CLAHRC BITE

Brokering **I**nnovation **T**hrough **E**vidence

A bite-sized summary of a piece of research supported by CLAHRC for Birmingham and Black Country Dec 2012

Outcomes are a good measure of healthcare quality provided that about one in eight bad outcomes can be prevented

When can we rely on outcome rates - a modelling study

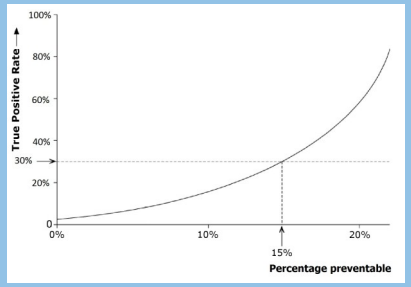
Background

- Risk-adjustment outcome rates (e.g. death rates and infection rates) are used to monitor hospital performance, on the assumption that high rates reflect poor care.
- But high rates of bad outcomes might be false positives, despite risk adjustment.
- High rates of false positives waste resources, stigmatise hospitals and lead to gaming the system. False negatives provide false reassurance.
- High false positives and negatives occur when the signal (e.g. preventable deaths) gets lost in the noise (e.g. inevitable deaths).
- CLAHRC researchers have developed an equation to identify what makes a useful outcome rate.

Turn over to find out more

Findings

- The figure below shows that if less than about 15% of bad outcomes are preventable, then overall risk-adjusted outcome rates are a poor measure of quality. When preventability is over 20%, they are a much better measure of quality.
- Less than 15% of all hospital deaths are preventable and so risk-adjusted hospital death rates are a poor guide to quality.
- More than 20% of bloodstream infections or pressure ulcers are likely preventable. Risk-adjusted infection and pressure damage rates are likely to be a good measure of quality.



For discussion about assumptions behind the above figures, see the reference below.

Reference

Girling AJ, Hofer TP, Wu J, Chilton PJ, Nicholl JP, Mohammed MA, Lilford RJ. Case-mix adjusted hospital mortality is a poor proxy for preventable mortality: a modelling study. BMJ Qual Saf. 2012. Available from: http://qualitysafety.bmj.com/content/early/2012/10/12/bmjqs-2012-001202.full

Recommendations for practice

The NHS should use risk-adjusted outcome rates to measure care quality only when at least 15% of bad outcomes can be prevented by good care.

What is CLAHRC for Birmingham & Black Country?

The Collaborations for Leadership in Applied Health Research and Care (CLAHRC) is a partnership between the University of Birmingham and a number of NHS organisations in Birmingham and Black Country. We are funded by the National Institute for Health Research with a mission to undertake high-quality applied health research focused on the needs of patients to improve health services locally and beyond.

For further information, visit: www.clahrc-bbc.nihr.ac.uk

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