News Release

FOR RELEASE May 17, 2010, 4:30 p.m. CDT

FOR MORE INFORMATION, CONTACT:
Keely Savoie or Brian Kell
ksavoie@thoracic.org or bkell@thoracic.org
ATS Office 212-315-8620 or 212-315-6442 (until May 14)
Cell phones 917-860-5814 or 516-305-9251
ATS Press Room: 504-670-6926 (May 15 to 20)

Press conference time: May 17, 4:30 p.m. in the ATS Press Room (E-1)

Poster session time: 8:15-10:45 a.m. May 19
Location: CC-Room 395-396 (Third Level), Morial Convention Center

Health Insurance Status Linked to Mortality Risk in PA ICUs

ATS 2010, NEW ORLEANS— Adult patients without health insurance admitted to intensive care units (ICUs) in Pennsylvania hospitals are at a 21 percent increased risk of death compared to similar patients with private insurance, according to researchers from the University of Pennsylvania. The difference in mortality risk was not explained by patient characteristics or differences in care at the hospital level, suggesting that uninsured patients might receive poorer quality care.

The findings will be presented at the ATS 2010 International Conference in New Orleans.

Compared to similar patients with private insurance or Medicaid, uninsured ICU patients were also less likely to receive certain common critical care procedures, including placement of central venous catheters, tracheostomies and acute hemodialysis.

"Previous studies suggested that uninsured critically ill patients may have a higher mortality, and may be less likely to receive certain critical care procedures. But we found that these differences are primarily due to differences in quality within hospitals rather than across hospitals," said Sarah M. Lyon, M.D., pulmonary and critical care fellow at

the Hospital of the University of Pennsylvania. “The higher mortality for uninsured patients does not appear to be caused by uninsured patients tending to go to hospitals with poor overall quality. Instead, we found that even when admitted to the same hospitals, and controlling for other differences between patients, critically ill individuals without insurance are less likely to survive than those with private or Medicaid insurance.”

Dr. Lyon and colleagues analyzed 30-day mortality, and the use of several key ICU procedures, in all adult patients under 65 admitted to Pennsylvania ICUs from 2005 to2006 using state hospital discharge data. They categorized the 166,995 patients as having private health insurance (67.7 percent), Medicaid (28.5 percent), or being uninsured (3.8 percent.) When the researchers analyzed mortality at 30 days, they found that uninsured patients were 21 percent more likely to die than patients with private insurance; those with Medicaid had a 3 percent greater risk of death. Only the mortality difference between private insurance and uninsured patients was statistically significant.

“Our findings suggest that ICU patients without insurance have a higher risk of death and receive less intense treatment in the ICU. Expanding and standardizing health care coverage through health care reform may improve outcomes in critically ill patients,” said Dr. Lyon. “We still do not understand all the reasons for differences in survival between the insured and uninsured. Critically ill patients without insurance may arrive to the hospital in more advanced stages of illness, perhaps in ways we could not control for in our study. Patients without insurance may also have different preferences for intensity of care at the end of life, and may not wish to be kept alive on life support as long as patients with insurance. Another, more concerning explanation is that physicians and hospitals treat patients without insurance differently than those with insurance. More work is needed before we can say with certainty that treatment biases caused these results.”

###

“The Effect of Health Insurance on Intensive Care Mortality and Procedural Utilization” (Session D14, Wednesday, May 19, 8:15-10:45 a.m., CC-Room 395-396 (Third Level), Morial Convention Center; Abstract 1434)

**Please note that numbers in this release may differ slightly from those in the abstract. Many of these investigations are ongoing; the release represents the most up-to-date data available at press time.*

The Effect of Health Insurance on Intensive Care Mortality and Procedural Utilization

S.M. Lyon[1], N.M. Benson[2], T.J. Iwashyna[3], C.R. Cooke[3], J.M. Kahn[2]
[1]Hospital of the University of Pennsylvania - Philadelphia, PA/US, [2]University of Pennsylvania - Philadelphia, PA/US, [3]University of Michigan - Ann Arbor, MI/US

Rationale: Insurance status may play a role in variation in treatment intensity and outcomes for patients with critical illness. Understanding the relationship between health insurance and critical care outcomes and utilization may provide insight into current clinical decision making and the impact of future insurance reform in the critical care setting.

Methods: We analyzed all patients admitted to Pennsylvania ICUs during fiscal years 2005 to 2006 using state hospital discharge data. We categorized health insurance as either commercial, Medicaid or none, excluding patients with Medicare and all those ≥ 65 years old. The outcomes of interest were 30 day-mortality, ICU length of stay, and rates of common ICU procedures (central venous catheter placement (CVC), bronchoscopy, tracheostomy, pulmonary artery catheterization (PAC), and acute hemodialysis). Hierarchical regression analyses were used to adjust for patient characteristics, severity of illness on presentation and hospital-level center effects.

Results: Of 166,995 eligible patients, 113,002 (67.7%) had commercial insurance, 47,613 (28.5%) had Medicaid, and 6,380 (3.8%) were uninsured. Unadjusted mortality was 5.3%, 7.2%, and 5.8%, respectively. After adjusting for differences in patient characteristics, when compared to patients with commercial insurance, uninsured patients had a higher risk of death (adjusted OR=1.26, 95% CI: 1.09-1.46, p=0.002), as did patients with Medicaid (adjusted OR=1.14, 95% CI: 1.07-1.21, p<0.001). Additional adjustment for center using hospital-level random effects did not attenuate these differences (uninsured: adjusted OR=1.27, 95% CI: 1.09-1.48, p=0.002; Medicaid: adjusted OR=1.13, 95% CI: 1.06-1.20, p<0.001). Adjusted rates of several critical procedures examined were significantly lower in uninsured patients (Table).

Conclusions: Patients with non-commercial insurance in PA ICUs appear to be treated less aggressively but die more often. This finding is inconsistent with simple confounding by unobserved severity of illness. In contrast to other disparities research, these differences appear to be driven by differential care by insurance status within hospitals rather than between hospital effects. Expanding and standardizing health care coverage may improve outcomes for critically ill patients.

Table: Odds Ratio for Critical Care Procedures for patients in Pennsylvania, adjusted for patient and hospital effects.

Procedure	Commercial	Uninsured	Medicaid
CVC			
Odds Ratio	1.0	0.82	1.26
95% CI		(0.72-0.93)	(1.20-1.32)
Bronchoscopy			
Odds Ratio	1.0	0.91	1.10
95% CI		(0.68-1.21)	(0.99-1.22)
Tracheostomy			
Odds Ratio	1.0	0.46	1.12
95% CI		(0.36-0.59)	(1.04-1.21)
PAC			
Odds Ratio	1.0	0.76	0.89
95% CI		(0.53-1.09)	(0.78-1.02)
Acute Hemodialysis			
Odds Ratio	1.0	0.68	1.35
95% CI		(0.49-0.96)	(1.22-1.50)