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AMERICAN  
SPEECH-LANGUAGE-  
HEARING  
ASSOCIATION

# **2015**

## **Researcher-Academic Town Meeting**



# ASHA Journals Awards

Kawana Award for Lifetime Achievement in Publications  
Editor's Awards



# Kawana Award for Lifetime Achievement in Publications

- Recognizing a sustained history of publication in the ASHA journals of at least 10 years
- Acknowledging the exceptional educational, scientific, or clinical value of the awardees' scholarly contributions

# Anne Smith

Purdue University

- Published more than 85 articles, with nearly half in *Journal of Speech, Language, and Hearing Research*.
- Received the Editor's Award four times – 1992, 1998, 2008, and 2014.
- Served as Associate Editor and Editor of *JSLHR-Speech*, twice as a member of the Publications Board, and as Chair of the Publications Board.
- Research focuses on neurophysiological bases of speech production, particularly in stuttering.



# Editor's Awards

- Selected by the editor of each journal or journal section
- Awarded annually to the authors of the most meritorious article published in the preceding year

List of winners back to 1970 available at

[http://journals.pubs.asha.org/SS/Past\\_Editors\\_Awards\\_Winner\\_s.aspx](http://journals.pubs.asha.org/SS/Past_Editors_Awards_Winner_s.aspx)



# American Journal of Audiology

Research Article | March 2014

Impact of Fear of Falling for Patients and Caregivers:  
Perceptions Before and After Participation in Vestibular and  
Balance Rehabilitation Therapy

Julie A. Honaker and Laura W. Kretschmer

Editor: Larry Humes



# American Journal of Speech- Language Pathology


Viewpoint | November 2014

Distinguishing Between Casual Talk and Academic Talk  
Beginning in the Preschool Years: An Important Consideration for  
Speech-Language Pathologists

Anne van Kleeck

Editor: Krista Wilkinson






# Journal of Speech, Language, and Hearing Research – Hearing section

Research Article | October 2014

Enhancing Speech Intelligibility: Interactions Among Context,  
Modality, Speech Style, and Masker

Kristin J. Van Engen, Jasmine E. B. Phelps, Rajka Smiljanic,  
and Bharath Chandrasekaran

Editor: Nancy Tye-Murray




# Journal of Speech, Language, and Hearing Research – Language section

Research Article | February 2014

Three Treatments for Bilingual Children With Primary Language  
Impairment: Examining Cross-Linguistic and Cross-Domain Effects

Kerry Danahy Ebert, Kathryn Kohnert, Giang Pham,  
Jill Rentmeester Disher, and Bitá Payesteh

Editor: Rhea Paul



# Journal of Speech, Language, and Hearing Research – Speech section

Research Article | June 2014

Rhythm as a Coordinating Device: Entrainment With  
Disordered Speech

Stephanie A. Borrie and Julie M. Liss

Editor: Jody Kreiman



# Language, Speech, and Hearing Services in Schools

Research Article | October 2014

The Rules of the Game: Properties of a Database of Expository  
Language Samples

John Heilmann and Thomas O. Malone

Editor: Marilyn Nippold



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# **2015**

## **Researcher-Academic Town Meeting**

# Disclosure

## Alan M. Jette, PhD

### Boston University

#### Financial disclosure:

- Co-Founder of CREcare, LLC and holds stock in this small business that disseminates and licenses users of outcome assessment instruments he and his colleagues developed at Boston University. These instruments will be discussed in the presentation.
- Received honorarium and expenses covered by ASHA for his presentation

#### Nonfinancial disclosure:

Nothing to disclose

Disclosure  
Barbara Ehren, PhD  
University of Central Florida  
**Panelist**

Financial disclosure:

Received a waiver of her registration fee from ASHA for participating in this presentation

Nonfinancial disclosure:

Serves as Chair of ASHA's Speech-Language Pathology School Issues Advisory Board

# Disclosure

Barbara Weinstein, PhD

The Graduate Center, City University of New York

## **Panelist**

### Financial disclosure:

Received a waiver of her registration fee from ASHA for participating in this presentation.

### Nonfinancial disclosure:

Nothing to disclose



Disclosure  
Kathryn Yorkston, PhD  
University of Washington  
**Panelist**

Financial disclosure:

Received a waiver of her registration fee from ASHA for participating in this presentation.

Nonfinancial disclosure:

Serves as Chair of ASHA's Ad Hoc Committee on Patient-Reported Outcomes

# Advancing the Science and Use of Patient-Reported Outcome Measures (PROMs)

Alan M Jette, PT, PhD

Boston University  
School of Public Health



**Boston University** School of Public Health  
Health & Disability Research Institute

# Learning Objectives

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Clarify what PROMS are and identify the potential benefits of incorporating them in the provision of services and within research

Describe PROM scientific innovations that enhance their clinical & research adoption and use.

Discuss promising applications.

# Why is this topic Important...

- We live in turbulent times with the storms of radical change are all around us....

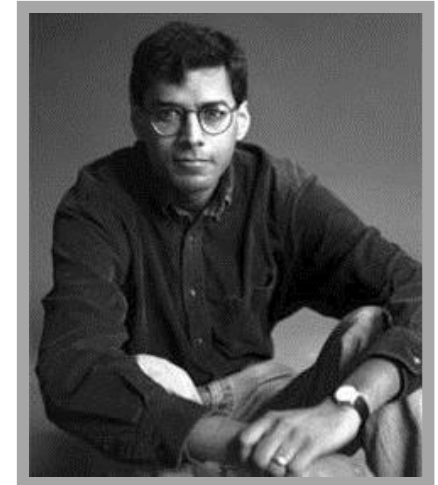


- In January, HHS Secretary Sylvia Mathews Burwell announced a national plan to tie at least 30% of traditional, fee-for-service Medicare payments to innovative value-based payment models, including accountable care organizations and bundled-payment arrangements, by the end of 2016.
- She seeks to tie as much as 50% of traditional, fee-for-service payments to these alternative models by the end of 2018.

HOW SHOULD OUR  
PROFESSIONS RESPOND?

# The '3-Ds' of Systems Thinking !

- Data Interest
- Devise Solutions
- Disseminate Results



Cowboys & Pitcrews (Atul Gawande: 2011)

**DATA INTEREST**

# David Cutler, HMS

- "Health care is the most information intensive industry in the economy, but it uses IT the least."
- Cutler puts primary emphasis on improving the quality of care. "Most of economics is about the cost of things," he notes.
- "There has been little effort to figure out what the benefits are. That's often more difficult. "





# Interest in Data

- We must develop the capacity to measure in real time the value of care we provide.
- Our goal must NOT be to 'prove' that our interventions work, but to discover what works, for what conditions, under what circumstances, to achieve what outcomes, and at what cost



# The Growing Role of Person-Reported Outcomes (PROs)

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Patient reported outcomes (PROs) represent the impact of a health condition on clients' lives

(PROM) is a measurement of any aspect of a client's health status that comes directly from the person, without the interpretation of the person's responses by the clinician.

# PROMs Useful

- PROMs offer a structured interview technique that minimizes measurement error and ensures consistency, ultimately providing a more reliable measurement of important outcomes that one can obtain by other means.
- PROMs can be useful because some treatment effects are known only to the client.
  - (Bob Rappaport, MD, FDA 2011)

# Assessing the Outcomes of the Care We Provide



***“Are you pissing and moaning, or can you verify what you’re saying with data?”***

# Psychometrics of PROMs have improved greatly in the past 2 decades

- Development of measures increasingly formal and science based.
- Better links between concepts and PROMs
- Better qualitative work with focus groups and cognitive testing to ensure content validity is achieved
- ePROM methods increasingly available
- NIH has invested heavily in this work through PROMIS, NeuroQol and other initiatives

# Scientific Advances

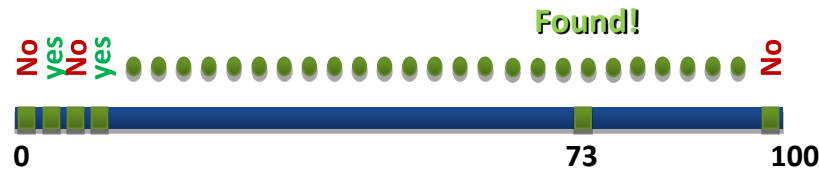
# Classical Test-based Measurement

- Psychometric procedures widely used to develop outcome tests for years
- A fixed set of items in an outcome instrument are presented to a clinician/client, regardless of the appropriateness of a specific item for that person .
- Scores are summed across all items in the instrument
- Observed scores on the instrument consist of true score plus error.

# Classical Test Theory (CTT)

- Measurement as a problem of search. CTT is **linear** in its approach
- Suppose our subject is **73** on a 1 to a 100 scale...

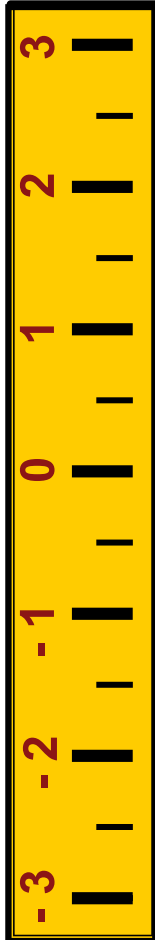
Classic Testing Theory



- In a CTT measure, each item in the measure is assessed, and a total score is calculated to determine where a person is located on the scale.



# What's wrong with CTT measurements ?



**Questionnaire  
with a wide  
range -  
but low precision**



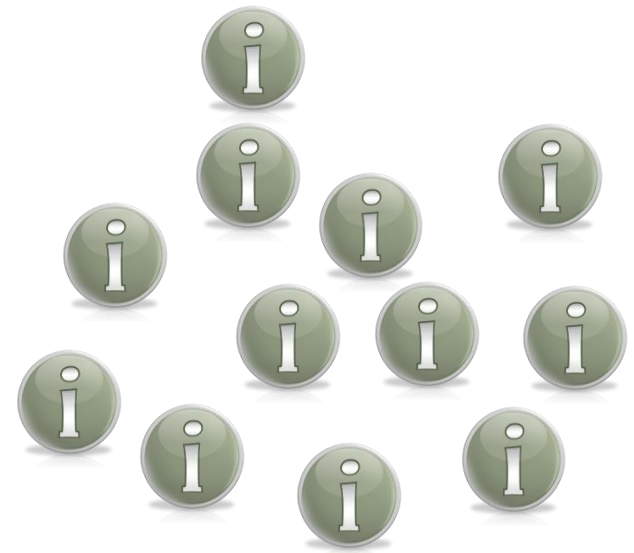
**Questionnaire  
with a high  
precision -  
but small range**

# Contemporary Measurement Item Response Theory .....

- Health outcome scores are item-based and not test-based
- Instrument items are modeled as a function of a person's level of an outcome and the characteristics of each item completed.
- Outcome scores are based on probability models that represent the likelihood a person would give a specific response given their ability level on that outcome.
- Enables outcome scores to be linked on an underlying metric.



# Physical Function



# Computerized Adaptive Testing (CAT)

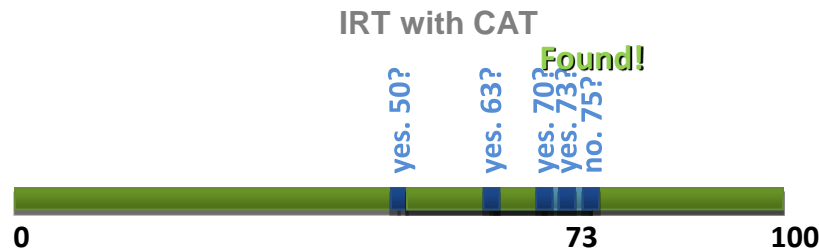


Integrates IRT with computers to administer a PROM

- Selects questions on the basis of a patient's response to previously administered questions
- Measurement is "adapted" to each individual
- Skips uninformative items to minimize response burden
- Allows determination of person's standing on a domain without a loss in measurement precision

# Item-Response Theory (IRT) and Computerized Adaptive Testing (CAT)

- Measurement as a problem of search. IRT/CAT measurement is **iterative** in its approach
- Suppose our subject is **73** on a 1 to 100 scale...



# Benefits of IRT/CAT PROMS

- Produces interval level data
- Precision maximized across score levels
- Different scales can be placed on a common metric
- Reduced floor and ceiling effects
- Potential to reduce patient burden & administration costs
- Highly efficient compared to classic testing theory (CTT)

# USING DATA TO DEVISE SOLUTIONS

# Use of PROM Data

## Level of Aggregation

	Individual	Group
<u>Within the clinical encounter</u>	Screening Monitoring Care planning	Treatment decision aids Prediction of prognosis
<u>Outside the clinical encounter</u>	Interdisciplinary communication	Clinic staffing Quality improvement/ Best practices Marketing Reduce practice variation

Adapted from Greenhalgh, 2009



# Our Clinical Comfort Zone:

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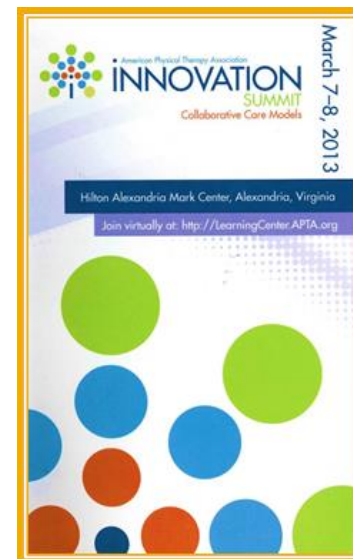
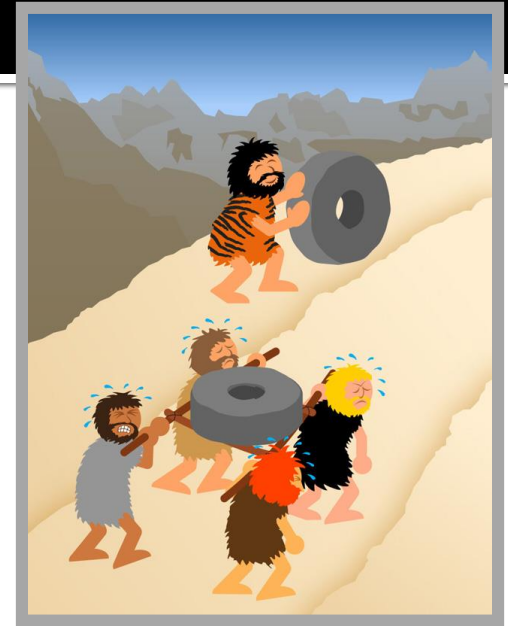
- Individual patient data within the clinical encounter:
  - Patient Screening
  - Care Planning
  - Monitoring Patient Outcomes

# Systems Thinking: Outside our Clinical Comfort Zone..

- Devising Solutions to 'Systems' Problems:
- Requires use of aggregate data within & outside the clinical encounter
  - Treatment decision aids
  - Prognostication of progress and resource use
  - Quality monitoring and benchmarking value
  - Best practices, reducing variation

# “Positive Deviants”

- Identify the ‘Positive Deviants’ in our professions.
- Create the foundation for a culture of innovation and quality improvement in practice.
- PROMS have an important role in generating the data needed to identify ‘positive deviants’.



# Data Registries are Growing...



(2010) Dartmouth/Hitchcock, Mayo,  
Denver Health, Inter Mountain,  
Cleveland Clinic.

- Goals are to: improve health care, lower costs, & move best practices out to the national provider community.
- In 2013, expanded to 19 health care systems across the US.

# DISSEMINATING AT SCALE TO CHANGE PRACTICE

# Don Berwick...

- “ In health care, invention is hard, but dissemination is even harder”
- We need the coordinated deployment of practice innovations on a large scale.



# Diffusion is a Social Process

Gawande, 2013

- Penalties and incentives won't achieve system/ cultural change.
- Getting to "X is what we do" means establishing "X" as the new norm. To create norms, you have to understand people's existing norms and the barriers to change.
- Mass Media can introduce an innovation to people, but Rogers showed that people follow the lead of other people they know and trust when they decide whether to take up an innovation.

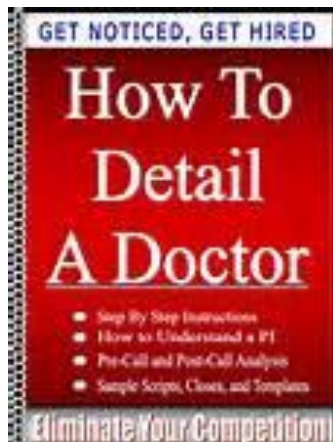
# Agricultural Extension Service (AES)



- The application of scientific research and new knowledge to agricultural practices through [farmer](#) communication and learning activities
- An extension agent is a university employee who develops and delivers educational programs.
- Relies heavily on face-to-face networks as they move information into the field.
- Includes [4-H](#) and youth activities.



# Pharmaceutical 'detailing'



- “The rule of 7-touches”
- Personally touch a doctor 7-times, and they will come to know you; if they know you, they might trust you; and if they trust you, they might change.

# Health Care Extension Service



- IHI's Breakthrough Collaborative Model for quality improvement.
- A short-term (6- to 15-month) learning system that brings together a large number of teams from hospitals or clinics to seek improvement in a focused topic area.



# In Conclusion ...

- 'Systems Thinking' must become important to clinicians in our professions
- We need to develop PROMS and other data to assess the outcomes of what we do
- We need common data registries to discover innovative solutions to systems problems
- Academic programs need to teach future clinicians the importance of systems thinking and how to use data to improve their practice
- The health professions need to make concerted efforts at disseminating innovations on a large scale

Thank You !

# Convention Events of Interest

## Thursday, Nov. 12, 2015

**Session Code:** 1047

**Title:** Past, Present, & Future: The AuD Training Model

**Time:** 1:30 pm - 2:30 pm

**Location:** Colorado Convention Center - **Room:** Mile High 4E-4F

**Session Code:** 1139

**Title:** Guideline Development for the Clinical Doctorate in Speech-Language Pathology

**Time:** 4:30 pm - 5:30 pm

**Location:** Hyatt Regency Denver - **Room:** Centennial Ballroom A

**Session Code:** 1191

**Title:** Forecasting the Future in CSD: Current Supply & Demand Data

**Time:** 6:30 pm - 7:30 pm

**Location:** Hyatt Regency Denver - **Room:** Centennial Ballroom E

## Friday, Nov. 13, 2015

**Session Code:** 1345

**Title:** Best Practice Considerations for Undergraduate Education in CSD:  
Report From the Academic Affairs Board

**Time:** 10:30 am - 11:30 am

**Location:** Hyatt Regency Denver - **Room:** Centennial Ballroom A

**Session Code:** 1345

**Title:** Best Practice Considerations for Undergraduate Education in CSD:  
Report From the Academic Affairs Board

**Time:** 10:30 am - 11:30 am

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