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# Centre for Health Education Scholarship (CHES) Research Rounds

**Mark Your Calendars!** The Centre for Health Education Scholarship (CHES) is inviting you to Research Rounds with

**Dr. Geoff Norman**



**Date:** Wednesday, February 15, 2012  
**Time:** 12:00pm to 1:30pm (Lunch will be served at DHCC)  
**Venue:** Diamond Health Care Centre 2267  
With Videoconference to IRC 305, CWH 2D22, MSB 210,  
RJH 120, NHSC 9-374, and UHNBC 5009 (Port #1)

*\*Please be aware that this session will be recorded and made available online to CHES members on a password-protected site.*

**Topic:**  
**The role of experience in clinical reasoning**

## **Abstract:**

When asked how long after graduation from their medical specialty it took before they felt competent in their job, most physicians report 5-10 years. When asked to choose a family physician from two candidates, one who is a recent graduate and a second who has been in practice 10 years, virtually everyone chooses the latter. Paradoxically, studies of recertification and relicensure performance based on written examinations uniformly show a linear drop with years from graduation. Evidently, practical experience is contributing substantially to our perception of competence, but its effects are not detectable by formal examinations. In this talk, I explore the nature of diagnosis from a cognitive psychology perspective, using dual processing theory. I argue from evidence that diagnosticians have two parallel reasoning strategies: a rapid process based on an unconscious "similarity" match with previous examples and a slow, logical and conscious strategy based on application of DSM-like rules. A major role of experience is to provide the expert with a vast mental storehouse of clinical examples, and the act of routine diagnosis, just like everyday categorization of objects like dogs or trees, proceeds primarily by an unconscious mental similarity matching against a previous example in memory. The careful, systematic, deliberate application of diagnostic rules is a secondary process used for confirmation or when the correct diagnosis is not evident. I discuss the implications for clinical teaching.

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Geoff Norman, PhD, is professor of clinical epidemiology and biostatistics, McMaster University. He received a BSc in physics from the University of Manitoba in 1965, a PhD in nuclear physics from McMaster University in 1971, and subsequently a MA in educational psychology from Michigan State University in 1977. He is the author of 10 books in education, measurement and statistics, and over 200 journal articles. Dr. Norman's primary research is in the area of expert diagnostic reasoning - how clinicians arrive at a diagnosis. Following from this research is an interest in various aspects of how medical students learn and has contributed to the theoretical foundation of problem-based learning. He has also developed and validated a number of innovative assessment methods and has made substantial contributions to assessment methodology. He is currently exploring the use of high fidelity simulation in clinical learning. He has won numerous awards, including the Hubbard Award from the National Board of Medical Examiners in 1989, the Award of Excellence of the Canadian Association for Medical Education in 1997, the Distinguished Scholar Award of the American Educational Research Association, Division I, in 2000, and the Award for Outstanding Achievement from the Medical Council of Canada in 2001. He was elected a Fellow of the Royal Society of Canada in 2007 and presently holds a Canada Research Chair.

**ACCREDITATION:**

As an organization accredited to sponsor continuing medical education for physicians by the Committee on Accreditation of Canadian Medical Schools (CACMS), the UBC Division of Continuing Professional Development designates this educational program as meeting the accreditation criteria of the College of Family Physicians of Canada for up to **1.5** Mainpro-M1 credits (per session). This program has been reviewed and approved by UBC Division of Continuing Professional Development. The CHES Research Rounds is a self-approved group learning activity (Section 1) as defined by the Maintenance of Certification program of the *Royal College of Physicians and Surgeons of Canada*.

*The Centre for Health Education Scholarship (CHES) is committed to enhancing health education scholarship by building capacity for educational scholarship across the Faculty of Medicine through collaboration, team-building, mentorship of new faculty, successful funding applications, and other activities.*