

You and your family doctor: Yesterday, today and tomorrow

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Times are changing and the world is evolving. The medical profession, like every other profession, has undergone major changes from the past due to technological innovations, economic constraints, insurance regulations and legal requirements. We can debate if these changes are an improvement or not. The reality is that we need, as patients, to adjust to these changes and provide our input towards modifying them for establishing better ones in the future.

In this respect, the Patient Family Advisory Council (PFAC) is a valuable tool for achieving this goal. Many hospitals and medical organizations have sponsored PFACs to promote feedback from their patients and to improve their satisfaction. CapitalCare, now part of Community Care Physicians, P.C., has been a forerunner and has successfully operated a PFAC at Internal Medicine Balltown Road (IMBR) for at least six years. Many good results have already been achieved. However, a longer term approach requires understanding the evolution of the family practice and its patients' community.

Armed with this knowledge, local PFACs can render their suggestions more effective as they will incorporate historical experience and will complement foreseen medical trends. To stimulate more thoughts on this topic, I present below my perspective of the relationship with my family doctor in the course of time, and I also venture into a forecast of what it will be in the future. This is by no means a comprehensive discussion, but a call for attention to this topic to ensure that patients have a voice on their future health instead of being totally at the mercy of powerful external factors.

Yesterday

If you are of my generation, which means already retired for quite a while, you probably remember what it was like to go to your family doctor (GP) for an office visit fifty years ago.

Everything was downright basic. Although my GP was a renowned doctor in Schenectady, who also held a national office at the American Medical Association, he exercised medicine in a small, old house on upper Union Street. It consisted of a waiting room, the examination office, and a backroom that also served as a testing laboratory.

I used to see the GP when I had a problem, such as a sore throat or bronchitis. In those days, who would think of going to the doctor for a yearly physical or for a regular follow-up, if you were young and healthy? When I was sick, I picked up the phone and would get an appointment for the following day. At the arrival, I would find, already, many patients in the waiting room as the doctor would call in the patients in the order of arrival. The receptionist,

sometimes his wife, had a small desk in the waiting room and would collect the office visit fee in cash, typically \$12.

Then each patient would wait his turn, but even with a full waiting room, I seldom had to wait more than half an hour. During a brief visit, the doctor listened to my problem, performed the medical exam and handed me a prescription with words of reassurance and instructions on the course of the ailment. If necessary, he would also perform basic laboratory tests in the backroom and only rarely would refer me for X-rays, ultrasounds, or more complicated tests. Fifty years ago CTs and MRIs were under development and Complete Blood Panel analysis was not routinely available.

I did not have to think twice before going to the doctor. The whole process was so simple and efficient: fast phone call, immediate appointment, short waiting, accurate diagnosis, encouragement and prescription. I was in and out in half an hour most of the times. And I was getting this whole service for only \$12 in cash! No forms to fill, no authorizations, no paperwork! These were the good old days that I remember so fondly, also perhaps because I was younger at that time.

Today

Today, like yesterday and probably tomorrow, the competence and care of the family doctor defines more than any other factor the quality of a medical practice. The patient needs to have full confidence in his family doctor. If this happens, the patient may overlook the undesirable aspects of the modern health system, regarding them as a necessary evil to get and stay well.

One of such items is the long waiting time on the phone to request an appointment. This is an irritant that in many occasions delays patients from seeking medical care. Out of necessity, patients put up with this problem, which is still present in many medical practices. Fortunately, at CapitalCare Internal Medicine Balltown Road this is no longer so, because management acted quickly on a suggestion of the local PFAC. This example shows that (1) many problems are not intrinsic and (2) they can be eliminated with good will. Normally, problems originate because the simple procedures of the past are set aside to economize on staff or to comply with bureaucratic regulations. There is a belief that a sick person would accept many inconveniences for the sake of seeing his doctor as soon as possible. Is there any thought of the productivity loss of a patient being put "on hold" over the phone and therefore preventing him from doing his work?

In today's colloquial jargon, it is still customary for a patient to refer to an office visit as "going to see the doctor." However the reality may be different. First of all, instead of a doctor, the patient may see a physician's assistant or a nurse practitioner. There is nothing wrong with this practice as minor illnesses are easily cared by a health practitioner with lower formal credentials than a doctor. Actually, many times, this is advantageous for the patient as this practitioner may spend more time on a visit due to a lower burden than the family doctor. This change from the past is part of a search for a more efficient health care delivery system. The

goal is to match the medical requirements of a procedure or an office visit to the skill level of the health practitioner performing the tasks. Hence, in a typical office visit today, the patient may be ushered through a series of encounters with various staff persons of progressively higher competence and training, starting with collection of the vital signs and patient's symptoms and ending with the doctor's exam, diagnosis and treatment's prescription.

Economically, these procedures make sense, because why should a doctor waste his precious time and extensive formal education on routine activities that are within the realm of his staff. In reality there is a price to pay for this method, but it is not recognized as a health cost, because the patient endures it. In other words, as the adage says, "there is never a free lunch." The price is the patient's time, because the visit takes longer as there are multiple logistical and operational conditions to satisfy. An examination room has to become available and ready for a new patient. A nurse has to find time to welcome the patient and take his vitals. The examination room has to be tagged as ready for the doctor's encounter with the patient. Moreover, as the doctor moves from one examination room to another, the patient is waiting, sometimes only partially dressed in an examination robe, for his turn. If you add all of these waiting times and occasionally the final wait at check-out, one can estimate the cost to society of this decrease of patient's productivity. Furthermore, the uncertainty about the visit duration adds another cost, because the patient has to include a margin on his availability for a following activity. Compare this situation with the past to get an idea of today's office visit complications.

You cannot help noticing that during your doctor's examination there is a third presence in the room. It is not a person, but the doctor's laptop, which shares with you the attention and the eyes of the doctor. While you tell the doctor your reason for the visit, he duly records on the laptop its key points, recalls past history, inserts the diagnosis, makes notes of tests and prescriptions to order, and ensures that insurance authorizations are requested promptly. No wonder that the doctor cannot look at you as you would like. He is not superman and struggles to do everything in five or ten minutes, which is the time allotted by his schedule. This is the "brave, new world" of current information technology, economic efficiency, results-oriented medicine, and so on.

Technology has provided the brightest medical progress in the last fifty years. It impacts every single aspect of medicine and its supporting fields. Today every annual physical exam includes a comprehensive blood analysis. If the doctor is uncertain about a diagnosis he can order a whole array of imaging tests to verify his prognosis or to search for a solution. New medications can cure more diseases than in the past. Bionic materials are available for prosthetic replacement of vital organs and bones. Software can analyze large amounts of patient data and extract useful treatment information. Communications and record keeping are easier with patient portals, like Allscripts FollowMyHealth, which is used by CCP.

Patients are now accustomed to the benefits of technology and demand the latest versions of CATSCAN and MRI imagers with the maximum resolution and/or the most comfortable testing procedure, like "Open MRI." Moreover, both doctors and patients demand a prompt

scheduling of the tests for obvious medical reasons. To satisfy these requirements, enough machines and specialized operators need to be available in a community to satisfy even peak demand periods. Unfortunately, these benefits go hand-in-hand with mounting medical costs. An important factor is that the operational lifetime of these machines is much shorter than their functional duration, because, when it comes to a person's health, a quality compromise is not acceptable. If a newer imager provides a higher resolution than an older one, it might spot a tumor earlier and save a life with a prompter intervention. Therefore, imaging centers always need to upgrade their equipment with the latest models and are compelled to pass along these costs to the users, who are the patients and their health insurers.

Technology does not always provide advantages because there are drawbacks. Consider for instance the wide range of innovations introduced recently in medicine. Although in itself this is overall an advantage, it compels a family doctor to be familiar with each one for making a proper treatment choice. Hence the doctor needs to devote additional time for updating his knowledge besides visiting patients. Today's patients are more knowledgeable than in the past and also more assertive in their treatment decisions. They usually have already researched the internet before seeing the doctor. Therefore, the doctor must be prepared to justify his decisions with valid arguments. Although this is more demanding on the doctor's time, the presence of well-informed patients is a positive development, because a shared decision on a treatment usually leads to a faithful compliance by the patient and hence better results.

Another burden imposed on the doctor and his staff originated from the rapid progress of information technology. Before the era of low-cost computing power and massive data communications, it was not feasible for insurance companies, HMOs and government to mandate extensive record keeping, treatment authorization and results-oriented health care. Although these activities are beyond the medical scope, they need to be scrupulously performed by the doctor and the office staff for them to get paid by the patient's insurance and be shielded from legal challenges of various government agencies.

On account of this description of today's practices, one could wonder how is it that we survived in good health with the simple and cheap ways of the past. How much better off are we now with our family doctors spending as much time on the computers as with the patients?

Tomorrow

Let us turn the page and focus our attention on the medical family practice of tomorrow. Forecasting the future has always been difficult and now this is more than ever because of the rapid pace of technological progress. One might be surprised by this statement, because a family doctor deals with patients who will hopefully be the same in the foreseeable future and present similar illnesses. Although this is true, a family doctor is also the primary advisor of patients besides being their first resource for healing. Hence the GP must be thoroughly knowledgeable of the medical innovations that are and will be available through the medical specialists. He has to advise the patient and decide on the most appropriate path for restoring

his health. He has to evaluate the effectiveness of novel techniques and drugs for treating the current health problem of the patient. He has to reach a consensus with the patient on the treatment plan by presenting the merits of the proposed treatment while taking into account the patient's concerns. These requirements will impose a higher and higher burden on the family doctor as he will need to devote more and more time to stay on top of novel medical tools and drugs even when they are used by specialists.

Where will a GP find the time to deal with these enhanced updates while visiting patients and also complying with more demanding insurance and government regulations? The most likely solution to this dilemma will be a layering of the healthcare delivery by matching medical knowledge and training requirements to the patient's health problems. A trend in this direction is already underway. Seeing the doctor during an office visit will be a rarer event as more and more competent nurse practitioners and physician assistants will replace the doctors for routine health problems.

Already computers have made their debut in the examination room in the form of a laptop for recalling the patient's medical history and recording the examination results. This is just the beginning because of the rapid progress of artificial intelligence (AI) and related software. For instance, IBM is testing its Watson AI system in the medical field to aid doctors in providing a correct diagnosis and appropriate treatment. IBM may have a lead, but other major companies, like Google, are also on the same path. Indeed the human mind cannot keep up with the ever-growing medical literature in contrast with the lesser amount consulted by a doctor in the past. Since the patient's medical history is already available in digital format in a modern family practice, the AI tools can easily merge this information with their own knowledge base without infringing on the patient's privacy. Moreover, to increase the probability of reaching the correct diagnosis, the AI assistant can suggest specialized medical exams working in unison with the doctor at every step. The final responsibility for the patient's care will still remain in the hands of the doctor, but the AI assistant will be another tool available to the doctor for healing the patient.

Despite the big advance in communications, the adoption of the most innovative tools has lagged considerably in the medical practices. There are many reasons for this situation. First of all, there is a large percentage of patients, especially older ones, who are accustomed to pick up the phone for interfacing with the doctor's office. Second, there is the privacy regulation, which requires a secure communication for interactively exchanging patient's health information. This problem has been addressed with the introduction of secure portals, such as FollowMyHealth, which provides a local secure network for interfacing with the doctor's office, keeping track of the patient's health data, and even billing. However, a third and compelling reason for underutilizing the new communication tools in the medical field is that a patient has to go in person to the doctor's office and be examined there in order for the doctor to be paid by the insurance. This is not efficient and is a carryover of the past. Many times the patient needs only to communicate his concern to the doctor and receive the appropriate medical

advice. Going to the office only for this reason is a waste of patient and doctor time without a better health outcome. Hopefully, this problem will be eliminated in the future with a revision of the methods of payment for health service.

Another fast-growing trend is the use of wearable and implanted devices for around the clock monitoring, treating or both. A forerunner has been the pace maker, which has prevented cardiac arrest in many patients. With the present miniaturization of electronic devices and higher energy storage of modern batteries, newer implanted devices will be smaller and last longer, improving acceptance of these devices by the patient. Pain control with electronic nerve stimulation is also the subject of many investigations and trials using small implanted devices. In addition, simple wearable devices can provide measurements of blood pressure, oxygen concentration, pulse count and other vital signs. With embedded wireless capability many devices can communicate with the patient's smart phone and transfer data to a clinic or medical office through an internet connection. Therefore, the patient can be constantly monitored even while he performs his usual activities. If there is a sudden emergency, his doctor will be automatically alerted and be ready to respond. Wearable devices are not limited to electronics and include time-release drug delivery systems. Among them is very prominent the medical skin patch used for applications ranging from pain suppression to smoking cessation.

While these devices offer great help to the doctor they also present unique challenges. Consider for instance how a medical practice must get ready to receive medical alerts from its patients. Will it be ready to respond promptly or transfer the alert to a neighboring hospital? Whose responsibility will it be if the communication link is temporarily out of order? Fortunately, the introduction of this type of devices will be staggered over a sufficiently long period that such problems can be properly addressed and resolved.

On purpose I have omitted to define the time period of the above discussion using the vague term "future." Since I mostly extrapolated ongoing trends, I assumed that breakthrough developments will not occur during this period. Hence it is safe to believe that the above scenario applies to the next 20 to 30 years. In the case of breakthrough medical or technological innovations what today we consider science fiction may become reality in no time. Are we prepared for such a case? No, but human ability to adjust is phenomenal as it was demonstrated with many modern breakthroughs, such as electricity, wireless communications, antibiotics, genomics and computers.

Conclusion

We have traced the key elements of the current transformation of the medical family practice. The simple ways of yesterday are being replaced by new methods of delivering primary care to patients. Moreover, the future might be even more challenging in comparison to traditional ways. This transformation is driven by technological progress, society changes, economic factors and legislative mandates. The patients, who are the customers, are at the receiving end

of this transformation. They are asked to adjust to the new system that originated without their input.

Fortunately, at CapitalCare Internal Medicine Balltown Road, patients can make their voice heard through the Patients Family Advisory Council (PFAC) to smooth the sharp edges of this transformation. In just a few years this council has identified various areas of improvement and helped management with their implementation. For instance, the holding time for patient phone calls and appointment requests have been drastically reduced. A clinic has been set up for daily office visit without appointment. The new FollowMyHealth portal has been made more user-friendly with feedback by PFAC members. These are just few examples of the PFAC contribution to the evolution of the local family practice at CCP. This bodes well for the future, because the participation of patients to build the structure of the modern family practice will ensure its ability to fulfill its mission, which is to be a primary resource for patients' health and a focal point for their medical needs.