

***Implications of appreciation, coaching, and evaluation  
for A&F engagement and effectiveness***

International Audit & Feedback Metalab Meeting  
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# My perspective: Health informatics

- *Developing infrastructure for health care improvement*
- *Evaluation of information tools to understand impact*
- *Individual-level, cognitive, clinician-focused interventions*
- *Information and knowledge-centric lens*

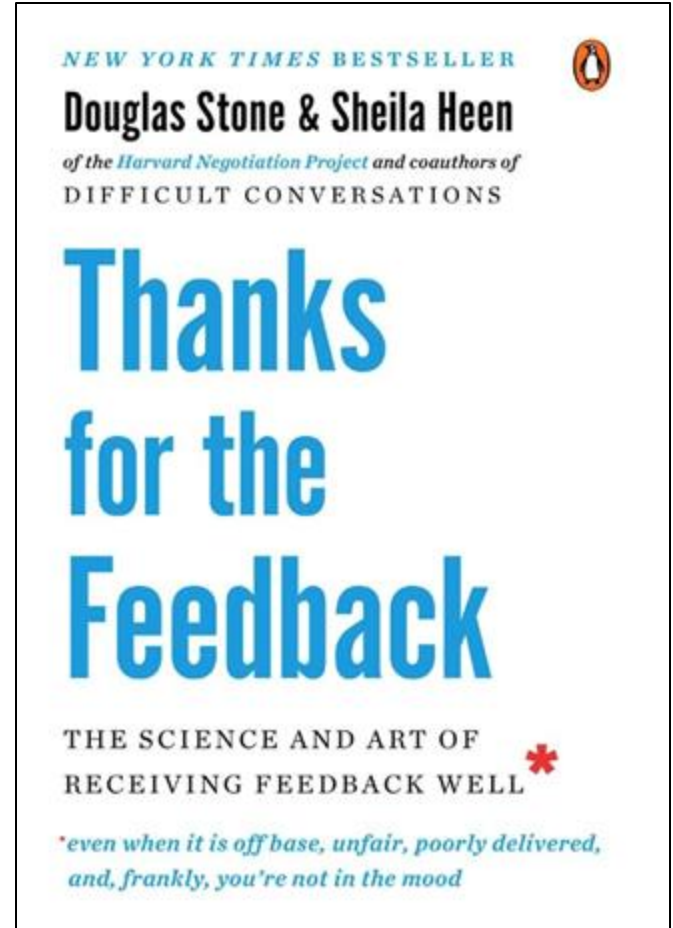
# We need better tools for practice-based learning

- Healthcare professionals learn continually in many ways
- We have a wealth of clinical practice data to support learning
- However, tools that provide feedback from data about clinical practice are not good at keeping up



# What is feedback?

- “Feedback” can mean:
  - Delivery of a performance summary (a process)
  - Performance information that can guide action (actionable information)
- Stone and Heen’s definition:
  - Any information you receive about yourself



# **3 types of feedback**

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## ***1. Evaluation feedback***

- Show current standing / performance level
  - Percentages, scores, counts, grades
- Compare performance
- Show change in performance

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- Show current standing / performance level
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- Show change in performance
- “Standard” audit and feedback



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## ***2. Coaching feedback***

- Identify learning opportunities and progress
- Motivate performance improvement

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## ***Coaching feedback***

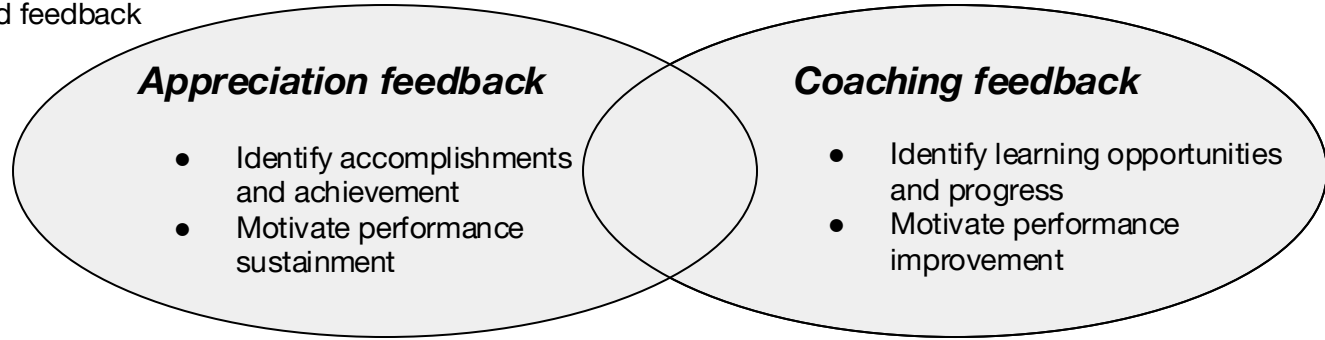
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## ***3. Appreciation feedback***

- Identify accomplishments and achievement
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Evaluation is a foundation for coaching and appreciation

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## ***2 Takeaways:***

- Coaching and appreciation are primary types of value from feedback
- Coaching and appreciation can inform many aspects of A&F - especially engagement

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# Implications of coaching and appreciation feedback for A&F research

Coaching and appreciation can:

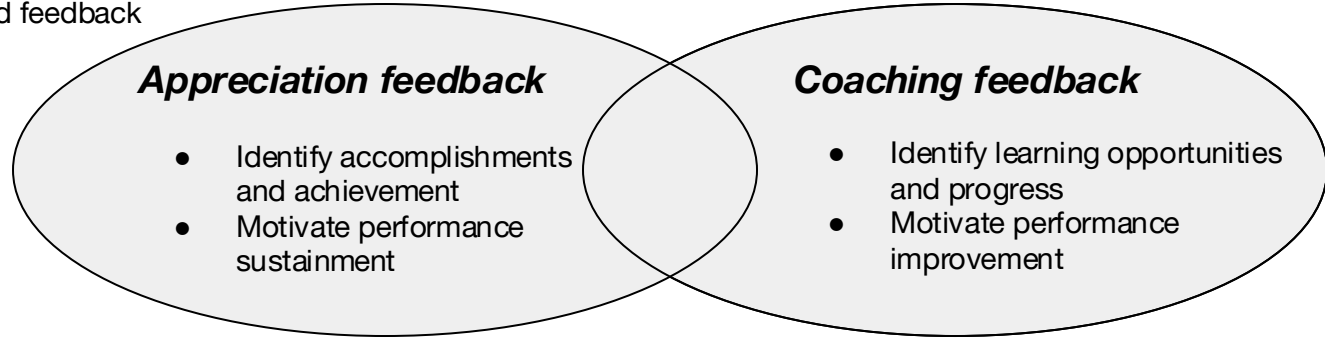
1. Be used to identify high-value performance information
2. Inform our understanding of feedback preferences
3. Guide the framing of feedback messages
4. Relate to CP-FIT constructs
5. Inform the design of A&F trials

# Identifying high-value performance information

- *Motivating information* is performance information that holds motivational potential
- Examples:
  - Comparison
  - Trend
  - Achievement and loss
  - Approach of a goal
  - Streak

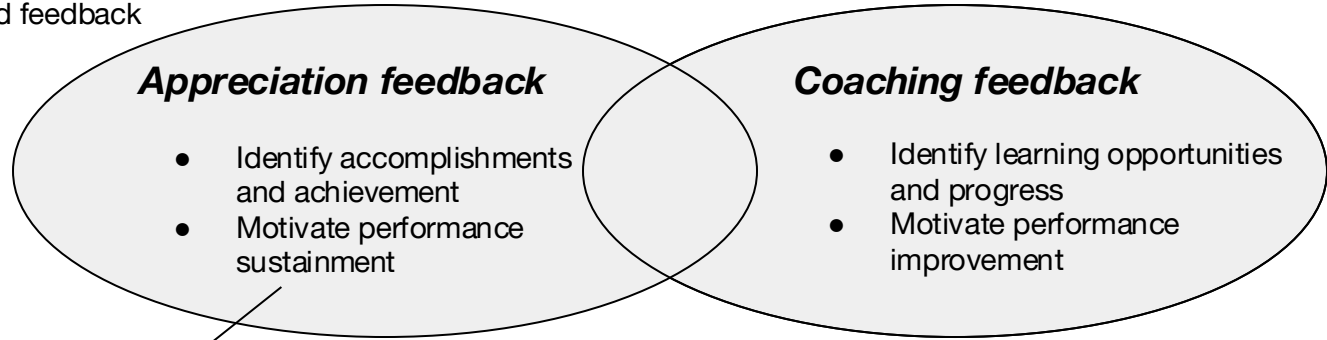
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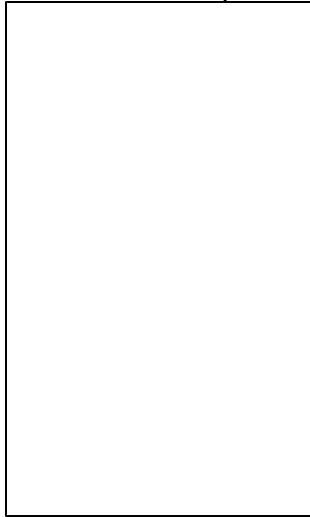


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*High  
performance*



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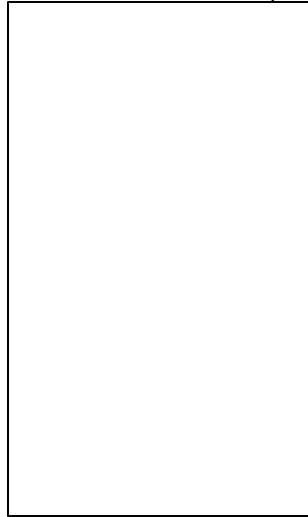
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*High performance*



*High performance and achievement*



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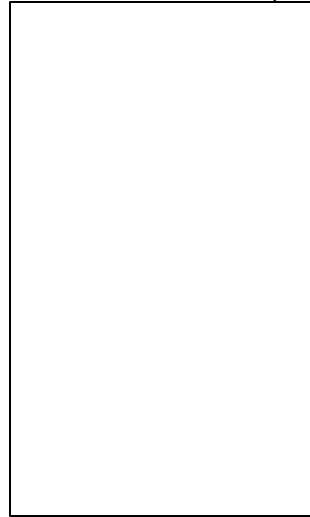
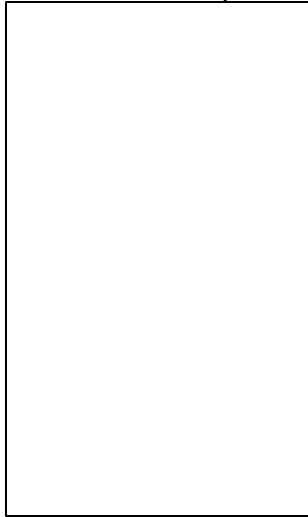
### ***Coaching feedback***

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*High performance*

*High performance and achievement*

*Low performance*



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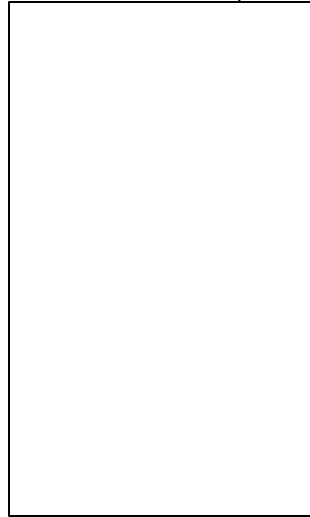
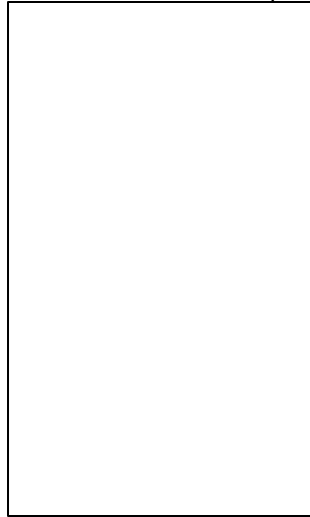
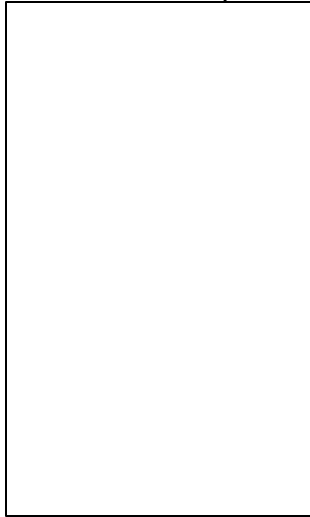
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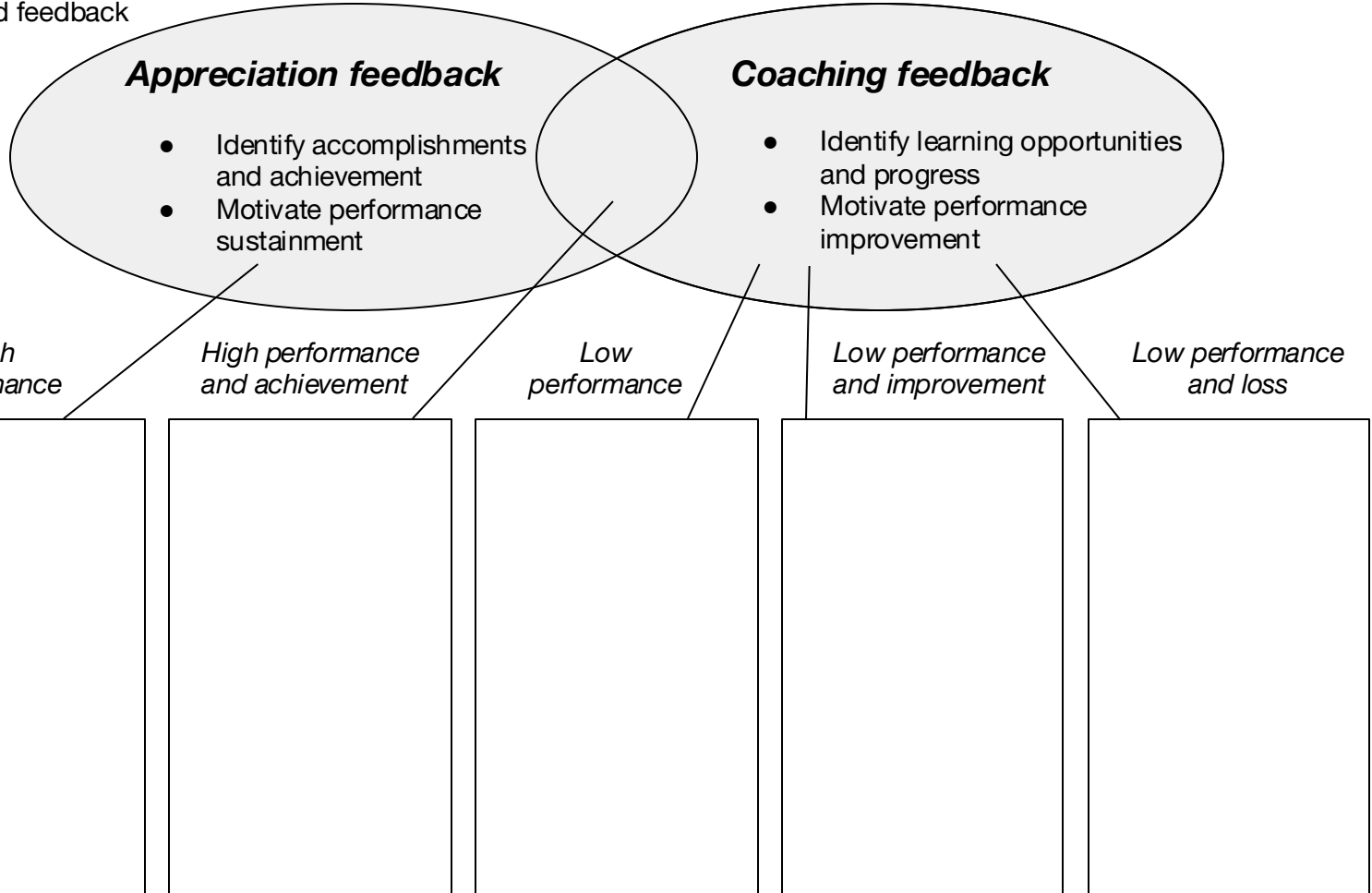
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*Low performance and improvement*



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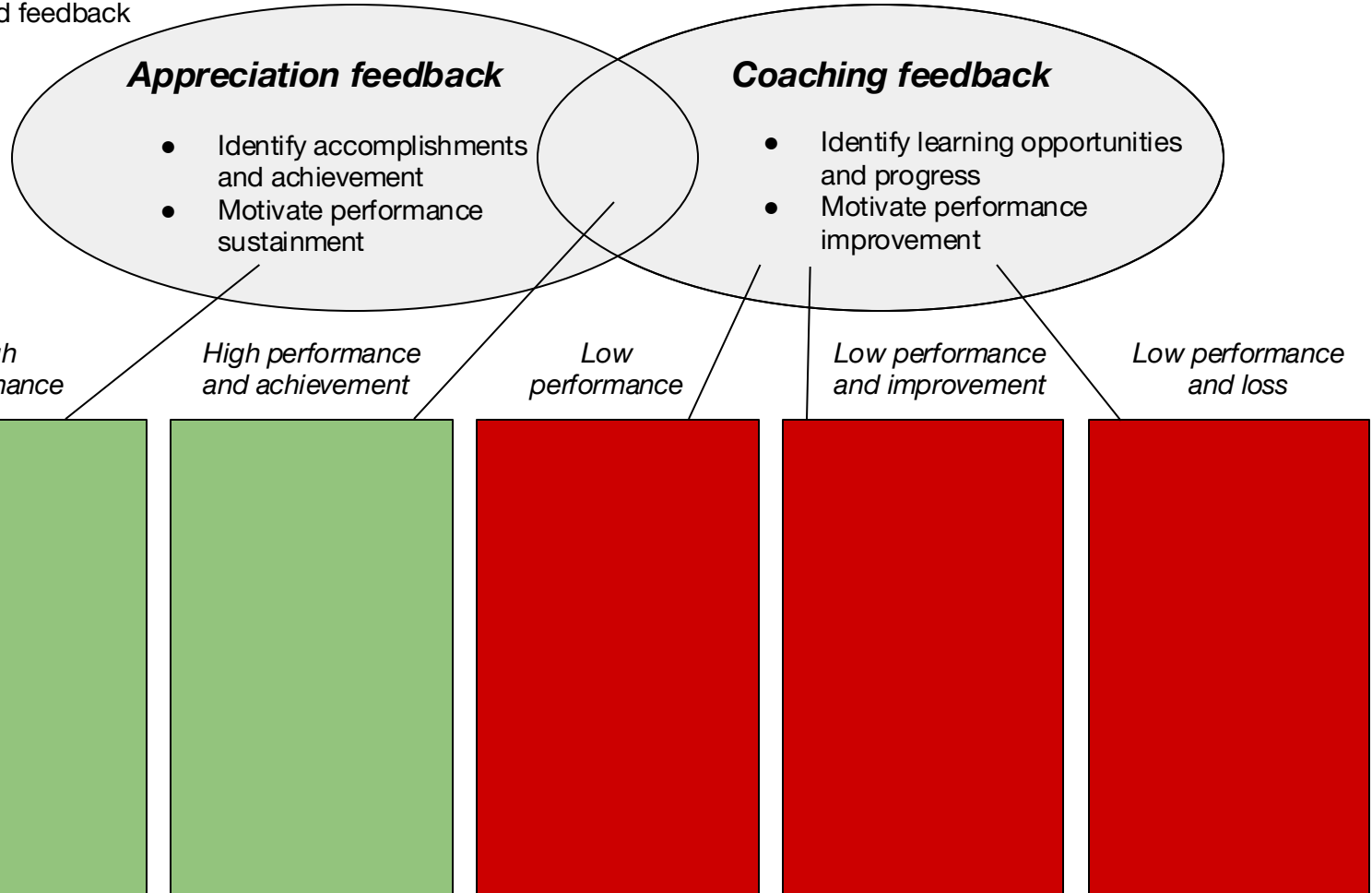
*Low performance and improvement*

*Low performance and loss*



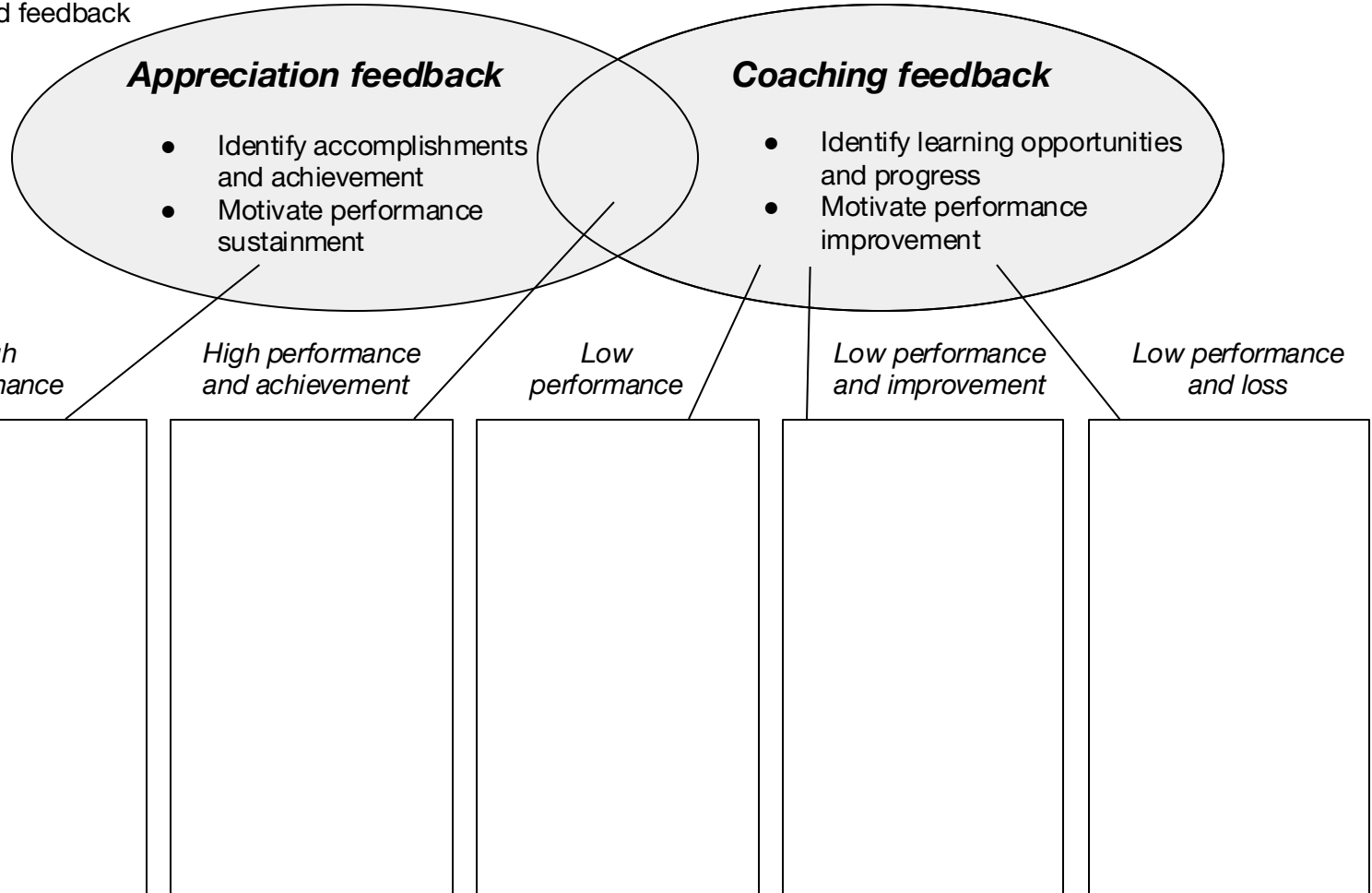
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*Comparisons to goals and standards*

“Your performance is above the goal”

“You reached the goal”

“Your performance is below the standard”

“Your performance is approaching the goal”

“Your performance dropped below the standard”

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*Social comparison*

“You are a top performer”

“You reached the top performer benchmark”

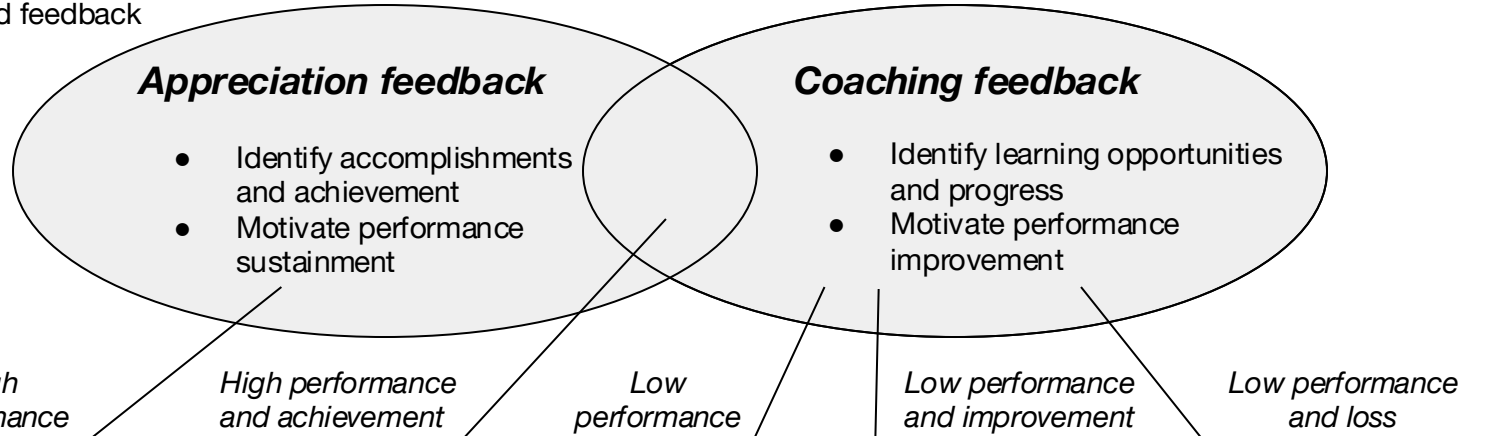
“You are not a top performer”

“Your performance is approaching the benchmark”

“Your performance dropped below average”

## Evaluation feedback

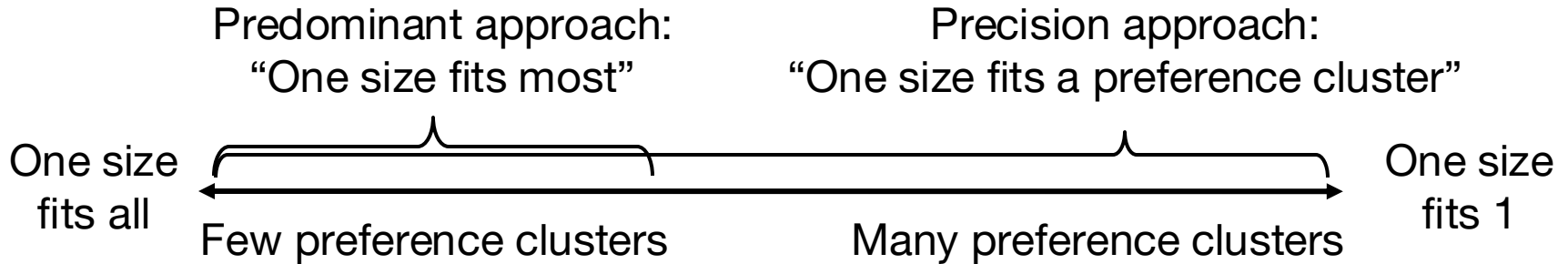
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	<i>High performance</i>	<i>High performance and achievement</i>	<i>Low performance</i>	<i>Low performance and improvement</i>	<i>Low performance and loss</i>
<i>Comparisons to goals and standards</i>	“Your performance is above the goal”	“You reached the goal”	“Your performance is below the standard”	“Your performance is approaching the goal”	“Your performance dropped below the standard”
<i>Social comparison</i>	“You are a top performer”	“You reached the top performer benchmark”	“You are not a top performer”	“Your performance is approaching the benchmark”	“Your performance dropped below average”
<i>Comparator not specified</i>	“Congratulations on your consistently high performance”	“You reached a new high performance level.”	“You may have an opportunity to improve”	“Your performance is improving”	“Your performance has dropped”

# Inform our understanding of feedback preferences

- People are different
- There are multiple sources of motivation and orientations to feedback
- Preferences for coaching and appreciation feedback may vary within a provider population



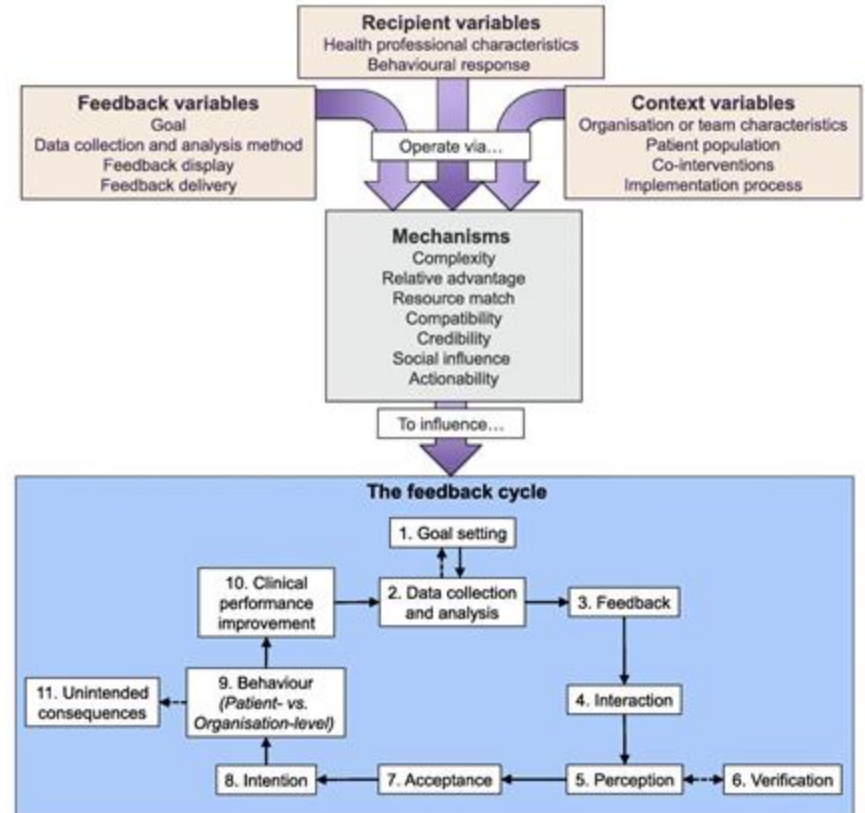
# Framing of performance data

- We can choose (or test) which motivating information to prioritize
- Possible messages from the same performance data:
  - Appreciation
    - “You reached a new personal best”
  - Coaching
    - “Your performance is improving”
    - “You may have an opportunity to improve”
    - “You are not a top performer”

# Clinical Performance-Feedback Intervention Theory (CP-FIT)

*Two proposals:*

1. Coaching and appreciation may offer an organizing principle for studying constructs across:
  - Recipient variables
  - Feedback variables
  - Context variables
  - Mechanisms





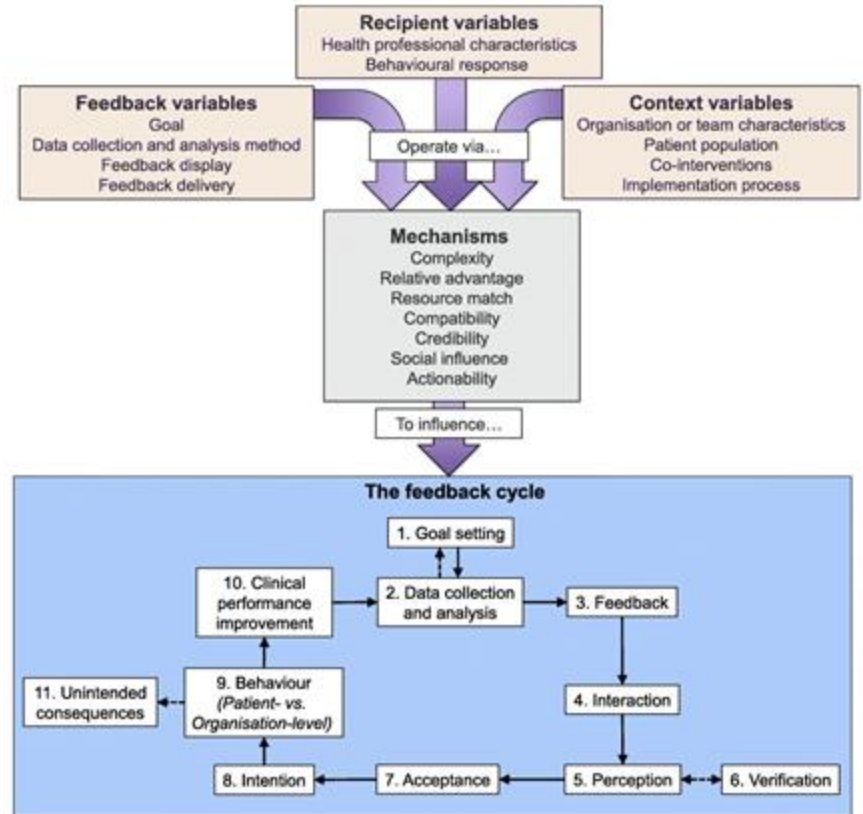
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*Two proposals:*

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- Mechanisms

1. Performance *sustainment*, not just *improvement*, may be an important aspect of the feedback cycle



# Testing coaching and appreciation feedback

- Coaching and appreciation messages can be tested in multiple ways:
  - Individual message as the intervention
  - Small set of high-priority messages as a performance summary
  - As enhancements to performance summaries
- Preference data can be used to algorithmically prioritize and select messages
- Factorial trials may be appropriate for testing whether coaching and appreciation are best used in a complementary way, or independently

Thank you!

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# Precision Feedback

- Prioritizes **coaching** and **appreciation** messages
- Uses estimates of the **motivational potential** of feedback messages
- Supports performance **improvement** and **sustainment**

## Performance data



## Precision Feedback Pipeline



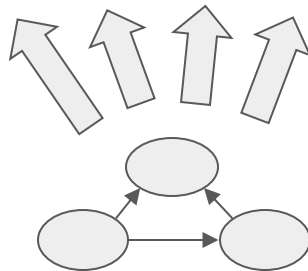
## Feedback Recipient

“You are a top performer for \_\_\_\_\_”



### Required inputs

- Recipient ID
- Performance metric ID
- Time intervals
- Performance levels
- Recipient



### Knowledge base

#### Descriptive models:

- Performance metrics
- Feedback message templates

templates

#### Causal pathway models

#### Algorithms:

- Signal detectors
- Prioritization algorithms

algorithms

Individual

Team

Comparator

Benchmarks

Goals

### Optional inputs

- Recipient preferences

# Causal pathway model: “Social gain”

