On mentoring

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Mentoring is a widespread but largely unexamined phenomenon in biomedicine. It is a multifaceted and complex relationship between senior and junior professionals which, when successful, serves to fortify and extend within the younger person characteristics and qualities integral to professional development. Thus, mentoring enables younger colleagues to learn about the environment they are entering, including its priorities, its customs and usages, and the identities of the leading figures, institutions and structures. Further, in the academic enterprise in medicine, mentoring is especially important in the shaping of an academic *persona* and in the formulation and implementation of a career trajectory.

Mentor was a wise and faithful friend of Ulysses (Odysseus), King of Ithaca[1]. When Ulysses departed for the siege of Troy, he entrusted to Mentor his infant son Telemachus and his wife Penelope. Mentor was largely responsible for the child's education, the shaping of his character, the instillation of values, and, later, the wisdom of his decisions. Years later, when Ulysses had not yet returned and Telemachus embarked on a search, Mentor accompanied him. Athena, the goddess of wisdom, intermittently assumed Mentor's form; in this sense the relationship was a gift of the gods. The presence of Mentor was particularly important when practical insight was necessary or when critical choices had to be made. By the end of the journey, Telemachus had matured both in spirit and in outlook, and could function and make decisions independently. On this basis, Mentor was viewed as 'the transition figure in Telemachus' life during the journey from youth to manhood' (Duffy T, unpublished). The Homeric saga elucidates traits associated with the current meaning of mentoring—a wise, experienced, and trusted counsellor engaged in the active guidance and maturation of a younger individual.

Mentoring, to be effective, requires of the mentor empathy, maturity, self-confidence, resourcefulness, and willingness to commit time and energy to another. The mentor must be able to offer guidance for a new and evolving professional life, to stimulate and challenge, to encourage self-realization, to foster growth, and to help make more comprehensible the landscape in which the protégé stands. Within medicine, these efforts extend also to such powerful professional elements as respect for the clinical as well as the scientific process, for the Samaritan functions of the physician[2], and for clinical and intellectual thoroughness—all necessary in the development of individual expressions of professionalism.

Daniel Levinson, in *Seasons of a Man's Life* (1978), describes the mentoring relationship as 'one of the most complex and developmentally important a man can have in early adulthood'[3]. He notes that the mentor's responsibilities embrace teaching, sponsoring, guidance, socialization into a profession, and the provision of counsel and moral support. The mentor, he writes, is an inspirational figure in that he or she promotes the 'realization of the Dream', fostering the protégé's development, sharing and believing in the Dream, helping to define the newly emerging self, and providing a space in which the protégé can create a life structure containing the Dream[3]. Levinson also describes how the relationship changes over time, and how the separation can sometimes be difficult as the relationship reaches its conclusion, although many mentoring dyads end in deep and lasting friendships.

While there is not an abundance of empirical research on mentoring in medicine, it is a widely held view that mentoring relationships in early years are critical for launching productive careers and for learning the informal networks that support productivity[4]. Results of surveys among various types of professionals, including business executives, lawyers, chemists, and faculty in the social sciences and humanities, have suggested that mentoring relationships have strongly positive effects on the career of the protégé[5–7]. One study of research scientists in departments of medicine revealed that, among MDs, MD/PhDs, and PhDs, an outstanding professor/mentor was a primary influence on the decision to undertake research training[8]. Additionally, in a study of mentors in graduate medical education at the Medical College of Wisconsin, all 25 faculty who reported having had a mentor felt that the relationship had advanced their careers, 88% reported that it had enhanced personal development, and 72% reported that it had helped them in dealing with stress. This study also found that, of the 90% who reported having had a mentor during their training, 81% in turn became mentors[9].

The protégé is not alone in reaping benefits from mentoring; the process is usually beneficial to the mentor as well[3,10], making possible replication of important elements of his or her own value systems, helping in the perpetuation

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of certain codes or covenants, and, not infrequently, offering a presence that is otherwise absent in the mentor's life. Further, opportunities may be found to advance the field of interest in which the mentor is working, and which the protégé is entering.

Mentoring includes powerful explicit and implicit elements. Explicit mentoring processes involve the active transmission of facts, techniques, and systems of thought, through overt and deliberate processes in which the mentor acts in teacher, advisor, and sponsor roles. Under this rubric might be included career counselling, professional socialization, and guidance in clinical or experimental techniques or systems of diagnostic or therapeutic thinking[11]. Implicit processes, conversely, are not consciously or deliberately displayed. They involve the exemplar role of the mentor: intellectual style, professional priorities, deliberateness, truth telling, and the flavour of interpersonal relationships are transmitted through implicit mechanisms. Elements of scholarliness, thoroughness, and loyalty, as well as styles of interactions with patients, peers, and juniors, are also powerfully displayed in implicit fashion. Implicit processes include also demonstration of the important set of characteristics and functions that McDermott[2] referred to as the Samaritan functions of the physician—those elements of support, empathy, and identification with the suffering of the patients that characterize doctoring at its best.

These implicit educational elements allow for validation of personal priorities, of self, and of the system; they instil a sense of belonging and of value within a more comprehensible professional setting. For the physician, implicit education has the capacity to offer a vision of professionalism and a basis for ordering priorities.

Mentoring differs from role modelling; while the mentor is engaged in an evolving, ongoing process that persists and grows richer with time, exposures to role models are often brief[12]. Mentoring is actively interpersonal, purposeful, and generally extends over considerable periods of time. Role modelling is not necessarily interactive; indeed the model may be unaware that he or she is being observed. Numbers of role models may impact on individuals, often with relation to limited numbers of characteristics in each instance. Role models may affect large numbers of individuals, whereas mentors ordinarily have relationships with only a few.

A paradigmatic mentoring relationship existed between William Osler and Harvey Cushing during the early 1900s[13]. During Cushing's early years as a faculty member at Johns Hopkins, Osler acted as personal and professional advisor, cautioning the younger man when his fiery temperament threatened his faculty relationships, and ushering him into the wider world of medicine through counselling, personal introductions and travel. Osler introduced Cushing to the study of the history of medicine, to historical writing, and to bibliophilia. Like many mentoring relationships, Cushing's and Osler's undoubtedly reflected personal resonance. A warm personal relationship gradually emerged; at one point Cushing and two colleagues lived in the house next to Osler's and were given latchkeys so they could come and go as they pleased, for use of his library and for friendship and consultation. In time, Cushing's professional life took on several characteristics of Osler's: both were exemplary teachers with pre-eminent clinics, both published widely, focusing on broad themes in medicine, and both assembled great libraries. Culmination of the mentoring relationship came when Cushing, at Lady Osler's request, wrote his great Osler biography, offering some sense of his mentor for generations of students to come.

As faculties have grown, as expertise has become more and more fragmented, and as fiscal necessity has become progressively more important in shaping the clinical transition, the environment that once supported mentoring relationships in medicine has changed. Growth in faculty and staff size has diluted opportunities for rich and stable interactions between teacher and student; further, with an expanding science base and progressive subspecialization, the focus of mentoring relationships has moved away from traditional expressions of clinical expertise and toward a stronger orientation around the biology of disease. *Pari passu*, power and importance of major bedside expertise have faded as priorities. Faculty time pressures, the expanding managerial duties of senior faculty, and the continuous search for funding, with its associated academic entrepreneurialism, also interfere with the establishment of mentoring relationships. Overall, a young person in medicine now has much more difficulty in forming a comprehensive mentoring relationship with one person[14], encompassing a balanced mixture of breadth and expertise.

Would it be valuable to 're-invent' and expand mentoring relationships in the health professions? It would seem so: mentoring activities contribute importantly to the priorities, academic styles, and career patterns of future faculty, and thus to shaping the medicine of the future. Mentoring offers opportunities to improve the quality of the clinical transaction and to address important gaps in medical education and training. To this end, the implicit process and its elements should be more carefully examined, and should in effect be made explicit, so that they can be modified, extended, applied, and subsumed as continuing elements of education and enculturation. Further, the extension of mentoring and role modelling programmes has been cited as one of several strategies to re-establish an education community and reaffirm professionalism in medicine[15].

According to the Association of Academic Health Centers[12], two types of investigation would be helpful in providing a sounder basis on which to build mentoring relationships—cross-sectional and longitudinal studies to evaluate the nature and career effects of traditional and formal mentoring relationships in medical education; and demonstration projects that assess short and long term effects of introducing structured and supportive mentor roles in the health professions. Additionally, expectations for the roles of mentor and protégé in the academic medical centre should be clarified and the objectives of formal mentoring relationships further defined, taking into account the current health care landscape and barriers to mentoring relationships.

Additional research addressing the issue of gender with regard to mentoring relationships may also be of value. Surveys and interviews conducted at medical centres show that greater numbers of male than female faculty report having had a mentor during training and early years as a faculty member (Johns Hopkins University School of Medicine, Department of Medicine Task Force on the Status of Women, unpublished; and refs 9,12,16); yet, according to a survey completed by 501 surgical residents, the availability of mentors, role models, or both is of greater concern to women than to men[17]. It has also been reported that senior faculty tend to be mentors or role models for students or junior faculty of the same sex and race[18]. Research has not established whether mentors of the same gender as their protégés are more effective than those of the opposite sex[12].

Clearly, comprehensive mentoring relationships can contribute to reinforcement of altruism and idealism among individuals entering medicine, and to the laying out of broad values. Each generation adds to the continuing evolution of medical science and practice, through its own activities and through the education and training of those who follow; mentoring has the capacity to make the pursuit of excellence an enduring preoccupation of future faculty and of the profession generally.

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