



The Innovation Agenda:

Design, Validate, Iterate

September, 2016

Roy Rosin
Chief Innovation Officer, Penn Medicine



AABB A		223
c Employer's name, address, and ZIP code MAJOR COMPANY 123 MAIN STREET SAN DIEGO, CA 92130		
b Employer's FED ID number 00-1234567	a Employee's SSA number 123-45-6789	
7 Social security tips	8 Allocated tips	
9 Advance EIC payment	10 Dependent care benefits	
11 Nonqualified plans	12a See instructions for box 12 C	
14 Other CASDI 375.41	12b D	27.00
	12c	
	12d	
e/f Employee's name, address and ZIP code JANE HORTON 143 BRAND BLVD. SAN DIEGO, CA 92122		
CA Employer's state ID no. 000-442988	16 State wages, tips, etc. 31128.10	
17 State income tax 1203.28	18 Local wages, tips, etc. 0	
19 Local income tax 0	20 Locality name 0	
W-2 Federal Filing Copy Wage and Tax Copy B to be filed with employer		



1 in 4 pregnancies. 1 million times each year.
\$1,000 savings per case...dramatically better experience



Separate Safely



Catch in Time



Size Opportunity

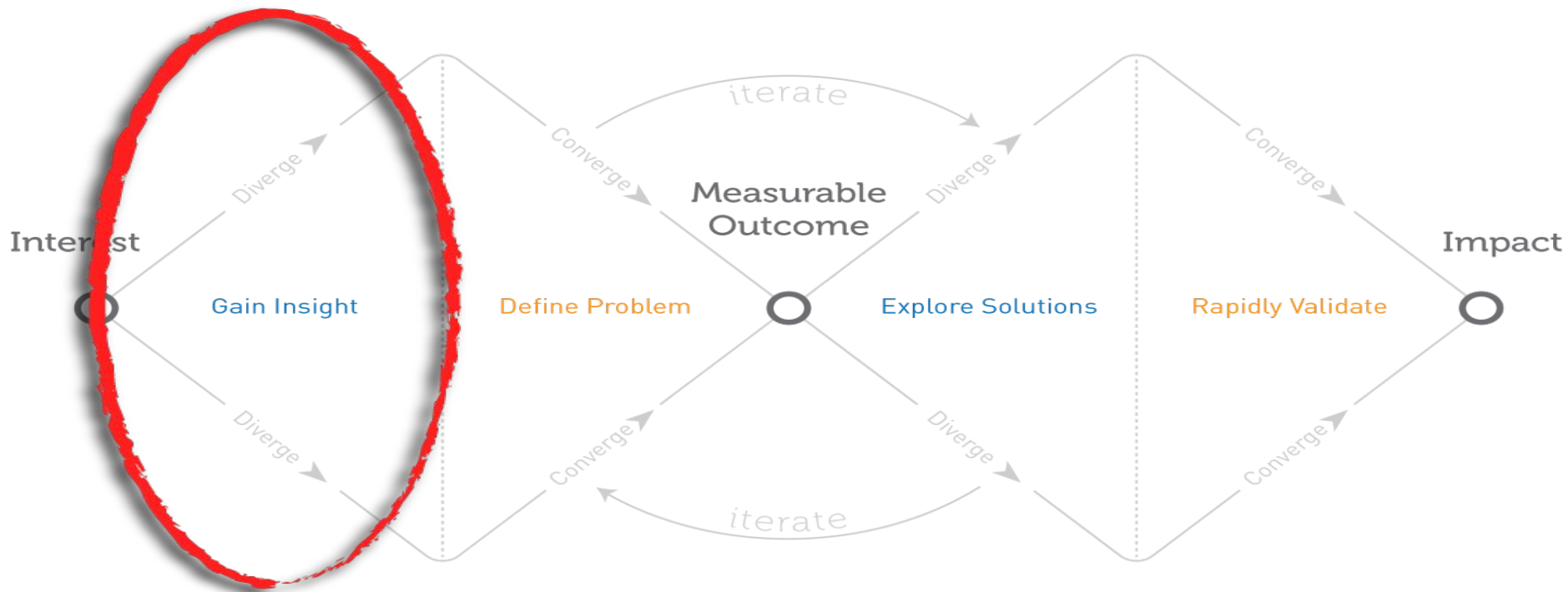
8 pilots in 90 days

Kept 100% who needed
the ED in the ED

Can avoid misutilization and
poor experience

8,000 women per year
in the region

Framework







See what others have missed



MAERSK SEALAND

Focus on what people DO, not say



...and get immersed in new settings



Mrs. Hart was readmitted for CHF, not knowing her cough was a red flag.

When to call
911 or Doctor

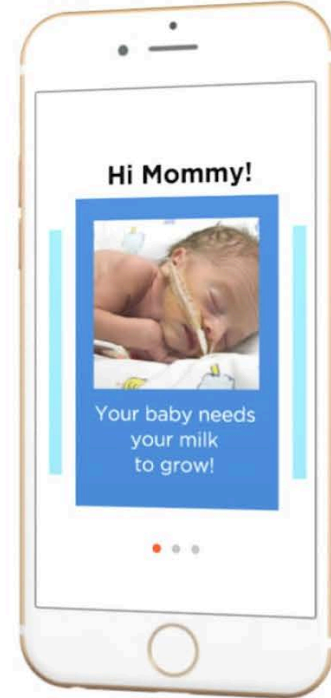
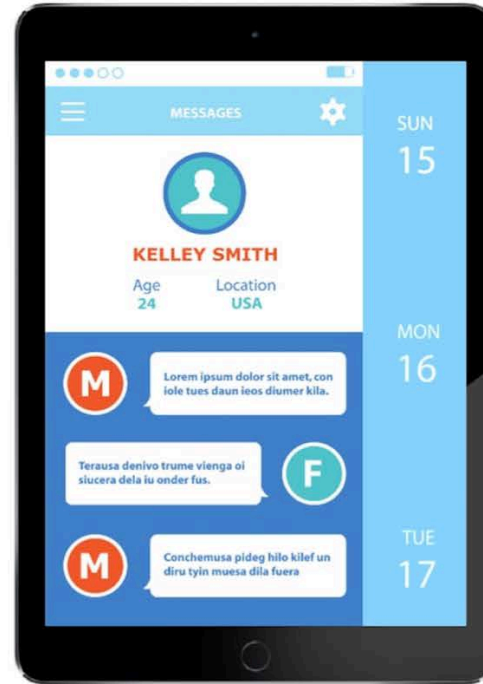
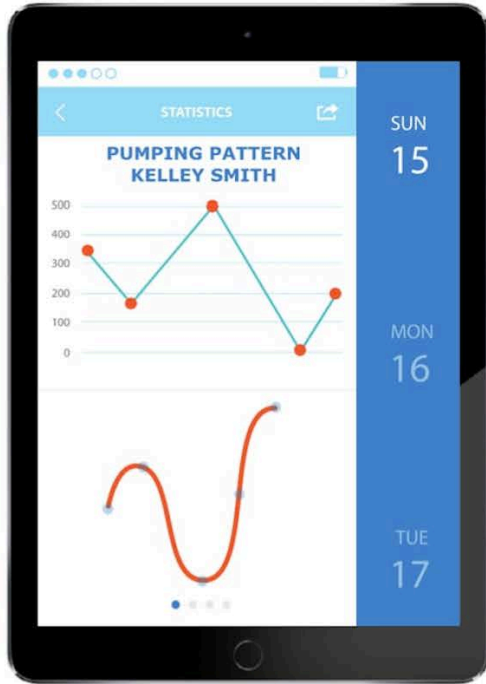
Medication
compliance

Changing
your diet

Useful labels for
medications

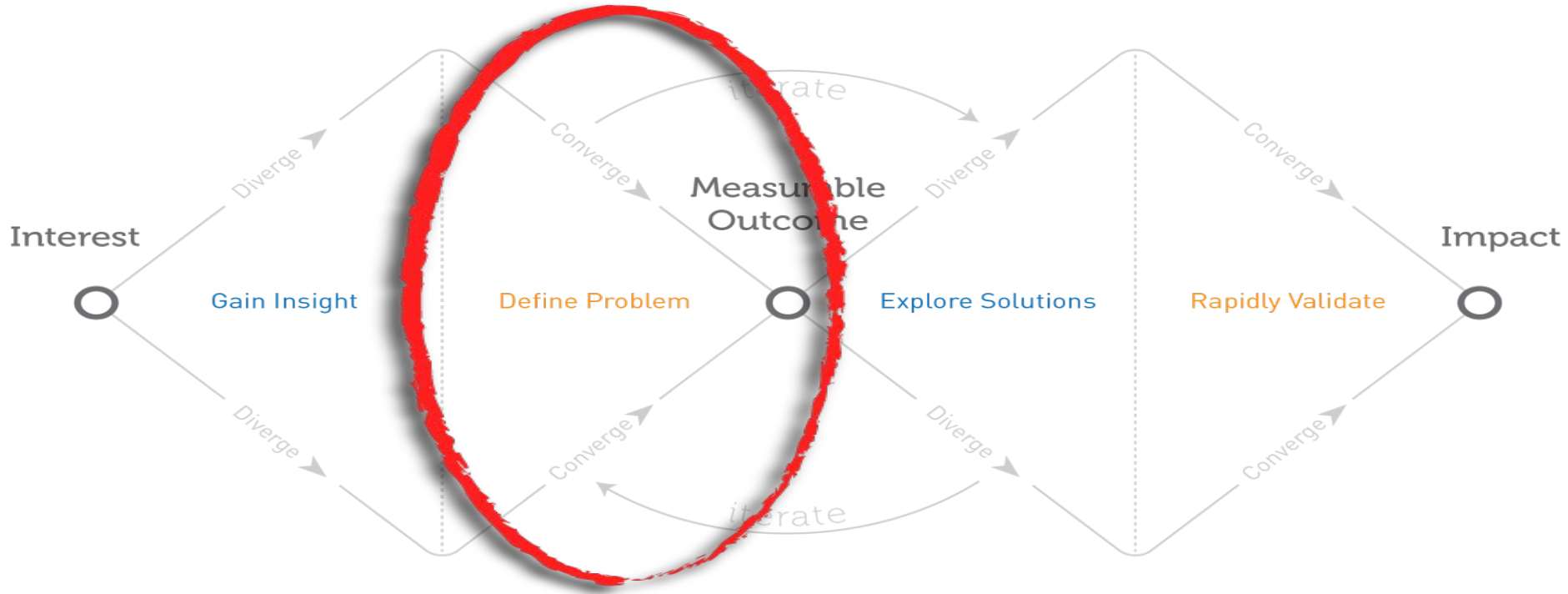


Eliminating 13,000 hours of work per NICU



“The RFID tags won’t work...and we need it to be hands-free!”- Keriton founder

Framework – part 2



The 5 'So What?'s



Problem framing can limit or enable





Time of discharge?

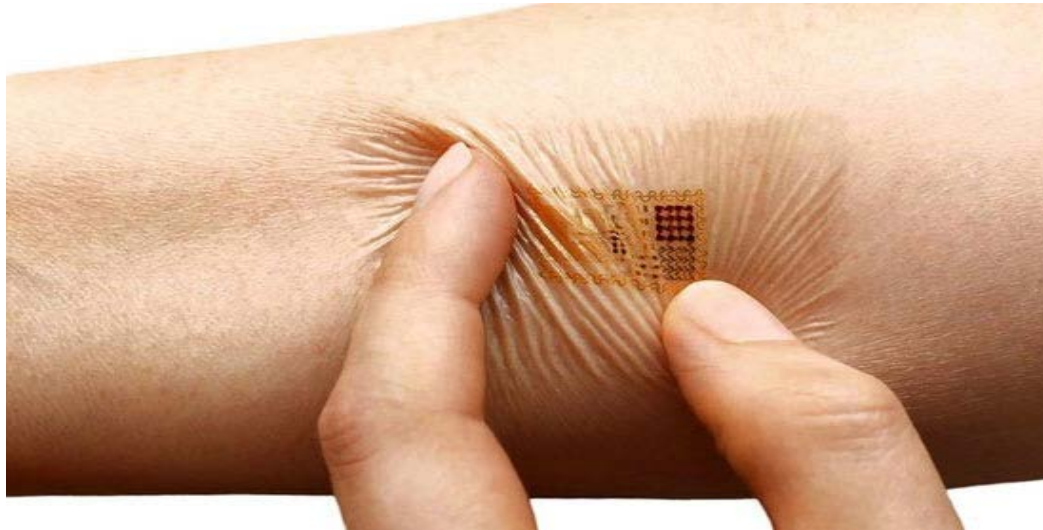


The solution set changes with proper problem framing



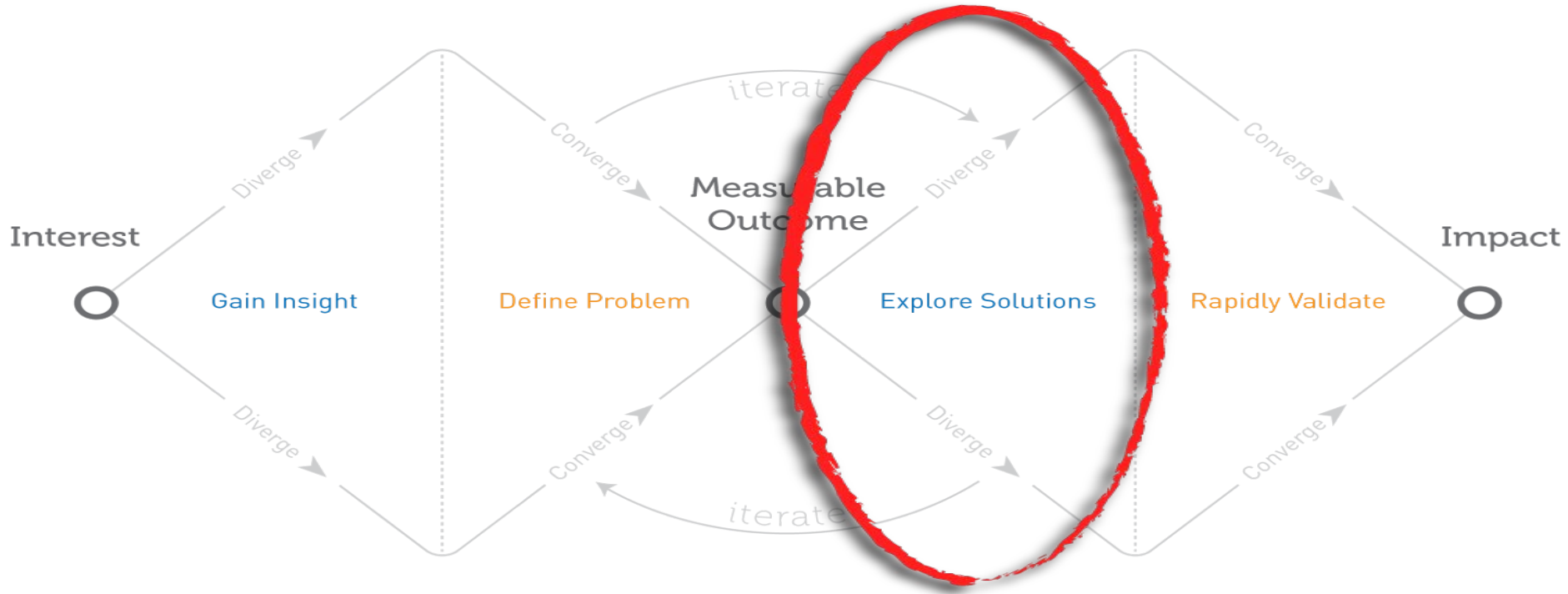
Watch the solution set change

Admission → Lab work



Moving to 'Time to Treatment' changed our perspective

Framework – part 3





Analogies can reveal opportunity

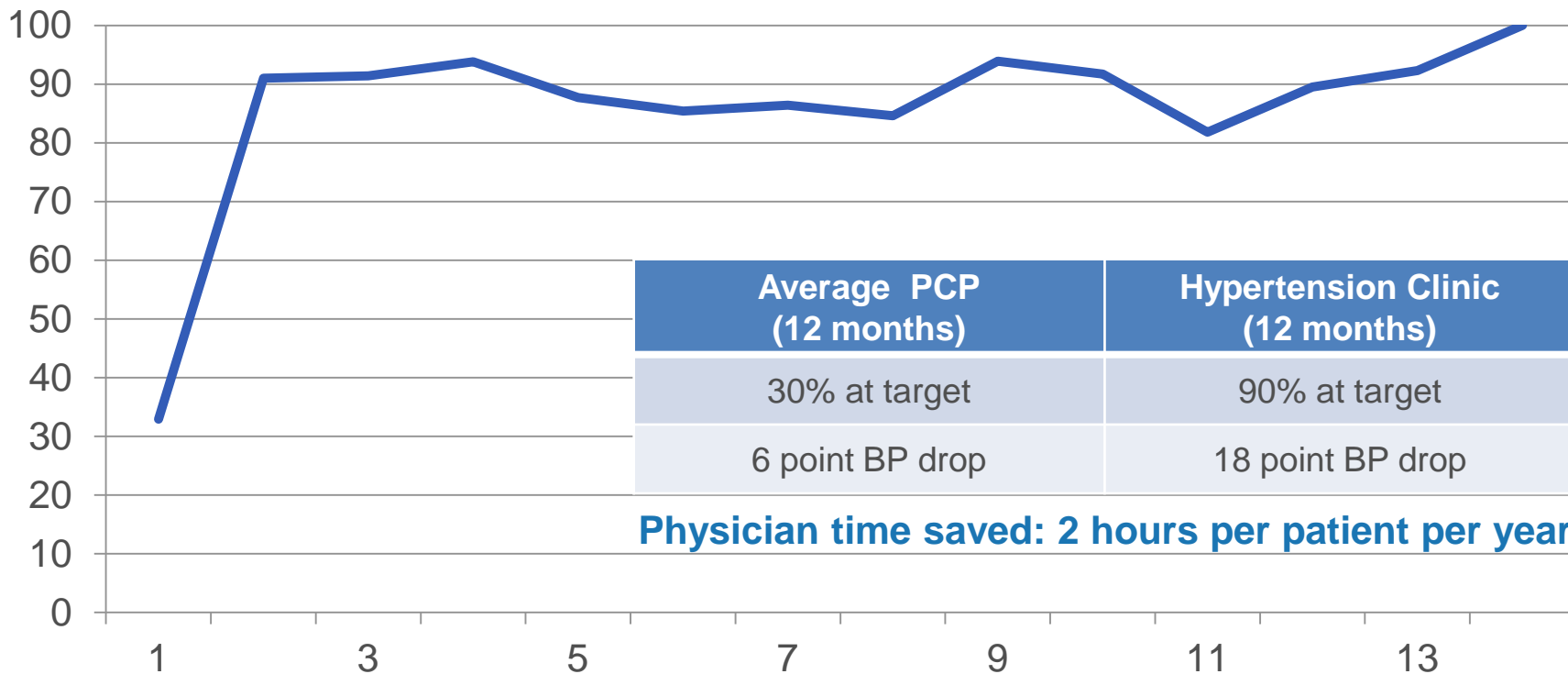


Hertz #1 Club Gold[®]

Didn't expect to be using this analogy...



% Patients at Target BP by Month from Enrollment

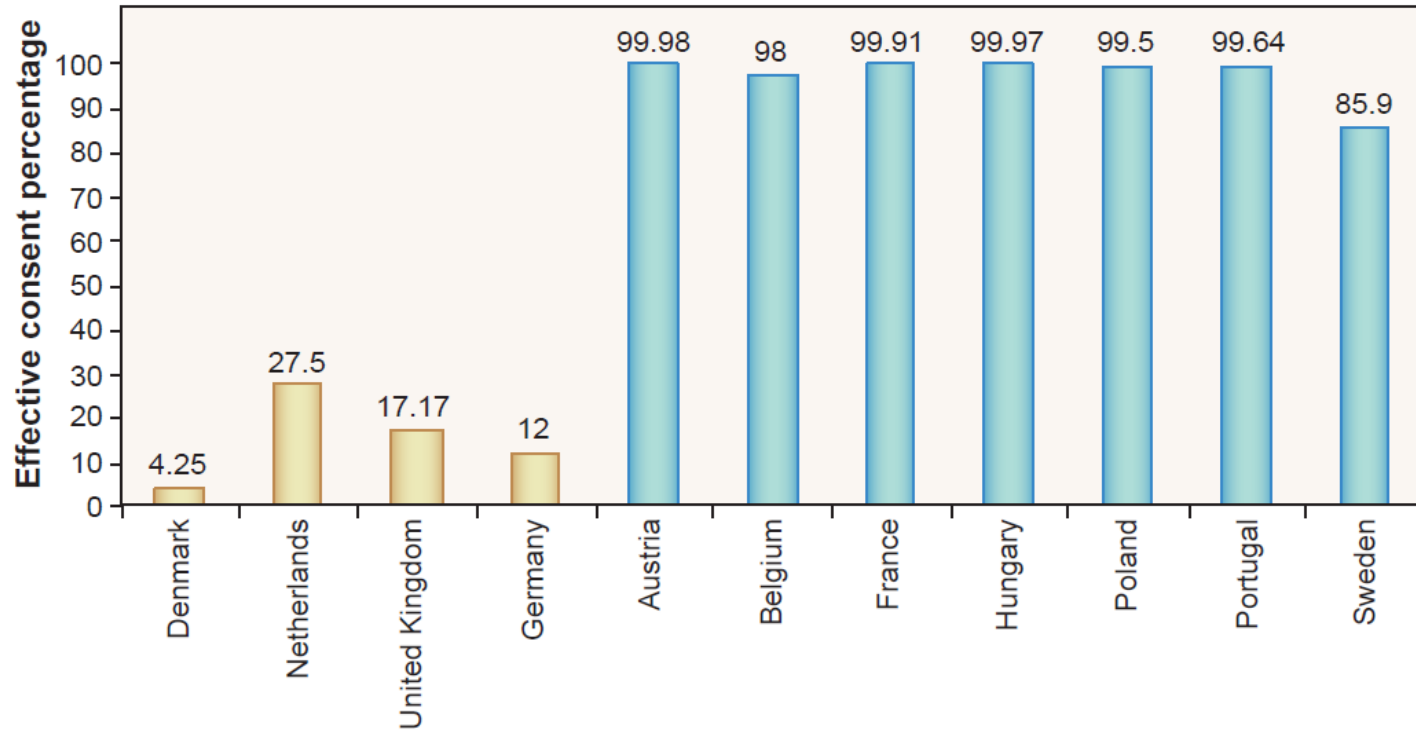


Average PCP (12 months)	Hypertension Clinic (12 months)
30% at target	90% at target
6 point BP drop	18 point BP drop

Physician time saved: 2 hours per patient per year



Health care's complexity

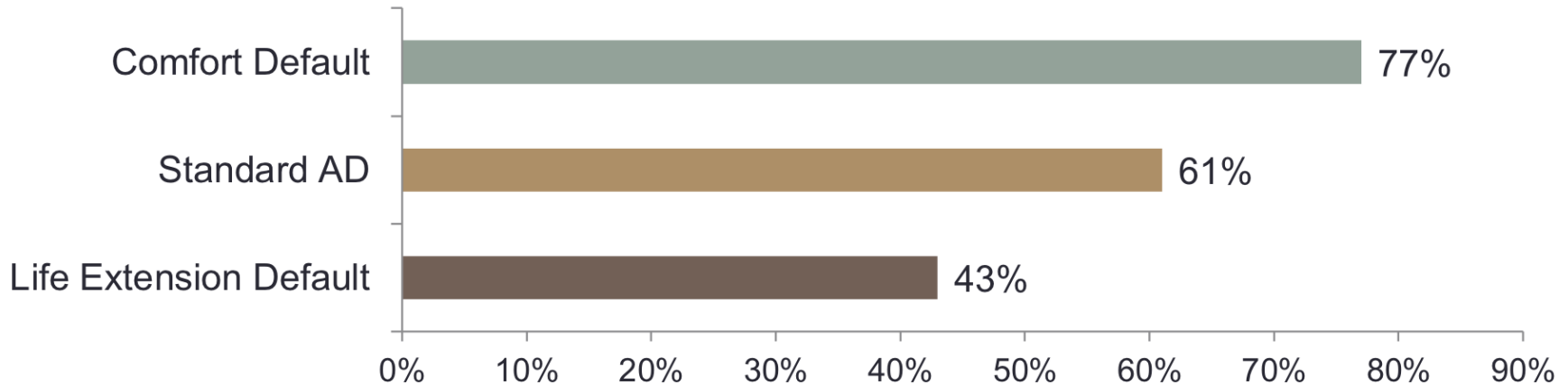


Human behavior and decision making



Defaults work even when stakes are high

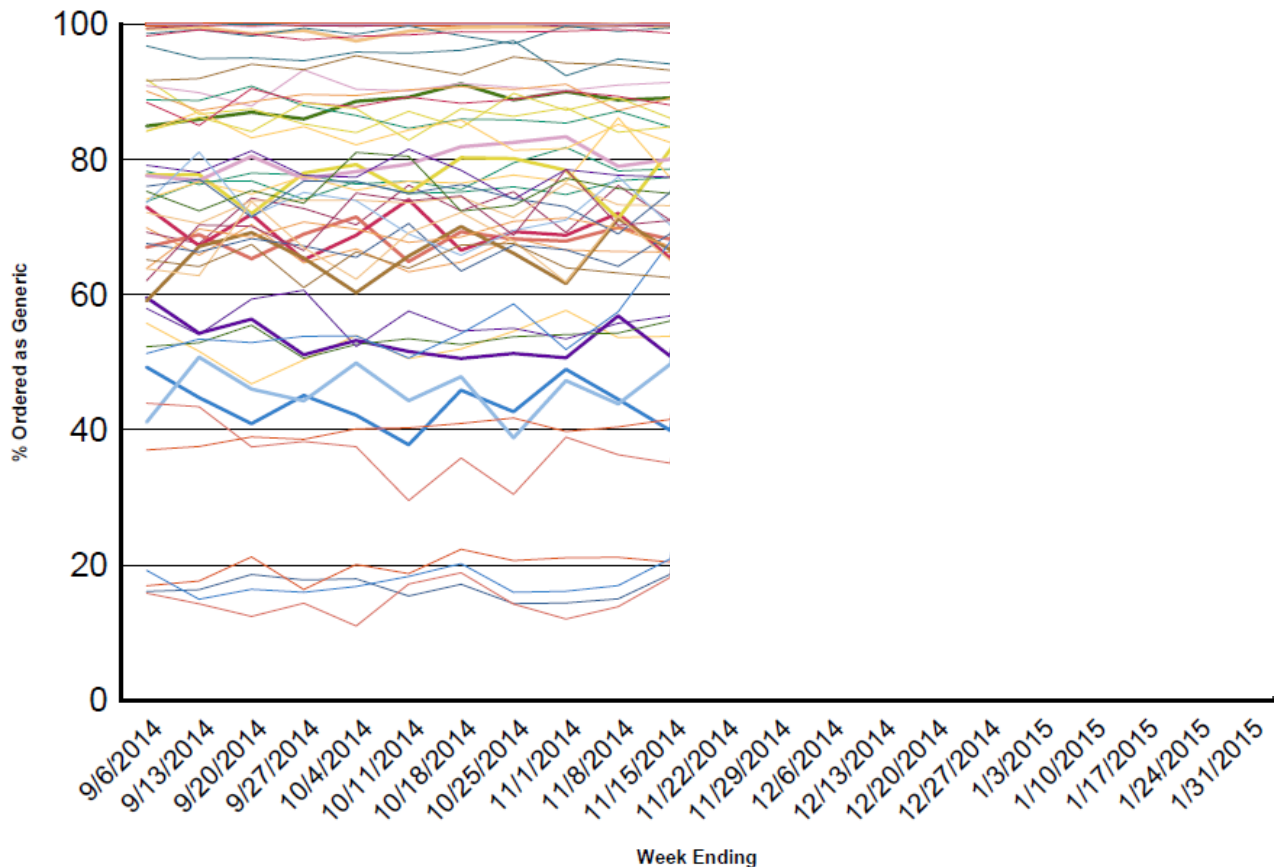
Percent of patients choosing a comfort-oriented goal of care



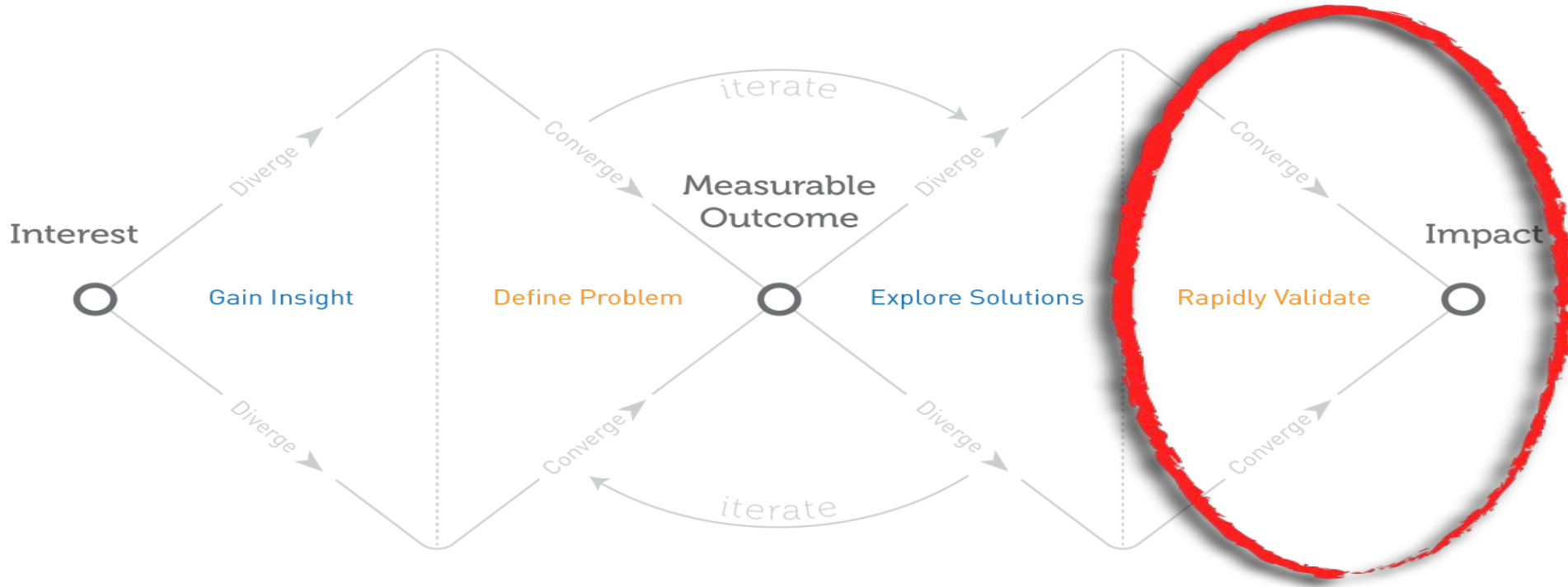
$p = <0.01$

Halpern SD, Loewenstein G, Volpp KG, et al. How ingrained are seriously ill patients' preferences for end-of-life care? *Health Affairs* 2013

Prescribing generics



Framework – part 4



Command & control is doomed



“93% of all innovations that ultimately became successful started off in the wrong direction; the probability that you’ll get it right the first time out of the gate is very low”



"From design, build, sell...to sell, design, build"

TECHNIQUES

"Don't build #@%\$ nobody wants"



"From design, build, sell...to sell, design, build"

VAPOR TESTING

"Don't build #@%\$ nobody wants"



BETA

Pay with Mint

Thanks for checking out Mint payments! It's a private beta for now, but you can sign up to get invited when we add more users.

Enter your email address

Request invite

8:41 AM - 30 Mar 12 - Embed this tweet

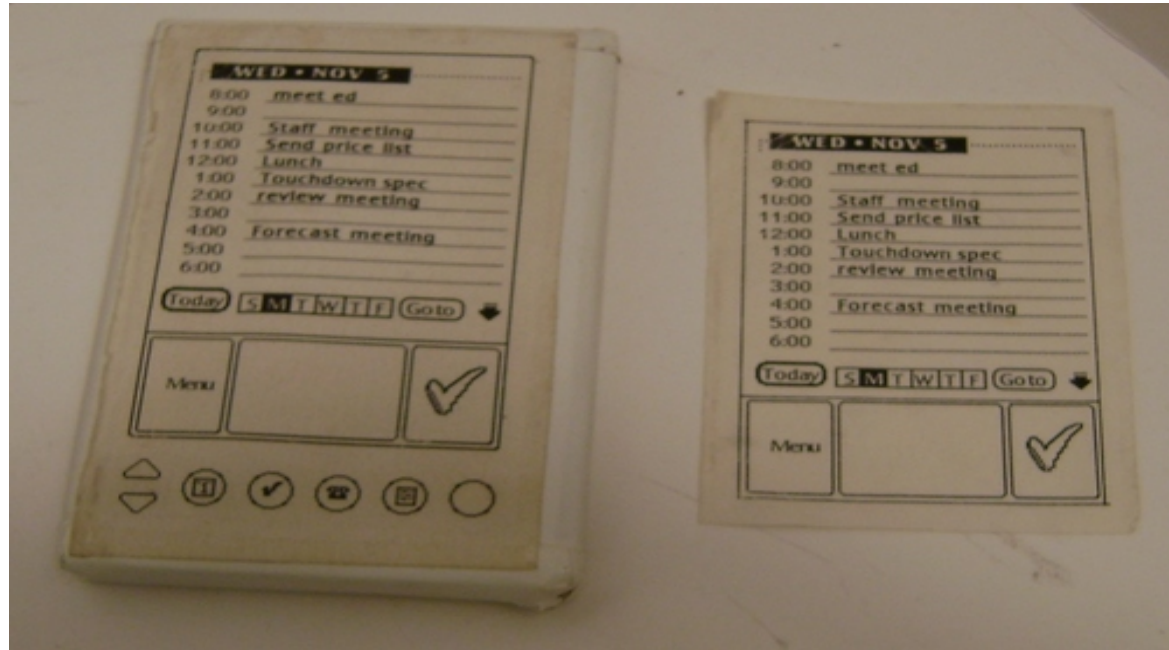


"From design, build, sell... to sell, design, build"

THE FAKE FRONT-END

"Don't build #@%\$ nobody wants"

V1 of the first successful mobile device



When do you wish it were real...and why?

Combatting impulse purchases



Get call telling you to launch the app



See your card is 'off'



Choose who can 'sign off'



Request to turn card back on

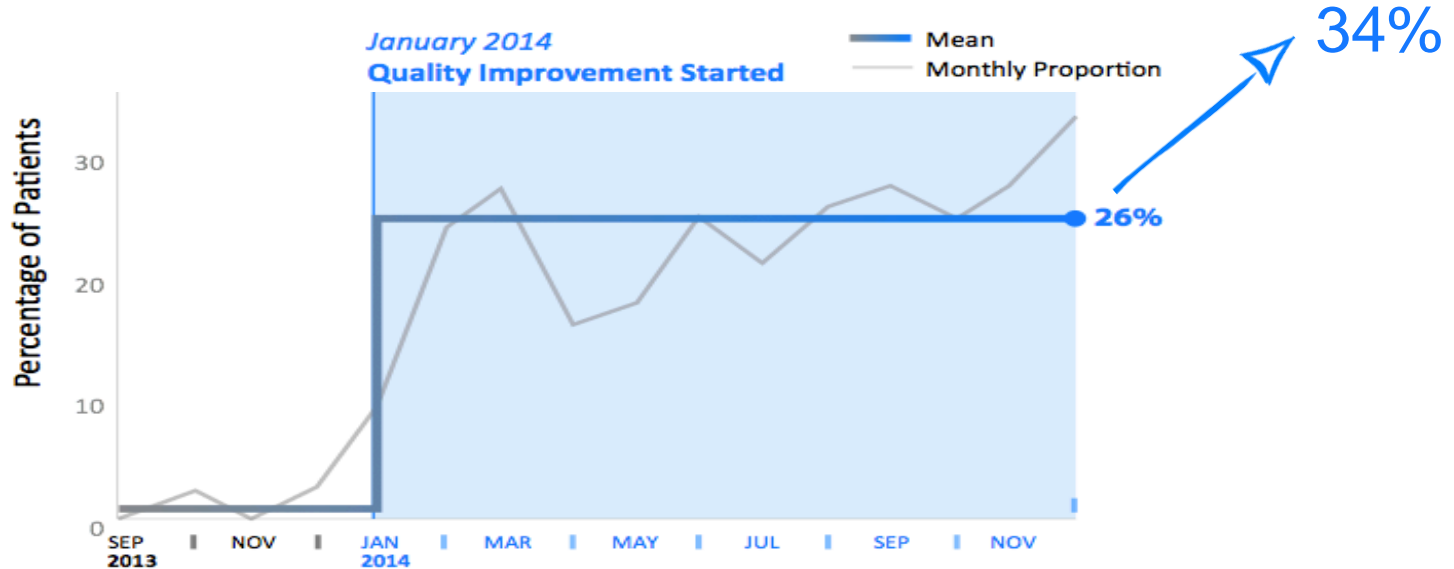
When you get near a store where you have control issues...



Breaking through dogma

RESULTS

Increasing Mean % of Patients With Fever Discharged From the ED



Mean discharges from ED increased 25 percentage points without increasing 72 hour readmissions.



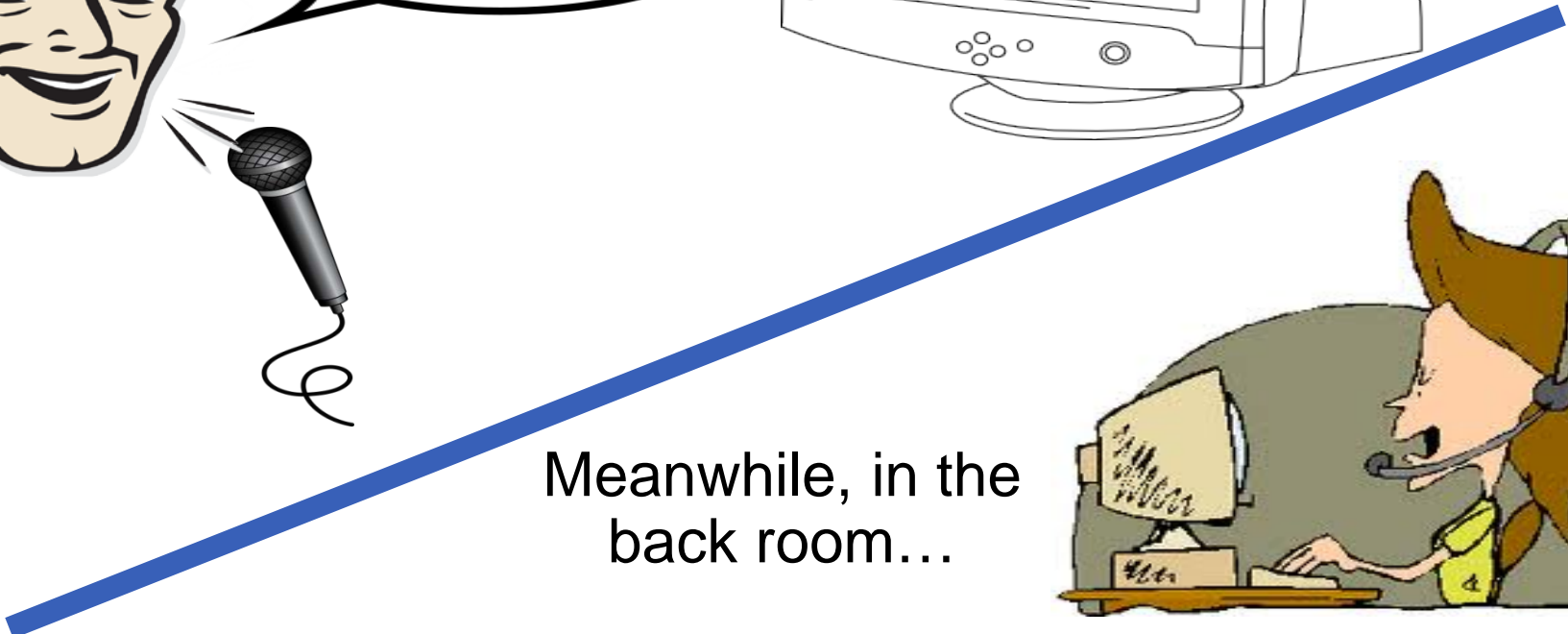
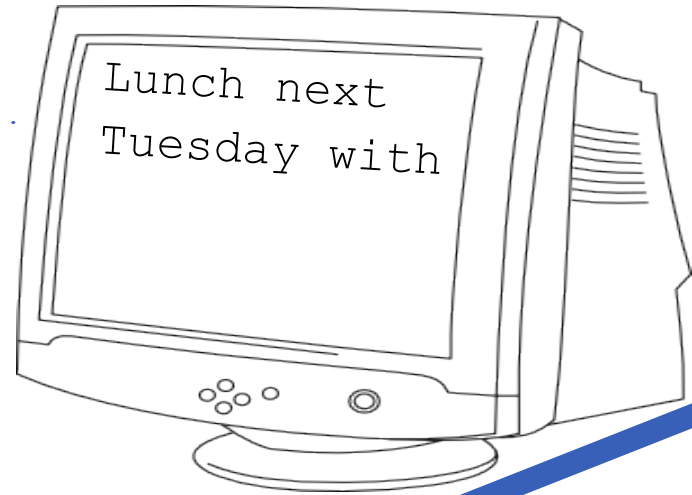
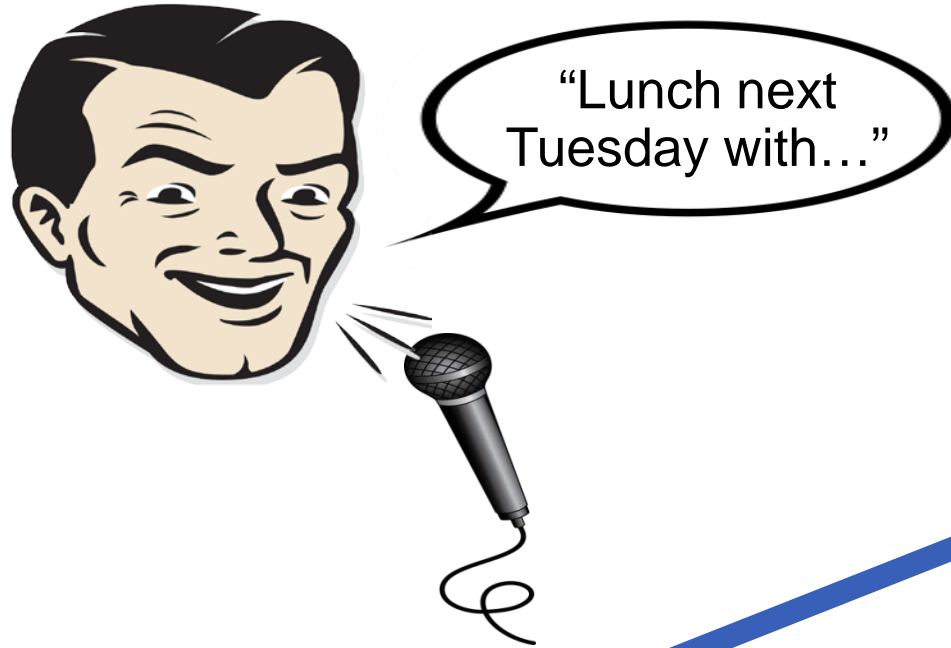
"From design, build, sell... to sell, design, build"

THE FAKE BACK-END

"Don't build #@%\$ nobody wants"



IBM speech-to-text



Meanwhile, in the back room...





#1 driver of maternal morbidity, readmissions





"From design, build, sell...to sell, design, build"

THE PRE-PILOT

"Don't build #@%\$ nobody wants"



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