

GANDALF'S GANG

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Current Sectors of Healthcare Delivery

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Over the past 25 years the needs and demands of the American public and its expectations of healthcare professionals have changed. Healthcare professionals have always played a key role in the provision and acceptance of health services to the American public. Recently, there has been a marked increase in the number of health professionals, and new categories of healthcare providers have emerged in response to the changing needs of the American public and changes in the health system. This paper will address the changes in the health professions in general, discuss the shift in dentistry from disease to prevention and discuss how other subsets of the healthcare professionals have or have not made similar advances.

The staffing of healthcare “points of service”, including both hospitals and outpatient services, and the make-up of the health professions today have undergone significant changes primarily due to the interrelated forces of technological growth, increased specialization and changes in health insurance coverage/payment. Where once the hospital was seen as the central institution of the healthcare system, much of the care provided today has moved into other settings (outpatient clinics, group practices, home health).

Technological advances have been perceived as beneficial by the medical community and population at large, but have come with a hefty price. Technological advances and increased specialization have changed the hospital from a place of last resort to go to die, to one of learning, research, and a place to get well. As the demands of the public increased and hospitals became more efficacious in diagnostic and treatment regimes, healthcare became more costly.

These changes have revolutionized the roles of healthcare professionals within the delivery system. The American public has come to expect more from healthcare professionals. They expect professionals to be current on the latest techniques, knowledgeable about the patient’s condition and quick in providing appropriate solutions (cures). They expect to have ready access to the most modern equipment, and get immediate results. The American public “demands” and “expects” the best and they want it now. The media has also played a role in the changing expectations of the public. The move to a computer era in recent years has equipped the public with increased access to medical information. Armed with more knowledge about their medical condition, patients today are more curious to know the what, how and why of their disease and treatments, and they demand to be more involved in their medical decision making process instead of having a paternalistic physician doing what he/she thinks is best.

The link between technological innovation and the increased demands of the American public is tight. With improved technology and increased patient demands, more physicians have moved out of primary care (generalist) into specialized areas of care, and new health profession roles have emerged within the delivery system. Nurse practitioners and physician assistants have become the gatekeepers for entry level care, a change that was met with some skepticism (as was mentioned as part of some group members’ experience), but

was later welcomed as a partnership, thus freeing the physician to do things other than routine physical exams and patient education.

Home healthcare for the elderly is slowly developing into the next wide-reaching specialty. Geriatricians are of the utmost need in medicine and will become highly valued commodities in the near future as our population ages (the baby boomer cohort). As our prevention efforts of the last 40 years bear their fruits of success, the incipient aging population has much greater chances of morbidity. Our group raised key issues around this future that awaits all of us, namely who should direct the care? Who can be hired to provide the assistance? Do they have the required skill? Can it be a family member? How does quality play into the equation? How do we address concerns are that these individuals are often unscreened, untrained, and unmonitored? Will there be more abuse and neglect? Although we noted that several kinds of managed long-term care exist currently, this is still largely an open field, evolving and changing.

The public has viewed the health system as a resource at the time treatment is needed (band aid) and for years turned to physicians to be “cured”. Whereas in the past health promotion was viewed as “safe drinking water, adequate sanitary systems and control of infectious diseases,” we have seen a gradual appreciation for prevention of disease. Together the public and the health professions are embracing a proactive attitude with regard to prevention. One arena that has shown an excellent response exemplary of this progressive “prevention” attitude is dentistry. The public expects their dental team to prevent problems, not just cure them. There are far more visits to dental offices in the United States for preventive measures such as routine recall examinations, dental cleanings and preventive sealants than for visits to solve problems such as cavities or tooth aches.

The increasing trend toward prevention has led to major organizational changes in dentistry in the past several years. There has been marked increase in use of dental auxiliary personnel, i.e. dental hygienists and dental assistants. Today there are nearly as many active dental hygienists in the United States as active dentists and about twice as many dental assistants. The movement towards prevention has posed several benefits. Preventive measures, contrary to curative measures in general, can be supported with relatively low technology equipment; therefore auxiliary personnel who require less training to enter the field can perform them. Hygienists and assistants can now play a major role in dentistry without a four-year, \$150,000 dental school commitment. This is good for patients because dentistry is now much more cost effective. It is definitely good for dentists because, when auxiliary personnel are doing lower paid preventative work, the dentist’s time is free for doing higher paid curative work such as fillings and root canals.

Fluoridation efforts have undoubtedly been the greatest success in the history of public health dentistry, namely because fluoridation has played a major

role in reducing caries rates across the country. Several other important factors that have helped dentistry become prevention based:

1) Dental insurance usually covers 100% of routine preventative procedures, and then typically pays 50-80% on fillings after the patient meets a deductible. The emphasis on prevention ultimately saves the insurers (and employers who buy the insurance) money. The increased financial responsibility on the patient for fillings encourages them to take advantage of the free preventative procedures. In the end, it has really been the patients who have brought this about. In general, insurance plans provide coverage for what employers are willing to buy and employers buy what their employees (the insured) value.

2) Large corporations like Procter & Gamble (Crest toothpaste) and Gillette (Oral-B toothbrush) have relentlessly marketed their preventative products. The dental team does a good job instructing patients on proper brushing and flossing techniques, but the psychological sophistication of these high-tech marketing campaigns has had a profound influence in motivating patients to purchase and use preventative products. When patients spend 5-10 minutes per day doing preventive procedures (brushing and flossing) they develop a mindset of prevention.

3) Sometimes prevention is not the primary motivation of patients seeking dental treatment, but results as a fallout from other procedures, for example, orthodontics. Most parents of orthodontic patients don't think about the potential dental and jaw problems of a malocclusion, rather they concentrate on the more aesthetic and confidence-boosting results of straighter teeth. The result is an important preventative procedure. Another example is the routine dental cleaning. Many patients are motivated to have an annual cleaning to prevent halitosis. Although this is certainly reason enough to have a professional cleaning, another advantage is that annual cleanings help prevent periodontal disease, which is very important: today more adults loose their teeth due to periodontal disease than to tooth decay.

4) Prevention is economically profitable for a dental clinic. First, there is the payment for the preventative procedure itself. Second, the most profitable procedures in dentistry are typically the ones performed on healthy patients. A typical cavity takes about 30 minutes to fill and costs about \$100.00 (\$200.00 per hour). This is barely enough to cover the overhead expense of many clinics. Fillings, of course, are performed on dentally unhealthy patients with tooth decay. A crown placed for a patient with a cracked cusp takes about 90 minutes and costs \$600.00 (\$400.00 per hour) and six aesthetic porcelain veneers take about 240 minutes and cost about \$2500.00 (\$625.00 per hour). For reasons beyond the scope of this paper, crowns and veneers are usually done on healthy patients, not patients with tooth decay. If the supply of patients is sufficient, decay

means less money and dental health means more money (a lot more money!). That is good motivation for the dental team to utilize every preventative measure possible at every patient visit and to convince patients that prevention is the most important part of dentistry.

In fact, the specialty areas in dentistry are mainly preventive. Oral surgeons extract wisdom teeth before they cause infection. Orthodontists correct tooth alignment irregularities before they cause decay and temporomandibular joint dysfunction. This is a wonderful direction for the profession to take because most dental problems are preventable. In fact, tooth decay is 100% preventable.

There is growing evidence of a movement towards health prevention in other health profession as well. Since the 1980s, pharmacists, like dentistry, have expanded their roles to meet the complex and ever changing demands in healthcare. They have moved from the traditional role of preparing and filling prescriptions by having ancillary staff support these functions and they have begun providing drug education to the public and act as a resource to providers about specific drug interactions and substitutions. They now often select, monitor and evaluate drug regimens.

For the physicians and medical care staff, the focus on health prevention has proven to be one of the biggest challenges. One possible reason maybe the issue that the medical field still does not know the root cause of many diseases. The field has made advances in developing technologies to provide diagnostic and therapeutic modalities, but even though certain conditions, such as breast, colon and prostate cancers can be detected, the cause of the development of disease is still unknown. When a cause is proven (such as smoking and lung cancer), other forces such as stakeholders' financial influence and/or the addictive nature of the cause have become barriers to changing the behavior that would prevent disease.

In the future health prevention may be more mainstream. As discussed in a recent Newsweek article, Genomic research may provide a link to health prevention efforts. In what has been touted as the "era of personalized medicine," newborn babies would have their genomes etched in microchips. This information would allow doctors to tailor drugs, diets, and treatments to each person's particular genome, avoiding drug fatalities, zeroing in on disease prevention strategies and helping us all lead healthier lives. Personalized genomics will alert doctors to dozens of inherited risk factors for a wide range of diseases. For example, by the time symptoms of diabetes have appeared, for example, the pancreas has already suffered damage. Knowing at birth if a patient is predisposed to the disease would give doctors a chance to prevent its onset with therapies or medications.

Drug companies are also pouring billions into "pharmacogenomics" – an effort to take the guesswork out of prescribing drugs. Diets may also fall under the sway of genomics. "Nutrigenomics" researchers hope to do away with such blanket generalizations and instead target diets to specific people.

When one considers that the total enrollment in schools of public health has nearly doubled in the last 25 years, the task of disease prevention and health maintenance promises to force integration of these two domains. It is the consensus of this group that health promotion is the basis of the future of medicine; getting there is the task. Based on an informal poll of this group the reasons most were attracted to the health care profession were not so very different from those in 1960—steady income, interesting field, autonomy, tradition, altruism. Maintaining the larger picture—how we can more strongly influence the public mindset towards a proactive stance on prevention of disease (as exemplified by dentistry)—is critical. This is what must be addressed to retain good people in a field where many are discouraged after giving their consistent, best efforts to help those patients who seem to reject prevention in favor of treatment of disease.