

# ***EXTENDING HEALING MISSIONS AND IMPROVING BOTTOM LINES THROUGH PRODUCT DONATIONS***

*MICHAEL WINTER - RN, MSN-NEL, CMSRN, OCN | Mercy Health Anderson Hospital, Bon Secours Mercy Health*

*GEORGIA WINSON, MS | President and Executive Director | Hospital Sisters Mission Outreach*

*RATISH KUMAR MOHAN, BE, MS | Biomedical Engineering Supervisor | Hospital Sisters Mission Outreach*

# THE HAVE & THE HAVE NOTS

- The story of Eros
- Venezuela in crisis:
  - 104 health facilities surveyed in 2018 showed that 79% had no running water, 25% of pediatric ICUs had closed down
  - In 2017 66% increase in pregnancy related deaths in 2 years
  - 80% shortage in medicine doctors needed
  - 70% shortage in vaccinations for children < 5 years old
  - 75% increase in malaria cases in 2016 from 2015
  - 19 lbs. average weight loss per citizen d/t famine
  - Brach-Sanchez, E. (2019). Infant deaths are on the rise in Venezuela, reversing years of improvements, study says. *CNN*. Retrieved from <https://www.cnn.com/2019/01/24/health/infant-mortality-venezuela-study/index.html>



# THE HAVE AND HAVE NOTS

- Mary's Story
- Liberia-Chronic Crisis
- Population traumatized and infrastructure decimated by years of civil war (1989-2003) and extreme poverty
- Fragile healthcare infrastructure close to collapse during the Ebola crisis
- Gross national per capita income: \$790 per year    US \$53,960
- Life expectancy: 62    US 76
- Children dying before age 5 (Per 1,000): 75    US 7
- Total expenditure on health care per person per year : \$980    US \$9403



FILM

# MEDICAL SUPPLY CHAIN IN DEVELOPING NATIONS

- Characteristics of medical supply chain in developing nations
  - No or inadequate budget
  - Unpredictable (frequency, volume, variety)
  - Little to no opportunity for group purchasing/volume discounts
  - Little to no reliable forecasting
- Biomedical challenges
  - Wide brand variability
  - Limited access to parts and consumables
  - Lack of clinical and technical training

# MEDICAL SUPPLY CHAIN IN DEVELOPED NATIONS

- Characteristics of medical supply chain in developed nations:
  - Dedicated budget
  - Prepared for the probable and the possible
  - Volume purchasing saves money
  - Prepackaged procedure packs increase efficiency and save money
  - Liability conscious
  - Predictable
- Factors contributing to rapid cycling of biomedical equipment:
  - Innovation
  - Competition requiring the best for:
    - Patients
    - Providers
  - Surplus is not a 4-letter word

# VALUING FINANCIAL STEWARDSHIP

- Three goals of my medical supply recycling program (MSRP)
  - Decrease financial & physical waste
    - Small idea = big result (clear bins!!!)
    - Update those physician preference sheets, folks!
    - Incentivizing waste reduction
  - Enhance community partnerships
    - Global health care is local health care!
  - Increase employee feeling of being vested in employer
    - Unintended effects (water pitchers...how much was saved??)



# EDUCATION ON RECOVERY & DONATION

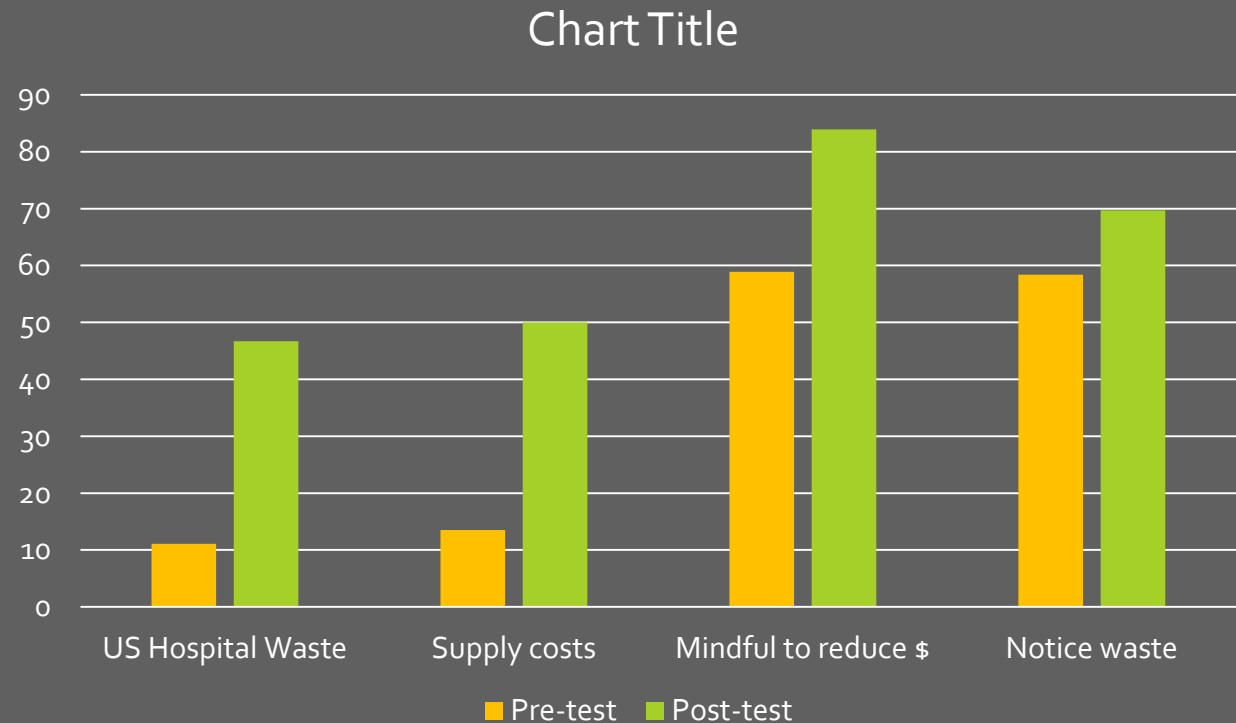
- Front line staff thrive when educated!
- Consumables:
  - Nothing from isolation, nothing contaminated, no medications!
- Equipment:
  - Looping an MSRO into these conversations is a win win!





# EVALUATION DRIVES EXPANSION!

- Research the Problem
- Determine the Solution
- Assess Staff Knowledge
- Educate Staff
- Reassess Staff knowledge
- Target & Evaluate the Response!



# STAFF ENGAGEMENT

- An MSRP further engages staff!
- According to the Robert Wood Johnson Foundation, “the cost of replacing a registered nurse ranges from about \$22,000 to more than \$64,000” (<https://www.rwjf.org/en/library/research/2009/07/business-case-cost-of-nurse-turnover.html>)



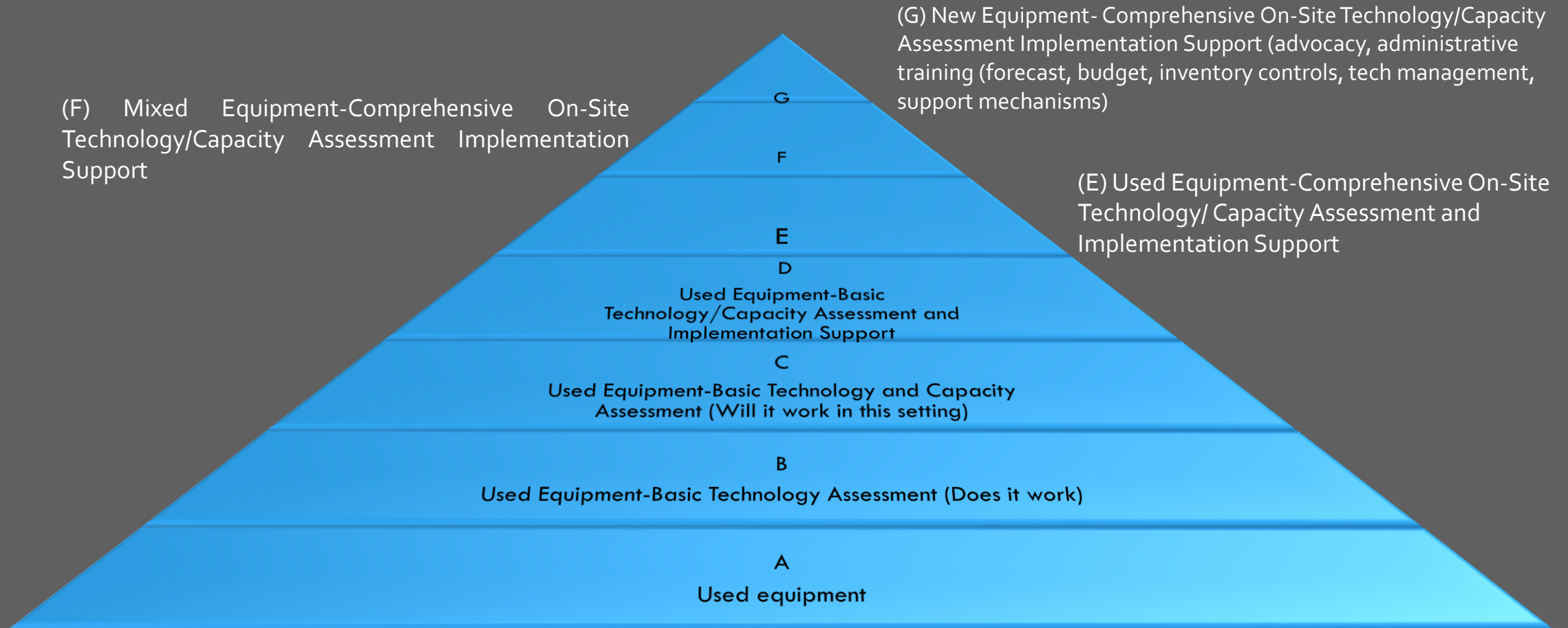
# THE BIG PICTURE: HOW CAN HEALTH SYSTEMS IN DEVELOPED NATIONS HELP

- MSRO Partnership
  - Accreditation
  - CHA Quality Drivers:
    - Organization (Leadership, Price/Value Ratio, Staffing)
    - Relationships (Hospitals, Beneficiaries, Financial Partners)
    - Operations (Quality Control, Logistics, Inventory Management System)
  - Engagement
  - Investment

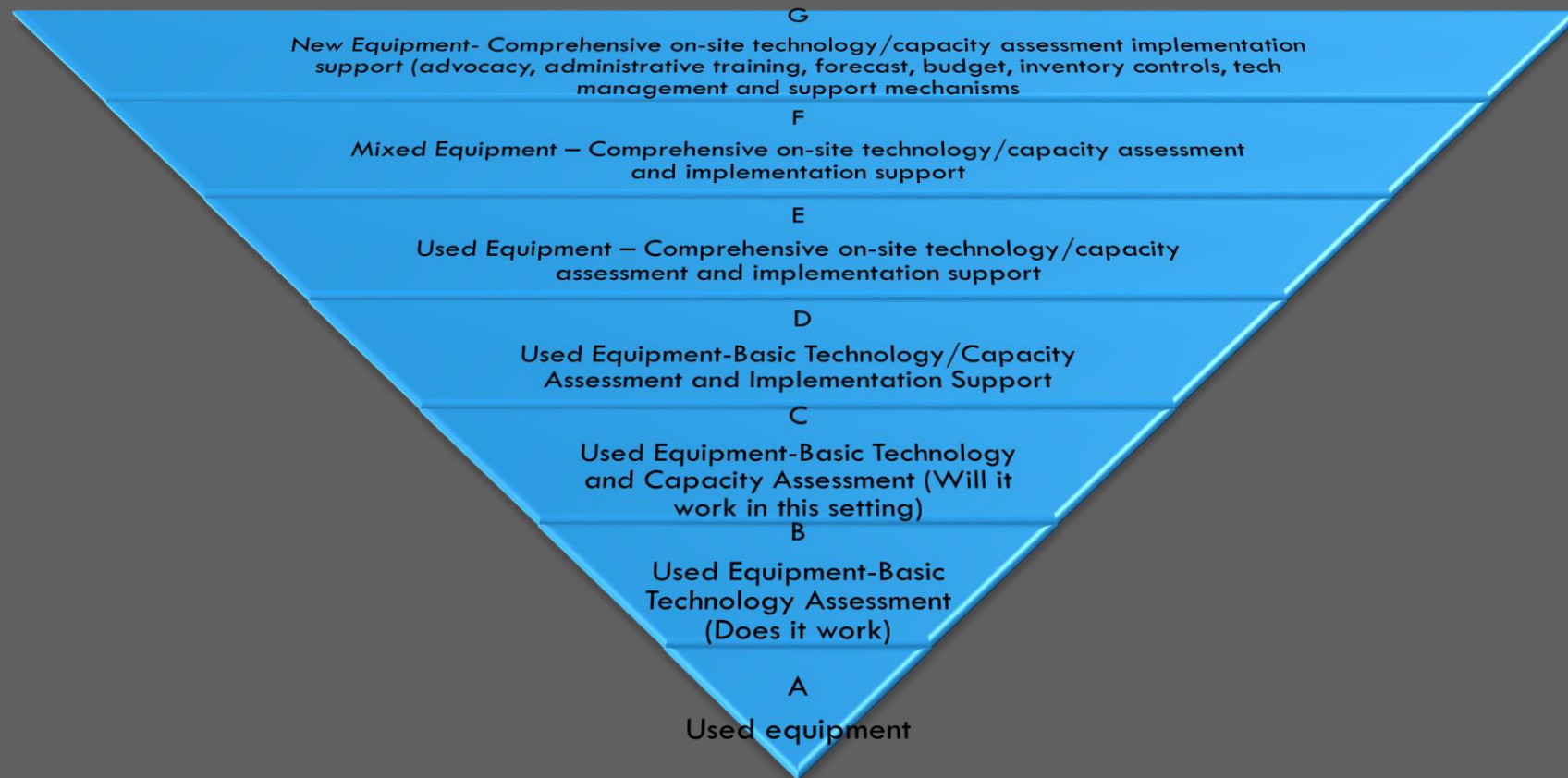
# SUPPLY CHAIN CAPACITY BUILDING

- Supply chain training and technical assistance
- Advocacy

# HEALTHCARE TECHNOLOGY QUALITY PYRAMID – *THE CURRENT SCENARIO*




# HEALTHCARE TECHNOLOGY QUALITY PYRAMID THE FUTURE



# HEALTHCARE TECHNOLOGY SERVICES OFFERED BY MSRO

- Sourcing
  - Brokering Service
  - Donation Solicitation
- Fully assessed and tested equipment
- Consultation call to recipients for all shipments
- Online inventory system to manage equipment lifecycle
- Distance learning opportunities
- On-site consultation-limited

# EDUCATION: *EQUIPMENT DISPOSITION DECISION MATRIX*

	LOW MISSION VALUE	HIGH MISSION VALUE
HIGH RESIDUAL VALUE	<p><b>QUADRANT 1-SELL</b></p> <ul style="list-style-type: none"> <li>Davinci Robot</li> <li>MRI System</li> <li>Lab Refrigerator</li> <li>CT Scanner</li> <li>General X Ray-Digital</li> <li>Linear Accelerator</li> <li>OR Lights-Ceiling Mount</li> <li>Phaco Emulsifier</li> </ul>	<p><b>QUADRANT 2-CONSIDER DONATION</b></p> <ul style="list-style-type: none"> <li>Anesthesia Machine</li> <li>OR Table</li> <li>C-Arm Imaging System</li> <li>Endoscopy</li> <li>Infant Incubator</li> <li>Portable X Ray</li> <li>Surgical Headlamp</li> <li>Ultrasound</li> <li>Ventilator</li> <li>Sterilization System</li> <li>Surgical Microscope</li> </ul>
LOW RESIDUAL VALUE	<p><b>QUADRANT 3-SELL OR SCRAP</b></p> <ul style="list-style-type: none"> <li>Infusion Pump</li> <li>EEG Unit</li> <li>Surgical Tourniquet</li> <li>Patient Warmer</li> <li>Blanket Warmer</li> <li>Nerve Stimulator</li> <li>Muscle Stimulator</li> <li>Hydrocollator</li> <li>General X Ray-Analog</li> </ul>	<p><b>QUADRANT 4-DONATE</b></p> <ul style="list-style-type: none"> <li>Patient Monitor</li> <li>Defibrillator</li> <li>EKG Unit</li> <li>Electrosurgical Unit</li> <li>Fetal Monitor</li> <li>Fetal Doppler</li> <li>Centrifuge</li> <li>Table Top Autoclave</li> <li>Infant Warmer</li> <li>Lab Microscope</li> <li>Otoscope and Ophthalmoscope</li> <li>Oxygen Concentrator</li> <li>Phototherapy Light</li> <li>Pulse Oximeter</li> <li>End Tidal CO2 Monitor</li> <li>Suction Pump</li> <li>Hospital Bed</li> </ul> 



# RECIPIENT VOICES

Success and Challenges

# QUESTIONS

Medical Supply and Resource