#### Nursing by Another Name: Nursing Science Impact on Special Forces Clinicians in Prolonged Evacuation Situations



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## Faculty Disclosure

Faculty Name:	Kate Rocklein Kemplin, DNP, RN, MSN, BNSc, CCEMTP
Conflicts of Interest:	Served as research & development advisor for remote critical care monitoring device acquisitioned by the United States Special Operations Command (US SOCOM)
Employer:	The University of Tennessee at Chattanooga
Sponsorship/Commercial Support:	Funding received from Sigma Theta Tau - Zeta Alpha Chapter (143) & The University of Tennessee at Chattanooga Faculty Development Grant

## Goals and Objectives

#### Session Goal:

- Stimulate discourse on nursing science influences on Special Forces (SF) medics' care delivery for critical care in prolonged care contexts

#### Session Objectives:

- Contextualize geopolitical factors contributing to prolonged field care, SF medics' practice, & outcomes conundrums
- Present the development of prolonged field care (PFC) as based in nursing science translation & application

#### Caveats

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## The Archetypes

- "Special Operations"
  - •United States (US) Army Special Forces (SF) ['The Green Berets']
  - Special Forces Operational Detachment – Delta ('Delta Force')
  - Naval Special Warfare (Sea, Air, Land 'SEALs')
  - US Army Rangers
  - •US Air Force Pararescue Jumpers ('PJs')
  - Marine Special Operations ('MARSOC')
- All teams have an assigned medic









## The Reality

- Practice at level of advanced critical care RN (Rocklein, 2014) or 1<sup>st</sup>-year surgical resident (Graham, 1994)
- Medics' school: lower acceptance & higher attrition than Harvard
- 8+ years military medical experience
- Fluent in hostnation language (Pashto, Arabic, Tagalog, French, Spanish, Russian, etc)



SF medic students in advanced airway & ventilation



SF medic applies junctional tourniquet to abdominal trauma



SEAL medic provides veterinary care



SF medic practices diagnostic ultrasound



SF medic preps to perform surgery w/nerve block



Special Operations Rescue Team (SORT) medics





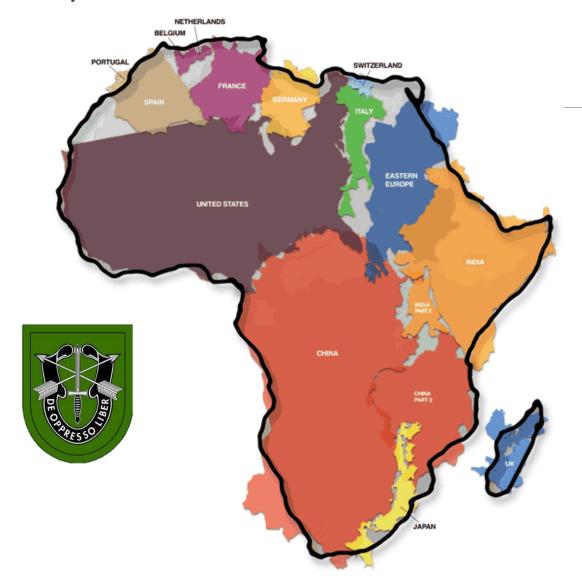
PJ medics prepare for rotary-wing evacuation



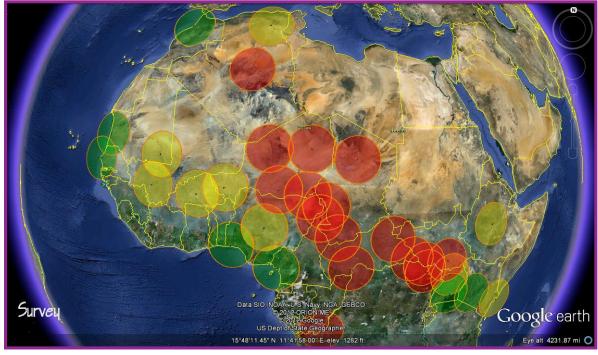
SF medic who really wanted to be included in this presentation

SF medics provide pediatric care (and reassurance) in village stability operations

## Geopolitical Context







Photos provided by COL M Givens, MD, US Army Special Forces Command

### The Problem

Evacuation platforms assume the "Golden Hour" exists

(Blackbourne et al., 2012; Hetzler & Risk, 2009; Risk & Hetzler, 2009)

- "Survivability" poorly operationalized
- Without evacuation, medics de facto nurses
  - Nursing care without nursing science
- SF operate in "special" areas & are excellent resuscitators
  - Liberators of the oppressed, not purveyors of aggression (Bank, 1986; Prados, 2015)



Medical supplies for a team, village, and contingencies

All-in-one treatment area, OR, ICU, resuscitation bay



Wound care & respiratory assessment from the back of a truck



#### The Solution

- Canadians & North Atlantic Treaty Organization (NATO)
  - Field medical care, applied beyond 'doctrinal planning time-lines' by an NSOCM (NATO Special Operations Combat Medic), in order to decrease patient mortality and morbidity.
  - Utilizes limited resources, and is sustained until the patient arrives at the next appropriate level of care
- Nursing: 90.4% female (Budden et al., 2013)
- Reexamine extant knowledge, assumptions, and concepts
- Discard all environmental "knowns" about critical care resources
- Give profound thanks for nursing science

#### The Obstacles

- Command structure: all physicians
- Special Forces: all male & alpha male and enlisted soldiers
  - Sexism?
- Cure vs care dichotomy: physicians cure, nurses care (Weaver, 2013)
  - Fix vs maintain
- Exited entrenchment from under physicians & sought academic nursing

## The Approach

- Philosophical: Critical pedagogy Constructivist epistemology
  - Medics' knowledge acquisition not empirical: is contextual & practice is complex (Rocklein, 2011)
  - Kuhn (1962): scientific [clinical] problems instigate revolutions in scientific practice & paradigm shifts
- ■Foucault: 'pouvoir-savoir' (Springer & Clinton, 2015)— medics powerless to maintain life due to lack of knowledge
  - Foucauldian discourse methods to translate nursing knowledge to affect survivability
  - Nursing has patterns of knowing foreign to other professions (Carper, 1978 as cited by Springer & Clinton, 2015)

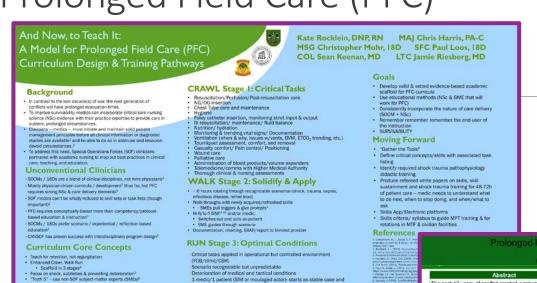
#### Theoretical

- Approach includes Vygotskian theory: zone of proximal development & scaffolded curriculum (Pea, 2004), subtracts technology
- Disruptions in health via catastrophic events (Newman, 1997)
- Care of systems constantly changing from baseline (Neuman, 2011b as cited in Fawcett & DeSanto-Medeya, 2013)
- Care emphasizing nutrition, hygiene, comfort, and sanitation (Davies, 2012; Nightingale, 1858; Nightingale, 1860)

#### Clinical Evidence Translation

- Systematic & Integrative review methodology (Whittemore & Knafl, 2005) fresh whole blood transfusions, fluid resuscitation, hemodynamic stabilization, critical care transport (Galvagno et al., 2014), monitoring
- Collaborative model to promote knowledge translation (Baumbusch et al., 2008) & care along a continuum: ruck truck house plane → hospital

#### The Product: Prolonged Field Care (PFC)



1 medic/1 patient (SIM or moulaided actor)- starts as stable case and

Stabilize & maintain patient while waiting for extraction/evacuation

Culmination of Critical Skills Acquisition-

- Familiar in initial presentation to unfamiliar along stages 1-3

· Clinical SME as PFC evaluator, Operational SME evaluates as well

- Resource-devoid: no comms, no electricity, no tech

Scenario ~ 22-36h, scaffold withdraws support4

. Monitor v/s, treat injuries appropriately, medication administration (antibiotics, pain meds), attempt to reach pre-surgical treatment

Sunnies available are contents of the aid had they nacked

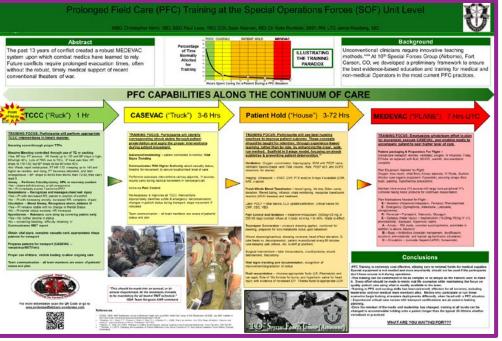
Must communicate patient status to SME & remote provider

NTENT AAR PORTAL REFERENCE MATERIA

SF Medic Curricular Changes



Prolonged Field Care Website & Podcasts



PFC Posters – International Military Medical Conference (Rocklein, Harris, Mohr, Loos, Keenan, & Riesberg, 2014; Mohr, Loos, Keenan, Rocklein, & Riesberg, 2014).

**RUN AGAIN:** 

Austere PFC

Images courtesy Kate Rocklein Kemplin & SF Medic Paul Loos, Joint Special Operations **Medical Training Center** 

1-1

End user & outcomes-driver

"Truth 1" - Humans vs hardware (brains vs tools)"
 Keep it simple

Scaffolding is inextricably linked to preventing clinical errors &

insuring safe medication administration<sup>1</sup>
Scaffolding transforms lower to higher-order learning & extracts

Scaffolding is key to connecting associations, concepts, rule relationships, and to develop meta-cognition<sup>10</sup>

Bloom: Higher-order learning requires insight, reflection, and

The Method: Scaffolding

nowledge in-waiting toward knowledge in-use<sup>a</sup>

SMEs give few answers, only questions<sup>a</sup>

Instructor is not the opposing force<sup>a</sup>



#### Prolonged Field Care Working Group Position Paper Prolonged Field Care Capabilities

Justin A. Ball, 18Z; Sean Keenan, MD

The Special Operations Command Prolonged Field Care Working Group (SOCOM PFC WG), composed of medical-specialty subject matter experts, has 2. Resuscitate the patient beyond crystalloid/colloid infusion edness of Special Operations Forces (SOF) medics. The first formal position paper from the working group suggests that medical providers consider the following list of capabilities when preparing their medical per-sonnel to provide prolonged field care (PFC) in austere settings. It is presented in a "minimum, better, best" for mat. The intent is to demonstrate those basic skills, with suggested adjunctive skills and equipment that may be used when considering PFC training

At first glance, the list may seem somewhat simple, but it mphasizes basic medical skills that, when put together, allow for a more comprehensive approach to critical patient care in an austere setting. Of note, equipment is relatively de-emphasized, since medical skills and training should be the focus of preparing the SOF provider

- c. Best: vital signs monitor to provide hands-free vital signs data at regular intervals
- a. Minimum: field fresh whole blood (FWB) transfusion kits b. Better: maintenance crystalloids also prepared for
- a major burn and/or closed head injury resuscitation (two to three cases of lactated Ringer's solution or PlasmaLyte A; hypertonic saline); coe sider adding lyophilized plasma as available; fluid
- Best: maintain a stock of packed red blood cells,
- fresh frozen plasma, and have type-specific donors identified for immediate FWB draw. Ventilate/oxygenate the patient
- a. Minimum: provide positive end-expiratory pre sure (PEEP) via bag-valve mask (you cannot ventilate a patient in the PFC setting [prolonged ventilation! without PEEP or they will be at risk

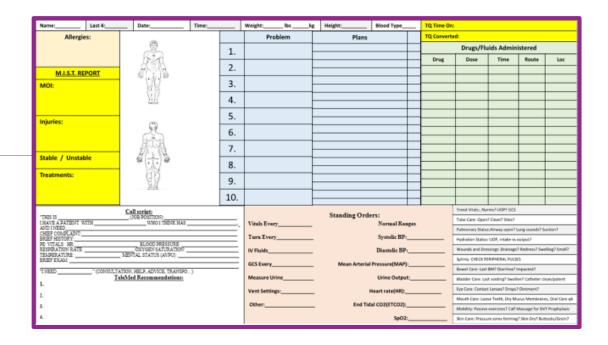
Prolonged Field Care White Papers (Ball & Keenan, 2015)

## The Care Plans

"This concept has completely changed and revolutionized the way I think about medicine and treating casualties" (Loos, 2016, para 1).



Images & Photos provided by Sergeant First Class Paul Loos, US Army SF Medic Prolongedfieldcare.org, "Create a Prioritized Care Plan"



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### The Future



 Joint Special Operations Medical Training Center [Medics' school] (faculty previously physicians, physician assistants, medics) has new billet for military nurse corps officer



- \$48 million (USD) 2017 funding announcement from Congress to research PFC; \$3 million (USD) in funding to research medics' performance in delivering combat casualty care
- In 2016, PhD RN (LTC Elizabeth Mann-Salinas, US Army) presented at Special Operations Medical Association Scientific Assembly
- Refugee & Non-governmental organizations (NGOs): resource-devoid care delivery, caring for & transporting critically ill in oppressed areas
- Translating innovations from Special Operations medics to civilian trauma/critical care nursing & medicine is unprecedented
  - Nasal core temp, capnography, freeze-dried plasma (accelerated IND), RFID monitoring to handhelds

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#### Questions?

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# Thank you very much!