Table 2. Comparison between cardiac surgeons with an adult or paediatric practice

	Adult practice		Paediatric practice		*P*-value
Question	Yes	No	Yes	No	
3a	6	83	1	14	0.992
5	50	61	7	9	0.922
16	56	51	9	7	0.981

Question 3a: How do 'surgeon's performance tables' affect your behaviour? I avoid high-risk patients.
Question 5: Do you think surgeon's performance tables improve outcome?
Question 16: Overall, do you welcome the introduction of surgeon's performance tables?

surgeons in the 2009 survey still believed they might avoid such patients. Similar examples of defensive [8, 10] medicine have been demonstrated in the USA, where in a study in Pennsylvania 63% of cardiac surgeons were less prepared to operate on high-risk patients [11]. In a further study from New York, in response to a questionnaire assessing change in practice after publication of individual surgeons' mortality results, 62% of respondents reported they refused to operate on at least one high-risk patient over the preceding year as result of the tables [12]. A more recent large multi-centre UK study, however, has reported that the introduction of public accountability has not led to a decrease in the number of high-risk patients undergoing coronary artery surgery [13]. The effect of the expected introduction of performance indicators on the availability of surgery on high-risk patients in other surgical disciplines remains to be seen. Results obtained from a similar exploratory survey performed in 2004 to investigate general surgical consultant views suggest that these surgeons may adopt defensive medicine in response to the publication of performance indicators [14]. Like cardiac surgeons, most consultant general surgeons did not welcome surgeons' performance tables at that time, with the surgeons having concerns regarding the method of assessing individual surgical performance, the poor data quality and the lack of funding in data collection [14].

With regard to surgeons whose mortality outcomes fall outside pre-determined statistical limits, and who should be the 'watch dog' regarding impartial reporting, the SCTS suggests responsibility should fall on local employers, specialist associations, and the academic colleges. The society notes that institutions employing cardiac surgeons should monitor outcomes in the hospital as a whole and for its individual surgeons in particular, and have mechanisms in place to pick-up unsatisfactory outcomes at an early stage, allowing the implementation of strategies to improve results. In addition, specialist associations, together with the Royal Colleges, should help to define the standards required for re-certification [2].

The authors concede that number of returns in both the 2005 and 2009 studies leads to some weakness in the results. In addition, the differing numbers in the two populations is less than ideal. Consideration was given to only including those in the 2005 study in 2009, but this was not undertaken as it was felt the exclusion of these surgeons more recently listed on the database may introduce bias against newly registered consultants.

The results of this current study suggest some persisting opposition to individual performance tables within cardiac surgery in the UK, as demonstrated by the percentage of surgeons still opposed to publication of the data (43.3%). The change in opinion in an experienced group of consultants towards individual performance indicators demonstrated in this study, however, may indicate increasing acceptance of the process over time. These findings may be of some benefit to those tasked with initiating similar audit systems in other areas.

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eComment: Performance indicators in cardiac surgery – time for public release

Author: ***Philippe H. Kolh,*** *Department of Cardiothoracic Surgery, University Hospital of Liège, B 35 Sart Tilman, Liège, Belgium*
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In this issue of the Journal, Maytham and Kessaris [1] compared the views of United Kingdom cardiac surgeons on individual performance tables in 2005 and 2009. The responses (109 answers/206 questionnaires = 53% in 2005; 134/266 = 50.5% in 2009) demonstrated that whilst the majority of cardiac surgeons (68.8%) were initially opposed to performance tables, the number welcoming their introduction increased significantly (from 23% to 48%) over the four-year period. Furthermore, fewer surgeons believed, in 2009 as compared to 2005, they would or may avoid high-risk patients. These are important findings.

Publication of surgical results is not new, as the exponential growth of modern medicine has been continuously recorded in peer-reviewed

publications and scientific sessions. However, the direct disclosure of health care outcomes of hospitals and individuals, accompanied by risk stratification, are more recent and controversial [2]. In the USA, the Pennsylvania report [3] and the New York State report [4] were, as early as the 1990s, the most sophisticated and widely published risk-adjusted data on the performance of hospitals and surgeons. These public reports already included demographic data, preoperative risk factors, intraoperative data, and postoperative intra-hospital morbidity and mortality.

From the patients' perspective, accurate clinical data detailing surgeon and hospital mortality rates fulfil a basic right to information. Furthermore, health policy experts, employers, and consumers increasingly consider reports on the outcome of medical care an important tool for improving the quality of care. Potential advantages include the selection of high quality providers and the motivation of hospitals to improve their quality of care. On the contrary, difficulties in adjusting for differences in case mix, reliability of underlying clinical data, and random fluctuation of outcomes may undermine the validity and credibility of comparative data [3]. Restriction of access to care for severely ill patients who need cardiac surgery constitutes a serious potential risk of such reports. There is, however, no solid evidence that such a problem exists [1, 3]. For example, data from New York State show an increase over time in the average severity of illness and the prevalence of coexisting conditions among patients undergoing coronary artery bypass grafting surgery, supporting that appropriate access to care among severely ill patients had probably been maintained [2, 5].

In conclusion, data collection and reporting mechanisms are important and therefore they should be accurate and timely. The focus on short-term mortality should be extended to long-term outcomes and patient's symptoms, as reflected by their functional status and quality of life, particularly in light of the growing emphasis on the appropriate use of procedures [5]. We need to understand better how the information is used by physicians, hospitals, the public, purchasers, payers, and referring doctors. Furthermore, compliance with guidelines on hospital volumes should be strongly encouraged by national and international cardiology and cardiac surgery societies and their implementation monitored by local regulatory boards. This will ultimately lead to optimal patient trust in health care providers.

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