EXTENDING HEALING MISSIONS AND IMPROVING BOTTOM LINES THROUGH PRODUCT DONATIONS

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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
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 $9,403
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!

![Chart Title]

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<th>Pre-test</th>
<th>Post-test</th>
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<td>90</td>
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<tr>
<td>Notice waste</td>
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Research and assessing the problem leads to determining the solution and educating staff. Reassessing staff knowledge ensures the effectiveness of the solution.
STAFF ENGAGEMENT

- An MSRP further engages staff!
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

(F) Mixed Equipment-Comprehensive On-Site Technology/Capacity Assessment Implementation Support

(G) New Equipment- Comprehensive On-Site Technology/Capacity Assessment Implementation Support (advocacy, administrative training (forecast, budget, inventory controls, tech management, support mechanisms)

(E) Used Equipment-Comprehensive On-Site Technology/Capacity Assessment and Implementation Support

D Used Equipment-Basic Technology/Capacity Assessment and Implementation Support

C Used Equipment-Basic Technology and Capacity Assessment (Will it work in this setting)

B Used Equipment-Basic Technology Assessment (Does it work)

A Used equipment
HEALTHCARE TECHNOLOGY QUALITY PYRAMID THE FUTURE

G
New Equipment - Comprehensive on-site technology/capacity assessment implementation support (advocacy, administrative training, forecast, budget, inventory controls, tech management and support mechanisms)

F
Mixed Equipment - Comprehensive on-site technology/capacity assessment and implementation support

E
Used Equipment - Comprehensive on-site technology/capacity assessment and implementation support

D
Used Equipment-Basic Technology/Capacity Assessment and Implementation Support

C
Used Equipment-Basic Technology and Capacity Assessment (Will it work in this setting)

B
Used Equipment-Basic Technology Assessment (Does it work)

A
Used equipment
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**

**QUADRANT 1-SELL**
- Davinci Robot
- MRI System
- Lab Refrigerator
- CT Scanner
- General X Ray-Digital
- Linear Accelerator
- OR Lights-Ceiling Mount
- Phaco Emulsifier

**HIGH MISSION VALUE**

**QUADRANT 2-CONSIDER DONATION**
- Anesthesia Machine
- OR Table
- C-Arm Imaging System
- Endoscopy
- Infant Incubator
- Portable X Ray
- Surgical Headlamp
- Ultrasound
- Ventilator
- Sterilization System
- Surgical Microscope

**LOW RESIDUAL VALUE**

**QUADRANT 3-SELL OR SCRAP**
- Infusion Pump
- EEG Unit
- Surgical Tourniquet
- Patient Warmer
- Blanket Warmer
- Nerve Stimulator
- Muscle Stimulator
- Hydrocollator
- General X Ray-Analog

**QUADRANT 4-DONATE**
- Patient Monitor
- Defibrillator
- EKG Unit
- Electrosurgical Unit
- Fetal Monitor
- Fetal Doppler
- Centrifuge
- Table Top Autoclave
- Infant Warmer
- Lab Microscope
- Otoscope and Ophthalmoscope
- Oxygen Concentrator
- Phototherapy Light
- Pulse Oximeter
- End Tidal CO2 Monitor
- Suction Pump
- Hospital Bed
RECIPIENT VOICES

Success and Challenges
QUESTIONS

Medical Supply and Resource