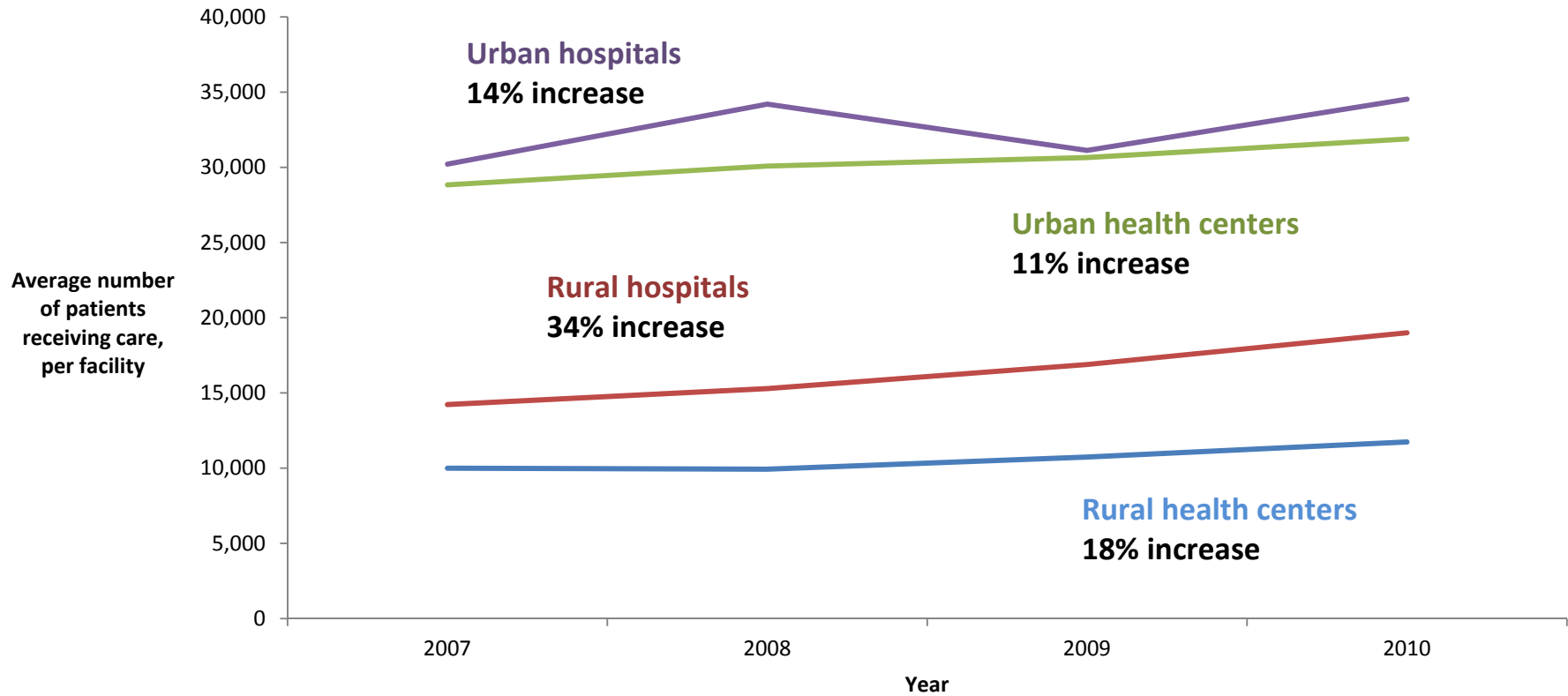
Condition at initiation



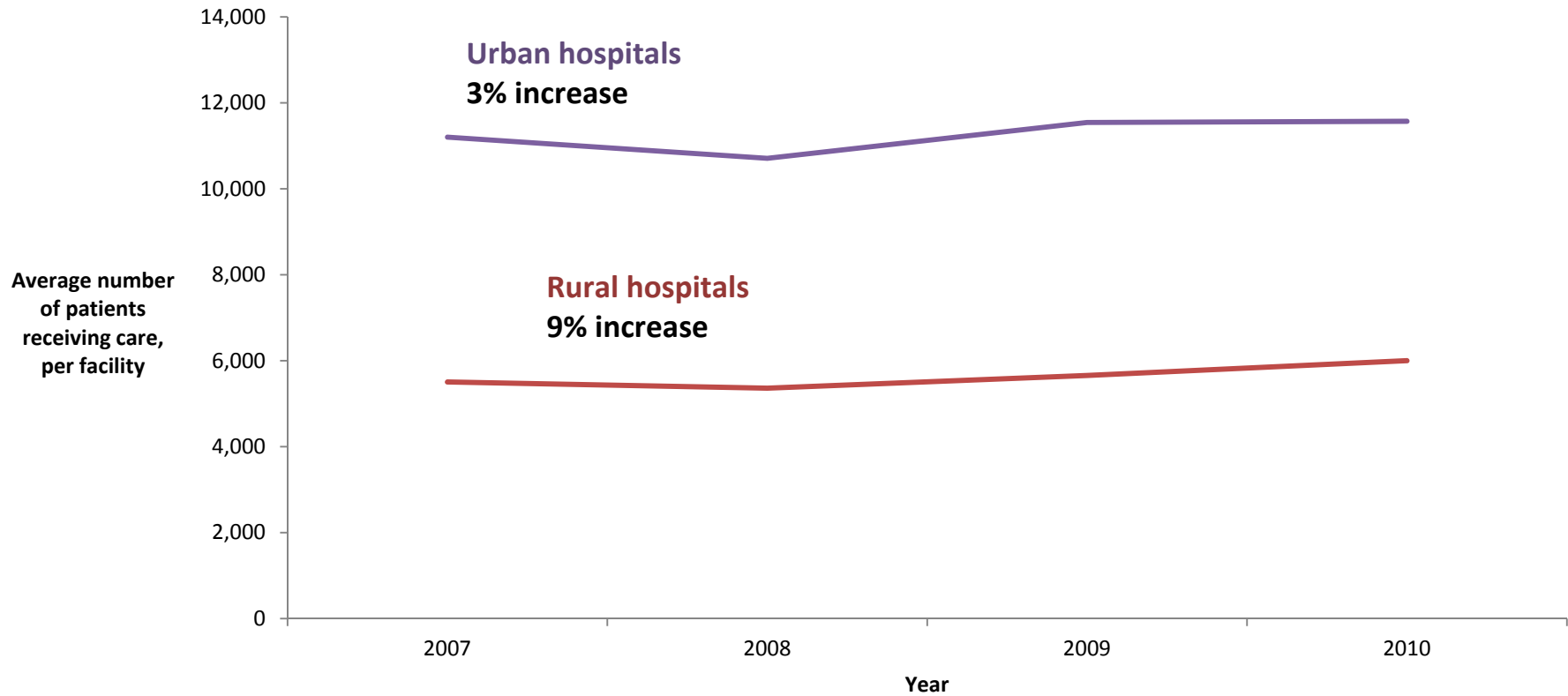
Condition at initiation, by platform



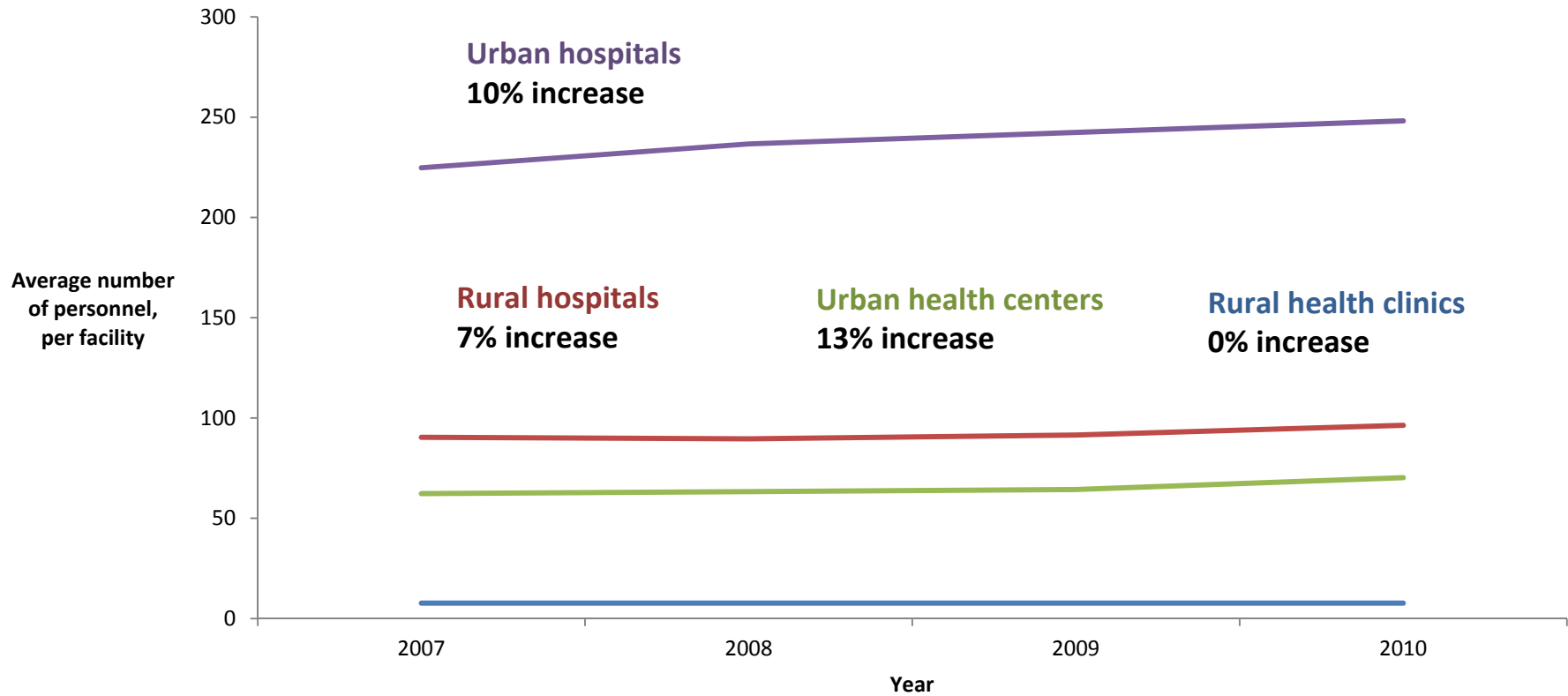
Trends in outpatient care



Trends in inpatient care



Trends in personnel



Inferring costs of service

$$\ln(\text{total expenditure})_{i,t} = \beta_0 + \beta_1 \boldsymbol{\nu}_{i,t} + \beta_2 \boldsymbol{\psi}_{i,t} + \beta_3 \boldsymbol{\pi}_{i,t} + \varepsilon_{i,t}$$

where

- $\boldsymbol{\nu}$ measures of volume
- $\boldsymbol{\psi}$ measures of quality
- $\boldsymbol{\pi}$ prices across time and space

Key issue: identifying non-linear relationships

Implications from preliminary analysis

Average variable cost (AVC) per ART visit	Low	Med	High
Hospital	\$4	\$14	\$25
Health clinic	\$4	\$7	\$11
Average cost of pharmaceuticals per patient year (from MSL)			\$166
AVC of ART care per patient-year: 4 visits, including drugs	Low	Med	High
Hospital	\$182	\$222	\$266
Health clinic	\$182	\$194	\$210

Implications for future scale-up

- At existing facilities, ART care (excluding pharmaceuticals) is inexpensive
- Health clinics appear to provide care at slightly lower costs than hospitals
- No evidence ART scale up has led to a decrease in other services



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Thank you!