The Overview

Pediatric Economics

"Uncomfortable is costly & subjective.

Pediatrics Central trend: Cesarean section increasing.

Medical infrastructure lacking in many areas.

Take Home:

-高低不平的经济状况
- 儿科经济状况是不可承受的。'
- 医疗基础设施不足在很多区域是明显的。
- 优劣不平的经济状况
- 医疗基础设施不足在很多区域是明显的。'

The Two Leitmotifs:

Feedback Loop

Centaur

The Arc:

"Fair Trade" Days

Revelation.

Learning

The Search...
Pediatric Economics

"Efficient markets are sustainable social justice."

Pediatric Leadership for the Underserved
Grand Rounds @ SFGH
Tuesday 30 June 2015
Michael Scahill MD MBA
Neither I nor my immediate family members have a personal financial relationship with a manufacturer of pharmaceutical products or services that will be discussed in this presentation.
The Two Leitmotifs:

Interest in global health

Initial top-down leanings

Revelation - Can't Ignore the Market

Feedback Loop
Markets work well ("efficient") when customers respond to quality & providers respond to customers

Centaur
For efficient health care, providers need to be Centaurs.
  Human face - things patients want
  Horse body - things patients need

The Arc:
Search for a Centaur
Take Homes

- Efficient markets are sustainable social justice.
  - Holy grail of global health is high quality provider that breaks even - sustainable & scalable.
    - Very hard - have to beat Medicine Men at their own game.
    - Need Centaur + Nudges - sell health people want & give health they need.
- Nudges help customers & providers.
  - Design systems for real world, irrational humans.
- Unhappy Wedge - easier to beat quacks with higher clinical capacity
In medias res, a case...
Manhica, Mozambique: District Health Center

- Toddler p/w fever, AMS, meningismus
- LP confirms meningococcus

- On presentation, vomits a mess of herbs, leaves & sticks.

On further review, realize a remarkable number of kids present with similar vomitus.

Why?
1994
my mom’s writing


2001-5 Boston College:

“Fair Trade” coffee campaign
Thinking about public health & social justice.

Argentina Marxist

Prezi
Rochester, NY > Columbus, OH > Scranton, PA

1984.
my mom's writing

1994: my mom's wedding


2001-5 Boston College:

Discovered ugly Old habits of violence

"Fair Trade" coffee campaign
Thinking about public health & social justice

Argentina Marxist

50% OFF Realized
Prezi

2001-5 Boston College:

"Fair Trade" coffee campaigner
Thinking about public health & social justice.

Argentine Marxist
Kaiser SF OB Resident!

Discovered rugby.
Did lots of science.

Obsessed with malaria. Aspiring to an MPH.

Peak of Foolish Hubris - "want to reform the political, legal & medical framework of developing countries"
Manhica, Mozambique: District Health Center

- Toddler p/w fever, AMS, meningismus
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- On presentation, vomits a mess of herbs, leaves & sticks.

On further review, realize a remarkable number of kids present with similar vomitus.

Why?
• Our hospital was hard to get to, especially with more kids at home.
  • Care was free, time & transport not.

• Doctors barely spoke Portuguese, let alone Shangaan.
  • Our nurses were overworked & a little frayed.
Why not?

Just like 6M, most kids get better no matter what.

The Revelation:
Perfectly rational to go to the cheap, friendly, culturally sensitive provider nearby.
Money for Nothing

The Dire Straits of Medical Practice in Delhi, India

82% of all visits are to private providers!

Medicine Men are not good at all... but they try so hard!

Public providers know medicine... but they may as well not.
82% of all visits are to private providers!

People love the Medicine Men.

Probably because they are cheap, friendly, culturally sensitive and nearby.


The Overview

Pediatric Economics

"Unrecommendable, unsatisfactory, success.""  
Pediatric Economics, Ten Years On

The Two Leitmotifs:

Feedback Loop

Centaur

The Search...

The Arc:

"Fair Trade" Days

Revelation.

Learning
Feedback Loop

Providers
Respond to feedback

Goods / Services

Customers
Assess quality

Choice / Patronage / Reviews

Complete loop -> Efficient market.
[High quality, affordable supply satisfies demand]

Broken loop -> Market failure.
A Complete Loop: Burritos in the Mission

- Competitive market, easy to switch patronage.
- Customers can assess quality.
- Providers respond or bust.

Result: Burritos are delicious, plentiful & cheap. The market is efficient.
Incomplete Loops:


Airport bars / The DMV - Customers are powerless to switch.
Health Care in Developing Countries: 2 Incomplete Loops.

Public - Providers know what to do but don't bother. Salaried. Hard to fire. Customers politically disenfranchised.

Private - Medicine Men thrive where customers cannot assess "quality". Instead, assess friendliness, cultural match, etc.
Private - Medicine Men thrive where customers cannot assess "quality". Instead, assess friendliness, cultural match, etc.

- Medicine Man "problem" is pervasive.
- Customers are *never* fully informed.
- *Always* competition from "low quality" providers.
Feedback Loop

**Providers**
Respond to feedback

**Customers**
Assess quality

**Goods / Services**

**Choice / Patronage / Reviews**

Complete loop -> Efficient market.
[High quality, affordable supply satisfies demand]

Broken loop -> Market failure.
Can't a wise Ministry of Health just give away good health?

Feedback Loop

Goods / Services

Providers

Customers
Cluster randomized study of anti-schisto drug uptake in Kenya

Families do not pay for their own medicines.

Families are even less likely to take them the more they hear from
Families do not pay for their own medicines.

<table>
<thead>
<tr>
<th>Explanatory variables:</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
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</thead>
<tbody>
<tr>
<td># parent links with children in early treatment schools (Groups 1 and 2, not own school)</td>
<td>-0.031**</td>
<td>-0.040**</td>
<td></td>
<td>-0.002</td>
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<tr>
<td># parent links with children in early treatment schools</td>
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<td>* Group 2 school indicator</td>
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<tr>
<td>Proportion direct (first-order) parent links with children in early treatment schools</td>
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<td></td>
<td>-0.098**</td>
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<td>(0.045)</td>
</tr>
</tbody>
</table>

Families are even less likely to take them the more they hear from friends.

Sound familiar?

Medicines for HTN, HL, DM...
Vaccines... :( 

Sure.
But...
It's very expensive (unsustainable).
People may not take what they are given.

Can't a wise Ministry of Health just give away good health?
How to make health care like El Farolito?

---

**Goods / Services**

**Providers**
- Respond to feedback

**Customers**
- Assess quality

**Choice / Patronage / Reviews**

Complete loop -> Efficient market.
[High quality, affordable supply satisfies demand]
2010: Stanford Graduate School of Business?!

Not just for rugby.

How can I be more like the Medicine Men?

Or, how can I beat them at their own game?
How to be more like El Farolito?
Offer patients a Centaur.

Centaur

Rigorous quality care... ...an appealing human face.
...grafted onto...
Centaur

Rigorous quality care... an appealing human face.
...grafted onto...

☐ Healthcare.
☑ Humankindness.

Dignity Health

HUGS = HEALTHY
Happy people are 50% healthier.
Kaiser Permanente = thrive

all children should get to star in their own story
Rigorous quality care...  ...an appealing human face...  ...grafted onto...

- Healthcare.
- Humankindness.
- Dignity Health

versus

- If your baby has bronchiolitis, we won't do ANYTHING!
- Avoiding antibiotics for viral infections!
- Our CLABSIs are so rare!
In general, patients do not care about our quality metrics.

Patient education can only go so far. Even highly educated often care more about convenience & pleasantries.

Thus, markets respond to things other than "quality".
quality metrics.

Patient education can only go so far. Even highly educated often care more about convenience & pleasantries.

Thus, markets respond to things other than "quality".

Not just clever advertisers but also...
...clever researchers know this.

The relationship between commercial website ratings and traditional hospital performance measures in the USA

Naomi S Bardach, 1, 2 Renée Asteria-Peñaloza, 2 W John Boscardin, 2 R Adams Dudley 3

Richard G. Frank
This approach...

Come to Mike's Clinic! Your child doesn't need tests or antibiotics!

...not going to work. The Medicine Men would crush me.
The ideal provider in any free market is a Centaur.

Horse-only providers (academic quality) are shunned by customers.

Human-only providers (Medicine Men) have not improved outcomes.

Rigorous quality care... ...an appealing human face.

...grafted onto...

In unregulated markets, Medicine Men are super cheap. Centaurs there need super efficient operations and as many "nudges" as they can find.
Nudges
(behavioral economics)

1. Humans are "irrational".
2. Humans are "irrationality" in predictable ways. Thus, choices can be designed to favor a desired outcome.

UK: "9 out of 10 people pay their taxes on time."

Put the Capri Sun on higher shelves?
Rigorous quality care... ...an appealing human face. ...grafted onto...

In unregulated markets, Medicine Men are super cheap. Centaurs there need super efficient operations and as many "nudges" as they can find.

Thus, a successful health provider in a developing country...

Has a strong feedback loop - to be useful & sustainable

Is a "centaur" with behavioral "nudges" - to give people the care they want AND the care they need.
Thus, a successful health provider in a developing country...

Has a strong feedback loop - to be useful & sustainable

Is a "centaur" with behavioral "nudges" - to give people the care they want AND the care they need.

Put another way...

<table>
<thead>
<tr>
<th>Poor quality, Breaks even:</th>
<th>High quality, Breaks even:</th>
<th>High quality, Hemorrhages money:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy</td>
<td>Extremely Hard</td>
<td>Relatively Easy</td>
</tr>
<tr>
<td>Need a Centaur + Nudges</td>
<td></td>
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</table>
Search

UCSF PLUS JACARANDA HEALTH = ?
I am looking for a centaur of pediatrics in a developing country to work on.

I am building a centaur of maternal care in Kenya, but no one has pediatric skills.

First Meeting

May 2012

Trip to Kenya 1

Dec 2012 - Feb 2013

Trip to Kenya 2

Nov-Dec 2014

The Future
Building a Centaur is hard:
What I was working on.
(mostly "horse" stuff)
Dec 2013: 12 midwives. NRP skills not so great. Seems an easy win...

Not just training - #QI training:
  • Created 20-point score
  • Tried to make simple metrics that could be strict & consistent
  • Started drills...

Dramatic improvement!
Dramatic improvement!

Goal 16 - good enough for most

Started at 7 - can't handle 2a apnea

The real proof was in the pudding...
The real proof was in the pudding...

- Feb 2014: ~1kg, 1 min APGAR = 0. Successfully resuscitated & transported to referral NICU

- Dec 2014: Happens again. Resuscitation led very well by midwives!
Lesson 1 - NRP works.
Lesson 2 - #QI works. You manage what you measure. Therefore: Measure NRP.
Lesson 3 - Our midwives are great. They just can't access quality training.
Quality Pipeline

Dec 2013: Jacaranda has many clinical protocols.

Many are excellent.

None are read.

Practice is variable.

Lesson 1 - It’s hard to learn what no one in the organization knows.

Lesson 2 - Follow the pilots.
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Lesson 1 - It's hard to learn what no one in the organization knows.

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Pipeline to Quality Needs a Source
"Trickle-Down Pediatrics"

- Find "attendings" - Recruited 3 midwives to be "Peds Champs"
- Setup a training program for them
- Let them train the rest
  - Including new hires 12 -> 30 staff
Pipeline to Quality Needs a Source "Trickle-Down Pediatrics"

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Lesson 2 - Follow the pilots.
"The checklist cannot be lengthy, focusing on the killer items— the steps that are most dangerous to skip and sometimes overlooked nonetheless."

"The wording should be simple and exact"

"Ideally, it should fit on one page. It should be free of clutter..."

"a checklist has to be tested in the real world"
“The checklist cannot be lengthy.”
“focusing on...’the killer items’--the steps that are most dangerous to skip and sometimes overlooked nonetheless.”

“The wording should be simple and exact”

“Ideally, it should fit on one page. It should be free of clutter...”

“a checklist has to be tested in the real world”
Providers are human & need behavioral economic "nudges", too.

One example of a work in progress
Unhappy Wedge

The "Unhappy Wedge" is a strategic no man's land where the horse meets the human.
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Bill Baby Example
- Healthy newborn just over L&D
- High-quality guidelines say treat
- But can't treat in house
- So we refer
- Referral center laughs & sends baby home.

Everyone is Unhappy
- Family thinks we're idiots
- Treaded for hosting
- Providers understand local standards, rebel against "quality" guidelines

Soon we have no patients or no quality staff; ignore guidelines

Lesson - To stay out of the Unhappy Wedge, 2 options
- Accept quality, back side as "normal", violate the mission - no good.
- Keep borderline patients in house.
Bili Baby Example

- Healthy newborn just over LRT
- High-quality guidelines say treat
  - But can't treat in house
  - So we refer
- Referral center laughs & sends baby home

Everyone is Unhappy:
- Family thinks we're idiots
  - Traveled for nothing
- Providers understand local standards, rebel against "quality" guidelines

Soon, we have no patients or no quality (staff ignore guidelines).
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Lesson - To stay out of the Unhappy Wedge, 2 options:
  • Accept quality backslide
    no "horse", violates the mission - no good.
  • Keep borderline patients in house.

  Centaurs can't live in the Unhappy Wedge.
  Jacaranda needs - and is building - more clinical capacity.

Low Risk NSVD -> C-sections
Well Child Checks -> Acute Care
Normal Newborns -> Intermediate Nursery

Lots of work for a pediatrician
Keep borderline patients in house.

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Unhappy Wedge

The "Unhappy Wedge" is a strategic no man's land where the horse meets the human.
Next Steps

• Scale Up
  • Keep Training the Trainers
  • Protocols -> Checklists

• Nudges
  • Experiment with insurance-like products, health savings accounts

• Get out of the Unhappy Wedge. Keep babies in house.
  • Better Acute Care
  • Intermediate Nursery
The Overview

Pediatric Economics

Take Home
- Uncomfortable use, inappropriate capitals.
- Pedestrians, passengers, the environment.
- Moving with the right tools.
- The right tools, the right approach.

The Two Leitmotifs:

Feedback Loop

Centaur

How to make health care like El Farafita?

Sure.
Not very expensive (unrecognizable).
People may not be sure what they are getting.

Can't we make Ministry of Health (just give away good health)?

The Arc:

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Revelation.

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