Addressing Population Based Health in Rural & Remote Areas: An International Tale EMS Systems
G'Day  Mate!
(Hello)
The Australasian Council of Ambulance Authorities (CAA) - Rural and Remote Symposium in combination with the 3rd Annual International Roundtable on Community Paramedicine and Rural Health Care Delivery.
Fourth Annual
International Roundtable on Community Paramedicine and Rural Healthcare Delivery
Victoria, British Columbia CAN
May 26-27, 2008

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Fifth Annual International Roundtable on Community Paramedicine and Rural Healthcare Delivery
October 12-17, 2009
Auckland, New Zealand

October 12-13  IRCP and Rural and Remote Symposium
October 14-15  Australian Council of Ambulance Authorities Annual Convention meeting
October 15    Australian College of Ambulance Professionals Conference registration (evening)
October 16-17  ACAP Conference
6th Annual International Roundtable on Community Paramedicine

Save The Date!

Sixth International Roundtable on Community Paramedicine
August 9-13, 2010
Manor Vail Resort
Vail, Colorado

August 9-11 IRCP
August 11-13 Rural EMS Summit
Mission

The IRCP promotes the international exchange of information and experience related to the provision of flexible and reliable health care services to residents of rural and remote areas using novel health care delivery models and to be a resource to public policy makers, systems managers, and others. While its focus is on rural and remote medicine, the lessons learned may prove beneficial to the better provision of urban health care.
Rural/Frontier EMS Agenda for the Future

http://www.nrharural.org/groups/sub/EMS.html
Recommendations

Integration of Health Services

• Encourage EMS-based community health service program development through the funding of pilots**, cataloguing of existing successful practices, exploration of opportunities for expanded EMS scopes of practice**, and on-going reimbursement for the provision of such services**.
Paramedic Programs & Scope of Practice

• 4 Paramedic Designations
  • Primary Care Paramedic (PCP)
  • Intermediate Care Paramedic (ICP)
  • Advanced Care Paramedic (ACP)
  • Critical Care Paramedic (CCP)
Long and Brier Islands

- Population: 1240
- Demographics: 50% over age of 65
- Closest hospital: 1 hour
- Closest regional hospital: 2 hours
Project Background

- A clinic without a doctor
- A community looking for answers to their healthcare needs
- An aging population with ever increasing healthcare requirements
- An ambulance operation in need of increased, standardized training and equipment
- A couple of visionaries with a dream
The Early Beginnings

- Emergency Health Services makes transition from previous operator to Emergency Medical Care
- Operations base set up at the community health centre 24 X 7
- Base staffed with two paramedics with a mixture of ALS & BLS certifications
- Duty paramedics respond to all local emergency and non-emergency calls
- Low volume of calls on the Islands approximately 1 call every 2.7 days
Development of the Program

- Provincial Medical Director developed and approved all medical policies and protocols
- A project manager was hired to assist in the development of the program
- This person was a medical nurse with a background in EMS quality audit management
- Local medical oversight physician also assigned to the team
- In October 2002 a nurse practitioner joined the team
Program Curriculum

• Clinical Theory & Skills
  • IV antibiotics
  • Advanced wound care
  • CHF assessment
  • Phlebotomies
  • Immunizations
  • Blood pressure checks
  • Urinalysis checks
  • B12 administration
  • Blood sugar monitoring
  • Suture/Staple Removal

• Programs
  • Fall assessment program
  • Car seat installation clinics
  • Adopt - a - patient program
    • Immunization Clinics
  • First aid & CPR community courses
  • Multi-agency training sessions
  • Community health fair
    • Safety programs
Paramedic Innovation

• Adopt-a-patient program initiated by a community paramedic
  – Patients needing routine home visits are adopted by one paramedic providing continuity of care, rather than being seen by many
  – Paramedic and patient agree on visit schedule
  – Visits are documented and reports given to the NP and family physician
Partnering with the Nurse Practitioner

- Well woman clinics
- Well baby clinics
- Healthy Islander clinics
- Smoking cessation program
- Exercise classes
- Phlebotomies labs
- Vial of life
- Immunization clinics
Common types of Care at Clinic

- Hypertension
- Ears syringed
- Sore throat
- Prenatal/PAPs
- Laceration
- Injections
- Dog bite
- UTI
- Foreign body in eye
- BP checks
- Fractures
- Back pain
- Wound dressings
- Adopt-a-patient
The facts please, just the facts!

• Digby Hospital is the community hospital located 45 minutes from the ferry that leads to the islands.

• In 2002 & 2003 there was a decrease of 23%, from 2001, for Island residents attending this emergency department.

• 2004 data will be forthcoming and is expected to show similar results.
A day in the life of Community Paramedic

- Report for duty as per any EHS Paramedic.
- Complete an Ambulance Equipment Check list.
- Complete an CP Bag Check list
- Check log for booked CP calls (dressing changes, Adopt-a patient etc.)
- Available for 911 Calls at all times
- Be available at clinic for triage, treatment & phlebotomies.
- Complete all Patient Care Records as well as PCR2 Forms for CP related calls.
First Community Paramedic Graduating Class
Developing Role

- See and Treat
  - Pathfinder Program
  - Community Paramedic
  - Unscheduled Care Practitioner

- Working in partnership to keep Patients at home
  - With the Patient
  - With local NHS provider

- To consider a Patient having to go to hospital as a potential failure
  - Prevent avoidable admissions.
Pathfinder Program

• Additional assessment skills
  • More detailed history
  • Inclusions of social factors

• Facilitate at home follow-up for
  • Diabetics
  • Epileptics

• Additional minor trauma skills
  • Assessment of minor head injuries
  • Wound management/ closure
Community Paramedics

- Work base within local health centre
  - Established as part of HC team
  - Will run clinics
  - Carry out assessments
  - Sit in on consultations

- Will attend house calls for GP
  - Carry out at home assessments
  - Will refer back to GP if required
  - Prescribing rights
  - Act with limited autonomy

- Still attend 999/ cat A calls
Unscheduled Care Practitioner

- Work within HC/Minor injury unit
  - Established as part of HC team
  - Will run clinics
  - Carry out assessments including limb x-ray
  - Conduct consultations
  - Will make referrals
  - Have prescribing rights

- Will attend house calls for GP
  - Carry out at home assessments
  - Will refer back to GP if required
  - Act with full autonomy

- Still attend 999/cat A calls
Australia

- Divided into 6 States and 2 Territories
- Queensland is the second largest State
  - Population is 3,960,000
  - Rising every 6 min 33 secs
  - 65% live in south-east corner
  - Land mass is 1,733,250 km², Plus 6,712 km² Islands
  - 2,700 km x 1,500 km
  - Equivalent in size to Manitoba and Ontario combined or Manitoba, Saskatchewan and North of Alberta combined
What skill level should our rural paramedic hold?

• Should they do more?

OR

• Should they do less?
Number of Code 1 Cases per day for all locations and Average

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<th>Cases per day</th>
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Number of Days per Code 1 case for all locations and Average

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Average: 10.00
Average minutes per day spent on Code 1 cases for all locations and average

![Bar chart showing average minutes per day spent on Code 1 cases for different locations. The chart includes data points for Doom, Hugh, JCK, Kar, Morn, Norm, and Average. The average minutes per day range from 1.02 to 13.69.]
What will they do?

- Dunno
- Extended Paramedic or Physician Assistant model or both
- But maybe:
  - Support of allied health in public & primary health in rural and remote settings
  - Supplement rural workforce
  - Perhaps some role in provincial areas
Expanded Role for R&R Paramedics

Our Objective:

To create a paramedic with an extended roles who has the skills to identify and respond to the health needs of their own community within the local health framework
Surveying R&R Paramedic Practice

Survey undertaken by QAS to examine what service delivery Paramedics were undertaking in rural and remote locations in addition to the normal scope of practice.
Results of Survey: Additional Procedures and Skills

- Rural and Remote Paramedics are undertaking the following additional procedures:
  - Wound dressing including use of local anaesthetics
  - Suturing and minor surgical procedures
  - Chronic pain management
  - X-rays
  - Mental health assessment/treatment
  - Vaccinations
  - Assisting with minor surgery
  - Blood Pressure/cardiovascular health monitoring
Results of the Survey: Health Promotion Activities

• Rural and Remote Paramedics are undertaking the following additional Health Promotion Activities:
  • CPR
  • Indigenous First Aid
  • RFDS Health Promotion project
  • Road accident prevention
  • Presentations to community groups (e.g., Nursing Mothers, farm & industry groups)
Future Directions for Expanded Scope of Practice for R&R Paramedics

• Graduate Certificate 2006

• Graduate Diploma in 2007

• Masters Degree in 2008
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Alaska Native Health System
Community Health Aide Program
CHAP History

- **1950s** Chemotherapy Aides
  - Direct Observed Therapy for TB patients
  - Addressed high rates of infant mortality and injuries
  - Volunteers

- **1960s** Formal Training
  - Trial training program for “medical aides”
  - Dr. Walter Johnson / Emmonak

- **1968** Federal Funding
  - Money to hire, train, and pay 185 CHAs in 157 villages

- **1975** Indian Self-Determination and Education Assistance Act (PL 93-638)

- **1988** “CHAP in Crisis” Report
  - In depth look at program resulting in doubling federal funds and establishing standard criteria for curriculum and training centers

- **2001** CHAP Update 2001 “Alaska’s Rural Health Care at Risk”
  - Reexamine program priorities and statewide goals
Alaska Community Health Aide/Practitioner Manual (CHAM)

- A guide to the CHA/P for every patient encounter
- 6th grade reading level
- Multiple cross references
- Current treatment guidelines based on “best practices” as agreed upon by panel of medical reviewers
2006 CHAM

- Emergency Field Handbook
  - New Volume
  - Designed for use outside of clinic
- Patient Care Visit
  - Significant reorganization and revision
  - Increased efficiency for Health Aides
- Medicine Handbook
  - Incorporates old Village Medicine Reference
  - Includes only meds that are stocked in clinics
- Reference and Procedure
  - New equipment and procedures chapter
  - Expanded End of Life Comfort Care and Death and Grief chapters
CHAM

- CHA/P uses CHAM to obtain chief complaint and history of present illness

- Identifies specific area of CHAM to guide exam and assessment and determine plan

- Follows plan if CHA/P has a standing order for this problem or reports to referral physician
What Services Do CHA/Ps Provide?
24 Hour Emergency Care

Acute, Non-emergent, and Urgent Care
Prenatal, Emergency Childbirth and Newborn Care
Chronic Care Follow-Up
Now and Then

- 1950s & 1960s: CHAs in scattered villages
- 1980s: 200 CHA/Ps in 150 villages
- 2005: Over 550 CHA/Ps in ~180 villages providing over 300,000 patient encounters annually
History of Modern Community Paramedicine and The Development of the Internationally Standardized Community Paramedic Curriculum
Community Paramedic
The Rural and Remote Dilemma

• ¼ of Americans live in rural and remote areas

• Only 10% of America’s doctors practice there

• 4 times as many rural and remote residents traveled >30 miles for health care, compared to urban residents
Rural and Remote Demographics

- More elderly
- More immigrants
- More poverty
- Poorer health
Filling an Unmet Need with Untapped Resources
Filling an Unmet Need with Untapped Resources
Volunteer and Paid Paramedics

- EMTs/Paramedics already know how to deliver care locally.
- Know how to assess resources and make decisions.
- They could fill gaps in care with enhanced skills through targeted training.
Seizing the Opportunity

- Built on the Rural and Frontier EMS Agenda of the Future
- Community Healthcare and Emergency Cooperative (CHEC) developed the curriculum
- The curriculum supports the work of the International Roundtable on Community Paramedicine supports (IRCP)
- Spearheading a movement
The Community Healthcare and Emergency Collaborative
The Community Paramedic Program

- Expand role, not scope
- Assess and identify gaps between community needs and services
- Improve quality of life/health
The Community Paramedic Program

- Level 1 – Non-paramedic filling some roles of the Community Paramedic
- Level 2 -- Certificate or Associate degree
- Level 3 – Bachelor’s degree
- Level 4 – Master’s degree
Expanded Services

• Primary care
• Emergency care
• Public health
• Disease management
• Prevention
• Wellness
• Mental health
• Dental care
Nova Scotia Community Paramedic Model

Serves Long and Brier Island

- Population: 1,240
- >50% age 65+
- 2 hours + to nearest hospital
- No local health care provider
Nova Scotia Community Paramedic Model

Impressive Results

40% 28%  

REDUCTION IN EMERGENCY ROOM VISITS OVER 5 YEARS  

REDUCTION IN CLINIC VISITS
Community Paramedic Training Program

- Where is the pilot based?
- Which communities will be served?
- Who is involved? Colleges? County? Town? Hospitals?
- When will it start?
Keys to Community Paramedic Program

- Flexible
- Resourceful
- Gap-filling
- Rural and Remote Centric
Community Paramedic Guidelines

• Essential oversight by community care providers

• Practice where designated underserved

• Approved and welcomed

• Funding specific to each locale
Major Benefits of Community Paramedic Program

- Keeps rural and remote health issues on the radar of policymakers and community leaders
- Measures and addresses health issues specific to rural and remote populations
Making the Program a Reality

- University/community college participation
- Establish international registry of student graduates
Curriculum Ready to Go

- Standardized multi-module delivery model
- Applicable across America and internationally
- Certificate, associate, bachelor’s, master’s programs
Curriculum—Phase I

Foundational Skills @100 hours

• Role, advocacy, outreach and public health
• Community assessments
• Developing community strategies for care and prevention
Curriculum—Phase II

Clinical Skills @15-146 hours
Community Paramedic
Minnesota’s Pilot Project
Fundamentals of the Minnesota Project

• Funded by a Grant from the Minnesota Department of Health, Office of Rural Health & Primary Care

• Curriculum design consisted of four modules one of which was a clinical tract

• Experienced paramedics were chosen as the first group of candidates mitigating the need for a lengthy clinical training requirement
Project Design

• Two years of planning led to the selection of 8 student candidates
  • All are heavily involved in providing advanced EMS care throughout the state
  • Several provide critical care transport services as flight or ground medics
  • Three serve as educators of advanced emergency medical services
  • All provide services under the license of a medical director

• Course work began in January 2009 and completed January 2010
Externship Work
Shakopee Mdewakanton
Sioux Community
Mobile Clinic and Emergency Management
Mobile Clinic and Emergency Management Vehicle
Communications Capabilities

- 2- Dispatch Positions;
  - 800 Mhz radios
  - VHF
  - UHF
  - Marine
  - CB

- Cross patch capabilities.

- 30- Metro Region 800 Mhz portable radios
Exterior Briefing Area

- Exterior Briefing Area
  - 42" LCD T.V. with:
    - CCTV
    - Satellite T.V.
    - DVD/VCR
- Canopy area
- PA System
- An observation deck on the top of the trailer.
EMS Capabilities

- 4- Patient beds.
- 12 lead cardiac monitor.
- 3- AED’s with 3 lead monitoring.
- ALS bag.
- Crash cart.
- Wheel chair lift.
- Mammography suite.
- Chest X-ray suite.
- Staffed with Paramedics
Clinic Capabilities

- 2 Exam rooms
- Waiting area
- Lab
- Bathroom
- Mammography
- X-Ray
- Dental
Venues of Care Using the CP Model

- Provision of mobile clinics for Native American populations
- Provision of “free clinics” for communities of need
- “Chase Car” concept
- Regional disaster response teams (Strike Teams)
- Federal disaster response teams (Homeland Security-DMAT Units)
- Critical Access hospital providers (Emergency Departments, Home Health Care)
Filling the Gaps Together
G'Day Mate!

(Good-Bye)