Dr. Ende has no conflicts of interest.
Back to the Bedside: A Call to Arms

ACP Oklahoma Chapter Meeting
Oklahoma City, OK
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How Bad Is It?

- Well, maybe not that bad, but...
- over-reliance on costly tests
- declining level of bedside skills
- concern that physical exam skills will no longer be integral to medical care
(Not) Talkin’ ‘bout my generation…

Peter Townsend of The Who, 1965

What about the teachers of tomorrow?
Will your learners be this interested on rounds?
If we start a club, it will need a name.
Actually More of a Movement than a Club –

*Back to the Bedside*

And we’ll need a tag line –

*Listening to Patients; Directing their Care*
... or you can be like Don Quixote

“... and he jumped upon his horse, and rode madly off in all directions.”

from *Don Quixote*, Cervantes 1605
Top Ten Reasons Why You Need to Join

10. Connects you with medicine’s traditions and luminaries.

9. Provides a window into pathophysiology of disease.

8. Illuminates clinical epidemiology and the diagnostic process.

7. Represents an opportunity to be hands-on, even artistic.

6. Enables you to make diagnoses more efficiently.

5. Patients appreciate it, they really do.

4. Enhances your performance as a teacher.

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Connecting with Medicine’s Traditions and Luminaries
Who needs an echo, anyway?

Antonio Maria Valsalva (1666-1723)
... or even an ECG?

K.F. Wenckebach (1864-1940)
Not all findings are worth finding

John Homans 1877-1954

The Dorsiflexion Sign
How did she know?

Sister Mary Joseph Dempsey (1856-1939)

Sister Mary Joseph nodule
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The Abdominojugular Reflux; that’s AJR not HJR

30 mmHg for 10 seconds

The Starling Curve
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Likelihood Ratios

The proportion of patients with a disease who have a particular finding, divided by the proportion of patients without the disease who also have that same finding.

\[ LR \, + \, \text{“the rule-in power of a positive test result”} \]
\[ \frac{\text{sensitivity}}{\text{1-specificity}} \]

\[ LR \, - \, \text{“the rule-out power of a negative test result”} \]
\[ \frac{\text{1-sensitivity}}{\text{specificity}} \]
The “Rule-in/out” Power of Likelihood Ratios

<table>
<thead>
<tr>
<th>Likelihood ratio</th>
<th>Effect on post-test probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>LR +</td>
<td>LR –</td>
</tr>
<tr>
<td>&gt;10</td>
<td>&lt; .1</td>
</tr>
<tr>
<td>4-10</td>
<td>.1 to .3</td>
</tr>
<tr>
<td>2-4</td>
<td>.3 to .5</td>
</tr>
<tr>
<td>1-2</td>
<td>.5 to 1</td>
</tr>
</tbody>
</table>
# Physical Exam Findings of Peripheral Vascular Disease

<table>
<thead>
<tr>
<th>Finding</th>
<th>Positive LR</th>
<th>Negative LR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of limb hair</td>
<td>1.7</td>
<td>NS</td>
</tr>
<tr>
<td>Capillary refill &gt; 15 sec</td>
<td>1.9</td>
<td>NS</td>
</tr>
<tr>
<td>Asymmetrically cold</td>
<td>6.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Absent femoral pulse</td>
<td>6.1</td>
<td>NS</td>
</tr>
<tr>
<td>Absent foot pulses (both)</td>
<td>14.9</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Adapted from McGee, 2001
A 58 year-old man with a 40 pack-year smoking history is evaluated for shortness of breath with exertion.

Examination reveals sparse, early inspiratory crackles at both bases.

Pre-test probability of COPD: 25%
Pre-test odds of COPD: 1/3 = 33%
LR of early insp crackles: 14.6
Post-test odds: .33 x 14.6 = 5
Post-test probability of COPD: 5/6 = 83%
There Are Crackles, and Then There Are Crackles

• “Miniature explosions,” the sound of airways popping open - Mangione, 2008

• Early inspiratory crackles, originate in large, central airways, as in COPD

• Late inspiratory crackles, originate in peripheral airways, as in restrictive lung disease, and CHF

from Nath AR, Thorax 1974
Early Inspiratory Crackles
LR pos=14.6
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A 28 year-old woman is seen in your office for a routine exam. She reports recent onset of fatigue. Gynecological history includes two pregnancies and somewhat heavy menses.

You would like to know if she is anemic.
### Physical Exam Findings of Anemia (Hb < 11 g/dl)

<table>
<thead>
<tr>
<th>Finding</th>
<th>Positive LR</th>
<th>Negative LR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nail bed pallor</td>
<td>1.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Palmar pallor</td>
<td>2.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Conjunctival rim pallor</td>
<td>16.7</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Adapted from McGee, 2001
Conjunctival Rim Pallor
LR pos=16.7
What exactly is conjunctival rim pallor, anyway?
...loss of peripheral rim of redness virtually diagnostic of anemia (Hb<11gm)

... but suppose you didn’t know that?
Effect of examiners’ level of skill upon the likelihood ratio for detection of IHSS using the Valsalva maneuver

<table>
<thead>
<tr>
<th>Group</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Positive LR*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained cardiologists</td>
<td>.65</td>
<td>.96</td>
<td>16.2</td>
</tr>
<tr>
<td>Hypothetical Group A</td>
<td>.60</td>
<td>.90</td>
<td>6.0</td>
</tr>
<tr>
<td>Hypothetical Group B</td>
<td>.50</td>
<td>.85</td>
<td>3.3</td>
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* $LR = \frac{sensitivity}{1-specificity}$
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Value of the Physical Exam for Gen Med Hospital Service

...score one, actually twenty-six, for the attending

- 100 patients admitted to inpatient service, evaluated in ER and/or by Medicine team
- the attending (BR) then does his own exam
- expert panel determines whether findings were “pivotal” and/or “discoverable” findings
- 26 patients with unnoticed or misinterpreted ‘pivotal’ findings, e.g.:
  - Polyarticular gout
  - Thrombophlebitis
  - C8 radiculopathy
  - No pneumonitis
  - Orthostatic hypotension
- Only 54% of these were “discoverable”

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Public’s Expectations for Annual Physical Examination

<table>
<thead>
<tr>
<th>As part of annual visit</th>
<th>Patients’ expectations (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood pressure measurement</td>
<td>90</td>
</tr>
<tr>
<td>Listen to heart and lungs</td>
<td>99</td>
</tr>
<tr>
<td>Testing of reflexes</td>
<td>95</td>
</tr>
<tr>
<td>Abdominal examination</td>
<td>93</td>
</tr>
<tr>
<td>Prostate exam (men)</td>
<td>91</td>
</tr>
<tr>
<td>Breast exam (women)</td>
<td>89</td>
</tr>
<tr>
<td>Pap smear (women)</td>
<td>78</td>
</tr>
</tbody>
</table>

Patients’ Perceptions of Their Encounters

- 125 of 687 outpatients perceived their doctors omitted something important

- Of these omissions, 42% were parts (or all) of the physical exam

- These patients were significantly less satisfied with their encounter: 63% vs. 27% (p < .0001)

“When I am sick, I want a doctor who understands me as a whole person. But I also want one who understands my parts.”

Walsh McDermott, MD (1909-1981)
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A 62 yo man with dyspnea on exertion

62 yo man, patient of mine with history of mitral valve prolapse and moderate MR presents with 1-2 week history of DOE.

Exam: BP 164/88  P 64  O₂ sat  98%
Appears worried, no resp distress
Lungs – clear
JVP – 6cm with neg AJR
Cor – 2/6 late, blowing murmur into S2 at apex
Ext – no edema
Valsalva maneuver – neg

What studies would you order?
proBNP – 32

Follow up
felt better when seen next week
The Five Minute Moment

- feature one maneuver at a time
- introduce with narrative
  - usefulness
  - anecdote
  - case vignette
- demonstrate finding
- discuss interpretation, common errors, etc.

Adapted from Chi J et al. AJM; 2016 :792-795
The Chiefs’ Service

- huddle
- discharge patients seen first
- bedside presentations
- diagnostic timeouts
- post-discharge follow-up rounds

“...will this be on the exam?”

- Appreciate that assessment drives curriculum
  - USMLE Step 2CS vs MRCP PACES
  - ABIM Certification and MOC
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Faculty Development Resources for Learning (then teaching) Physical Diagnosis

- JAMA Rationale Clinical Exam Series
- ACP Waxman Center
- Numerous resources on the internet
- Practice, practice, practice, and read, read, read, starting with Steven McGee’s Evidence-Based Physical Diagnosis, then anything by Abraham Verghese, Salvatore Mangione or Andrew Elder.
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1. If you do it, others will follow.