

Continuity of Care. Still Crucial or a Useless Nostalgia?

Continuidad en la atención ¿todavía crucial o una nostalgia inútil?

*It is by talking nonsense that one gets to the truth.
I talk nonsense, therefore, I am human.*

FYODOR DOSTOYEVSKY (*Crime and punishment*)

INTRODUCTION

Let's raise two occasional and conflicting medical encounters, which could occur under different circumstances in the current health care system.

A patient asks for a consultation with a doctor he does not know because he is worried and cannot locate his general practitioner. He reports that he is restless, that at times he feels a "anxiety" (he emphasizes that word) in the middle of the chest. He undergoes an electrocardiogram, which is normal, and he is prescribed anxiolytics.

As he continues with his symptoms despite the anxiolytics, he consults his general practitioner, who has known him for years and understands that he is a balanced patient, who has never complained of anxiety or other psychic symptoms. For this reason "he did not buy" (in quotes) the diagnosis of anxiety offered by the patient (as had the first doctor who did not know him). The general practitioner interviews him again in more detail. On this occasion, the patient indicates that the symptom appeared during the exertion made while walking and was relieved when he rested for a few minutes. During his report he touched the middle of his chest with his open hand saying that if he kept walking, the distress would spread to his neck and to the inside of his left arm. In short, a typical angina of recent onset, with a coronary arteriography that showed multiple injuries of the three coronary vessels.

Conversely, in a consultation with an occasional doctor, a patient who had recently turned 55 and was in good health, said that he woke up at night with a sense of imminent death and referred specific pains in different parts of the body. In view of a normal electrocardiogram, the doctor asked for a cardiac Doppler echocardiogram, a Doppler ultrasound of neck vessels and an exercise stress test with myocardial perfusion scan (SPECT). With all these studies that yielded normal results, the patient then consulted his general practitioner. The patient had already mentioned several times the panic he felt by turning 55, because his father, a healthy man, had died of sudden death on the day he reached that age, and he believed that he was not going to live longer than his father.

In these situations, the fact that a patient has an interpersonal continuity with his regular doc-

tor (whether a general practitioner, a family doctor, a specialist or even a psychiatrist or another therapist) makes an important difference in the interpretation of the aforementioned complaints. Because over time, the professional develops some essential skills to generate, first, enough confidence for the patient to tell him about his life, and then a certain degree of empathy, which is often mutual. These elements are fundamental to achieve a multidimensional diagnosis, which includes the personal, family and common interests' context, in increasingly elderly patients, with multiple associated complex diseases.

Freeman et al. describe it approximately in these terms (1): "Interpersonal continuity built through repeated (but not necessarily exclusive) contacts is important to build trust and respect. We like it when we use the services of craftsmen, go to the hairdresser or send our car to the known mechanical workshop. Patients also like this when they turn to the health care system. The opportunity to leave a pending consultations and perhaps return later, if necessary, is highly valued by patients and means that it is often possible to wait for ill-defined problems to develop and resolve. If additional evaluations were necessary, they would be more efficient if the dialogue with the same doctor were resumed."

For family doctors, continuity of care is crucial. In an article (2), the primary care specialist Moira Stewart states: "The day-to-day tasks of family medicine are carried out through the interaction of the patient and the doctor during the visit, the "essential unit of medical practice"... The results emphasize the crucial importance of shared experiences (that is, "we've been through a lot together") to achieve a positive attitude regarding personal continuity in medical care."

But of course, not everything in medicine is easy, simple and linear, because there are myriad ways of presenting a huge number of human ailments that resist the mastery of doctors. "With an established therapeutic alliance, patients tend to share their concerns openly. The doctor knows how to read the familiar patient: Is he someone in whom every concern needs to be carefully considered, or is that patient's terrifying history routine an actual appeal to reassurance?" (3). In the continuity of care there is the risk of a certain monotony and of the trust given by the fact of knowing the patient, and as is acknowledged by the author in this same opinion article, it is always "an effort to remain vigilant with patients who have been seen for decades".

If the continuity of care really matters, it is the profession itself that must decide it, and if so, doctors must take the leadership and impose it both in university programs as in medical residency practices.

As already mentioned (4), one of the requirements is to ensure that patients understand that doctors can take better care of patients they know. And this is especially important in the case of patients with fewer resources, who usually receive the greatest burden of disease.

But do we have scientific evidence that continuity of care produces positive results in patients?

There are some evidences that quality of care improves with the continuity of care. For example, it has been pointed out that continuity of care is associated with greater patient satisfaction (5), and it has also been linked with health promotion (6) and an increase in medication adherence. (7)

For example, in a Canadian province it was observed that elderly patients with longitudinal mid-level continuity of care had 27% more visits to the emergency department than those with high-level continuity of care, a difference that was statistically significant. (8)

Given these benefits, the question that arises next is: Do these effects extend to harder and more important markers, such as the reduction of hospital admissions and even to overall and specific mortality? That is our next step.

ASSOCIATION BETWEEN THE CONTINUITY OF CARE IN GENERAL MEDICAL PRACTICE AND HOSPITAL ADMISSIONS

Barker and colleagues (9) carried out a cross-sectional, observational and retrospective study using data from the Clinical Practice Research Datalink, which are broadly representative of patients registered in health care centers of England.

This study included a huge number of patients (230,472) treated between April 2011 and March 2013 in 200 general medicine centers. Elderly patients (62 to 82 years), which are the ones who have the highest number of hospitalizations, and who had at least experienced two contacts with the general practitioners in that period were chosen.

The outcome measure was the number of hospitalizations per patient taken for conditions that could be managed on an outpatient basis in the primary care setting and for which hospitalizations would be potentially avoidable.

Continuity of care was measured using the "usual provider of care index", which was defined as the proportion of contacts that were made with the most frequently seen general practitioner. The authors explain that: "For example, if a patient had 10 contacts with a general practitioner including 6 with the same doctor, then his usual provider of care index score was 0.6." (9)

The results were evaluated by an increase of 0.2 in the usual provider of care index score, which could occur at any baseline value (for example, going from 0.3 to 0.5 or from 0.6 to 0.8). Continuity of care was

also evaluated as a discrete variable, in a more flexible model than that of the previous continuous variable. With this last model, patients were classified into three levels of continuity of care: low, medium and high, defining a priori a usual provider of care index score between 0 and 0.39 as low continuity of care, between 0.4 and 0.69 as medium, and between 0.7 and 1 as high continuity of care.

A linear multivariate regression model was used to test the association between the number of hospitalizations for conditions that could be handled in outpatient care and the usual provider of care index score, controlling for the rest of the variables; in addition, an analysis of subgroups was performed. In this study it was seen that patients experienced on average 11.4 contacts (SD: 9.4) with a general practitioner. The average usual provider of care index score was 0.6 (SD: 0.23).

The group with low continuity of care comprised 22.8% of patients; that of medium continuity, 42.1% and that of high continuity, 35.2%. On average, patients in the low continuity group had more contacts with the general practitioner than those in the other groups.

The results were conclusive: compared with patients in the low continuity group, patients with medium continuity of care had 8.96% less hospital admissions due to conditions that could be controlled on an outpatient basis (95% CI: -5.63% to -14.22%). Patients with high continuity of care had even lower rates of hospitalization: 12.49% fewer admissions (95% CI: -9.45 to -19.29%) than those with low continuity of care.

Considering continuity of care as a continuous variable, every 0.2 increase in the usual provider of care index score was associated with a reduction of 6.22% (95% CI: -4.87% to -7.55%) hospital admissions due to conditions that could be managed on an ambulatory basis. (9)

It is necessary to notice that patients with the highest levels of use of the health care system tended to have less continuity of care, and that despite this greater use of health care services, due to their lower continuity, they underwent more hospitalizations for conditions that could be managed at an ambulatory level, which confirms that it is only the continuity of care that decreases the amount of hospital admissions and not the number of consultations. And the strength of this relationship was even greater among older patients.

The authors of this analysis offer some possible explanations for these findings, including that when patients receive more continuous care, the physician is better able to understand the health needs within the limitation imposed by the growing constraint of time allocated to health care consultations, as illustrated in the two examples presented at the beginning of this article, in which the care provided was more appropriate to the real needs of the patient when conducted by the professional who was acquainted with him.

Continuity of care also promotes more effective

and reliable relationships between patients and physicians, and this should lead to a greater understanding of health problems and greater adherence during the course of treatment. Therefore, it would be expected that these benefits would be more marked in those patients who need to attend the consultation with the general practitioner frequently, as it effectively happened.

One of the limitations recognized by the authors of this study is that, because they focused on general practitioners, they did not evaluate the continuity of care provided by nurses and health care assistants. (9)

In Argentina, the GESICA research group demonstrated in the DIAL randomized clinical trial that the programmed and sustained telephone intervention of a nurse significantly reduced hospital admissions of outpatients with chronic heart failure treated by cardiologists. (10) It was also seen that after the intervention ceased, the patients who had received continuous care continued to maintain a significant difference in the number of hospitalizations, which verified a training effect that was maintained over time. (11)

We agree with Barker et al., who as conclusion of their work highlight that continuity of care is an important consideration when designing programs aimed at reducing hospital admissions, and that its promotion can also improve patients' experience and that of those who work in general medical practice. (9)

SYSTEMATIC REVIEW OF THE ASSOCIATION BETWEEN CONTINUITY OF CARE AND MORTALITY. A MATTER OF LIFE OR DEATH?

Given the benefits of continuity of care demonstrated so far, the final question that arises is whether this extends to mortality rates. Death is, clearly, the most serious and important result.

A recent review asks whether "the highest levels of continuity of care of physicians, in any scenario and with any group of patients, are associated with changes in mortality". (12)

Among the 726 articles identified in the searches conducted for that review, only 22 met all the eligibility criteria. Of these 22 studies, 15 were retrospective and 4 prospective cohort studies (totaling 86.4%) and only 3 (13.6%) were cross-sectional. Some studies included a large number of patients (median: 16,885), all had been published since 2010 and had been carried out in 9 different countries: exactly half of them (11 studies, 50%) in North America (6 in Canada and 5 in the USA), 7 (31, 8%) in European countries (3 in England, 2 in France, 1 in Croatia and 1 in Holland), and the remaining 4 (18.2%) in other countries (2 in Taiwan, 1 in Israel and 1 in South Korea).

Doctors had a varied origin; 9 of the 22 studies examined continuity in primary care, either by general practitioners or family doctors, 3 only analyzed the care of specialists and 10 (almost half) included different types of doctors.

Follow-up reached in some studies up to 17 years, although median follow-up was 2 years. Twenty studies (90.9%) reported all-cause mortality and only 2

studies evaluated premature mortality.

The 22 studies were rated high quality using the Newcastle-Ottawa scale, 10 of them with the maximum scale, and none with less than 7 of the 9 possible points for any reviewer.

These studies come from 9 countries with very different cultures and health systems. As a great heterogeneity was found in the methods of measuring continuity and mortality, as well as in the time frames, it was not possible to combine the results of the studies in a meta-analysis. However, 18 of the 22 studies (81.8%) showed that greater continuity of care was significantly associated with lower mortality, with 16/18 evidencing lower all-cause mortality. In 2 studies, no association was found during hospital stay or at follow-up, but these studies had very short follow-ups.

The association between continuity of care and mortality was verified both related to the care of general practitioners as of specialists.

There are very few controlled and randomized trials referring to the continuity of medical care, and none including mortality as an outcome measure or with a follow-up of more than one year. Therefore, all the studies that met the inclusion criteria were observational, although most were high quality cohort studies. The issue of reverse causality applies to all the evidence presented here, which can create a bias in the association between continuity of care and mortality, in one or the other direction.

However, the evidence is categorical and shows great coherence, because it is obtained from studies that use very large cohorts. In addition, they are studies conducted in different countries, with different health care systems and different cultures. And as already established, the continuity of care included that which patients received from both specialists and general practitioners, which shows that the effect is not limited to a branch of medicine or a specific health care system. As Pereira Gray et al. point out, "despite the numerous technical advances, continuity of care is an important characteristic of medical practice and, potentially, a matter of life and death." (12)

Continuity of care seems to imply a universal basic effect, because the presence of this association is observed in 9 countries on three continents, and in very different populations and health systems. This would suggest that it is necessary to prioritize the continuity of care in the health system policy, as several studies have already pointed out.

Why does this maladjustment occur? In our electronic record system, contextual, social and even psychological aspects are absent. It may be because it is considered redundant information and, often, the time is too short to write a precise descriptive text that can be recorded or read. Other times it may be due to the nature of the information, which can be considered confidential and therefore destined to remain within the strict patient-doctor relationship. In other situations, the knowledge of the cultural context is too detailed to be suitably summarized in the clinical history.

More than an information problem, this is a problem of relationships and, fundamentally, of interactions guided by feelings, trust and empathy, which is very difficult to transmit in a medical record. Even so, these interactions exist in the perception of patients and doctors, insofar they are shared and recognized.

Ultimately, although the availability of medical information is undoubtedly important, it does not replace the benefits of having more personal knowledge and establishing a therapeutic alliance with the patient.

Helen Salisbury poses that if one asked, "Did you save any lives today?" the most common response from the majority of doctors would be "No, obviously." And she adds: "but a recent study on the continuity of care found that maybe we do, by staying in the same outpatient clinic or in the same general practice office over time, seeing the same patients." (13) And she emphasizes her idea with these words: "I do my best to treat all my patients equally, but it is easier to care for people that you already know, and having an interest in care makes work easier and more interesting. As money flows into technological solutions given the foreseeable (and expected) shortage of doctors and nurses, we should stop and think hard about what we risk losing." (13)

WHAT IS THE SITUATION OF PATIENTS AND PHYSICIANS IN THE ERA OF VIRTUAL COMMUNICATION?

In recent years, in different health systems, doctors perceive that "they provide care with less time to chat with patients and their relatives, with colleagues, and sometimes with their own family members. Many of us feel the erosion of time to reflect, to live in that edifying and quiet place where we know who we are, where we are going and what we consider the truth." (14)

Lately, much of the communication with patients is becoming virtual. For example, in the Kaiser Permanente system, 52% of the more than 100 million contacts that patients have with professionals each year are now virtual visits. (15)

But virtual attention leaves doctors alone, without the possibility of interacting physically with colleagues and patients "... it connects us to our patients in a more natural way than ever before, but it may also leave us in isolation, spending hour after hour with our computer. The most commonly cited reasons for attrition - increased paperwork, more metric quality measurements, and less time with patients - reflect the need of physicians for meaningful interactions.

Doctors, for the most part, are social creatures. Thus, the transition from moving away from the routine of interaction with patients and colleagues to more isolated and individual activities has contributed to solitude and the resulting erosion." (16)

In its favor, unlike the periodic medical encounter we are used to, it connects the patients with the doctor or the care group more dynamically and in immediate synchrony with the needs of their clinical condition.

We are in the moment when the author of a "per-

spective" in the New England Journal of Medicine wonders if in-person health care has ceased to be a priority and would be an option B.

They explicitly say "What if health care were designed so that in-person visits were the second, third or even the last option to meet routinely with the needs of the patient, rather than the first?" (15)

CONCLUSIONS

We have tried to show that there is sufficient evidence to confirm that continuity of care significantly promotes greater satisfaction of patients, with more reliable and effective relationships which are demonstrated in greater adherence to medication and compliance of medical orders, added to lower rates of emergency and scheduled hospital admissions. And it is also shown that it is a matter of life or death, because it saves lives in different health systems, in 9 different countries on 3 continents and with different categories of doctors.

It seems that the time has come for health professionals to decide to challenge the simplistic assumption of current health administrators, who consider that by increasing the frequency of visits and reducing the time of each consultation, thereby increasing the patient inflow, will benefit hospitals, clinics and also ironically those who practice the profession.

As Wenzel says: "Traditionally medicine was one of the most personally rewarding professions. Many of us are still inspired by the mysterious art of making an elusive diagnosis or the ability to help patients cope with illness or injury; others are motivated by the discovery of new epidemiological associations that can benefit the entire population of sick people." (14)

But we need more than ever time, which is becoming less, to reflect on where we are going and where we want to go, to talk with each other and with our patients and, despite the disadvantages of the unconditional embrace of technology, to benefit from its advantages (there are plenty) and recapture the objectives of our profession and our valued interpersonal relationships.

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