Northern Arizona Regional Emergency Medical Service & Trauma System Plan 2004-2005

FINAL DOCUMENT

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ACKNOWLEDGEMENTS

Many people and agencies have contributed to EMS and Trauma System planning and development in the State of Arizona. Beginning in the 1970's with prehospital system elements and continuing today with trauma system elements, stakeholders from across the state, representing public, non profit, and private prehospital and hospital agencies, and the public at large, have contributed thousands of hours of time toward the ongoing planning, development and incremental implementation of a comprehensive EMS and Trauma system. It is through their efforts that a system of care for emergent patients continues to evolve in Arizona.

The NAEMS Region supports broad-based stakeholder involvement in regional system development. Many people and agencies in the region have contributed to the Northern Region's initial Comprehensive EMS and Trauma System Plan development process.
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Northern Arizona Region Receiving and Stabilizing Trauma Facilities:	City	State
Chinle Hospital	Chinle	AZ
Flagstaff Medical Center	Flagstaff	AZ
Fort Defiance Indian Hospital	Fort Defiance	AZ
Grand Canyon Clinic	Grand Canyon	AZ
Hopi Health Care Center	Polacca	AZ
Inscription House	Shonto	AZ
Kayenta Health Care Center	Kayenta	AZ
Navapache Regional Medical Center	Show Low	AZ
Page Hospital	Page	AZ
Sage Memorial Hospital	Ganado	AZ
Sedona Medical Center	Sedona	AZ
Supai Clinic	Supai / Grand Canyon	AZ
Tuba City IHS	Tuba City	AZ
Verde Valley Medical Center	Cottonwood	AZ
White Mountain Regional Medical Center	Springerville	AZ

Whiteriver Indian Health Services Hospital	Whiteriver	AZ
Williams Health Care Center	Williams	AZ
Winslow IHS Hospital	Winslow	AZ
Winslow Memorial Hospital	Winslow	AZ
Yavapai Regional Medical Center	Prescott	AZ

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ARIZONA EMS & TRAUMA SYSTEM VISION & VALUES

VISION

The vision for the Arizona EMS and Trauma System is a statewide system of high quality, cost effective, emergency medical services and trauma care for all adult and pediatric residents and visitors in the state, and in Indian Nations within the state boundaries. The system will target the prevention of unnecessary death and disability from emergent health problems and improve and enhance the delivery of emergency medical and trauma services. To ensure this capability, an inclusive statewide network of emergency medical services providers, ambulance services, prehospital agencies, state designated trauma centers, hospitals, and other emergency receiving health care institutions will be in place. The system will be formally organized and integrated and will include the elements of a comprehensive system including injury prevention and control, public information and education, prehospital services including patient care resources, hospital patient care resources including medical rehabilitation, and ongoing system evaluation and improvement processes. This system of care will be statewide in design and state and regionally implemented. The system will be led and monitored by the Department of Health Services with ongoing input from the EMS and trauma community, inclusive of EMS providers, ambulance services, prehospital agencies, trauma centers, hospitals, other emergency receiving health care institutions, elected officials, and other system stakeholders.

VALUES

Regional Values:

The Northern Arizona Region values the involvement of stakeholders from across the health care continuum, the public, and Indian Nations. We believe broad based involvement and collaboration are paramount to the success of a Northern Region EMS and Trauma System as part of a statewide system.

INTRODUCTION

HISTORY OF EMERGENCY MEDICAL SERVICES AND TRAUMA SYSTEM DEVELOPMENT IN THE NORTHERN REGION

Funding to build an EMS system was first made available in the late 1970's from Federal Department of Transportation monies. Funding from this source was discontinued in 1983 due to Federal budget cuts. Starting in 1983 EMS systems funding was taken over by the state of Arizona. Projects paid for by this funding included provider contracts, poison control, ambulance development, regional coordination and special projects. These projects were overseen by ADHS under a contract from the Northern Arizona Council of Government (NACOG). In 1989 funding was cut, leaving EMS providers in northern Arizona without direction from a regional source.

At this time Northern Arizona Emergency Medical Services Inc. (NAEMS) was founded to assist providers in the development of a regional system. NAEMS started its work with no funding, volunteer work from EMS providers and northern area base hospitals, and the support of the regional ADHS/BEMS office. The goal was to continue improvement of the EMS system, help smaller providers, and have a unified voice at the state level. Today, NAEMS receives funding from ADHS to provide grants for education, equipment and supplies. NAEMS operates with a board of directors and a steering committee. Membership is open to all EMS agencies in the northern region having an interest in participating.

Physical description of the base hospitals boundaries and medical

Chinle Hospital

No information has been submitted at this time. Chinle Hospital is not a base station.

Flagstaff Medical Center

1. The EMS region served by FMC encompasses more than 20,000 square miles. The **primary** service area, that is, the area in which patients are treated in the field and then transported to FMC, covers the Flagstaff city limits as well as much of Coconino County to include the communities of Baderville, Valle, Kachina Village, Forest Highlands, Mountainaire, Mormon Lake, Pinewood, Doney Park, Timberline, Parks, Williams, Ash Fork, Seligman, and the areas in between. The **secondary** hospital service area, that is, hospitals which receive patients who are treated in the field by prehospital personnel who receive medical direction from FMC's base station, includes the communities of Page (Page Hospital), Winslow and Holbrook (Winslow Memorial and Winslow PHS), Grand Canyon and Tusayan (the Grand Canyon Clinic), and parts of the reservation served by Keams Canyon Hospital and Sage Memorial Hospital.

2. Geopolitical boundaries and issues for trauma care:
Located 57 miles to the east is a Level III community hospital of 30 beds.
Located 135 miles north is a Level III community hospital of 25 beds.
Located 130 and 135 miles northeast are the reservation hospitals of 17and 45 beds, both Level III facilities. Located 75 miles north is a clinic which often receives trauma patients for stabilization prior to transport. It does not have inpatient facilities.
Each of the above facilities have contracts with FMC to act as their base station.
Located 83 miles north is a Level III facility on the reservation. This hospital does not contract with FMC and does not currently have Advanced Life Support prehospital

care. Issues affecting trauma care: Transport issues, remote locations, multi-surgical specialties not available, lack of 24 hour physician staffing in some Emergency Departments, hospital affiliations which affect referral/transport of patients, ie. Indian Health Service, private ownership.

3. Authority for EMS: The Arizona Department of health Services (ADHS) regulates EMS in the state through the Bureau of EMS (BEMS). Flagstaff Medical Center is a member of the Northern Arizona EMS (NAEMS) Council, which represents the northern region to the state office.

4. EMS governing body, including description of medical leadership:
The legislature funds the Arizona Department of Health Services. The Bureau of EMS is mandated to oversee EMS activities in Arizona. There is a part-time physician who contracts as Medical Director. The BEMS and Medical Director receive advice from three advisory bodies: 1) Medical Direction Commission which is composed of physicians, 2) EMS Council which is composed of EMS providers, 3) State Trauma Advisory Board. Base hospitals are required to have a physician who serves as administrative medical director and can have an RN/NP/CEP who functions as the department manager. FMC Base Station is a member of a Regional Council which represents its interests/concerns to the BEMS.

5. A 911 system is present in the community.

6. EMS personnel are dispatched to the scene of an injury by:

[X] 911
[ ] direct call to agency
[ ] police
[ ] fire
[ ] other_____

7. Agencies that are dispatched to injury scene: Fire, EMS, law enforcement.

8. EMS providers are (check all that apply):

[X] volunteer,
[X] paid,
[X] public -agency Fire, police, Department of Public Services
[X] private

9. Levels of EMS response available in FMC base hospital boundaries:

[X] EMT-B

[X] IEMT-Q
[X] Paramedic.

10. Hospital's participation in the EMS region, including a description of participation in CQI activities for prehospital personnel:

FMC funds the Prehospital Care (PHC) department which serves as a Base Station for 18 agencies in northern Arizona. The department has a medical director, a full-time manager and a full-time assistant. The department provides on-line, off-line and administrative medical direction to ALS, ACLS, and EMT-D medics employed by the contract agencies. The PHC department is represented on the NAEMS Council by the manager. The manager and assistant also participate at the state level, serving on the PMD Committee, Education Committee, and the EMS Council.

The department audits all written field care charts and tapes to ensure that performance standards are met and sends review comments to individual medics. Continuing education is a major focus of the PHC department: Advanced airway skills labs are provided 2-3 times per year, monthly run reviews are held in Flagstaff, and each of the outlying agencies are visited a minimum of once each year for continuing education and run reviews specific to their needs. Quality improvement is an ongoing process. The "Unstable Trauma Patient" has been one of the aspects of prehospital care which is presently being audited. Results are reported to the medics/agencies quarterly, with education directed toward improving care.

11. FMC's participation in the regional disaster plan:

FMC has an Internal and External Disaster Plan. They are integrated with the city, county, and state plans. Drills are held 2-3 times per year and include full scale participation from all agencies and transportation of victims from the scene via ground and air to the ED and other areas of the hospital as specified in the disaster plan.

Fort Defiance Indian Hospital

1. The EMS region served by Fort Defiance Indian Hospital (FDIH) covers the southern portion of the Navajo nation. The primary area includes the communities of Ganado, Tohatchi, Sanders, Chinle, and east towards Gallup, New Mexico, including the roads and open country between the communities. The secondary area can cover other areas of the Navajo nation lands dependent on need.

2. Geopolitical boundaries and issues for trauma care:

Located 175 miles to the east is a Level I trauma center, this is in New Mexico. Located 175 miles to the west is a Level 2 trauma center. Located 80miles to the northwest is a community hospital. Located 25 miles to the southeast is a community

hospital. Located 25 miles to the southeast is a second community hospital. Issues affecting trauma care: Lengthy transport times, remote locations, lack of multi-surgical specialties.

3. Authority for EMS:
FDIH is a base station with authority and regulation through the state of New Mexico. The prehospital personnel from this area work under New Mexico certifications.

4. EMS governing body, including description of medical leadership: Leadership comes from New Mexico. There is a physician who serves as medical director for FDIH.

5. A 9-1-1 system is present in the community.

6. EMS personnel are dispatched to the scene of an injury by 9-1-1, direct calls to agency, and police.

7. Agencies that are dispatched to the injury scene: fire, EMS, law enforcement.

8. EMS providers are (check all that apply): [X] volunteer, [X]paid, [X] public agency, [X] private.

9. Levels of EMS response available in FDIH hospital boundaries: [X] EMT, [X] IEMT, [X] paramedic.

10. Hospital's participation in the EMS region, including a description of participation in CQI activities for prehospital personnel:
FDIH funds an EMS medical director for the base station. The base station provides on-line, off-line, and administrative medical control for the medics in the area. The medical director performs chart review to ensure that performance standards are met. Continuing education is provided monthly at run reviews. Education is directed at improving care. Clinical time for airway management is provided through the surgical services department.

11. FDIH participation in the regional disaster plan:
FDIH has an internal and external disaster plan. This plan coordinates and integrates with the tribal, city, county, and state plan. An area wide drill is conducted at least once a year. EMS, fire and law enforcement are included in the area wide drill.

Grand Canyon Clinic

1. The EMS region served by the Grand Canyon Clinic is inclusive of the Grand Canyon National Park boundaries. The secondary area includes the town of Tusayan and surrounding area.

2. Geopolitical boundaries and issues for trauma care:
Located 75 miles to the southeast is a level 2 trauma center. Trauma care issues are lengthy transport times, lack of specialty services, remote locations and difficult extrications.

3. Authority for EMS: ADHS regulates EMS in the state through the Bureau of EMS. Grand Canyon Clinic is operated under Northern Arizona Healthcare.

4. EMS governing body, including description of medical leadership:
See the description under Flagstaff Medical Center.

5. A 9-1-1 system is present in the service area.

6. EMS personnel are dispatched to an injury scene by 9-1-1.

7. Agencies that are dispatched are: fire, EMS, law enforcement, park service.

8. EMS providers are (check all that apply): [X] volunteer, [X]paid, [X] public agency, [X] private.

9. Levels of EMS response available in the Grand Canyon area: [X] EMT, [X] IEMT-Q, [X] paramedic.

10. Participation in the EMS region, including a description of participation in CQI activities for prehospital personnel:
FMC prehospital care department provides continuing education, CQI indicators, and chart review for the prehospital personnel at the Grand Canyon. See full description under Flagstaff Medical Center.

11. Grand Canyon Clinic's participation in the regional disaster plan:
Grand Canyon Clinic has both internal and external disaster plans. They are integrated with the park service, city, county and state plans. Drills are held 1-2 times a year. All area agencies participate in the drills.

Hopi Health Care

No information is supplied at this time. Hopi Health Care is not a base station.

Inscription House Clinic

Inscription House uses Tuba City Indian Health Services as resource for EMS/ prehospital issues. No other information has been supplied. Inscription House Clinic is not a base station.

Kayenta Health Care Center

No information is supplied at this time. Kayenta Health Care Center is not a base station.

Navapache Regional Medical Center

1. The EMS region served by the Navapache Regional Medical Center (NRMC), base hospital covers over 8044 square miles. The primary service area is the area covering most of the northern part of Navajo and Apache Counties. Communities in which patients are treated in the field and are transported to NRMC include Heber/ Overgaard, Snowflake, Taylor, Clay Springs, Pinedale, Linden, Show Low, Lakeside, Pinetop, White Mountains Lakes, Vernon, Concho, and Saint Johns and the areas in between. Secondary hospital services areas, which receive patients who are treated in the field by prehospital personnel who receive medical direction from NRMC's base station include: White Mountain Community Hospital, Sage Memorial Hospital, Gallup Indian Medical Center, Heroboth, McKinley Christian Hospital, (Gallup, New Mexico), and Zuni Indian Medical Center.

2. Geopolitical boundaries and issues for trauma care:
NRMC, per ACS guidelines, is a Level 4 trauma facility of 66 beds located in Show Low, Arizona. Fifty miles to the east is a non-designated emergency receiving facility the 5 inpatient beds. Located 25 miles to the southeast is a level 4 trauma facility. Located 80 miles northeast is a level 4 community hospital with 30 beds. Located 100 miles to the northeast is a level 4 community hospital. Located 120 miles to the northeast are two trauma facilities wit 69 inpatient beds. Issues affecting trauma care are transport issues, remote locations, surgical specialties not available, lack of twenty-four hour ED coverage in some areas, and poor communication capabilities in remote areas.

3. Authority for EMS:
NRMC and all provider agencies follow State base hospital and EMS rules as regulated by ADHS and administered by the Bureau of EMS. NRMC is a member of the NAEMS council, which represents the northern region to the State.

4. EMS governing body, including description of medical leadership:
See description under Flagstaff Medical Center. -NRMC Base Station is a member of a regional council which represents its interests/concerns to the BEMS.

5. A 9-1-1 system is present in the community. There is limited enhanced 9-1-1 coverage.

6. EMS personnel are dispatched to the scene by: 9-1-1 system and occasional direct calls to an agency.

7. Agencies that are dispatched to the scene: EMS, fire, law enforcement, and special operations units.

8. EMS providers are (check all that apply):
- [X] paid
- [X] volunteer
- [X] public
- [X] private

9. Levels of EMS response available in NRMC base hospital boundaries:
- [X] EMT
- [X] IEMT-Q
- [X] Paramedic

10. Hospital's participation in the EMS region, including a description of participation in CQI activities for prehospital personnel:
NRMC prehospital department is a non-fund generating department of NRMC, which serves as base hospital for 18 agencies in northeastern Arizona. The department is State certified by ADHS and provides on-line, off-line and administrative control to all levels of prehospital providers. The base hospital is represented on the NAEMS council and has participated in a number of different advisory boards for the State. NRMC provides continuing education classes for ALS and BLS providers through run reviews, airway workshops, and partnership with Northland Pioneer College. CQI at NRMC is an ongoing process and involves review of written run reports. CQI is addressed at the individual, agency, and hospital level with education directed towards improvement.

11. NRMC has an internal and external disaster plan that is integrated with city, county, and state plans. NRMC and agency personnel participate in 2-3 disaster drills a year. Training has been completed at all agencies on the State triage training system. Joint disaster training has been done with White River Service Unit.

Page Hospital

1. The EMS region served by Page Hospital includes the communities and surrounding areas of Kaibeto, Inscription House, Green Haven, Big Water, Church Wells, Marble Canyon, Bitter Springs, Lake Powell, Copper Mine, Lachee, and Bullfrog. The secondary area covers the communities of Kaibeto, Inscription House, and Bullfrog where there are clinics operating.

2. Geopolitical boundaries and issues for trauma care:
Located 140 miles south is a Level 2 trauma center. Located 70 miles west is a community hospital. Located 160 miles west is a community hospital. Located 60 miles south is a community hospital with ICU beds.
3. Authority for EMS: ADHS regulates EMS in the state through the Bureau of EMS. Page Hospital is a member of NAEMS which represents the northern region at the state level.

4. See the description under Flagstaff Medical Center.

5. There is 9-1-1 in the community. Some areas have recently acquired enhanced 9-1-1.

6. EMS personnel are dispatched to the scene of an injury by 9-1-1.

7. Agencies that are dispatched to injury scene: fire, EMS, law enforcement.

8. EMS providers are (check all that apply): [X] volunteer, [X] paid, [X] pubic agency, [X] private.

9. Levels of EMS response available in Page Hospital area: [X]EMT-B, [X] IEMT-B, [X] paramedic.

10. Hospital's participation in the EMS region, including a description of participation in CQI activities for prehospital personnel:.
Flagstaff Medical Center's prehospital department provides continuing education, training and chart review for Page Hospital as part of their responsibility as base station. This includes on-line, off-line, and administrative medical control for the area's prehospital personnel.

11. Page Hospital's participation in the regional disaster plan:

Page Hospital has an internal disaster plan and coordinates for external disasters with the city, county and state plans. Drills are held internally at least once a year. External drills are integrated with the other area agencies.

Sage Memorial Hospital

1. The EMS region served by Sage Memorial Hospital (SMH) is defined by a catchments area of 8 chapters of the Navajo nation. It includes the communities of Ganado, Kinlichee, Klagetoh, Wide Ruins, Greasewood, Cornfields, Nazlini and Steamboat. Secondary areas include the clinics in Greasewood, Wide Ruins and Sanders.

2. Geopolitical boundaries for trauma care:
Located 35 miles to the north is a community hospital.
Located 100 miles to the southwest is a level 2 trauma center.
Located 35 miles to the east is a community hospital.
Located 35 miles to the west is a community hospital.
Issues for trauma care: Long transport times, lack of specialty services in the area, lack of 24 hour staffing in some areas, remote locations.

3. Authority for EMS: ADHS regulates EMS in the state through the Bureau of EMS. SMH is not a member of NAEMS which represents the northern region at the state level.

4. See description under Flagstaff Medical Center.

5. A 9-1-1 system is in place through the local fire department.

6. EMS personnel are dispatched by 9-1-1, direct call to the agency, and police.

7. Agencies that are dispatched to injury scene: fire, EMS, law enforcement.

8. EMS providers are [X] volunteer, [X] paid, [X] public agency and/or [X] private.

9. Levels of EMS response available in SMH area are[X] EMT, [X] IEMT-Q and [X]paramedic.

10. Hospital's participation in EMS region: FMC prehospital department provides continuing education, chart review, and CQI for SMH area prehospital personnel. See full description under Flagstaff Medical Center.

11. SMH's participation in the regional disaster plan:
SMH has both internal and external disaster plans. They are integrated with tribal, city, county, and state plans. Drills are done 1-2 times a year. All areas agencies are involved in the drills and evaluation process.

Sedona Medical Center

SMC is listed under Verde Valley Medical Center services. Sedona Emergicenter (SEC) is located on the SMC campus. SMC is not a base station.

Supai Clinic

No information has been supplied at this time. Supai Clinic is not a base station.

Tuba City Indian Health Services

1. The EMS region served by Tuba City Indian Health Services encompasses the boundaries of the Navajo Nation. This area includes the communities of Kayenta, Cameron, Inscription House, Kaiboto, and Shonto.
The secondary area comes from the clinics in Kayenta and Inscription House.

2. Geopolitical boundaries for trauma care: Located 75 miles to the south is a level 2 trauma center. Located approx 100 miles to the north is a community hospital. Issues affecting trauma care: remote locations, lack of specialty services and transport issues.

3. .Authority for EMS: ADHS regulates EMS in the state through the Bureau of EMS. Tuba City IHS is not a member of NAEMS which represents the northern region at the state level.

4. EMS governing body, including description of medical leadership:
The legislature funds the Arizona Department of Health Services. The Bureau of EMS is mandated to oversee EMS activities in Arizona. There is a part-time physician who contracts as Medical Director. The BEMS and Medical Director receive advice from three advisory bodies: 1) Medical Direction Commission which is composed of physicians, 2) EMS Council which is composed of EMS providers, 3) State Trauma Advisory Board. Base hospitals are required to have a physician who serves as administrative medical director and can have an RN/NP/CEP who functions as the department manager. Tuba City is not a base station. Tuba City IHS is not a member of a Regional Council which represents its interests/concerns to the BEMS.

5. A 9-1-1 system is not present in the community.

6. EMS personnel are dispatched to the scene of an injury by: police, direct call to agency.

7. Agencies that are dispatched to injury scene: fire, EMS, law enforcement.

8. EMS providers are: paid, tribal, volunteer, public, private.

9. Levels of EMS response available in Tuba City area: EMT, IEMT, paramedic. These medics are certified under New Mexico.

10. Hospital's participation in the EMS region, including a description of participation in CQI activities for prehospital personnel.
Tuba City IHS is not an Arizona base station.

11. Tuba City IHS's participation in regional disaster plan:
Disaster plans are in place. The hospital holds yearly drills to practice the plans. Drills involve not only the hospital but also tribal, city and county agencies for fire and law enforcement.

Verde Valley Medical Center/Sedona Emergicenter

1. The EMS region served by VVMC/SEC covers approximately 3000 square miles. This area is designated to the local fire districts. There is significant undesignated area, (Sycamore Canyon, Mingus Mountain, Sedona) outside of any districts that are responded into based on need. The **primary** service area, where patients are treated in the field and then transported to VVMC covers the Cottonwood city limits, parts of both Yavapai and Coconino counties, including the communities of Clarkdale, Jerome, Cornville, Page Springs, Camp Verde, Montezuma/Rimrock, Sedona, the Village of Oak Creek and the areas in between including the Yavapai Apache Nation reservations in the Clarkdale and Camp Verde areas.
The **secondary** area hospital service area, includes other areas of Yavapai and Coconino counties that surround the primary area, this is partially overlap coverage of the communities of Dewey, Cordes Lakes, Cordes Junction, and Spring Valley. It also includes portions of Sycamore Canyon, Mingus Mountain area and Phoenix Cement properties which at this time are not designated in any fire districts.

2. Geopolitical boundaries and issues for trauma care:
Located 18 miles to the north is a free standing emergency department with no inpatient beds. They provide stabilization prior to transport. Located 60 miles to the north is a level 2 trauma center. Issues affecting trauma care: Transport issues, remote

locations and rough terrain, many specialties not available without transport to higher level of care.

3. Authority of EMS: The Arizona Department of Health Services, ADHS, regulates EMS operations in the state through the Bureau of EMS., Verde Valley Medical Center is a designated base station through ADHS and is a member of Northern Arizona EMS Council, which represent the northern Arizona region to the state office.

4. EMS governing body, including a description of medical leadership:
See description under Flagstaff Medical Center.

5. A 911 system is present in the community.

6. EMS personnel are dispatched to the scene of an injury by:

[X] 911
[ ] direct call to agency
[ ] police
[ ] fire
[ ] other

7. Agencies are dispatched to an injury scene: Fire, EMS, law enforcement.

8. EMS providers are (check all that apply):

[X] volunteer
[X] paid
[X] public agency, fire, police, DPS
[X] private

9. Levels of EMS response available in VVMC base hospital boundaries:

[X] EMT-B
[X] IEMT-Q
[X] EMT-P

10. Describe in detail your hospital's participation in the EMS region, include a description of your hospital's participation in CQI activities for prehospital personnel: VVMC budgets the Prehospital Care Department which serves as base station to eight agencies in the Verde Valley area. The department has an EMS medical director, and a full time prehospital manager. The base station provides both on, off-line, and administrative medical direction to ALS, BLS and EMT-D

providers employed by the contracted agencies. The PHC department is represented on the NAEMS council by the prehospital manager. The prehospital manager also participates in the ER diversion task force. The department audits field care charts in compliance with ADHS base station requirements. Continuing education is a main focus of the department. Airway workshops are held twice a year and bi-monthly run reviews are held at VVMC and rotating agencies. Continuous quality improvement is ongoing.
Rapid chest pain intervention is currently being audited and results are shared during tape and chart with emphasis on improving care.

11. Describe your hospital's participation in the regional disaster plan: VVMC/SEC have an internal and external disaster plan. They are integrated with city, county, and state plans. Drills are held two times a year and include participation of the local EMS agencies. These drills utilize mock patients and transportation from the scene to hospital and discharge as specified in the disaster plan. Debriefings following the drills are directed at pinpointing both areas of competency and areas needing improvement and modification.

White Mountain Regional Medical Center

No information has been supplied at this time. White Mountain Regional Medical Center is not a base station.

Whiteriver Service Unit Base Hospital

1. The EMS region served by Whiteriver Service Unit (WRSU) Base Hospital covers 170,000 square miles, the geographic boundaries of the Fort Apache Reservation., in rural Eastern Arizona. Prehospital care is provided by White Apache EMS and White Mountain Apache Fire & Rescue tribal agencies, with medical direction through Whiteriver Service Unit Base Hospital. Within the Fort Apache Reservation, the Western-most community of Cibecue is served by local branches of tribal EMS & Fire agencies, with regular hours medical direction provided by Base Hospital Physicians from nearby Cibecue Health Center, with dual-patch and after-hours direction thru Whiteriver Service Unit Base Hospital as needed. On occasion, non-tribal-non-IHS beneficiary patients might be treated by White Mountain Apache prehospital personnel and transported directly to Navapache Regional Medical Center (NRMC) in Show Low, with medical direction thru WRSU. On occasion, non-tribal EMS agencies from Show Low and/or Pinetop might respond to prehospital emergency calls within the reservation, with their medical direction through NRMC.

2. Geopolitical boundaries and issues for trauma care:
WRSU is a Level 4 trauma facility located near the largest population center within the Fort Apache Reservation, in Whiteriver. Located 40 miles to the West of WRSU within the Fort Apache Reservation is a non-ER/trauma-designated receiving clinic facility that provides initial stabilization during regular open hours, with no in-patient beds. Located 25 miles to the northwest is a Level 3-4 trauma center. Located 40 miles to the east is a Level 4 trauma center. Located 50 miles southeast is a Level 3-4 trauma center.. Nearest Level 1-2 trauma centers within Arizona are located in Phoenix East Valley (Scottsdale) or Tucson or Flagstaff, depending on the area of rotor field pick-up within the Fort Apache Reservation.

3. Authority for EMS:
Both WRSU (a federal hospital facility) and White Mountain Apache Tribe prehospital agencies (run by a sovereign nation) have elected to follow state Base Hospital and EMS rules, regulated by the Arizona Department of Health Services (ADHS), administered by the Bureau of EMS (BEMS). BEMS is further divided into four state-wide representative regions, each with their own EMS Councils and EMS/Trauma Coordinating Councils.

4. EMS governing body, including a description of medical leadership:
See description under Flagstaff Medical Center.

5. A 911 system is present reservation-wide, operated by the Police Department of the White Mountain Apache Tribe. There is not yet any Enhanced-911 system. There is not yet any training of personnel in Emergency Medical Dispatch (EMD).

6. EMS personnel are dispatched to the scene of an injury by:
Primarily via PD-operated 911-reservation-wide dispatch system. Despite public education and encouragement, calls for help still sometimes come by phone directly into the EMS Offices or WRSU-ED. Callers are encouraged to call 911 directly. Increasing reservation-wide public use of cell phones has resulted in earlier 911 calls for help from rural field sites of injury.

7. Agencies that are dispatched to injury scene:
Within the Fort Apache Reservation, the EMS & FD & PD agencies operated by the White Mountain Apache Tribe. Non-tribal EMS & FD & PD agencies from nearby Show Low and Pinetop might also respond to mutual aid areas or for mass casualty incidents. Highway injuries might also involve responding personnel from the Department of Public Safety (DPS). Regional rotor air ambulance services sometimes

are dispatched for long-distance transports, mass casualty, etc. Off-reservation specialized rescue teams (swift water, HAZMAT, etc) might occasionally be summoned.

8. EMS providers are: (check all that apply)

[X] paid
[X] volunteer
[X] public (tribal, in this case)
[ ] private

9. Levels of EMS response available in WRSU boundaries:
[X] EMT
[X] IEMT-Q
[X] Paramedic
(also note, most all Basic EMTs in our system have EMT-IVC certification)

10. Hospital's participation in the EMS region, including a description of participation in CQI activities for prehospital personnel: WRSU Base Hospital personnel are actively involved with the Northern AZ EMS Council, Northern AZ EMS Steering Committee, Northern AZ EMS/Trauma Coordinating Council, and AZ State Trauma Advisory Board. WRSU personnel participate in a local Prehospital Care Committee. WRSU also works closely with NRMC Base Hospital, regarding White Mountain regional prehospital care concerns. WRSU is state-certified by ADHS as an ALS Base Hospital, providing medical direction of ADHS-certified prehospital personnel employed by White Mountain Apache Tribe.WRSU QI activities include review of written/recorded refusals, ALS codes, and airway management cases. Run reviews are provided monthly, presented by the WRSU Base Hospital Medical Director, sometimes in conjunction with NRMC. Lectures to EMS are provided by base hospital personnel. Annual megacode and airway training sessions are provided by the Base Hospital Medical Director. WRSU personnel teach at regional CEP refresher courses. ALS coverage, trauma scene times, and mass casualty incident triage have been followed in Prehospital Care Committee meeting minutes. Special skills training has been encouraged/supported by WRSU, including the addition of adult sternal IO access, advancement of Basics to EMT-IVC certification, and funding contributions to Dahmer airway lab training courses for regional prehospital personnel. Future goals include an anticipated new tribal FD/EMS substation, further increase percentage of ALS coverage, sat-cell communications for wilderness/canyon communications, and advancement of PD dispatchers to Emergency Medical Dispatch certification.

11. WRSU participation in the regional disaster plan*:*
Active participation in local and regional and state committees/councils involved with disaster planning. WRSU has both an Internal and External Disaster Plan. WRSU stages, (or experiences), periodic disaster response drills, including regional hospitals and agencies.

Williams Health Care Center

No information is supplied at this time. Williams Health Care Center is not a base station.

Winslow IHS Hospital

No information is supplied at this time. Winslow IHS is not a base station.

Winslow Memorial Hospital

1. The EMS region served by Winslow Memorial Hospital (WMH) encompasses the reservation lands of both the Navajo and Hopi nations. It includes the communities of Holbrook, Sanders, Lakeside and Clear Creek. Secondary areas come from the northern communities of the Navajo nation including Ganado, Chinle and Keams Canyon.

2. Geopolitical boundaries and issues form trauma care:
Located 65 miles west is a level 2 trauma center. Located within 3 miles is a IHS clinic. Located 150 miles southwest is a community hospital. Located 70 miles to the east in New Mexico is a community hospital.

3. Authority for EMS: The Arizona Department of Health Services (ADHS) regulates EMS in the state through the Bureau of EMS. Winslow Memorial Hospital is a member of NAEMS council, which represents the northern region to the state office.

4. EMS governing body, include description of medical leadership. WMH receives leadership for its EMS program from FMC. See description under Flagstaff Medical Center.

5. A 9-1-1 system is present in the community.

6. EMS personnel are dispatched to the scene of an injury by 9-1-1, direct call to an agency, police, and/or fire.

7. Agencies that are dispatched to injury scene: EMS, fire, law enforcement.

8. EMS providers are (check all that apply): [X] volunteer, [X]paid, [X]public agency, [X]private.

9. Levels of EMS response available in WMH boundaries: [X] EMT, [X] IEMT-Q, [X] paramedic.

10. Hospital's participation in the EMS region, including a description of participation in CQI activities for prehospital personnel:
WMH has no prehospital department. Prehospital CQI and training are routed through the prehospital department of Flagstaff Medical Center. FMC is the base station for WMH medics.

11. WMH's participation in the regional disaster plan:
WMH has an internal and external disaster plan. There is an area wide drill at least one a year than involves the hospital and local fire and EMS agencies. The plans are integrated with city, county and state plans.

Yavapai Regional Medical Center

1. The EMS area served by Yavapai Regional Medical Center is the Primary service area that is the area in which patients are treated in the field and transported to YRMC, covers the Prescott city limits as well as much of Yavapai County to include the following points. Starting at Iron Springs Road west to Hillside, Bagdad, including communities of Highland Pines, Skull Valley, Kirkland, and Hillside; travel north to the point of Camp Wood, including Williamson Valley Road and the community of Simmons; travel northeast to the point of the Drake Railroad Overpass on U.S. Alternate Highway 89; including the communities of Chino Valley, Paulden, Ashfork; travel southeast to the point of milepost 340 on U.S. Highway 89A; travel south to the point of the intersection of U.S. 169 and Interstate 17, travel south to the point of the intersection of U.S. Highway 69 and Interstate 17, including the communities of Diamond Valley, Prescott Valley , Prescott Country Club, Dewey, Humboldt, Mayer, Spring Valley; travel west to the point to of Goodwin on Senator Highway (35 miles from Prescott) including the communities of Groom Creek, Walker, and Goodwin; travel west to U.S. Highway 89 to the point of milepost 289 at Kirkland Junction, including the community of Wilhoit. Life Line Ambulance now covers Wickenberg, YRMC now covers that area until LLA contracts with another hospital closer to give medical direction. The secondary clinical areas that send patients to YRMC include clinics in Bagdad, Spring Valley, Prescott Valley, Chino Valley, Yarnell, and VA Medical Center.

2. Geo-political boundaries and issues for trauma care:
Located 2 miles to the east is a hospital having limited services and no trauma services. Issues affecting trauma care: Transport issues, remote locations, multisurgical specialties not available.

3. Authority for EMS:
The Arizona Department Health Services (ADHS) regulates EMS in the state through the Bureau of EMS. YRMC is a member of the Northern Arizona EMS (NAEMS) Council, which represents the northern region to the state office.

4. EMS governing body, including description of medical leadership:
See description under Flagstaff Medical Center.

5. A 911 system is present in our community.

6. EMS personnel are dispatched to the scene of an injury by 911.

7. Agencies dispatched to scene: fire, EMS, law enforcement, and helicopter if indicated.

8. Levels of EMS providers in our community include: volunteer, paid public agencies such as Fire, Police, DPS, and private.

9. Levels of EMS response available in YRMC boundaries: EMT, IEMT-Q, Paramedic.

10. Hospital's participation in the EMS region, including a description of participation in CQI activities for prehospital personnel:
YRMC funds the Prehospital Care Department which serves as a base station for 13 agencies in northern Arizona. The department has a medical director and a full time manager. The department provides on line, off line, and administrative medical direction to ALS, ACLS, and BLS medics employed by contract agencies. The manager represents the PHC department on the NAEMS Council. The department audits all written field reports and tapes to ensure that performance standards are met and sends review comments to individual medics. Continuing education is a major focus of the PHC department. Advanced airway skills labs are provided once a year, monthly run review are held in the tri-city area, with 4 run reviews at agencies and 4 run reviews at VAMC. Quality improvement is an on going process.

11.YRMC's participation in the regional disaster plan:

YRMC has an Internal and External Disaster Plan. They are integrated with the city, county, and state plans. Drills are held 2-3 times a year and include full scale participation from all agencies and transportation of the victims form the scene via ground and air to the ED and other areas of the hospital as specified in the disaster plan

EMS AND TRAUMA SYSTEM ADMINISTRATIVE COMPONENTS

I. LEADERSHIP IN THE NORTHERN REGION

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BACKGROUND

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Lead State Agency

The Department of Health Services is the lead Arizona State agency for the coordination, development and administration of a comprehensive statewide system of emergency medical services (EMS) and trauma care. (statute)

Northern Region Leadership

The NAEMS Region and Coordinating System is the lead regional body for EMS and Trauma System planning, development, implementation, and evaluation in the Northern Region of Arizona. (statute) The Regional Council encourages active

stakeholder participation of prehospital agencies and hospitals within the region, including from Native American committees. The Regional Council works with the state Bureau of Emergency Medical Services on system development within the region and statewide.

Organizational Structure

The Northern Regional Coordinating System is administrated by the Northern Area Emergency Medical Services Council (NAEMS). NAEMS is a 501 (c) 3 corporation. Bylaws define the work of the Council. NAEMS does not currently have a regional council office or employ a regional director for management of council operations. NAEMS does budget funding for management of its finances and for regional meeting management. It has relied on dedicated volunteers to support council operation needs.

The administrative structure includes the following elements:

- An elected voting board of five officers, (See Acknowledgements)
- A 32 member voting board of Directors
- A current non-voting general membership of 52

Not all of the agencies and hospitals in the region are members of NAEMS. Members pay $50.00 annually for prehospital and $100.00 for hospitals. The membership dues are used to support a regional education and training funds. Hardship waivers are available to agencies that want to have membership but can not afford to pay the membership dues. NAEMS accepts applications for new membership at general meetings.

Advisory Groups

Advisory committees include:

- Steering Committee – funding recommendations on prehospital equipment
- Trauma Advisory Committee to NAEMS Board of Directors - trauma recommendations and suggestions for implementation of the regional plan through the NAEMS council

- Prehospital Treatment Guidelines Committee

NORTHERN REGION LEADERSHIP OBJECTIVES

- Objective 01.1 Recruit and retain active and visible executive board members that are representative of the continuum of EMS and Trauma care in the region.

- Objective 01.2 Obtain collaboration from northern region to incorporate trauma system into NAEMS focus.

- Tactic 1 In 2004 open dialogue on the need to have a comprehensive integrated regional focus.

- Tactic 2 In 2004-2005 identify funding streams for EMS and Trauma (state, local and other).

- Tactic 3 In 2004-2005 review bylaws and update to allow for representation from across the continuum of EMS and Trauma System care.

- Tactic 4 In 2004-2005 Solicit NAEMS membership by hospital administration across the region.

II. SYSTEM DEVELOPMENT

BACKGROUND

System Planning

The Northern Region EMS and Trauma System Plan is a component of the statewide Trauma System Plan. NAEMS is participating in a statewide effort to develop a comprehensive approach to EMS and Trauma Systems. The council is using a planning process and regional plan outline that mirrors other regions and the state. The regional process is designed to assure that the unique needs of the region can be met while also meeting overall statewide system needs. The formal regional system planning process began in January 2001. A stakeholder process is being used to identify the current state of system elements and initial regional goals and objectives for system development. The Northern Region EMS and Trauma System Plan will be incorporated into the state plan through use of the common plan format. The regional plan will serve as an ongoing development guide for general system development, for regional contracting with the state, and for grant participation.

System Operations

As issues arise they are directed to appropriate NAEMS officers. Items that require a council vote are added to the agenda for action at the next NAEMS Council meeting. NAEMS officers work in cooperation with the DHS Northern Regional Office. The Northern Arizona EMS region utilizes regional trauma triage guidelines in the field.

NORTHERN REGION SYSTEM DEVELOPMENT OBJECTIVES

- Objective 02.1 Incorporate trauma components into the existing prehospital EMS system though training and education.

- Objective 02.2 Provide resources to enhance prehospital system elements.

- Objective 02.3 Encourage all hospitals to collect and submit trauma data.

- Objective 02.4 Encourage all prehospital agencies to collect and submit trauma data.

· Tactics 1 Assist with the development of a standardized prehospital documentation form and a central repository data base for such form.

- Objective02.5 Develop a voluntary prehospital data collection project in 2004-2005.

- Objective 02.6 Identify regional funding sources for the prehospital data collection project in 2004-2005.

III. LEGISLATION

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BACKGROUND

Statute

Statute 36-2210 assigns responsibility to the regional coordinating system for the development of an EMS and Trauma System plan and coordination of an EMS and Trauma System.

NORTHERN REGION LEGISLATION OBJECTIVES

- Objective 03.1 Encourage Northern Region providers (prehospital and hospital) to support comprehensive statewide EMS and Trauma System Legislation.

- Tactic 1 Educate Northern Region members about pending or needed legislation through NAEMS meetings on an ongoing basis.

- Tactic 2 Use Email, Website and Fax as needed (ongoing).

IV. FINANCE

BACKGROUND

Funding resources are currently limited for regional and statewide EMS and Trauma System Support. The Bureau of Emergency Medical Services receives dedicated funding from the Emergency Medical Services Operating Fund. Monies are allocated for operation of the Bureau in order to meet its statutory mandates, and for regional system support. Regional councils receive funding through state contracts. The legislature has allocated limited additional specialty funding for rural prehospital ambulance service support and rural provider agencies funding support which has been passed through to regional councils. To date the Northern Region has used its funding primarily for prehospital EMS system support through provider equipment purchases, various levels of emergency medical technician training and continuing education, and minimally for council administration operations. Stable statewide funding is needed to assure the overall stability of the Regional EMS and Trauma System as part of a statewide system.

NORTHERN REGION FINANCE OBJECTIVES

- Objective 04.1 Continue budget planning and track and prioritize needs in relationship to the plan.

- Objective 04.2 Seek out and develop new funding sources for regional system development.

- Tactic 1. Participate in one or more grants in 2004-2005.

- Objective 04.3 Support legislation to maintain and or increase EMS and Trauma funding for state and regional system building.

EMS AND TRAUMA SYSTEM OPERATIONAL AND CLINICAL COMPONENTS

I. INJURY PREVENTION AND CONTROL

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BACKGROUND

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In the Northern Region injury prevention programs and projects exist in dispatch centers, prehospital agencies and hospitals. Injury prevention efforts are present both in rural and urban agencies. Dispatch centers are involved primarily when the center is associated with a fire department. Community based agencies are more involved in injury prevention for pediatric, children, and adults. Hospitals programs are more prevalent if they have staff dedicated to injury prevention and are involved in prevention coalitions and committees. Navajo Nation hospitals have organized injury prevention efforts. The 2002 regional profile demonstrated that there is confusion in the region about the meaning of "injury prevention programs" that should be explored in order to capture existing resources and set the stage for further development. Both child and adult focused injury prevention do exist in the NAEMS region.

NORTHERN REGION INJURY PREVENTION AND CONTROL OBJECTIVES

- Objective 05.1 Continue to expand regional injury prevention efforts for children, teens, and adults.

- Objective 05.2 Encourage dedicated staff in prehospital agencies and hospitals to become trained and to participate in injury prevention.

- Objective 05.3 Increase rural hospital and prehospital involvement in injury prevention programs.

II. PUBLIC INFORMATION AND EDUCATION

BACKGROUND

No organized EMS and Trauma System public information and education program exists in the Northern Region. The region is developing a web site that can be used for informing the public on system topics. Participation in highly visible events that coincide with state and national events is a target for the future.

NORTHERN REGION PUBLIC INFORMATION AND EDUCATION OBJECTIVES

- Objective 06.1 Encourage prehospital providers to participate in public education in their communities (system and prevention focuses).

- Objective 06.2 Increase visibility of regional events and media campaigns that coincide with state and national proclamation of special months related to the Hospitals, EMS and Trauma System (e.g. Trauma awareness month, EMS week, etc.).

- Objective 06.3 Identify established public education programs and use regionally.

III. HUMAN RESOURCES

BACKGROUND

There are a number of factors affecting the prehospital and hospital EMS and Trauma System workforce in the Northern Region. The region is primarily rural with a few suburban cities. In the rural areas most prehospital agencies rely on volunteers. The more remote the rural area is, the fewer the number of prehospital providers at the agency level and the lower the level of EMS

provider certification levels. Similarly, there are predominantly BLS services in more rural areas. Rural agencies have more requests for training and educational support. Additionally, there is ongoing attrition among rural providers who are challenged by initial and continuing education requirements and long travel distances to get education. The higher the level of certification in the Northern Region, the more difficult it is for a rural agency to retain the provider. Rural ALS trained personnel tend to migrate to suburban and urban ALS services. While Emergency Medical Dispatching (EMD) is present in the suburban cities, it is very limited in small rural dispatch agencies. There is a significant difference in overall numbers of EMD trained dispatchers when a dispatch agency requires EMS training.

The Northern Region has 24-hour emergency receiving facilities in its suburban cities. Only one hospital in the northern region has formally organized trauma care resources and participates actively in the statewide EMS and Trauma System development process. Hospitals in the region with higher resource levels, (OR, ICU, ED s and ED physician specialists) are generally also Base Hospitals. Physicians in the EDs are board certified or have taken trauma and pediatric care courses. Most ED nurses have taken pediatric life support training, and many have completed a recognized trauma course. Hospital diversion of prehospital transports does not occur in the Northern Region due to the extended ground transport time of taking patients to another location, however capacity issues do exist depending on the number of transports to any one facility. The region does have an active aero medical component of both fixed and rotor wing aircraft transportation available to provide for acuity and capacity issues.

The availability of internet and videoconferencing as vehicles for information sharing and the delivery of distance education at prehospital and hospital levels vary across the Northern Region.

Most prehospital agencies report not having video conferencing capabilities. Conversely, large and small prehospital agencies do report having internet access. There is video conferencing available at some urban hospitals and at the satellite college / university level. All hospitals have internet capabilities. Distance learning capabilities are available in parts of the Northern Region.

NORTHERN REGION HUMAN RESOURCES OBJECTIVES

- Objective 07.1 Encourage additional development of distance learning resources in the Northern Region.

- Tactic 1. Identify (clarify from survey results) existing resources in 2002-2003

- Objective 07.2 Identify numbers of providers needed for EMS and trauma care in prehospital areas across the region (FR, EMT, IEMT, Paramedic)

- Objective 07.3 Prioritize funding for FR, BLS and ALS training across the region based on the needs assessment of prehospital providers.

- Tactic 1. Provide reimbursement assistance for all levels of certification.

- Objective 07.4 Address hospital level education and training as well.

- Tactic 1 Identify minimum standard certification or training for trauma care in the stabilization and receiving hospitals.

IV. DISASTER PREPAREDNESS

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BACKGROUND

The State Department of Emergency Management has the lead state responsibility for disaster planning and preparation in Arizona. In the Northern Region, individual agencies are responsible for their internal disaster planning. Prehospital agencies utilize mutual aid agreements to collaboratively address large-scale events that can be formally declared disasters or multi-casualty situations. Hospitals are guided by requirements of the Joint Commission on Hospital Accreditation. Some prehospital agencies participate in disaster preparedness planning and drills. Dispatch centers report limited general, biological, or chemical disaster training. Prehospital agencies that are fire based are more likely to have had formal disaster training in general, biological and chemical disaster management. Prehospital agencies affiliated with base hospitals have higher numbers of trained providers. Dispatch, prehospital care agencies and hospitals report the need for additional formal disaster training, especially biological and chemical disaster management training. Similarly, all agencies report the need for personal protection devices and clothing that is adequate for biological and chemical protection.

DISASTER PREPAREDNESS OBJECTIVES

- Objective 08.1 Promote increased disaster training and awareness for dispatch, prehospital and hospital staff.

- Tactic 1. Inform provider agencies of possible funding resources available (ongoing).

- Tactic 2. Anticipate availability of disaster training in 2004-2005 using the future NAEMS website.

V. PREHOSPITAL CARE

Communication

System Goal 09 – Improve communication throughout the Northern Region so that providers can adequately communicate to meet patient

BACKGROUND

Access to prehospital EMS is guaranteed in most populated areas of the state but 9-1-1 and, in particular enhanced 9-1-1 is not. There are many remote areas of the state where there is no specific phone access point or a defined pre-hospital provider. Along primary rural roadways there are many areas in which there is no cellular coverage for incident reporting by motorists or cellular or radio coverage for prehospital to hospital communications.

Communication center dispatch efforts specific to standards of practice and performance (e.g. call taking, medical management at the between dispatch centers, data collection, and quality management processes) vary across the region.

PREHOSPITAL COMMUNICATIONS OBJECTIVES

- Objective 09.1 Support expansion and modernization of a regional communication system.
- Tactic 1. Request BEMS add communication issues as an ongoing component of EMS Council agenda.

Medical Control and Direction

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BACKGROUND

Medical control and direction of the prehospital component of the EMS and Trauma System encompasses standard setting, monitoring, and medical supervision and discipline of pre-hospital emergency medical technicians at all levels of certification. The Northern Region has off-line medical control through regional standards, protocols and procedures that providers in the region follow. On-line medical control for day to day direction of patient care is managed through base hospitals within the region.

This is accomplished through ambulance to hospital communication to base hospitals. The base hospitals provide quality monitoring and education for prehospital agencies. Current state administrative rule requires prehospital providers to have medical control through base hospital agreement. The Navajo Nation follows New Mexico State rules and regulation for their EMS control.

MEDICAL CONTROL AND DIRECTION OBJECTIVES

- Objective 10.1 Explore alternate means of delivering medical control.

- Tactic 1. Add to NAEMS Council agenda in 2004-2005 for ongoing education and discussion.

Prehospital Triage

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BACKGROUND

General patient triage standards have not been formally adopted as a regional standard. Due to the location of hospitals within the Northern Region, patients are primarily taken to the closest hospital for initial care. Specialty patients needing additional care resources are transferred to tertiary care facilities. Pediatrics, multi-system trauma, and burns are the types of patients most frequently transferred. Decisions to transfer are made on a case by case basis.

Issues related to prehospital diversion of patients in the Northern Region are related to the hospitals not being able to divert due to distances between hospitals.

In the Northern Region, Flagstaff Medical Center has a formally organized trauma program. There is no state statute or rule to formally identify that hospitals resource level as a trauma center. Other hospitals in the region do currently receive and treat trauma patients.

PREHOSPITAL TRIAGE OBJECTIVES

- Objective 11.1 Review regional treatment guidelines and update as needed.

- Tactic 1. Add to regional agenda for council work and decisions during 2004-2005.

- Objective 11.2 Facilitate distribution of information regarding triage guidelines.

- Tactic 1. Post recommended guidelines on future NAEMS web site.

Prehospital Treatment and Transport

BACKGROUND

A network of prehospital agencies is in place in Northern Region. NAEMS is the central coordination point for prehospital agencies and hospitals to work together on prehospital system development and issue resolution. Equipment needs determined in a 2004 survey of prehospital agencies were reported minimal for basic equipment.

PREHOSPITAL TREATMENT AND TRANSPORT OBJECTIVES

- Objective 12.1 Review regional treatment guidelines and update as needed.

- Tactic 1. Add to regional agenda for council work and decisions during 2004-2005

- Objective 12.2 Identify Gaps in the level and location of coverage in rural and remote areas in the Northern Region will be formally identified and addressed under the Northern Region EMS and Trauma System Plan.

- Tactic 1. Redefine the needs assessment survey.

- Objective 12.3 Clarify equipment needs for basic EMS and trauma care service providers.

- Tactic 1. Improve and utilize the NAEMS needs assessment survey to clarify equipment needs and distribute a basic equipment list to the provider agencies in 2004-2005.

VI. DEFINITIVE CARE (TRAUMA CENTERS AND OTHER EMERGENCY RECEIVING HOSPITALS)

BACKGROUND

There are 20 general acute care hospitals identified as emergency receiving hospitals in the Northern Region. They provide 24 hour emergency services for emergent medical and trauma patients. Regional hospitals have become or are in the process of becoming Critical Access Hospitals under the Rural Flexibility Program, administrated through the Office of Rural Health, and funded through HRSA's federal funding.

In the Northern Region, Flagstaff Medical Center has a formally organized trauma program and provides tertiary care to many northern area facilities. The hospital actively participates in state trauma development activities.

Hospitals surveyed in 2004 as a part of the regional system planning process identified equipment needs ranging from Braslow (pediatric color coded) carts and kits, to large equipment like portable ultrasound and decontamination equipment. Basic Northern Region hospital needs for disaster preparedness will be shared with the state bio-terrorism planning group which is using the same geographical regions (Northern, Western, Central, and Southeastern) for implementation of a 1.2 million dollar CDC grant for hospital preparedness in Arizona.

DEFINITIVE (HOSPITAL) CARE OBJECTIVES

- Objective 13.1 Determine regional support for trauma center designation through activities and recommendations of the advisory trauma committee.

- Objective 13.2 Encourage the collection of acuity levels and numbers of traumatically injured patients that are currently being care for in the northern region's hospitals.

Inter-facility Transfer

System Goal 14 – Revise treatment guidelines to assure that intra-regional and inter-facility transfer capacity and capabilities are maintained in the NAEMS region and Trauma System.

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BACKGROUND

General acute care inter-facility transfers take place following EMTALA guidelines. There are no formal guidelines for the transfer of trauma patients in the state or region.

INTERFACILITY TRANSFER OBJECTIVES

- Objective 14.1 Enhance stabilization and transfer of pediatric, burn, and trauma patients
- Tactic 1. Include reporting on formal-written transfer agreements in hospital self-assessment in 2004-2005.

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Medical Rehabilitation

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BACKGROUND

Medical rehabilitation is the final critical link in the care continuum of a comprehensive EMS and Trauma System. The early identification of rehabilitation candidates is an integral component of the acute hospitalization phase of patient care for

medical and trauma patients, in order to return individuals to the highest possible level of functioning consistent with their medical problem or traumatic injury. The Northern Region supports rehabilitation within the region when it is in the best interest of the patient.

MEDICAL REHABILITATION OBJECTIVES

- Objective 15.1 Integrate rehabilitation centers into Northern Regional EMS and Trauma System planning.

EMS AND TRAUMA SYSTEM EVALUATION

I. INFORMATION SYSTEMS

BACKGROUND

Information must be collected to evaluate the performance of the EMS and Trauma System in the Northern Region. There is no central repository for regional system data.

Northern Region Dispatch centers do not consistently collect patient data. Collection of non-patient EMS call data is limited primarily

to agencies that have Emergency Medical Dispatch programs and software varies greatly.

There is limited use of common forms or data elements for patient care data collection in prehospital care agencies. Prehospital agencies that collect data generally do not separate medical and trauma data. In fire and EMS agencies, *MS Excel* and *MS Access* are common. In fire departments, there is no common software. In large Fire and EMS agencies, the use of Firehouse software is seen. There are some "home grown" databases being used. There may be an opportunity for a pilot project in the Northern Region if funding sources can be found.

Hospitals are required to submit hospital discharge data for patients admitted to the hospital. That data is available through the State. A new ED discharge data base is being developed and hospitals are required to submit some data to it as well. Together, these data bases can provide population based data for regional planning. Flagstaff Medical Center participates in the state trauma registry. Other hospitals providing trauma care in the Northern Region (Yavapai Regional Medical Center, Verde Valley Medical Center, and Navapache Regional Medical Center) are collecting trauma data and utilizing for internal quality assurance purposes only.

INFORMATION SYSTEMS OBJECTIVES

- Objective 16.1 Promote prehospital data collection in the region.

- Tactic 1. In 2002-2004 open dialogue with the state and other regions to develop effective data collection processes.

- Tactic 2. Identify prehospital agencies in the NAEMS Region that would be interested in a data collection pilot project in 2004-2005.

- Objective 16.2 Promote use of trauma registry by other hospitals in the NAEMS Region that are receiving and treating trauma patients.

- Tactic 1. Provide new updated software systems for data collection programs.

- Tactic 2. Resolve data submission issues between hospitals and state data repository.

II. SYSTEM EVALUATION

BACKGROUND

In the State EMS and Trauma System Plan the focus on evaluation at the regional level is to maintain local (agency) and regional autonomy while assuring improvement of overall system performance both at the regional and state levels.

Currently in the Northern Region, dispatch agencies, prehospital agencies and hospitals all report some level of internal use of data for quality assurance. There is no organized or formal

Northern Region and Trauma System level QA process in place at this time. There is no standardized state prehospital data collection instrument, no mandated data collection process, and no state prehospital database. There are no prehospital or hospital outcome or performance standards in place related to the EMS and Trauma System. Qualitative evaluation occurs informally in regional EMS and Trauma Systems through the practice of informal regional issue identification and resolution. Regions do not have statutory authority to regulate so collaboration is the common method for system improvement.

SYSTEM EVALUATION OBJECTIVES

- Objective 17.1 Review available data, objectives and tactics to see if council work and decisions are data and plan driven according to the NAEMS region and Trauma System Plan.
- Tactic 1. Use an annual comprehensive needs assessment to provide updated data.
- Tactic 2. Review the plan in making council decisions.

- Objective 17.2 Work collaboratively with the state to develop regional EMS and Trauma System evaluation recommendations.

III. RESEARCH

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BACKGROUND

A statewide EMS and Trauma System research agenda does not exist at the current time. Involvement in research by prehospital agencies and hospitals in the Northern Region is not well documented. Programs like institution of RSI and MAI protocols are currently being utilized and evaluated within the NAEMS region. A method of collecting and distribution of that information through out the region is needed.

In Arizona research is occurring primarily at the urban hospitals with teaching programs. Some EMS agencies have published research in peer publications. National coalitions of systems and research professionals, lead by agencies like the Centers for Disease Control (CDC), are developing research agendas related to injury and injury control. Developing an EMS and Trauma System agenda that parallels the national direction is a logical approach for an expanding Arizona EMS and Trauma System.

RESEARCH OBJECTIVES

- Objective 18.1 Support EMS and Trauma System research through research partnerships between the state and system participants to increase opportunities for federal funding of meaningful research.

- Tactic 1. Investigate funding opportunities for collaborative research.

Appendix A: Northern Arizona Maps