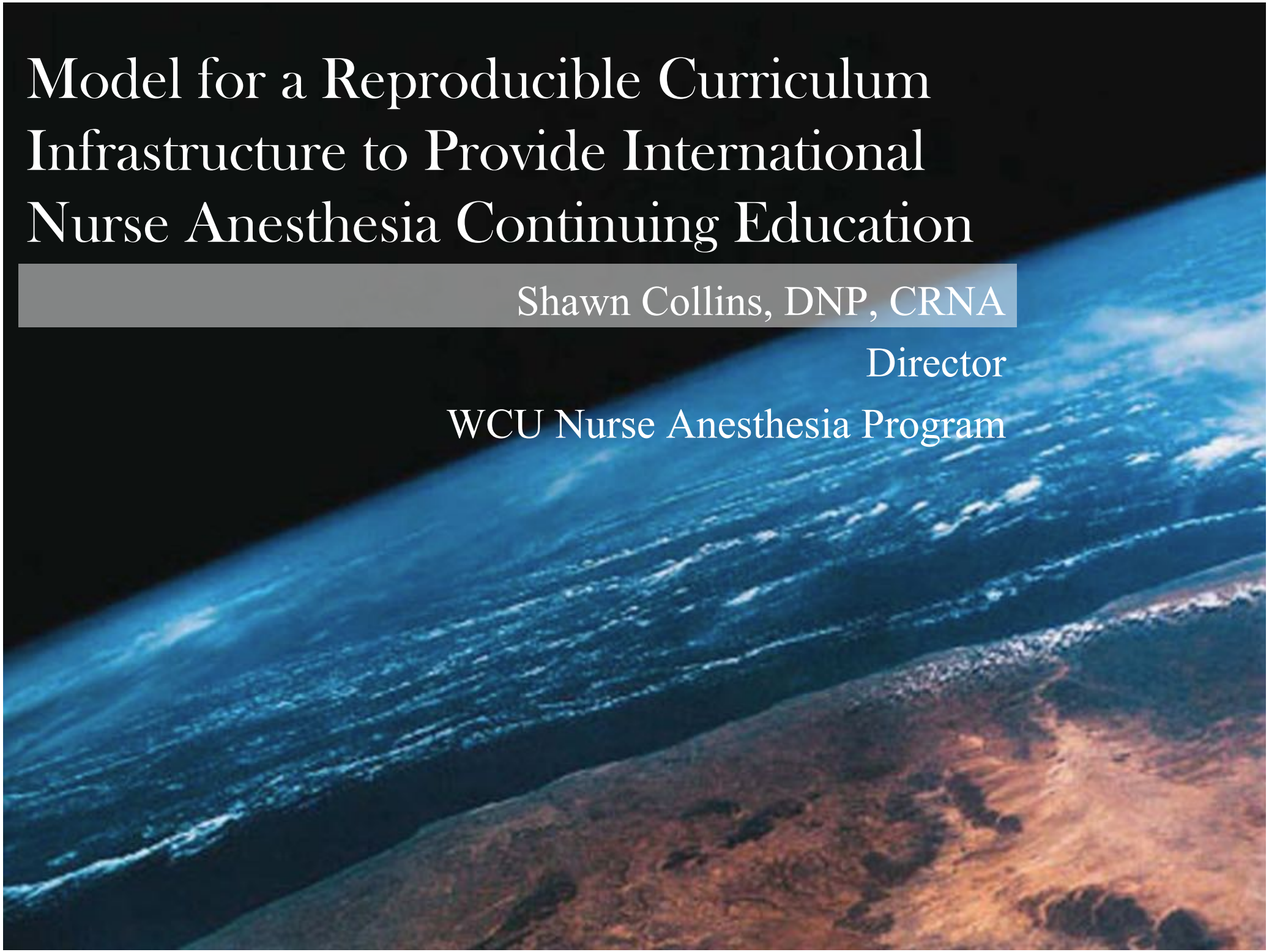
# Model for a Reproducible Curriculum Infrastructure to Provide International Nurse Anesthesia Continuing Education

Shawn Collins, DNP, CRNA

Director

WCU Nurse Anesthesia Program



# Executive Summary

- Problem
  - Anesthesia providers have a low status in many developing countries.[1]
  - Increasing evidence that the application of knowledge in developing countries is failing[1]
  - Poor initial training

– [1]Walker, I., Wilson, I., & Bogod, D. (2007). Anaesthesia in developing countries. *Anaesthesia, 62* (Suppl. 1), 2-3.

# Problem (cont.)

- Many anesthetists in developing countries have poor access to educational materials.
- Unrelenting workload
- Lack of standardized CE in developing countries

# Executive Summary

- Purpose
  - To develop a model for providing nurse anesthesia continuing education (CE) that can be reproduced and used in any developing country

# Market/Risk Analysis

- Market: past, present, & future:
  - Past
    - Historically, face-to-face education
  - Present
    - Higher education has been shifting (Lenn, 1997)
  - Future
    - Internet usage in developing countries

# Project Objectives

1) To develop a continuing education needs assessment tool

3) To develop an initial CE module library by 2008

5) To increase the knowledge base of Phnom Penh Cambodian nurse anesthetists as measured by pre and post-tests

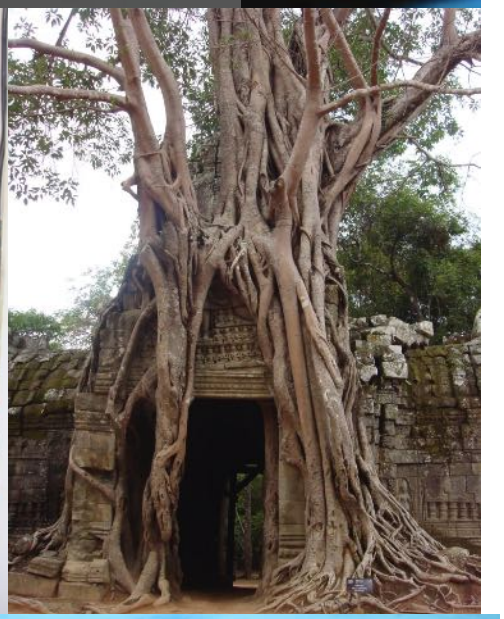
# Project Objectives (cont.)

4) Secure adequate volunteer assistance, defined as providing a volunteer-delivered CE program within six months of the request
5) To increase the knowledge base of the nurse anesthetists in two new developing countries per year starting in 2009
6) To obtain 90% program participant satisfaction by 2013
7) To develop standards for CE in developing countries

# Market/Risk (cont...)

- Risks:
  - Distance from the end-user
  - Limited volunteer base
  - Language barriers/lack of bilingual staff
  - Program developer's lack of experience with Information Technology (IT)
  - Exchange rates that fluctuate
  - End-user lack of Internet access
  - Presenter's understanding of cultural differences

# Action Plan



# Action Plan

- "Give a man a fish and feed him for a day. Teach him how to fish and feed him for life" [1]
- Training the local trainers
- Develop CE Needs Tool
- Determine the CE needs of nurse anesthetists in the developing country
- Develop CE modules with corresponding tests


- [1]Size, M., Soyannwo, O. A., & Justins, D. M. (2007). Pain management in developing countries. *Anaesthesia, 62*(Suppl. 1), 38-43.

# Action Plan (cont.)

- Recruit volunteer nurse anesthetists
- Administer pretest to CE program participants
- Present CE modules in Phnom Penh, Cambodia
- Immediate posttest to CE program participants
- Administer satisfaction surveys to CE program participants and volunteer nurse anesthetists

# Action Plan (cont.)

- Evaluate data
- CE Needs Tool and CE Modules stored
- Administer six-month posttest to Cambodian CE participants
- Present findings to IFNA and HVO

# Action Plan (cont.)

- Marketing
  - ✓Health Volunteers Overseas
    - AANA Booth
    - Health Volunteers Overseas Website
  - ✓IFNA Website
  - ✓AANA
    - Advertising in the AANA Bulletin

# Action Plan (cont.)

- Evaluation
  - CE Needs Tool
  - Pretest
  - Posttests (Immediate and 6-months)
  - Participant satisfaction survey
  - Volunteer satisfaction surveys
  - CE Module Database on HVO Servers
  - Number of annual CE programs delivered
  - Budget

# Timeframe

- CE Needs Survey in March 2008
- CE modules developed in April 2008
- Pilot program in Cambodia in May 2008
- CE modules and CE Needs Tool from the pilot program have been stored on HVO website
- Data analysis performed and results presented to HVO in August 2008

# Timeframe (cont.)

- 6-month posttest
- All aspects of the project were on schedule or ahead of schedule
- Timeframe for completion of the pilot program was December 2008
- CE programs planned for Bhutan and Ghana

# Results

- Objective One
  - ✓ The continuing education needs tool for developing countries
  - ✓ Qualitative questions

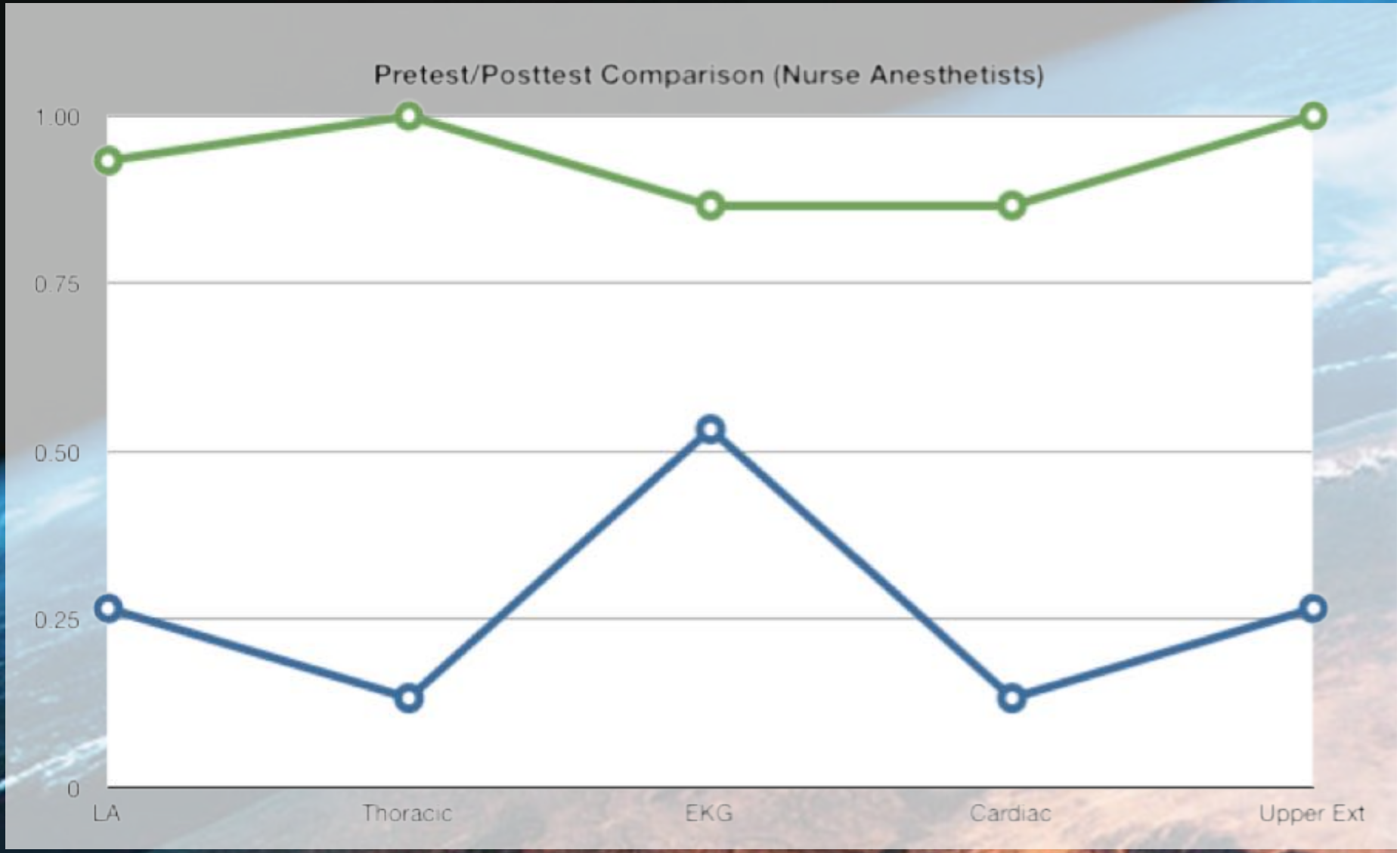
# Results

- Objective Two
  - ✓CE modules were developed for EKG, Cardiac Anatomy and Physiology, Thoracic Anatomy and Physiology, Local Anesthetics, and Upper Extremity Nerve Blocks.
  - ✓All five CE modules were placed on the HVO website

# Results

- Objective Three
  - ✓Piloted in Phnom Penh, Cambodia
  - ✓All participants showed a significant increase in knowledge
    - ✓Local Anesthetics (Pre = 27%, Post = 93%)
    - ✓Thoracic (Pre = 13%, Post = 100%)
    - ✓EKG (Pre = 53%, Post = 87%)
    - ✓Cardiac (Pre = 27%, Post = 93%)
    - ✓Upper extremity nerve blocks (Pre = 27%, Post = 100%)

# CE Pretest/Posttest Results



# Results

- Objective Four
  - ✓CE program for Cambodia was requested in November 2007.
  - ✓The Cambodian pilot CE program was delivered in May 2008
  - ✓Vietnam
  - ✓Bhutan

# Results

- Objective Five
  - ✓Health Volunteers Overseas annual Steering Committee met in August 2010
    - ✓It was agreed to move the program into Bhutan and Ghana in 2009.
    - ✓2010-2011

# Results

- Objective Six
  - ✓Participant satisfaction surveys were developed
  - ✓The satisfaction survey
    - ✓Delivered via Survey Monkey at the end the CE Module delivery.
  - ✓Responses on survey show 90% satisfaction
  - ✓The areas with room for improvement
    - ✓Handouts, in-class questions, facilitation of discussions, and language

# Results

- Objective Seven
  - ✓This is a long-term objective
  - ✓IFNA is working to develop international CE guidelines
- Unintended Consequences
  - ✓Increased presentation length

# Recommendations

1) CE Module delivery and students.
2) Access of the CE modules on the HVO website.
3) CE Needs Tool and Satisfaction Surveys translated into the local language.
4) Access email addresses through the IFNA database of its members.

# Recommendations

5) The CE module database
6) Determine what topics need to be included in the database.
7) Advertise for and solicit PowerPoint lecture donations on various topics
8) Advertise for and solicit PowerPoint lecture donations on various topics

# Recommendations

9) Foster relationships with nurse anesthetists in the developing country
10) Hand out the lectures in paper format
11) Trips to deliver the CE modules
12) Speak slowly
13) Expand the CE program

# Maintaining/Sustaining Change

- The Nurse Anesthesia Overseas Steering Committee
  - The project director serves on the Steering Committee for Nurse Anesthesia Overseas
- The project director and the IFNA
- The CE Needs Tool and CE modules
- CE Modules are being added

international federation of nurse anesthetists
IFNA

# Where are we today?

- HVO
  - Vietnam
  - Belize
  - Bhutan
  - Ethiopia

THE END