

The Private Practice of Infectious Diseases -- A Current Assessment

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The organizational history of infectious diseases in American medicine traces its formal roots to a small resort near Gainesville, Virginia. Airlie was the early meeting site of the seminal academic group from which sprang the Infectious Diseases Society of America (IDSA). As the membership grew, questions arose concerning the society's direction and composition. Currently, the majority of IDSA membership is engaged in the *private* practice of infectious diseases. Who are we? What elements of private practice comprise established areas of expertise? What elements are more recent additions to the legitimate repertoire of the infectious diseases specialist? What lies ahead for our rapidly expanding subspecialty?

The core of any specialty practice is hospital consultation. In an era of procedures, the infectious diseases physician stands alone in providing more traditional consultative services. The keys to success have always been prompt availability, realistic patient care recommendations, and communication with the referring physician. The advent of diagnostic-related groups (DRGs) and fixed payment care ensures that the severity of illness index of hospitalized patients is increasing. The final common pathway for many complex illnesses is nosocomial infection. Furthermore, aggressive use of toxic anti-neoplastic regimens and the expanded use of allograft organ transplantation results in recipient immunosuppression with heightened risk for opportunistic infection. Thus, the patient base requiring our expertise is expanding rather than contracting. The management of high-risk patients lends itself to a multidisciplinary approach

that includes the hematologist/oncologist, the pulmonologist, the nephrologist, the surgeon, and the infectious diseases physician. Therapeutic algorithms for these patients require active participation by our specialty. Furthermore, the next decade will herald an era of immunomodulators for use in clinical medicine. Already, recombinant interferon alpha is accepted as therapy for venereal warts.¹ Clinical trials using human erythropoietin in HIV-infected patients to reverse ALU-induced myelosuppression, and the exciting prospect of colony-stimulating factor in the granulocytopenic patient population are other examples that further underscore the focal role to be played by the infectious diseases physician in private practice.

Infection control and hospital epidemiology is no longer in its infancy and the science which comprises these hospital-based activities demands scientific rigor and political acumen. In the private hospital, it is appropriate for the infectious diseases physician to enter into a salaried contractual arrangement with his/her hospital, which formalizes the expectations of both parties and allows periodic review. Hospital administrators must be made aware of the depth and breadth of service provided to the hospital. Mere chairmanship of an infection control committee does not begin to define the contribution provided by the private practice physician. The establishment of a hospital epidemiologist position ensures that the medical staff and hospital employees perceive the mandate empowered by medical staff bylaws and the Joint Commission on Accreditation of Healthcare Organizations. This position allows the physician to interact horizontally and vertically within the hospital superstructure since the hospital epidemiologist may step in at any level to examine and resolve an issue. The hospital epidemiologist may be viewed as an interloper by various segments of the hospital or medical staff. This is inevitable. A delicate balance must be struck between the for-

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mulation of sound directives for improved patient care and the political risk to the infectious diseases physician who also functions as a private consultant. Clearly, these situations create an opportunity for conflict of interest to arise. The ethical resolution of these problems are an unexplored aspect of our growing science. The hospital epidemiologist is no longer an ombudsman for monthly infection rate reporting. This retrospective approach to data compilation lacks the dynamic opportunity for real intervention. Novel methods for displaying or evaluating nosocomial infection data are emerging. Furthermore, the landmark Study on the Efficacy of Nosocomial Infection Control (SENIC) has been discussed at length. Although no single study is definitive, the SENIC data suggested avenues for improvement in infection control activities in the modern hospital. Active participation on other hospital committees has become routine. For instance, the pharmacy and therapeutics committee offers an opportunity for budgetary savings while furthering the intelligent prescribing of antimicrobial agents. Usually, antibiotics comprise the largest hospital formulary budget component. Creative application of formulary review, substitution of equivalent/less expensive agents, or more restrictive formulary guidelines are widespread. Furthermore, quality assurance activities in hospitals are modeled after techniques developed in hospital epidemiology. Data evaluation based upon rates, incidence, and prevalence are statistical tools utilized by hospital epidemiologists on a daily basis. The development of sound hospital policy has other cost implications. The issues of HIV and waste management create a unique opportunity to display the talents of the hospital epidemiologist as a rational voice in a sea of emotionalism. The time has passed when the infectious diseases specialist can perform these vital functions gratuitously.

The outpatient component of infectious diseases practice has become complex and infinitely more challenging. Historically, sexually transmitted diseases and ambulatory febrile individuals comprised a significant proportion of office visits. The steady stream of HIV-infected individuals has transformed a heretofore "stress-free" component of practice into a high wire act of patient management. Many infectious diseases physicians have become primary care providers for these patients. Drug-induced myelosuppression, as well as the need for constant surveillance for early signs of opportunistic infection, requires vigilance and compassion. The physician is catapulted into an existential realm of chronic uncertainty. As the natural history of HIV disease unfolds, each practitioner learns similar lessons, makes similar mistakes, and experiences real potential for occupational burnout. Nowhere in formal training has the infectious diseases specialist been prepared for the onslaught of responsibility in dealing with this national epidemic. The office-based management of these patients has as its primary goal the desire to keep these patients ambulatory, at home with maximal quality of life and minimal hospitalization.

Yet another "new" diagnosis has blossomed in the frequency of office visits. Obviously, reference is made to the constellation of signs and symptoms referred to as chronic fatigue syndrome/chronic Epstein-Barr virus syndrome.

Although it is clear to most practicing physicians that many patients have functional complaints, it is equally clear that a subgroup of this population has a disorder that, as yet, defies definitive explanation. These persons require an enormous commitment of time and support in the outpatient setting. The level of office management is hardly encompassed by the actual numbers of patient visits since telephone communication with them between visits is the norm. Inevitably, these patients find their way from primary care providers to the infectious diseases specialist. The role of the specialist encompasses careful evaluation to exclude undiagnosed disorders, as well as emotional support, and helping patients to learn skills to cope with chronic illness.

The role of the office-based laboratory is an exciting area for exploration by private practice physicians. It is justified for the infectious diseases physician to be able to provide prompt hematologic and metabolic test results for optimal patient management. Furthermore, the explosion of diagnostic kits and rapid culture techniques provides an opportunity for the physician to obtain vital diagnostic information within hours. An office-based laboratory can provide a positive revenue center for the practice while requiring a substantial capital investment. Clearly, not all infectious diseases practices warrant this level of office complexity. Those practices whose patient volume will support these endeavors will benefit as more sophisticated, rapid diagnostic tests become available.

An issue that dovetails with the concept of an office laboratory is participation in clinical trials. It is legitimate for an infectious disease specialist to conduct or participate in research activities. Practitioners whose laboratories are properly accredited are in a solid position to conduct clinical trials while monitoring the patients at the same location. The explosion of antibacterials, antivirals, antifungals, and immunomodulators, allows the private practitioner to participate in product development. Frequently, the volume of patients in private practice greatly exceeds the volume seen by a nearby academic center. The manufacturers of new agents are seeking investigators who can provide the appropriate number of study subjects in the shortest time span. Appropriately, many clinical trials have been criticized for a methodology that suffers from small cohort studies ensuring significant type II error in data analyses. The infectious diseases literature is replete with examples of poor study design emanating from academic centers and private sector alike. The IDSA might well consider a more formal protocol review process in the future. In the absence of IDSA standards, it makes sense for industry to pursue private practitioners who are able to function in an environment of decreased "red tape."

The economics of private practice demand an assessment of financial yield for time spent. The private practice of infectious diseases is not a procedureless endeavor. Outpatient parenteral therapy is both an innovation and a procedure.^{3,4} The intensified pressure to provide more complex levels of patient care in the outpatient setting has led to the acceptance of this modality. Intravenous antibiotics, intravenous fluids, intravenous nutrition, as well as other therapies (eg, chemotherapy, blood products)

require the direct management of a specialist. The infectious diseases specialist is in a unique position to manage these patients as a provider or owner of such a venture. Continuity of patient care suggests that hospital-initiated therapy is best managed by the same physician once the patient leaves the hospital. The financial incentive to the physician to participate in outpatient parenteral therapeutics should not be viewed as a conflict of interest. Rather, in an era of the legitimate use of revenue-generating procedures in medicine, the infectious disease specialist should play a central role in the management of patients requiring outpatient parenteral antimicrobial agents.

There are axioms of private practice. Total commitment to patient care is one. Time is money is another. Effective office management is a juggling act is a third example. There are others. Inherent in these thoughts is the realization that the private physician is no different than the academician in many regards. We have a commitment to our community. That commitment suggests the devotion of time to endeavors that are not compensable. Lectures given to civic organizations are a standard activity in private practice, which is both a duty and a privilege. The duty is to provide meaningful information in a timely fashion to the community served. The privilege is the acknowledgement of the respect, acceptance, and financial rewards that accrue to the physician in society. We must not shirk the responsibility of community leadership while focusing narrowly on the "efficiency" of our practice of medicine.

Ostensibly, the death knell for the infectious diseases specialist in private practice was sounded several years ago.⁵ I can assure the readership that neither I nor my partners spend any significant portion of our day culturing one another. The arguments proffered to buttress the notion of nonviability of private practice are suspect. Central to this position was the concept that private practitioners obviate the clinical cases that formerly were transferred to university hospitals. The logic that training

programs will be hindered by decreased referrals misses a fundamental construct of consultative medicine. Patients are consumers. What they seek is quality health care provided by physicians in their immediate surroundings. The infectious disease specialist functions most often as a consultant. As a consultant, it would be imprudent to presume that patients can in some way be funneled to academic centers for definitive management. There is neither the need nor the patient acceptance for this approach to become universally performed. Academic centers serve a solid function in providing the groundwork for investigation in bench research, clinical research, academic teaching, and preparing clinicians to practice in the private sector.

The changes in modern medicine have thrust our specialty to the forefront of involvement. The discovery of new pathogens such as *Legionella* species, the agents causing Lyme's disease and cat scratch disease, AIDS, as well as new therapies for parasitic infections among worldwide travelers, have placed the infectious diseases physician in an exciting position. The diversity available to the private practitioner is limitless. The demands in time and personal commitment are sizable. The rewards of autonomy from self-employment and the challenges of the business aspects of practice are distinct from the academic realm. The private practitioners of infectious diseases must continue to forge an alliance that will provide a forum for these and other issues to be heard.

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