Optimizing Feedback

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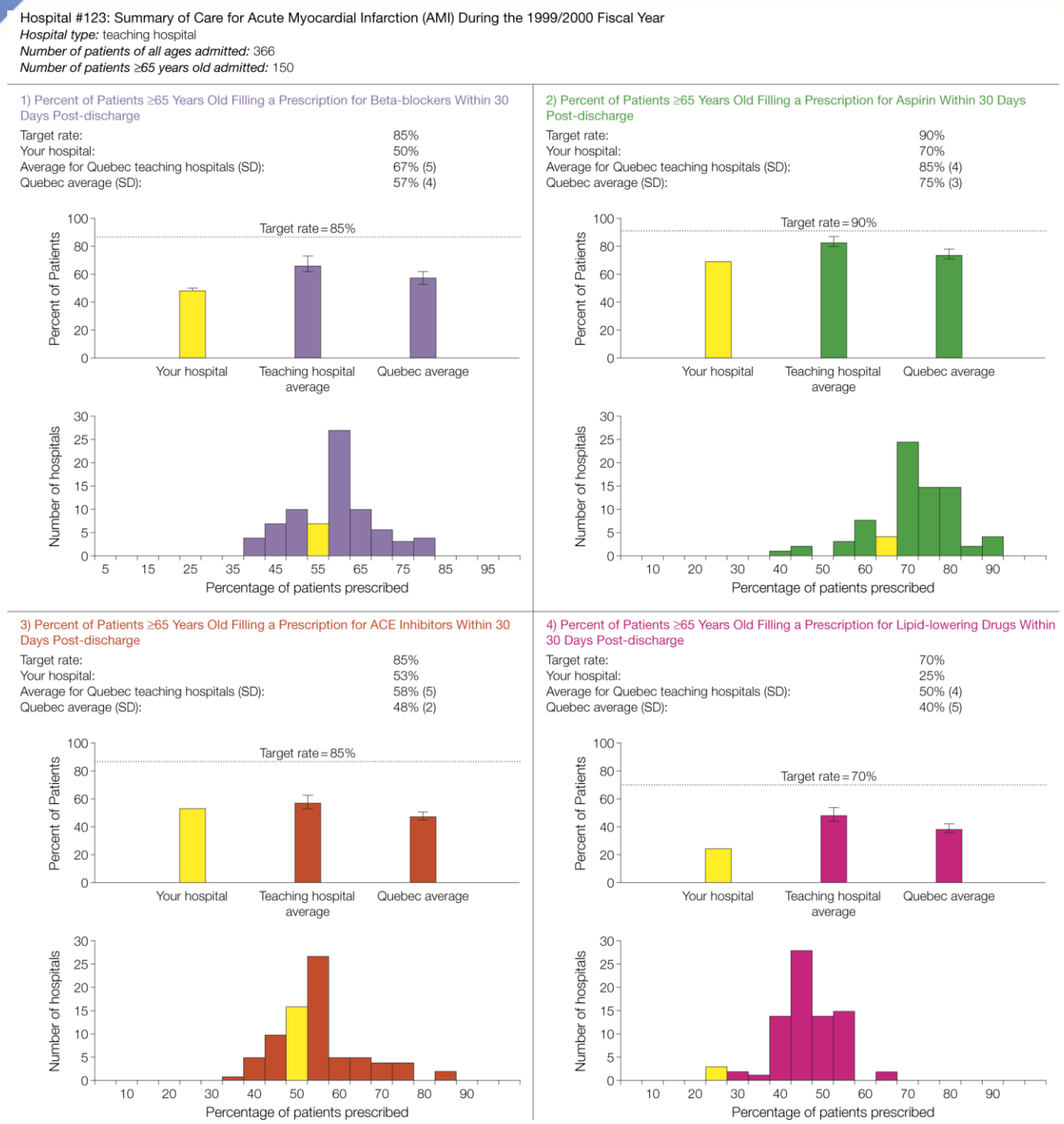
Feedback in Health Care should be an easy way to improve practice

- Data increasingly available and easy to obtain
- Providers are professionals; want to do their jobs well
- Physicians are high-achievers (even competitive); show them where they are under-performing, they will want to improve



- Reported in JAMA
- Can Hospital admin data improve quality of cardiac care?
- Hospital report cards to 77 hospitals in Quebec
- 12 outcomes, 2 histograms per
- Sent to directors of services
- Feedback sent once based on data from previous year

Beck et al., 2005 JAMA

We know A&F works, but not ***how*** it works

- What are the mechanisms by which feedback works?
- Many different disciplines understand feedback in different ways

We interviewed 28 theory experts from:

- Psychology (social, health, cognitive, organizational)
- Human factors
- Medical education
- Economics
- Management

Perspectives on feedback

Feedback as…

- A cognitive challenge
- A method for directing attention
- A motivator/de-motivator
- A reflection of self-identity
- A learning/education tool
- A tool for changing behaviour
- An organizational improvement device
- A socio-cultural construct

15 Suggestions for Optimizing Feedback

- Some ideas seemed uncontroversial
- But when you look in health care, they aren't being consistently (or ever) applied
- These 'Low-hanging fruit' issues could be used to improve health feedback interventions NOW

Generated the 15 based on:

- Interview data
- Data from existing reviews
- Study group discussion and experience

Annals of Internal Medicine

ACADEMIA AND THE PROFESSION

Practice Feedback Interventions: 15 Suggestions for Optimizing Effectiveness

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Electronic practice data are increasingly being used to provide feedback to encourage practice improvement. However, evidence suggests that despite decades of experience, the effects of such interventions vary greatly and are not improving over time. Guidance on providing more effective feedback does exist, but it is distributed across a wide range of disciplines and theoretical perspectives.

Through expert interviews; systematic reviews; and experience with providing, evaluating, and receiving practice feedback, 15 suggestions that are believed to be associated with effective feedback interventions have been identified. These suggestions are intended to provide practical guidance to quality improvement professionals, information technology developers, educators, administrators, and practitioners who receive such interventions. Designing interventions with these suggestions in mind should improve their effect, and studying the mechanisms underlying these suggestions will advance a stagnant literature.

Ann Intern Med. 2016;164:435-441. doi:10.7326/M15-2248 **www.annals.org**
For author affiliations, see end of text.
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Brehaut et al. *Ann Intern Med* 2016; 164:435-441.

Nature of the action sought

Feedback Interventions should…	Example Intervention Changes	Evidence
1. Recommend actions consistent with established goals & priorities	Coordinating with ongoing initiatives; collect pilot data on need, salience, justifiability of the behaviour	Interviews
2. Recommend actions that have room to improve	Target FB to under-performers	Cochrane
3. Recommend specific actions	Implementation intentions	Interviews

Nature of the data available for feedback

Feedback Interventions should…	Example Intervention Changes	Evidence
4. Be provided multiple times	Replace one off feedback with regular feedback	Review: 24% once, 24% unclear
5. Be provided as soon as possible, dependent on number of patient cases	Increase frequency/decrease interval of feedback for outcomes with many patient cases	Review: Only 6% provided data within days
6. Provide individual rather than general data	Provide practitioner-specific rather than hospital-specific data	Review: 58% individual provider, 25% individual patient cases
7. Choose comparators that reinforce desired behaviour change	Choose 1 comparator rather than several	Cochrane: 49% others' performance only, 26% unclearly reported

Display of the feedback

Feedback Interventions should…	Example Intervention Changes	Evidence
8. Closely link the visual display and summary message	Put summary messages in close proximity to the graphical or numerical data supporting it	Interviews: human factors literature
9. Provide feedback in more than 1 way	Present key messages textually and numerically	Cochrane
10. Minimize extraneous cognitive load for feedback recipients	Eliminate unnecessary 3-D graphical elements, increase white space, clarify instructions, target fewer outcomes	Interviews; human factors literature

Delivering the feedback intervention

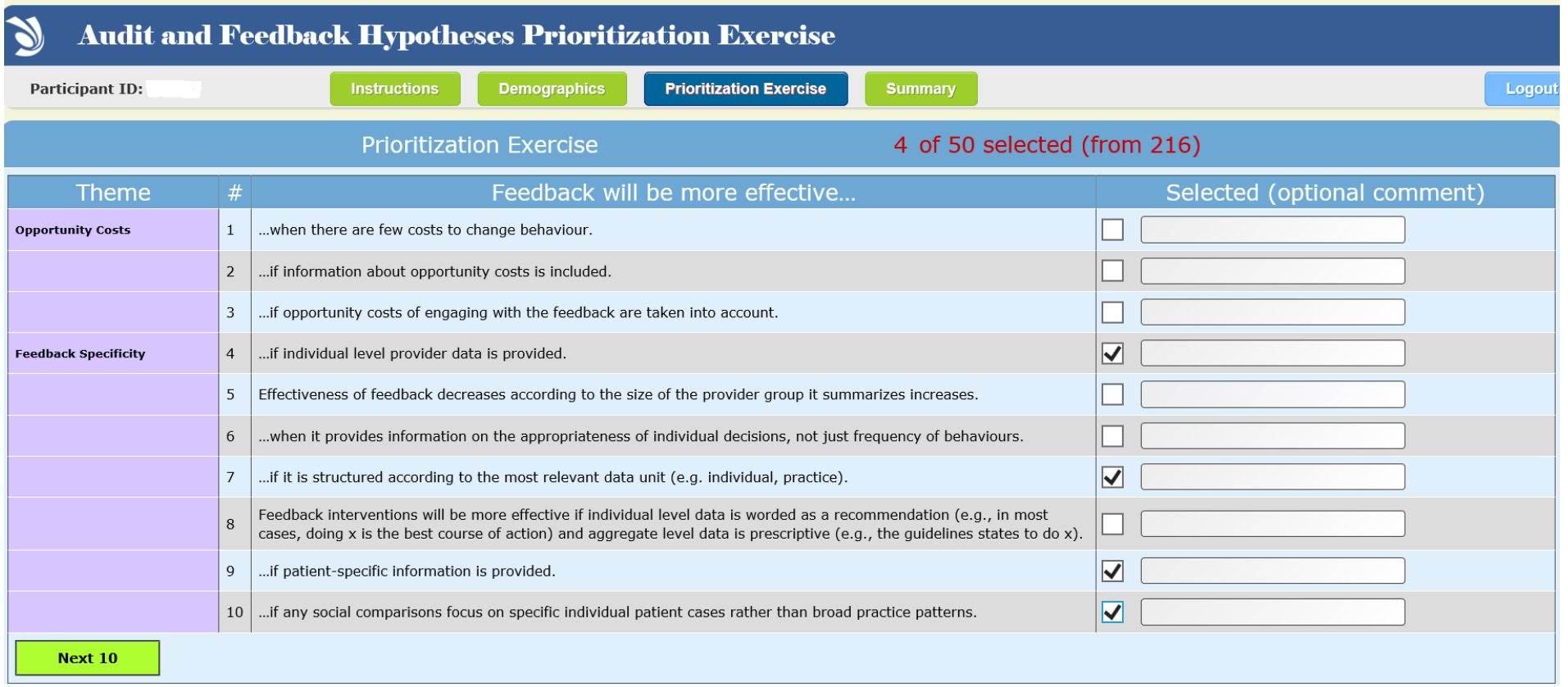
Feedback Interventions should…	Example Intervention Changes	Evidence
11. Address barriers to feedback use	Assess barriers before feedback provision, incorporate fb into care pathway rather than providing it outside of care	Cochrane: E.g. action plans, coping strategies
12. Provide short, actionable messages followed by optional detail	Put key messages/variables on front page; additional detail in subsequent materials	Interviews
13. Address credibility of the information	Feedback from trusted local champion, colleague, rather than research team; increase transparency of data sources; disclose conflicts of interest	Interviews
14. Prevent defensive reactions to feedback	Incentives for improved performance; positive messaging along with negative; 'feedforward' discussions	Interviews: e.g., prevent discounting of feedback
15. Construct feedback through social interaction	Encourage self-assessment around target behaviours prior to receiving fb; engage in dialogue with peers as fb is provided	Interviews: Medical education literature

But the 15 are just the tip of the iceberg

- Interviewed experts on feedback from Psychology (social, health, cognitive, organizational), Education, Human Factors, Medical Education, Economics, Management

- Identified **300+ hypotheses** about how health care feedback might be improved/optimized

Prioritize the Hypotheses



Audit and Feedback Hypotheses Prioritization Exercise

Participant ID: [redacted] | Instructions | Demographics | Prioritization Exercise | Summary | Logout

Prioritization Exercise — 4 of 50 selected (from 216)

Theme	#	Feedback will be more effective…	Selected (optional comment)
Opportunity Costs	1	…when there are few costs to change behaviour.	☐
	2	…if information about opportunity costs is included.	☐
	3	…if opportunity costs of engaging with the feedback are taken into account.	☐
Feedback Specificity	4	…if individual level provider data is provided.	☑
	5	Effectiveness of feedback decreases according to the size of the provider group it summarizes increases.	☐
	6	…when it provides information on the appropriateness of individual decisions, not just frequency of behaviours.	☐
	7	…if it is structured according to the most relevant data unit (e.g. individual, practice).	☑
	8	Feedback interventions will be more effective if individual level data is worded as a recommendation (e.g., in most cases, doing x is the best course of action) and aggregate level data is prescriptive (e.g., the guidelines states to do x).	☐
	9	…if patient-specific information is provided.	☑
	10	…if any social comparisons focus on specific individual patient cases rather than broad practice patterns.	☑

Next 10

Our Partner - EORLA

Eastern Ontario Regional Laboratory Association (EORLA)

- Conducts all in-hospital laboratory testing for 16 hospitals in Eastern Ontario
- ~12 million tests per year
- Interested in providing feedback about appropriate/inappropriate use
- Regularly contacted to “do utilization on…”

Thank You!

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For the Study Group

- Heather Colquhoun (Co-PI)
- Kelly Carroll (Coordinator)
- Kevin Eva (Co-I)
- Jeremy Grimshaw (Co-I)
- Noah Ivers (Co-I)
- Susan Michie (Co-I)
- Anne Sales (Co-I)

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