The Lancet Regional Health - Europe 1 (2021) 100010

Contents lists available at ScienceDirect

The Lancet Regional Health - Europe

journal homepage: www.elsevier.com/lanepe

Commentary

Paying for better care?

Yang Chen[a,b], Amitava Banerjee[a,c,*]

[a] St Bartholomew's Hospital, Barts Health NHS Trust, United Kingdom
[b] Institute of Cardiovascular Science, University College London, United Kingdom
[c] Institute of Health Informatics, University College London, United Kingdom

ARTICLE INFO

Article History:
Received 3 December 2020
Accepted 3 December 2020
Available online 8 December 2020

Paying for better care?

Is private healthcare associated with better clinical outcomes? Benedetto and colleagues used national surgical audit data from 2009 to 2018 in England to study impact of private adult cardiac surgery on outcomes. They conclude that private operations within NHS hospitals, ordinarily offering operations free at point of service, were associated with 21% reduction in risk of in-hospital mortality, compared with non-fee paying operations, adjusting for case-mix [1].

An important exclusion was operations conducted in non-NHS, private-only hospitals, which account for half of private cardiac operations in England. Aside from being a highly selected population, the infrequent post-operative complications that occur are usually dealt with by transferring patients to NHS hospitals, making head-to-head comparisons difficult.

Whether paying for private healthcare in a NHS hospital leads to better clinical outcomes requires consideration of additional factors, including: (i) the role of factors previously associated with in-hospital mortality and morbidity; (ii) a more complex analysis of private vs. public rather than a simple dichotomy; and (iii) the service which private treatment entails beyond public healthcare.

Some factors, including private side rooms, better meals and patient choice of surgeon may lead to better patient experience. Most of the clinical team remains the same though direct delivery of the operation occurs by the named surgeon (rather than sometimes another colleague or supervision of a trainee). In a meta-analysis of studies of outcomes in coronary artery bypass grafting between trainees and trainers, no difference was detected in performance, emphasising attention paid to surgical supervision, training and data collection in higher-income countries [2].

For private patients, there is enhanced access to the named surgeon before and after the operation. To our knowledge, there are no data published on whether private patients are less likely to be cancelled or more likely to be operated on at a certain time of day (for instance first on an elective list) or day of the week, which may lead to differences in outcomes, given evidence that elective surgery carried out later in the week or on the weekend affects mortality [3]. There are no data to support 'more attention from the surgeon' or other members as a mediator of better clinical outcomes. Does the quality of the patient interaction and thoroughness of the senior decision-maker increase? There is evidence linking thoroughness of a surgical ward rounds and reduced in-hospital complications [4].

Analysis of the factors contributing to the cause of death is crucial in understanding the reasons for reduced in-hospital mortality. For example, it is known that low nurse: patient ratios increase risk in-hospital complications and mortality [5]. For CABG, mortality rates are directly associated with "failure to rescue" (death following complications, e.g. stroke, renal failure, re-operation, and prolonged ventilation) [6]. If failure to rescue was a significant factor in the current analysis, and better nursing:patient ratios exist for private-paying patients, then this at least partly explain the findings.

Although the outcomes were adjusted for case-mix based on the EUROSCORE, several important confounding factors require further consideration. For example, the same authors have inspected a larger series of data, identifying an association with ethnicity [7]. Prior studies have examined body-mass index, BMI (demonstrating a U-shaped relationship with mortality), and socioeconomic status, including adjustment for BMI and smoking [8,9]. Drawing this research together, an avenue for future work might be to identify how large scale electronic health records could offer more detail in these aspects, for instance, to obtain missing data such as cause of death through data-linkage. Despite limitations and inability to deduce causality, such population level studies are important for their generalisability and applicability. By studying 'bright spots' of care and differences in outcomes between groups at an aggregate level, generalisable improvements may be made through policy intervention.

A recent commentary regarding policies and interventions within complex adaptive systems in the COVID-19 context is very relevant [10]:

> "precise quantification of particular cause-effect relationships is both impossible. . .and unnecessary (because what matters is what emerges in a particular real-world situation). . . where multiple factors are interacting in dynamic and unpredictable ways,

* Corresponding author at: Associate Professor in Clinical Data Science and Honorary Consultant Cardiologist, Institute of Health Informatics, University College London, 222 Euston Road, London, NW1 2DA, UK.
E-mail address: ami.banerjee@ucl.ac.uk (A. Banerjee).

https://doi.org/10.1016/j.lanepe.2020.100010

naturalistic methods and rapid-cycle evaluation are the preferred study design."

Rather than concluding that 'private payment within an NHS hospital' decreases the mortality associated with cardiac surgery, we need to temper simple conclusions with caveats. In spite of many unknowns, there may be several factors, which when combined, could lead to improved patient care. We have highlighted the potential contribution of nursing ratios combined with consultant level 'attention' post-operatively. Rather than selectively quoting research results out of context in isolated healthcare examples, which may over-estimate private sector performance, a focus on the judicious use of data is essential. Improving data quality and linkage to other datasets will allow future study designs to be strengthened, findings to be reproducible, and policy impact to be more robust.

Author contributions

AB and YC contributed equally to the first draft of the paper and critical revisions.

Declaration of Competing Interests

Dr. Banerjee reports grants from Astra Zeneca, outside the submitted work. Dr. Chen has nothing to disclose.

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