

The Enduring Value of the Physical Examination



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KEYWORDS

• Clinical examination • Bedside medicine • History and physical examination • Value

KEY POINTS

- Physical examination has been a vital tool in medical diagnosis over the last few centuries, but has come under increasing scrutiny because technological aids to diagnosis are thought more reliable.
- It has value beyond diagnostic accuracy, especially in fundamental areas, such as patient safety and cost, and has been shown to improve physician and patient satisfaction with clinical encounters.
- There are certain diagnoses that can only be made by physical examination, and others whereby risk stratification and prognosis are based on physical examination of physiologic function.
- Physical examination complements the increasing technological tools available for bedside diagnosis, and an “either-or” mentality is best avoided.

INTRODUCTION

Physical examination (PE) is defined as “an examination of the bodily functions and condition of an individual.”¹ This article focuses exclusively on PE in the context of clinical medicine, that is, the interaction between a health care provider and patient. In short, the title of the article is a statement ratified throughout the article, namely that there is not only benefit (*value*) to PE, but also that it will continue to last (*endure*) for some time. Both “enduring” and “value” are explored in more depth with respect to the future integration of PE into the clinical assessment of a patient and how its value extends well beyond current diagnostic/cost-based metrics.

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EVOLUTION OF THE PHYSICAL EXAMINATION

PE was not always a part of medicine. Its introduction into Western medicine can be traced throughout the last few centuries when novel techniques were applied to aid diagnosis of the sick. It is beyond the remit of this article to detail these discoveries by pioneers of the field (eg, percussion by Auenbrugger or auscultation by Laennec).² These discoveries developed into distinct European models of PE and were later incorporated at the bedside by Sir William Osler into the present ritual of *inspection, palpation, percussion, and auscultation*. With his illustrious career spanning Canada (McGill), United States (Pennsylvania, Hopkins), and United Kingdom (Oxford), perhaps nobody was more central than Osler to the modern practice of bedside PE. His bedside philosophy still permeates through teaching at these institutions and beyond. The evolution of PE is superbly reviewed in Refs.^{3,4} for those wishing further detail; the pivotal moments are summarized in [Table 1](#).

There have always been those who doubt the central role of PE in bedside diagnosis. However, the modern “age of investigations,” whereby imaging and laboratory tests are often deemed to have more accuracy than PE maneuvers, presents unique challenges to the primacy of the PE in its current form.⁵ Although traditionally thought to lead to approximately 20% of diagnoses⁶ (with history comprising 70% and investigations comprising 10%), the dogma of history, examination, investigation is increasingly eroded by hospital workflows whereby much of the initial workup focuses on investigation results, and much of the “H&P” is duplicated from admission clerking. Furthermore, the annual “general physical” for screening in the healthy population is also under attack. Many think it can be replaced by a review of key results and history risk factors and argue this helps improve allocation of health care resources from the well to those who need care.⁷

The division between PE and bedside investigation is increasingly blurred, because electronic instruments such as handheld ultrasound machines allow instant access to advanced imaging. Although some see this clash as an “either/or,” predicting the end of the binaural stethoscope as is currently known,⁸ there are others who not only use clinical cases to highlight the unique importance of bedside auscultation^{9,10} but also

Table 1
Key developments in the history of the physical examination

Date	Person	Development
ca. 400 BC	Hippocrates	Medicine as a profession; disease natural, not divine
ca. AD 1300		Dissection of human bodies increased
1543	Vesalius	<i>Fabrica</i> published; first accurate anatomy text
ca. 1670	Sydenham	Classification of disease
1761	Morgagni	<i>De Sedibus</i> published. Pathology begins
1761	Auenbrugger	Percussion discovered
1808	Corvisart	Popularization of percussion
1816	Laennec	Stethoscope invented, distributed with each copy of his book
1800–1850	Louis	French School establishes systematic approach to clinical case, still in use to this day
1830–1900	Mueller	German School adds insight from mechanisms of disease, studied by experimental methods
1889	Osler	Medical clinic opens at the Johns Hopkins Hospital

Adapted from Walker HK. The origins of the history and physical examination. In: Walker HK, Hall WD, Hurst JW, editors. *Clinical methods: the history, physical, and laboratory examinations*. 3rd edition. Boston: Butterworths; 1990. p. 6; with permission.

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