

INVITED COMMENTARY

You Never Work Alone: The Potential of Quality Improvement Research

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Intuitively every vascular surgeon or interventional radiologist already knows. You never work alone. Every one of us, no matter how gifted, needs a team to achieve excellent results. This team, including operating room staff, intensive care unit staff, ward staff, residents, logistics, and so on, determines the outcome for patients. The data on centralisation of care strongly reflect this concept. High volume aortic surgery centres have lower mortality than low volume centres.¹ This effect is not only seen in vascular surgery, but also in other specialties such as intensive care. For example, cardiac arrest in high volume intensive care units has a lower mortality.² Results improve when teams are better prepared and equipped for specific high risk interventions.³ In order to improve outcomes it is essential to understand which factors play a key role. This so called “system awareness” is essential in complex and high risk care. However, solid data are lacking in the vascular field. As Lear *et al.* point out,⁴ system factors, such as teamwork and the work environment influencing quality and safety, are underexposed in current research.

Interventions and quality improvements in system factors include a pre-intervention time out procedure to reduce procedural errors, a medication verification system to reduce medication mistakes, a standardised handover procedure to reduce not only loss of or incorrect patient information, but also crew resource management (CRM) for urgent medical interventions and the organisation of a multidisciplinary team or the implementation of goal directed therapy.⁴

The limited studies analysing the impact of system factors on the quality and safety of care have a moderate design.⁴ Results from these studies are difficult to interpret, making extrapolation hard. Moreover surrogate endpoints without clinical implication make it difficult to estimate their clinical value. More insight into these system factors and methods

to improve them are extremely important. This area of research differs from the quantitative research we are used to. Research in this field is often qualitative. Qualitative research has scientific rules as well. In order to improve the reproducibility in this field of research, SQUIRE guidelines for quality improvement research have been set.⁵ This field of research holds great potential to improve patient outcomes. We support the conclusion of Lear *et al.* that research in this field would benefit from consistency in terminology, the use of validated assessment tools, measurement of clinically relevant endpoints, and adherence to national reporting guidelines.⁴ Despite these challenges, the importance of quality improvement research should, in our view, not be underestimated.

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DOI of original article: <http://dx.doi.org/10.1016/j.ejvs.2017.03.014>

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<http://dx.doi.org/10.1016/j.ejvs.2017.03.020>