
Hospital Accreditation Impacts Care Standards



Hospital accreditation is frequently selected by healthcare leaders as a method to improve quality and is an integral part of healthcare systems in more than 70 countries. However, as cost containment continues to be a concern in many hospitals, organisations need to assess the value of accreditation as a long-term investment.

Empirical studies that evaluate whether accredited organisations sustain compliance with quality and patient safety standards over the accreditation cycle are lacking. To draw causal inferences about the direct influence of accreditation on patients' health outcomes and clinical quality, a dynamic analysis that focuses on the effects of accreditation over time is needed. This research directly addresses this issue by adopting a time series framework. In addition, this is the first study to answer the important question of whether accredited organisations maintain quality and patient safety standards over the accreditation cycle by developing and testing a life cycle explanation.

Methods

Four distinct phases of the accreditation life cycle were defined based on the Joint Commission International (JCI) process. Predictions concerning the time series trend of compliance during each phase were specified and tested.

- The Initiation Phase is the baseline level of the outcome at the beginning of the series;
- The measures should exhibit a positive change in slope in the preaccreditation period, the baseline trend;
- The peak level of compliance should occur during the 3 months prior to the accreditation survey (the Pre-Survey Phase);
- The measures should record a negative change in level post the accreditation survey (the Post-Accreditation Slump); and
- The measures should exhibit a negative change of slope post the accreditation survey (the Stagnation Phase).

The study was conducted in a private 150-bed, multispecialty, acute-care hospital in Abu Dhabi, UAE. The annual inpatient census is approximately 15,000. To test the Life Cycle Model, a total of 23 quality measures were recorded each month at the hospital over a four-year period, including a JCI accreditation survey. These measures were observed for 48 months, one year prior to accreditation (2009) to capture the preparation period, and for three-year postaccreditation (2010, 2011 and 2012) to capture the three-year accreditation cycle. Each month, a simple random sample of 24 percent of patient records was audited, resulting in 276,000 observations collected from 12,000 patient records, drawn from a population of 50,000.

The Life Cycle Model was evaluated by aggregating the data for 23 quality measures to produce a composite score (Y_c) and fitting an interrupted time series (ITS) regression equation to the unweighted monthly mean of the series.

Results

The Life Cycle Model explains 87 percent of the variation in quality compliance measures ($R^2=0.87$). The ITS model not only contains three significant variables (β_1 , β_2 and β_3) ($p \leq 0.001$), but also the size of the coefficients indicates that the effects of these variables are substantial ($\beta_1=2.19$, $\beta_2=-3.95$ (95% CI -6.39 to -1.51) and $\beta_3=-2.16$ (95% CI -2.52 to -1.80).

The preintervention slope (β_1) implies an increase in compliance by 2.19 percentage points per month prior to the accreditation survey. This Initiation Phase is characterised by a period of steep increases in compliance followed by sporadic declines. The β_2 coefficient suggests that the mean level of compliance for the 23 quality measures decreased by 3.95 percentage points immediately following the accreditation survey. The β_3 coefficient indicates a decrease in compliance of 2.16 percentage points per month postaccreditation. The postaccreditation slump is followed by a long period of stagnation characterised by an undulating plateau of compliance but, importantly, at a level of 20 percentage points higher than the preaccreditation survey levels.

Conclusion and Discussion

The results have answered the key question: do hospitals maintain quality and patient safety standards over the accreditation cycle? The results demonstrate that, although performance falls after the accreditation survey, the tangible impact of accreditation should be appreciated for its capacity to sustain improvements over the accreditation cycle. This phenomenon is supported by other researchers who state that those institutions which invest in the accreditation surveys reap the most benefits from accreditors' diagnosis, sharing of leading practices and the

ensuing changes.

Organisational efforts (eg, creating a functional committee structure) to meet the accreditation programme requirements could orchestrate the circumstances for prolonged improvements in hospitals. The Life Cycle Model also justifies the need for a continuous survey readiness programme throughout the organisation. A paradigm shift, from the scheduled accreditation survey to an unannounced survey, is recommended to prompt a change from a survey preparation mindset to that of continual readiness.

The study is limited to one hospital and more studies are needed to test the validity of this life cycle framework in different national and cultural settings.

Reference:

Subashnie Devkaran, Patrick N O'Farrell *BMJ Open* 2014;4:e005240 doi:10.1136/bmjopen-2014-005240

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