Assessing and Optimizing Operations and Patient Flow in VHA Facilities

*A six-month professional development program for VHA leaders and staff*
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VHA facilities are constantly challenged to steward constrained resources in providing timely, efficient, high quality care for their patient populations. The substantial responsibility for providing excellent care for all veterans under VHA care imposes unique patient flow and access challenges, which affect quality of care and outcomes. VHA acute hospitals exhibit patient flow stress that manifests in high inpatient bed occupancy and delays throughout the system. Difficulties and delays in accessing internal (e.g. surgery, physician, PT/OT, etc.) and external (post-acute care such as rehab, SNF, etc.) resources in a timely manner lead to gridlock within the acute hospitals. In order to sustainably address these vexing challenges patient demand patterns need to be better understood, and inform the design and allocation of operational resources in different parts of the system such as the ED, OR, acute beds and sub-acute beds.

The Institute for Healthcare Optimization’s (IHO) Variability Methodology has demonstrated dramatic improvements in flow in disparate healthcare settings in the US as well as Canada and the UK. Medical and surgical redesigns have achieved decreased waiting times and internal delays, decreased length of stay, increased throughput, higher quality of care, and improved staff and provider satisfaction.

IHO is excited to offer this six-month patient flow assessment and optimization program uniquely tailored to the needs of VHA facilities.

This six-month program will provide training and specific recommendations on cutting edge operations management strategies and tools to assess and improve your hospital-wide patient flow. The actionable analyses and learning-oriented approach will uncover bottlenecks, identify sources and impact and develop detailed recommendations to achieve impressive results in quality improvement and cost reduction. The Guided Patient Flow Assessment (GPFA) will be followed by a detailed two-day ‘how-to’ surgical and medical services redesign implementation training.

Key Program Features include the following:

- In-person professional development sessions to establish your institutional capability to maximize efficiency and optimize patient flow
- IHO Variability Methodology® assessment toolkit (inpatient, OR, and ED)
- A robust data-driven self-assessment and analysis of your hospital’s patient flow to understand:
  - When and where to add resources such as nurses, beds, etc.
  - How to decrease your hospital’s overcrowding, readmissions, and medical errors
  - How to increase your patient throughput without adding capital and human resources
  - How to prioritize and where to start your patient flow redesign
- The interpretation of numerous system performance analyses included in the IHO toolkit
- Expert coaching on data extraction, analyses and your executive briefing
- A one-day meeting for facility Executive Leadership to receive an overview of operations management and Variability Methodology, and for facility participants to present their assessment findings to their executive(s)
- A two-day training session providing step-by-step guidance to implement IHO Variability Methodology in the surgical and medical settings including:
  - Clinician engagement
  - Practice change management
  - Key data needs and data analytics
  - Application of queuing theory
  - Key metrics
  - Standard operating procedures

At the end of this program, VHA participants will have all the information and tools necessary to implement requisite changes at their hospital.
Program Activities

- Launch Meeting - two day in-person meeting
  - Overview of operations management and Variability Methodology
  - Preparation for data extraction and analyses
  - Overview of the IHO Variability Methodology® assessment toolkit
- Webinar group coaching and guidance – regular biweekly webinars during the GPFA period
  - Regular group coaching and guidance by IHO faculty on data extraction and analyses
- Submissions of each VHA facility assessment analyses to IHO for review one month prior to the Executive Leadership Meeting
- IHO faculty guidance on prioritizing patient flow redesigns
- Senior Executive Meeting - one day in-person meeting
  - Executive overview of operations management and Variability Methodology
  - Facility staff present their assessment findings to their leadership
- A “Reengineering Patient Flow” training session - two day in-person meeting
  - “How-to” guidance materials on reengineering surgical and medical patient flow
  - Overview and application of Queuing Theory, which is a key underpinning of patient flow redesign
  - An overview of managing flow from acute to sub-acute settings

Note: At the end of the six-month program VHA participants may determine to continue with a second phase program designed to support the redesign changes and measure improvements in throughput, satisfaction, quality and safety.

IHO Role and Responsibility

IHO will provide training in variability methodology, tools and templates for various patient flow assessment analyses, coaching to perform and present assessment findings and detailed guidance that VHA teams can follow to implement changes at their organizations.

VHA Role and Responsibility

Participating VHA sites will ensure team participation in in-person and virtual webinars coaching sessions, active engagement in the professional development process, timely access to data for participating teams and submissions to IHO, and leadership participation in the executive report out session at the end. We suggest that each participating VHA site train a multi-disciplinary team including physicians, surgeons, anesthesiologists, nurses, quality and PI specialists, data analysts and senior administrators.

Program Fees

The fee for participation in this six-month professional development program is $6,000 per person. This fee includes the following:

- All materials and resources
- Two-day launch meeting
- One day Executive Leadership meeting
- Virtual webinar training and coaching sessions
- A “Reengineering Patient Flow” two-day training
- All meeting facilities and breakfasts, lunches and snacks during the in-person meetings

Team Participation

IHO requires a minimum of 30 participants and a facility participating team of at least three people attending each of the in-person meetings. We suggest that each participating VHA facility train a multi-disciplinary team including physicians, surgeons, anesthesiologists, nurses, quality and performance improvement specialists, data analysts and senior administrators.
Eugene Litvak, PhD

President and CEO of the Institute for Healthcare Optimization. He is also an Adjunct Professor in Operations Management in the Department of Health Policy & Management at the Harvard School of Public Health (HSPH), where he teaches the course “Operations Management in Service Delivery Organizations”. Prior to his current position he was a co-founder (with Michael C. Long, MD) and director of the Program for the Management of Variability in Health Care Delivery at the Boston University (BU) Health Policy Institute and a Professor at the BU School of Management. Before joining Boston University Dr. Litvak was a faculty member at the Harvard Center for Risk Analysis.

He was the leading author of the innovative cost-effective protocols in screening for HIV and hepatitis, which reduce the cost of screening by a factor of 5 to 10 while simultaneously reducing errors by a factor of 20 to 40. These protocols have been positively evaluated by FDA, NIH and CDC, were the subject of a large-scale international trial supported by the U.S. Agency for International Development as well as Chiron and Roche pharmaceutical companies. Dr. Litvak served as a Principal Investigator from the U.S. for this trial.

Dr. Litvak is an author of more than 60 publications in the areas of operations management in healthcare delivery organizations. He was the editor of The Joint Commission’s patient flow book “Managing Patient Flow in Hospitals: Strategies and Solutions”, 2nd Edition, and the leader of the organization's first patient flow seminars. He was a member of the Institute of Medicine (currently the National Academy of Medicine) Committees “The Future of Emergency Care in the United States Health System”, “The Learning Health Care System in America” and “Optimizing Scheduling in Health Care.” Dr. Litvak also served as a member of the “National Advisory Committee to the American Hospital Association for Improving Quality, Patient Safety and Performance”. Currently, he serves on the Executive Leadership Council, Strategic Innovation Engine, Centers for Medicare & Medicaid Services.

Since 1995 he has led the development and practical application of innovative approaches for managing patient flow variability (introduced by him and Dr. Long) for cost reduction and quality improvement in health care delivery systems. Application of these approaches has resulted in significant quality improvement and multimillion dollar improvements in the margins for every hospital that has applied them. He is also Principal Investigator in many hospital and hospital systems operations improvement projects. These include CMS sponsored initiative “Partnership for Patients” in NJ and nationwide patient flow initiative in Scotland.

Michael C. Long, MD

Senior Fellow and Clinical Consultant with the Institute for Healthcare Optimization. Dr. Long graduated in 1965 from MIT with honors in Life Sciences and from Harvard Medical School with honors in 1969. After an internship in Surgery at the University of Colorado Medical Center and residency in Anesthesiology at the Massachusetts General Hospital, Dr. Long was Chief of Anesthesia at US Kirk Army hospital during the Vietnam conflict. He returned to the MGH in 1974 and was on staff in the Department of Anesthesia and Critical Care for more than 27 years. He served the MGH in a number of key clinical and administrative positions within the Anesthesiology department and Operating Room administration. From 1995 to 2001, he served as Chairman of Operations Improvement for the Operating Services and from 1997 to 2001 as Deputy Director of Operating Services for Operations Improvement and Information Systems. He was instrumental in designing and implementing a new state-of-the-art OR scheduling and information system at the MGH.

Since 1995, Dr. Long has collaborated with Dr. Eugene Litvak in the development and practical application of an innovative approach to patient flow variability management for cost reduction and quality improvement in health care delivery systems. This approach has been described in their publication "Cost and Quality Under Managed Care: Irreconcilable Differences?" in the American Journal of Managed Care 2000; v.6, No.3, pp.305-312. Application of patient flow variability management principles in numerous hospitals has resulted in improvements in patient flow and access to care in the Operating Rooms, Emergency Department, Intensive Care Units and other inpatient care areas. In 2001, Dr Long and Dr Litvak founded the Program for the Management of Variability in Health Care Delivery at the Boston University Health Policy Institute. In 2009 Dr Long joined Dr. Litvak and colleagues to form the Institute for Healthcare Optimization. Dr Long currently continues his active participation as Senior Fellow and clinical consultant as an integral team member at the Institute.
Sandeep Green Vaswani, MBA  
Senior Vice President with the Institute for Healthcare Optimization. Sandeep is responsible for management of hospital flow improvement initiatives. Sandeep has wide ranging experience in hospital business strategy, finance, operations and data-driven business management. He has led patient flow redesign initiatives at a range of US and international healthcare delivery organizations including academic medical centers, community hospitals, primary care facilities, as well as multi-hospital programs such as the CMS-funded Partnership for Patients initiative in New Jersey, and the National Health Service program in Scotland. Additionally Sandeep teaches operations management principles and application to current and aspiring healthcare executives at various educational and professional development events.

Previously, Sandeep served as Director, Analysis & Planning at the Brigham and Women’s Hospital in Boston; establishing the department within their Center for Clinical Excellence. In that role, Sandeep served as an advisor to the hospital executive team. He oversaw strategic and business planning, departmental multi-year planning, cost benchmarking, and the development of capacity utilization and projection models. He played a broad role in the development of the hospital’s new cardiovascular center including strategy planning, financial analysis, Board approval process, architectural design and development, and operational planning. Along with his team, Sandeep led the development of models to assess and project the utilization of hospital capacity such as the operating rooms, inpatient beds, emergency room, cath lab, interventional radiology, outpatient clinics, and endoscopy. This initiative led to an institution-wide focus on enhancement of utilization of existing hospital assets.

Prior to Brigham and Women’s Hospital, Sandeep worked in a variety of settings - management consulting with the strategy firm Monitor Company, equity research, investment banking, and manufacturing. Sandeep serves on the Board of Trustees of the Pro-Arte Chamber Orchestra of Boston. Sandeep has an undergraduate degree in electronics engineering from Bombay University, and an MBA from the Stern School of Business at New York University.

Julia Krol, RN, BSN, MBA  
Lead Methodologist with the Institute for Healthcare Optimization. As Lead Methodologist, Julia has worked with multiple hospitals and primary practice to evaluate, design, and implement projects to improve operational efficiencies and improve quality. She was instrumental in managing and coordinating the collaborative between IHO and 14 hospitals in the New Jersey Hospital Association. Julia holds an MBA from Boston University, with a certificate in Health Sector Management. Julia also holds degrees from Brown University and the University of Arizona, and has also worked as a practicing RN. She has practiced in Cardiac Intermediate Care at University Medical Center (now the University of Arizona Medical Center) and Gastroenterology/ERCP at Indiana University Hospital, where she gained an extensive knowledge of hospital operations.