5 Ways to Empower Physicians with their Clinical Data

agathos

HOW SUPERIOR FEEDBACK ON PRACTICE VARIATION ACHIEVES:

PHYSICIAN TRUST

PHYSICIAN ENGAGEMENT

SUSTAINABLE BEHAVIOR CHANGE

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> ***"IT IS GREAT THAT WE HAVE ALL THIS DATA, BUT WHAT SHOULD I DO DIFFERENTLY?"***

Most physicians immediately relate to the frustration of receiving performance data with an obvious call to action yet no obvious course of action.

A common scenario is outcomes data percolating down to physicians, presented in a patient-centric yet non-clinical perspective. Inherently administrative and retrospective, this data does not identify ***how*** physicians can improve patient outcomes. This leads physicians to disengage and come away with the impression that their efforts and intent are misunderstood or unappreciated.

Although most health systems share data with physicians, few organizations provide action-level feedback directly to physicians. Existing solutions either have glaring functional limitations, or they introduce such methodological doubts that they backfire and achieve the exact opposite of desired outcomes by reducing physician alignment.

Agathos exists to solve for the sophisticated data needs of the physician end-user, to ***make valuable care obvious and normal***. Through years of researching best practices and user-centric design, Agathos has developed an unprecedented transparency platform that empowers clinical excellence through data directly to physicians.

WE CREDIT OUR PLATFORM'S GROWING SUCCESS TO THE FOLLOWING

5 KEY PRINCIPLES

1. ***PRECISE ATTRIBUTION*** of clinical actions to the responsible physician(s)
2. ***ACTION-LEVEL FEEDBACK*** (not outcomes), with clear and accurate context on how to act next time
3. ***PEER COMPARISON*** at once creating tension for change and positive deviance
4. ***TIMELY CASE EXAMPLES*** allowing physicians to verify attribution, reflect on choices, and witness impact
5. ***TEXT NOTIFICATIONS*** for efficient, effective, low-pressure, and engaging communication

#1 PRECISE ATTRIBUTION

> ***"IF YOU ARE GOING TO MEASURE ME, PLEASE MEASURE ME."***

STATUS QUO

Conventional attribution models assign an entire hospital stay to one of the admitting, attending, or discharging physician of record, based on reporting and billing conventions or out of convenience. This is a highly imprecise, commensurately unhelpful, and often a misrepresentative model for purposes of feedback. It is a large part of why physicians generally do not trust individualized metrics today.

CHALLENGE

Proper attribution, with one-to-one assignment of specific behaviors to the responsible physician(s), is highly labor intensive and technically challenging. Regardless, it is a requirement for physician buy-in.

KEY PRINCIPLE

Performance metrics must appropriately attribute clinical actions to the correct physicians. Accounting for the complexity of inpatient care is particularly difficult, given the potential for numerous handoffs and that multidisciplinary teams often care for a single patient. The solution to this problem is to build the right attribution, which will inevitably vary across metrics, and to transparently reveal how a given metric applies 100% to the assigned physician.

In order to do this, Agathos pinpoints physicians' level of contribution by delving deeply into the EMR data, local workflows, and understanding how major clinical activities (e.g., admissions, orders, scripts, consults, handoffs, discharge sequences) both occur and get documented. We advise uncompromising attention to detail, both in the design and validation.

EXTERNAL VALIDATION

A study by John Hopkins, published in The Journal of Hospital Medicine, showed how differences in attribution methodologies ***had clear and significant impact on individual physicians' metrics***, relative to generalized models that either under- or overstated performance.

METHOD FOR ATTRIBUTING PATIENT-LEVEL METRICS TO ROTATING PROVIDERS IN AN INPATIENT SETTING.
HERZKE CA, MICHTALIK HJ, DURKIN N, ET AL.

AGATHOS EXPERIENCE

When designing an attribution model for lab utilization—and specifically the decision toward daily (vs. one-time) labs, Agathos weighed a number of factors:

1) whether to attribute to the ordering (vs. attending) physician,

2) resident dynamics, and

3) how to attribute opportunities to cancel prior daily defaults with avoidance of new ones.

CLINICAL VARIATION INSIGHT: DAILY COMMON LABS

#2 ACTION-LEVEL FEEDBACK

> ***"LENGTH OF STAY IS OUT OF MY CONTROL; WHAT MUST I DO DIFFERENTLY?"***

STATUS QUO

Most health analytics are patient-centric and outcomes-level (e.g., length of stay, readmission rates, mortality, patient satisfaction, cost per case). This is inadequate, even demoralizing, for most physicians who are in the dark regarding what is within their control to impact those metrics.

CHALLENGE

Measuring a behavior and convincing a physician it needs to change is difficult without a benchmark for comparison, a clear line of sight into what is within their control to change, and the specific actions that need to occur.

KEY PRINCIPLE

Meaningful feedback is immediate, specific, and actionable. Without appropriate data-driven guidance, it is easy to confuse consequences and causes, especially in a clinical setting. For feedback to be truly "action-level," data shared with physicians must reflect things within their ability to control through actions and decisions they make.

It is hard to overstate the importance of this principle—both in the context of understanding how Agathos works, and where we see blind spots in the health analytics industry. When physicians observe differences in their practice patterns relative to peers, they instinctually evaluate underlying clinical activities, practice style, and supporting evidence. Based on this assessment, large or subtle behavior tweaks can naturally emerge. No time is wasted convincing physicians why given action-level metrics are relevant, enabling immediate impact—often within days of first impressions with the feedback.

EXTERNAL VALIDATION

"None of the studies we reviewed included all of the components of the actionable feedback model... If feedback processes are to be successfully... implemented widely, some standardization and certainly ***more clarity is needed in the specific action steps taken*** to apply behavioural theory to practice."

FEEDBACK AS A STRATEGY TO CHANGE BEHAVIOUR: THE DEVIL IS IN THE DETAILS.
LARSON EL, ET AL.

AGATHOS EXPERIENCE

After discovering early how LOS attribution to the discharging provider was wrong, Agathos

1) created a better individualized LOS benchmark that distributed ownership of stay lengths based on clinical touches, and

2) developed a module of comparison insights on ***actions that hospitalists fully control that influence LOS***, e.g., time to OT/ PT consults, clean handoffs, MRIs, etc.

OH, LENGTH OF STAY, HOW SHALL I REDUCE THEE?

#3 PEER COMPARISON

> ***"I WONDER WHAT DR. X IS DOING...SOMETHING FOR ME TO LEARN?"***

STATUS QUO

Due to fear of conflict and the perceived potential for disruption or causing embarrassment, many health systems avoid sharing physician comparative data altogether.

CHALLENGE

Unwillingness to display comparative data hinders respectful discourse, natural peer collaboration, and thoughtful performance assessment. Challenges with attribution and actionability—if not addressed—create a vicious cycle, whereby both administrators and physicians assume a worst case of how physicians will react and, thus, underinvest or fully abandon efforts at useful feedback and peer-to-peer comparisons. This culture of unease deleverages one of the strongest motivators for change: peer affirmation and respect.

KEY PRINCIPLE

Physicians are naturally curious about how they perform relative to peers that they know and respect. This intrinsic behavioral incentive is rarely leveraged following residency, even though peer comparison—if done constructively, accurately, and respectfully (particularly non-punitively)—can be very effective. In our experience, most clinical settings already have a culture of trust and respect required to facilitate such transparency.

Peer comparison facilitates two kinds of group learning. First, it creates tension for change. It takes a strong signal to trigger awareness, admission of the problem, and the mental state for learning. Peer comparison data can be a wake-up call, causing emotional dissatisfaction with one's present state. Second, it reveals positive deviance. The answer for a better approach is often already present in the group. Physicians can turn to peers who look better for advice on where and how change.

EXTERNAL VALIDATION

"ED physician opioid prescribing variability can be decreased through the systematic application of ***sharing of peer prescribing rates*** and prescriber specific normative feedback."

QUALITY IMPROVEMENT INITIATIVE TO DECREASE VARIABILITY OF EMERGENCY PHYSICIAN OPIOID ANALGESIC PRESCRIBING.
BURTON JH, HOPPE JA, ET AL.

AGATHOS EXPERIENCE

"With the volume of patients as high as it is, individual hospitalists may have very little idea about the number of prescriptions they write each month [relative to peers]."

"Mobile-enabled, real-time, transparent, individualized feedback is a powerful tool for ***building awareness of individual practice habits***, including opioid prescribing rates at discharge."

CHANGING HOSPITALISTS' PRACTICE HABITS: THE EFFECT OF REAL-TIME, INDIVIDUALIZED FEEDBACK ON OPIOID PRESCRIBING.
RAZA SA, RAY-DRODDY

#4 TIMELY CASE EXAMPLES

> ***"HOW CAN I TRUST THE DATA? LET ME SEE SOME RECENT EXAMPLES "***

STATUS QUO

When providing summary reports with totals and averages, it is not customary to provide recent case examples. Physicians must manually comb the clinical records, or take the metrics and prescriptive insights at face value.

CHALLENGE

At Agathos, we find it surprising that case examples are not a more common industry practice. Added transparency cuts both ways, more quickly exposing poor attribution, faulty metric design, and data cleanliness issues, thereby disengaging physicians.

KEY PRINCIPLE

Individual case review is the preferred method for clinical validation and learning. Once a metric is calculated, it is not that much effort to list out the most recent and relevant cases with useful context from the records for physician review. After all, what better way to validate that metrics are functional and reasonable? Even just one example of how data is attributed can disproportionately increase the credibility of the entire exercise, generating buy-in.

There is another huge advantage to timely case examples when presented away from the point of care. Nudges at the point of care are inevitably pitted against the physician's best judgment about what is best for the human being in front of them. They lose context of broader practice patterns and risk being confidently wrong in clinical edge cases. Where reconsideration is warranted, that same case could invite more reflection if presented to the physician in a lower pressure, less intrusive context. In hospital medicine there is often a "whole" irreducible to its parts that only emerges upon review and reflection over many cases.

EXTERNAL VALIDATION

Feedback that details patients included in clinical performance calculations allows recipients ***to understand how suboptimal care may have occurred***, helping them take corrective action.

CLINICAL PERFORMANCE FEEDBACK INTERVENTION THEORY (CP-FIT): A NEW THEORY FOR DESIGNING, IMPLEMENTING, AND EVALUATING FEEDBACK IN HEALTH CARE BASED ON A SYSTEMATIC REVIEW AND META-SYNTHESIS OF QUALITATIVE RESEARCH.
BROWN B, GUDE WT, BLAKEMAN T, ET AL.

AGATHOS EXPERIENCE

Case examples have consistently been the most beloved feature by Agathos users. Whether revisiting a recent SNF discharge, linking to an attributed CT order, or just knowing when a patient they cared for was readmitted, timely case examples create buy-in, learning "clues", and peace of mind.

"This is information I can't get anywhere else."

- AGATHOS HOSPITALIST USER

#5 TEXT NOTIFICATIONS

STATUS QUO

Even where individualized, action-level feedback is available for physicians, it often misses the mark due to poor user experience: lack of timeliness, too much noise, excessive length, access difficulties, "dashboard fatigue", "click fatigue", etc.

CHALLENGE

Clinical performance feedback has traditionally landed as dated, out-of-touch, presented on paper or slide show, and often feeling punitive—an unwelcome report card. Any physician engagement strategies and performance improvement tools must contend with this historical reality and quickly rebuild buy-in and rapport.

KEY PRINCIPLE

Research suggests physicians respond best to targeted, just-in-time notifications. An informative and useful text can be well-received when it falls within an individual's mindset at anticipated specific time. Texting has emerged as a highly efficient, engaging, and effective means of communication if done correctly. Agathos has monthly active usership (i.e., physician application logs) of up to 80%—far higher than substitute offerings, and largely through our text-based insights.

Text notifications outside the workflow paradoxically allow greater depth and breadth of transparency while reducing distractions. As previewed in the last principle, notices away from the point of care better introduce patterns over many cases while still allowing for single-case review. This approach also works best for pathways, protocols, and clinical decision support, where feedback more pertains to adherence or decisions over many cases.

> ***"IT HAS TO BE EASY, NO LOGINS, NO WORKFLOW INTERRUPTIONS."***

EXTERNAL VALIDATION

Feedback about parenteral steroid prescription rates to general practitioners reduced their prescribing rates by about one-third. Feedback in the form of short text messages was demonstrated to be at least ***as effective as postal letters, and much cheaper.***

EFFECT OF REGISTRY-BASED PERFORMANCE FEEDBACK VIA SHORT TEXT MESSAGES AND TRADITIONAL POSTAL LETTERS ON PRESCRIBING PARENTERAL STEROIDS BY GENERAL PRACTITIONERS.
NEJAD AS, NOORI MRF, ET. AL.

AGATHOS EXPERIENCE

Text notifications were an early hypothesis (vs. email reports, unprompted login) for how to best engage our earliest hospitalist users with their performance data. It was an overwhelming success, and reflective of our continual ***commitment to physician centric design,*** as discussed by our advisor, Usha Periyanayagam, MD.

HOW TO DESIGN TECHNOLOGY FOR AND WITH PHYSICIANS

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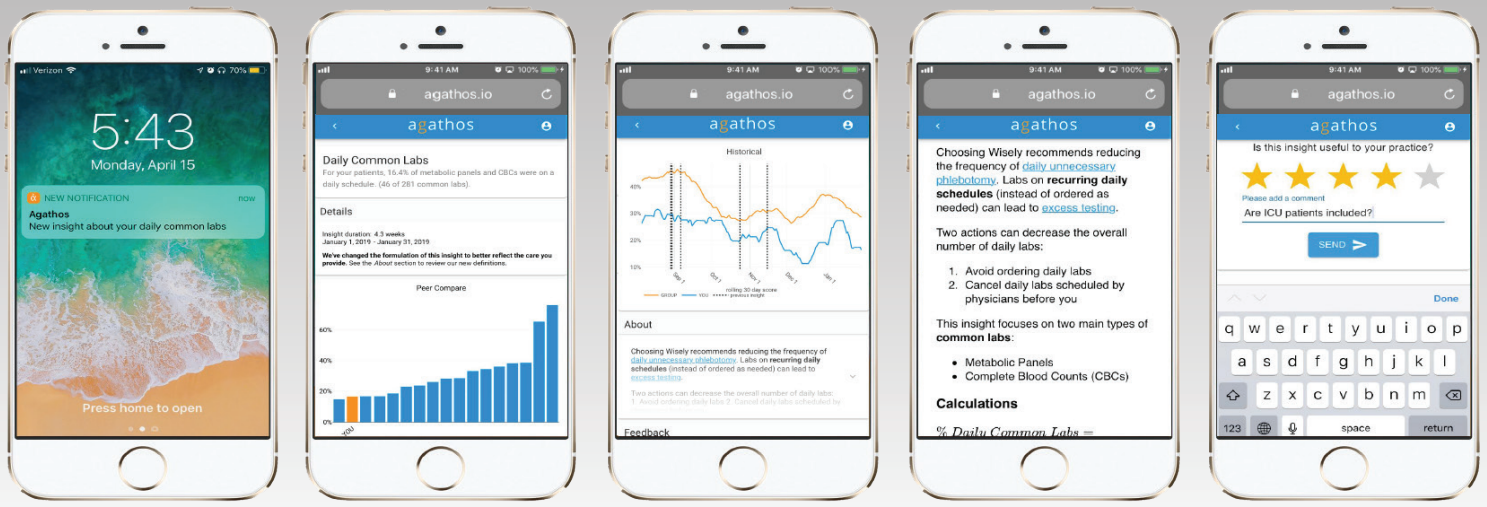
Agathos' team of physician advisors, data scientists, data integration engineers, and health technologists are committed to empowering physicians to take charge of their own data. Our platform was designed to help physicians influence those aspects of patient care that are within their control.

If your organization has experienced some of the challenges described, or if you wish to build upon and scale existing data capabilities from the end physician user's vantage point, we invite you to take a closer look at Agathos. These 5 principles for physician-led behavior change can help your team achieve measurable quality improvement, greater efficiency, and reduction of unnecessary care. Each is advisable and valuable in isolation, yet it is the whole of them together that best earns physicians' trust and engagement, thereby producing a culture of continuous learning and improvement.



ABOUT AGATHOS

Agathos is the transparency platform, by physicians for physicians, giving superior feedback on practice variation and scaling the "last mile" of physician engagement toward valuable care. We partner with health systems to maximize the benefits of technology investments already made, and to empower individual physicians toward ever-higher quality, cost stewardship, and organizational alignment. Our vision is to make valuable care obvious and normal.

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