Stop the Guessing Game: Implementing a Criterion and Evidence-Based Functional Performance Testing Algorithm in Foot and Ankle Injuries

Stanford HEALTH CARE

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Learning Objectives

After attending this educational session, participants will be able to:

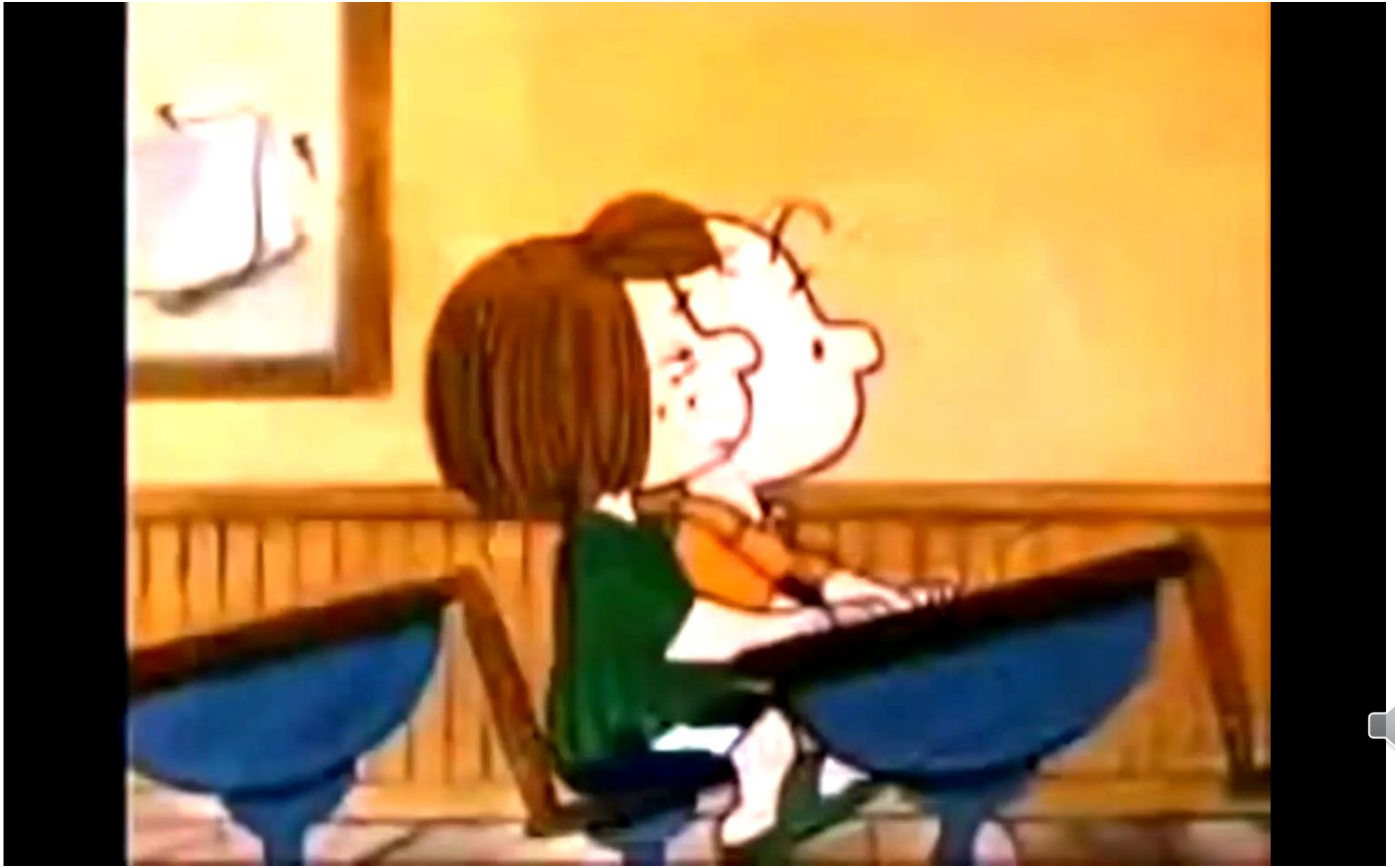
1. Analyze the importance of functional testing algorithms for determining return to function readiness in patients with foot and ankle musculoskeletal injuries.
2. Evaluate the evidence on the appropriate use of physical performance tests (PPTs) to determine readiness for return to function post foot and ankle musculoskeletal injury.
3. Develop a criterion, algorithmic, and evidence based approach of determining patient readiness and clearance for return to jogging, plyometrics, and higher-level activities.
4. Synthesize practical recommendations for implementing the Return to Function Physical Performance Testing Algorithm for the Foot and Ankle Complex in clinical practice, taking into account the patient's demographic, functional capacity, and specific pathology.

Session Outline

1. **Introduction**
   - Overview & epidemiology of foot & ankle injuries
2. **Proposed Criteria for Clinical Milestones & Return to Activity Decision-Making**
3. **Early-Stage Criteria**
   - Tissue Healing Timelines
   - Joint Pain & Symptoms
   - Patient Reported Outcomes
   - Joint Range of Motion
   - Neuromuscular Re-training
4. **Mid-Stage Criteria**
   - Range of Motion
   - Postural Control
   - Muscle Performance & Capacity
5. **Force & Impact Absorption Capacity**
   - Low-Level Plyometric
   - Return to Running Decision Making
6. **Functional Full Kinetic Chain Re-Integration**
   - Jump & Hop Tests
   - Multi-directional Hopping
7. **Functional Testing Batteries**
   - Proposed Physical Performance Batteries
8. **Summary, Conclusion & Future Directions**
   - Implications for Clinical Practice
   - Putting it all together: Key Takeaways
   - Practice Based Evidence: Implementation strategies and best practices
9. **Discussion & Questions/Answers**

Purpose…

Secondary Goal. Is to avoid this…



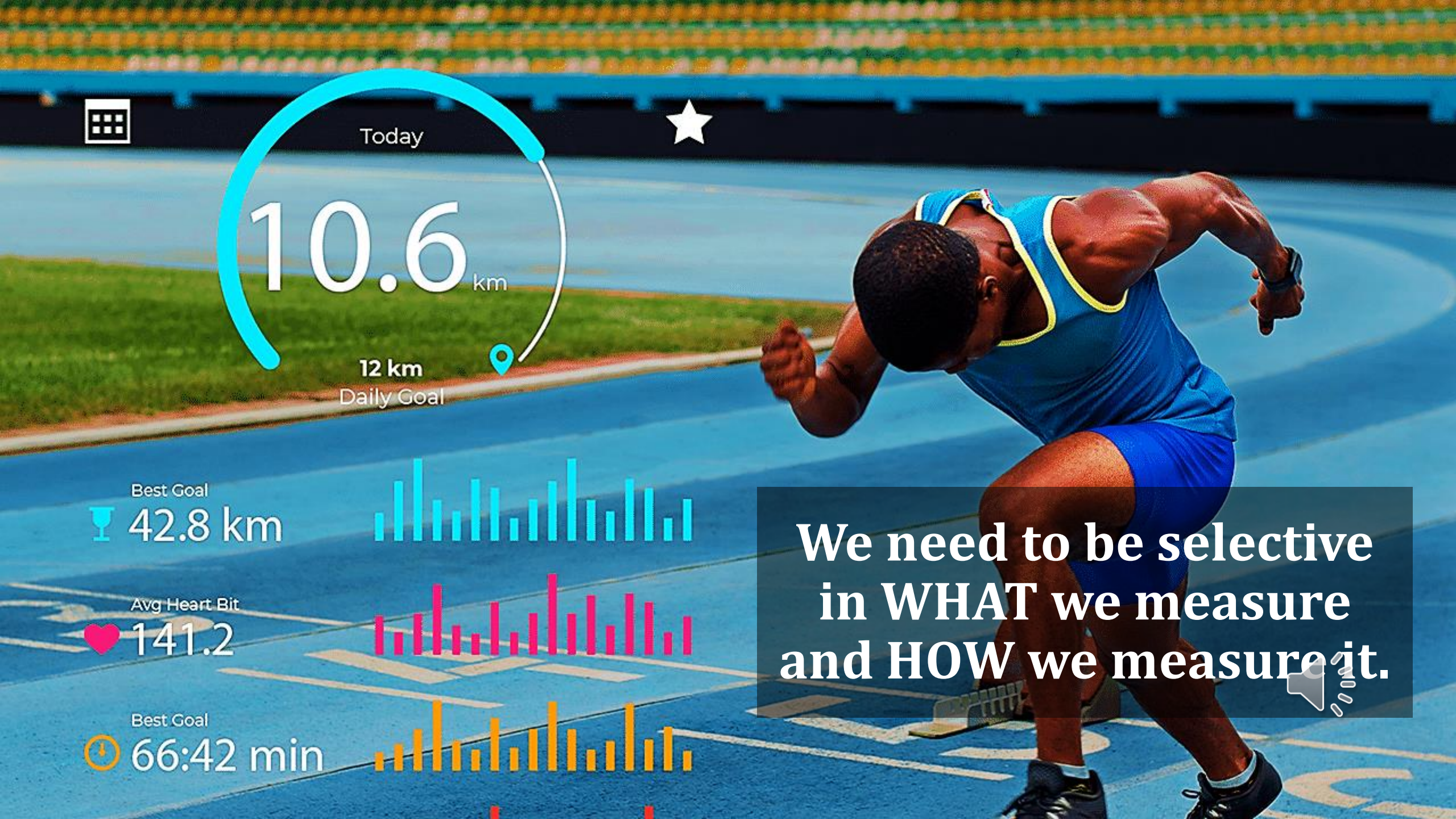
Presentation Road Map

- Speed Development
- Explosive & Elastic Strength
- Strength & Work Capacity
- Muscle Re-education
- Postural Control
- Mobility / Movement
- Tissue Protection

PART 3

PART 2

PART 1


Today
10.6 km
12 km
Daily Goal
Best Goal
42.8 km
Avg Heart Bit
141.2
Best Goal
66:42 min
We need to be selective in WHAT we measure and HOW we measure it.

Not all Tests & Measures Are Created Equal

Return to Sport Criteria

Dorsiflexion Passive Range of Motion: **>40°**

How is that measured?

What goes into a measurement?

1. *Reliability (consistency over time, providers, and clients)*
2. *Validity (accuracy (at least correlation) to gold standard)*
3. *Standard Error of Measure*
4. *Minimal Detectable Change*
5. *Normative Data (Interpretation)*

Not all Tests & Measures Are Created Equal

Do you know what **Physical Quality** the test measures?

YES

Do you know/understand what **Outcomes Measures** you will use?

YES

Does the test have sufficient **Construct Validity & Reliability**?

YES

Do you know how to **Run the Test & Interpret the Results**?

YES

Can you do at least two of the following:
Monitor, Prescribe, Rank
From the testing data?

YES

Use The Test

If **NO**...

Don't Use The Test

Educate Yourself

Measure What Matters.

"What gets measured gets managed."

Dysfunctional Consequences of Performance Measurements

V.F. Ridgway 1956
Admin Sci Quarterly

"What gets measured gets managed – *even when* it's **pointless to measure** AND **manage it**, AND *even if* it **harms the purpose** of the [provider] to do so"

– *Simon Caulkin summarizing*

V.F. Ridgway's argument

Measure What Matters.

1. **Understand Context & Objective**
   - Understand:
     - specific **physical demands** of the patient/athlete
     - relative importance of **KPIs** to those demands
   - Identify **predictable KPI deficits** based on diagnosis/condition
2. **Avoid Single-Criterion Measures**
3. **Use Multiple Criteria Judiciously**
   - Employ multiple performance metrics that capture all critical aspects of the condition & physical demand
4. **Develop Composite Measures with Clear Weight**
5. **Regularly Review & Adapt Metrics**