

The Overview



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Take Homes

- Criticite markets are strained index process process
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The Two Leitmotifs:







Can't a wise Ministry of Health just give away good health?

Feedback Loop













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...not paine to work.



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swifty.	
	Ref



The Arc:



"Fair Trade" Days



Revelation.



Learning



The Search...



The Overview

Pediatric Economics



The Two Leitmotifs:







Feedback Loop





Centaur





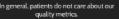


















The Arc:



"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:

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

Interest in global health

Initial topdown leanings

Revelation - Can't Ignore the Market

The Arc:



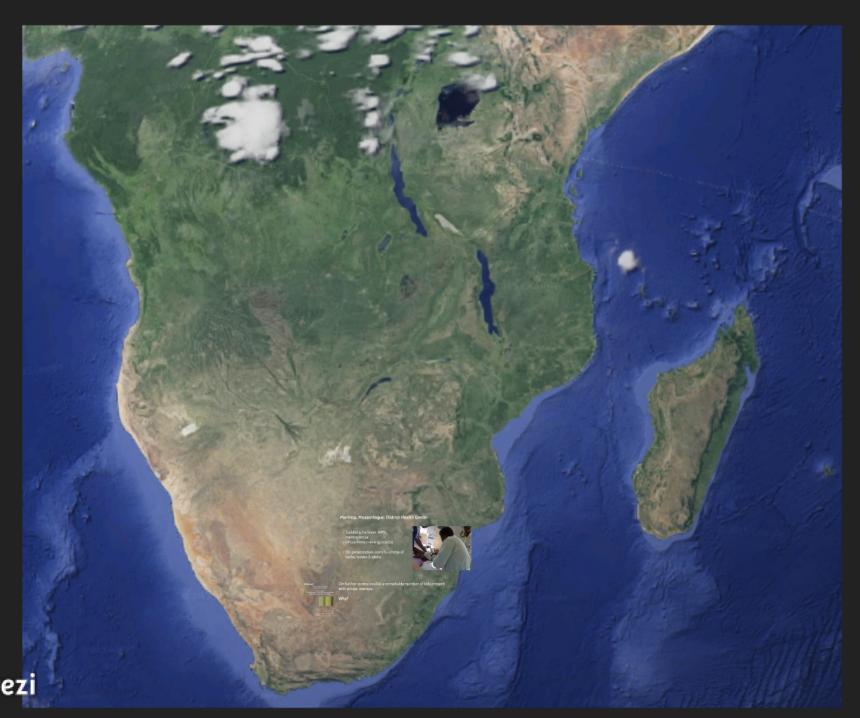
Search for a Centaur

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

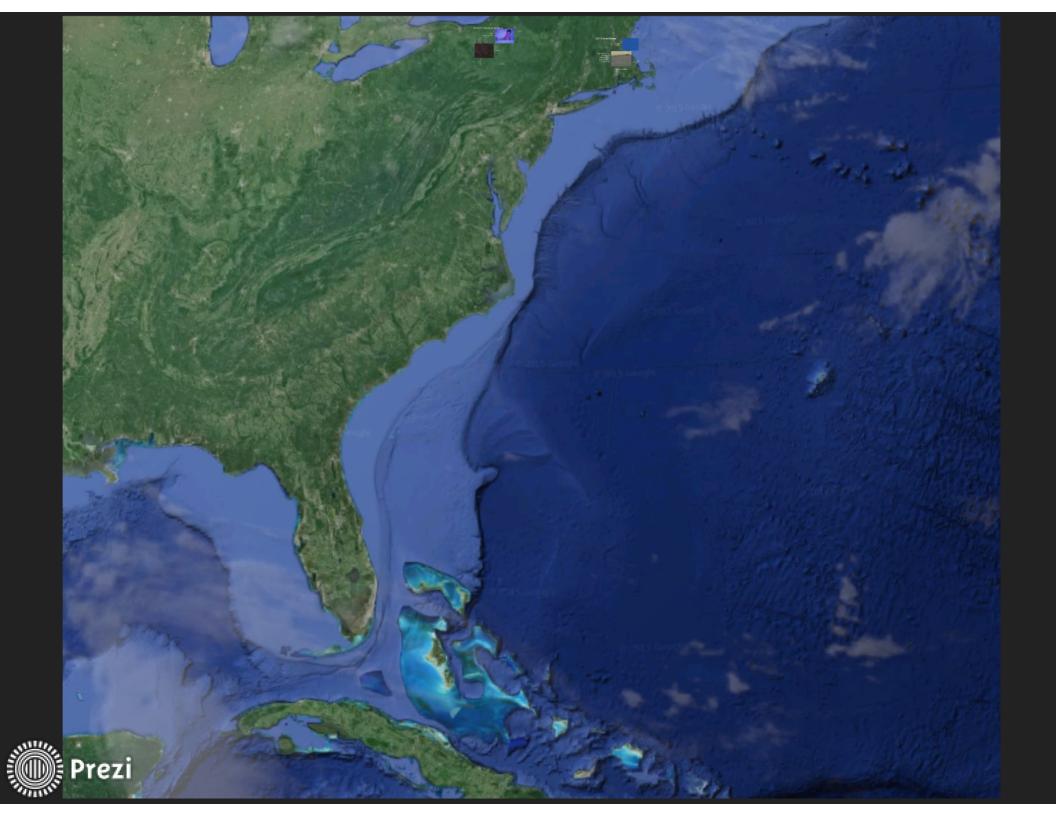
- Toddler p/w fever, AMS, meningismus
- LP confirms meningococcus
- On presentation, vomits a mess of herbs, leaves & sticks.

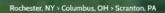


On further review, realize a remarkable number of kids present with similar vomitus.

Why?







1984. my mom's writing





2001-5 Boston College:



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



Argentine Marxist

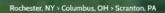
Rochester, NY > Columbus, OH > Scranton, PA

1984. my mom's writing





c. 1987.



1984. my mom's writing





2001-5 Boston College:



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



Argentine Marxist

2001-5 Boston College:

Discovered rugby. Did lots of science.



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



Kaiser SF OB Resident!



Argentine Marxist



2007: Stanford.



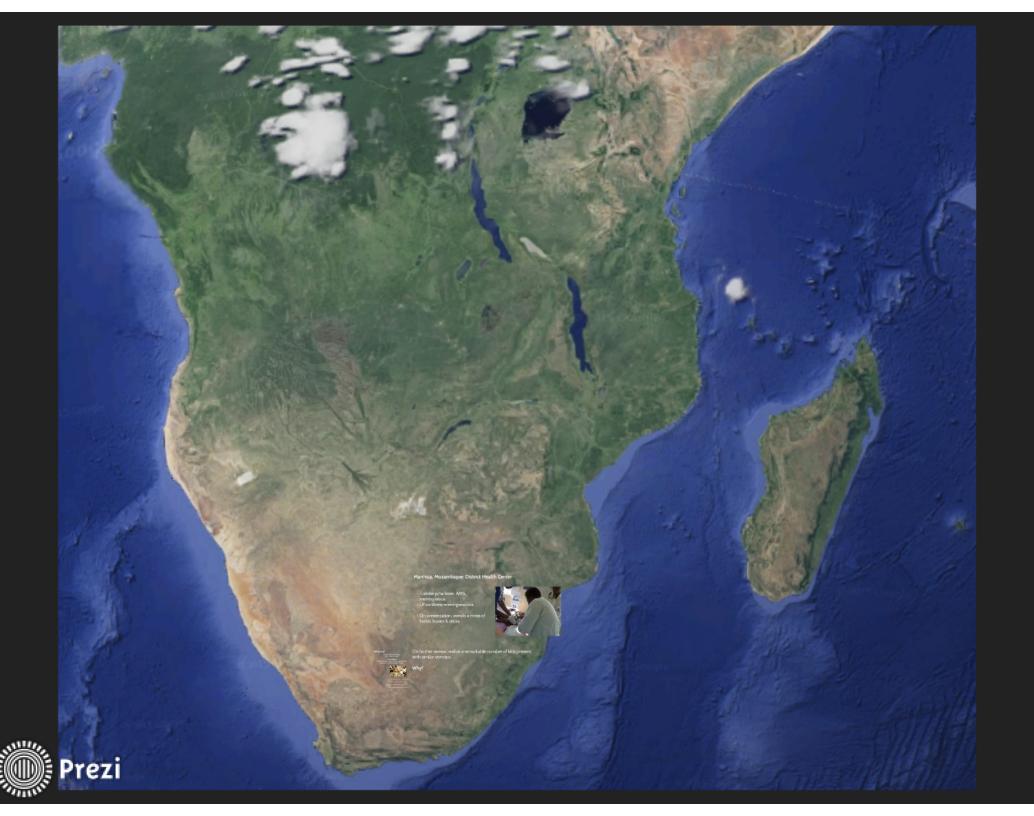
Obsessed with malaria. Aspiring to an MPH.

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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Why?

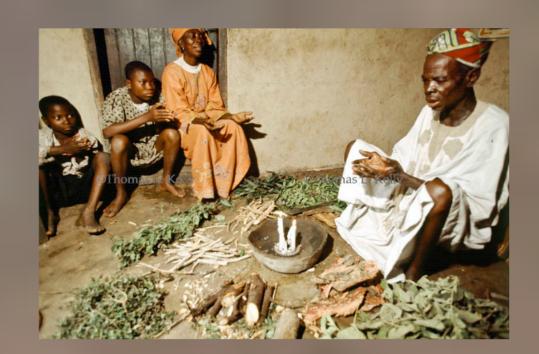
- Our hospital was hard to get to, especially with more kids at home.
 - Care was free, time & transport not.
- Doctors barely spoke Portuguese, let alone Shangaan.
 - Our nurses were overworked & a little frayed.



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.

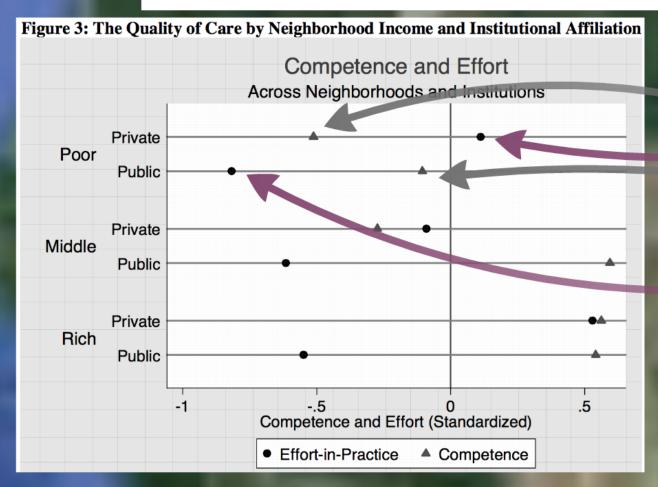






Money for Nothing

The Dire Straits of Medical Practice in Delhi, India



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!

-1 -.5 0 .5
Competence and Effort (Standardized)

• Effort-in-Practice • Competence

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



The Two Leitmotifs:







Feedback Loop





Centaur





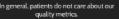


















The Arc:



"Fair Trade" Days



Revelation.



Learning



The Search...





Feedback Loop

Goods / Services

Providers
Respond to feedback

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.

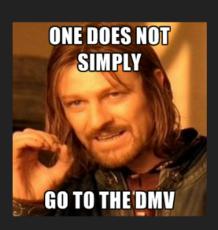


Incomplete Loops:

Auto Mechanics - Customers cannot assess quality:price.

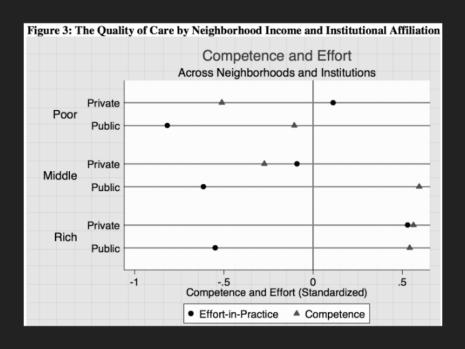


Airport bars / The DMV - Customers are powerless to switch.





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.

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Can't a wise Ministry of Health just give away good health?

Feedback Loop

Goods / Services



THE ILLUSION OF SUSTAINABILITY*

MICHAEL KREMER AND EDWARD MIGUEL

Cluster randomized study of anti-schisto drug uptake in Kenya

THE IMPACT OF COST-SHARING					
	Dependent variable: Child took deworming drugs in 2001				
	(1)	(2)	(3)		
Explanatory variables:					
Cost-sharing school indicator	-0.580*** (0.054)	-0.459*** (0.122)	-0.572*** (0.080)		

Families do not pay for their own medicines.

EXPERIMENTAL SOCIAL EFFECT ESTIMATES					
	Dependent variable: Child took deworming drugs in 2001				
	(1)	(2)	(3)	(4)	(5)
Explanatory variables:					
# parent links with children in early treatment schools (Groups 1 and	-0.031**	-0.040**			-0.002
2, not own school)	(0.014)	(0.017)			(0.018)
# parent links with children in early treatment schools		0.017			
* Group 2 school indicator		(0.029)			
Proportion direct (first-order) parent links with children in early			-0.098**		
treatment schools			(0.045)		

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

Families do not pay for their own medicines.

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treatment schools			(0.045)		

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

Kremer, M., & Miguel, E. (2007). The Illusion of Sustainability. The Quarterly Journal of Economics, 122(3), 1007-1065

Sound familiar?

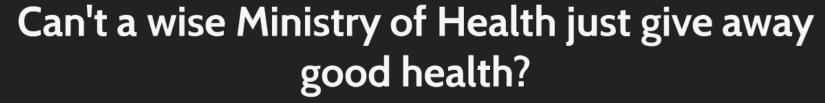
Medicines for HTN, HL, DM... Vaccines...:(



Sure. But...

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







How to make health care like El Farolito?

Goods / Services

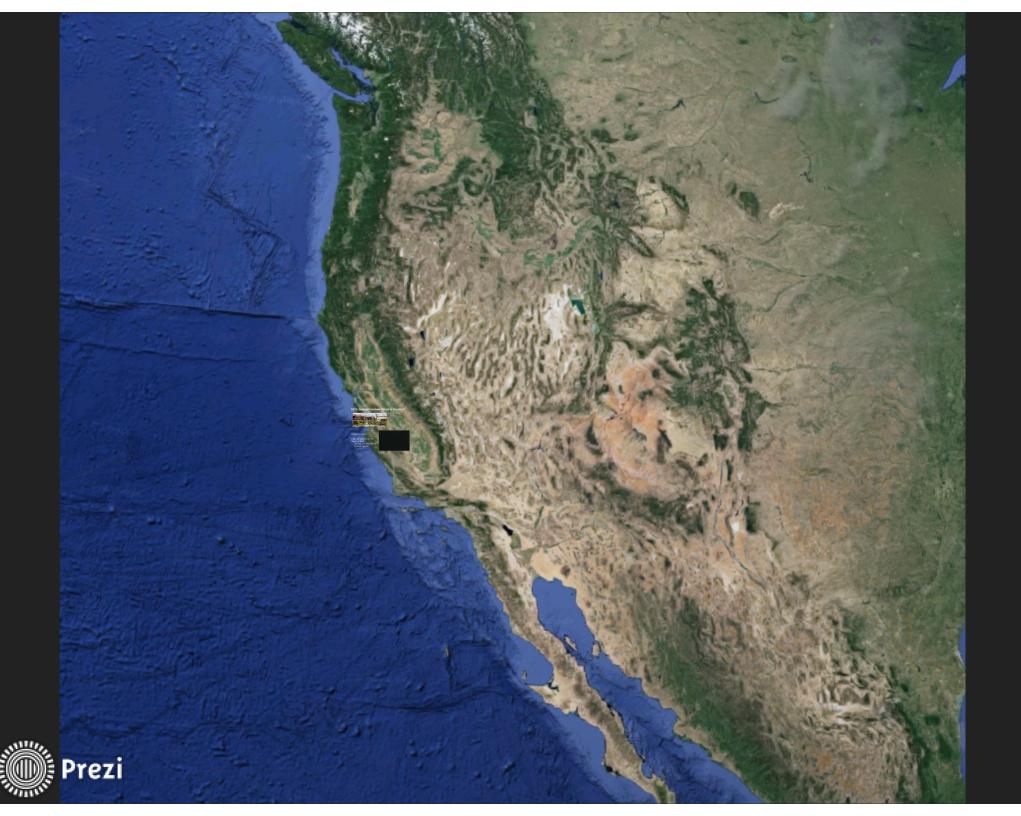
Providers
Respond to feedback

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



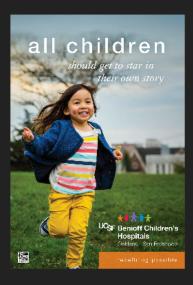
Rigorous quality care...

...an appealing human face.

...grafted onto...









...grafted onto...







versus



If your baby has bronchiolitis, we won't do ANYTHING!



Avoiding antibiotics for viral infections!



Our CLABSIs are so rare!





If your baby has bronchiolitis, we won't do ANYTHING!





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, ³ R Adams Dudley ²

Measuring Hospital Quality Using Pediatric Readmission and Revisit Rates

AUTHORS: Nacmi S. Bardach, MD, MAS,* Eric Vittinghoft, PhD,* Sende Asteria-Peñaloza, MFH,* Jeffrey D. Edwards, MD, MA, MAS,* Jimcox Yacdary, MD, MFH,* Harry C. Lee, MD, MS,* W. John Boscardin, PhD,* Michael D. Cabana, MD, MFH,*** and R. Adarms Dudley, MD, MSA*.

Departments of "Pedistries and "Epidemiology and Bestalaties ("Polya P. Lee Justices for Health Polya Studies, and "Orision Procureisong, University of Defaulting Studies, Desarchies San Francisco, Carlomies "Department of Pediatrics, Desarchie University, Rev Tork, New York and "Operational of Pediatrics, Standard Chinarge, Studiesh Carlomie

REY WORDS
readmission rates, hospital performance
measurement, child havith research, deli-

what's known on this SUBLECT. Readmissions have been localified as a priority area for position ingalent quality measurement nationally. However, it is unknown whether readmission retes very meaningfully across hospitals and how many hospitals would be identified as high- or low-performers

what this study about only are incipitated and care for children are high or low-performers when their conditionspecific revisit rates are compared with average rates across hospitals. This limits the usefulness of condition-specific readmission or revisit measures in pedatric quality measurement.

BEHAVIORAL ECONOMICS AND HEALTH ECONOMICS

Richard G. Frank



This approach...





...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.

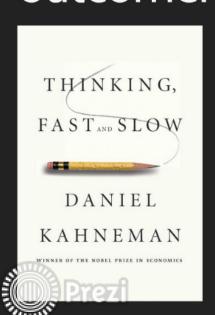
...grafted onto...

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



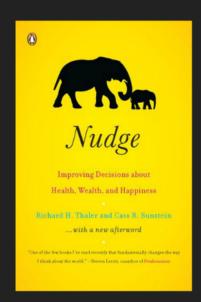
Nudges (Behavioral Economics)

- 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"
Pretp 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...

Poor quality,

Breaks even:

High quality,

Breaks even:

High quality,

Hemorrhages

money:

Easy

Extremely Hard Need a Centaur + Nudges Relatively Easy



The Overview

Pediatric Economics



The Two Leitmotifs:







Feedback Loop





Centaur





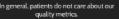


















The Arc:



"Fair Trade" Days



Revelation.



Learning



The Search...





Search

UCSE PLUS











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.



Nov-Dec 2014



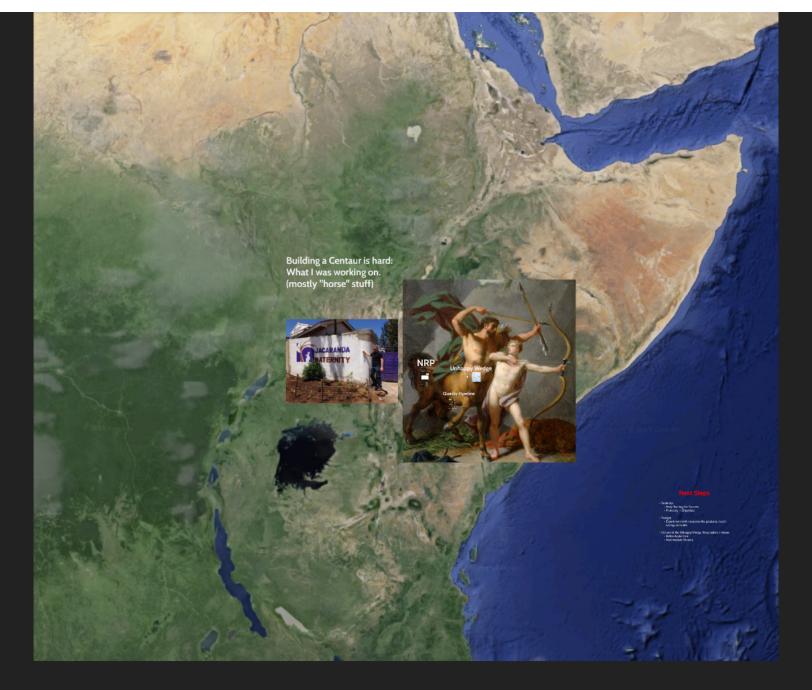
Dec 2012 - Feb 2013

Trip to Kenya 2

May 2012

Trip to Kenya 1





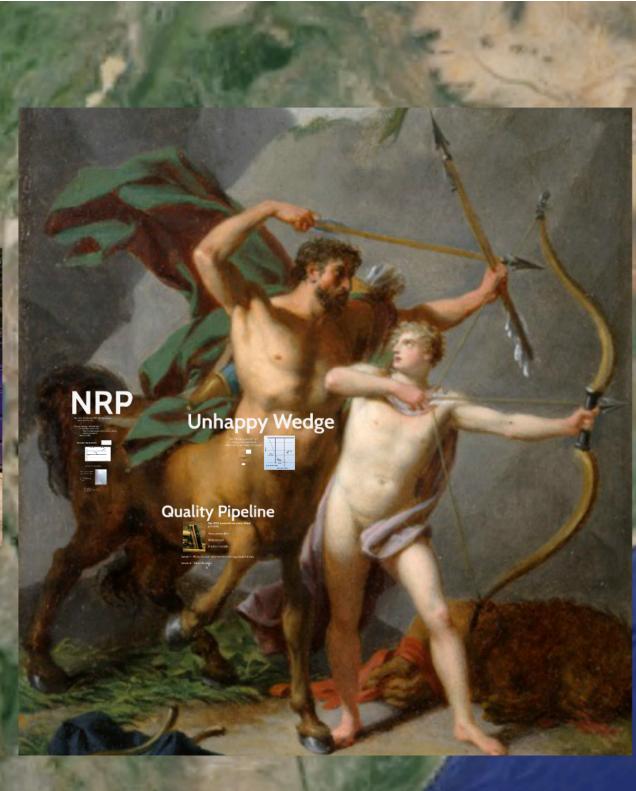




Building a Centaur is hard: What I was working on. (mostly "horse" stuff)



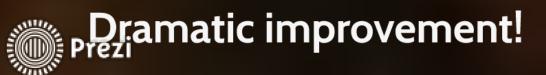
Prezi



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...



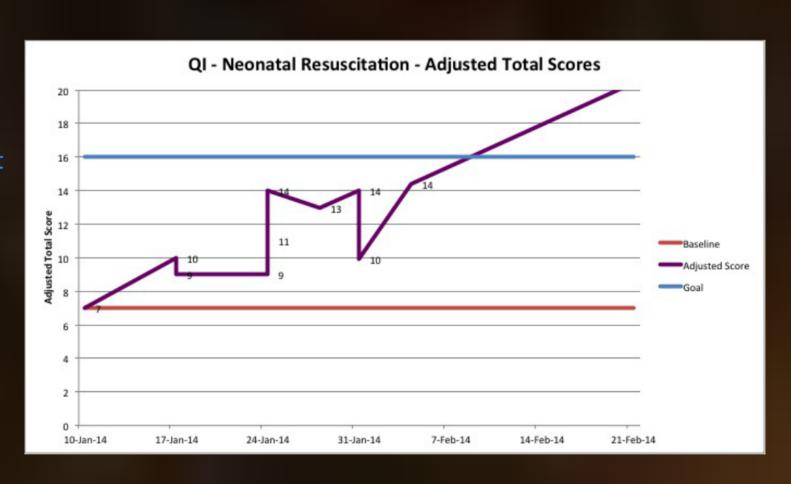


Dramatic improvement!



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!





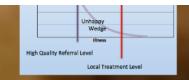
Lesson 1 - NRP works.

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.



lality Hipeli



Dec 2013: Jacaranda has many clinical protocols.

Many are excellent.

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Practice is variable.

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



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



o learn w



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"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"





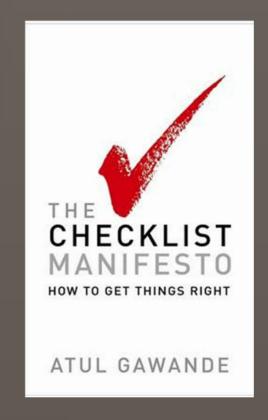
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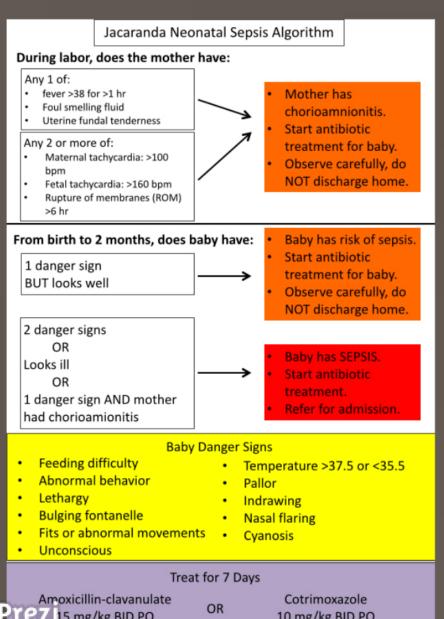
"The wording should be simple and exact"

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

"a checklist has to be tested in the real world"







One example of a work in progress



27 15 mg/kg BID PO

10 mg/kg BID PO

Unhappy Wedge

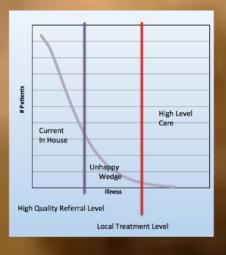
The "Unhappy Wedge" is a strategic no man's land where the horse meets the human.

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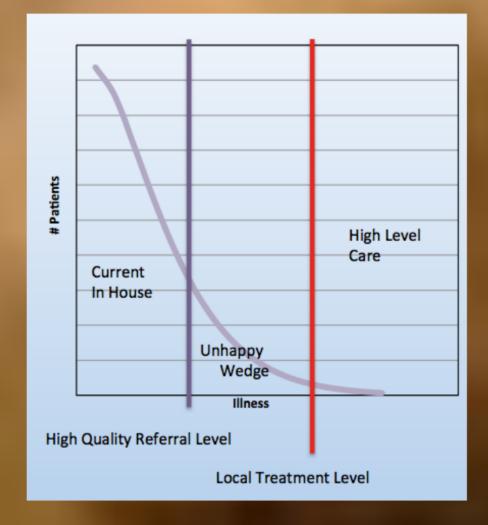
The "Unhappy Wedge" is a strategic no man's land where the horse meets the human.



- Everyone is Unhappy:
 Family thinks we're idiots
 Traveled for nothing
 Providers understand local standards,

Soon, we have no patients or no quality (staff ignore guidelines).

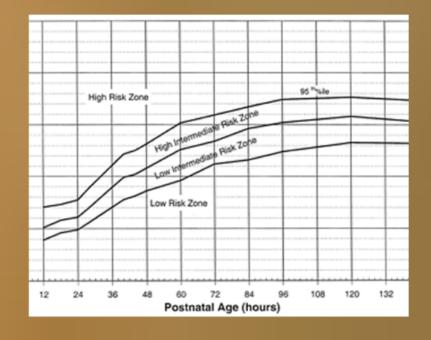






Bili Baby Example

- 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).

Soon, we have no patients or no quality (staff ignore guidelines).

Lesson - To stay out of the Unhappy Wedge, 2 options:

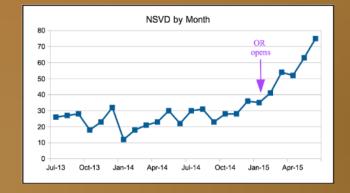
- Accept quality backslide no "horse", violates the mission - no good.
- Keep borderline patients in house.

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





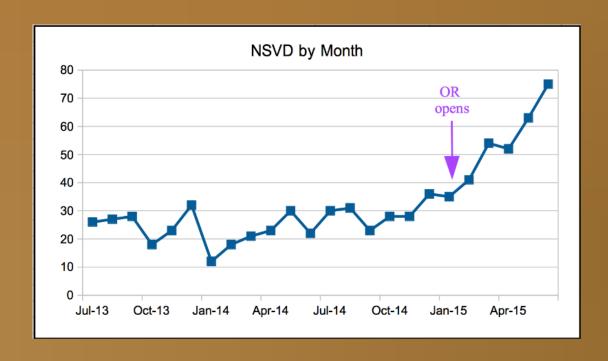
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Unhappy Wedge

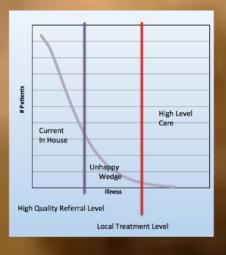
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Next Steps

- 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



The Two Leitmotifs:







Feedback Loop





Centaur





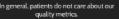


















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 - Holy grail of global health is high quality provider that breaks even - sustainable & scalable.
 - Very hard have to beat Medicine Men at their own game.
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- Nudges help customers & providers.
 - Design systems for real world, irrational humans.
- Unhappy Wedge easier to beat quacks with higher clinical capacity



Thank You!



