

DATA QUALITY ASSURANCE FOR A PERFORMANCE MEASURING SYSTEM

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Introduction:

Taiwan Clinical Performance Indicator (TCPI) was launched in 2011 and 88 hospitals participate in the system now. The indicator information technology (IT) system developed mechanisms to assure the data quality.

Aims:

To address the mechanisms of data assurance check.

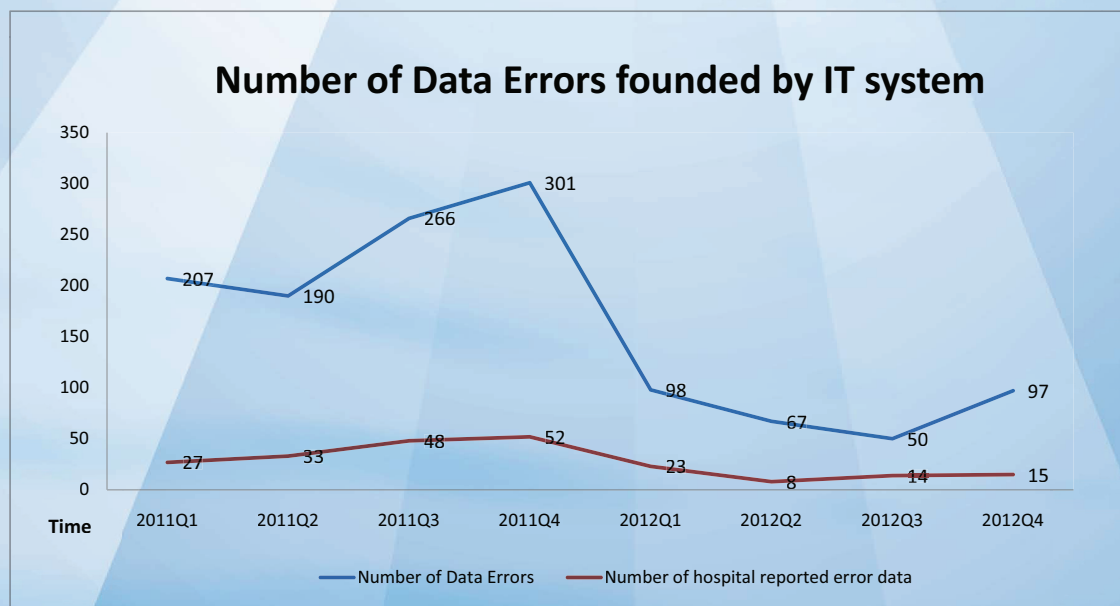
Methods:

The data quality assurance mechanisms were built through the three stages:

- (1) Indicator developing stage: Data element concepts were designed for users to reduce the human errors to fill in and the information technology (IT) system will calculate automatically. For example, the mortality patients should be excluded from denominator of readmission rate. Users fill in 3 elements including (a) number of surviving discharges, (b) number of readmissions, and (c) number of mortality patients. The IT system calculates the denominator "number of discharges" automatically to make sure the number of mortality patients will be excluded from number of discharges. Therefore the human judgment errors for exclusion can be reduced.
- (2) Data entry stage: Data recheck rules were established to detect the errors of elements and inform users on-line immediately. One of the rules is "the rate less than zero or higher than 100% can't be saved". The other one is rational cross check. For example, the number of return ED patients within 72 hours should be more or equal to the number of return within 24 hours.
- (3) Quarterly report stage: The purpose of this mechanism is to detect the extreme values. We defined the "extreme data" as rate higher or lower than 3 standard deviations based on past 12 months peer average. The TCPI work team will feedback the extreme data to users when extreme data are identified.

Results:

Errors founded by rational cross check decreased from 207 (1th quarter in 2011) to 97 (4th quarter in 2012). And the extreme data are generally decreasing.



Conclusions:

It's very important to make sure the data quality before the quality indicator interpretation. The data assurance mechanisms established to improve data quality is indispensable in a measuring system.