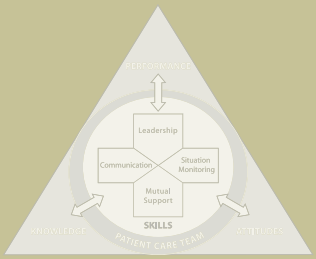

GUIDE TO ACTION

TeamSTEPPS®

Team Strategies & Tools to Enhance Performance & Patient Safety

"Creating a Safety Net for Your Healthcare Organization"

AHRQ
Agency for Healthcare Research and Quality
Advancing Excellence in Health Care • www.ahrq.gov
PATIENT SAFETY
TRICARE

ABOUT THE TeamSTEPPS *GUIDE TO ACTION*

This *Guide to Action* presents an overview of the TeamSTEPPS system. It is intended to aid in determining how to utilize this powerful resource to improve the safety and quality of care delivered to patients. The *Guide* presents an overview of TeamSTEPPS principles, methodologies, training curricula, and resources; and provides a brief discussion of the TeamSTEPPS scientific foundation. Included is an evidence-based summary of the benefits healthcare organizations have realized through implementation of a team-related initiative.

"TeamSTEPPS is a strategy to initiate organization change across healthcare delivery systems…changing the DNA of hospitals and ambulatory clinics."

Eduardo Salas, PhD
Professor and Trustee Chair
Dept of Psychology and Institute for Simulation and Training
University of Central Florida

GUIDE TO ACTION
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"Communication failures and lack of teamwork are major contributing factors to patient injury and harm. TeamSTEPPS is itself a product of teamwork in that it is a collaborative effort by AHRQ and the DoD's Military Health System's Patient Safety Program to bring a much-needed product into the public domain."

Carolyn Clancy, MD
Director
Agency for Healthcare Research and Quality
Department of Health and Human Services

"One of my non-negotiable priorities is to uphold the quality of care in the Military Health System, guided by priorities and initiatives that are based on a sound foundation of evidence. TeamSTEPPS is supported with over two decades of research and lessons learned. It remains the Military Health System's flagship initiative to improve teamwork, communication, and the delivery of safe care to our beneficiaries worldwide."

Jonathan Woodson, MD
Assistant Secretary of Defense for Health Affairs
Department of Defense

What Is TeamSTEPPS®?

A teamwork system designed to improve quality, safety, and efficiency of healthcare; offering a powerful solution to improving patient safety within your organization.

TeamSTEPPS is an evidence-based teamwork system aimed at optimizing patient outcomes by improving communication and other teamwork skills among healthcare professionals. TeamSTEPPS includes a comprehensive suite of ready-to-use materials and training curricula necessary to successfully integrate teamwork principles into all areas of your healthcare system.

TeamSTEPPS was developed by the Department of Defense (DoD) Patient Safety Program, in collaboration with the Agency for Healthcare Research and Quality (AHRQ).

THE TeamSTEPPS APPROACH: HIGHER QUALITY, SAFER PATIENT CARE

The goal of TeamSTEPPS is to produce highly effective medical teams that optimize the use of information, people, and resources to achieve the best clinical outcomes for their patients. TeamSTEPPS is scientifically-rooted in over 20 years of research and lessons learned from the application of teamwork principles identified in Crew Resource Management (CRM) and within High-Reliability Organizations (HROs).

Human factors research has shown that even highly skilled, motivated professionals are vulnerable to error due to inherent human limitations. HROs, such as those found in military operations, aviation, community emergency response services, and nuclear power industries, have learned that teams of individuals who communicate effectively—and back each other up—compensate for individual fallibility and dramatically reduce the consequences of inevitable human error—resulting in enhanced safety and improved performance.

TeamSTEPPS is an evidence-based framework to optimize team performance across the healthcare delivery system.

Healthcare systems, like many HROs, depend on the coordinated interactions of multiple teams operating in a dynamic, complex, and high-risk environment. High-reliability work units thrive on teamwork. Patient safety experts agree that communication and other teamwork skills are essential for the provision of quality healthcare and the prevention of medical errors and patient harm. Yet, despite the importance of teamwork, most healthcare professions' curricula lack teamwork training, and few medical practices incorporate teamwork principles. Teamwork skills are not innate—they must be learned and practiced. TeamSTEPPS provides a ready-to-use solution.

"Teamwork is an essential component of achieving high reliability particularly in healthcare organizations."

David P. Baker, PhD
Principal Research Scientist
American Institutes for Research

"Evidence increasingly suggests that failures in teamwork and communication underlie most sentinel events and are strongly associated with patients' clinical and economic outcomes. Strategies such as TeamSTEPPS that improve teamwork hold great promise to improve patient safety."

Peter J. Pronovost, MD, PhD
Medical Director, Center for Innovation Quality Healthcare
Associate Professor of Anesthesiology and Critical Care Medicine
Johns Hopkins University School of Medicine

Why Invest in TeamSTEPPS®?

Patients are safer in healthcare delivery systems where teamwork principles are practiced.

ANNUAL COST OF MEDICAL ERRORS:

Lives: 98,000

Cost: $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ | **$17-19 Billion**

The investment of resources to institute a teamwork initiative is trivial compared with the overall expenditures in healthcare resulting from medical errors. In late 1999, the Institute of Medicine (IOM) estimated in their landmark report *To Err is Human: Building a Safer Health System*[1] that preventable medical errors in U.S. hospitals cost an estimated 98,000 patient lives and $17 to $29 billion every year. The IOM further concluded that medical errors could be significantly reduced through fundamental changes in our national healthcare system. One of their key recommendations was that healthcare organizations **"establish interdisciplinary team training programs for providers that incorporate proven methods of team training…."**

COMMUNICATION FAILURES ARE THE LEADING CAUSE OF PREVENTABLE PATIENT DEATHS.

Analysis of sentinel events reported to The Joint Commission over the past 10 years identified communication failure as the leading root cause.[2] The Veterans' Administration (VA) National Center for Patient Safety database shows similar results with communication failure cited as a primary contributing factor in nearly 80 percent of over 6,000 root cause analyses of adverse events and close calls.[3]

What Can TeamSTEPPS®

There is growing evidence for significant improvements in patient safety, clinical outcomes, and cost. For example:

Emergency Department[4]

After implementation of multiple medical team training programs:

- Improved observed team behaviors.
- Enhanced staff attitudes toward teamwork.
- Reduced observed clinical errors.

Operating Rooms (OR)

After implementation of a "pre-op" brief:

- Increased OR communication.[5,6]
- Increased administration of properly timed prophylactic antibiotics prior to incision from 84% to 95%.[5]
- Increased pre-op deep vein thrombosis prophylaxis prior to induction from 92% to 100%.[5]
- Error avoidance: Pre-op brief revealed seven patients (3.3%) with previously unidentified severe surgical risks — surgery cancelled.[5]
- A 16% reduction in nursing turnover rate.[6]
- A 19% increase in OR employee satisfaction.[6]

"Our malpractice suits, high severity case claims, and the associated reserves required were reduced by 50% over a 3-year period after training teamwork in our Labor and Delivery Units."

Benjamin P. Sachs, MB, BS
Chief of Obstetrics and Gynecology, Beth Israel Deaconess Medical Center
Professor, Harvard Medical School

Do for My Organization?

Labor and Delivery Units[7]

After implementation of multiple teamwork strategies and tools:

- A 50% reduction in the Weighted Adverse Outcome Score (WAOS). The WAOS describes the adverse event score per delivery—10 potential adverse events weighted by severity.
- A 50% decrease in the Severity Index—which measures the average severity of each delivery with an adverse event.

Intensive Care Units (ICU)[8]

After implementation of a "Patient Daily Goals" form to facilitate staff communication:

- A 50% decrease in mean ICU length of stay from 2.2 days to 1.1 days.

All Clinical Units in a Medical Center[9]

After implementation of SBAR to improve communication among clinical caregivers:

- Reduced rate of adverse drug events (from 30 to 18 per 1,000 patient days).
- Improved medication reconciliation at patient admission from 72% to 88% and at discharge from 53% vs. 89%.

What is SBAR?

Originating in the U.S. Navy submarine community to quickly provide critical information, SBAR is a communication technique that provides a standardized framework for sharing information.

- **Situation**
  What is happening with the patient?
- **Background**
  What is the clinical background?
- **Assessment**
  What do I think the problem is?
- **Recommendation/ Request**
  What would I recommend or do to correct it?

What Makes TeamSTEPPS® Different?

TeamSTEPPS evolved using rigorous scientific methods. The goal was to create a comprehensive set of evidence-based tools and strategies that are practical and adaptable to any healthcare organization.

- **Evidence-based and Field-tested:** A panel of researchers, clinicians, medical educators, and teamwork experts initially identified core team competencies. TeamSTEPPS was then developed, based on recommendations and guidelines from an extensive independent evaluation conducted by the American Institutes for Research. This curriculum was piloted over an 18-month period spanning 24 facilities, including both DoD and civilian organizations. Feedback and lessons learned from hundreds of healthcare users in the field was an integral part of the development and validation process. TeamSTEPPS is scientifically rooted in team performance and teamwork research, along with leading theoretical models for systems-based error prevention that originally applied to other complex, high-risk industries. This body of research has yielded a solid evidence base for a set of teamwork core competencies with identified knowledge, skills, and attitudes. Teamwork training and implementation is incorporated into most HROs and is widely believed by industry experts to have dramatically improved safety, spared many lives, and saved billions of dollars.
- **Comprehensive:** Over the past 10 years, there has been exponential growth in products aimed at improving healthcare quality and safety. However, most of these products provide information on *what* healthcare organizations should do, but give little guidance on how to do it. *TeamSTEPPS is unique in that it not only describes what to do, but also guides users through the how, and provides the needed resources*. Because accreditation requirements were considered during development, TeamSTEPPS may be used to design team-driven action plans in response to sentinel events.

- **Customizable:** The TeamSTEPPS system is fully customizable to meet the specific needs of an organization. It is applicable in all medical settings of any size or clinical specialty, either throughout the facility or within one work unit or clinic. TeamSTEPPS may be implemented in full or in part. Over 130 scenarios (mini-case studies) are available to be customized to your specialty area. The training materials include stand-alone modules to select the training curricula and teamwork skill(s) that best accommodate the organization's unique teamwork needs and resource availability.
- **Easy-to-use Teamwork Tools and Strategies:** TeamSTEPPS provides simple, ready-to-use, structured communication tools and teamwork strategies applicable to any healthcare setting.

"Team training does not begin or end with the actual training session. The work starts with identifying opportunities for improvement in communication and teamwork, and developing a customized approach. Teamwork has to become the way we deliver care, not just another initiative."

Karen S. Frush, MD
Chief Patient Safety Officer
Duke University Health System

What Will My Organization Learn from TeamSTEPPS®?

Teamwork principles and training techniques are applicable to every healthcare organization.

TeamSTEPPS is built on the framework of four core competency areas that ultimately lead to improved team performance, safer practices, and change in culture. These four areas include Leadership, Situation Monitoring, Mutual Support, and Communication.

The foundation of teamwork builds on technical proficiency. The TeamSTEPPS architecture offers specific leadership and staff actions, leveraging identified knowledge, skills, and attitudes and complex human factors. In a high-performing team, members share a clear vision of the plan; utilize concise, structured communication techniques; adapt rapidly to changing situations; and maximize the use of information, skills, and resources for optimal outcomes.

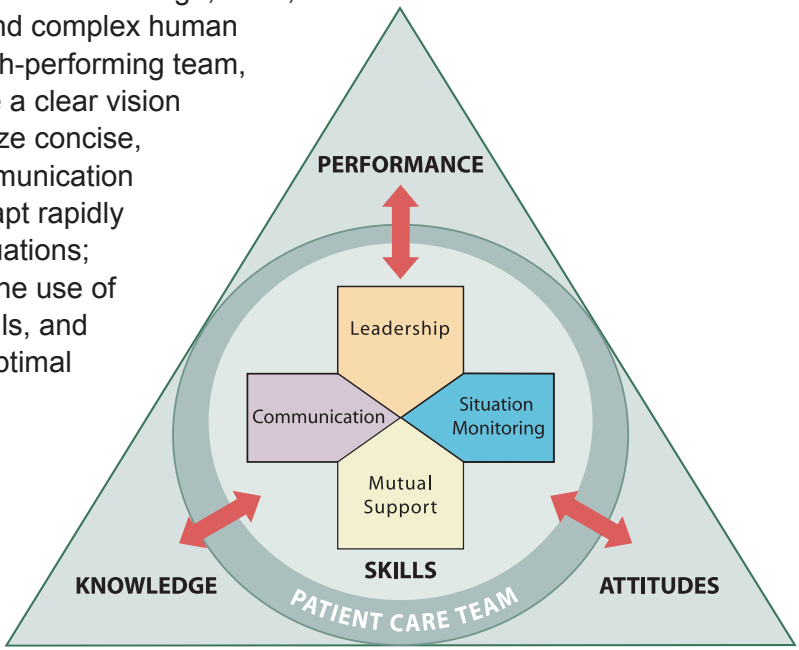

Exhibit 1: The TeamSTEPPS® Framework

Teamwork Competencies	Behaviors and Skills	Tools and Strategies
Leadership *ability to direct and coordinate, assign tasks, motivate team members, resource, and facilitate optimal team performance.*	Clarify team member roles; provide performance expectations; engage in team events (e.g., brief, huddle, debrief); facilitate team problem solving.	• Resource Management • Delegation • Brief • Huddle • Debrief
Situation Monitoring *ability to develop common understandings of the team environment and apply appropriate strategies to accurately monitor teammate performance; maintain a shared mental model.*	Anticipate and predict each other's needs through cross monitoring the actions of fellow team members; provide feedback early which allows a team member to self-correct; establish a safety net; watch each other's back.	• Situation Awareness • Cross Monitoring • STEP • I'M SAFE
Mutual Support *ability to anticipate other team member's needs through accurate knowledge, and shift workload to achieve balance during high periods of workload or pressure.*	Correct deficiencies in workload distribution through shifting of responsibilities to underutilized team members; give and receive constructive and evaluative feedback; resolve conflict; advocate and assert.	• Task Assistance • Feedback • Advocacy & Assertion • Two-Challenge Rule • CUS • DESC Script • Collaboration
Communication *ability to effectively exchange information among team members; irrespective of the medium.*	Communicate critical information through structured communication techniques; ensure information conveyed is understood through follow-up and acknowledgement.	• SBAR • Call-Out • Check-Back • Handoff • I PASS THE BATON

Exhibit 2: Teamwork competencies, skills, and related tools*

*Based on data from *Medical teamwork and patient safety: The evidence-based relation*.[10]

HOW DOES TeamSTEPPS WORK?

A TeamSTEPPS Initiative occurs in three continuous phases:

- Phase I — Assessment.
- Phase II — Planning, Training, and Implementation.
- Phase III — Sustainment.

Each phase incorporates one or more of these key actions:

- Set The Stage.
- Decide What To Do.
- Make It Happen.
- Make It Stick.

The *TeamSTEPPS Implementation Guide* takes users step-by-step through each phase, detailing the roadmap for creating change and shifting the organization toward a sustained culture of safety. The Initiative can be implemented at any level—throughout the facility or within one work unit.

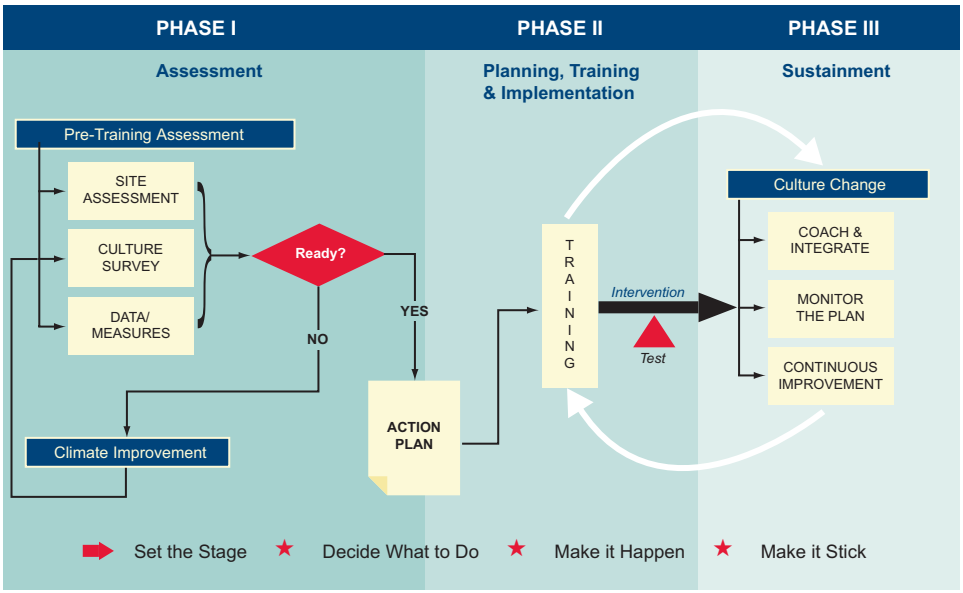

Exhibit 3: A Phased Approach

PHASE I: ASSESSMENT — SET THE STAGE

The goal of Phase I is to determine organizational readiness for a TeamSTEPPS Initiative. During Phase I, the organization or work unit will assemble a Change Team (the leaders and key staff members who will drive the TeamSTEPPS Initiative). The Change Team will identify a specific opportunity for improvement that could be realized with enhanced teamwork and formulate a vision for a TeamSTEPPS Initiative. They also will use various site assessment tools to determine if the organization has the necessary leadership support, information base, and resources in place to support a successful TeamSTEPPS Initiative.

PHASE II: PLANNING, TRAINING, & IMPLEMENTATION — DECIDE WHAT TO DO AND MAKE IT HAPPEN

Phase II is the planning and execution segment of the TeamSTEPPS Initiative. It begins with developing the *TeamSTEPPS Action Plan*, a written report detailing exactly what an organization or work group intends to do during the Initiative. The *TeamSTEPPS Implementation Guide* provides systematic instructions for writing a comprehensive Action Plan that, when completed, will function as a customized “how-to guide” for the entire Initiative. Using strategies documented in the individualized Action Plan, the group will then conduct medical team training and implement and test its TeamSTEPPS intervention (your tools and strategies for teamwork improvement).

PHASE III: SUSTAINMENT — MAKE IT STICK

The goal of Phase III is to sustain and spread improvements in teamwork performance, clinical processes, and outcomes resulting from the TeamSTEPPS Initiative. During this phase, users will (a) integrate teamwork skills and tools into daily practice, (b) monitor and measure the on-going effectiveness of the TeamSTEPPS intervention, and (c) develop an approach for continuous improvement and spread of the Initiative throughout the organization or work unit.

What TeamSTEPPS® Resources Are Available to My Organization?

TeamSTEPPS includes a collection of instructions, materials, and tools to help you drive a successful teamwork initiative, from initial vision to sustainment of change. These resources are available to you and are ready for immediate use in any healthcare setting.

EVERYTHING YOU NEED TO BUILD AND SUSTAIN HIGHLY EFFECTIVE MEDICAL TEAMS FOR TODAY'S COMPLEX HEALTHCARE ENVIRONMENT.

TeamSTEPPS RESOURCES INCLUDE:

- **Three Teamwork Training Curricula.**
- **Course Management Guide.**
- **Multimedia Course Materials.**
- **TeamSTEPPS Implementation Guide.**
- **Measurement Tools.**

Three Teamwork Training Curricula

Each of the three curricula are complete courses that can be tailored to fit your organization's unique teamwork training needs, your staffing, and your resource infrastructure. Each course consists of individual modules that may be taught together or separately.

Features of each module include the following:

1. Train-the-Trainer:

- Designed as 2.5 days of didactic, interactive training.
- Creates a cadre of instructors.
- Develops training and coaching skills.
- Prepares instructors to facilitate a TeamSTEPPS initiative.

2. TeamSTEPPS Fundamentals:

- Designed as a 4- to 6-hour interactive workshop.
- Intended for direct care providers.
- Includes role-playing, exercises, mini-case studies.
- Focuses on improving core team competencies.

3. TeamSTEPPS Essentials:

- Designed as 1- to 2-hour condensed fundamentals training.
- Intended for non-clinical staff.
- Provides basic tools for effective communication of essential information.

Course Management Guide

- Provides a reference for team training instructors.
- Includes information on how to prepare, execute, assess, and sustain a TeamSTEPPS Initiative.
- Includes complete course descriptions and an explanation of how to utilize resources.

Multimedia Course Materials

- Includes a suite of educational media on CD and DVD.
- Accommodates multiple learning styles.
- Illustrates concepts using slide presentations, discussions, video vignettes, case studies, testimonials, demonstrations, practice exercises, role-play, and simulation.
- Includes the *TeamSTEPPS Pocket Guide*, glossary, extensive evidence-based summaries, bibliography, and sample agendas and evaluations.

TeamSTEPPS Implementation Guide

- Includes a comprehensive "how-to" manual.
- Details the actions necessary to design, implement, monitor, and sustain your TeamSTEPPS Initiative.
- Includes the *Guide to Developing A TeamSTEPPS Action Plan* and *Implementation-At-A-Glance*.

Measurement Tools

- Incorporates a battery of validated, ready-to-use tools to assess the effectiveness of your TeamSTEPPS Initiative.
- Provides instructions for tool selection, metric development, and data analysis.

"Organizational Transformation is a journey rather than a destination, and every journey begins with a single step. The path and pace you choose will depend largely on your immediate needs and organizational readiness for change. Regardless of the starting point, developing an overall framework that seeks to align strategy, goals, and performance will help to build a culture of excellence and sustained success…everything should add real value for our patients."

GE Healthcare Performance Solutions[11]

How Will We Measure Results of a TeamSTEPPS® Initiative?

MEASURE RESULTS… KNOW IT WORKED… CELEBRATE SUCCESS.

The TeamSTEPPS system includes a set of validated, ready-to-use measurement tools to assess the effectiveness of the TeamSTEPPS Initiative. Tools include the following:

- Team Assessment Questionnaire.
- Team Performance Observation Tool.
- TeamSTEPPS Learning Benchmarks.

Use these tools alone or in addition to other external patient safety and healthcare quality assessment tools, such as *AHRQ's Hospital Survey on Patient Safety Culture*. You may also use your organization's existing measurement systems, such as staff and patient satisfaction surveys and clinical outcomes databases, to show changes resulting from your Initiative. The *Guide to Developing a TeamSTEPPS Action Plan* provides easy-to-follow instructions for selecting measurement tools, developing testing methods, and analyzing the data.

"Communication and other teamwork skills play a vital role in virtually every interaction in the healthcare environment. The benefits of improved teamwork—improved safety and quality of care, productivity, staff and patient satisfaction, cost-savings—are applicable to all healthcare organizations."

James B. Battles, PhD
Senior Service Fellow for Patient Safety
Center for Quality Improvement and Patient Safety (CQuIPS)
Agency for Healthcare Research & Quality (AHRQ)

KICK-START YOUR TeamSTEPPS INITIATIVE

Begin by reviewing the *TeamSTEPPS Implementation Guide*. It details the necessary organizational actions for successfully conducting a TeamSTEPPS Initiative, from initial concept development through sustainment. A TeamSTEPPS Initiative starts in Phase I — "Set the Stage." Keys to success during this earliest phase include involving the right people, using organizational data to support your claims, and communication.

Many highly successful organizational change efforts have proceeded through a series of steps based on Dr. John Kotter's nationally acclaimed organizational change theory.[12] The following recommended actions for initiating a TeamSTEPPS Initiative are anchored in Dr. Kotter's widely accepted theory:

1. **Create a Sense of Urgency.** Demonstrate the need for improved teamwork and the importance of acting now. Use organizational data to support your claims. Data sources include *AHRQ's Hospital Survey on Patient Safety Culture*, *Team Assessment Questionnaire*, incident reports, or other internal process and outcomes measures.
2. **Pull Together the Guiding Team.** Engage a powerful group to lead the charge — one with leadership authority, credibility, communication ability, analytical skills, and relevant clinical expertise.

"High performance teams create a safety net for patients, caregivers, and support staff in your healthcare organization as you promote a culture of safety."

Heidi King, MS
Program Director, Healthcare Team Coordination Program
DoD Patient Safety Program

3. **Formulate a Change Vision and Strategy.** Clarify how better teamwork can change the future — such as improved clinical outcomes; staff and patient satisfaction; and safer, more efficient patient care. Demonstrate how the future can become a reality with a TeamSTEPPS Initiative. Ensure that your vision is feasible, that your organization has the necessary resources, information infrastructure, commitment to improvement, and leadership support. Starting with a small-scale TeamSTEPPS Initiative, implemented within one work unit, using one teamwork tool creates the greatest probability of success.
4. **Communicate Your Vision for Understanding and Buy-in.** Showcasing a successful effort fuels the spread to other units in an organization. Focus on leadership and staff members critical to the success of your Initiative.

Once you have set the stage, you are ready to progress to Phase II and officially launch your TeamSTEPPS Initiative. The TeamSTEPPS system will provide all the instructions, materials, and resources you need to make it successful.

"Our Military Health System is a one-of-a-kind worldwide organization committed to providing quality, patient-focused care. When our medical professionals--doctors, nurses, technicians, medical support personnel and other medical professionals--work together as a team--our patients win. TeamSTEPPS provides the tools and skills necessary to deliver high-quality care to the more than nine million service members, families and retirees who count on the MHS for their health care."

Joseph E. Kelley, MD
Deputy Assistant Secretary of Defense for Health Affairs, Clincial and Program Policy
Chief Medical Officer, TRICARE Management Activity

How Do We Access TeamSTEPPS® Materials?

The enclosed CD/DVD includes:

- Course Management Guide
- Fundamentals Instructional Modules and Slides
- Trainer/Coach Instructional Modules and Slides
- Essentials Instructional Modules and Slides
- Supplemental Materials
    - Practical Exercise Handouts
    - Video Vignettes
    - Specialty Scenarios
    - Evidence-Base for Each Module
    - Measurement Tools
    - Bibliography
    - Glossary
    - Sample Agenda
    - Sample Evaluation Forms
    - Model for Change

How do I access TeamSTEPPS materials?

- Compile an Instructor Guide binder by printing from a CD.
- Order from the AHRQ Publications Clearinghouse.
- Visit http://www.ahrq.gov/teamsteppstools

Can I purchase a binder or copies of the pocket guide in bulk?

Copies of the TeamSTEPPS products can be ordered for a nominal fee from the AHRQ Publications Clearinghouse by calling 800-358-9295.

Copies of the Instructor Guide material with the CD/DVD wallet and multiple copies of the Pocket Guide (in sets of 10) may be purchased from the Government Printing Office online, at http://bookstore.gpo.gov/; or via e-mail to contactcenter@gpo.gov. To order by phone, call 866-512-1800 or, in the DC metro area, call 202-512-1800 (M-F 8:00 am — 5:30 pm EST). All orders must be prepaid.

For more information, visit:

http://teamstepps.ahrq.gov
http://www.health.mil/dodpatientsafety

TeamSTEPPS® Instructor Guide
AHRQ Pub No. 06-0020-0 ISBN 1-58763-192-X

TeamSTEPPS® Pocket Guide
AHRQ Pub No. 06-0020-2 ISBN 1-58763-191-1

TeamSTEPPS® CD/DVD Wallet
AHRQ Pub. No. 06-0020-3 ISBN 1-58763-225-X

TeamSTEPPS® Guide To Action
AHRQ Pub. No. 06-0020-4

TeamSTEPPS® Poster
AHRQ Pub. No. 06-0020-5

REFERENCES

1. Kohn LT, Corrigan JM, Donaldson MS, eds. To err is human: Building a safer health system. Washington, DC: Committee on Quality of Health Care in America, Institute of Medicine, National Academy Press. 2000.

2. Joint Commission on the Accreditation of Healthcare Organizations. sentinel event database, available at www.jointcommission.org.

3. VA National Center for Patient Safety. NCPS Medical Team Training Program, Executive Summary, April 2006. www.va.gov.ncps.

4. Morey JC, Simon R, Jay GD, et al. Error reduction and performance improvement in the emergency department through formal teamwork training: Evaluation results of the MedTeams project. Health Serv Res. 37:1553-1581, 2002.

5. Awad SS, Fagan SP, Bellows C, Albo D, et al.: Bridging the communication gap in the operating room with medical team training. Am J Surg 190(5):770-4, Nov 2005.

6. Leonard M, Graham S, Bonacum D. The human factor: The critical importance of effective teamwork and communication in providing safe care. Qual Saf Health Care 13 Suppl 1:i85-90, Oct 2004.

7. Mann S, Marcus R, Sachs B: Lessons from the cockpit: How team training can reduce errors on L&D. (Grand Rounds) Contemporary Ob/Gyn v51 i1:34(8), January 2006.

8. Pronovost P, Berenholtz S, Dorman T, Lipsett PA, Simmonds T, Haraden C. Improving communication in the ICU using daily goals. J Crit Care 18(2):71-5, Jun 2003.

9. Haig K., Sutton S., Whittington J: SBAR: A shared mental model for improving communication between clinicians. Jt Comm J Qual Patient Saf 32(3):167-75, March 2006.

10. Baker DP, Gustafson S, Beaubien J, Salas E, Barach P. Medical teamwork and patient safety: The evidence-based relation. Literature review (Contract No. 282-98-0029, Task Order #54 to the American Institutes for Research). AHRQ Publication No. 05-0053. Rockville (MD): Agency for Healthcare Research and Quality. April 2005.

11. Pexton C, Establishing a framework for organization transformation in healthcare. GE Healthcare Performance Solutions, 2005.

12. Kotter J, Rathgeber H. Our iceberg is melting: Changing and succeeding under adverse conditions. St. Martin's Press, September 2006.

13. Joint Commission on Accreditation of Healthcare Organizations. Patient safety: Essentials for healthcare. Fourth Edition. Oakbrook Terrace, Ill: Joint Commission Resources, Inc. 2006.

Advocates for Teamwork

Industry Leaders

"Effective teamwork can prevent mistakes."

~ *Michael Leonard, MD*
Physician Leader for Patient Safety
Kaiser Permanente

"Training physicians, nurses, and other professionals to work in teams is another idea whose time seems to have come."

~ *Lucian Leape, MD*
Adjunct Professor of Health Policy
Department of Health Policy and Management

~ *Donald M. Berwick, MD, MPP, FRCP*
President and CEO
Institute for Healthcare Improvement (IHI)

"On-going in-services, training, or other education (should) incorporate methods of team training, when appropriate."

~ *JCAHO, 2006*[13]

"However, despite the importance of teamwork in health care, most clinical units continue to function as discreet and separate collections of professionals."

~ *Eric Knox, MD*
Director, Consumers Advancing Patient Safety (CAPS)

~ *Katherine Rice Simpson, RN*
St. John's Mercy Medical Center, St. Louis, MO

Consumers

"Healthcare providers have a powerful opportunity to revolutionize patient safety by recreating how healthcare is delivered—as a team, as a system, and as a champion."

~ *Sue Sheridan*
Co-founder & President, Consumers Advancing Patient Safety (CAPS)
Chair, World Health Organization Patients for Patient Safety Initiative

"I want doctors and nurses to slow down, look at the patient, communicate with each other, doctors to nurses, one team to another."

~ *Sorrel King*
Founder, Josie King Foundation
Patient Safety Advocate

AHRQ

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