Introduction:
The positive effect of case volume on patient outcome seen in complex surgical procedures such as coronary artery bypass graft surgery has not been definitively shown in liver transplantation (LT) with conflicting reports.

Methods:
The Health Insurance Review and Assessment Service (HIRA) data from 2007 to 2016 was analyzed for in-hospital mortality, ICU length of stay, and hospital length of stay in patients undergoing LT, depending on the case volume of the institution.

Results:
The operative mortality of 10993 LTs was 6.9% (690/10993). The operative mortality in institutions performing more than 50 cases/year was 5.1% (444/8668) as compared to 8.9% (118/1322) in institutions performing 10-49 cases/year and 12.8% (128/1003) in institutions performing less than 10 cases/year. After adjusting for disease severity using the Elixhauser index, risk factors for in-hospital mortality after LT included female sex (OR 1.38, 95%CI [1.17-1.63], p=0.0001), age over 60 (OR 1.31, 95%CI [0.73-2.36], p=0.046), and institutions with less than 10 cases/year (OR 2.86, 95%CI [2.32-3.54], p<0.0001). The overall ICU length of stay was 9.5±13.0 days. The ICU length of stay in institutions performing more than 50 cases/year was 9.1±13.4 days as compared to 10.7±12.2 days in institutions performing 10-49 cases/year and 11.6±9.7 days in institutions performing less than 10 cases/year. The overall hospital length of stay was 48.3±33.3 days. The ICU length of stay in institutions performing more than 50 cases/year was 47.5±32.7 days as compared to 50.4±35.9 days in institutions performing 10-49 cases/year and 51.9±34.9 days in institutions performing less than 10 cases/year. The overall hospital cost covered by the national insurance was $73,263±39,177 per liver transplant.

Conclusion:
Our study results showed that LTs performed at institutions with higher case volume were associated with lower mortality and shorter ICU and hospital length of stay.