Title: Variation in Tonsillectomy Rates by Health Care System Type

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ABSTRACT

Objectives: To analyze variation in tonsillectomy procedure rates between health care system types around the world.

Methodology: The 2015 Organization for Economic Co-operation and Development (OECD) Health Statistics surgical procedures database was mined for tonsillectomy procedure volumes for 31 countries. Each country’s health system type and structure was classified by overall system type, and by health care regulation, financing, and provision methods. Each system type and structure variable was compared using the rate of tonsillectomy procedures per 100,000 citizens.

Results: 10.5 million tonsillectomy procedures completed between 1993 to 2014 were analyzed. Overall, social health insurance system types had higher total and inpatient tonsillectomy case rates versus other health care system types (p<0.05 for each comparison). Health systems with private care provision had a higher procedure rate versus state provided care (159.1 vs. 131.1 per 100,000 citizens; p=0.002). Health care systems with societal regulation and financing had a higher procedure count versus state regulated or financed care (regulation 193.3 vs. 139.7 per 100,000 citizens, p<0.0001; financing 168.2 vs. 135.0 per 100,000 citizens, p=0.0004).

Discussion: The volume of tonsillectomy procedures is associated with a health care system’s overall structure, regulation, financing, and provision methods. International health care systems with state mediated provision, regulation, and financing had lower tonsillectomy rates versus systems with private provision, and societal regulation or financing. Further study is needed to determine differences in indications for tonsillectomy between countries, but these results underscore potential variation in health care delivery in different systems.