

Change in the cross-boundary flow of emergent care in Taiwan, 2001-2010

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Objectives: This study explored the changes in the proportions of cross-boundary emergent care (CBEC) visits from 2001 to 2010 based on the emergent care flow among 50 subregions in Taiwan. **Methods:** Approximately 2 million randomly sampled representative beneficiaries from the National Health Insurance database were used as the data source for analysis. A modified New York University algorithm was applied to classify emergency department (ED) visits to emergent care, as well as ED visits resulting in hospitalization. Subsequently, 50 medical subregions were used as the analytical units to calculate the proportion of CBEC visits between 2001 and 2010 in Taiwan. Paired t tests were applied to examine the differences in CBEC flow over one decade, and the ratio of the third quartile (Q_3) to the first quartile (Q_1) was presented to reflect the regional variation in CBEC flow. Finally, the 50 subregions were divided into low, medium, and high groups according to their CBEC flows in 2001, and the differences in the CBEC and emergent care capacities between 2001 and 2010 were compared. **Results:** The average proportion of CBEC visits nonsignificantly declined from 43.4% in 2001 to 41.2% in 2010. The Q_3 to Q_1 ratio slightly decreased from 2.19 to 2.13 in that decade. However, the CBEC flow in the subregions in high CBEC groups significantly decreased, accompanied by a significant increase in emergent care capacity, even when the CBEC rate remained as high as 57.7% in 2010. **Conclusions:** The proportion of CBEC visits did not significantly decrease from 2001 to 2010 in spite of health policies dedicating to allocate emergent care resources more equitably across subregions. Nevertheless, the subregions with higher CBEC flows improved significantly as emergent care capacity was enhanced, in spite of continuously maintaining higher CBEC flow, indicating that allocating more emergent care resources into these subregions is necessary. (*Taiwan J Public Health*. 2014;**33**(1):64-74)

Key Words: emergent care visit, cross-boundary flow, medical subregions

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