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Editorial
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Returning to a Pre-Flexner Milieu: Clinician Non-Compliance with Treatment Protocols

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Editorial

"*Medical education is not just a program for building knowledge and skills in its recipients… it is also an experience which creates attitudes and expectations.*"

Abraham Flexner (1866-1959)

Abraham Flexner (1866-1959) was an American educator whose famous 1910 document, *Flexner Report*, changed the quality of medical student education for the better by recommending high, uniform standards in medical education [1-3]. His classic report helped to establish progressive principles of medical education that included the need to standardize medical training at a high level and produce doctors of exceptional training who would provide an effective level of standardized treatment to patients seeking their care.

"*A patient had a 50-50 chance of benefiting from visiting a physician as of 1910. Medicine was more voodoo than science until the 20th century.*"

Abraham Flexner (1866-1959)

One of the monumental movements of medicine in the 20th and now 21st century was the deliberate development of various expert committees (national and international) to review *au courant* research and professionally provide guidelines of treatment based on the best available medical evidence around the world [4,5]. Though these guidelines change from time to time as more scientific evidence emerges, it is important for clinicians to be educated in these guidelines and to follow them carefully to ensure the best outcomes or highest quality of health care for their patients [4,5].

Despite this forward-looking movement in provision of optimum health care, an analysis of how well some clinicians utilize these established guidelines is disturbing. A number of clinicians are not consistently implementing approved guidelines for a various reasons including actual ignorance of these guidelines' existence and/or effectiveness [5-10].

A practical, poignant, paradigm of this clinician non-compliance circumstance is the *au courant* management of pelvic inflammatory disease (PID) --a potentially devastating polymicrobial infection of the female upper genital tract [11]. PID is usually caused by sexual transmission of *Neisseria gonorrhoeae* and/or *Chlamydia trachomatis*, though a variety of microbes from the vagino-cervical endogenous flora can also be involved [11]. Sadly, there are approximately 1 million annual cases of PID in the United States with one-third occurring in adolescents who are at risk for PID complications such as fertility and chronic pelvic pain [11].

Experts recommend an early diagnosis of PID along with following the latest U.S. Centers for Disease Control and Prevention (CDC) sexually transmitted diseases guidelines---guidelines started in the 20th century and revised periodically [12-14]. How well are clinicians doing to reduce the acute symptoms as well as potentially chronic complications of this major sexually transmitted disease by following the expert guidelines of the CDC?

Unfortunately, studies conclude that many clinicians are not following these expert guidelines potentially increasing complications in these adolescent and adult PID patients [15-18]. This is emphatically epitomized in an excellent population-based report on management of PID in emergency departments in youths with PID from 2000 to 2009 based on observance of the then CDC recommended 2006 CDC guidelines; tragically, low clinician compliance was identified [15]. Unfortunately, this is an international clinician-based problem as well [18].

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Treatment guidelines for other conditions are also being ignored and these include protocols for managing eating disorders, depression, anxiety, attention-deficit/hyperactivity disorder, cardiovascular disorders, and others [5-8,19-23]. Assorted reasons are provided for limited management guideline implementation including iatric information overload, unconscious forgetfulness, ignorance of the existence of guidelines, town-gown influences, patient non-adherence whether involuntary or voluntary, complications of social barriers (i.e., poverty, immigration status), medication misperceptions, parent or patient illness, and refusal of patients to follow sanctioned standards [24-28].

For example, the familiarity of physicians with the American Academy of Pediatrics' guidelines for attention-deficit/hyperactivity disorder (ADHD) varies considerably by specialty, with 30% more pediatricians reporting familiarity than family physicians. Despite over 77% of primary care physicians being familiar with these guidelines and feeling their community's mental health resources were inadequate, only 25% report routinely adhering to all diagnostic components surveyed, likely somewhat influenced by limited insurance coverage for ADHD assessment and treatment [22].

Another expository example of clinician non-compliance with guidelines is seen with management of asthma. Many physicians are either over- or under prescribing asthma medications ignoring the need to assign a severity or control level; others are not fulfilling the asthma education and self-management skills [27,29]. Unfortunately, the problem is not limited to primary providers. In a large study at a tertiary asthma center, 82% of patients with persistent asthma were prescribed long term inhaled corticosteroids; however, there was significant variability in assigning phenotype---especially in preschool children [27,29]. There is also considerable variability in cystic fibrosis centers' outcomes and objective overview reveals substantial differences in treatment of acute pulmonary exacerbation and adherence to pulmonary guidelines [30].

Various strategies are recommended to improve limited guideline fulfillment including increased education about these protocols, the development as well as dissemination of tools to improve guideline use by clinicians, computer-generated reminders for clinicians, enhanced clinician-patient communication, increased oversight of physician practices, and, of course, more research into the prevalent phenomenon of potentially picayune protocol practice itself [31-35].

Additionally, there is a need for improved provider to provider health communication, emphasis on patient-centered care, cooperation as well as changing barriers, and resources including mental health integration into routine care [36-38].

However, what is exigently needed in the 21st century is that clinicians lucidly understand the privilege it is to care for human beings and that in this professional clinician-patient relationship, the patient deserves and demands the best evidence-based management for his/her illness. In the tradition of Abraham Flexner, how can we do less and why should we return to a pre-Flexner era? As debtors to our profession, we should do all we can for the maximum benefit of all our patients.

"*I hold every man a debtor to his profession.*"

Francis Bacon (1561-1626).

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