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In praise of the physical examination

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It provides reason and ritual

If an alien anthropologist were to visit a modern teaching hospital, "it" might conclude that, judging by where doctors spend most of their time, the business of an internal medicine service takes place around computer terminals. The alien might assume that the virtual construct of the patient, or the "iPatient",¹ is more important than the flesh and blood human being occupying the bed.

But the alien would be wrong—patients are what medical care is all about. Yet the electronic medical record and advanced imaging technology have not only seduced doctors away from the bedside but also devalued the importance of their role there. Indeed, intensive care units exist where consultants conduct their "rounds" on the patients and adjust ventilator settings and drugs via telemetry.²

These trends have left educators and trainees in internal medicine in two camps when it comes to the merits of the bedside examination. In the first camp are those who pine for the old days, bemoan the loss of clinical bedside diagnostic skills, and complain that no one knows Traube's space or Kronig's isthmus. In the second camp are those who say good riddance and point out that evidence based studies show that many physical signs are useless; some might even argue that examining the patient is just a waste of time.

We believe that the truth is somewhere in between. We argue that clinicians who are skilled at the bedside examination make better use of diagnostic tests and order fewer unnecessary tests. If, for example, you recognise that the patient's chest pain is confined to a dermatome and is associated with hyperaesthesia, and if you spot a few early vesicles looking like dew drops on rose petals, you have diagnosed varicella zoster and spared the patient the electrocardiography, measurement of cardiac enzymes, chest radiography, spiral computed tomography, and the use of contrast that might otherwise be inevitable. And so many clinical signs, such as rebound tenderness, lid lag, tremor, clubbing, or hemiparesis cannot be discerned by any imaging test.

In the United States, after a three year residency, trainees can become certified by the American Board of Internal Medicine on the basis of a multiple choice test—an examination that has been standardised and well studied. Because the oral clinical examinations of the past, in which external examiners assessed a doctor's skills at the bedside, were viewed as subjective and not standardised, assessment of such skills

was left in the hands of training programme directors, who themselves were ill prepared to conduct the test or be truly objective about their own trainees. Without a high stakes clinical examination looming over them, the bedside skills of trainees atrophy. In short, we now certify internists in the US without an external benchmark that ensures that they can find a spleen, elicit a tendon reflex, detect fluid in a joint, or detect a large pleural effusion by percussion. If the public fully understood this, they would be shocked.

The good news is that in our experience, house staff and junior faculty members are eager to improve their skills at the bedside. They recognise that the clinical examination has value and that it is necessary, particularly because so many of our students and residents have some experience in practising abroad in resource poor settings, where the value of such skills is more obvious. Often they understand the theory of a physical diagnostic manoeuvre but their technique is lacking. To this end we have developed the "Stanford 25," a list of 25 technique dependent physical diagnostic manoeuvres that we teach to our trainees (box).³ On the list are items such as the fundoscopic examination, the thyroid examination, the study of jugular venous pressure and wave forms, and the performance of the Achilles tendon reflex in a bedridden patient—the last is a great example of a technique dependent manoeuvre. It is a skill to get the patient to relax, to position the leg properly, and to strike the tendon correctly to elicit a reflex (and it also takes a tendon hammer, which, unlike the ubiquitous stethoscope, is often missing from the pocket of the trainee's white coat). The Stanford 25 teaches trainees 25 useful manoeuvres, while helping them recognise how nuanced some of these tests are. It also gives junior faculty members a repertoire of skills to teach when they are at the bedside.

A third view of the bedside examination, and one that we advocate, is that it is not just a means of data gathering and hypothesis generation and testing, but is a vital ritual, perhaps the ritual that defines the internist. Rituals are all about transformation. The elaborate rituals of weddings, funerals, or inaugurations of presidents are associated with visible transformation. When viewed in that fashion, the ritual of the bedside examination involves two people meeting in a special place (the hospital or clinic), wearing ritualised garments (patient gowns and white coats for the doctors) and with ritualised instruments, and most importantly, the patient undresses and allows the doctor to touch them. Disrobing and touching in any other context would be assault, but not as part of this ritual, which dates back to antiquity.

We propose that if the ritual is short changed, if it is done in a cursory fashion, if it not done with skill and consideration, if its sacredness seems to be violated, then the transformation (which in this case is the formation of the doctor-patient bond, the beginning of a therapeutic partnership and the healing process) does not take place. We believe that the failure to form that bond could account for a great deal of the dissatisfaction patients express and doctors feel about their encounter.

[More]

The Stanford 25

1. Fundoscopic examination for papilloedema, etc, using panoptic and regular ophthalmoscopes
2. Examination of the papillary responses and relevant anatomy
3. Examination of the thyroid
4. Examination of neck veins/jugular venous distension for both level (volume) and common abnormal wave forms
5. Examination of the lung, including surface anatomy, percussion technique, identifying upper border of the liver, finding Traube's space
6. Evaluation of point of maximal cardiac impulse, parasternal heave, and other precordial movements
7. Examination of the liver
8. Palpation and percussion of the spleen
9. Evaluation of common gait abnormalities
10. Eliciting ankle reflexes, including in a recumbent patient
11. Ability to list, identify, and demonstrate stigmata of liver disease, from head to foot
12. Ability to list, identify, and demonstrate common physical findings in internal capsule stroke
13. Examination of the knee
14. Auscultation of second heart sounds, including splitting, wide splitting, and paradoxical splitting
15. Evaluation of involuntary movements such as tremors
16. The hand in diagnosis: recognise clubbing, cyanosis, and other common nail and hand findings
17. The tongue in diagnosis
18. Examination of the shoulder, specifically testing for rotator cuff tears, the acromioclavicular joint etc
19. Assessing blood pressure; identifying pulsus paradoxus

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