

The Medical Emergency Preparedness – Pediatrics Project Alaska’s 2007-2008 Healthcare Facilities Partnership Grant Project Final Report

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The Medical Emergency Preparedness – Pediatrics (MEP-P)* Project (the Project) is the result of a United States Healthcare Facilities Partnership (HFP) grant. The U.S. Dept. of Health and Human Services (HHS) recently created the Office of the Assistant Secretary of Preparedness and Response (ASPR). In 2007, ASPR issued a competitive grant request to encourage collaborative emergency preparation programs across the U.S. The Alaska Department of Health and Social Services (DHSS) applied for this grant with an innovative proposal to improve statewide pediatric disaster preparedness. Alaska was one of only eleven states awarded funding, and thus the MEP-P project was born.

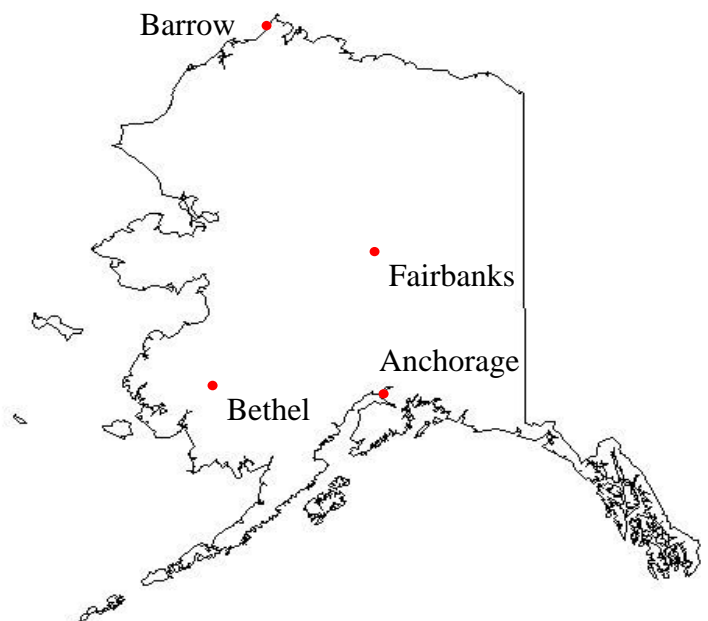
The seed of the MEP-P Project was planted in 2007 after a late winter epidemic of RSV (Respiratory Syncytial Virus) in Alaska’s most northern village, Barrow, Alaska. Within eight weeks, 53 children, many of them infants, were hospitalized in Barrow with RSV. Though there were no deaths, 28 of those 53 needed intensive care and were sent via air ambulance to Anchorage.

With a close knit population of just over 4,000 people, most of them Native Alaskan, Barrow is indicative of some of the larger villages in rural, or “bush” Alaska. It has a small acute care hospital and a public health clinic, both of which serve the small, but numerous, surrounding villages. Barrow, like much of Alaska, is not accessible by road. It is 500 air miles (over an hour flying time) from Barrow to the nearest city of Fairbanks and 720 to the largest Alaskan city of Anchorage (over two hours flying time), the site of the only two Alaskan Pediatric Intensive Care Units (PICUs).



Barrow from the air in winter

The 2007 RSV incident was not a one time occurrence. RSV has a history of annual surge in the bush,



* See full list of acronyms in Appendix A

including a smaller incident in 2008 in the village of Bethel which once again highlighted the fragility of pediatric care in Alaska. If any community has a pediatric medical surge, the surge is transported to Anchorage, in effect making Anchorage PICUs the source of pediatric critical care for the entire state. The MEP-P Project, in conjunction with the All Alaska Pediatric Partnership (AAPP) and its members, is addressing issues of pediatric medical surge capacity and improving the availability and quality of disaster medical care for Alaska's children.

Specifically the goal of the Project is to improve the emergency hospital capacity of the two Anchorage area pediatric critical care hospitals by 100% with normal standards of care and by 200% with altered standards of care and utilization of the other three Anchorage area hospitals.

Project Partners

Emergency preparedness requires a comprehensive approach to be most effective. The All Alaska Pediatric Partnership, an organization of all major Alaskan hospitals and government health agencies with a pediatric interest, was chosen as the most appropriate entity to collect and coordinate members from the local healthcare communities for the Project. The MEP-P Project members include all major state hospitals, tribal health organizations and the state and municipal health departments*. Mary Grisco, Executive Director of the AAPP, pulled emergency preparedness staff, hospital leadership and pediatric clinicians together to create a Steering Committee (SC) for the Project to guide the program and represent their respective institutions. The Steering Committee began by searching for a Project Coordinator who would manage and lead the project.

The Project Coordinator position proved difficult to fill. The SC eventually found a capable manager with medical interests who was otherwise new to health care. In order to effectively represent the collaborative aim of the group, the project coordinator acted as an independent agent, enabling a focus on the project goals with fair allocations to each partner institution.

During the months spent searching for an available coordinator, the SC started recruiting teams, or workgroups, to accomplish the goals of the project. These teams were populated by members of the Steering Committee and other appropriate people from the Alaskan health care community. Careful attention was paid to inviting members from each institution involved to each workgroup and involving members with diverse skills and backgrounds.

Initially, six teams were created, however the duties of a "Communication" workgroup were assimilated into the other groups and it was abandoned. The remaining teams focused on five identified areas: **Curriculum, Equipment, Exercise, Ethics** and **Community**.

Project Objective Overview:

1. **Curriculum:** Promote pediatric emergency education and develop Just In Time (JIT) training modules to improve pediatric disaster care in Alaska.

* See Appendix B for full list of partners.

2. **Equipment:** Purchase and store pediatric capable ventilators and respiratory equipment to improve availability of resources. Include creating and purchasing a “Go Kit” to assist outlying communities.
3. **Exercise:** Design and participate in exercises to test the State of Alaska’s pediatric surge capability.
4. **Ethics:** Examine ethical concerns and develop technical recommendations for scarce resource allocation to children.
5. **Community:** Improve community of Anchorage’s resources and preparedness through emergency call in center collaboration, pediatric supply stockpiling and resource website creation.

Project Objective Summaries

Curriculum

The Curriculum Workgroup consisted of Alaskan pediatric intensivists and clinical nurse educators. This workgroup identified two approaches to increasing the number of pediatric trained staff in Alaska by improving pediatric emergency education.

1. Promote an existing pediatric emergency education course to a target audience of non-pediatrics (non-peds) and non-emergency trained healthcare providers.
2. Develop 1 hour Just In Time training modules. Create a printed training manual based upon these modules and adapt them to a digital and web-based format for flexibility. Offer Continuing Education Units (CEU) for these modules as incentives for target audience to expand their training.

Examining existing pediatric emergency courses was the first step. Courses examined included: Pediatric Advanced Life Support (PALS), Pediatric Emergency Assessment, Recognition and Stabilization (PEARS), Pediatric Disaster Life Support (PDLS) and Pediatric Education for Pre-hospital Professionals (PEPP). After researching the existing courses, PEPP emerged as the preferred curriculum with PEARS as a secondary choice.

The American Academy of Pediatrics (AAP) PEPP course has an excellent history in educating first responders, such as Emergency Medical Technicians (EMTs) and Paramedics, but the opinion of the Curriculum Workgroup is that it would allow any healthcare provider to care for pediatric patients in an emergency. PEPP examines a wide range of pediatric emergency presentations and includes communicating with children of different developmental stages as well as behavioral health and general disaster response considerations. While PEPP could be useful to any healthcare provider, the MEP-P target audience would be in-patient adult care nurses and physicians with little to no pediatrics or emergency experience. Other noted priority groups are Respiratory Therapists, school nurses, Public Health Nurses and Community Health Aides (CHAPS). Marketing PEPP and pediatric emergency training in general to the

aforementioned providers will serve to directly increase the number of staff capable of assisting pediatric patients in a disaster.

There are a number of ways the Curriculum Workgroup envisions PEPP course graduates will improve pediatric disaster care. Within hospitals, PEPP providers can assist regular pediatric providers in surge areas, effectively increasing the number of patients treated. In congregate care facilities, PEPP providers would act as first-responders, assessing and treating minor illness with the knowledge to determine if a pediatric patient requires hospital care.

PEPP is a well regarded course among pre-hospital professionals, but generally unknown among the MEP-P target audience. In order to encourage the target audience to take PEPP, the Curriculum Workgroup promoted the course at nursing conferences with brochures and informational posters and collected contact information for interested parties.



PEPP pilot class participant learns pediatric intubation

A pilot PEPP course for the target audience was held June 9-10, 2008. The course was attended by 25 providers including float pool nurses, public health nurses, school nurses and a physician. Several providers came to the course in Anchorage from the outlying communities of Kodiak, Mat Su and Fairbanks. Because of the similar background in nursing of many of the participants, the goals of the course were tailored to meet their needs including further discussion about community preparedness, and a focus on intubation and intra-osseous access procedures. Post course, 8 attendees participated in an instructor seminar to train them to teach a PEPP course, creating a seed group of instructors who are bringing PEPP to their colleagues in their home communities.



PEPP participant injects dye to confirm intraosseous needle placement

In addition to the more traditional PEPP course, the MEP-P Curriculum Workgroup developed four learning modules to allow for flexibility in training. Each of these modules could be completed in approximately one hour and will ultimately be available online at any time. A shorter, more accessible course allows for flexible training time or Just In Time (JIT) training. These modules can be used to quickly improve training of non-peds providers to help pediatric patients during an epidemic or directly after a major natural disaster. As an incentive, we are offering CEUs for these modules to qualified providers interested in improving their pediatric emergency education.

The modules developed are as follows:

1. **“Pediatric Assessment for Occasional Peds Providers”**
Essentially a PEPP and pediatric medicine overview, this presentation has been developed and tested by MEP-P Curriculum Workgroup member Jen Thomas, RN as a one hour lecture with Power Point slides and reference handout. Nurse Thomas presented this module to adult Intensive Care Unit (ICU) nurses at the Elmendorf Air Force Base (EAFB) military hospital and received positive feedback along with interest from participants in taking the full PEPP course. This module was also tested and edited by Workgroup member Linda Oxley, RN, at Mat Su Regional Medical Center (MSRMC) during a nursing in-service. Feedback was generally positive and lead to inclusion of pediatric blood pressure information and a case scenario example.
2. **“Children in Crisis: Basics of Disaster Behavioral Health”** by MEP-P Curriculum Workgroup member Bobbi O’kelley, LCSW, a Clinical Therapist at North Star Behavioral Health, is an overview of common pediatric behavioral health concerns in a disaster. This module focuses on distinguishing normal behavior from Post Traumatic Stress Disorder (PTSD) and simple treatments and coping mechanisms for medical providers. This module was presented at an MSRMC nursing in-service and received positive feedback.
3. **“Triage and JumpSTART Triage”** is based on nationally known pediatric emergency care doctor Lou Romig’s modification of the START disaster triage system. LeMay Hupp, RN, and director of the Alaska Nurse Alert System (ANAS), has modified this presentation for use as a self study module including case study examples, examples of triage tags and common triage pitfalls to avoid.
4. **“Newport HT50 Ventilator Orientation and Training”** is designed to familiarize a health care provider with mechanical ventilation, concerns specific to pediatric ventilation, and the Newport HT50 ventilator. The HT50 is a compact, durable vent unit that has been stockpiled at various locations in Alaska for emergency use. There are some units in normal use to encourage familiarity with the vent. This module provides a ventilation refresher before or during a respiratory emergency.

The 4 JIT Modules will be available to the partner institutions in a 200+ page full color spiral bound manual with accompanying digital format of each presentation. These manuals are distributed at strategic points in Alaska to provide quick pediatric knowledge and reference in the event of a pediatric disaster.



MEP-P JIT Manual Cover

Equipment

The Equipment Workgroup consisted of Pediatricians, Respiratory Therapists (RTs) and supply chain staff from Anchorage area hospitals. There were two approaches to improving availability of scarce medical equipment in Alaska.

1. Purchase pediatric capable ventilators and other respiratory equipment and supplies to be used in the Anchorage area and prioritized for use in emergencies.
2. Develop, purchase and store a “*Go Kit*” of ventilators and appropriate respiratory supplies which would be mobilized with a *Go Team* to assist in an epidemic or other disaster in a rural Alaskan village.

There are numerous physiological reasons that children have more respiratory problems than adults. Children are closer to the ground, have a higher respiratory rate, narrower trachea and bronchi, as well as more frequent inhalant allergies and respiratory illnesses. Respiratory illnesses such as the RSV epidemic which inspired this project or, on a larger scale, a pandemic flu, affect children more drastically and frequently so that they require ventilators to survive until they are well.



Sensormedics 3100
Oscillator

The first piece of equipment identified was the Sensormedics 3100 oscillator. It is an advanced ventilator used frequently for the smallest and sickest children. There are currently 10 of these advanced ventilators in Alaska, all in Anchorage. Current practice in Anchorage Pediatric Intensive Care Units (PICUs) is to rent backup oscillators from outside vendors when availability is low. MEP-P purchased 3 oscillators based on these needs. 2 are housed at ANMC, 1 at PAMC, which will alleviate the need for costly and time consuming rentals.

In addition to the advanced oscillator ventilator, there is a need for a compact and robust ventilator. The Newport HT50 was recommended by a panel of Alaskan health care providers and emergency preparedness staff as a durable, efficient and reliable ventilator, capable of providing therapy to pediatric patients. The HT50 was also favored because the Alaska State DHSS has created a stockpile of a number of these vents at various points in Alaska. The MEP-P Project purchased 6 HT50s, 4 of which are to be kept in use rather than stockpiled to encourage familiarity with the unit. 2 HT50s are stored as part of the “*Go Kit*” with travel cases that include monitors and accessories. The



Two Newport HT50 vents for the *Go Kit*

ventilators are supplied to the hospitals with instructions that they are prioritized for emergency use and should not be used for chronic ventilation.

In addition to the ventilators, other respiratory equipment purchased includes 6 portable oxygen concentrators intended for use in surge areas or congregate care facilities. These units are stockpiled in Anchorage at no cost by North West medical. Over 100 portable pulse oximeter monitors were distributed to each Anchorage School District nursing station, with 5 each going to the pediatric wards of each Anchorage area hospital and 2 stored in the *Go Kit*. Another portable monitoring solution useful in respiratory emergencies are End-Tidal CO₂ monitors which were distributed throughout Anchorage area pediatric wards with 2 stored in the *Go Kit*.

To enable sustainability of the *Go Kit* and medical supply storage, MEP-P collaborated with the Alaska Native Tribal Health Consortium (ANTHC) warehouse to increase their stock of certain identified common pediatric medications and supplies. These items will be maintained by ANTHC warehouse staff to monitor expiration dates and availability.

The Equipment Workgroup developed a respiratory "*Go Kit*" of equipment that can travel, in conjunction with staff from an Anchorage area hospital, to remote villages suffering an epidemic or disaster. The *Go Kit* will allow for more local treatment and less need for dangerous patient transport.

The *Go Kit* is centered around the 2 HT50 ventilators previously mentioned. It contains everything needed to set up and maintain pediatric ventilatory support for 2-5 days. The extra supplies needed would depend on the situation and destination. The workgroup has created a flexible checklist designed to support a respiratory emergency such as RSV. Most of the items on the list are stored as a stockpile within the *Go Kit*. MEP-P has created 1 *Go Kit* and provided information for mobilization of the Kit to the 2 Pediatric Critical Care hospitals, PAMC or ANMC. An exercise testing *Go Kit* mobilization took place in July 2008.

Exercise

A team of emergency preparedness professionals from health care facilities and government agencies developed an exercise to test and troubleshoot this project. There are two exercises currently planned:

1. Anchorage area city-wide wildfire functional exercise took place June 26th, 2008.
2. Rural RSV outbreak tabletop with functional mobilization of *Go Kit* took place July 11th through 17th, 2008.

MEP-P convinced Anchorage area hospital partners to use an annual city-wide exercise to examine pediatric surge capacity. The two pediatric critical care hospitals, PAMC and ANMC were involved, as well as Alaska Regional Hospital

and the Elmendorf Air Force Base military hospital. On June 26th 2008, each hospital ran its own exercise focusing on pediatric patients with communication between the civilian hospitals, government Emergency Operation Centers and the military base hospital. MEP-P provided extra, independent, evaluators to observe pediatric medical surge decision making within the participant institutions.

The scenario simulated a wildfire encroaching on an Anchorage elementary school and surrounding neighborhood during the school year. The affected area was evacuated, but respiratory injuries were significant, requiring a surge in patients at the participating hospitals. Objectives included: determining maximum pediatric surge at participating hospitals, downloading pediatric patients from critical care facility to non-critical care facility to increase critical care capacity, evaluating ventilator and pediatric medical supply availability and accessibility and evaluating training of non-pediatric personnel.



“Victims” on “ventilators” during wildfire scenario citywide exercise

were not as noisy or stressful.

Other notables were seemingly innocuous byproducts that had profound effects on the progression of the exercise. Most significant was the loud noise inevitable when 25 or more kids are in an unfamiliar situation together. The volume of the victim volunteers made listening to overheard pages, ringing phones and pagers impossible at one hospital. Emotionally distressed children also create an extra burden on the already stressed health care providers, whereas previous exercises with similar numbers of adults

Ultimately PAMC processed 79 patients, ANMC 25, with the other hospitals caring for 25. The exercise stipulated that all peds beds in Anchorage (approx 80 PICU and standard staffed beds) were currently full. Thus, the 129 victim volunteers in the exercise represent approximately 160% of the total Anchorage area pediatric surge capability. The exercise illuminated many issues related to pediatric surge. Communication between the hospitals and government organizations was difficult, but ventilator availability was improved through transport of HT50 ventilators to requesting institutions. Staffing solutions included using float pool nurses trained in peds, including some trained in PEPP, EMS personnel and in one case, housekeeping staff.

The second exercise simulated a rural pediatric respiratory epidemic such as the incident in 2007 that inspired this project. It was conducted as a tabletop



Samuel Simmonds Memorial Hospital in Barrow

combined with a functional component evaluating communication flow and *Go Kit* mobilization.

The exercise started July 11th with a tabletop scenario of a surge of 12 pediatric patients at Samuel Simmonds Memorial Hospital in Barrow (SSMH) which has 14 licensed and 12 staffed beds. SSMH providers requested help from the State DHSS to provide supplies and staff if possible to avoid med-evacuation of patients to Anchorage. The surge simulation progressed to 50 pediatric patients within 6 days, necessitating many med-evac flights to Anchorage and transport of a *Go Kit* and *Go Team* to Barrow to mitigate the surge. The *Go Team* consisted of one pediatric intensivist physician from ANMC, one pediatric critical care nurse from PAMC, one respiratory therapist from FMH and a logistical team leader position which was filled by the MEP-P Project Coordinator.

Ethics

While less direct than staffing or equipment, ethical concerns are an understandably important part of disaster preparedness. Emergency planning is generally about improving availability of scarce resources, however there are disasters, such as a pandemic flu outbreak, where no amount of preparation can make enough resources available.

The workgroup examining resource allocation and ethical considerations is composed of Anchorage area pediatricians, Respiratory Therapists, an Alaska Department of Public Health attorney and emergency preparedness coordinator and a hospital ethicist as well as non-medical community contributors: a university philosophy professor and bioethics graduate student.

There are three documents created through this workgroup. They will act to initiate an ethical discussion among health care providers and the communities they serve.

1. A technical medical recommendation for pediatric resource allocation in a disaster.
2. An expository ethical reasoning discussion of pediatric resource allocation in a disaster.
3. A Frequently Asked Questions document to address perceived public concerns about the proposed plan.

The technical medical recommendation document is targeted at healthcare providers and facilities. It draws heavily from existing documents published by Utah, New York City and Toronto workgroups. This document is based on a modified Sequential Organ Failure Assessment (SOFA) score and many established clinical scoring algorithms. The modifications were developed by pediatricians and healthcare providers from around Alaska with the intent to improve numbers of pediatric survivors in the event of pandemic flu or other major disaster necessitating resource allocation.

The expository ethical reasoning document is targeted at the public as well as the medical community in an effort to explain in depth the proposed changes in the medical system during a major disaster. This document explains the decision making process behind the technical medical recommendations. The Frequently Asked Questions document is aimed at the general public and includes answers to basic questions such as “What is a Triage Plan?” to more complex issues such as “How can we be sure that the triage plan will be fair?” Both the ethical reasoning and Frequently Asked Questions were developed by healthcare providers, ethicists and non-medical community contributors.

Community

The Community Workgroup focused exclusively on Anchorage area needs. It consisted of healthcare providers and administrators from the Anchorage area hospitals, State and Municipal public health officials and representatives from the Anchorage School District (ASD). Combining community preparation with the medical training, equipment and testing planned for the rest of this project will help Alaska handle all levels of emergency where children are involved.

The Community Workgroup has 2 areas of focus.

1. Coordinate with the Municipality of Anchorage Emergency Operations Center (MOA EOC) on pediatric expertise for medical advice line and congregate care shelters for children with special needs.
2. Coordinate with ASD for storage of infant supplies in existing congregate care shelter supply stockpiles.

Through the Municipality of Anchorage Health and Human Services (MOA HHS) the Community Workgroup has coordinated with the MOA EOC to make available pediatric medical expertise to the EOC’s Emergency Advice Line system. Providence Hospital’s Nurse Advice Line has agreed to accept referrals from the Emergency Advice Line in the event of an emergency. The Nurse Advice Line is familiar with pediatric healthcare needs and is part of PAMC, one of Anchorage’s pediatric critical care facilities.

Congregate care shelters for children with special needs such as ventilators, oxygen or other medical technology are identified as Anchorage School District (ASD) shelters at Anchorage area schools with generators capable of independent power, water and food supply for a minimum of 3 days under adverse conditions.

Each of the 22 ASD shelters has an associated stockpile of items for 1,000 people, school age and older. In a common oversight in emergency planning, no infant care supplies are included in these stockpiles. To each of the 22 ASD stockpiles, MEP-P supplied 600 diapers in 3 sizes and 1400 diaper wipes. Stored in a temperature regulated garage are 44 cases of various powdered

infant formulas and bottles which can be mixed with water provided by the ASD through its independent bottling plant.

Individual Facility Developments

The overarching tasks of the project detailed above focused on the two pediatric critical care hospitals, ANMC and PAMC. However, many of the non-pediatric critical care partner institutions were able to make use of grant funds in ways specific to their institutional needs for pediatric medical preparedness.

Alaska Regional Hospital (ARH) purchased five pediatric Broselow code carts to house pediatric supplies and medications in areas of the facility which may act as peds surge areas or had inadequate access to pediatric supplies.

ARH also purchased a number of pediatric educational tools including pediatric sized training mannequins, pediatric AED training units and PEARS course manuals.

For their involvement in the citywide pediatric exercise, ARH purchased victim scenario cards to provide detailed information on each simulated victim.

Anchorage Neighborhood Health Center (ANHC) participated in the citywide pediatric exercise

Central Peninsula Hospital (CPH) purchased and created a pediatric supply and emergency supply cart based upon an existing pediatric supply cart at the institution. This cart is used to bring pediatric sized medical supplies and appropriate comfort items to any area of the hospital required as well as provide a stockpile of appropriately sized emergency supplies.

In addition, CPH sent one employee to the Anchorage area PEPP pilot course for training.

Fairbanks Memorial Hospital (FMH) sent five staff members to the Anchorage area PEPP pilot course hosted by MEP-P for training. These five also attended the PEPP instructor training session with intent to provide PEPP to staff at FMH.

Mat Su Regional Medical Center (MSRMC) created a pediatric mass casualty incident exercise testing their facility's surge capability and behavioral health response.

Lessons Learned

Positive:

- The AAPP's existing partnership between pediatric focused health care institutions and government agencies was invaluable to accomplishing this project.
- Hiring a capable, impartial, third party project coordinator was invaluable to the project.

- Trust and personal relationships between institutions and government allowed project partners to take financial risk in order to complete project in a timely fashion.
- Using pediatric victims in hospital disaster exercises is possible and useful.
- Encouraging diverse workgroup teams fostered creativity and statewide participation.
- Time spent searching for workgroup leaders with passion for project goals was necessary to move project forward.
- Seeking out emergency preparedness assets in community, e.g. the ASD existing stockpiles, was beneficial.

Negative:

- Multi-level pass through structure of grant funding was cumbersome and time consuming.
- Institutional staff turnover made consistent participation difficult
- As a result of staff turnover and project changes, funding allocations were in constant flux. The many changes were difficult to address within rigid state grant requirements.
- Workgroup meeting participation benefited by longer, workshop style sessions. Only two workshop sessions during project.
- Certain prevalent pediatric emergency education courses, e.g. PALS, are viewed as less useful than the uncommon PEPP (or equivalent) for many providers by MEP-P Curriculum workgroup.
- Timeframe of project was too short to maximize potential of such a large group.
- Informal relationships within close knit Alaskan community discourage development of formal agreements and protocols.

Other Developments

There are ancillary benefits to this project, which have already improved Alaskan pediatric emergency preparedness.

- Emergency plans were initiated early in an RSV outbreak in February 2008, which resulted in activation of the MOA EOC, improved communication between governments and hospitals, heightened awareness and better management of the situation than in the 2007 incident.
- MEP-P members presented the project to approximately 50 Anchorage area pediatricians at an American Academy of Pediatrics sponsored Grand Rounds. Reception was favorable and the pediatrician response was congruent with the goals of the project in that they felt the key scarce resources were pediatric trained staff and respiratory equipment.
- Presentations such as Grand Rounds and flyers and posters created for project promotion at State nurses' conferences have

brought additional interest and participation from within partner institutions as well as their intended audience.

- Despite the challenges caused by collaboration among diverse institutions, working together has created a more unified healthcare community and has already improved communication between hospitals and state and local governments.
- MEP-P has initiated discourse with the joint military hospital at Elmendorf Air Force Base (EAFB) in Anchorage as an active partner in mitigating pediatric surge in Alaska.
- The robust emergency preparation of the ASD and their willingness to collaborate has allowed the health care community to work with the Anchorage schools to provide more resources than either could have alone.

The Future of the MEP-P Project

The MEP-P Project was a one-time competitive grant award that allowed for significant improvement of Alaska's pediatric preparedness. In order to integrate the efforts of the project into standard practice (e.g. PEPP training, *Go Kit* usage) and continue any lengthy processes started, (e.g. MOUs for equipment, dissemination of training modules) effort must continue past the end of this project.

The State Department of Health and Social Services (DHSS) Preparedness Group will head up coordination of these continuing efforts with assistance by certain members of MEP-P Workgroups and the Municipality of Anchorage.

Specific future tasks include:

- Incorporating recommended curriculum into standard protocols and requirements.
- Creating MOUs to delineate usage of purchased equipment in a disaster.
- Informing future providers about *Go Kit* availability and mobilization procedures.
- Incorporating larger numbers of pediatric victims in future disaster exercises.
- Requesting feedback from public and other health care institutions regarding the documents produced by the Ethics workgroup.
- Presenting developments of the MEP-P Project at local and national conferences.

Summary

- The MEP-P Project was an ambitious project to increase Anchorage area pediatric surge capabilities by 100% and 200% with altered standards of care.

- Anchorage area pediatric surge capacity was tested at 100% to 160%.
- Project scope reached beyond hospitals into community preparation and ethical decisions.
- Existing training course Pediatric Education for Pre-hospital Professionals (PEPP) was pilot tested with non-emergency and non-pediatric providers. This course is recommended to all health care providers to improve pediatric and disaster health care knowledge
- Four 1 hour Just In Time (JIT) Modules were created in hardcopy and electronic formats to encourage flexible and timely learning of pediatric disaster skills.
- Approximately \$300,000 was spent on equipment and supplies including pediatric capable ventilators and a “Go Kit” to assist rural villages with pediatric surge.
- Existing stockpiles throughout the Anchorage community were improved with pediatric specific supplies, e.g. diapers and formula
- A citywide functional exercise focusing on pediatric respiratory issues was performed at Anchorage hospitals to determine available surge capacities. A notional effective surge of approximately 160% was reached during the exercise
- Three documents have been drafted examining scarce resource allocation in disasters as related to pediatric patients
- The presence of the AAPP’s existing partnership between pediatric focused health care institutions and government agencies was invaluable to accomplishing this project.

Appendix A: MEP-P Commonly Used Acronyms

AAPP	All Alaska Pediatric Partnership
AAP	American Academy of Pediatrics
ANAS	Alaska Nurse Alert System
ANHC	Anchorage Neighborhood Health Center
ANMC	Alaska Native Medical Center
ANTHC	Alaska Native Tribal Health Consortium
APCA	Alaska Primary Care Association
ARH	Alaska Regional Hospital
ASPR	Assistant Secretary for Preparedness and Response
ASD	Anchorage School District
ASHNA	Alaska State Hospital and Nursing Home Association
CAHs	Critical Access Hospitals
CHAP	Community Health Aide Program
CPGH	Central Peninsula General Hospital

DHSS	Department of Health and Social Services (Alaska)
DHHS	Department of Health and Human Services (Anchorage)
DMAT	Disaster Medical Assistance Team
DNHPP	Division of National Healthcare Preparedness Programs
DPH	(Alaska) Division of Public Health
EAFB	Elmendorf Air Force Base
EMSC	Emergency Medical Services for Children (Alaska)
EOC	Emergency Operations Center (Anchorage)
ESAR-VHP	Emergency System for Advance Recruitment of Volunteer Health Professionals.
FMH	Fairbanks Memorial Hospital
FSA/SSA	Federal Single Audit/State Single Audit
GAO	General Accounting Office
HFP	Healthcare Facilities Partnership
HHS	(US Dept) Health and Human Services
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
JIT	Just In Time
JMEPG	Joint Medical Emergency Planning Group
MEP-P	Medical Emergency Preparedness – Pediatrics
MOE	Maintenance of Effort
MOA	Memorandum of Agreement/ Municipality of Anchorage
MOU	Memorandum of Understanding
MSRMC	Mat-Su Regional Medical Center
NGA	Notice of Grant Award
NIMS	National Incident Management System
OEM	Office of Emergency Management (Anchorage)
OMB	Office of Management and Budget (Alaska)
OPEO	Office of Preparedness and Emergency Operations (ASPR)
OIG	Office of Inspector General
PALI	Providence Alaska Learning Institute
PAMC	Providence Alaska Medical Center
PEPP	Pediatric Education for Pre-hospital Professionals
PHS	Providence Health Services
PICU	Pediatric Intensive Care Unit
RSV	Respiratory Syncytial Virus

SC Steering Committee
 SCF South Central Foundation
 SNS Strategic National Stockpile

TCHAP The Children’s Hospital at Providence

**Appendix B:
 Medical Emergency Preparedness – Pediatrics Project Steering
 Committee Roster
 With workgroup affiliation if applicable**

Workgroup	Name	Title	Institute
	Aaron Case	MEP-P Project Coordinator	MEP-P
	Beth Fleischer	Emergency Preparedness Coordinatator	APCA
Curriculum	Bobbi O’Kelley	Residential Intake Manager	North Star
	Bruce Hess, MD	Chief, Pediatrics	EAFB
Curriculum	Cindy Alkire	Assistant Chief Nurse Executive	TCHAP
	Clint Brooks	Director, Emergency Preparedness, Safety & Security	FMH
Exercise	Darren Damiani	Medical Readiness	EAFB
Community	Debbie Golden	Perinatal Nurse Consultant	DHSS
Curriculum	Deborah Whitethorn	Administrative Nursing Supervisor	ARH
	Doreen Risley	EMSC Supervisor	DH&SS
	Gail Pass	Grants Administrator	TCHAP
	Greg Encelewski	Finance Director	SCF
Community	Jane Fellman	Coordinator, Safe Kids	CPGH
	Jay Johnson	Preparedness Program Grant Project Coodinator	DHSS
Community	Jayson Smart	Deputy Director, DH&HS	MOA/DH&HS
	Joan Fisher	Executive Director	ANHC
	Kristen Cady	Acting Director, Maternal Child Health	ANMC
Curriculum	LeMay Hupp	Coordinator	ANAS
Exercise, Community	Mark Mew	Security & Emergency Preparedness	ASD
	Mary Grisco	Executive Director	AAPP
Curriculum, Community	Nancy Edtl	Coordinator of Nursing & Health Services	ASD
Curriculum, Equipment	Patricia Smith	Director, Birthing Center	MSRMC
Ethics,	Richard Mandsager, MD	Executive Director	TCHAP

Equipment			
Ethics	Sally Abbott	Hospital Coordinator, Public Health Preparedness	DHSS
Community	Stephanie Birch	Title V & CSHCH Director	DHSS
Community	Tari O'Connor	Division Manager, Community Health Services	MOA/DHHS

Medical Emergency Preparedness – Pediatrics Project: Other Members

Ethics	Stephanie Bauer	Asst Prof of Philosophy	UAA
Subcommittee	Name	Title	Institution
Equipment	Steven Mayer	Asst Clinical Mgr Respiratory	PAMC
	Amy Danzi	Disaster Preparedness and Response Director	Red Cross
Exercise	Tony Lazenby	Emergency Preparedness	ANHC
Community	Arlene Patuc	Inpatient Peds, Discharge Coordinator	ANMC
Curriculum, Ethics	BJ Coopes	Pediatric Intensivist	TCHAP
Equipment, Ethics	Dave Gilbert	Director, Cardiopulmonary services	MSRMC
Equipment, Ethics	Deb Lerner	Pediatric Intensivist	TCHAP
Equipment	Don Lesco	Purchasing	ANMC
Equipment	Donna Fleming	Supply Chain Purchasing	ANMC
Equipment, Ethics	Ed DeForest	EFD@anmc.org	ANMC
Ethics	Elizabeth Bakalar	Assistant Attorney General	DHSS
Curriculum	Jennifer Thomas	Nurse Manager, Peds	EAFB
Equipment	Joe Miljure	Materials Handler Supervisor	ANTHC
Curriculum	Linda Oxley	Clinical Nurse Educator	ANMC
Ethics	Matt Hirschfeld, MD	Inpatient Pediatrician	SCF
Ethics	Maria Wallington, MD	Ethicist	PAMC
Community	Marilyn Deykes	Inpatient Nurse Manager	ANMC
	Marisa Wang	Grants Manager	SCF
Ethics	Michael Dooley	Community representative	N/A
Equipment	Mike Engel, MD	Pediatrician	ANMC
Curriculum	Patty Williams	Emergency Department Director	FMH
Equipment	Paula Fair	Nursing Director, Women's and Children	ARH

