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ZU KÖLN****How relative performance feedback can motivate doctors**

Rankings among colleagues in hospital teams may motivate some doctors to perform better, but can also have a demotivating effect on others. A behavioural economics experiment shows that choosing the 'right' design for a ranking system can eliminate the demotivating effects and improve patient care; the study was published in the leading journal 'Management Science'.

When physicians receive relative performance feedback on quality of care, the design of the ranking influences whether it motivates them to improve or has a demotivating effect. The specified quality threshold defining outstanding performance and top ranks may not be set too low, nor must it be too difficult to achieve. This is the conclusion of a study conducted by a research team from the Department of Health Economics at the University of Cologne, in collaboration with a colleague from the University of Münster. The results have been published under the title 'How the Design of Ranking Systems and Ability Affect Physician Effort' in the Management Science journal.

Providing top-quality patient care is the most important objective for hospitals. One measure available to hospital management staff to improve quality is to carry out relative performance comparisons in the form of rankings. Behavioural economic studies show that, in the healthcare sector, feedback systems that do not rely on financial incentives for good performance, but rather on peer comparison, can be motivating: Receiving feedback in the form of rankings makes individual performance transparent in comparison to that of others within a group or team. This, in turn, encourages social comparison and motivates a person to improve his or her performance.

In such a ranking system, each doctor is assigned a rank according to their performance based on an individually measurable quality indicator. Quality thresholds determine the rank assigned to a medical service for a measurable key indicator (e.g., the adenoma detection rate). Designing such a ranking system can be challenging for clinical leaders, as setting the limit high can motivate doctors who have a chance of surpassing it. On the other hand, it can demotivate those doctors who believe they cannot achieve the goal even with great effort. This creates a dilemma.

In a so-called lab-in-the-field experiment, 112 practising doctors and 240 medical students working in small groups were presented with a decision-making scenario in a medical context: At a certain cost to themselves, they were able to maximise a treatment's chance of success for abstract patients, with their personal effort directly impacting the quality of care provided to real patients. To reflect real differences in performance capabilities, everyone's ability was assessed in advance. The researchers then systematically varied the design of the rankings, particularly the number and position of the threshold values that determined categorization into different ranks. This allowed them to analyse which combinations of rank thresholds were motivating, and which were demotivating. The outcome was that no fixed ranking design automatically improves performance in every team. Rather, a ranking should be designed individually depending on the individual abilities of the participants.

"Our results show that a well-thought-out ranking should be carefully tailored to the team's performance potential or capabilities," says Yero Ndiaye, a doctoral researcher in the Department of Economics in the Faculty of Management, Economics and Social Sciences. "The challenge lies in striking the right balance to motivate as many doctors as possible

without frustrating parts of the team.”

The results provide recommendations for managers who want to use ranking systems to provide feedback in their hospitals. A ranking system can be a valuable tool for increasing doctors’ motivation, but hospital managers should consider the different motivating and demotivating effects depending on the doctors’ capabilities. To avoid demotivating individual doctors, ranking systems should be designed so that the rank limits are adapted to the skill distribution of the team; this ensures that everyone can achieve a higher rank through better performance.

“However, the prerequisites for a successful introduction into clinical practice are the continuous measurement and recording of key performance indicators at the level of individual providers, and the regular use of performance feedback in combination with training and educational opportunities for doctors. Further long-run evidence from field experiments in clinics is, however, still needed,” explains Professor Dr Daniel Wiesen, study leader and head of the Department of Operations Management at the University of Cologne.

contact for scientific information:

Professor Dr Daniel Wiesen
Professor of Health Management
Department of Operations Management
+49 221 470 89171
wiesen@wiso.uni-koeln.de

Yero Ndiaye M.Sc.
Department of Economics
+49 221 470 5491
ndiaye@wiso.uni-koeln.de

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