

## Introduction and Historical Background to Medical Consultation

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A hundred years ago William Osler, Professor of Medicine at Johns Hopkins, saw patients in consultation rooms adjacent to his living quarters in Baltimore. They came from all over the world, and he acquired both fame and fortune from this clinical enterprise. In 1903 his Hopkins salary was \$5000; his income from his book was \$5120; and his consultant practice earned \$37155. This was the financial peak of his career, estimated in 1972 to be the equivalent of \$266459 in total income.<sup>1</sup> Physicians at the time who were not so famous, yet deemed competent by the AMA, were told to be far more constrained<sup>2</sup>: \$5 for a complete examination and advice; \$1 per mile for a day visit in the country; and \$1 for advice or prescription by telephone. Consultants could double these fees, and all physicians were expected to bill only patients who could pay.

The era of modern medicine began at the turn of the century with rapid developments in differentiating diagnostic possibilities. Opportunities for wealth, sometimes justified, existed for consultant physicians viewed as experts in the new technologies. Yet, abuses occurred. Patients were routed to the 'right' specialist, and fees were split. Finally, in 1960, the AMA laid down new ethical principles of consultation that defined the separate responsibilities of attending and consulting physicians. Up to then, the role of the consultant had had both positive and negative connotations.

The general medicine consultation service at MCV began in 1977. Prior to that time, internists who had privileges at MCV Hospital had responded individually to personal requests from attending surgeons to see their private patients. Resident-to-resident communication about indigent patients was largely informal, uncharted and 'curbside' in nature. In 1977 resident supervision for inpatient consults was provided for the first time by general medicine faculty who were attending in the emergency room for the month. These included the author, Mark Clark, Tom Lewis, Hubert Haywood, and Michael Pears. Consult medicine was just beginning nationwide, as was the organizational development of general internal medicine. Prototypic consult programs were started about that time at UC-Davis, Grady Memorial Hospital and Penn State's Hershey Medical Center, yet half of the 36 consult services

existing in 1977 at university teaching hospitals appeared to have little or no educational value.<sup>3</sup>

In 1980 medical consultation at MCV became a formal teaching service with assigned residents and general medicine attendings. The curriculum consisted of reprints on file in the divisional office. Residents provided first contact, usually accompanied by a medical student, and took the attending to see the patient during the day. Patients were seen in many locations: West Hospital (private, primarily white patients); St. Phillips "East" Hospital (indigent, primarily black patients); North Hospital (psychiatry); South Hospital across Broad Street (rehab medicine); and the Eye and Ear Hospital next to the Skull and Bones Restaurant. All were connected by a dimly lit tunnel system, parts of which were rumored to date back to the Civil War. New students and housestaff got lost in them, or so they said when they were late for rounds.

In the early years of the consult service, only a few ICU beds existed at MCV. Patients seen had a high level of acuity, and they were rarely transferred to medicine because of the limited bed availability, physical separation of the hospitals, and racial segregation of patients. Consult patients were followed until stable but generally not to full resolution of their medical problems. Follow-up appointments were offered in the new primary care clinic for indigent patients and, after 1982, for both indigent and insured patients in the same AD Williams Building location. In the beginning, resident communication with the consult attending was not strictly enforced by the department of medicine. The young faculty had little time for the service, and resident autonomy was an expected feature of all MCV training programs. Slowly this changed as beepers increased everyone's availability; bridges overcame the hazards of the tunnel system; documentation of direct participation of the attending in patient care was required for billing purposes; and publications showed a convincing relationship between faculty effort and resident satisfaction on general medicine consult services.<sup>3,4</sup>

Knowledge and skill in the science of risk assessment, especially for pre-operative patients, substantially raised the stature of consultation medicine across the country. Several general medicine faculty at MCV were prominent in this and other aspects of the new discipline of medical decision-making. Requests for consults increased, as did teaching conferences and research in the risk/benefit analysis of medical management of surgical patients.

Nationally, numerous observations expanded the clinical and educational reach of consultation medicine:

1. Pre-operative testing could be limited once patients were determined to be in good health.<sup>5</sup> In the mid-1980's the consult service saw patients with no active medical problems largely to perform a comprehensive history and physical examination.
2. Cardiac risk could be assessed in patients undergoing non-cardiac surgery using a multi-factorial index that required no specialty training in cardiology.<sup>6</sup> General internists "cleared" patients for elective surgery who had good exercise tolerance, even with a history of coronary artery surgery or congestive heart failure.
3. Surgical risks could be reduced in chronically ill or elderly patients by improving fluid balance, electrolyte levels and nutritional status. Small deficiencies made a difference<sup>7</sup>, and the consult service was called to help improve surgical outcomes beyond the immediate post-operative period.
4. Guidelines emerged for pre-operative management of common medical problems such as chronic lung disease<sup>8</sup>, hypertension<sup>9</sup>, congestive heart failure<sup>10</sup>, and diabetes<sup>11</sup>. These guidelines were viewed as both systematic and patient-specific, and since common problems tended to co-exist, the surgical services tended to call general medicine first.

Other difficult questions such as the prevention of thromboembolic disease and evaluating mildly anemic patients for pre-operative transfusion were referred to the consult service because the answers seemed to depend on medical assessment of the individual patient rather than on the well-accepted protocols that exist today.

By 1985 the medical management of the surgical patient had a large national audience. The American College of Surgeons had published its guide for pre-operative and post-operative care, and there were good books on the subject by general internists.<sup>11-17</sup> Research on teaching hospital clinical practice had identified the controlling ingredients of an effective consultation, such as: limiting the number and scope of recommendations<sup>18</sup> speaking directly and respectfully with the referring service<sup>19</sup>; and

providing timely initial and follow-up visits<sup>20</sup>. Of particular importance to general medicine consultations was realization of the need to specify the central or crucial recommendation in complex patients.<sup>21,22</sup> A structure for inpatient consultations evolved, sometimes stated as "commandments", and pre-printed forms were created to direct the reader to the perceived reason for the consult, the initial assessment, and the most important recommendations. The evidence, consisting of history, physical exam and test results, was presented last so that the emphasis remained on consultant opinions rather than on primary data. Internists were urged to yield to uncharacteristic brevity and plain words and to leave no room for misinterpretation.<sup>23-26</sup>

Now early in the first decade of 2000 pressures created by reduction in bed capacity and length of stay, plus renewed recognition of the unique, coordinating role of general internal medicine, are widening the consult service. In 2002 the service has had 2 to 3 times as many consult requests per month as in 1991. Faculty and resident work hours have increased. The surgical services compete for beds and OR time based on clinical productivity, yet transferring a frail, post-operative patient from surgery to medicine no longer has the same *quid pro quo* feasibility as it did a decade ago. Many patients followed by the consult service are chronically ill and needy.

The concept of 'interface' medicine that was at the heart of medical consultation years ago now has survival implications for the institution. Consults must not only be timely, but decisions have to be implemented quickly, regardless of the severity of illness. Attending documentation must clearly reflect the closeness of resident supervision mandated even when complexity is low, and treatment must strive to be evidence-based. Past experience, while valuable, is not enough to formulate opinions in our academic environment. Finally, in a collective enterprise far beyond the fee-splitting barriers of 40 years ago, the distinction between attending physician and consulting physician is blurred by the need for teamwork and good patient care. Any physician with meaningful influence over the decisions that affect a patient, as determined by peer review, is simply a treating physician with direct credentialing and medico-legal responsibilities. Failure to diagnose and address a serious medical problem, even if not the purpose of a consult may be judged to be negligent. Furthermore, outcomes are reviewed at far more levels than they were in the past, and data banks have the capability to monitor

consultation responsiveness. As the following chapters amply demonstrate, expectations are high, and contemporary standards that inspire the consulting general internist are indeed broad and challenging.

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