

# **Global Medicine: The Opportunity that makes you better at your day job.**

Department of Pediatrics Blue Ribbon Grand Rounds  
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Disclosures: Matherne- Board Member Special Hope Network; Scharf- none

Objectives: Think differently about what we do and can do and how it can make us better.



# Why have we chosen our academic careers?

- Care for patients?
- Teach the next generation of providers?
- Discover new knowledge?

Sum it up in one word: **SCHOLARSHIP**



**“Exporting  
Knowledge”**

**Hypothesis:** Global Medicine supports  
and expands our scholarship

# Why did I wait so long to jump in?

**Answer- 3 words\***

- **Thoughting**
  - I thought I had no time
  - I thought it was not relevant
  - I thought it was not for me
- **Thinking**
  - Thinking prevented me from thinking about it
- **Imagining**
  - I never got to imagining how this could
    - Make a better faculty member
    - Improve me as a physician and teacher
    - make me a better person

\* Alec Horniman- Darden

# **First Trip 2012 to Sub-Saharan Africa Cardiac Surgery in Uganda with DC Children's**

## **Background- Health Care in Sub-Saharan Africa**

- Most economically challenged region in the world
- Limited health care infrastructure
- Widespread malnutrition
- HIV/AIDS pandemic
- Unstable politics and war
- Very high infant and maternal mortality

# Congenital Heart Disease Developing World

- 93% of children in world do not have access to treatment for CHD
- Without treatment many die at young age
- Ongoing treatment of unrepaired children is expensive and impacts extended family/village
- Years of life saved/dollars spent compares favorably to vaccine/nutrition programs



# Typical patient: Tetralogy of Fallot



## Program Building: Craig Sable MD

**Premise: no child amenable to single stage life altering cardiac intervention should be denied care**

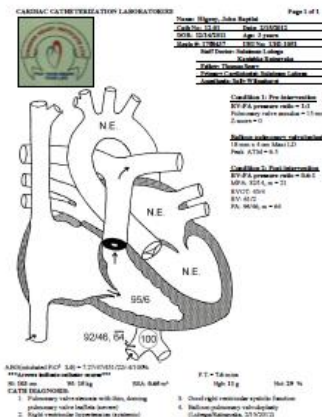
- Support/build local cardiovascular program
  - Visiting teams
  - Continued training of medical staff
  - Technology expansion
  - Independence and sustainability
- Realistic transition plan that helps as many children as possible



# Mulago Hospital Uganda Heart Institute Kampala, Uganda



- Screening clinic with 3 fellows
  - 200+ pts that needed surgery
- Surgery and Cath Teams
  - 10 open heart cases and 6 cath



## Journal Entries

- **Day 1-** Words don't describe this place. Seems like a regular city then you realize most people are walking or on small motor bikes. Toddlers sitting along the street side- covered with dust- begging. How can I not cry but I walked on.... The trip is inspiring to think about what is possible...
- **Day 2-** Most amazing day as a pediatric cardiologist in my entire career. I have never been in a clinic with so many severe un-operated and undiagnosed patients. Some we can help and some we cannot...

## Journal Entries

- **Day 3-** I saw the regular children's ward today. Beds next to beds with no room in between them and child after child who looks desperately ill.....The building looks like something that would be abandoned any place else...
- **Day 5-** Another overwhelming day in clinic. So many unrepaired kids but I also got to see results of our work..... I sent two kids for the first Balloon valvuloplasty for PS in the country. Cool stuff.
- **Day 6** -I went to the wards to see some patients today. I saw a newborn with undiagnosed cyanotic CHD. We didn't have time to figure it out and even if we did there is no treatment..... I want to go back to the wards and see more patients. I cannot get enough.....

## Take Home Learnings

- What seems important here may not always measure up
- Improved my clinical skills
  - Better echocardiographer
    - Was humbled by missing an ALCAPA (but again there was no treatment available).
  - Learned more about TOF in a week than in years in US
- Importantly it created a spark and I began thinking and imagining what else I could do in the developing world.



# Ripples and Connections



- Remembered the Nelsons
  - Family of 5 with 3 adopted children with Down Syndrome who were postop CHD- I was their cardiologist
- They moved to Zambia to serve Children with special needs
- I reached out via skype and a year later visited....

# Background on Disability in the Developing World :

- 2 of every 10 children in the developing world are disabled either physically, intellectually or both.
- Many of the children who have special needs world-wide are not registered at birth.
- Mortality for children with disabilities may be as high as 80% in developing countries.
- 90% of children with disabilities in developing countries do not attend school.



# Special Hope Network Approach:

- A faith-based, nonprofit organization working to support children with intellectual disability in Zambia.
- Developed Community Care Centers:
  - within walking distance of children's homes
- The parent/child team received over 24 hours/month of specialized care and training:
  - speech, occupational and physical therapies,
  - nutrition, education,
  - medical care, and familial counseling.
- Centers Staffed by Zambian Nationals



# The children:



# Special Hope: the Opportunities and Ripples

- Joined the Board
- Began UVA partnerships
  - Darden Business School
    - Sponsored MBA graduate to spend a month advising Special Hope on business operations
    - Global EMBA students Business Development Project
  - Curry Educational School
    - Paige Pullen Ph.D- special education expert
      - Sent a recent graduate to work there 6 months
  - Rebecca Scharf MD became involved.....

# Scholarship, Ripples, and Connections

- **Two 2014 Jefferson Public Citizens Awards with Rebecca and Paige**
  - *Hope through Mobility: next steps-Assistive Mobility Devices in Urban Communities Served by Special Hope Network*
    - Help design adaptive mobility devices sourced from a local manufacturer, *Zambian Association of Children with Disabilities (ZACD)*.
  - *Ku-Punzitsa Apunzitsi: Creating a Professional Skills Program for Teachers*
    - Collaborate with SHN to improve the effectiveness and efficiency of the teachers by establishing and evaluating the success of a sustainable, culturally fluent program to supplement teacher training.
- **National Health Research Conference.**
  - Providing care and special education for *Zambian children with severe intellectual disability: Special Hope Network Community Care Centers in Lusaka. Lusaka Zambia October 14, 2013*

# More Opportunities

- University Teaching Hospital (UTH)
  - Department of Pediatrics
    - Resident and Student teaching
    - Atlas Project with Amy Brown
      - Highlight diseases we don't see and develop educational tool on the web

Cutaneous  
Larva Migrants



Leprosy





# More Ripples and Connections

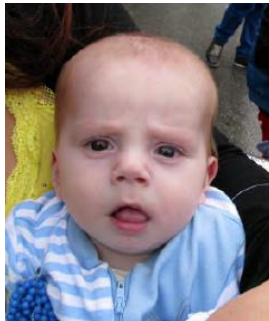


- AHA connections led me to Botswana
  - *Saving Children's Lives Program*- using PEARS to train frontline staff to recognize and stabilize critically ill children.
    - I became PALS certified and with MJ Sacco and George McDaniel's help we will be reinvigorating our training here
  - *Saving Children's Lives Program* was interested in Quality
    - Developed Be Safe lectures given in Botswana, Zambia and in two weeks will travel with Paul Helgerson to Costa Rica
- Cardiologist at UTH, Dr. John Musuku, reached out last year for help in developing a sustainable cardiac surgery program
  - I contacted Rob Raylman, CEO Gift of Life International, to help.



# Congenital Heart Disease Crisis

- A crisis exists with regard to the prevalence of congenital heart defects throughout the world.
- Congenital heart defects are the #1 birth defect worldwide, with 93% of these children born in a country that cannot treat them.
- Rotarian based program created in 1975
- Over 19,000 children have received care for heart disease
- Children from 71 countries across 5 continents have been treated
- 74 Autonomous Gift of Life programs exist today
- More than 1,000 children worldwide are now treated each year





# Developing a Sustainable CHD Surgery Program in Zambia

- Fact-finding trip September 2015
  - Bill Harmon MD, Rob Raylman Gift of Life
    - Looked at current capacity and team
    - Met with Department, Hospital and Government officials
    - Explored Local partners with Rotary
  - Recommended a stakeholders meeting
- Gift of Life with Rob Raylman raised \$120,000 to fund 20 children to go India for surgery to raise awareness.



# Developing a Sustainable CHD Surgery Program in Zambia

- Screening trip March 2016
  - Rob Raylman, Gift of Life, and Christine Saunders Director of the Echo lab
    - 3 days of screening- 58 patients
      - 20 surgery in India
      - 5 surgery in Italy



# Developing a Sustainable CHD Surgery Program in Zambia

- Stakeholders meeting March 8, 2016
  - Local team, Hospital officials, Government officials
  - Local Rotary
  - Gift Of Life
  - Chain of Hope (UK NGO)
- Next Steps
  - International Conference
  - Strategic Plan
- Realistically it will take 10 years to achieve sustainable program for simple CHD.

STAKE HOLDERS MEETING ON THE ROADMAP FOR DEVELOPMENT OF SUSTAINABLE CARDIAC SERVICES IN ZAMBIA



# Global Medicine:

## Take home Message from a part timer

- Even if this is a small part of your professional life
  - It is very rewarding (but can be challenging)
  - It makes you a better health care provider
  - It makes you thankful for what we have
  - It helps you think differently

[illegible]

# Global Medicine: from an Expert's point of view.....