

CALS

Comprehensive Advanced
Life Support Program

(Rural Emergency Team Training)

CALS Program
www.calsprogram.org

CALS

A Program
Perspective

What is CALS?

- Educational program in ALS
- Includes concepts of trauma, OB, cardiac, airway management, pediatrics, etc.
- Developed for the entire emergency TEAM including RN's, PA's, NP's, MD's, EMT-Ps, and other paramedical personnel.

Primary Focus of CALS

- Train medical personnel in the use of a CALS Universal algorithm and the TEAM approach
- Training targeted for teams of health care professionals who provide emergency and critical care.
- Specifically designed for rural providers who must treat a broad range of medical/traumatic emergencies.

Delivery of Rural Emergency Care

- Life or Death in rural communities depends on a small team of providers.
- Customary medical training does not prepare providers for the demands of rural practice.
- Emergency/Critical Care in Urban settings have access to subspecialty trained personnel with latest equipment.

Delivery of Rural Emergency Care

- Advanced life support courses – fall short
- Medical-legal expectations
- Rural - lack of state-of-the-art equipment
- Rural - lack backup staff

NRHA (National Rural Health Association) EMS Agenda for the Future - Rural Public Access

- “The further one is from a large emergency medical facility – the more one needs a high level of local emergency capacity and the less likely it is that the emergency capability will be available”.

Rural Emergency Paradox

- NRHA EMS Agenda: On a clinical bases, a rural emergency medical paradox results
- Advanced Life Support (ALS) Services are difficult to establish and maintain in systems that experience insufficient volume to enable advanced providers to be paid and to retain their skills.

Rural Emergency Care Suffers

due to:

- Lack of ongoing education in advanced emergency care.
- Limited availability of appropriate Rural ALS training.
- Lack of sufficient volume for providers to retain emergency knowledge and skills.

Rural Emergency Care Suffers

due to (cont):

- The high cost of ALS training – multiple ALS Courses.
- Inadequate patient volume to pay for emergency training based on a fee-for-service revenue system.
- Lack of appropriate equipment.

Results in Rural Communities

- Disparity between rural and urban – especially evident in trauma care
- Difficulty of recruiting medical personnel to rural communities
- Increased provider burnout
- Mounting medical-legal risks

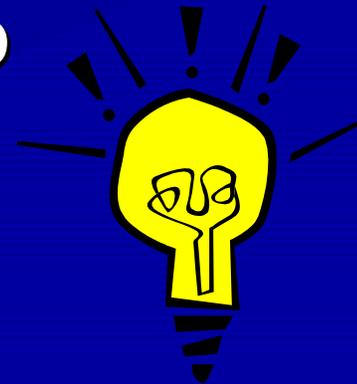
The Need



- Provide better patient care
- Solve the feelings of being inadequate
- Address medical-legal concerns
- Help with professional burn-out

Concept of CALS

- Concept of a single ALS course for rural providers
- Couldn't be done
- Had to be done
- January 1993 - CALS working group formed
- Thousands of hours
- 1st class Sept 1996
- Grant money
- \$2.5 million - pro bono



CALS Mission Statement

“The primary mission of CALS is to improve patient care by enhancing the provider’s established scope of practice through advanced education”.

Goals of the CALS Program

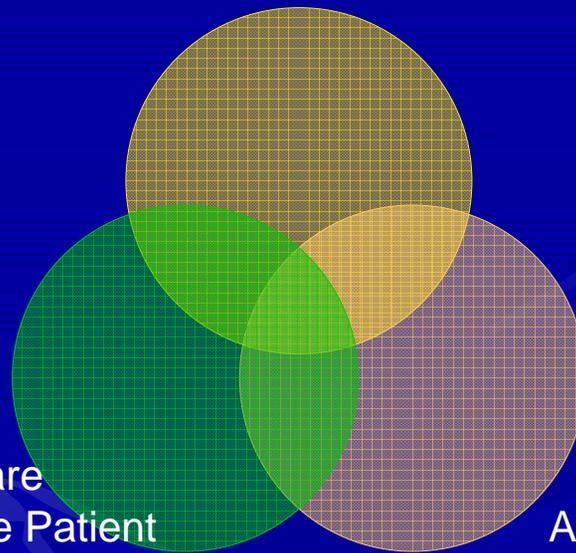
- Provide an informational resource and a rapid retrieval system of algorithms and Treatment plans
- Provide a means for ALS providers to update and maintain knowledge and skills

CALS Resuscitation Triangle

Competent Clinical Skills & Knowledge

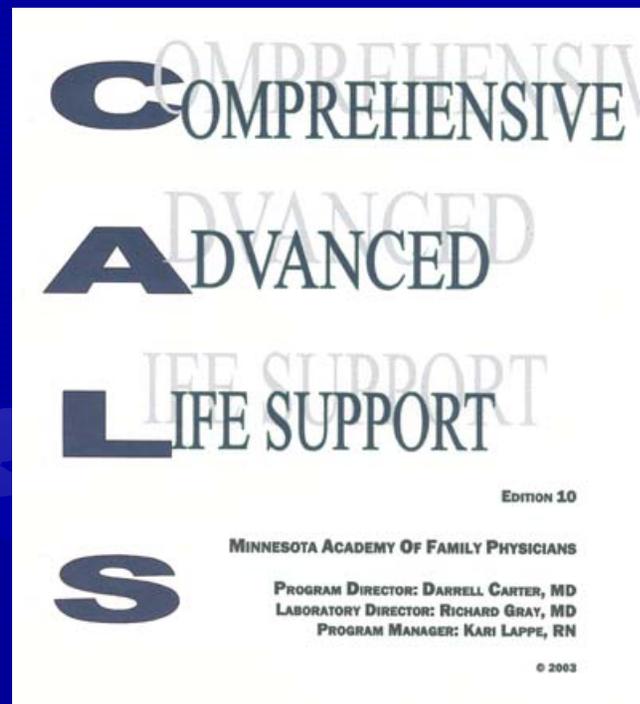
Patient Centered Care
(Focus on the needs of the Patient
Not on a specific Diagnosis)

Appropriate Equipment



Components of the CALS Course

- CALS Provider Manual and course



CALS 2-Day Interactive Provider Course

- Conducted in the rural settings in the local hospital or other facilities.
- Taught to teams of rural providers.
- 24 providers per course.
- Interactive scenario based.

Components of the CALS Course

- CALS Scenario-based Classroom Course

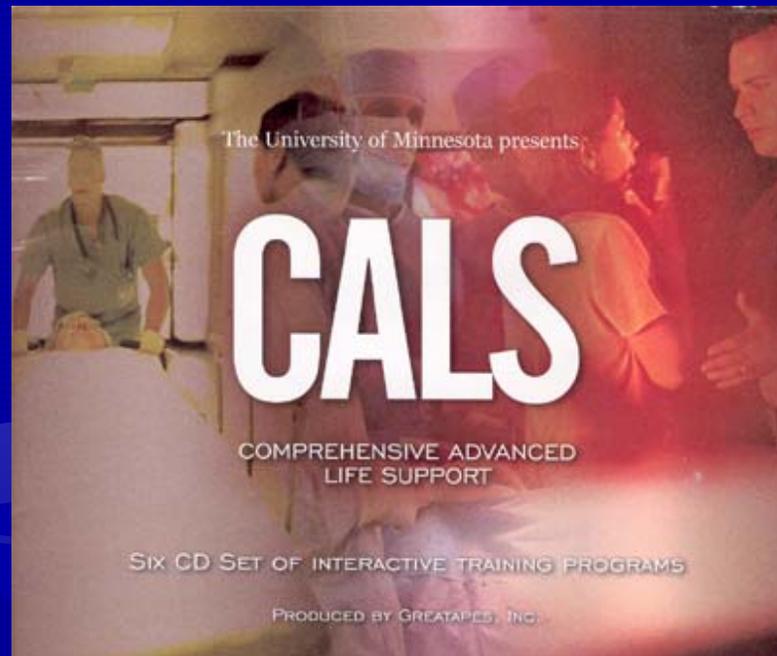


Components of the CALS Course

- CALS Instructor Manual
- CALS Instructor Course

Components of the CALS Course

- CALS Emergency Procedures CD



Components of the CALS Course

- Benchmark Skills Lab & Lab Manual



CALS Essential Equipment List

(On CALS Web Site)

- List of essential emergency equipment useful in a rural health care facility
- Cost effective equipment
- Airway cart – designed for rural hospitals

Essential Aspects Unique to CALS

- Team development
- CALS Universal Approach to ALS
- Advanced airway skills
- Rapid Sequence Intubation (RSI)

Essential Aspects Unique to CALS

- Management of the difficult airway
- Additional topics not covered in current ALS courses
- Instruction in the proper emergency equipment for rural hospitals

Distribution of CALS Education

- In Minnesota – over 3500 providers have attended the 173 CALS Provider Courses (35% physicians, 50% nurses, 8% PA/NP, others include EMTP, medical students).
- Hundreds of CALS Benchmark Skills Labs conducted in MN.

Distribution of CALS Education

(cont)

- Training of the US Department of State Embassy Medical Personnel – 14 courses (640 providers)
- US State Department has developed a standardized emergency care pack for all of the US embassies based on the CALS equipment list.

Distribution of CALS Education

(cont)

- Wisconsin CALS Chapter development – 8 courses (169 providers),
- Developed a CALS Lab -4 labs conducted to date.

Distribution of CALS Education

(cont)

- Missouri CALS development – 16 providers trained in Minnesota
- First provider and Instructor class held in Missouri - June 08

Distribution of CALS Education

(cont)

- Texas held first provider and instructor course in January of 2008
- Texas held second provider course
June 08
 - Received flex grant funds to develop program

Distribution of CALS Education

(Cont)

- Early developmental work being done in Canada and Alaska.
- Afri-CALS Program – working with the University in Nairobi, Kenya



Research
on
the
Value
of CALS
Training

Results of CALS Training in Rural Minnesota

- Survey found increased ability to manage airway
- Use of RSI has become common place
- Improved team approach to emergency and critical care
- Increased the efficiency of handling critical trauma patients

Results of CALS Training in MN

1. Provider comfort-levels in handling emergencies has improved.

- * 2006 CALS Course participant survey showed increased confidence in intubation after taking the CALS Course.
- * Intubations are now being done by the rural providers after CALS training; significant change for these providers compared to before the training.

CALS Training Results in MN

(cont)

2. Enhanced quality of airway management in rural communities. Lab survey in 2000.

- * 99% success rate in endotracheal intubation
- * 90% success rate in the first Advanced Airway technique attempted (skills rarely used but life saving when needed).
- * Improved rural airway management observed by transport teams and referral centers.

CALS Training Results in MN

(cont)

3. TEAM-based approach to the handling of emergencies helps to facilitate patient care.

- 2003 Critical Access Hospital Site Study found CALS Training in one hospital:
 - Helped everyone to anticipate and prepare for a patient's needs prior to arrival and thus improved the speed and efficiency of the patient's treatment.
 - Increased the speed and efficiency of transferring of critically ill/injured patients to higher levels of care (Golden Hour).

CALS Training Results in MN

(cont)

4. Based on a CAH Site Study, CALS training provides a rural-based standard for assessing the medical equipment needs of small rural hospitals and clinics.

Minnesota Trauma System

- Minnesota recently approved a State Trauma System
- CALS is accepted (along with ATLS) as MD or RN training for level III or IV designation and has greatly increased the demand for CALS

MN Trauma System

Statement on CALS Training

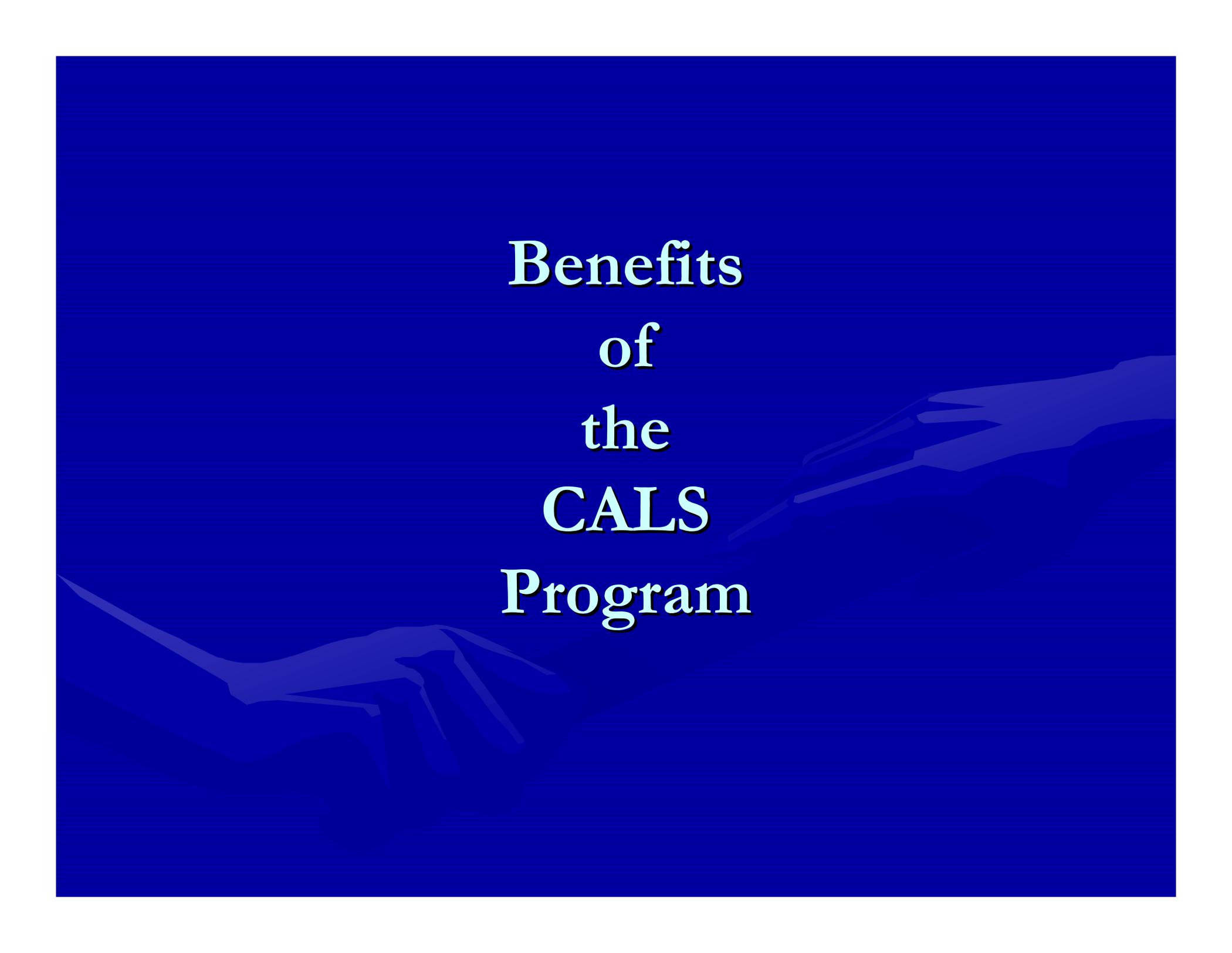
(Rural Hospital Trauma Designation)

“Hospitals that have hosted or successfully completed a CALS course did have a significant head-start in preparation to meet most of the Level III & IV trauma facility criteria. Specifically, education, equipment, treatment, and transfer guidelines were largely in place.

The CALS philosophy of rapid assessment, stabilization, and definitive care decisions mesh nicely with the optimal care of the trauma patients.”

Acceptance of CALS Training

- CALS is the Emergency Care Training Course for the US Department of State for the Embassy Medical Personnel.
- Accepted in Wisconsin for trauma training in level IV centers
- Accepted in Minnesota for trauma training for level III and IV Centers.
- Accepted in many rural hospitals in place of ACLS training.



**Benefits
of
the
CALs
Program**

Benefits of CALS

- CALS is designed for rural healthcare providers



Benefits of CALS

- CALS is designed for the specific needs of rural but adaptable to metropolitan arenas Two Twin City hospitals have sent their ED staff to CALS Courses.



Benefits of CALS

- CALS is one course that covers concepts of many of the other advanced life support courses



Benefits of CALS

- CALS emphasizes teamwork in a team training environment



Benefits of CALS

- CALS provides a favorable ratio of students to instructors for optimal student learning



Benefits of CALS

CALS focus is the Universal
Approach to emergency care of rural
patients

CALS Universal Algorithm

CALS UNIVERSAL APPROACH FOR CRITICAL PATIENT CARE			
Steps	Patient approach	Intervention	
Step 1	Notification of Patient Arrival	Alert Team/Appropriate Protocols /Consider resources	
Step 2	Immediate Control Immobilization	Restrain/ Immobilize Adequate lighting Appropriate work surface Receive EMS report	
Step 3 Team leader ↓ Simultaneous Actions ↑ Team members	Initial Survey '10 Seconds of Silence' Assess life threats Airway inadequate Breathing inadequate Circulation inadequate Disability/LOC/Defib	Immediate transfer? Treat life threats Correct problems Control bleeding/Defib IV access/ Replace volume/ AVPU/GCS/DONT	A -Alert D-Dextrose V-Voice O-Oxygen P-Pain N-Narcan U-Unres T-Thiamine S=Signs/symptoms A=Allergy M=Meds P=Past med history L=Last meal E=Events
	Assist Team Leader	Apply Oxygen Gain exposure Obtain Vitals/SAO ₂ ECG monitor IV access /Medications Obtain labs and x-rays Urinary catheter Dextrose evaluation Other	
Step 4	Preliminary Impression →	Focused evaluation: ↓ Focused physical exam Diagnostic tests Diagnostic procedures	Focused Pathways as needed OB Neonatal Respiratory Cardiovascular Trauma Gastrointestinal/ Abdominal Altered LOC/ unknown
Step 5	Working Diagnosis/Ongoing Care/Disposition No patient response or patient deteriorates return to initial survey	Refer to diagnostic treatment portals Continue to reassess Consultation Stabilization Disposition →	Admit Transfer Discharge
Step 6	Team Process Review	Team input/assess need for debriefing	

Benefits of CALS

- CALS identifies equipment essential for resuscitation



Benefits of CALS

- CALS includes all age groups from birth to geriatrics.



Benefits of CALS

- CALS offers both classroom and lab components



Benefits of CALS

Teaches both horizontal and vertical communication and thus helps to facilitate the patient's coordination of care.

Benefits of CALS

Teaches how to get the right patient to the right place in the right period of time. This has a direct impact on patient care and patient outcome.

**Would
CALIS
be beneficial
in
other states?**

Is CALS Type Of Training Needed In Your Hospital ?

- Are rural providers and team members responsible for the initial stabilization and care of seriously ill or injured patients without the direct help from subspecialists?
- Do you now have an adequate emergency training program for rural providers?

Is CALS Type Of Training Needed In Your Hospital ?

- What level of skills and knowledge training is needed or desirable for the rural provider teams?
- Can an atmosphere of cooperation be developed among the involved disciplines?
- Is there interest and funding available to bring CALS to another state?

CALS Training Program Components For Rural Emergency Providers

- Teaches adequate airway management knowledge and skills.
- Teaches emergency training for the whole emergency TEAM – so the team members work together efficiently.
- Teaches a Universal Approach to critically ill/injured patients so an organized pattern of care is provided.
- Teaches the skills needed for the use of emergency equipment, especially the use of advanced airway equipment.

Conclusion about Rural Emergency Care Training

- It is possible to create a Rural Emergency Team.
- It is possible to prepare for the unknown.
- A Rural Health Care Team can stabilize most medical/trauma emergencies.

Conclusion about Rural Emergency Care Training

- Rural Health Care Teams can practice state-of-the-art emergency care with the use of basic emergency equipment
- Rural Health Care Teams can master needed skills and work in an organized fashion as a team.

Conclusions about the CALS Program

- CALS training is helping to make some order out of the chaos and nightmares of rural emergency care.
- CALS is positively impacting the rural emergency care in Minnesota.
- CALS MD “Physicians in Minnesota consider CALS the gold standard for rural emergency medical care”.

CALS in your state

Why or Why not?

What reactions, concerns, observations, or other comments do you have about what you have heard about the CALS Program?

Does CALS training sound to have value your state ?

CALS Contact Information

- Darrell L. Carter MD, Program Director
dlcarter@mchsi.com or phone 320-564-2511
- Gordon Rockswold MD, Lab Director
cals@calsprogram.org or phone 952-807-1696
- Kari Lappe RN, Program Manager
kdlappe@umn.edu or phone 612-624-5901
- Carol Peterson RN, Program Coordinator
cap@dfti.net or phone 612-624-8833
- Norma Heuer RN, Program Coordinator
heuer010@umn.edu or phone 612-626-7734
- Katharine Horowitz, Program Assistant
cals@calsprogram.org or phone 800-913-6409

CALS Website

www.calsprogram.org

National CALS website with links to
state CALS Chapters.