

1 **The simple act of counting:
how characterizing routine clinical practice can improve the quality of
patient care**

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2 **Objectives**

- The what: what is "practice characterization"?
 - Primary components of athletic training clinical practice
- The why: why is practice characterization important?
 - Living in a world of data-driven decisions
 - Professional implications: global and local
- The how: how should I go about characterizing my routine practice?
 - General tips and strategies
 - Examples

3 **What is practice characterization?**

- Characterizing athletic training clinical practice
 - The basic question: what does an athletic trainer do on a daily basis?
 - How do you know? Can you prove it?

4 **An example**

- The need for practice data: AZ Licensure
 - "Sunset" process in 2010
 - The need to expand language: from "athletic injuries" to "athletic injuries" and "athletic illnesses"
 - Viewed as an expansion of "scope of practice"
 - Began "turf wars" with other healthcare professions
 - Legislators (in large part) ignored the "noise" from the turf wars
 - Were objective and rational in their decision-making

5 **An example**

- The need for practice data: AZ Licensure
 - Common questions among legislators during the process
 1. Is there a true need to expand your scope of practice
 - Do athletic trainers encounter and treat athletic illnesses during their routine practice?
 2. Do you have evidence to support the need to expand the current scope of practice?
 - Do you have data to demonstrate that athletic illnesses are an aspect of routine athletic training practice?
 - We did NOT have the data to support our claim
 - VERY fortunate to have language pass (based on our educational competencies)

6 **The why: the importance of "data"**

- This example highlights the growing trend of data-driven decisions
 - Successes in business, sports, and healthcare
 - More informed and objective decisions
 - Huge potential
- We live in a world of big data
 - We are generating data at an unprecedented pace
 - 90% of ALL current data were created in the last 2 years

7 **The potential of big data**

- Businesses
 - Facebook
 - Worth estimated >\$200 BILLION; why? Data, data, data!
 - Target
 - Can identify pregnant customers by subtle changes in shopping habits
- Sports
 - Sabermetrics; CourtVision: Harvard study
- Healthcare
 - “Better” by Atul Gawande: positive deviant

8 **The why: benefits of leveraging big data in healthcare**

- Help us make better (and faster) and more informed decisions
- Help us perform better
 - More effective and more efficient in clinical practice
 - Reduce patient care costs
- Improved quality of care
 - Reduced errors
 - Translating evidence more quickly

9 **Big data in healthcare: initiatives**

- Federal initiative
 - Health Information Technology for Economic and Clinical Health (HITECH) Act
 - Encourages use of electronic health record at healthcare facilities nationwide
 - Creates the infrastructure needed to collect big data in healthcare
- Athletic training
 - Athletic Training Practice-Based Research Network (AT-PBRN)
 - Connects athletic trainers through an electronic medical record
 - Creates similar infrastructure as HITECH Act to collect large amount of patient care data within athletic training

10 **The what: what is practice characterization in athletic training**

- Characterizing athletic training clinical practice
 - What does an athletic trainer do on a daily basis?
- Primary characteristics of clinical practice
 - Patient characteristics
 - Age, sex, sport, type of injury
 - Treatment characteristics
 - Type, duration, and amount of treatment
 - Value characteristics

- Cost and quality of patient care services

11 **The how: the clinician as a data collector**

What is clinical documentation?

- An official record of care provided to the patient

Why document your care?

1. Legal and professional responsibility
2. Provides a frame of reference by which to make your clinical decisions during care
3. Increased communication with other providers
4. Data can help ensure and improve quality of care*

From an informatics standpoint, clinical documentation can be a source for data

12 **The how: the clinician as a data collector**

- The good news...
 - Patient care documentation = data collection
 - In theory, this should not be extra work on your part
- The bad news...
 - Recorded data does NOT guarantee useful information
 - Documentation must be systematic, structured, and standardized
 - Comprehensive documentation requires diligence

13 **The how: the clinician as a data collector**

- Missing data prevent us from completing the whole picture (eg, characterizing practice, effectiveness of care)
 - Common problems:
 - Incomplete records
 - Differences in measurements (eg, interval)
 - Differences across patients with the same condition

14 **Electronic medical record**

- Remember: you are only worth what you document
- EMRs can be a 2-for-1
 - A good EMR will allow for:
 - #1: comprehensive clinical documentation of patient care
 - #2: analyses of clinical practice characteristics
 - Should incorporate and capture all practice characteristic variables (eg, sport, injury, ICD codes, CPT codes, fee schedules)

15 **The what: practice characteristics in AT**

- Patient and treatment characteristics
 - Lam KC, Snyder Valier AR, Valovich McLeod TC. Injury and treatment characteristics of patients under the care of athletic trainers: a report from the Athletic Training Practice-Based Research Network. *Sports Health*. 2015;7(1):67-74.
 - Valovich McLeod TC, Lam KC, Bay RC, Sauers EL, Snyder AR. Practice-based research networks (PBRNs) Part II: A descriptive analysis of the Athletic Training Practice-Based Research Network in the secondary school setting. *Journal of*

Athletic Training. 2012;47(5):557-566.

- Lam KC, Snyder Valier AR, Anderson BE, Valovich McLeod TC. Athletic training services provided during daily patient encounters: a report from the Athletic Training Practice-Based Research Network. *Journal of Athletic Training*. [In press].

16  **The what: practice characteristics in AT**

- Value characteristics: Cost
 - Sauers EL, Bliven K, Lam KC. Treatment characteristics and estimated direct costs of care provided by athletic trainers for upper extremity disorders: a report from the Athletic Training Practice-Based Research Network. *Journal of Athletic Training*. 2013;48(3): S-99.
 - Lam KC, Welch CE, Valovich McLeod TC. Treatment characteristics and estimated direct costs of care provided by athletic trainers for lower extremity injuries: a report from the Athletic Training Practice-Based Research Network. *Journal of Athletic Training*. 2014;49(3): S-135.

17  **The what: practice characteristics in AT**

- Value characteristics: Quality
 - Lam KC, Snyder Valier AR, RC Bay. Patients experience significant and meaningful changes in self-report of function during the first two weeks after an ankle sprain: A report From the Athletic Training Practice-Based Research Network. *Journal of Athletic Training*. 2015;50(6): S-41.
 - Lam KC, Snyder Valier AR, RC Bay. Changes in self-report of impairments, function and disability following sport-related knee injuries: a report From the Athletic Training Practice-Based Research Network. [In review].

18  **The how: other strategies**

- A real-life example “from the field”
- Development of a simple “counting” system
 - AT staff at Division I University overseeing varsity, club, and ROTC at three different sites...patients can go to any AT clinic
 - Counting system: color-coded marbles
 - Practice characteristic = patient encounters: regardless of time and reason for visit (eg, ankle tape counted the same as treatment)
 - White (varsity), red (club), green (ROTC), and blue (other)
 - Result: who we see, when we see them, and in which facility
 - Provides information regarding staffing needs
 - Informs who should be at what facility at which time
 - Benefits: balance work load (eg, limited weekend hours)

19  **The how: other strategies**

- A real-life example “from the field”
- High school athletic trainer
- Development of a simple “counting” system
 - Practice characteristic = injuries and illnesses treated
 - Sport, body part, diagnosis,
 - Identified trends: lateral ankle sprains
 - Prevention programs: balance program (based on the current literature)

- Basic framework for quality improvement
 - To close to loop, one must count the numbers again the following year to see if injuries decreased
 - Basis for demonstrating value

20  **Take home points**

- There is a real need for practice characterization within athletic training
 - Important for the advancement of our profession
 - eg, worth and value
 - Important at the local level too
 - eg, employment, staffing needs
- Decisions will become more and more data-driven
 - Without the data, you won't be able to do much!

21  **Take home points**

- Start simply
 - Choose ONE thing to count
 - This one thing should be interesting and meaningful to YOU
 - If you count something interesting to you, you'll find something interesting to you
- Create a simple counting system
 - Fit the system into the natural flow of your environment and practice
 - EMRs are great but may not be the most effective in your particular work setting
 - However, if you're currently using an EMR, consider pulling data from it!
 - May need to think outside of the box
 - eg, using marbles or self-sign in sheet

22  **Thank you**

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