The Trouble with Spreading Pharmacist Services

(In Community-based Pharmacy Practice)

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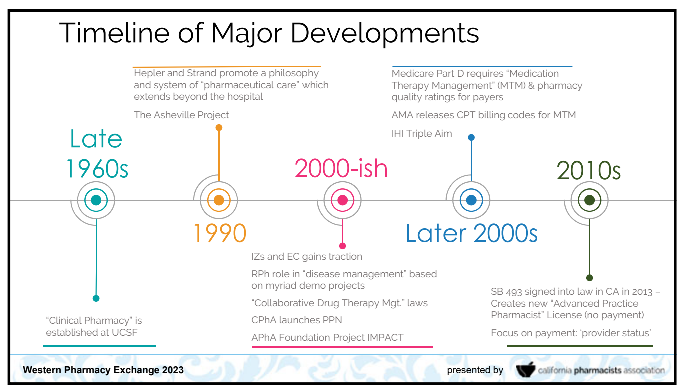
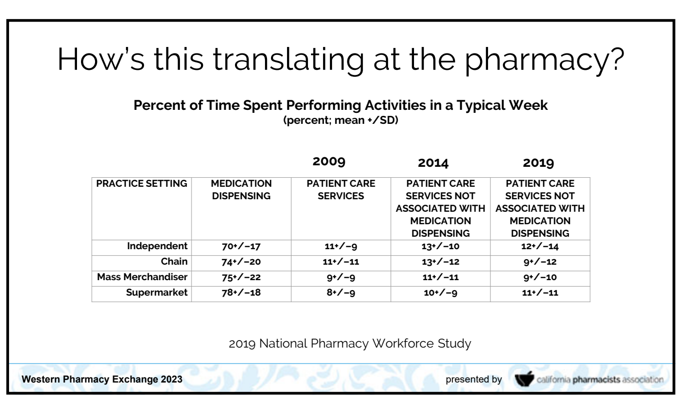
Disclosures

- Michael Negrete: No relevant conflicts to disclose
- Nancy A. Alvarez: Current Director of the APhA Foundation Board

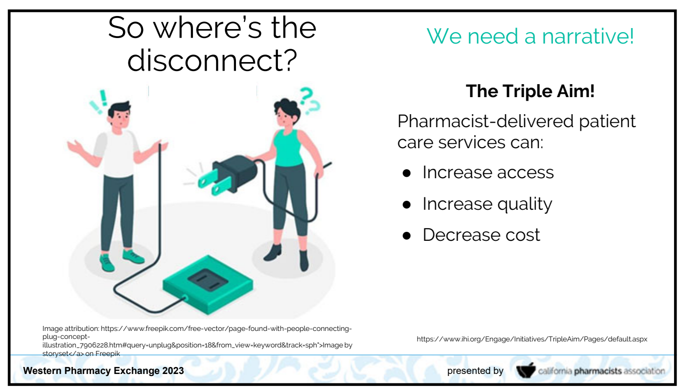
Learning Objectives:

1. List major efforts over the last 30 years to shift the focus of pharmacist responsibilities from products to services
2. Identify the approximate percentage of time community pharmacists spend per week on patient care services not associated with medication dispensing.
3. List the 5 "vital signs" that indicate a product or service's potential to achieve and sustain at scale
4. Given a list of potential non-dispensing services, identify which one is most likely to achieve and sustain at scale
5. Identify potential strategies for addressing the most challenging vital signs in relation to scaling non-dispensing services





		2009	2014	2019
PRACTICE SETTING	MEDICATION DISPENSING	PATIENT CARE SERVICES	PATIENT CARE SERVICES NOT ASSOCIATED WITH MEDICATION DISPENSING	PATIENT CARE SERVICES NOT ASSOCIATED WITH MEDICATION DISPENSING
Independent	70+/−17	11+/−9	13+/−10	12+/−14
Chain	74+/−20	11+/−11	13+/−12	9+/−12
Mass Merchandiser	75+/−22	9+/−9	11+/−11	9+/−10
Supermarket	78+/−18	8+/−9	10+/−9	11+/−11



So where's the disconnect?

We need evidence!

- Asheville Project
- Diabetes Ten City Challenge
- Project IMPACT
  - Diabetes
  - Depression
  - Hyperlipidemia
  - Immunization
  - Osteoporosis

Image attribution: https://www.freepik.com/free-vector/page-found-with-people-connecting-plug-concept-illustration_7906228.htm#query=unplug&position=18&from_view=keyword&track=sph">Image by storyset on Freepik

https://aphanet.pharmacist.com/sites/default/files/audience/EvidenceforPharmacistsServices2000-2016.pdf

So What Gives?

- "Translating an idea into widespread impact depends on one thing only: whether it can be replicated at scale."
- "Successfully scaled ideas are all alike; every idea that fails to scale fails in its own way."
- Assessing 5 "vital signs" can determine whether an idea has the potential to scale.

https://www.thevoltageeffect.com

Vital sign #1: False Positives

2. Unethical Researchers

How Many Scientists Fabricate and Falsify Research? A Systematic Review and Meta-Analysis of Survey Data

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Abstract

The frequency with which scientists fabricate and falsify data, or commit other forms of scientific misconduct is a matter of controversy. Many surveys have asked scientists directly whether they have committed or know of a colleague who committed research misconduct, but their results appeared difficult to compare and synthesize. This is the first meta-analysis of these surveys. To standardize outcomes, the number of respondents who recalled at least one incident of misconduct was calculated for each question, and the analysis was limited to behaviours that distort scientific knowledge:

the meta-analysis. A pooled weighted average of 1.97% (N = 7, 95%CI: 0.86–4.45) of scientists admitted to have fabricated, falsified or modified data or results at least once –a serious form of misconduct by any standard– and up to 33.7% admitted other questionable research practices. In surveys asking about the behaviour of colleagues, admission rates were 14.12%

(N = 12, 95% CI: 9.91–19.72) for falsification, and up to 72% for other questionable research practices. Meta-regression showed that self reports surveys, surveys using the words "falsification" or "fabrication", and mailed surveys yielded lower percentages of misconduct. When these factors were controlled for, misconduct was reported more frequently by medical/pharmacological researchers than others. Considering that these surveys ask sensitive questions and have other limitations, it appears likely that this is a conservative estimate of the true prevalence of scientific misconduct.

Citation: Fanelli D (2009) How Many Scientists Fabricate and Falsify Research? A Systematic Review and Meta-Analysis of Survey Data. PLoS ONE 4(5): e5738. doi:10.1371/journal.pone.0005738

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Vital sign #1: False Positives

3. Overconfidence in statistical significance
   a. p=0.05 means there's a 1 in 20 chance the observed results are nonsignificant
   b. Statistical significance ≠ *clinical* significance

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Vital sign #2: Unrepresentative Audiences & Contexts

1. Who were the key "stakeholders" involved?
2. What was their "context" in relation to their participation?
3. How representative are these to the audience(s) and context(s) that would be encountered at scale?

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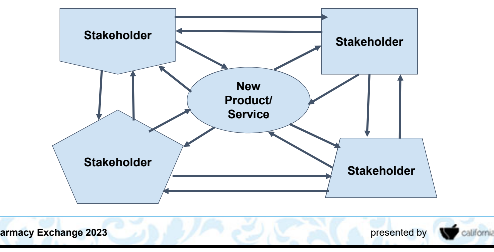
Vital sign #3: Scalability of "non-negotiables"

1. What were the "key ingredients" that enabled success?
   a. Consider the types of stakeholders involved and the various tools, resources and incentives they had at their disposal
2. Will it be possible to secure the same types of stakeholders, tools, resources and incentives at scale?
3. Where's your weakest link?

Vital sign #4: Unintended Consequences

- No good plan survives contact with reality



Vital sign #5: (Dis)economies of scale

1. Are there components of the new product or service that will get cheaper or more efficient with scale?
2. Are there components that may get more <u>expensive</u> with scale?

Case Study:

How can each of these services in community-based pharmacy practice succeed when scaling principles are applied?

Service	VITAL SIGNS*			
	Applicability of Audiences & Contexts	Scalability of "Key Ingredients"	Unintended Consequences	(Dis)economies of scale
Vaccinations				
Comprehensive Diabetes Management				
Comprehensive Medication Review				
Targeted Medication Review				

*"False Positive" intentionally omitted for the purpose of this exercise

References & Resources

- https://pharm.ucsf.edu/history-cp/1965-1972
- https://pubmed.ncbi.nlm.nih.gov/2316538/
- https://www.aphafoundation.org/asheville-project
- https://www.aphafoundation.org/impact
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- https://aphanet.pharmacist.com/sites/default/files/audience/EvidenceforPharmacistsServices2000-2016.pdf

Assessment Questions

1. Which of the following efforts to promote "non-dispensing services" included a mandate to pay for pharmacist services?
   a. Laws providing for pharmacist initiation of emergency contraception and vaccines
   b. Laws authorizing Collaborative Drug Therapy Management (CDTM)
   c. MTM requirements under Medicare Part D
   d. Establishment of CPT billing codes for pharmacist-delivered MTM
   e. None of the above

Assessment Questions

2. According to the National Pharmacy Workforce Study, between 2009 and 2019, the percent of time community pharmacists spend providing non-dispensing services:
   a. Increased from 10% to 30%
   b. Stagnated around 10%
   c. Decreased from 20% to 15%
   d. None of the above

Assessment Questions

3. When reviewing promising results from a demonstration/pilot project, which of the following is NOT one of the five "vital signs" that should be assessed to determine its potential for scale:
   a. Whether results could be a "false positive"
   b. The general applicability of the target audience(s) & context(s)
   c. Scalability of the "key ingredients" that generated the desired result
   d. Economies of scale
   e. Unintended consequences
   f. Opportunity costs

Assessment Questions

4. Based on the five "vital signs", which of the following "non-dispensing services" has the greatest potential for scale in a community-based pharmacy practice?
   a. Vaccinations
   b. Comprehensive diabetes management
   c. Comprehensive Medication Review (CMR)
   d. Targeted Medication Review (TMR)

Assessment Questions

5. Promoting the scale of a product or service by using a person's dislike of relinquishing something they possess is an example of leveraging:
   a. Marginal utility
   b. Loss aversion
   c. Optimal Quitting
   d. Culture Focus