The objective of this study was to calculate the transition costs to ESRD in the United States Medicare and Taiwan National Health Insurance (NHI) populations.

Methods
- Included in the analysis were incident ESRD patients, identified in USRDSS data, who initiated dialysis in 2007, were age 66 and older at initiation, and had Medicare as their primary payer for at least one year before initiation (n=134,006).
- Based on the 1% random sample of the entire NHI population in Taiwan, a cohort of Taiwanese incident ESRD patients age 66 and older, who initiated dialysis between 2000 and 2008 was established for comparison (n=287).
- Taiwan’s NHI program uses the same billing format as US Medicare claims data, which provide a beneficial structure for comparison.
- Comorbid conditions were derived from Medicare and NHI claims 1 year prior to dialysis initiation.
- Total costs of Medicare Part A and Part B services and total costs of Taiwanese NHI outpatient and inpatient services were calculated by per-patient-per-month (PPPM).
- Hospitalization costs were also calculated by PPPM for Medicare and NHI incident ESRD patients.

Results
- Compared with Medicare Incident ESRD patients, Taiwanese patients were significantly younger, and a higher proportion were women (P < 0.001).
- Except for CKD, DM, and cancer, prevalence of each comorbid condition differed in the two populations (P < 0.05). Medicare patients had more comorbid conditions (4.9 vs. 3.6).
- 75% of US Medicare and 80% of Taiwan NHI patients were hospitalized in the month of dialysis initiation (Figure 1; P < 0.05).
- Taiwan NHI hospitalization costs began to increase in the last 6 months before dialysis initiation and reached a peak in the first month of dialysis initiation in both study cohorts.
- The time lags between peaks of PPPM total cost for the US Medicare and Taiwanese ESRD patients may exist because 48% of Taiwanese ESRD patients were continuously hospitalized in the second month after dialysis initiation, and average length of stay was almost four times longer for Taiwanese hospitalized patients than for Medicare patients (40.8 days vs. 10.3 days).
- Future study is needed to compare differences in use of nephrology care, hospitalization management policy, and other health system factors that might explain why the dialysis initiation period seems to be longer, in terms of cost distribution, for Taiwanese than for US incident ESRD patients.
- The inclusion criteria limiting entry to incident ESRD patients age 66 and older limits the generalizability of the study.

Conclusions
- PPPM hospitalization costs began to increase in the last 6 months before dialysis initiation and reached a peak in the first month of dialysis initiation in both study cohorts.
- The time lags between peaks of PPPM total cost for the US Medicare and Taiwanese ESRD patients may exist because 48% of Taiwanese ESRD patients were continuously hospitalized in the second month after dialysis initiation, and average length of stay was almost four times longer for Taiwanese hospitalized patients than for Medicare patients (40.8 days vs. 10.3 days).
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