Community medicine from the point of view of the general practitioner: “Never plump your foot straight into your shoe in the morning”

Dr. Jose Luis Turabian

Abstract
This article aims to reflect and show the changes that community medicine has to be applied from general medicine. The basic concepts of general medicine / family medicine print important special and differential features to the tasks and tools of community medicine, and these have not been sufficiently conceptualized, systematized and highlighted. The three key elements of general medicine, which are the clinical interview, continuity of care and attention to context, have fundamental implications in relation to community medicine. So, on the one hand, the “classic” concepts of community medicine as epidemiology, biostatistics, social medicine, planning, health education, and health promotion, suffer changes and modifications when understood and applied from general medicine; for example, regarding the knowledge of the prevalence and incidence based on the consultations, knowledge of the natural history of a disease, the screening becomes “case finding”, the importance of work on small geographic bases increases, as well as Bayesian probability, and concept of “opportunistic prevention” appears. On the other hand, the concept of “community” is modified and replaced by “context”; The practice of community medicine in general medicine is “contextual medicine”, which means sharing and empowerment in the connections in the relational matrix of the patient, and this may favor contextual empowerment, that is to say the increase of individual capacity among people who participate in a group action that brings about a consequence about some kind of resources or control of the decision-making process. In conclusion, general practitioner should not apply the concepts of community medicine as person who “plump the foot straight into shoe in the morning”, in an unspecified or unreflective manner, as he may be risking finding a “centipede inside” and losing the advantages offered by general medicine.

Keywords: Community medicine; General practitioner; Family medicine; Uses of Epidemiology; Preventive medicine; Health promotion; Anticipatory care; Continuity of Patient Care; Natural history of disease; Primary health care; Physician-Patient relations; Empowerment; context

Introduction
“Never plump your foot straight into your shoe in the morning,” earl Willis said.
“There were a centipede inside,” Willis said at last.

Paul Theroux. Hotel Honolulu.

What is Community Medicine?
The hospital and bedside physician, the ward nurse and the primary care nurse, all spend most of their working lives having contacts with a succession of individual patients and their families. Your impressions about the different diseases - how common they are, what course they follow, how useful the treatments are - are shaped to a large extent on the basis of their experience, which is too narrow a perspective to draw general conclusions [1]. Community medicine is most commonly defined as a discipline concerned with the identification and solution of health care problems of communities or other defined populations [2]. It is admitted that community medicine is work ”combined” with individual curative treatment and preventive health work in the community. Thus, training programs have been developed for the medical specialty of ”community medicine”, which requires several years of postgraduate training in general medicine, in a department of clinical hospital, community medicine in a municipality and theoretical education in epidemiology, biostatistics and environmental medicine, social medicine, planning, economics and administration [3]. So, the strength of community medicine is that it bridges the gap between traditional fields of public health and clinical medicine and brings community perspective into health [4].
Systematization of the implications and specific characteristics of "classical" community medicine from the point of view of the general practitioner

There are specific implications of epidemiology from the general medicine that have not been conceptually systematized enough. That is to say, the focus on the subjects and epidemiological method is not exactly the same, in general medicine than in other medical areas. How then to differentiate the epidemiology of general medicine from epidemiology of other medical specialties? What are the nuances, approaches, and practical work tools different in epidemiology between general medicine and other specialties? [5]

Epidemiology places clinical problems in the community perspective, their size and distribution, reveals problems and indicates which population should be studied, and how much action and where it is needed [6-7]. The family physician is in a rare position that combines the individual and community dimensions.

In developed countries around two-thirds of any population consults in a Family Medicine service at least once a year, and more than 80% contact once every 5 years [8-10]. Registries in general practice are key sources for morbidity estimates, especially if all people are registered in a general practice and if the general practitioner is the gatekeeper of health care, diagnoses from medical specialists and other health care providers will also be known by the general practitioner. The collection of data in Family Medicine is cumulative and continuous. The path of all patients begins and ends with the family doctor. For most illnesses, in many health systems, the general practitioner is the first point of contact in the health care system and he looks after a population whose age and sex composition is known. So, family medicine is a major source of information on health problems and their variation, and this has important epidemiological connotation [9]. Un buen punto de comienzo de la investigación epidemiológica, es el análisis crítico de pacientes individuales –un hombre y su pequeño mundo [8].

Individual and community care are not alternatives to the care given by the family doctor. What is traditionally called individual, family and community attention are elements of the same reality and can not be separated: that is, there is no individual attention, but always is both familiar and community [8,11]. All health problems are biopsychosocial and individual, group and community: the symptoms and diagnoses of the disease symbolize certain psychosocial aspects in people: disability, death, social isolation, anguish, cultural rejection, etc. In diseases of "biological or organic" basis, psychosocial noxae intervene in their etiopathogenesis, evolution and treatment, and psychosocial symptoms can frequently occur. In "functional or psychosocial"-based diseases, "somatic" symptoms often accompany psycho-socio-pathological manifestations. In the etiopathogenesis, evolution and treatment of all health problems are involved biological factors, but also psychosocial (contextual, relational, community) [12, 13].

Although epidemiology is the study the distribution patterns of diseases in human populations [14], the person is the center of interest for the family doctor; but the person is seen in context’. To do this correctly there must be adequate assessment of not only "what health problems there are", but "how many there are and where are"; the incidence and prevalence [15]. So, there is a meeting or merger of epidemiology with family medicine. Populations are not just collections of individuals, but parts of local communities; and communities are part of a society.

The three key elements of family medicine are the clinical interview, continuity of care and attention to context [16,17]. These three elements are fundamental in relation to the binomial "individual health-community health" [18]. Knowledge of the local context by the family doctor, the great accessibility of patients to the family medicine office, and the fact that continuity of care characterizes family medicine has important epidemiological connotations [19]. And these concepts lead to the knowledge of the natural history of disease (which refers to the progression of a disease process in an individual over time), and to the "opportunistic prevention" which in general medicine means "Anticipatory Care", "Case-Finding" and "Continuity of Care", because every contact with patients provides opportunities for the prevention of illness and the encouragement of people to adopt more healthy life-styles, even when the patient has come for an apparently unrelated problem which has to be dealt with first. The emphasis is on taking the opportunities offered by patients [20].

In family medicine, Anticipatory care, in practice, refers to the adoption of a "think ahead" mode that allows family doctors and their teams to work with patients and with the network of relationships of these patients to establish and reach consensus goals that ensure that what is right is being done at the right time, and with the desired result. Anticipatory care is most commonly applied to chronically ill patients to establish an action plan for their health.

The primary purpose of screening tests in a healthy population is to identify those individuals who have some pathology, but who still do not have symptoms. In general medicine, the most commonly used strategy is opportunistic detection or "case finding", in which a series of tests are performed according to age, sex and possible risk factors present in the person consulting for any reason thing. So, it involves actively searching and systematically in at risk people, rather than waiting for them to present with symptoms or signs of active disease [21-24].

Natural history of the disease is the course of the disease from the beginning to its resolution. That is, it is the proper way to evolve that has any disease or process, without any medical intervention. Detailed study of the natural history of the disease has been one of the most fruitful in the field of medicine. With the observation and proper description of the natural history of the disease, it has been able to understand its course and in this way, detect the disease in an early manner and prevent its sequelae [17]. TABLE 1 shows the conceptualization and systematization of a series of specific implications of “classical” community medicine in general practice [5, 25].
### Table 1: Specific Implications of "Classic" Community Medicine in General Practice

<table>
<thead>
<tr>
<th>Concepts of General Medicine</th>
<th>Specific Implications Of General Medicine Regarding &quot;Classical&quot; Community Medicine</th>
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<tbody>
<tr>
<td>1.- The great accessibility of patients to their family doctor, and its role as first contact with the patient</td>
<td>Access to the &quot;numerator&quot;</td>
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<td>2.- Care a defined population with geographic base</td>
<td>Access to the &quot;denominator&quot;</td>
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<td>3.-Continuity of care</td>
<td>- Natural history of a disease and to know the incidence and prevalence rates of diseases in small geographical bases</td>
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<td>4.-The opportunities for early diagnosis and preventive activities</td>
<td>- Knowledge of risk factors and susceptibility</td>
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<td>5.-The method of identifying pre-symptomatic diseases and screening is done differently: &quot;case-finding&quot;</td>
<td>- Taking advantage of patient visits</td>
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<td>6.- The differences between sensitivity and specificity of diagnostic tests regarding the hospital setting</td>
<td>- The negative predictive value (the probability that a certain disease is not the cause of the patient's problem) is more important than the positive predictive value due to the low prevalence of disease vs. the hospital setting</td>
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<td>7.- The working with a population as &quot;denominator&quot;</td>
<td>- A main element of the family doctor and epidemiologist involves completion of the clinical individual picture (an &quot;iceberg&quot; of total diseases) in family medicine</td>
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<td>8.- The conflict between the recommendations of experts in public health and clinical practice with the particular patient (differentiation between frequentist and Bayesian probability)</td>
<td>- The frequentist odds are offered by epidemiology, but make individual decisions based on them can be a serious error</td>
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<td>9.- The work with small geographical bases</td>
<td>- Possible errors in the interpretation of relative risks, mortality rates, incidence rates, etc., and the epidemiological techniques used to manage these sources of errors</td>
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<td>10.- Treatment of patients with low risk can be a high risk strategy</td>
<td>- This means the importance of transforming measures of relative risk in the number of patients who need to be treated to prevent a final event</td>
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<td>11.- The difference between statistical significance and clinical.</td>
<td>- Thus the significance (the mathematical probability that the outcome will not occur by chance) is less relevant than the clinical significance: that the results of study could mean if they were applied to a similar population.</td>
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<td>12.- The assessment of the usefulness of sanitary measures. It is an excellent way to evaluate the process and outcome of health care, simply by comparing the number of cases observed to be expected</td>
<td>- Patients in clinical trials are selected to cooperate with the intervention being evaluated. But ordinary patients experience lower rates of success of the intervention that reported in clinical trials</td>
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<td>13.- Individual attention and community are not alternatives of care given by family doctor</td>
<td>- What is traditionally called individual, family and community attention are elements of the same reality and can not be separated</td>
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<td>14.- The epidemiological method of family medicine is a biosocial-psychological method</td>
<td>- Each person is part of multiple interconnected systems</td>
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<td>15.- The context in family medicine is a non-linear context, without conditions of normality and independence of variables in a complex system</td>
<td>- Most of the phenomena studied in family medicine - a complex system - can not be solved by examining the relationship between a few variables</td>
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<td>16.- The importance of research and epidemiology at the level of the family doctor</td>
<td>- A cast of pioneering researchers shows that what is contained in practice can be discovered</td>
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### Health and context

Health is the perfect correspondence between an individual and his environment-context. There is a recognition that organic health and mental health constitute a common field of study, so that while in some diseases physical factors predominate and in others are the psychic factors, for the great majority of health problems there are physical elements and mental factors in their etiology, symptomatology and treatment. In human life there is no absence of movement. We are all always moving, upwards or downwards, towards the construction of our personality or their rupture, with appropriate or inappropriate responses, at every moment. This reminds us of the fact that when we work in health we need to always look at all the contexts of our subject, since there is no part of life that is irrelevant to the totality of being.

From the family, the circle of human relationships extends to other levels in all states of life for new connections. These levels are the world of individuals in the community: the neighborhood, the city, the country and humanity in general. In addition, it is necessary to consider the individuals in the school, the factory, the informal group of partners, etc. (that is, in the free or obligatory relationships that occur between the individuals).

You can not treat cases of illness that people present considering them in isolation from each other and out the context to which they belong. Epidemiology has limitations to exhaust the field of relationships between health and living conditions. These limits are of a technical, methodological and conceptual nature, and are related to the complexity of the object of study. General medicine offers interdisciplinarity (not multidisciplinarity or summative study of the object by different disciplines, generally subordinated to a hegemonic one), that progressively produces an explanatory synthesis, and opens the way to recover the capacity of the definition, description and explanation of the health situation in the groups of the population.

General medicine carries to community medicine a thong really new about community health: it is to emphasize as care providers for health the categories of family, groups, social infrastructures, and other public or private supra-structures, which implies strategies of alliance between the health sector and the rest of the intervening elements. Family doctor turns his attention to the circumstances of the home and to the consideration of man in his family, work and community context \[26\].
The community approach in general medicine is a context-based approach

The general practitioner is not an epidemiologist, nor a statistician, nor an anthropologist, nor a planner; his main interest in epidemiology is not the "community", but those areas that could help to understand and improve his interactions with patients and their families [29]. A large gap presently exists between the predominantly biologic expertise of the medical profession and the complex mixture of biologic, behavioural and epidemiologic components of health problems today [29]. General medicine can help bridge that gap: the practice of community medicine in general medicine is “contextual medicine”. And that means knowing and facilitating participation in the connections in the relational matrix of the patient.

The disease is a problem due to alterations in human relationships. The disease is the symptom of an error in the order of relations between the patient and his social world (its context). The disease is deeply integrated into the different vital constructs, and is an integral element of decision-making, of the transactions of the life cycle, of the management of life's critical events. It is also a "thought modulator". The "cure" is in learning how to change the patterns of relational experiences. Healing must occur in a context that generates expectations through a process of change. Illness and healing can create gaps, disconnections, losses, which can produce symptoms related to the need to redefine the important aspects of a person’s life. The way to "expand" the therapeutic capacity of the general practitioner is not so much to increase the use of drugs exhaustively, but to open new doors to possible conflicts posed by patients: stuck crises, dysfunctional interactions, etc. The aim is to make that the intervention be meaningful: useful for the patient and his family [13, 30-32].

Talking about participation is talking about "adult-adult contracts." It is the terrain of collaborations, conciliations, transactions, coalitions, and alliances. Human life is a tissue of reversible, two-way experiences: From expert to ordinary people, but also upside down. From leader to neighbor, but also from neighbor to leader, what is mastered is not found: if I recognize that others are centers of initiatives like me, the communication / collaboration / creativity is achieved; a promotional collaboration is achieved. Collaborating / Cooperating means reaching out to support others in their activities, and this brings benefits: greater strength, greater dynamism, greater learning, and more cost-effective. The Coalition / Alliance is to sharing power, work and support with others to achieve mutual or compatible goals.

Community health and the formation of alliances are intimately related to the concept of "empowerment". It refers to the ability of people to achieve understanding and control over personal, social, economic and political forces and thus be able to act in the improvement of their life situations. It includes the improvement of self-esteem, self-efficacy and other behaviors, but also the strengthening of community networks, self-development, quality of life, awareness and critical reflection on the origin of health problems.

From general practitioner view, there is an individual or psychological empowerment: the feeling of control over one's life as a consequence of active participation in the matrix of relationships that gives rise to self-efficacy and self-esteem, as well as personal competence with improving interpersonal and social skills; and there is a community empowerment: the increase of individual capacity among people who participate in a group action that brings as a consequence the gain of some kind of resources or control of the decision-making process, and that can eventually have an organizational level, which refers to democratically managed organizations, in which members share information and power, use decision-making processes of a cooperative nature and planning is participatory.

Health is a property that emerges from the person understood as a complex life system. Thus, the whole can have properties that separate parts do not have. Thus, it is unlikely that biomedical and epidemiological research that typically looks at the parts of health care and disease individual parts one by one, but not as a complete system, will obtain comprehensive results. The integral system includes the doctor-patient relationship, the multiple conventional and unconventional treatments (of alternative medicine), the contextual treatment or treatment of the matrix of relations of the patient, and the philosophical context of assistance as part of the intervention. The systemic results produce simultaneous interactive changes within the whole person [33].

Classical community medicine does not consider the role of relational context. All social behavior takes place, by definition, within the context of a relationship, and relational context shapes thoughts, feelings, and behaviors [34]. The doctor-patient relationship creates "contexts", with different qualities of the therapeutic relationship, and so, for example It is necessary to analyze not only the content of the symptoms but also the meaning of the symptoms in a broader relational context [35-37]. On the other hand, individual disease depends on the context. The patient is a spokesman for the sick or problematic context (family conflict, social problem...). Therefore, symptoms may be forms of expression of biological alterations, or group or family alterations, or symbols or ways of coping with a situation. One of the factors that influence the type of symptoms is the stage of the family life cycle in which the patient is. This perspective considers that social and physical situations and the final behavior, and the biological and psychosocial processes, affect not only the possible risk of disease, but surround or frame the symptoms of the affected persons. For example, when an acute coronary syndrome occurs, different stages of the patient's family life cycle may give rise to different symptoms for each of these stages [38]. In family medicine we can see "turning points" or transitions of patients and their contexts. These transitions are related to: a) The life cycle of the individual and the family; b) The sudden loss of stability c) The recurrence of problematic factors; and d) The accumulation of a number of problematic factors [39].

General medicine includes therapeutic interventions in the sense of 'co-development and co-treatment': there are not isolated individuals, but in reference to others, in relation to others. Family doctors do not treat illnesses but rather care for people in their contexts. From the family, the circle of human relationships extends to other levels in all states of life -except the extreme ages of youth and old age- for new connections [40-42]. TABLE 2 presents some forms of community medicine as "contextual medicine."
In conclusion, general practitioner should not apply the concepts of community medicine as person who "plump the foot straight into shoe in the morning", in an unspecified or unreflective manner, as he may be risking finding a "centipede inside" [43] and losing the advantages offered by general medicine.

References
13. Turabian JL, Pérez Franco B. Actividades

| Concepts of General Medicine | Implications of Community Medicine as "Contextual Medicine"
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<td>3.-Patient participation and shared decision making</td>
<td>-&quot;Adult-adult contracts.&quot; Collaborations, conciliations, transactions, coalitions, alliances</td>
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<td>4.-Doctor-patient relationship and relational context</td>
<td>-&quot;Psychological empowerment&quot;: the feeling of control over one's life as a consequence of active participation in the matrix of relationships that gives rise to self-efficacy and self-esteem, as well as personal competence with improving interpersonal and social skills</td>
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<td>5.-Continuity of care and relational context</td>
<td>-&quot;Contextual empowerment&quot;: the increase of individual capacity among people who participate in group actions that brings as a consequence the gain of some kind of resources or control of the decision-making process</td>
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<td>6.- Care providers and actors for health are the categories of family, group, social infrastructure, and other public or private supra-structures</td>
<td>-Inventory of community resources</td>
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<td>-Strategies of alliance between the health sector and the rest of the intervening elements</td>
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<td>7.-General medicine instruments as &quot;continuing care&quot;. “family care” and “genograms”</td>
<td>-To provide a basis for the development of contextual health strategies, prevention and treatment measures</td>
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<td>-Capital relacional: recursos relacionales personales</td>
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<td>8.- &quot;Co-development&quot; and “co-treatment”</td>
<td>-Contextual treatment: it is necessary to consider the individuals in family, in school, the factory, the informal group of partners, etc</td>
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<td>9.- Risk groups</td>
<td>-Vulnerable groups (infants, children under 5 and adults over 60 whose immune system has a lower response, etc.)</td>
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<td>-Knowledge of certain conditions such as deficiencies in the drinking water network and garbage collection put at risk the most humble social sectors</td>
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<td>10.- Group consultations</td>
<td>-Consultations with several patients (hypertension, diabetes, asthma, etc.) that interact and support each other and learn from each other</td>
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<td>11.-Empowerment protocols</td>
<td>-Use clinical guidelines for disease management developed between professionals and Patient / Family Associations, etc.</td>
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Table 2: Some Implications of Community Medicine as “Contextual Medicine”


34. Clark-Polner E, Clark MS. Understanding and accounting for relational context is critical for social neuroscience. Front Hum Neurosci; 2014; 8:127. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3971189/


38. Turabían JL, Báez-Montiel B, Gutiérrez-Islas E. Type of Presentation of Coronary Artery Disease According


