Risk Assessment of Remote Medical Systems
INTRODUCTION

What is a remote medical system?

Medical emergency plans (Medevac) should meet the following response times, and it should be applied to all units within the project:

- 4 min – life saving first aid (level 1)
- 20 min – fully trained & certified first aider (level 2)
- 60 minutes – paramedic, site doctor (level 3/4)
- 4 hours – hospital with medical specialists (level 5).

If this is not feasible, then a risk assessment should determine what additional resources are needed and can be applied.
INTRODUCTION - CONTINUED

Why do we have such systems?

- Legal
- Ethical
- Logistical

Risk Assessments are the right tool to address these systems. Risk includes HS&E, company reputation, project success, etc.
Risk Assessments are the cornerstone of risk management.

Steps to process:

1. Establish Context

2. Risk Assessment
   - Identify risk (hazards)
   - Analyze risks identified
   - Evaluate those risks

3. Risk Treatment
RISK ASSESSMENT DISCUSSION TOPICS

- Risks that affect ability to provide quality health care
- Risks that affect project/logistics
- Discussing provider capabilities
- Equipment for the clinic
HEALTH RISK ASSESSMENTS

Identifying pertinent health risks:

- Environmental
- Disease
- Ergonomic/ job specific

• Often general illness is majority of cases

General Illness vs External causes
IDENTIFYING RISKS: HEALTH

Time to evacuate injured/ill personnel to higher level of care

- Resources available to transport
- Helicopters and limitations
- Ambulances – time to transport
- Personnel staffed on these transports

Capabilities at the higher level of care

- Staff – language, quality
- Equipment/Supplies

Capabilities of your own clinic and staff

- License/Certification: Doctor vs. Nurse vs. Paramedic
- How is your clinic equipped
IDENTIFYING RISKS: PROJECTS/LOGISTICS

What can your clinic handle on site?

• If they must be evacuated, you lose that personnel until replaced
• Operations often interrupted even if evacuee is not critical
• If medical provider goes with patient this may shut down operations

Use of equipment/ supplies/ medications

• Adequate supply for expected situations
• Ability to replenish in a timely fashion
  o Availability of certain products limited in different regions
  o Limitations by law, process and cost
MEDICAL CONTROL AND PROVIDER KNOWLEDGE

• Are your providers and medical control using the most current knowledge and skill sets?

• Emergency Medical Services have begun using research-based science to determine best treatments and procedures.

• New research and various conflicts have revealed a lot of new medical information.
Qualifications vs Knowledge/ Skills/ Abilities

Providers will have a qualification: license or certificate but does that really let you know or define their KSAs?

One type of provider could vary greatly depending on multiple factors:
- Where was qualification obtained?
- Individual experience, drive, education, etc.

There are potential misunderstandings of each qualification

What steps are taken to ensure the KSAs match those desired?
- Interview, written testing and/or skills check
AMAZING TECHNOLOGIES THAT ARE AVAILABLE

The potential capabilities of a remote medical system are amazing with today's technology and options!

• Telemedicine - "doc in a box" systems

• Point of care laboratory equipment – iStat

• Ultrasound – FAST Exam, cardiac output, stroke identification, appendicitis, etc.

• Walking blood banks
ONGOING TRAINING AND EVALUATION

Part of risk management is the ongoing evaluation and improvement of the system - PDCA

- What is working and what isn't
- Is the system addressing the identified needs as expected
- Ongoing training and evaluation of providers
• Changing standards and technology

• Good Risk Assessments
  Maximize capabilities
  Minimize risks

• Avoiding generic plans and systems

Triad of Death: https://emj.bmj.com/content/29/8/622

Stop the Bleed: https://www.bleedingcontrol.org/

TCCC: https://www.naemt.org/education/naemt-tccc

TECC: http://www.naemt.org/education/tecc
THANK YOU

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