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Practice Forum

## Continuous improvement in hand therapy: Lean and the improvement Kata mindset



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*These authors present a unique way to promote patients to engage in self-directed behaviors to promote enhanced outcomes. — KRISTIN VALDES, OTD, OT, CHT, Practice Forum Editor*

Lean is a systematic method for the elimination of waste within a manufacturing system derived mostly from Toyota Production System. As a result of Toyota's success, lean was then adapted for service operations and the lean principles of continuous improvement and respect for people began being applied in many service sectors, such as health care.

In Toyota Kata Rother<sup>1</sup> describes how Toyota employs a unique way of managing and coaching to help individuals and teams develop the “Kata mindset”; a habit of being strategic in order to break through barriers. The improvement Kata mindset, therefore, is an approach in managing people for improvement, adaptiveness, and superior results, and today, it is commonly referred to as “Coaching Kata.”

Coaching Kata is described as a pattern of teaching the improvement Kata, primarily to employees at every level, to ensure it motivates and informs their ways of thinking and acting. However, because health care outcomes rely on patient engagement and participation, Coaching Kata can be taken a step further by coaching our patients toward engagement and participation in their health care outcomes.

This approach helps internalize and integrate an attitude of continuous improvement, and within the context of therapy it can answer questions such as:

1. How can we make improvement and adaptation part of every patient encounter as well as in what patient's achieve independently?

2. How can we develop and use the capability of everyone (therapist, patient, family) to consistently work toward and achieve new levels of performance, health, and well-being?
3. How can we give people within the care team, including the patient, the power to handle dynamic, unpredictable situations, and sustain excellent outcomes and satisfaction?

Interest in this approach stems largely from the ever-changing healthcare climate with a growing initiative to reduce costs, increase access to care, provide evidence-based interventions, and produce the highest level of patient satisfaction.

Coaching Kata ultimately aims to increase effectiveness and efficiency with the goal of continuous improvement. Thus, the “Kata mindset” of habitually being strategic with every patient encounter can ultimately decrease the number of patient encounters, thereby reducing costs, while ensuring added value at every patient encounter.

At Toyota, Kata involves the habit of asking 5 questions<sup>1</sup>:

1. What is your target condition?
2. Where are you now?
3. What obstacles are in the way?
4. What is your next step?
5. When can we see what we have learned from taking that step?

As clinicians we can be habitual to ask very similar questions:

1. What are your goals?
2. What do you feel is your primary limitation or problem area?
3. What obstacles are preventing you from reaching your goals?

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"What are your goals?" <small>(i.e. return to work, gain strength...)</small>	"Where are you now?" <small>(i.e. can't lift glass, stiff, can't drive)</small>	"What are the obstacles preventing you from reaching your goals?" <small>As the expert you are helping patient understand obstacles (i.e capsular tightness) as well as recognizing their perspective</small>	What is our next step?  What should you expect? <small>As the expert we are leading this discussion (i.e progress joint mobilizations)</small>	Are the steps taken working?  <small>Pre and post session objectives measures as a tool to assess our effectiveness but also patient carryover between sessions</small>

Eval date: _____	DASH: _____	Discharge date: _____	DASH: _____	Total # of visits: _____
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Fig. 1. Coaching Kata grid for patients' s/p distal radius ORIF.

- As the expert, we begin coaching our patients here and begin the education process as well as initiating a dialogue that will lend itself toward patient engagement.
4. What is the next step?
    - We are coaching them as we develop the plan as well as educating them to exercises or strategies to remediate and/or prevent the identified problems, while also working to gain "buy-in."
  5. When can we see what we have learned...is it working?
    - Every session includes an assessment by taking objectives for the area of focus. Pre-session and post-session objective measures can be informative to help answer questions such as:
      1. Is the patient doing the work we prescribe?
      2. Are our interventions effective?

In the form of a performance improvement initiative, Coaching Kata was trialed with patients after distal radius open reduction internal fixation (ORIF). At every session and after the initial evaluation, the therapists completed the Coaching Kata

grid in Figure 1. Coaching Kata was used to engage the patient in the therapy process with the objective to facilitate learning, problem solving, and insight. Simultaneously, the questions created the opportunity for the therapist or the therapy assistant to evaluate the effectiveness of their interventions, and immediately identify the need for modifications in their treatment approach.

For the baseline population, 11 patients after distal radius ORIF had an average of 17 encounters, whereas the Coaching Kata group of 19 patients after distal radius ORIF had an average of 11 encounters. See Figure 2.

Disabilities of the Arm, Shoulder, and Hand (DASH) scores at discharge were also assessed. The baseline population had a mean DASH score of 16 at discharge, whereas the Kata Coaching group was discharged with a mean DASH score of 13 (see Fig. 3).

The findings of this performance improvement study show promise that Coaching Kata may be an effective means to engage the patient as well as the clinician in a continuous process of evaluating their effectiveness and identifying the need to adapt with the intent to continuously improve.

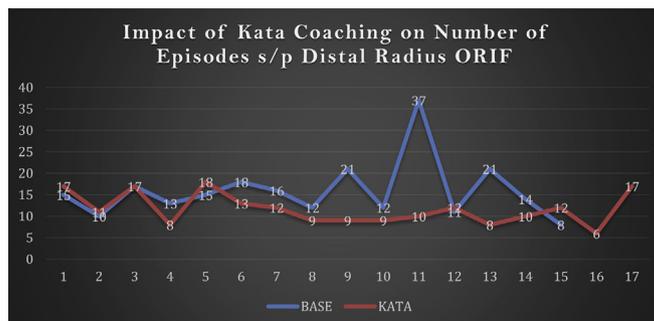


Fig. 2. Mean number of episodes for the baseline group (n = 11) is 17 sessions. Mean number of episodes for the Coaching Kata group (n = 19) is 11 sessions.

**DASH Outcomes Kata Coaching vs. Baseline  
s/p Distal Radius ORIF**

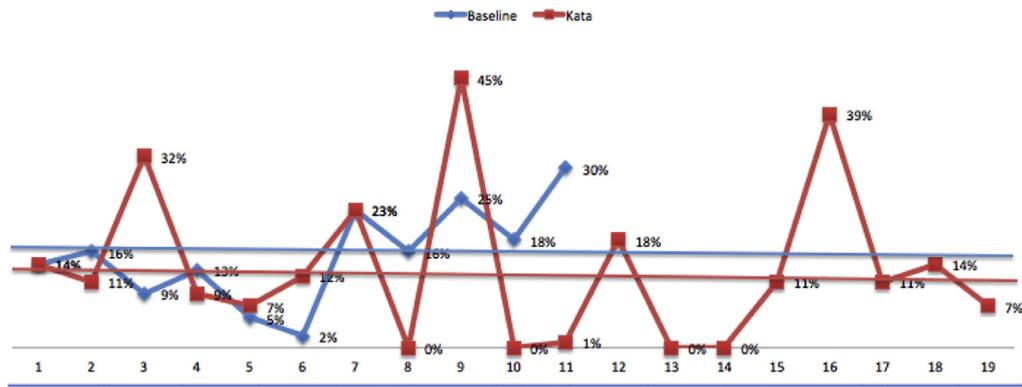


Fig. 3. Mean DASH score for the baseline group (n = 11) is 16. Mean DASH for the Coaching Kata group (n = 19) is 13

**Acknowledgments**

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**Reference**

1. Rother M. *Toyota Kata*. Mc Graw Hill, New York, NY; 2010.

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## Quiz: # 647

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- # 1. The “kata mindset” focuses on being
  - a. in touch with your “inner self”
  - b. habitually strategic
  - c. in touch with the patient’s “inner self”
  - d. habitually aware of aspects that are unseen at the time
- # 2. The patient example had the following Dx
  - a. zone II flexor tendon repair
  - b. release of CTS
  - c. open release of Dupuytren’s Disease
  - d. ORIF following a DRFx
- # 3. The kata method was developed at Toyota and calls for repeatedly
  - a. stating a set mantra
  - b. re-examining outcomes

- c. asking a series of 5 questions
  - d. suggesting to the patient that their performance is improving
- # 4. After each session the therapist completed a
  - a. Quick DASH
  - b. coaching grid
  - c. plan of treatment
  - d. home program
- # 5. The DASH score improved as well as a reduction in the number therapy sessions
  - a. true
  - b. false

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