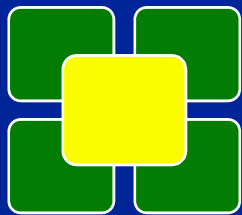




OSLHA CONVENTION 2008
VOICE DISORDER
SHORT COURSE

Douglas M. Hicks, Ph.D.
Director, The Voice Center



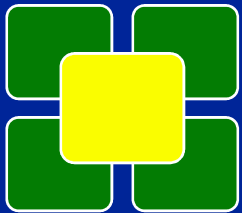
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WHAT'S IN A VOICE: MANAGING ADULT VOICE PATIENTS

**Douglas M. Hicks, Ph.D.
Director, The Voice Center
March 7, 2008**

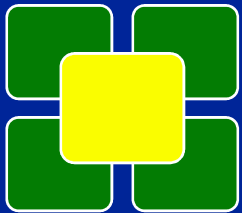


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**WHAT'S IN A VOICE:
THE CHALLENGE
OF MANAGING
WHAT WE HEAR AND SEE
IN ADULT VOICE PATIENTS**



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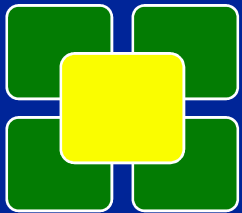




CLINICAL / SCIENTIFIC PHILOSOPHY

***Broaden One's Perspective ***

**Clinical + Scientific
Subjective + Objective**



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CLINICAL MANAGEMENT

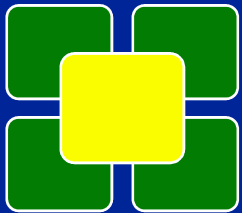
Diagnosis + Therapy

Evaluation + Treatment

*** Equals Diagnostic Therapy ***

**** Continuous Thread Thinking ****

(Diagnosis to Discharge)



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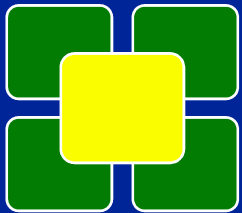
CRITICAL EVALUATION PERSPECTIVE

Hypothesis Testing

VS

Blank Slate

* SLP vs. ENT *



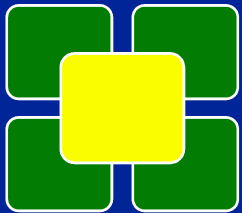
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WORKING TENETS

- **Careful, Comprehensive and Sophisticated**
- **SLP Paired with MD**
- **Physiology is Key**
- **Endoscopy / Stroboscopy is Key**



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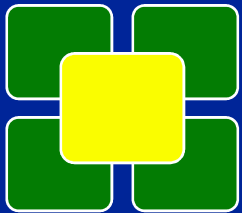




LARYNGEAL PHYSIOLOGY

Knowledge Void, Yet....

Critical Information Bridge



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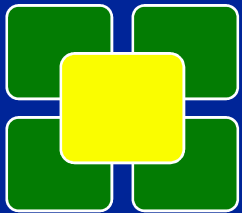




VOICE DISORDERS

- Symptoms
- Physiology
- Pathology / Etiology

Physiology Reconciles

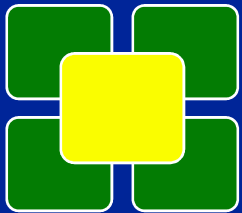


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VOCAL ASSESSMENT MODEL



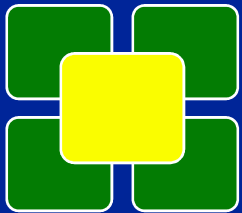
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COMPREHENSIVE

- History
- Clinical (Subjective)
- Clinical (Objective)
- End Game Triology

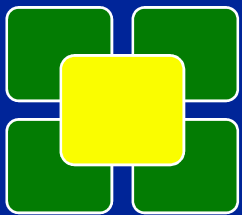


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CLINICAL OVERVIEW

- Perceptual
- Acoustic
- Aerodynamic
- Movement

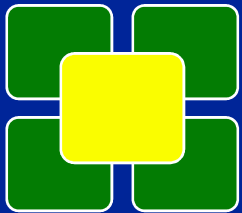


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PERCEPTUAL

- Subjective
- Trained Ear
- Hear vs. Listen
- Organize One's Subjectivity



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VOICE PERFORMANCE PARAMETERS

☞ **Pitch (#2)**

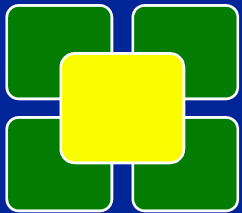
☞ **Loudness**

☞ **Laryngeal Quality (#1)**

☞ **Nasal Resonance**

(? Oral / Pharyngeal)

**** L. Quality & Pitch Very Common**



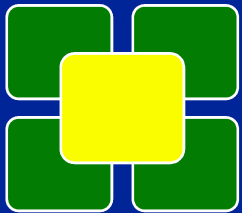
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CLASSIFICATION SYSTEM

By Performance Parameter



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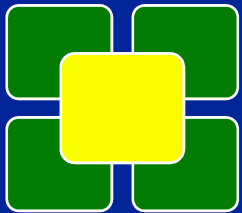




PITCH

- ☞ Too High
- ☞ Too Low
- ☞ Bizarre

Re: Age/Gender/Use Norms



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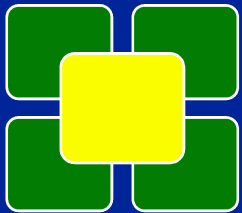


LOUDNESS

☞ Too Loud

☞ Too Soft

Re:Social Expectations / Setting



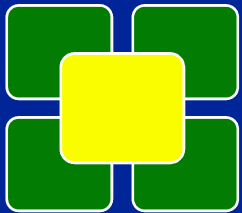
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LARYNGEAL QUALITY

- Roughness
- Breathiness
- Hoarseness (R & B)

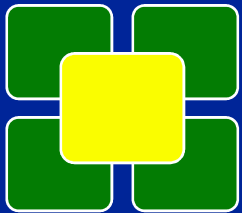
Re: Age / Gender Norms



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NASAL RESONANCE

- Hyper-
- Hypo- or De-
- Vs. “Nasality”



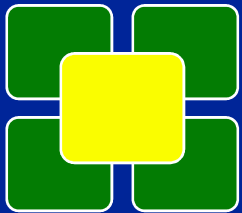
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CAPE - V

Division 3 Webpage

www.asha.org/about/membership-certification/divs/div_3.htm



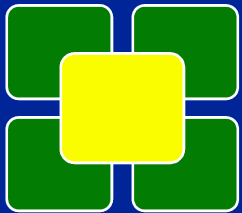
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ACOUSTICS

- Objective
- Indirect Physiology
- Instrumentation
- Measures / Algorithms?
- Norms
- Complimentary / Confirmatory



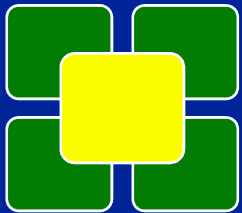
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AERODYNAMICS

- **Objective**
- **Indirect Physiology**
- **Instrumentation**
- **Measures / Algorithms ???**
- **Norms ?**
- **Complimentary / Confirmatory**



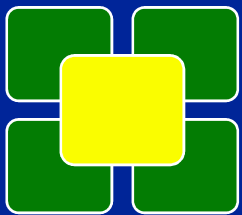
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VIDEOSTROBOSCOPY #1

- **Objective**
- **Direct Physiology**
- **Instrumentation**
- **Equipment / Examiner Dependent**
- **Measures?**
- **Descriptions vs. Numbers**
- **Norms ?**



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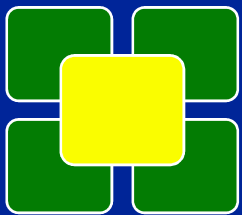




VIDEOSTROBOSCOPY #2

KEY:

- **Excellent Photography First**
- **Clinical Interpretation Second**



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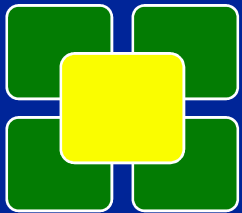




VIDEOSTROBOSCOPY #3

Valuable Tool

- **Clinical**
- **Education**
- **Research**
- **Professional**



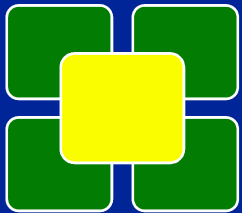
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VOCAL ASSESSMENT SUMMARY

- ☞ **Subjective: Trained Ear (Perceptual)**
- ☞ **Objective: Videoendoscopy / Stroboscopy
(Instrumental)**
- ☞ **Collaboration: SLP & MD**

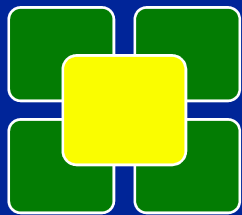
**** Not As Easy As It Sounds!**



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MODEL: INTERPRETING PHONATORY DISORDERS



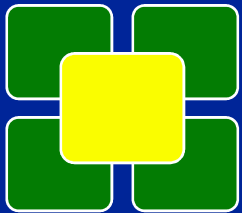
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STRUCTURE:FUNCTION:VOICE

- ➔ **Cause: Effect**
- ➔ **Hear + Listen**
- ➔ **Hypothesis Testing**



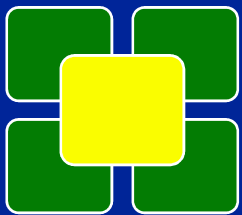
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LAWS of VOCAL PHYSICS

- TVF Contact
 - TVF Symmetry
 - TVF Mass / Pitch Dynamics
- ** Critical Role of Laryngeal Physiology**

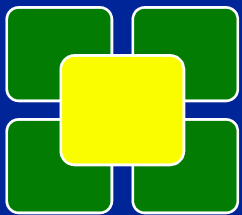


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PHYSIOLOGY BASES

- Pitch (“Effective” Vibrating Mass)
- Loudness (TVF Contact / Vibration Amplitude)
- L. Quality (TVF Vibration Symmetry / Regularity)
- N. Resonance (VP Port / Mouth Opening Ratio)



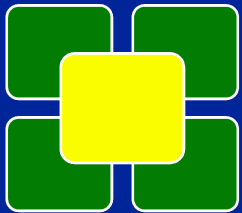
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LARYNGEAL COMPENSATION

➡ **Role in Phonation**

➡ **Clinical Assumption**

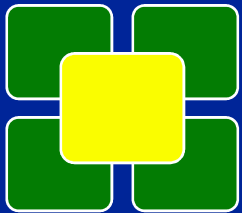


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VOICE TREATMENT OPTIONS

- Behavioral (Voice + Others)
- Medical
- Surgical
- Combination

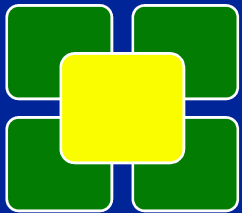


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VOICE THERAPY GOALS #1

- Desirable Change Regardless...
- Remember Dx Tx



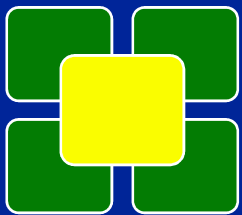
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VOICE THERAPY GOALS # 2

- **Functional: Restoration Therapy (Normal)**
- **Organic: Compensation Therapy (Best Possible)**



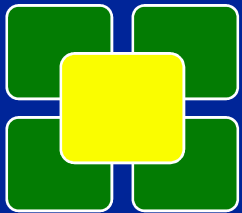
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BEHAVIORAL MANAGEMENT: GENERAL AREAS

- ➡ **Vocal Abuse**
- ➡ **Voice Monitoring**
- ➡ **Breath Support**
- ➡ **Relaxation**
- ➡ **Direct Voice Manipulation**

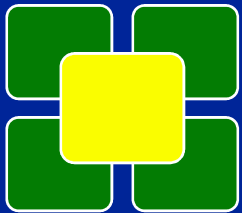


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VOCAL ABUSE #1

- Misuse + Overuse
- Require Change in Vocal Lifestyle
- Reprogram vs. Make Over



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VOCAL ABUSE #2

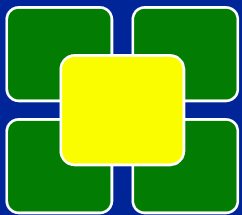
☞ Vocal Hygiene: Attitude + Action

NOT DRILLS

☞ ID/Eliminate Priority Factors

PRESCRIPTIVE

NEGOTIATE NOT DICTATE

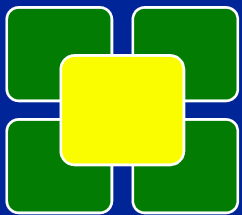


**Ch. 7 “Laryngeal Hygiene”, Hicks + Milstein, Textbook of Voice Disorders,
Merati + Bielamowicz (Eds), 2007**

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VOICE MONITORING #1

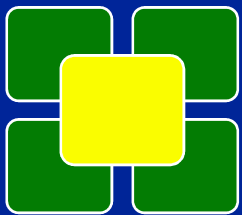
**Goal: Develop Accurate Monitoring
of the Voice As a Prerequisite
to Controlling Voice
Performance**



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VOICE MONITORING #2

**Rationale: Patient Cannot Implement
Behavior Change Unless He
Is Accurate + Consistent In
Identifying When Problem
Exists + What's Wrong**



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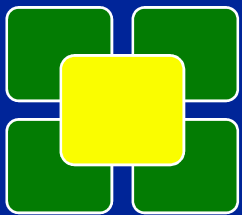


BREATH SUPPORT #1

**Goal: Develop New Habits of
Breath Pausing Strategies**

NOT BREATHING

***Watch Posture and Tension Factors**



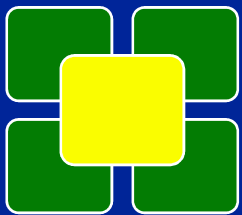
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BREATH SUPPORT #2

Poor Breath Support:

- Inadequate Inhalation
- Exhale Prior to Phonation
- Talk Too Long on One Breath
- Any Combination



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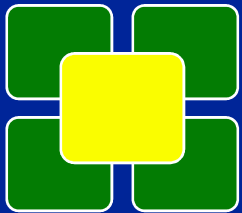


RELAXATION

Goal: Reduce Excess Cervical and Upper Thoracic Tension

➡ **Tension + Relaxation Are Mutually Exclusive States of the Body**

➡ **Mind Over Matter**

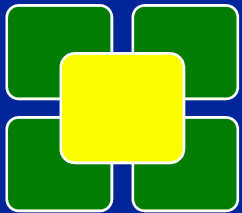


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DIRECT VOICE THERAPY

Facilitate Vocal Change In Specific
Performance Parameters In Specific Ways

-  Exercises / Drills
-  Facilitating Techniques
-  Holistic Programs

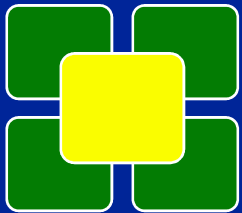


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GENERIC THERAPY FOCUS

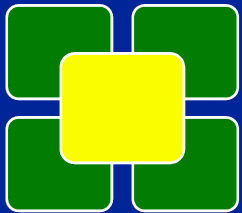
- Reduce TVF Contact
- Increase TVF Contact
- Reduce Tissue Trauma
- Improve Vibratory Stability
- Modify Vibratory Frequency
- Improve Mouth: VP Port Ratio



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MEDICAL CARE: Health Issues

- LPR vs. GER**
- Emotional State**
- Endocrine System**
- Mucosal Irritants**
- Eat/Sleep/Drink**



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MEDICAL TREATMENT #1

☞ **Drugs: Effects and Interactions**

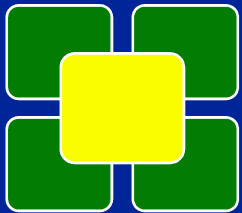
☞ **Friend or Foe**

- **Prescription**

- **OTC**

- **Recreational**

- **Food**



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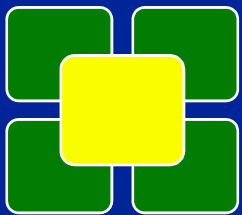




MEDICAL TREATMENT #2

Helpful Drug Categories

- Antibiotics
- Cough Suppressant
- Anti-Reflux
- Decongestant
- Anti-Inflammatory
- Anti-Tremor
- BOTOX



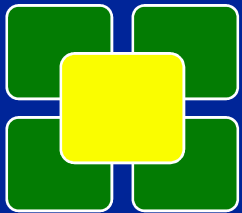
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PHONOSURGERY

- **KEY IS VOCAL PERFORMANCE**
- **Surgical Precision**
- **Mucosal Preservation**
- **Vocal Ligament Integrity**
- **Layer Integrity**



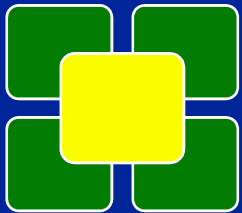
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SURGERY FOCUS

- **Tissue Excision**
- **Tissue Vaporization**
- **Tissue Injection**
- **Implants**
- **Neuromuscular Reconnection**
- **Conservation (Partial)**



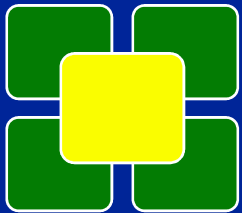
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POST-SURGERY CARE

- **Voice Rest (Specific / Limited)**
- **Quiet Settings**
- **Normal Settings**
- **Avoid Overt Abuse**
- **Reprogram Public Speaking/ Singing**
- **Timeframes**



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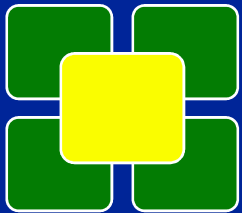




DISCHARGE STRATEGY

Perception vs. Reality

Patient vs. Clinician



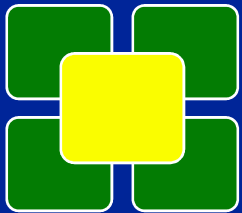
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DISMISSAL CRITERIA

- **Tissue Improvement**
- **Perceptual Improvement**
- **Objective Improvement**
- **Patient Satisfaction**
- **Symptom Resolution**
- **Achieve Goals**
- **Functional Adequacy**
- **Inadequate Improvement**
- **Patient Termination**



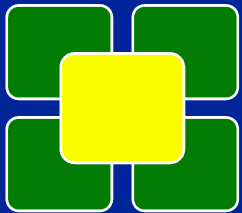
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EXIT STRATEGY

- ➔ **Role of Follow Up**
- ➔ **F/U Interval + Frequency**



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