

Physician comment on the conventional mode of lifelong learning from mistakes: "It is a crime. I'm not sure why or how it gets translated that way, but it is. Medicine has always had this very high ethical standard and to fail that standard is to be guilty. There's some anonymous court that's been set up someplace--I mean Osler or God somewhere at Massachusetts General Hospital-- and you 've been convicted and tried at the same time." - Christensen. Heart of Darkness. JGIM 1992 PMID 1506949

Observations on from using positive deviance for lifelong learning: "Interviews revealed enthusiastic support for surgeon-specific outcome reports (SSORs) as a means to improve patient care through awareness of personal outcomes with blinded divisional comparison for similar operations and diseases, and apply the learning objectives to continuous professional development and maintenance of certification." - Ivanovic. Surgeon-Specific Outcome Reports and Positive Deviance. Ann Thorac Surg. 2015 PMID 26188970

Background

Positive deviance (PD) has been used successfully in clinical care but not applied to medical education. We introduced PD to help residents' tactics to speed the handling outpatient test results, in order to: 1) improve the clinical process, and 2) expose trainees to PD.

Methods

Each resident attended one PD seminars of 7 to 8 residents. During the seminar, residents' opinions were collected with a RedCap survey.

Prior to the seminar, forest plots determined our overall proportion of results handled within 2 days (timely rate, TR), the TR of each resident, and the heterogeneity (I²) of the group. The forest plots were anonymized and emailed before the seminar to each resident with their own result identified.

Results

Our baseline TR was 52% (range 0% to 97%; $I^2 = 85\%$) with a mean of 7.4 days. In each seminar, after collecting and showing each member's tactics without attribution, 72% and 58% of residents voted to encourage the deviants and all participants, respectively, to identify uniquely successful tactics.

After the seminar, 83% of residents assessed the session positively (p = 0.96 for comparison with the same assessment of other components in our last year-end curriculum survey).

Over the subsequent 10 weeks, a secular increase in performance occurred.

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Conclusion

In this initial use of PD to empower learning on a mundane task, the residents received the experience similarly to established components of our curriculum. The finding that 72% of residents encouraged identifying positive deviants suggests that about a quarter of residents were initially uncomfortable with this introduction to PD.

Using Positive Deviance in Medical Education to Empower Learning Badgett RG, MD; Brumfield B, DO; Wissman K, PharmD Internal Medicine, KU School of Medicine-Wichita

Figure 1. example email to residents the day before the session.

Figure 2. Forest plot of test results turnaround times for all residents (anonymized). This slide was shown to residents when they voted whether to ask the positive deviants to identify themselves and their tactics from Figure 2.

Who a devian

- Should w encourac positive of voluntaril themselv
- Should w encourac voluntaril their resu

the attached is for panel management this week. In the plot you are #18. will explain at panel management. 0.50 [0.35; 0.65] .39 [0.17; 0.64] .24 [0.12; 0.39] 66 [0.46; 0.82] 0.52 [0.45; 0.59]

Figure 3. Grid of test result handling tactics submitted at one session. Note this is useless without knowing which tactics belong to the positive deviants.

Record ID record_ id	What thi tactics
<u>32</u>	-check ec -based on -kathleen medicatio -5 to 20 n -laptop
<u>33</u>	Using the When test I do so m
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<u>36</u>	I opened most of th
<u>37</u>	- Address - send no - call the
	- smartph
<u>38</u>	I redownl Go to con - If negat 2-5 minut
<u>40</u>	I used to

	Proportion of labs and DI signed off within 2 days of receipt	2019-20
ire our its?	Provider Timely Total labs Proportion 95%-CI Team = Blue 23* 2 14 0.14 [0.02; 0.43] 27* 23 32 0.72 [0.53; 0.86] 32* 26 36 0.72 [0.55; 0.86] 33* 30 31 0.97 [0.83; 1.00] 35* 22 27 0.81 [0.62; 0.94] 38 16 33 0.48 [0.31; 0.66] 45* 9 49 0.18 [0.09; 0.32] Random effects model 222 0.61 [0.26; 0.88] Heterogeneity: J ² = 92% 0.61 [0.26; 0.88]	
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	Random effects model 1549 0.52 [0.45; 0.59] Heterogeneity: I ² = 85% 0 0.2 0.4 0.6 0.8 1	• In 08, reside

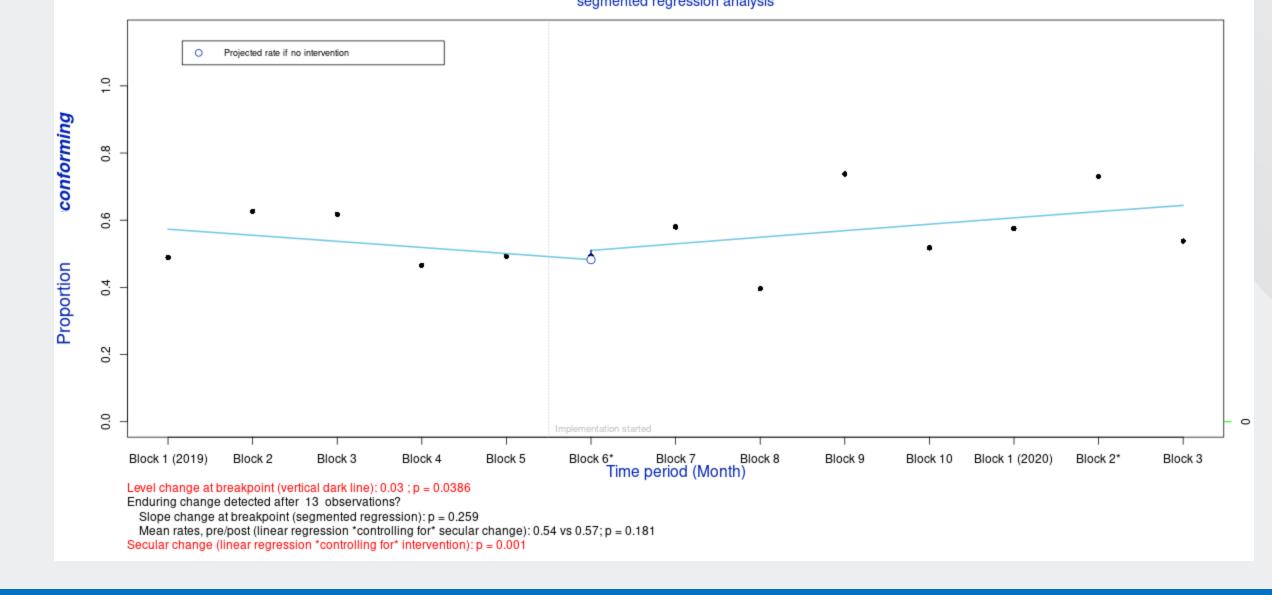
References

Christensen et al. Heart of Darkness. JGIM 1992 PMID 1506949 2. Hazy JK, Uhl-Bien M. Towards operationalizing complexity leadership: How generative, administrative and community-building leadership practices enact organizational outcomes. Leadership. 2015 Feb 1;11(1):79–104. 3. Ivanovic et al. Surgeon-Specific Outcome Reports and Positive Deviance. Ann Thorac Surg. 2015 PMID 26188970

ing(s) do you do in managing test results that you think mos use a laptop vs a smartphone
Team blue
n time availability
if normal and nothing to do, Call the patient to discuss abnormal results esp if need to redo labs or adjust on, ask MA to call if can not reach the patient and options discussed with patient in previous visit based on lab results mins
e app to address them with dot phrases programed into iphone.
its are normal I ask the MA to call patient. If abnormal and require clarification, I do so myself, If need for admission, hyself.
nately do not have any specific things that I use to help manage my work flow
lay per week (my day off) to review ecW : Katie sends a letter; abNL and needs f-up appointment: MA to notify; critical abNLty and/or anxious patient (or d by patient): call the patient. n length: 10-15 mins phone when it allows me to login!
the ECW once I got an alert email for lab result, starting by checking the result through by mobile application, then, he time, I used my web based ECW to notify the MA to send the result with the instruction if needed
s eCW notifications as they arrive ormal/unremarkable labs to Kathleen immediately (takes ~2 mins to review and send) patient/your MA with plan if not (~5-10 mins depending on the problem/action)
hone
loaded the app and added email. Use alerts to prompt me to check labs, etc. nputer lab on fridays.
tive send a letter, if abnormal but not a big deal I have the MA call, if needing intervention or serious test result I call. tes
try and log on to ECW about once a week when off service, but I no longer do this sadly

Figure 4. Test result handling for academic year 020 to present

KUSM-W IM: test result



Future plans

/2020 we introduced peer coaching in which senior residents were asked to coach struggling residents. All residents were trained on peer coaching and delivering feedback.

