

# Quality initiatives in transplantation

Welcome to this special issue of *Progress in Transplantation*, which concentrates on quality improvement as it applies to transplant centers, organ procurement organizations, and the United Network for Organ Sharing. The history of quality is interesting. In medieval times craftsmen developed guilds, teaching quality to apprentices and marking a high-quality product with their stamp of approval. The industrial revolution and mass production of the 1800s brought the need for quality control to make sure all the different parts of a product fit together. During the 1920s Bell Laboratories, under the direction of Walter Shewhart, developed statistical process control aimed at reducing variation in the production process. Shewhart also developed an improvement method called “Plan, Do, Check, Act” (PDCA), which involved cycles of continuous improvement.<sup>1</sup>

During World War II, the focus of quality was primarily on safety to protect the lives of our soldiers. After the war ended, the US government sent W. Edwards Deming to Japan to help that nation’s industries recover economically from the war’s devastation. Deming changed the focus from quality control to quality improvement, looking for ways to improve the process itself. This resulted in good quality products the first time around, eliminating mistakes, waste, and rework. Along with his peers Joseph Juran and Armand Feigenbaum, Deming refined the quality improvement process, changed the PDCA cycle to PDSA, substituting “Study” for “Check,” and developed many other quality improvement tools.<sup>2</sup> The results were a tremendous boost to the Japanese economy, which continues to be a worldwide force today.

American companies started to embrace the principles of quality improvement in the 1980s, but as is often the case with any change, transitioning from quality assurance to quality improvement was difficult for people to readily accept. In 1987 the federal government stimulated the progress by creating the Malcolm Baldrige National Quality Award. The Baldrige Award recognizes companies that have successfully embraced the philosophy of quality improvement companywide, successfully completed a rigorous application process, and been judged worthy by a panel of national quality experts. Seven areas are evaluated: leadership, strategic planning, customer focus, measurement, workforce focus, process management, and results. Companies

that have won the Baldrige award have a proven track record of success regardless of what business they are in. Since 1999, 624 companies have applied for the Baldrige award, but only 47 have won it, and only 9 have been in health care.<sup>3</sup>

More recently, additional schools of thought regarding quality improvement have developed, including International Standardization Organization 9000 Quality Systems, Toyota Lean, and Six Sigma. Initially these programs have found a strong application in the manufacturing industry, but in recent years they have been applied within the nonprofit sector, the hospitality industry, service industry, education, and government. Only in the early 1990s was quality improvement embraced by the health care industry, and only in the past few years has quality improvement been incorporated into the organ donation and transplantation world.

With more than 102 000 people on the national transplant waiting list and with only 23 933 organs transplanted in 2008, the need for quality improvement in the field of organ donation and transplantation is readily apparent.<sup>4</sup> A significant milestone occurred in 2003 when the US Secretary of Health and Human Services Tommy Thompson recognized the growing disparity between organs needed and those available. Thompson applied the principles of quality improvement nationally by launching the Organ Donation Breakthrough Collaborative. The Collaborative identified high performers and selected them to teach the rest of the country what they were doing to be successful. The improvement model was that of PDSA cycles, a delineated change package, including push and pull forces, and a philosophy of “all teach and all learn.”<sup>5</sup> After many previous years of minimal increases in the number of organ donors and the number of transplants, the Collaborative accomplished an 11% increase in the first year and nearly as much in the second and third years.<sup>6</sup>

The Quality Improvement Council of the Association of Organ Procurement Organizations has embraced quality improvement and promotes quality education through the American Society for Quality, as well as other organizations. The body of knowledge of quality improvement contains a wealth of tools and techniques to accomplish improvement. Historically, with evidence-based progress in the medical field, improvement has been brought about through rigorous double-blind controlled studies that show statistical significance.

In today's world of rapidly changing circumstances, improvement can be accomplished by sharing knowledge of successful practices, as promoted by the Institute for Healthcare Improvement<sup>7</sup> and demonstrated by the success of the national collaboratives.

The articles in this special issue will demonstrate the practical application of these quality improvement principles in the field of organ donation and transplantation. So please enjoy these articles, be inspired by them, and help promote quality improvement within your organizations. The results not only are fulfilling, they can mean the difference between life and death for the people we serve.

#### References

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