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FROM EARLY SIGNALS TO COACHING CONVERSATIONS IN PHARMACEUTICAL FIELD MANAGEMENT

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Abstract: This conceptual paper examines how pharmaceutical field managers can use early signals to decide whether a developmental coaching conversation is needed. A focused narrative synthesis of coaching, feedback, adaptive selling and human–AI decision-making research is used to develop a six-step process with explicit decision rights. The proposed process requires contextual review, employee participation and a defined behavioral follow-up before any claim of coaching benefit is made. Three propositions and a pilot evaluation plan are offered for future testing; no empirical results or estimates of effectiveness are reported.

Keywords: managerial coaching, pharmaceutical field management, artificial intelligence, adaptive selling, psychological safety, employee development

1 Introduction

A missed target tells a field manager that an outcome differs from expectations. It does not, by itself, explain whether the cause is a capability gap, limited customer access, territory conditions or an operating problem. Treating that outcome as a coaching diagnosis can therefore produce a conversation that addresses the wrong issue. The managerial problem considered here is narrower than predicting sales performance: when does an early signal justify a developmental conversation, and how should the manager act on it?

Research supports the potential benefits of workplace coaching, but it does not establish that adding an algorithm improves manager-led coaching. Meta-analyses report positive average effects across coaching outcomes [1, 2]. Their settings and coaching arrangements differ, however, from the continuing supervisory relationship in a pharmaceutical field team. In particular, the meta-analysis by Jones and colleagues excludes manager–subordinate and peer coaching [3]. Its results cannot be treated as direct evidence for the effectiveness of the process proposed here.

Feedback research provides a further reason for caution. Feedback can improve performance, yet its effects depend on where it directs attention [4]. An alert describing an employee as a poor performer can invite a different response from evidence about a specific, observable planning difficulty. The proposed contribution is a practical decision process that separates an alert from a diagnosis, a diagnosis from an agreed intervention, and an intervention from evidence of learning.

This paper adapts and narrows the author's earlier Predictive Coaching preprint [5]. It focuses on the transition from evidence to a coaching conversation, adds a worked hypothetical

example and specifies how a pilot could distinguish useful developmental support from additional monitoring. The proposed process is not an empirically validated model.

2 Conceptual approach

The paper uses a focused narrative conceptual synthesis. The source set is drawn from the literature cited in the earlier manuscript and retained where it informs one of four decisions: whether a signal is developmentally relevant, how feedback should be framed, how human decision rights should be protected, and how outcomes should be evaluated. The retained sources include coaching meta-analyses, feedback research, adaptive selling research, studies of psychological safety, conceptual work on human–AI decision making and the NIST AI Risk Management Framework. This is not a systematic review; no exhaustive database search, screening protocol or quantitative synthesis is claimed.

The argument is developed in three stages. First, findings and concepts are translated into design requirements for manager-led coaching. Second, those requirements are organized into a six-step process. Third, the process is expressed as propositions and an evaluation plan that could be tested prospectively. The resulting tables contain proposed practices and measures, not observations from a company or estimates derived from a dataset.

The pharmaceutical setting defines the intended application. The discussion concerns commercial field management and employee development, not clinical decision making or patient treatment. No company records, patient information, employee-level data, interviews or surveys were collected or analyzed. The hypothetical example below illustrates the reasoning process and does not describe an actual employee or organization.

3 Design requirements from the literature

Coaching and feedback should be treated as related but distinct processes. Coaching involves a developmental conversation and an agreed goal; an automated notification is only an input to that conversation. The coaching evidence [1–3] supports examining learning and behavior, while feedback intervention theory [4] supports directing attention toward the task rather than the employee's personal worth. For this framework, an acceptable signal must therefore concern a behavior that can be discussed and practiced.

Adaptive selling research examines how salespeople adjust their behavior to the situation [6]. Research on learning orientation and working smart also connects sales performance with how effort is organized and applied [7]. These findings support a contextual approach to field capability. They do not justify inferring that a particular employee lacks skill because one activity or outcome indicator has changed. A manager must still consider whether the person had a reasonable opportunity to perform the behavior.

Human–AI research describes complementarity between computational analysis and human judgment [8], while the automation–augmentation literature cautions that the two processes are intertwined [9]. Decision-making structures also shape who can act on an algorithmic recommendation [10]. Here, the system may identify a pattern and display its supporting evidence. The manager must interpret it, and the employee must have an opportunity to supply missing context. Those responsibilities should be specified before a pilot begins.

Psychological safety is associated with learning behavior in teams [11]. The inference for the present framework is that employees need a workable way to question a signal or explain an error without that response being treated as resistance. This is a proposed design implication, not evidence that psychological safety has already been shown to improve AI-supported coaching. The NIST framework provides a separate basis for treating validity, transparency, privacy and ongoing risk management as lifecycle responsibilities [12].

4 A six-step coaching process

The process begins with a possible coaching opportunity rather than a risk label attached to a person. A signal is developmentally relevant only if it points to a specific behavior, has sufficiently reliable supporting information and leaves open a plausible action the employee can take. Table 1 summarizes the six steps and the record each step should produce.

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Table 1 – Proposed steps and decision records

Step	Managerial task	Required record
1 Observe	Identify a specific behavior pattern and check the underlying records.	Signal, source, period and known uncertainty.
2 Diagnose in context	Examine operating constraints and the employee's explanation.	Alternative explanations and evidence supporting the working diagnosis.
3 Prioritize	Decide whether coaching is appropriate and timely.	Reason for coaching, deferral, operational action or closure.
4 Co-design	Agree on one observable behavior and the support needed.	Learning task, employee input and planned review.
5 Coach and commit	Use discussion, practice and feedback to support the task.	Agreed action and available managerial support.
6 Learn	Review behavioral evidence and reconsider the original signal.	Learning observed, constraints remaining and any correction to the signal.

Source: Author's proposed framework, adapted from the earlier preprint [5].

The first two steps prevent an activity change from becoming an automatic capability judgment. A delayed follow-up may reflect weak planning, but it may also reflect an access restriction, an incomplete record or a change in customer priorities. The manager should establish which explanation is supported before arranging practice or giving advice. If the evidence is unreliable or the cause lies outside the employee's control, the appropriate response may be data correction or operational support.

Prioritization is then a managerial decision. A visible anomaly does not necessarily deserve attention ahead of a less visible but more consequential development need. The manager should consider the likely usefulness of a conversation, the burden it creates and whether the issue can be addressed through coaching. The process permits a documented decision to take no action.

Co-design turns a tentative diagnosis into an agreed learning task. The employee can challenge the evidence, propose an alternative explanation and help choose an observable behavior to practice. The resulting commitment should specify what will be attempted, what support is available and what evidence will be reviewed. Agreement with a dashboard is not a substitute for understanding the task.

Follow-up closes the cycle. The manager and employee compare the agreed behavior with subsequent evidence, record unresolved constraints and decide whether further practice is justified. A completed meeting is evidence of process completion. It is not evidence that capability improved or that the original signal was accurate.

5 A hypothetical field example

Consider a hypothetical field representative whose account-plan updates and agreed follow-up actions have become less complete. A dashboard identifies the change but does not classify the employee as low performing. The manager checks whether customer access, account allocation, recording practices or workload changed during the same period. This contextual review occurs before any coaching conclusion is reached.

Suppose the employee explains that several account responsibilities changed and that the planning record does not reflect the new allocation. The immediate action is to correct the record. If that correction accounts for the pattern, the manager closes the alert without assigning a development task. This outcome is useful even though no coaching intervention follows: the process has prevented an unsupported capability judgment.

Alternatively, suppose the record is accurate and the discussion identifies a difficulty translating account priorities into specific next actions. The manager and employee could jointly review an account plan, practice defining a clear next action and agree to examine the quality of subsequent plans. The review should assess the behavior being practiced before interpreting any

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later sales change. Neither branch of this example establishes an observed benefit; it illustrates how the same alert can lead to different decisions.

6 Implementation and evaluation

A pilot should begin with one clearly defined coaching task and a transparent descriptive signal. A predictive model should be added only if it can be compared with that simpler baseline and its output is understandable to managers and employees. Starting with a complex model would make it difficult to determine whether any benefit comes from prediction, more consistent coaching or greater managerial attention.

Before the pilot, the organization should define the developmental purpose, permitted data, access rights, retention period and correction process. Private communications, sensitive personal information and information collected for incompatible purposes should be excluded from the proposed pilot. Coaching records should not automatically become disciplinary scores. Any later proposal to use the information for employment decisions requires a separate assessment and appropriate authorization.

Managers need guidance on interpreting uncertainty and recording overrides. An override should be examined for its reasoning rather than assumed to be an error. Conversely, a high rate of accepting recommendations should not be treated as proof that the system is useful. Both practices follow from the separation between computational advice and managerial responsibility discussed above [8–10].

Table 2 proposes a compact evaluation plan. It separates the quality of the signal, the quality of the conversation, behavioral learning and downstream outcomes. These measures are candidates for a future study and have not been validated as a combined instrument.

Table 2 – Candidate measures for a prospective pilot

Evaluation question	Candidate evidence	Interpretation limit
Was the signal useful?	Independent assessment of whether flagged cases warranted a developmental inquiry; reasons for rejected alerts.	Expert agreement is not proof of a causal effect.
Was the conversation developmental?	Review of goal specificity, contextual inquiry, practice and follow-up; employee feedback.	A completed meeting alone does not show quality.
Did behavior change?	Repeated assessment of the agreed behavior using a consistent rubric.	Improved behavior may have causes beyond coaching.
Could employees challenge the evidence?	Record corrections, disputed interpretations and confidential feedback on the correction process.	Few complaints may indicate either confidence or reluctance to speak.
Did downstream outcomes change?	Role-appropriate outcomes assessed with territory and time context.	Sales changes cannot be attributed to coaching without a suitable design.

Source: Author's proposed framework, adapted from the earlier preprint [5].

Where feasible, a prospective study should compare the process with structured coaching that uses the same managerial time but no predictive recommendation. Random allocation could be considered where suitable and ethically approved; otherwise, a comparison design should report its limitations and account for differences between teams. A simple before-and-after sales comparison would not isolate the effect of coaching because territory opportunity, access and market conditions may change.

The pilot should report rejected signals, corrected records, employee concerns and unintended behavior as well as completed conversations. Predefined pause criteria could include unreliable data, unresolved privacy concerns or repeated inability to explain recommendations. Numerical thresholds require local justification and are deliberately not prescribed here.

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7 Propositions for future research

Proposition 1 concerns contextual diagnosis. Compared with an outcome-only alert, a signal accompanied by relevant territory and operating context is expected to produce fewer unsupported capability judgments. The proposed mechanism is improved separation of an employee's behavior from constraints outside the employee's control. This proposition could be tested through independently reviewed coaching cases; it should not be evaluated only through managers' confidence in their own diagnoses.

Proposition 2 concerns employee participation. When employees can inspect and correct the evidence and help define the learning task, the resulting coaching commitments are expected to be more specific and better understood than commitments assigned without that participation. The mechanism proposed here is the addition of contextual knowledge and a clearer shared interpretation of the task. The relationship may weaken where employees reasonably expect that raising concerns will carry a penalty.

Proposition 3 concerns evaluation. A process that reviews behavioral change and the accuracy of the original signal is expected to identify more ineffective interventions than a process evaluated only by the number of completed meetings. This is a proposition about detection and learning, not an assertion that the process will increase sales. Future studies should report null findings and explain whether failures arose from signal quality, conversation quality or conditions that coaching could not change.

8 Limitations and conclusion

The framework is a conceptual proposal based on a selected literature set. It does not establish novelty through an exhaustive review, demonstrate causal effects or validate a predictive algorithm. Evidence from professional coaching, general sales research and organizational teams is used to inform a pharmaceutical management application; transfer between those settings remains a research question. The framework is also less applicable where managers lack time to coach, behavioral evidence is sparse or employees cannot challenge interpretations safely.

A further limitation is the proposed boundary between development and formal performance management. In practice, the same manager may have responsibility for both. Written purpose limits alone cannot resolve that tension. Future research should examine how access rules, employee expectations and actual managerial conduct affect trust and willingness to participate.

For pharmaceutical field managers, the proposed starting point is a specific behavior and an open question about its context. AI can assist in identifying a pattern, but the decision to coach requires interpretation and dialogue. The six-step process makes those decisions visible and links them to a follow-up plan. Its usefulness should be judged through prospective evidence of better diagnosis and behavioral learning, including cases where the appropriate decision is to correct the data or take no coaching action.

Declarations

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Conflict of interest: The author declares no conflict of interest.

Ethics and data availability: No human participants, patient records, personal employee data or empirical datasets were used. No new data were created or analyzed.

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