Incorporating statistical methods for non-normal distributions may improve pharmacy claims risk indices.

**PHP39**

**DOES POOR HEALTH STATUS LEAD TO LOWER INCOME PRODUCTIVITY?**

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**OBJECTIVES:** There is a large body of literature indicating income effect on health. This research tests an important hypothesis as to how health human capital in turn contributes to income productivity among the US population. **METHODS:** Income production variable is defined as the product of once weekly working hours and wage rate. Health is measured by self-perceived health status in five scales ranging from being poor, fair, good, very good, and excellent. Following an income production function, we consider the endogeneity of health and its unobserved factors using a panel model design. To achieve national representation, the model is estimated using the 1999 Medical Expenditure Panel Survey (MEPS). **RESULTS:** The study sample includes 19,399 Caucasians and 3,261 African-Americans; their weekly income was $657 and $539 respectively. The ordinary least squares (OLS) model finds no impact of health on income for both African-Americans and Caucasians. However, a fixed-effect (FE) panel income model shows a strong health effect on income for African-Americans, indicating a gained income of $31 for being excellent, $24 for being very good, $26 for being good, and $22 for being fair compared to poor reference. For Caucasians, the FE estimates are similar to OLS results showing no significant association between health and income productivity. **CONCLUSIONS:** This study makes two primary contributions. First, it finds a health effect on income productivity to be race-specific for African-Americans only. A policy implication is that the African-American population deserves a special attention on income productivity to be race-specific for African-Americans only. A policy implication is that the African-American population deserves a special attention on income productivity to be race-specific for African-Americans. A policy implication is that the African-American population deserves a special attention on income productivity to be race-specific for African-Americans. A policy implication is that the African-American population deserves a special attention on income productivity to be race-specific for African-Americans. A policy implication is that the African-American population deserves a special attention on income productivity to be race-specific. Second, it sheds light on a methodological issue of endogeneity of income in income production, indicating an estimation bias with OLS results as hypothesized.

**PHP40**

**WORK IMPAIRMENT DUE TO CHRONIC DISEASE IN A POPULATION OF WISCONSIN SCHOOLTEACHERS**

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**OBJECTIVES:** Reductions in productivity can hinder an organization’s ability to meet its goals. In the teaching profession, these consequences may be especially detrimental. We performed a cross-sectional study to determine the impact of health on quality-of-life and work-related outcomes for Wisconsin schoolteachers. **METHODS:** Wisconsin schoolteachers were surveyed during the 2002 Wisconsin Education Association Teacher’s Convention. The Work Limitations Questionnaire, an instrument that quantifies work impairment across four subscales (Time Management Demands, Physical Demands, Mental-Interpersonal Demands, and Output Demands), was used along with the EQ-5D, a generic measure of health status. **RESULTS:** A total of 273 teachers responded, with 196 (71.8%) reporting one or more chronic disease(s). The presence of chronic disease was associated with a decreased ability to perform routine teaching activities, including answering student questions ($p = 0.0002$), completing the entire teaching activity ($p = 0.0065$), teaching an unfamiliar subject ($p = 0.0001$), monitoring students ($p = 0.0061$) and grading papers ($p < 0.0001$). Additionally, self-rated health status on the EQ-5D visual analog scale was significantly lower than healthy individuals (76.8 and 85.9 respectively, $p < 0.0001$). Musculoskeletal disorders produced the highest level of impairment on the Physical (mean 31.8, SD 30.1) and Mental-Interpersonal (mean 29.4, SD 25.5) scales while digestive diseases produced the highest level of impairment on the Time (mean 30.2, SD 32.5) and Output (mean 26.3, SD 27.2) scales. **CONCLUSION:** Although Wisconsin academic test scores have consistently remained higher than the national average, the consequences of reduced teacher productivity may be lower student test performance. Regardless of past achievement, room exists for improvement and health related work impairment may be a logical area for increased attention.

**PHP41**

**PHARMACY REIMBURSEMENT FOR PHARMACEUTICAL CARE SERVICES IN AMBULATORY CARE SETTINGS AT US SCHOOLS OF PHARMACY**

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**OBJECTIVES:** This study was done to assess: 1) To determine the level of ambulatory-care pharmacists at US Schools of Pharmacy who are getting reimbursed for providing pharmaceutical care services (PCS); 2) To determine factors hindering PCS reimbursement; and 3) to determine what disease states pharmacists are providing PCS for and the billing method. **METHODS:** A survey instrument was constructed for this study. The survey was pre-tested by pharmacy faculty for clarity and time required for completion. The survey was sent via email to all 85 US Schools of Pharmacy during the month of July 2002. **RESULTS:** The total response rate was 34 (40%) of 85 schools, represented by 46 respondents. Forty (87%) respondents provide PCS and 17 (37%) are reimbursed for PCS. Seven (15%) respondents reported billing for less