

Funding formulas; intersection of funding efficiency and optimal health department size.

- Presented to the Institute of Medicine,
Committee on Public Health Strategies to Improve Health
May 5, 2011, Washington DC.
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Introduction

- Can funding formulas promote efficiency?
- What is efficiency?
- What are the desired outcomes?
- Political feasibility

Efficiency and Size

- Is there an optimal size for public health departments?
- Explicit handling in funding formulas.
 - Per capita.
 - Bioterrorism - New York, Los Angeles, Chicago, DC.
- Implicit judgments of size.
 - Regionalization incentives
 - Breadth of service incentives

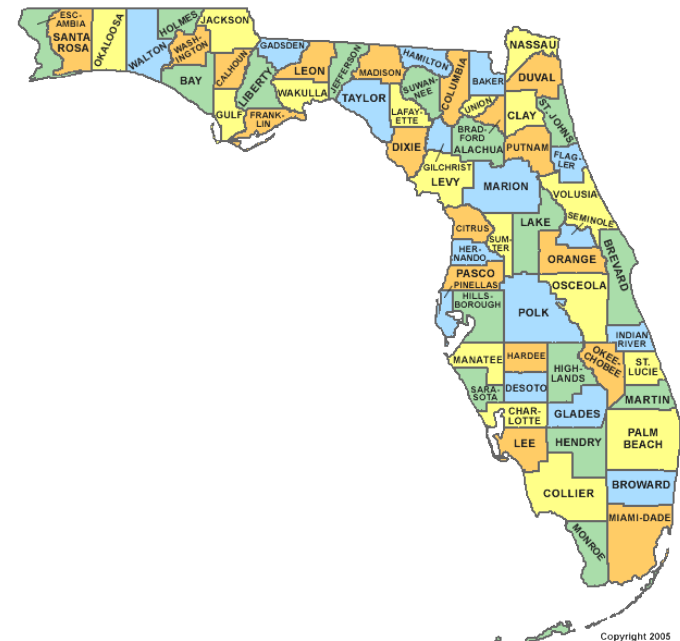
| | Federal | | | States | | | | | |
|---------------------|------------|---------------|-----|--------|----|----|----|-----------|----|
| | BT, Pan | PHHS Block | MCH | GA | MA | MO | UT | WA MCH | WI |
| Population size | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Regionalization | | | | | ✓ | ✓ | ✓ | | |
| Breadth of services | ✓ | ✓ | ✓ | | | | | ✓ | ✓ |

Data

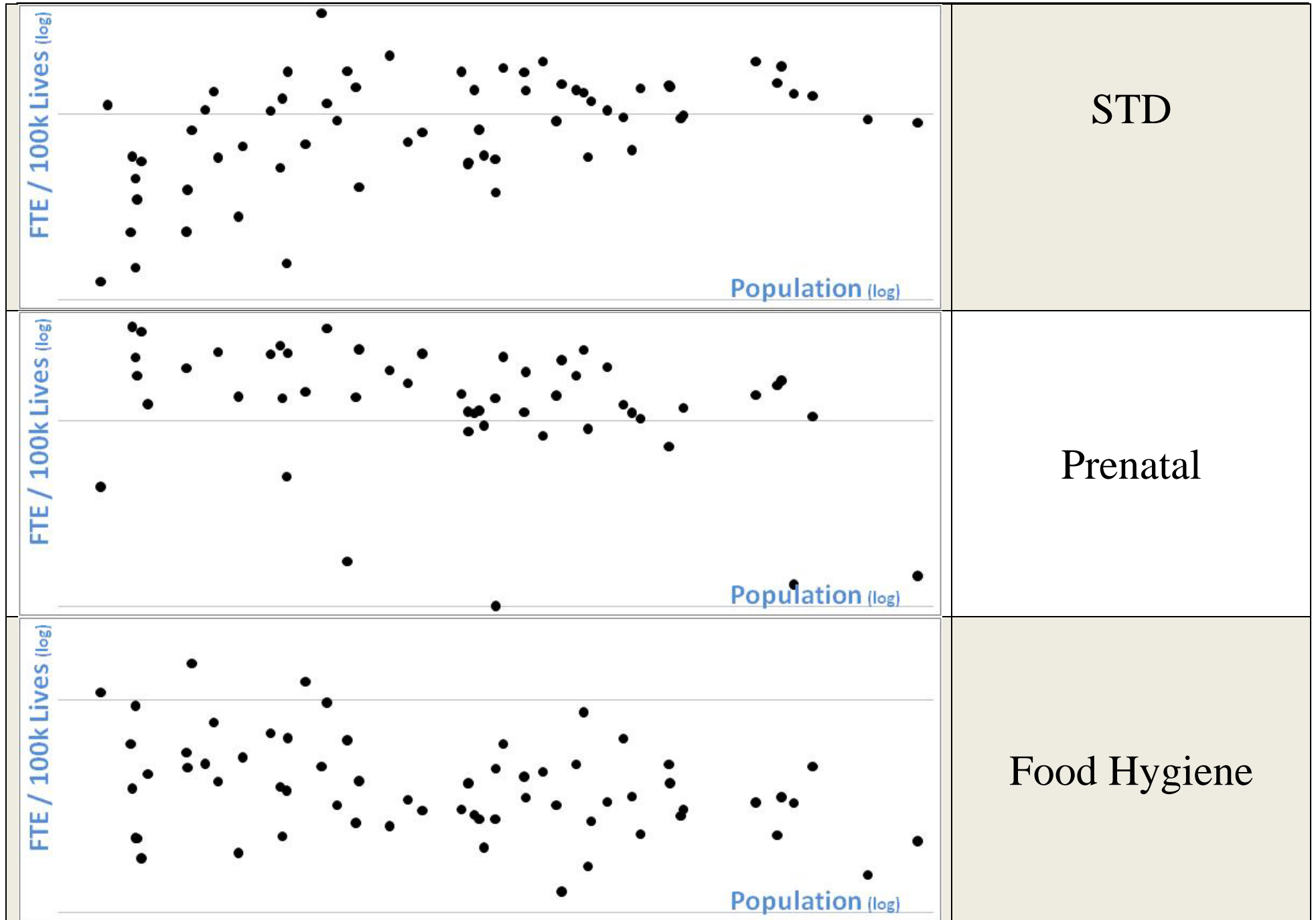
- Florida public health
 - Staffing
 - Expenditures
 - Service (customer) counts

| | | | | | | |
|--------------|---------------|-------------|-----------------|---------------|----------------|----------------|
| Immunization | STD | AIDS | TB | Dis Surv | Hepatitis | Chron Dis |
| Tobacco | Preparedness | WIC | Family Planning | HS-IPO | HS-Prenatal | Child Hlth |
| HS-Infants | Sch Hlth | Adult Hlth | Dental | Occ Hlth | Cons Prod Sfty | Injury Prev |
| Beach Mntr | Food Hygiene | Body Art | Lead | Grp Care | Migrant Camps | Hsing-Pub Bldg |
| Mobile Home | Strg Tank | SuperAct | Ltd Use Pub Wt | Pub Wtr | Priv Wtr | Pools |
| Indiv Sewage | Public Sewage | Solid Waste | Biomed Waste | Sanitary Nuis | Rabies | Arbovirus |
| Rodent Cntrl | Tanning | Water Pol | Air Pol | Radiology | Toxic Sub | Vital Stats |

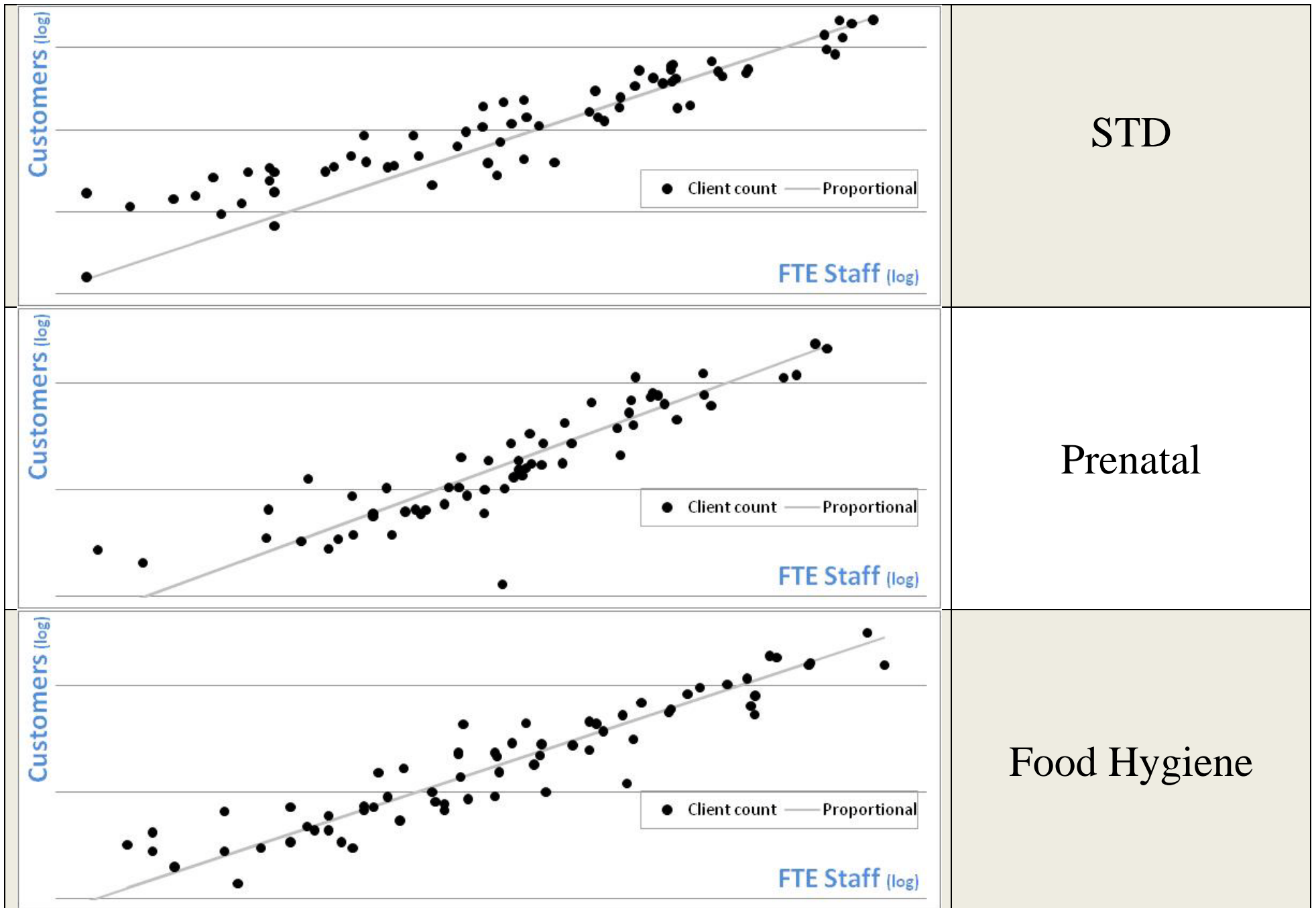
- Additional references
 - Census
 - NACCHO
 - Community Health Status Indicators
 - County Health Rankings
 - CDC



Optimal Size and Population

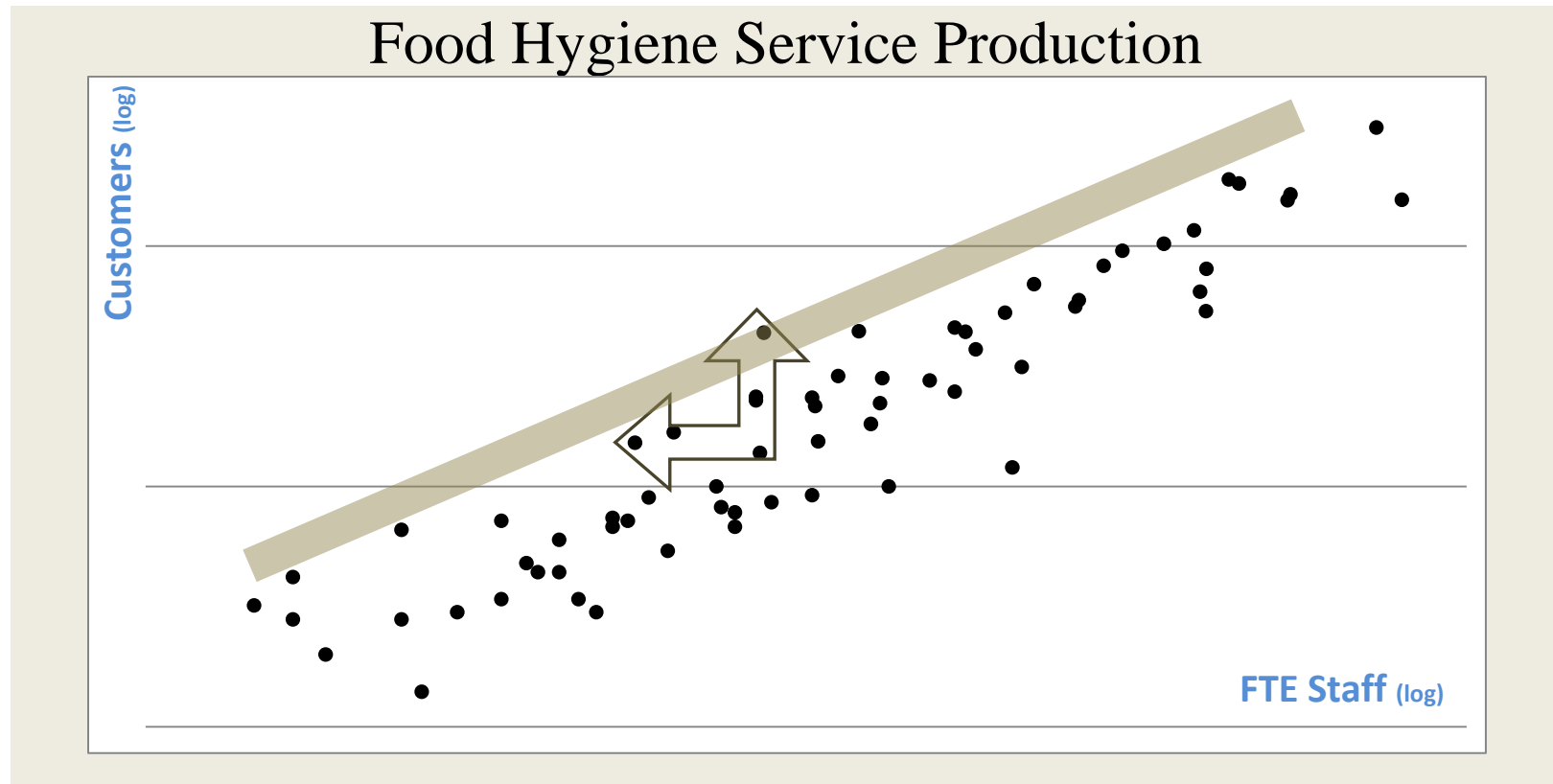


Service Production Efficiency



Data Envelopment Analysis

- Measuring inefficiency.



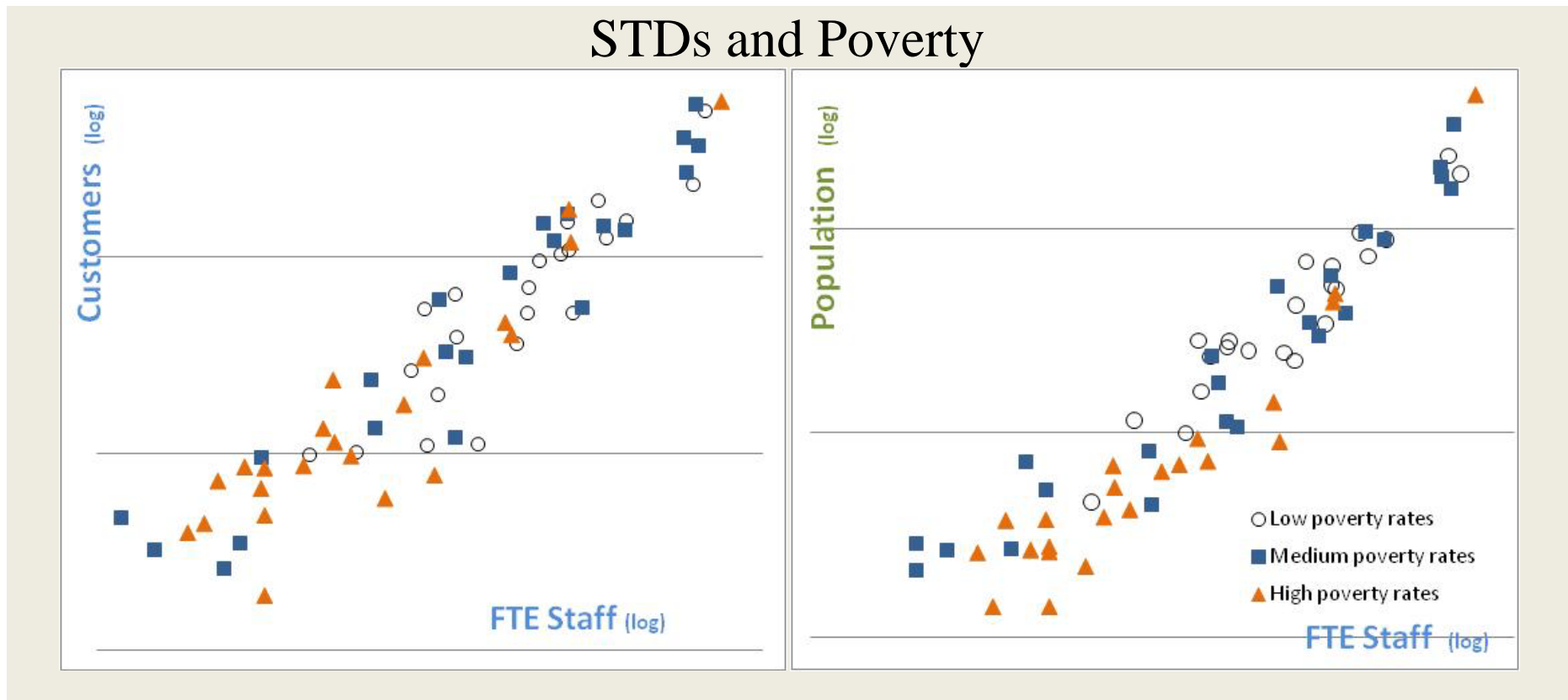
- Important determinants of efficiency
 - Poverty
 - Unemployment
 - Urban/Rural

Adjustments for Population Characteristics

| | Federal | | | States | | | | | |
|-----------------------------|------------|---------------|-----|--------|----|----|----|-----------|----|
| | BT, Pan | PHHS Block | MCH | GA | MA | MO | UT | WA MCH | WI |
| Population size | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Poverty | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Rural / Land area / Density | | | | | ✓ | | ✓ | | ✓ |

- Funding formulas adjust for factors that impact efficiency.

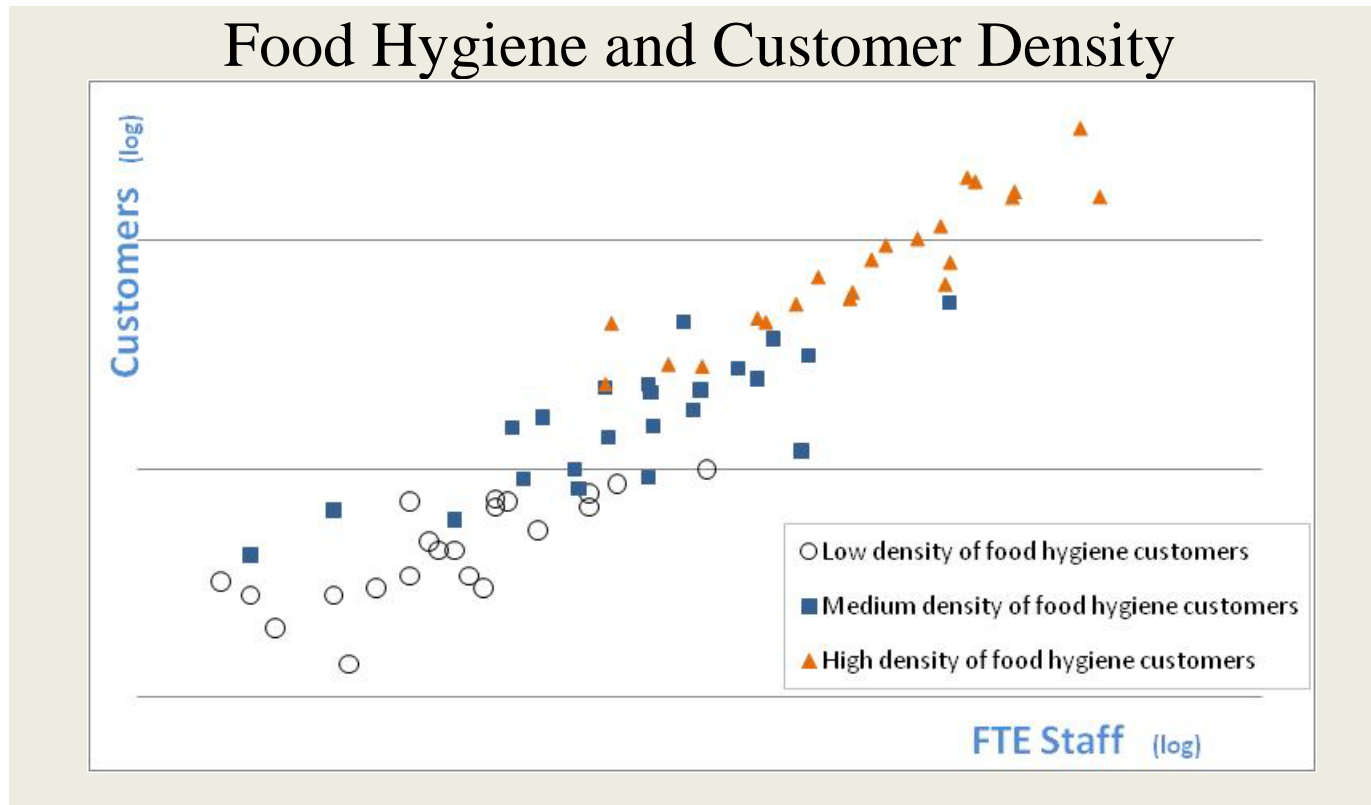
Explanatory Factors - Poverty



- Areas with high poverty require more FTEs per population.
 - Inefficiencies associated with population. (Demand driven.)
 - Worker efficiency is not the cause.
- Higher funding based on poverty seems appropriate.

Explanatory Factors - Facility Density

- Low facility density associated with lower productivity.



- Higher funding based on population density seems appropriate.

Efficiency and Agency Characteristics

| | Federal | | | States | | | | | |
|---------------------|------------|---------------|-----|--------|----|----|----|-----------|----|
| | BT, Pan | PHHS Block | MCH | GA | MA | MO | UT | WA MCH | WI |
| Regionalization | | | | | ✓ | ✓ | ✓ | | |
| Local Tax Effort | | | | | | ✓ | | | |
| Breadth of services | ✓ | ✓ | ✓ | | | | | ✓ | ✓ |

- Regionalization

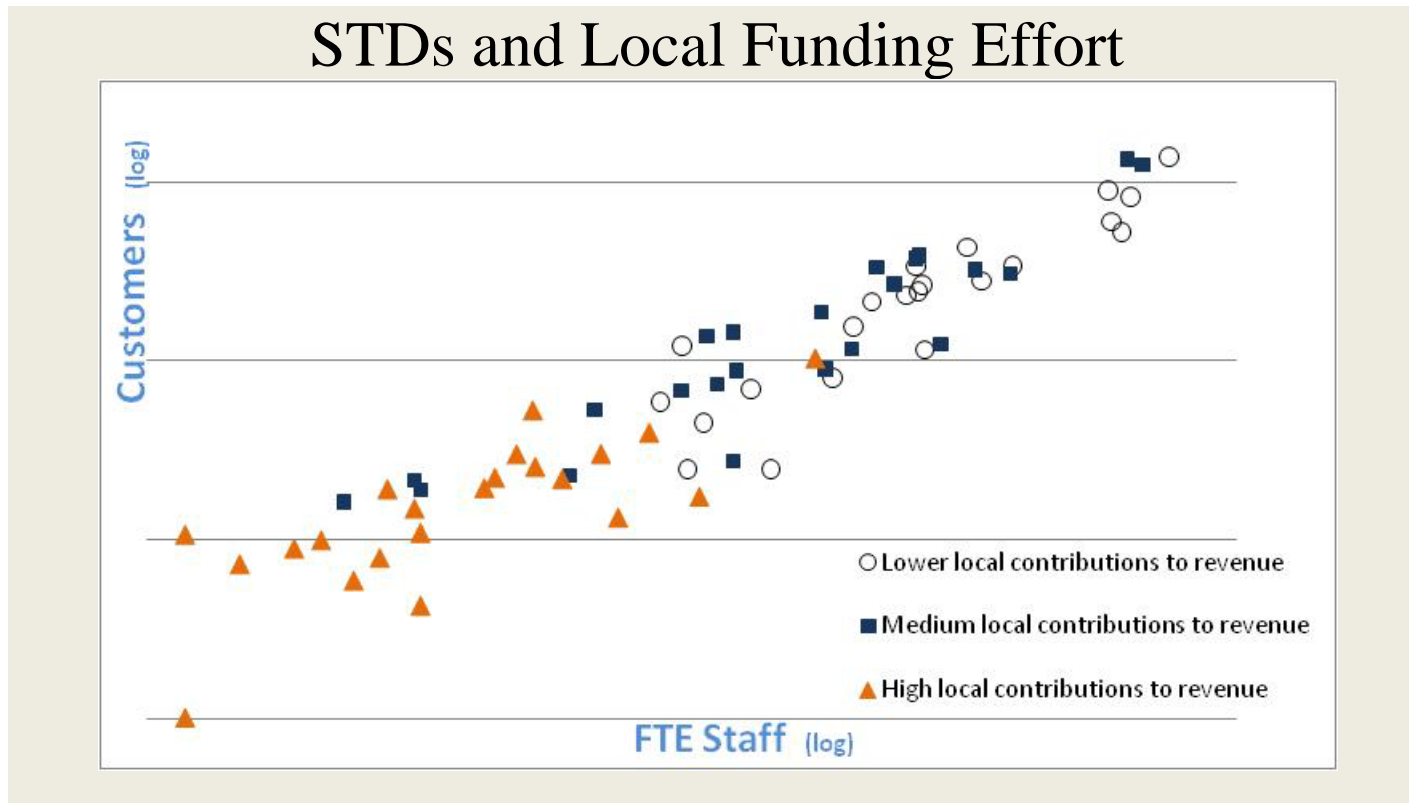
- Connecticut: Per capita premium from state. Strong regions.
- Missouri: Increase in state funding. Strong regions.
- Utah: Up to 6% premium from state. Strong regions.

- Breadth

- Federal programs define exactly what they are 'buying'.
- Wisconsin: more to departments that provide all essential services.

Local Tax Effort

- Help those who help themselves.

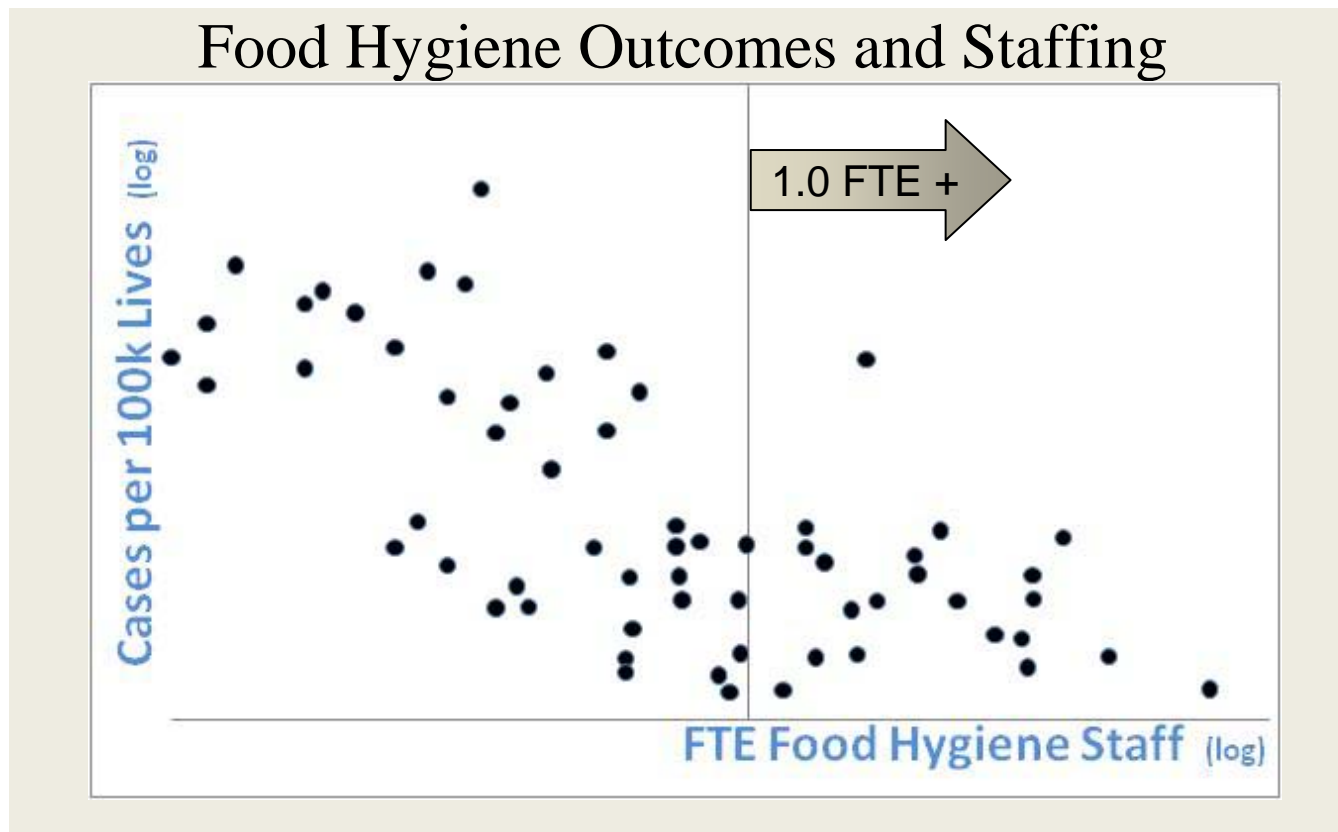


- More pain = greater efficiency?

Risk Factors and Outcomes

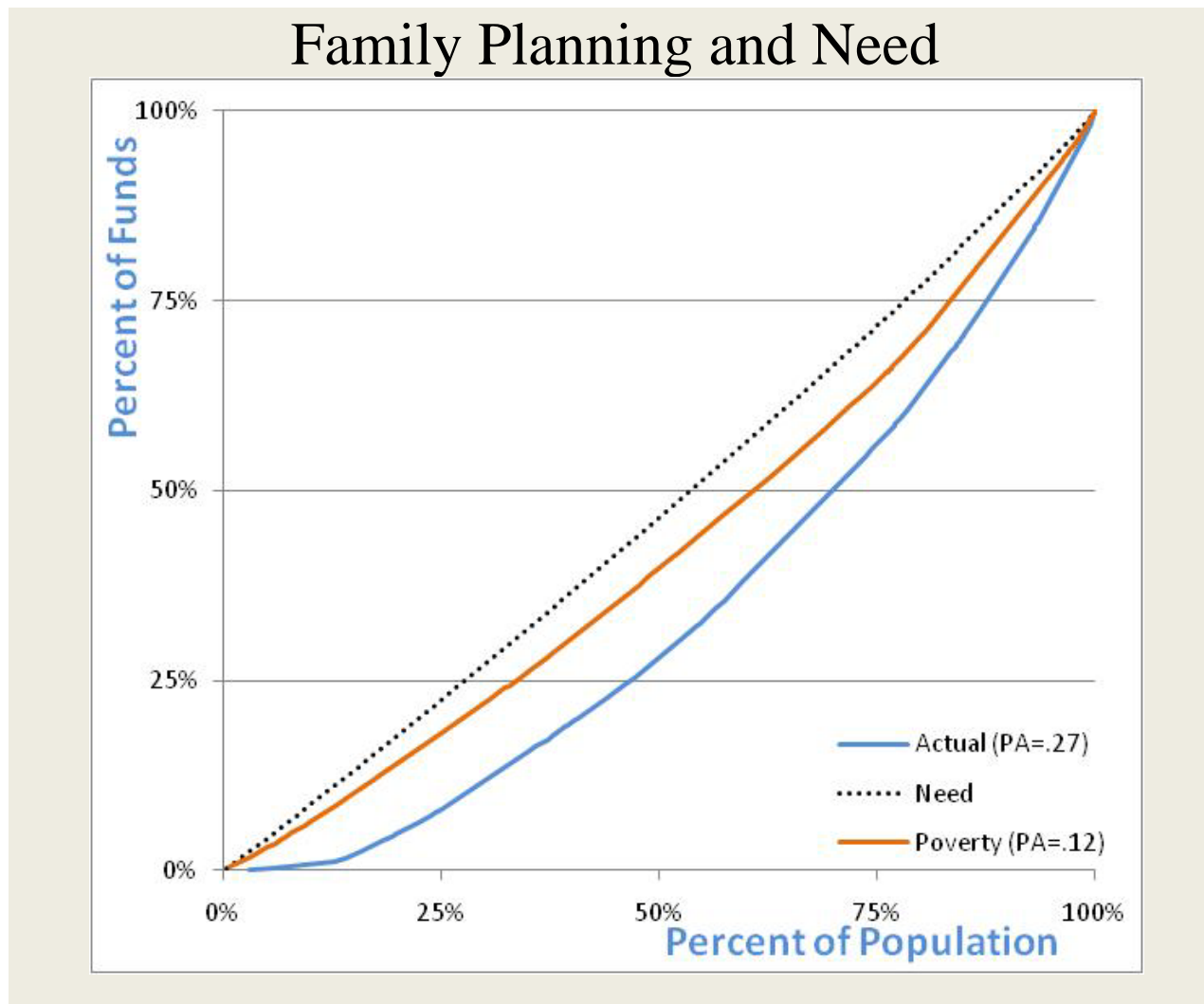
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|--------------|------------|---------------|-----|--------|----|----|----|-----------|----|
| | BT, Pan | PHHS Block | MCH | GA | MA | MO | UT | WA MCH | WI |
| Risk Factors | | | ✓ | | | | | ✓ | ✓ |

- Outcomes are an 'ultimate measure' of efficiency.
 - But which outcome?
 - Jump steps in 'production' chain.



Funding and Need

- Funding formula analysis tool (on ASTHO web site).
- Proportionality of Allocation



Political Assessment

- Political feasibility of changes to funding.

Family Planning and Politics

| | Unadjusted | Allocations adjusted for: Land area | Allocations adjusted for: Wealth (per capita income) | Allocations adjusted for: Income inequality (Theil) | Allocations adjusted for: Ability to pay (home values) |
|---|------------|-------------------------------------|--|---|--|
| Percent of total allocations moved from baseline | 0% | 22% | 7% | 4% | 2% |
| Senate support (# counties with over 20% increase) | 0 | 6 | 28 | 1 | 0 |
| Senate oppose (# counties with over 20% decrease) | 0 | 44 | 7 | 4 | 0 |
| House support (% population with over 20% increase) | 0% | 28% | 6% | 1% | 0% |
| House oppose (% population with over 20% decrease) | 0% | 37% | 13% | 2% | 0% |

- Complications
 - Non-discretionary funding

| | Federal | | | States | | | | | |
|--------------------------|---------|------------|-----|--------|----|----|----|--------|----|
| | BT, Pan | PHHS Block | MCH | GA | MA | MO | UT | WA MCH | WI |
| Minimum per county/state | ✓ | | | | | ✓ | | ✓ | |
| Legacy Allocations | | ✓ | ✓ | ✓ | | ✓ | | | ✓ |

Conclusion

- Funding formulas can encourage efficiency.
- Regionalization
- A tastier carrot and a pointier stick
- Subcontracting
- Practitioners
- Outcomes and Need