

# Preparing medical students to become skilled at clinical observation

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## Abstract

**Background:** Observation is a fundamental skill for physicians and it has been the subject of a resurgent interest. Although strategies for teaching observation have been described previously, many of them linked conceptually to emerging insights in visual literacy and aesthetic development, principles of clinical observation have not been elucidated.

**Aims:** The purpose of this study was to develop a set of principles that would be useful in guiding educators teach medical students how to observe.

**Methods:** The authors conducted a comprehensive review of the literature on the history and theory of clinical observation. They then consulted a group of individuals from a highly diverse background who, based on the nature of their work, were considered to have expertise in observation.

**Results:** Informed by the literature and the group of experts, the authors developed a set of four guiding principles relating to pedagogy and eight core principles of clinical observation. In the context of curriculum renewal at the Faculty of Medicine, McGill University, these principles were then used to create specific teaching modules.

**Conclusions:** Principles that are pragmatic in nature, anchored in a theoretical framework of visual competence and applicable to medical education have been developed and successfully deployed.

Let someone say of a doctor that he really knows his physiology or anatomy, that he is dynamic – these are real compliments; but if you say he is an observer, a man who really knows how to see, this is perhaps the greatest compliment one can make.

J.M. Charcot (1889)

## Introduction

Probably no one would dispute that observation is one of the most prized and valued clinical skills. There is dispute, however, about the precise details of what constitutes clinical observation, its conceptual basis, and how it is learned or developed. This, in turn, has implications on how clinical observation is taught and how it can be assessed in medical school. So, we have created a course that teaches clinical observation to first year medical students. The purpose of this paper is to describe the development of this teaching module, outline its theoretical framework and describe some of the observation challenges.

The course was developed after, first, examining the history, theory and conceptualization of clinical observation and, second, working with experts with diverse backgrounds in observation. The theories and experiences of Bardes and Bleakley suggested a course that would address both perception and the interpretation of what is observed by students (Bardes et al. 2001; Bleakley et al. 2003). Working with experts in art appreciation, cinematography, veterinary medicine, law enforcement training, and clinicians in various branches of medicine, we identified the need for students to be

## Practice points

- Clinical observation is a fundamental skill of the clinical method that physicians must acquire in order to do their work.
- Strategies to teach observation have recently been described with many of these programs relying on visual materials from the fine arts.
- A set of eight core principles in clinical observation has been elucidated and can be used to guide curriculum development in this domain.
- One of the important observation principles in medicine is that observation occurs on several levels.
- Two important interdictions in clinical observation are: 'never-never just look at the part; always look at the whole' and 'never confuse the observation and the inference.'

able to identify or recognize observable materials, describe them and communicate their observations to patients, colleagues, the medical record and clinical or scientific literature. We then formulated eight principles to guide

course development. The final phase was to develop teaching modules, each with specific objective and learning exercises.

## History and theory of clinical observation

Historically, observation has been central to clinical practice. Indeed, physicians of the so called French school, in the early 19th century, such as Laennec, Andral and Chacot, and their contemporaries from the U.K., notably P.M. Latham, conceived of clinical data gathering as one founded on observation. A précis on clinical observation was published in the *Lancet* in 1857 (Farre 1857). Sir William Osler, too, recognized the central place of observation; in his commencement address to the 1885 class of medical and dental students at the University of Pennsylvania he stated, '[You will do well] if you bring a knowledge which is practical, senses which have been trained to exact observation, habits painstaking & careful and above all an appreciation of the value of method in work' (Osler 1885). Several years later, he went on to describe observation classes that he gave on clinical wards (Osler 1901). An emphasis on visual observation has remained a mainstay of physician training since. Currently, it is often taught under the heading of 'inspection' in courses charged with the responsibility to teach the physical examination.

Despite the enduring value placed on clinical observation, we know of no undergraduate medical program where there is a concerted and continuing effort, guided by an explicit educational blueprint, for the teaching of observation skills as core curricular content. Indeed, there have been recurring calls to do so. Engel (1973), before he became renowned for the 'biopsychosocial model', lamented the withering away of observation skills at the hands of technology; he stated, 'Regardless of what systems of medicine or concepts of disease have prevailed over the ages, the competence of the physician has been measured by his ability to make the observations required for the application of his art or science... Medical education of today must reinstate clinical observation to its proper status as a basic medical discipline.'

The recognition and appreciation of the importance of observation, however, did not elucidate its nature, what constitutes it, how it operates, and how it is developed or honed. Only recently, has observation been subjected to analysis that has led to theory building. Bardes et al. (2001), in a pilot project to teach students observation through the analysis of museum paintings, considered observation and description to be distinct from interpretation. Bleakley et al. (2003) tackled the matter of 'superficial looking' vs. 'deep seeing', proposing a model of expertise, or connoisseurship, characterized by a keen appreciation of aesthetics enhanced by a stimulation of the imagination. It is interesting that Bardes et al. (2001) considered aesthetics 'off-limits' and cautioned against focusing on it, whereas Bleakley et al. (2003) considered aesthetics to be the primary vehicle through which one learned deep seeing. In addition, Bleakley et al. (2003) suggested that internalized images do not simply function as an 'aide-mémoire', a stimulus that releases pre-formed concepts, but rather serve to incubate and generate

distinction between 'le regard' (translated as 'gaze') and 'coup d'oeil' (translated as the 'glance'). The former may be understood as 'seeing with saying' – observation laced with interpretation – whereas the latter has generally been understood as observation unfettered by judgments or inferences. But, they challenge this interpretation and suggest that the 'glance' is also a 'saying', albeit with a metaphorical text. They also consider that perceptions – whether nascent, naïf or repeated – may not be entirely separable from inference. This, in turn, suggests that the observer has to be aware of the potential pitfalls in conflating observation with inferences.

These analyses suggest that the development or refinement of observation skills requires students to learn that perceptions are seldom only that, but rather that they carry with them or trigger inferences which one is required to apprehend. Bleakley et al. (2003) describe the role of the medical educator as, 'an art critic who illuminates, interprets and appraises the qualities that have been experienced'. In a much earlier reflection on observation, Berger (1980) proposed a hierarchy of clinical observation. The fourth level of his hierarchy consisted of the 'look inside', the self-reflection which enables one to become aware of feelings and emotions. In a sense, one could suggest that Berger recognized the need, before it became popular, for cultivating the 'art critic' within.

To pursue the discussion on this trajectory would bring the debate to a level of complexity that evokes philosophical discourse such as Hegel's 'concept before percept'. While not indifferent to philosophically grounded questions on the nature of perception, we intend, like Berger, to ground our essay in more pragmatic concerns and directions. We will propose a specific set of principles that can be made operational within the scope of most undergraduate medical education programs.

## Methods

### Context

This program arose in the context of curricular renewal at the Faculty of Medicine, McGill University. The leitmotif of the renewed curriculum is 'physicianship'. Physicianship is based on the premise that the primary mandate of medicine is healing. Professionalism describes the manner in which the profession has been organized to deliver its services. A unique clinical method was developed to be in service of physicianship. This method comprises the following elements: clinical observation, attentive listening, communication skills, narrative competence and description, physical examination, clinical thinking and reasoning, and self-reflection (Boudreau et al. 2007).

### Learning from observer experts

Following our literature review on observation we consulted an art historian with a research interest in the depiction of the human face in Renaissance art; a veterinarian specializing in abnormal pet behavior; a teacher with responsibilities for

