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Comments
Medical student Anthony Burrows participated in this study as part of the Senior Scholars research program at the University of Massachusetts Medical School.

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Universal Health Care Coverage in Massachusetts: A Follow-up on the Effects on Neurosurgical Practice

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Background:
It has been four years since the introduction of universal health care coverage in Massachusetts. Our initial assessment performed from 2007-2008 demonstrated largely positive results.

Objectives:
We performed a follow-up study to assess the long term financial impact of universal health care on hospital charges associated with neurosurgical operative cases at our institution.

Methods:
The billing records from July 1, 2009 – June 30, 2010 were compared to those from 2007 and 2008. Records were analyzed for length of stay, case mix, patient age, hospital charge, reimbursement, and procedure.

Results:
Case volume increased by 31% and mean acuity increased from 2.3 to 3.1 ($p < 0.005$). Hospital stays lengthened by 1 day ($p < 0.005$). Payor mix changed over this time with Commonwealth Care and Medicaid comprising 2.9% and 12.4%, respectively, of neurosurgical inpatients; neither had significantly different acuity or lengths of stay. Despite an increase in case volume by 31% and significantly increased acuity in 2010, revenue increased 14% over early reform data. When volume was normalized, extrapolations of pre-reform and early reform coverage on current financials demonstrated that the change in payor mix alone had decreased revenue by 30% and 24%, respectively. When modifying 2010 financials by considering 2007 reimbursement rates and 2007 payor mix, these changes together resulted in a revenue reduction of 36%.

Conclusions:
Taken together, our data suggests that revenue associated with hospital charges for neurosurgical inpatients has decreased significantly since health care reform went into effect.