**IAQ Session Thursday, August 2, 2012, 9:00-10:00**

# Quality in Healthcare - Its past, present and future

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| Moderator | Yoshinori Iizuka, IAQ VP-Publication, JSQC |
| Panelists | Fugee Tsung, IAQ Academician, HKSQ |
| | Janak Mehta, IAQ President, ISQ |
| | Bob King, IAQ Academician, USA |

## Profile of the Panelists

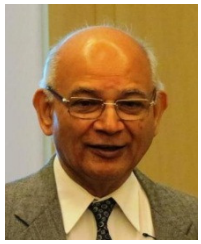
### Yoshinori Iizuka

Dr. Yoshinori Iizuka is Professor Emeritus, University of Tokyo. He was Professor until 2011 and is currently Project Researcher at the same university. His research has focused on quality management, including TQM, ISO 9000, structured knowledge engineering, healthcare social system engineering, software quality, and nuclear safety. He has played important roles, including President of JSQC for 2003-2005, Chair of Deming Application Prize Committee for 2008-2011, Vice President Publications of IAQ, and a board member of Japanese Society for Healthcare Quality and Safety (JSQSH). He was awarded Deming Prize for Individuals in 2006 and ASQ/Freund-Marquardt Medal in 2011.

### Fugee Tsung

Dr. Fugee Tsung is Professor and Head of the Department of Industrial Engineering and Logistics Management (IELM), Director of the Quality Lab, at the Hong Kong University of Science & Technology (HKUST). He is an Academician of IAQ, Fellow of ASQ, IIE, and HKIE. He is Department Editor of the IIE Transactions, Associate Editor of Technometrics and Journal of Quality Technology (JQT). He is an ASQ Certified Six Sigma Black Belt, and ASQ authorized Six Sigma Master Black Belt Trainer. He is also the winner of the Best Paper Award for the IIE Transactions in 2003 and 2009.

### Janak Methta



Janak Mehta is currently the President of International Academy for Quality and the Chairman of TQM International Private Ltd., India. He has been the pioneer in promotion of modern quality management in India since 1982. He was the founding President of Indian Society for Quality, India from 1996 to 2002. He was also involved in the formation of Asian Network for Quality (ANQ) in 2002 and later became the Chairperson of ANQ for 2009 – 2010. He has been an invited keynote speaker at various quality conferences in over 25 countries. In recognition of his contribution to the quality movement in the world he was awarded the Lancaster Medal by the American Society for Quality in 2012.

### Bob King

Bob King is co-founder, chairman, and CEO of GOAL/QPC. In the early 1980s, he was the first to launch a regional Deming users group. In the late 1980s, he led the research of advanced Japanese quality methods. He was the first to publish books in English on Quality Function Deployment and Hoshin Planning. He led the adoption of these methods at many U.S. organizations, including Ford, Intel, Procter & Gamble, Hewlett-Packard, IBM, Bethesda Hospital, General Motors, Motorola, Harvard University, and many others. He has written three books: Idea Edge, Better Designs in Half the Time, and Hoshin Planning: The Developmental Approach. He also publishes a quarterly peer-reviewed journal, the Journal of Innovative Management, which is designed for experienced practitioners of quality management and continuous improvement systems. He has a bachelor of arts degree from St. John's College and an S.T.M. from Boston University.

## Abstracts

**Service Science in Healthcare** – Fugee Tsung, Hong Kong University of Science & Technology
Driven by a new business environment including globalized economy, business automation, and business and technology innovations, the service sector keeps growing and now accounts for more than 50 percent of the labor force in the developed economies. With the shift in economic focus from manufacturing to service, industrial and academic research facilities may need to apply more scientific rigor to the practices of service, such as discovering better methods to use statistics and mathematical optimization to increase quality, productivity, and efficiency to meet the challenges in the service sector. This talk will focus on the development of quality techniques to the service science and engineering, in particular to the healthcare area. Several technical challenges and recent extensions in healthcare service, especially the application of Six Sigma in healthcare, will be discussed."

**IAQ Initiatives on Healthcare** – Janak Mehta, TQM International / Bob King, GOAL/QPC
Think Tanks concentrate IAQ member resources on the contemporary applications of quality that require focus and coordinated support to advance knowledge and to leverage lessons learned in order to accelerate the development and adaptation principles and methods to improve performance for the benefit of society or to improve applications of core quality-related methods.

The think tank on healthcare takes up the work begun 10 years ago by Academician Bob King and others to significantly improve health for those suffering from chronic illness and reduce the cost. Hundreds of millions around the world may benefit from this work.

The process has been driven by the Pareto principle. Based on the work of Bob King and Don Berwick in 1992, it focuses on the triple aim of improved outcomes for patients, improved quality of care and cost control.

Chronic illness affects the most people and drives the cost. Only 15% of people practice self-care (take meds, check blood pressure and blood sugar and take their meds). The 85% who don't practice self-care go to emergency room and hospital and consume more than 50% of medical care costs in the US.

This project is bringing together the world's top pharmacists and physicians with leading quality experts to bring this process to the next level and to help develop appropriate standards for this work with the necessary certification and accreditation of those involved in this work.

**Healthcare as a Socio-Technology** – Yoshinori Iizuka, University of Tokyo
With the successive reports on adverse events in healthcare, social needs for the assurance of healthcare quality and safety has been increasing. Along this line, healthcare society has initiated variety of activities for quality and safety, including joint researches which have been performed through the collaboration of experts from a various science. This approach is expected to result in the establishment of a new science of "healthcare safety and relief", which is significant to establish a sound healthcare social system.
It should be noted that healthcare is a "socio-technology". Socio-technology is defined as a technology, i.e. a reproducible methodology to achieve an objective, to be owned collectively by whole society.
Healthcare quality and safety needs to be supported by a series of socio-technologies including;
- Social common sense about principles of healthcare quality and safety,
- Social knowledge infrastructure for structured clinical knowledge, safety technology and healthcare management system model, and
- Implementation of these knowledge and technology in hospitals.

This paper discusses overall picture of healthcare quality and safety as a "socio-technology", including its meaning, significance, scheme and mechanism.

**Discussion** – All panelists and Audience