Tracks:

- Improving Health Outcomes
    - Schools
        - Johns Hopkins Applied Physics Lab
        - Johns Hopkins Biomedical Engineering
    - SubTopics
        - Preventative Medicine
        - Predictive Health
        -
- Post-Operative Care
    - Jhpiego
    - Challenges in low resource settings
- Global Management of Chronic Disease
    - Schools
        - Johns Hopkins School of Nursing
            - Only Dr and MBA combined degree
        - Johns Hopkins Center for Humanitarian Health
        - Johns Hopkins University Center for Bioengineering Innovation & Design
            - MedHacks for a year
            - Accept 24 students a year
            - Deadline: Jan 1
    - How to deal with the most vulnerable people & give them the care they deserve
    - Recurring in nature > heavily VC funded startups

Elsevier

- Chris Larkin & Mevan Samarasinghe
- How to become a CTO?
    - "There is no try there is only do and not do"- Yoda
    - Hes wrong: we are trying this weekend
- How to take patient data and answer high level questions
- Pulling content data: what we should do about a problem
- It's not about pushing alg it's about understating the clinical response
- Turn information into actionable clinical decision support
- What are the questions being asked? 13q account for 80% of queries

Healthworx

- Aaron Feierstein
- CareFirst BlueCross BlueShield
- Opening innovation Center next year
- Seed Stage Funding

BME

- Data science
- Project based learning
- Promoting internships
- Masters
    - Doubled in size over the last 2 years
    - DATA SCIENCE is a track

MLH

- Hack.mlh.io
- Cup stacking 8PM
- Season Tshirts AFTER

PostOp Care

- HR
    - Having 1 nurse take care of multiple patients
    - Monitoring
        - Blood pressure pressure
        - Temperature
        - Urine output
- Equipment and Supplies
- Clinical Decision Support Systems
    - Montior's beep - Algorithm to monitor vitals
        - Green
        - Yellow
        - Red ACT FAST
    - Treatment recommendations based on output
- Resource utilizations
- Women that are dying from cesarean infection
    - Hemorrhage
    - Infection

- ANEMIA
- Hemoglobin of 5: 3x lower compared to avg
- Early identification and management
- People are dying because they are identifying problems too late on
    - Determine they do need surgery
    - Give antibiotics and iron if needed
    - Proper skin prep
    - Planning for the post operative care
        - We miss 70% of infections after they go home
        - Send pic to doctor
    - Maybe need to educate nurse aids to prevent infections
    - Patient education and proper care
- Standard operating procedures
    - Creating a universal standard
    - You would have to abstract data samples from each geographic location and then run some sort of model ® to abstract the most efficient version for each culture

Global Management of Chronic Disease Pitch Session:

- Problem: traditional diseases are still around but not as relevant. Nowadays, more focus on heart disease, diabetes, asthma, high blood pressure
- Managing non communicative diseases are harder to manage than malaria, tuberculosis, etc.
    - People are dying from these diseases.
- Need to improve supply chain.
- Dealing with refugees
    - Syrian: people with high education are fleeing their countries.
- People are living longer.
    - Kids and old people are not dying faster.
        - Have to deal with these groups' health issues
    - People are gaining weight (obesity)
        - High fructose corn syrup, alcohol.
    - People dying from car accidents is almost as much as kids dying of diarrhea.
- Can divide people into 2 groups
    - Natural
        - Typhoon, earthquake

        - People's records and prescriptions being lost
    - Conflict
        - Syria
- Standardize treatment
    - People are dissatisfied with care so they find other clinics, solutions
    - Records need to move from place to place
        - Need prescriptions and disease record
- What we need to do to help physicians treat patients correctly
    - Up to date treatments
- Patients do not understand their own diseases
    - Some doctors do not thorough job of explaining problem and treatment
- Improve quality of care
    - Treatment
    - Training
    - Standardization
- Where to get needed medicine
    - May not be stocked in certain clinics
    - Go to private pharmacies for needed medicine
        - Real or fake drugs
        - Readability
        - Expiration
        - Damaged?
- Adequacy of clinical support
    - Adequate laboratory tests
    - X-ray sources
    - Specialist referral available
    - Access to routine check ups
- Build health literacy
- Managing lifestyle changes
    - Food
    - Drugs
    - Alcohol
- Continuity of care
- Solutions tried w/ problems
    - Paper records kept by patients or family/clinic or hospital/pharmacy
    - Electronic records in clinic or hospital/cloud

- Records on sim card, usb, e-drive
- **Some problems to solve:**
  - Think of something better that will help maintain continuity of care for displaced populations
  - How to find displaced people with NCDs?
  - How to be sure staff provide high quality up-to-date care
  - How to make sure right medicines are in the right place, right time
  - People know about their disease (Health Literacy)
- IDEAS:
  - Central DB?
    - Verification using id number or ssn or something along those lines
      - Assuming people have id numbers in their respective countries
    - Cell phone numbers???? Most people have phones

Artificial Intelligence: A Radiologist's Perspective

- Paul H Yi, MD
- What does a radiologist do?
  - Diagnosis
- 4 Themes
  - Radiologists
    - Annotate datasets
    - Ensuring Quality of datasets
    - Continuing tech
  - Ai & machines
    - input> feature to extract > classification > output
    - Deep learning: input> deep neural network (feature to extract & classification) > output
  - Optimism & Ambition