# LETTING THE GINI OUT OF THE BOTTLE: DOES MEDICARE SPENDING ON GRADUATE MEDICAL EDUCATION RELATE TO INCOME INEQUALITY?

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## **Purpose of Study:**

Using individual US states as the unit of analysis, we sought bivariate correlations between state-level socio-economic and geo-demographic factors and the intensity and composition of GME within each state.

## Background:

State governments in the US have great control over health care delivery. States decide **who** can deliver health care through professional licensing boards and scope of practice legislation; **what** services are paid for by Medicaid and private insurers through insurance regulations and legislated benefits; and **how** care is provided through regulations of health-care facilities. The Affordable Care Act strengthens states' roles by vesting in them authority to create state-based insurance exchanges. However, Medicare blankets all states with a uniform federal insurance plan for citizens over 65. Also, Medicare is the major funder of Graduate Medical Education (GME), providing US teaching hospitals about \$10B of the \$15B explicitly spent on GME.

#### Findings:

Predictably, the number of ACGME programs (#GMEPGMS) in a state correlates most highly with a state's population (R=.85). But despite the fact that Medicare is the major source of funding for GME, the #GMEPGMS correlates inversely to a state's percent of the population on Medicare (R=-.11), and weakly to % on Medicaid (R=.23) and % uninsured (R=.07). Also, the #GMEPGMS correlates negligibly with state-wide personal health care spending per capita (R=.08) and Medicaid spending per beneficiary (R=.02). However the #GMEPGMS does correlate significantly with total Medicare spending per beneficiary by state (R=.61) as well as the state's household-income GINI coefficient (a measure of income inequality within the state) (R=.49). A state's GINI coefficient correlates highly to a state's Medicare spending per beneficiary (R=.68); moderately to % of population on Medicaid (R=.49); weakly to personal health care spending (R=.26) and the % uninsured (R=.21); and not at all to the % of population on Medicare (R=.04) and to Medicaid spending per beneficiary (R=.00). Using three factors (state-level Medicare spending per beneficiary, household-income GINI coefficient and the #GMEPGMS per state), states group into four distinct clusters: low, moderate, high and very high on all three measures.

#### **Discussion:**

Because GME dollars are distributed to teaching hospitals through complex and opaque funding formulas based on how many hospital beds are occupied by Medicare beneficiaries, finding a correlation between a state's Medicare spending per beneficiary and its GME intensity is not surprising. However, the weak correlations between GME intensity and both public and private health insurance coverage, as well as non-Medicare health spending suggests that the current distribution of dollars to train future physicians is based on criteria that do not represent the health care needs of a state's population. In addition, the strong and dominant correlation between a state's household-income inequalities and Medicare spending per beneficiary suggests a potential relationship that deserves further investigation.

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