



# *TeamSTEPPS*<sup>®</sup>

## Strategies and Tools to Enhance Performance and Patient Safety

### INTRODUCTION



#### SUBSECTIONS

- Introduction
- The Science of Teamwork
- Patient Safety Movement
- Components of a Patient Safety Program
- Medical Errors
- TeamSTEPPS Framework
- Teamwork Actions

**TIME:** 50 minutes

# ICE BREAKER

## SAY:

Before we get started, you're going to team up with the other people at your table and complete an ice breaker activity.

## DO:

Demonstrate how to make the chains as you explain:

## SAY:

To make the chains, cut the construction paper into strips, make links by taping together the ends of a strip, then loop the next strip through it. Continue this process to make a chain.

You have 2 minutes to create the longest chain. Go.

*After 2 minutes, have each group display the length of its chain. Have the groups set the first chains aside.*

Now, you're going to make a new chain; however, each of you may use only your left hand. You have 2 minutes.

*After 2 minutes, have participants display the length of their second chains. Have the groups set the chains aside.*

Now, you have one more chance to make the longest chain. However, this time, you may use only your left hand, and you must not speak. You have 30 seconds to discuss with your group before beginning your 2 minutes.

*After the 2-1/2 minutes are up, display the final chains, and debrief the exercise.*

## DISCUSSION:

*Starting with the groups that had the longest chains, go around the room asking the participants in each group the following questions:*

- What techniques or methods did you use for working well as a team when making the chains?
- What hindered your group in working as a team?
- How did the additional time to plan affect your team's technique? How did the limited communication change it?



## Slide



## MODULE TIME:

50 minutes



## ICE BREAKER TIME:

10 minutes



## MATERIALS:

- Flipchart or Whiteboard
- Construction Paper
- Tape
- Scissors

Continued...

## ICE BREAKER (continued)



### DISCUSSION:

As participants respond, rephrase their responses back to them as TeamSTEPPS skills that will be covered in the training. If one of the skills is not brought up after each group responds, bring up that skill briefly afterward.

- Someone assuming the leadership role
  - Point out a group in which someone assumed a leadership role and helped the team plan for the times when team members were no longer able to communicate verbally. If none of the groups had a member who did this, point out how this would have helped.
- Clearly defined team roles
  - Ask if any of the teams had designated people who agreed to take on certain roles (e.g., cutting the paper strips or taping). Ask if anyone was standing around wondering what to do because a clearly defined role was lacking.
- Mutually supporting/helping other team members
  - Point out situations in which participants helped each other, rather than simply wait on another team member.
- Situation monitoring
  - Ask if anyone observed when other team members were finished cutting strips of paper or needed a piece of tape. Ask how this action affected performance.
- Communication
  - Ask participants if the task became significantly more difficult without the ability to communicate verbally with other team members, in the third part of the exercise.

# SUE SHERIDAN VIDEO

## Introduction

### SAY:

Before we start the course, it is important to understand why resident safety is so important and how teamwork can make the difference between life and death.

### DO:

 Play the video by clicking the director icon on the slide.

### ASK:

Could these two incidents have been avoided if effective teamwork had taken place?

### SAY:

This course is about making sure that stories like this do not happen.



### Slide



### VIDEO TIME:

9:55 minutes



### MATERIALS:

- Sue Sheridan video

## VIDEO DISCUSSION



Slide

 **Instructor Note:** Ask the participants the following questions below. Sample answers are provided to generate a discussion if participants do not volunteer answers.

 **DISCUSSION:**

- How are residents harmed as a result of medical errors?
  - This question is mostly rhetorical. If a participant questions this, however, state that you'll cover the data and statistics on medical error in several minutes.
- How can we prevent medical errors?
  - If any of the participants answer negatively, focus the discussion on improvement opportunities.
- What are the solutions?
  - Ask participants to respond to this question. If their responses indicate a skill or technique taught in the course, but participants use different terminology, rephrase their response back to them using the TeamSTEPPS terminology.

### SAY:

In this module, we'll:

- Describe the TeamSTEPPS training initiative.
- Explain your nursing home's resident safety program.
- Describe the impact of errors and why they occur.
- Describe the TeamSTEPPS framework.
- State the outcomes of the TeamSTEPPS framework.



### Slide

# TEAMWORK IS ALL AROUND US



**Slide**

### **SAY:**

Teamwork truly is all around us. The U.S. Department of Defense values teamwork as key to its mission—thus training more of its institutions in teamwork than any other system in the world.

Patients across the world are safer in health care delivery systems where teamwork principles are practiced on a daily basis.

## PROVEN RESULTS (OPTIONAL CONTENT)

### SAY:

Through implementing teamwork initiatives, organizations have found positive results. Several examples of the promising findings are:

- Long-term care facilities participating in a quality improvement program that promoted staff working together as a multidisciplinary team to improve communication experienced a 48 percent reduction in the CMS high-risk pressure ulcer quality measure (Horn, et al., 2010).
- After the implementation of an interdisciplinary communication tool to improve rounds, the average length of ICU stays was reduced by 50 percent (Pronovost, 2003).

What might change by improving communication among your interdisciplinary team? What might help make improvements?

- Operating rooms with staff that report having a good attitude toward teamwork also have postoperative infection rates less than half of those where staff perceive the environment as being poorly conducive to teamwork. The operating rooms with the highest rated teamwork climates also have postoperative infection rates half that of the AHRQ-reported national average for the Patient Safety Indicator rate for postoperative sepsis, PSI 13 (Sexton, 2006).

What about infections within your nursing home? How can teamwork help reduce the spread of flu, MRSA, etc.?

Health care organizations that have effectively implemented a medical teamwork system have observed:

- A decreased clinical error rate from 30.9 percent to 4.4 percent, along with an increase in positive attitudes toward teamwork (Morey, 2002).
- A 27 percent reduction in nurse turnover (DiMeglio, 2005).

Although the evidence is still evolving, especially in long-term care, proven results from acute care and expert consensus recognize that teamwork plays a critical role in providing healthcare. The investment of resources is trivial compared with the overall expenditures in health care resulting from medical errors.

Slide

**NO SLIDE**

## INTRODUCTION

### SAY:

TeamSTEPPS evolved through collaboration with multiple partners, with efforts led by the DoD Patient Safety Program.

Patient Safety regulations related to teamwork practices are reviewed routinely to ensure that the TeamSTEPPS Initiative offers solutions to meet these accrediting requirements. The evolution of TeamSTEPPS has been mapped out in relation to the resident safety movement.

### ***Curriculum Contributors:***

In conjunction with several Federal agencies and high-performance teams, human factors, and crew resource management subject matter experts, several research organizations, quality improvement organizations, medical and business schools, university health care systems, military treatment facilities, private corporations, hospitals, nursing homes, health care foundations, and community-based practices have contributed to the development of TeamSTEPPS.

The insightful input of this “team of experts” is invaluable as we strive to strengthen a safety net for our residents, caregivers, and staff within complex health systems.



Slide

### **The Evolution of TeamSTEPPS...A Research Approach**

Following an extensive literature review of teamwork in health care, a panel of experts convened in 2003 to identify the gold standard for medical team training. Through an extensive modified Delphi methodology, key team-related competencies were identified to assess effectiveness of teams and team training based on 20 years of research. Collective input from this expert panel recommended standardized training objectives, guidelines, and future research challenges. The Agency for Healthcare Research and Quality (AHRQ) collaborated with the Department of Defense (DoD), to perform an independent case study of DoD and non-DoD training programs, which was conducted by the American Institutes for Research (AIR). This case study analysis included formative and summative research methods looking at strengths, weaknesses, and limitations of existing team training curricula. Based on these findings and lessons learned from training events, the TeamSTEPPS curriculum was developed and initially piloted in January 2005. Based on multiple assessments and ongoing evaluation, TeamSTEPPS was piloted and reassessed over an 18-month time period during which 24 facilities were trained and implemented these teamwork principles. In 2005, 450 newly trained instructors trained several thousands of staff. Incorporated into the curriculum design project are lessons learned from team training activities captured over the past 8 years, and evidence-based research relative to the science of teamwork, human factors, and team performance, along with organizational improvement and change strategies.

### SAY:

TeamSTEPPS stands for: *Team Strategies and Tools to Enhance Performance and Patient Safety*.

TeamSTEPPS focuses on specific skills supporting team performance principles, including training requirements, behavioral methods, human factors, and changes to the resident care culture designed to improve quality and resident safety. TeamSTEPPS is another component to help support and enhance person-centered care. It does not work in competition with other culture change efforts within long term care.

Teamwork concepts are introduced that provide specific tools and strategies for improving communication and teamwork, reducing chance of error, and providing safer resident care.

This course is based on evidence derived from teams working in high-risk environments (i.e., where the consequences of error are great).

More than 25 years of research and evidence have been accumulated on teams and team performance in diverse areas (e.g., aviation, the military, nuclear power, health care, business and industry). TeamSTEPPS has evolved from research in these high-risk fields to the health care environment, a high-risk, high-stakes environment in which poor performance may lead to serious consequences or death.

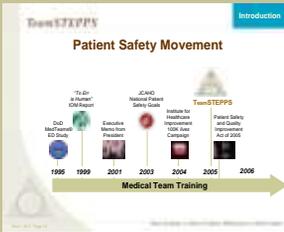
Based on research, we know what defines a team, what teamwork requires, how to train team members, and how to manage team performance. Researchers have linked team training programs to improved attitudes, increased knowledge, and improved behavioral skills.

 **Instructor Note:** Add the following text for train-the-trainer sessions.

Additional content includes how to deal with culture change (using Dr. Kotter's Eight Steps to Change), change management, customizable implementation plans, trainer and coaching skill development, guidance to develop assessment and evaluation strategies using teamwork measurement tools, and consultation.



### Slide



## Slide

**SAY:**

As you can see, medical team research and training began 4 years before the onset of the patient safety movement. The integration of teamwork into health care by the DoD and forward-thinking researchers preceded the Institute of Medicine (IOM) report and regulatory requirements.

**1995**

- The first research project involving the Emergency Department (ED) was a multiyear initiative.
- ED Study—A multiyear DoD research project that introduced formal teamwork training based on aviation Crew Resource Management (CRW) training concepts was applied to health care.
- MedTeams® began with a retrospective closed claim review of ED risk management cases. It was determined that 43 percent of errors resulted from problems with team coordination. In these cases, an effective team structure and caregivers trained in team behavior would have mitigated or prevented 79 percent of the identified failures.

**1999-2001**

- Institute of Medicine report *To Err Is Human* was published, drawing widespread attention from the government, media, and healthcare profession.
- As a response to the IOM report, President Clinton’s Executive Memo on Improving Health Care Quality requested a report from QulC: “Therefore, I hereby direct the Quality Interagency Coordination Task Force, to report to me a set of recommendations on specific actions to improve health care outcomes and prevent medical errors in both the public and private sectors in a manner that is consistent with the strong privacy protections we have proposed.”

**2003**

- Institute of Medicine releases “Patient Safety: Achieving a New Standard for Care.”

## PATIENT SAFETY MOVEMENT (continued)

### 2004

The 100K *Lives Campaign* was an initiative to engage U.S. hospitals in a commitment to implement changes in care proven to improve resident care and prevent avoidable deaths. The campaign was successful and exceeded 100K lives saved! (June 2006).

### 2005

Patient Safety and Quality Improvement Act is signed, requiring the Department of Health and Human Services to establish a process for the voluntary and confidential reporting of medical errors to patient safety organizations.

TeamSTEPPS pilot curriculum was developed and extensively field tested in 19 training sessions throughout the Department of Defense hospitals and clinics. Over 440 physicians, nurses, and technicians became Instructors in 2005, with more than 5,000 participants trained by these Instructors.

 **Instructor Note:** It is important to discuss with the audience why TeamSTEPPS is so important and is not another “program” or “flavor of the week.” TeamSTEPPS allows all staff at every level to be sure the patient/resident’s safety comes first. It may not be necessary to share all the above timeline history with your audience. Instructors should use discretion and share the most relevant facts applicable to their audience.

# RESIDENT SAFETY



### Slide

### SAY:

Let's look at the various components that are designed to help support resident safety and how all of these efforts support and create a person-centered care environment for residents.

**👁️ Instructor Note:** Use the existing slide to prompt discussion on the various components of person-centered care and how resident safety contributes to this concept.

 **Instructor Note:** Within the train-the-trainer/coach supplemental instructor slides, the course agenda will be different. In essence, the course agenda for the TeamSTEPPS fundamentals course is an initial component of the train-the-trainer/coach curriculum.

### SAY:

We will be covering seven modules during the next few hours.

- **Introduction**—Overview and science of team performance beginning in aviation and migrating to health care.
- **Team Structure**—First step in implementing a teamwork system. Delineates fundamentals such as team size, membership, leadership, identification, and distribution.
- **Leadership**—Identifies key behaviors that leaders need for ensuring that teams perform effectively and attain desired outcomes. Introduce brief, huddle, and debrief skills.
- **Situation Monitoring**—To gain or maintain an accurate awareness or understanding of the situation in which the team is functioning. Results in situation awareness and ultimately a shared mental model among team members.
- **Mutual Support**—Backup behavior that allows teams to become self-correcting, distribute workload effectively, and regularly provide feedback. Introduce specific approaches to managing conflict. Each team member becomes a part of the safety net.
- **Communication**—Focus is on how to communicate effectively through standardized information exchange strategies such as SBAR, check-back, call-out, handoff, and checklists.
- **Summary—Pulling It All Together**—This module provides an opportunity for participants to review and analyze a video case study. A low-fidelity simulation is then conducted by different groups; this simulation incorporates the various teamwork skills previously introduced.



### Slide



**CUSTOMIZABLE  
CONTENT**



Slide

**TIME:**

15 minutes

**MATERIALS:**

- Magic Wand Exercise Sheet
- Tape
- Flipchart (optional)



**Instructor Note:** Direct participants to the Magic Wand exercise sheet, and give them 2 to 3 minutes to complete it. Before opening the floor to the participants, set the tone of the answers by providing an example with resident safety implications, then go around the room and ask each participant to respond in turn. As they respond, record the problems on one sheet of the easel pad and the solutions on another.

**SAY:**

If you had a “magic wand” and could make changes within your unit or the facility to improve the quality of care provided or resident safety, what actions would you take?

**DISCUSSION:**

- From part A on the exercise sheet:
  - Relative to teamwork, what problems do you have in your unit or facility that make providing safe, quality care more difficult?
- From part B on the exercise sheet:
  - What changes would you make with your “magic wand” to solve these, or to help improve the quality and safety of the care that you provide?



**Instructor Note:** If participants bring up topics peripheral to resident safety or quality, such as improved parking or salaries, prompt them with directing questions to get a relevant response:

**ASK:**

Have you ever witnessed something that you thought was a safety issue and that you believed you were unable to address yourself? Why? How would you have changed the situation if you had a magic wand?

**DO:**

After the participants have responded, wrap up the discussion.

Continued...



#### **SAY:**

In this course, we will provide you with some tools and strategies to help you actualize these changes. Changes will not occur overnight, but you can gradually make improvements to the safety of your residents and the quality of care that you provide.

 **Instructor Note:** Display the sheets with the responses around the room, and reference the "Wish List" during the course presentation. Link identified issues to the skill or technique being practiced that may mitigate the problem or accomplish the goal.

## Why Do Errors Occur?



### Slide

#### SAY:

The science of human factors recognizes that a majority of these errors still affect units that are effectively practicing teamwork. However, in effective teams, mistakes are caught, addressed, and resolved before they compromise resident safety.

**👁 Instructor Note:** The following terms are defined below.

- **Excessive professional courtesy**—giving someone of higher rank or status too much respect or deference so that it affects the level of health care they receive. May also occur among team members having higher rank or status, resulting in a hesitancy of team members to point out deficiencies in performance.
- **Halo effect**—occurs when someone else’s “great” reputation or extensive experience clouds our judgment.
- **Passenger syndrome**—Team members experience “passenger syndrome” (“just along for the ride”) when they abdicate responsibility because they believe someone else is in charge.
- **Hidden agenda**—When a team member makes suggestions or decisions on information or desires of which the remainder of the team may be unaware. An example of hidden agenda is a person’s strong desire to get off work early or avoid a procedure in which he or she is poorly trained.
- **Complacency**—When individuals and/or teams become comfortable with the most routine to the most difficult or critical tasks. Becomes a hazard when individuals and teams lose their vigilance and situation awareness.
- **High-risk phase**—a procedure or time in which a medical mishap is likely to happen (e.g., shift change).
- **Task (target) fixation**—a condition in which an individual’s and/or team’s focus on a task may impair their decisionmaking or make them oblivious to “the big picture.” It is generally precipitated by a real or perceived pressure to perform, or by workload/stress-related issues.

Continued...

## WHY DO ERRORS OCCUR? (continued)

 **Instructor Note:** The following terms are defined below.

- **Strength of an idea**—an unconscious attempt to make available evidence fit a preconceived situation. Once people get certain ideas in their heads, it can be difficult or impossible for them to alter that idea regardless of how much conflicting information is received.
- **Hazardous attitudes**—ways of thinking and viewing the world (e.g., antiauthority, impulsiveness, invulnerability, machismo, or resignation).
- **Limited English proficiency**—persons who are unable to communicate effectively in English because English is not their primary language.



## Slide

### SAY:

Public reaction to the problem of medical errors reached a critical mass during the 1999 publication of *To Err Is Human*, which concluded that medical errors cause up to 98,000 deaths annually. This report generated a demand for action that was headed by the government, the media, and the health care profession. Former President Clinton established a Quality Interagency Coordination (QuIC) Task Force to develop a coordinated Federal plan for reducing the number and severity of medical errors. Among QuIC's recommendations was the widespread adoption of human factors training, such as Crew Resource Management, for improving medical teams' performance. Their duties included the following:

- Identify causes of errors.
- Develop error reduction strategies.
- Distribute effective strategies.

### OPTIONAL DISCUSSION:

- How does this make you feel as a health care consumer?
- Does it make you think differently about the care provided in a doctor's office? Hospital? How about here in your nursing home?
- How does this inspire you to think and act differently?

### SAY:

So where are we now, more than 5 years later?

In 2005, an article published in the *Journal of the American Medical Association (JAMA)* indicated that despite the calls for a 50 percent reduction in medical errors over 5 years, “As many as 98,000 Americans still die each year because of medical errors, despite an unprecedented focus on patient safety over the last five years [...] and the death rate has not changed much.”

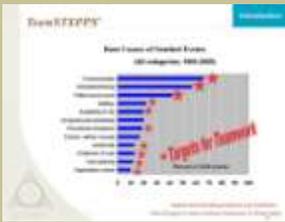
However, there were also some promising findings, according to Leape and Berwick. Reductions of certain types of error-related illnesses and deaths occurred.

According to the JAMA article, team training in Labor and Delivery has led to a 50 percent reduction in harmful outcomes in premature deliveries, such as brain damage. Computerizing prescriptions has led to an 81 percent reduction in medication errors, placing a pharmacist on the medical team has resulted in a 66–78 percent reduction of preventable adverse drug events, and implementing rapid response teams has led to a 15 percent decrease in cardiac arrests.



Slide

# TOP CONTRIBUTING FACTORS TO MEDICAL ERRORS (OPTIONAL CONTENT)



Slide

**SAY:**

Now that we're familiar with how prevalent medical error is, let's examine the causes of it. The information on the slide represents causal findings or contributing factors from significant medical errors experienced in all care settings, including nursing homes. Often these medical errors are "reportable" to the State health department and it is the responsibility of the care setting to determine its cause and contributing factors.

Of the medical errors voluntarily reported over a 10-year period, the top contributing factor has been inadequate communication. Integrating teamwork principles into daily practice can help mitigate errors.

**👁️ Instructor Note:** Another option is to create a slide that shows an understanding of medical errors or survey results in your nursing home, including trending data from the past couple of years.

**💬 OPTIONAL DISCUSSION:**

- Can you think of negative events (medical errors, deficiencies, accidents) in your nursing home that occurred because of inadequate communication?
- What would have made the situation different?
- What would you suggest to increase communication and teamwork in your nursing home?

# WHAT COMPRISES TEAM PERFORMANCE?

## SAY:

TeamSTEPPS is composed of four teachable-learnable skills: leadership, mutual support, situation monitoring, and communication; the core of the TeamSTEPPS model. The red arrows depict a two-way dynamic interplay between the four skills and the team-related outcomes. Interaction between the outcomes and skills is the basis of a team striving to deliver safe, quality care.

Encircling the four skills is the resident care team, which not only represents the resident and direct caregivers, but those who play a supportive role within the health care delivery system.

Team competencies required for a high-performing team can be grouped into the categories of Knowledge, Skills, and Attitudes (KSAs). Team-related knowledge results in a shared mental model; attitudes result in mutual trust and team orientation. Adaptability, accuracy, productivity, efficiency, and safety are the outcome of a high-performing team.

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



## Slide



### KEY POINT:

- The framework consists of four core skills: leadership, mutual support, situation monitoring, and communication.



## Slide

**SAY:**

Team members possessing strong leadership, situation monitoring, mutual support, and communication skills typically yield important team outcomes. The interrelationships are the foundation of a strong continuous improvement model: The knowledge, skills, and attitudes of teamwork will complement clinical excellence and improve resident outcomes by using feedback cycles and clearly defined tools to communicate, plan, and deliver better quality care.

- **Knowledge:** Teams that consist of team members with strong leadership, situation monitoring, mutual support, and communication capabilities yield important team outcomes like a shared awareness about what is going on with the team and progress toward its goal. Team members will also be familiar with the roles and responsibilities of their teammates.
- **Attitudes:** When you work in teams in which the members possess good leadership, situation monitoring, mutual support, and communication skills, team members are more likely to have a positive experience; you will enjoy working in teams and trust the intentions of your teammates.
- **Performance:** You'll be able to adapt to changes in the plan of care. Team members will know when and how to back up each other. You'll be more efficient in providing care; you will have a plan, and you will know who is supposed to do what, and how they are supposed to do it. Finally, your team will be safer, allowing the team to more readily identify and correct errors, if they occur.

No amount of teamwork can compensate for clinical/technical proficiency. The foundation of teamwork builds on technical proficiency and protocol compliance.

**👁️ Instructor Note:** The first four bullets are actions that should be accomplished by the change team members and future resident safety instructors who attended the train-the-trainer/coach session. The final bullet is something that should be taught to all participants who attend the fundamentals training.

### SAY:

- Recognize opportunities to improve resident safety.
- Assess your current organizational culture and existing components that support resident safety.
- Identify a teamwork improvement action plan by analyzing data and survey results.
- Design and implement an initiative to improve team-related competencies among your staff.
- Integrate TeamSTEPPS into daily practice.

High-performance teams create a safety net for your nursing home as you promote a culture of safety.



### Slide

## SUPPLEMENTAL INSTRUCTOR SLIDES



Slide



CUSTOMIZABLE  
CONTENT

 **Instructor Note:** The remaining slides in this module should be included for only the train-the-trainer/coach sessions, to provide additional background on TeamSTEPPS origin and overview of the training session for the next 2 days.

# COURSE AGENDA—TRAIN-THE-TRAINER/COACH SESSION

 **Instructor Note:** Use this slide for the train-the-trainer/coach session in addition to the Fundamentals course agenda to provide train-the-trainer/coach participants with the difference between the two courses.

The course management session is typically conducted in the implementation module. However, if you have some time at the end of day one, you can fill the remaining time with the course management session.

### SAY:

During the next few days, we will go through the fundamentals modules. In addition, we will discuss and engage in activities in support of the change management, coaching, and implementation of the TeamSTEPPS critical skills and tools.

Finally, as potential trainers and coaches, you will be given an opportunity to conduct a practice teaching session of an assigned module on the final day. At the completion of this course, you will be equipped to facilitate and train in the TeamSTEPPS curriculum. Furthermore, you will be continually supported to succeed through reinforcement, practice, networking, and feedback.

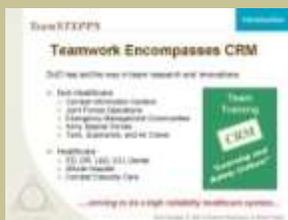


Slide



**CUSTOMIZABLE  
CONTENT**

## TEAMWORK ENCOMPASSES CRM



### Slide

#### SAY:

In the past 25 years, more than \$100 million has been invested in team performance and safety research and innovations.

Military aviation led the way toward dramatic improvement in flight safety. Commercial aviation instituted Crew Resource Management (CRM) in the late 1970s after several high-profile airliner crashes. Commercial aviation has undergone multiple iterations of CRM and has developed an extraordinary culture of safety and a track record of success: 2002, 2003, 2004—zero deaths for jet airline operations in the United States.

***CRM is currently in the “threat and error” management phase.***

The military has transitioned what was learned from the combat teams, military aviation, and other high-risk teams to the health care environment.

Since the late 1990s, a significant number of personnel practicing in military hospitals have become certified medical team instructors; and thousands of caregivers have been trained on teamwork principles.

### SAY:

To provide a background to support evidence-based team performance, it is helpful to understand the science of team performance within the military.

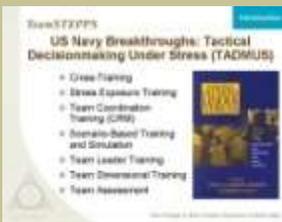
Army aviation crew coordination failures in the mid-80s contributed to 147 aviation fatalities and cost more than \$290 million. The vast majority involved highly experienced aviators.

Failures were attributed largely to crew communication, workload management, and task prioritization errors.

These failures led to the development of an exportable aircrew coordination training and evaluation system, resulting in an estimated annual saving of 15 lives and nearly \$30 million. Recent real-world data showed savings close to \$60 million per year.



### Slide



## Slide

### SAY:

A watershed moment for military team training research came in 1998, after the naval warship USS Vincennes fired inadvertently on an Iranian commercial airliner over the Persian Gulf. What resulted was a multiyear, million dollar research program to formally study teamwork and team training interventions. The program, known as Tactical Decision Making Under Stress (TADMUS), began in 1990 and led the Navy to breakthrough advances in team training.

Results from the TADMUS program have led to the following:

- Advanced understanding of team knowledge, skill, and attitude requirements.
- Reliable and valid measures of team processes and outcomes.
- New training strategies for enhancing teamwork.

The Navy's Aircrew Coordination Training Programs are based on CRM principles. The objective is to integrate the following:

- Instruction in these eight behavioral skills (i.e., mission analysis, assertiveness, decisionmaking, communication, leadership, adaptability, flexibility, and situation awareness) throughout Navy and Marine Corps aviation training.
- The goal has been effective application of these behavioral skills into operational aviation procedures, where appropriate.

# U.S. AIR FORCE CRM HISTORY

## SAY:

The Air Force Individual and Team Training Tools and Evaluation Techniques Project set new performance standards in teamwork in the U.S. Air Force Tanker Aircrews, including the following:

- Maintaining an atmosphere that facilitates teamwork.
- Backing up each other.
- Coordination.
- Group problem solving.
- Information flow.

(Air Force Armstrong Laboratory 1995–99)

 **Instructor Note:** Trainers within the Department of Defense may want to review a timeline of events.

A timeline of events:

- Mid to late 1980s AF bombers and heavy aircraft started CRM training.
- 1992 ACC (Luke/Tyndall AFB) developed AAAMP (Aircrew Attention Management /CRM Training) for F-16/F-15 and expanded to A-10/F111/F-15E.
- Before the first Combat Air Forces (CAF) CRM contract, AETC used blue suit and other contract resources for CRM training.
- 1996 ACC contracted CRM training for the entire command.
- 1997 USAF CRM Steering Committee, ACC presented a plan to combine CRM training requirements under one contract for all MAJCOMS, standardized CRM training, and saved money by combining resources/manpower.
- 1998 USAFE sole sourced CRM training.
- ACC, PACAF, USAFE, and the AETC Luke and Tyndall FTUs agreed to form the CAF CRM contract in 1998

Since inception of CRM training in U.S. Air Force, evidence has shown program effectiveness based on a steady decline in human factor–based mishaps.



Slide

## EIGHT STEPS OF CHANGE (KOTTER)



### Slide

#### SAY:

Let's be honest, change is tough. People often have a difficult time shifting to a new environment, especially in environments that require strict regulations and procedures to effectively care for residents. We will spend some time on understanding change.

Dr. John Kotter, who wrote the book *Our Iceberg Is Melting, Changing and Succeeding Under Adverse Conditions* proposes eight steps that lead to a successful change.

The first phase in implementing change includes *setting the stage*:

- **Step 1:** Create a sense of urgency. Help others see the need for change and the importance of acting immediately.
- **Step 2:** Pull together the guiding team. Make sure that a powerful group is guiding the change—one with leadership skills, credibility, communications ability, authority, analytical skills, and a sense of urgency.

The second phase in implementing change includes deciding *what to do*:

- **Step 3:** Develop the change vision and strategy. Clarify how the future will be different from the past and how you can make that future a reality.

The third phase in implementing change includes *making it happen*:

- **Step 4:** Communicate for understanding and buy-in. Ensure that as many others as possible understand and accept the vision and the strategy.
- **Step 5:** Empower others to act. Remove as many barriers as possible so that those who want to make the vision a reality can do so.
- **Step 6:** Produce short-term wins. Create some visible, unambiguous successes as soon as possible.
- **Step 7:** Don't let up. Press harder and faster after the first successes. Be relentless with instituting change after change until the vision becomes a reality.

The final phase in implementing change includes *making it stick*:

- **Step 8:** Create a new culture. Hold onto the new ways of behaving and make sure they succeed until they become a part of the very culture of the group.

### SAY:

These steps and activities form a high-level roadmap to create a culture of safety. They provide an outline for a vision and strategy. In the Change Management: How To Achieve a Culture of Safety module, we'll discuss these steps in more detail and begin to apply the Eight Steps of Change to our nursing home.

We also will focus on how to be an effective coach and integrate teamwork behaviors into the nursing home and develop an implementation plan, to include developing a team improvement action plan. Having a roadmap customized to meet the facility's current culture is paramount to the success of the TeamSTEPPS initiative.

 **Instructor Note:** Depending on the implementation plan, some organizations may elect to have designated instructors teach TeamSTEPPS to staff, with selected coaches within different work areas in your facility.



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## REFERENCES

- Adams, K. A., G. F. Goodwin, C. A. Searcy, et al. "Development of a Performance Model of the Medical Education Process." Technical report commissioned by the Association of American Medical Colleges. Washington, DC, American Institutes for Research, (2001).
- Agency for Healthcare Research and Quality. "Doing What Counts for Patient Safety: Federal Actions to Reduce Medical Errors and Their Impact." Rockville, MD, Author, (2000).
- Baker, D.P, R. Day, E. Salas. "Teamwork as an Essential Component of High-Reliability Organizations". *Health Services Research*. 41:4p2, 1576-1598, (2006).
- Baker, D. P., S. Gustafson, J. M. Beaubien, E. Salas, and P. Barach. *Medical Teamwork and Patient Safety: The Evidence-Based Relation*. Washington, DC, American Institutes for Research, (2003).
- Amalberti, R., Y. Auroy, D. Berwick, P. Barach. "Five System Barriers to Achieving Ultrasafe Health Care". *Annals of Internal Medicine*, 142: 9, pgs 756-765, (2005).
- Barach, P. and M. Weingart. "Trauma Team Performance." *Trauma: Resuscitation, Anesthesia, Surgery, & Critical Care*. Ed. W. Wilson, C. Grande, and D. Hoyt. New York, Dekker, Inc. (2004).
- "Beyond Blame: Ob-Gyns Investigating Model Reforms On Patient Safety," ACOG News Release, [www.acog.org/from\\_home/publications/press\\_releases/nr05-03-04.cfm](http://www.acog.org/from_home/publications/press_releases/nr05-03-04.cfm)
- Cannon-Bowers, J. A., S. I. Tannenbaum, E. Salas, et al. "Defining Competencies and Establishing Team Training Requirements." *Team Effectiveness and Decision-Making in Organizations*. Ed. R. A. Guzzo, E. Salas and Associates. San Francisco, Jossey-Bass (1995) 333.
- DiMeglio, K., S. Lucas, C. Padula, et. al. "Group Cohesion and Nurse Satisfaction". *Journal of Nursing Administration*. 35:3 pgs. 110-120, (2005).
- Dunnington, G. L. and R. G. Williams. "Addressing the New Competencies for Residents' Surgical Training." *Academic Medicine*, 78: 14, (2003).

Continued...

## REFERENCES (continued)

- Garza, M. and J. S. Piver, "Can Aviation Safety Methods Cut Obstetric Errors?" *OB/GYN Malpractice Prevention* 11: 8 (August 2004), 57-64.
- Horn SD, Sharkey SS, Hudak S, et al. "Pressure Ulcer Prevention in Long-term Care Facilities: A pilot Study Implementing Standardized Nurse Aide Documentation and Feedback Reports." *Advances in Skin & Wound Care* 23(3):120-131.
- Klein, G. and L. G. Pierce. "Adaptive Teams." Proceedings of the 6th ICCRTS Collaboration in the Information Age. Track 4: C2 Decision-Making and Cognitive Analysis. (2001).
- Klimoski, R. and S. Mohammed. "Team Mental Model: Construct or Metaphor?" *Journal of Management*, 20: 403 (1994).
- Kohn, L. T., J. M. Corrigan, and M. S. Donaldson. *To Err Is Human*. Washington, DC, National Academy Press (1999).
- Kotter, J. and H. Rathgeber. *Our Iceberg is Melting: Changing and Succeeding Under Adverse Conditions*. New York: St. Martin's Press. (2006). See also: <http://ouricebergismelting.com>
- Kozlowski, S. W., S. M. Gully, E. R. Nason, et al. "Developing Adaptive Teams: A Theory of Compilation and Performance Across Levels and Time." *The Changing Nature of Performance: Implications for Staffing, Motivation, and Development*. Ed. D. R. Ilgen and E. D. Pulakos. San Francisco, Jossey-Bass (1999) 240.
- Leape, L. L. and D. M. Berwick. "Five Years After *To Err Is Human*: What Have We Learned?" *Journal of the American Medical Association*, 293: 2384 – 2390 (2005).
- Mann S., R. Marcus, B. Sachs. "Lessons from the cockpit: How team training can reduce errors on L&D. (Grand Rounds) *Contemporary Ob/Gyn* v51 i1:34(8). (January 2006).
- Mathieu, J. E., T. S. Heffner, G. F. Goodwin et al. "The Influence of Shared Mental Models on Team Process and Performance." *Journal of Applied Psychology*, 85: 273 (2000).

Continued...

## REFERENCES (continued)

- McIntyre, R. M. and E. Salas. "Measuring and Managing for Team Performance: Emerging Principles from Complex Environments." *Team Effectiveness and Decision Making in Organizations*. Ed. R. A. Guzzo, E. Salas and Associates. San Francisco, Jossey-Bass (1995) 9.
- Morgan, B. B., A. S. Glickman, E. A. Woodward, et al. "Measurement of Team Behaviors in a Navy Environment." Tech. Report No. NTSC TR-86-014. Orlando, FL, Naval Training Systems Center (1986).
- Morey, J. C., Simon, R. J., Jay, G. D., Wears, R. L., Salisbury, M., Dukes, K. A., and Berns, S. D. "Error Reduction and Performance Improvement in the Emergency Department through Formal Teamwork Training: Evaluation Results of the MedTeams Project. *Health Services Research* 37 (6), 1553-1581. (2002)
- Morey, J. C., R. Simon, G. D. Jay, and M. M. A. Rice. "A Transition From Aviation Crew Resource Management to Hospital Emergency Departments: The MedTeams Story." R. S. Jensen. *Proceedings of the 12th International Symposium on Aviation Psychology*, 1-7. Dayton, OH, Wright State University Press (14 April 2003).
- Pisano, G.P., R.M.J. Bohmer, A.C. Edmondson, "Organizational Differences in Rates of Learning: Evidence from the Adoption of Minimally Invasive Cardiac Surgery". *Management Science*. 47:6 pgs 752-768. (2001).
- Porter, C. O. L. H., J. R. Hollenbeck, D. R. Ilgen, et al. "Backup Behavior in Teams: The Role of Personality and Legitimacy of Need." *Journal of Applied Psychology*, 88: 391 (2003).
- Pronovost, P., S. Berenholtz, T. Dorman, et. al. "Improving Communication in the ICU Using Daily Goals". *Journal of Critical Care*, 18:2, pgs. 71-75. (2003).
- Rivers, R. M., D. Swain, and B. Nixon, "Using Aviation Safety Measures to Enhance Patient Outcomes." *AORN Journal*, 77: 158 (223).
- Roberts, K.H. "Managing high reliability organizations". *California Management Review*. 32:4 pp. 101-114. (1990).

Continued...

## REFERENCES (continued)

- Salas, E., C. A. Bowers, and J. A. Cannon-Bowers. "Military Team Research: 10 Years of Progress." *Military Psychology*, 7: 55 (1995).
- Salas, E., C. S. Burke, and K. C. Stagl. "Developing Teams and Team Leaders: Strategies and Principles." *Leader Development for Transforming Organizations*. Ed. R. G. Demaree, S. J. Zaccaro, and S. M. Halpin: Mahwah, NJ, Lawrence Erlbaum Associates, Inc. (2004).
- Salas, E., T. L. Dickinson, S. A. Converse, et al. "Toward an Understanding of Team Performance and Training." *Teams: Their Training and Performance*. Ed. R. W. Sweze and E. Salas. Norwood, NJ, Ablex, 1192, 3.
- Sexton, J.B., "Teamwork Climate and Postoperative Sepsis in the Surgical Operating Room". *Association for Psychological Science Symposium*. New York, (27 May 2006).
- Shapiro, M., et. al. "Simulation based teamwork training for emergency department staff: Does it improve clinical team performance when added to an existing didactic teamwork curriculum?". *Quality & Safety in Healthcare* 13, 417,421. (2004).
- Sims, D. E., E. Salas, and S. C. Burke. "Is There a 'Big Five' in Teamwork?" 2004. Chicago, IL. 19th Annual Meeting of the Society for Industrial and Organizational Psychology. Chicago, IL (2004) 4.
- Stout, R. J., J. A. Cannon-Bowers, and E. Salas. "The Role of Shared Mental Models in Developing Team Situational Awareness: Implications for Team Training." *Training Resource Journal*, 2: 85 (1996).