HEALTHCARE DISPARITIES IN PEDIATRIC DENTISTRY: IDENTIFYING VULNERABLE GROUPS

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Abstract
Pediatric dentistry represents one of the domains of medical assistance which is probably in closest contact with the child patient. Many of these child patients come from vulnerable populations because the child needs the continuous intervention of a responsible adult in order to benefit from dental care, and this permanent dependence on an external support makes childhood itself a period of vulnerability. After defining the concepts of vulnerability and vulnerable group, this study aims to identify some specific vulnerable groups in pediatric dentistry globally and to assess the healthcare disparities that these child patients face. Nevertheless it is our intention to present some possible solutions and interventions that would improve the healthcare quality for these populations constantly referring to the ethical dilemmas encountered by the dentist.

Keywords: Pediatric Dentistry, Vulnerable Populations, Child, Healthcare Disparities, Dental Caries

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Introduction

Childhood is extending over a wide time frame, starting from birth until late adolescence. From a legal perspective, the definition of a child refers to any person who did not yet come of age (18 years). Throughout this period, the pediatric dentistry represents one of the domains of medical assistance which is probably in closest contact with the child patient, once known that a considerable part of these patients are children. The pediatric dentist is constantly prepared to solve the diagnosis, therapeutic and preventive needs of a category of patients that is continuously facing physical, intellectual and emotional development. Such patients are special, indeed, by the fact that they continuously depend on the support of other adult persons (parents, tutors, legal representatives) – which is the condition for their development according to the optimal physiological standards. The medical dental assistance contributes itself to the psycho-emotional development of the child, the relation with the dentist helping the infants to learn, as early possible, to make decisions by themselves (1). However, to benefit from dental care, the child needs the continuous intervention of a responsible adult; it is exactly this permanent dependence on an external support that makes childhood a period of vulnerability. Regardless of other associated factors, a child is a vulnerable patient – that is why, the pediatric dentist is firstly responsible for recognizing this vulnerable condition and for fully observing and promoting the child always in full progress autonomy (2, 3).

The age of childhood also represents an optimal time frame for the naturalization of certain long-term habits and practices that assure the protection of child’s oral health; the absence or the low quality of such prophylactic methods leads to dysfunctions and chronic disabilities, which considerably alter the general health condition, even at adult age. Dental caries, periodontopathies, the abuse as well as the need of orthodontic treatment represent the main causes inducing a long-term scarce oral health, with negative impact both upon the somatic growth of the child (as it generates chronic pain and malnutrition) and upon his psycho-social development (reducing one’s self-respect and image upon oneself, inducing post-abuse psychic traumas, etc.).

The dental care costs during childhood are high, because it involves numerous professional teams, advanced technological methods applied and materials that are frequently monopolized, as well as incomplete policies applied in the field of health insurance services or, more recently, the global economic crisis. Such situations explain the identification of multiple factors which reduce or even prevent the child’s access to dental care services; these factors are firstly related to a poor economic family status (low income per member of family, unemployment, homeless environment) and, secondly, to certain aspects of social, cultural, geographical or state nature (race and ethnicity, immigrant families or family migration, unfavourable geographical areas, low cultural and educational level of the parents, lack of any type of health insurance for the infant) (4). All these premises contribute to the
augmentation of infant patients’ vulnerability, thus generating disparities in the access to medical care. The gravity of the impact of this global situation is reflected in the joint efforts of the international community for maintaining the accessibility to medical care services. It is only by such a coordinated effort that improvement of general and dental pediatric morbidity-mortality may be attained at global level, once known that the problem of disparities in medical assistance is mainly manifested in the poor, economically-unstable geographical areas, with minimum access to the scientific-technological advances registered worldwide (5).

Operational concepts

Considering the main objective of the present study, namely the identification of vulnerable groups of patients in pediatric dentistry, as well as the dysfunctions still present in medical assistance, the authors are morally obliged to individualize the categories of "more vulnerable patients" within the main group of infant patients – the more so that, by his above-described condition, the child is always more vulnerable than other patients. Having all these in view, it is our firm belief that a conceptual analysis of the operational terms of vulnerability and, respectively, of vulnerable group is necessary. Once these concepts defined, the identification of subgroups and their insertion within a general context will be substantiated in an optimal manner.

As to the staff working in the medical system, the observation made was that, in everyday practice, the responsible persons understand the concept of vulnerability in a different way from its usual normative meaning (6). Moreover, even the literature in this field differentiates between vulnerability and vulnerable, namely: vulnerability refers to different levels of exposure of a population to the susceptibility or risk of damages produced by some natural disasters, while vulnerable may be the segment of population mostly affected by natural disasters, especially pregnant women or those having babies to be looked after, children in general, the old ones, homeless persons or those directly predisposed to diseases or nutritional deficiencies (6,7,8). Much more illustrative for the present study is to identify the vulnerable group as a group of persons with extremely reduced possibilities as to their free choices, as a result of the intervention of some external coercive factors (6). In our opinion, this aspect is especially important, as it refers to the absence of decisional autonomy – which is a specific characteristic for pediatric patients. The vulnerability of these patients is therefore accompanied by the necessity of some additional measures for protecting the autonomy in progress and their subjective rights, while having permanently in view the fact that this category of patients is much more exposed to discrimination (9).

Consequently, vulnerability is manifested as the impossibility of (both physical and legal) self-protection in front of an external threat; this leads to situations of risk, defined by the literature of the field with the concept of "opening towards vulnerability” – according to some authors, an individual is not vulnerable by himself, instead he suffers a process
of vulnerable transformation induced by associated factors (socio-economic, geo-climate, legal, of family type) (7,10), without wholly leaving aside the hypothesis of "self-vulnerabilization" or of "social self-exclusion" (7,11).

On the other side, viewing a group as a vulnerable structure should always consider, as well, a reference system versus which vulnerability is defined. Even if considering only the medical domain, a clear-cut distinction should be made among the vulnerability induced by risk and difficulties in front of various pathological contexts, vulnerability caused by different ratios of attenuation of individual autonomy, vulnerability vs. programs of scientific research in medical fields, or the vulnerability produced by an unequal offering of medical care.

All these typological varieties of vulnerability generate potentially vulnerable heterogeneous groups, which require distinct approaches. In this respect, it is extremely important to recognize the vulnerable groups during the development of programs of scientific research as, quite frequently and somehow unexpectedly, these programs influence the subjects from the other categories of vulnerability. According to the scientific research developed in the biomedical domain, the vulnerable groups are formed of (11): subjects unable to express their consent, persons highly susceptible to be manipulated or subjected to coercion, iii or persons without health insurance iv.

Last but not least, a conceptual analysis of the domain of vulnerability should also mention the qualification conferred by the law to these operational concepts. Thus, according to Law no. 292/2011 on social assistance v, item 5 letter a), the vulnerable are those who need support and measures of social protection for facing or at least for reducing some difficult situations, for assuring the social inclusion of this category of population. Item 6 letter p) states that the vulnerable group is formed of persons or families risking to lose the capacity of providing by themselves their own necessities as a result of severe diseases, disability, poverty, drug or alcohol addiction or other causes, which lead to economic and social vulnerability. Extended details with legal character describing situations of vulnerability or vulnerable persons may be also found in the Governmental Emergency Ordinance OUG no. 162/2008, vi respectively the Governmental Decree HG no. 56/2009 vii, normative documents which, unfortunately, make no mention of the pathology specific to pediatric dentistry. This legislative deficiency is really liable to criticism, as important disabilities, chronic diseases with major impact upon the child’s general health condition are eluded, a situation to be solved by the expected settlement of some new legal norms.

Without resuming redundant details related to the legislative techniques, mention should be made of the fact that medical legislation cannot disagree with the norms referring to the social domain, both because of the proximity of the regulation spheres and by virtue of the unitary character of the state legislative system and of the non-contradiction among the juridical norms. The conceptual definitions should posse, at least principally, a unitary character. However, the literature of the field is entitled to criticize the absence of some
operational terms, such as vulnerable, disadvantaged, or being exposed to disadvantages from the medical legislation (7). These suggestions of the authors should be taken into consideration de lege ferenda, which would grant a normative adaptation including exactly the needs of the groups of vulnerable patients.

The importance of an accurate defining of the situations of vulnerability and of the vulnerable groups lies – according to the objectives of the present study – on the recognition of the potential disparities in offering medical care specific to pediatric dentistry.

**Defining the vulnerable groups in pediatric dentistry**

A universally recognized aspect in the literature of the domain is the affiliation of a child (caused simply by age, which impacts the power of judgement and, consequently, the autonomy) belonging to a vulnerable group of patients as such. The motivations that led to this concept have been already exhausted. Consequently, while performing activities (medical, prophylactic, research), the pediatric dentist constantly comes in contact with vulnerable patients who, in different ways, may be exposed to some other additional factors that may increase their vulnerability. Such situations require from the part of the pedodontist the ability of always recognizing the additional causes of vulnerability among the patients (subgroups of vulnerable patients). The higher is their incidence, the more difficult will be the access of the infant patient to medical services of dental care – which explains the various disparities in medical care activities.

Up to now, various studies devoted to such topics (4, 13-17) have drawn the attention upon a series of so-called “more vulnerable” children, who require special attention as to the methods of oral health care. The first of these subgroups of children is represented by babies (with imprecise limits of age, starting from the suckling up to pre-school period); this interval of time is characterized by the eruption of the milk teeth, which is the moment for the substantiation of the general principles of education assuring a child’s oral health. Along this period, the child gets accustomed with the main habits of oral hygiene, the hygienic deficiencies of this moment having long-term negative repercussions (4). Also, the diversification of nutrition and an optimal level of nutritive elements and oligoelements should assure a suitable somatic physiological development of the child. The deficits of growth observed in this period - such as disorders of the permanent teeth, of the masticatory apparatus, etc. - may considerably and irreversibly affect the oral health condition. The main factors inducing vulnerability along this period of life are mostly extra-personal, being especially related to the poor care which a baby always needs (nutritional and prophylactic deficiencies, unsuitable hygiene education).

The second category of vulnerable children is formed of subjects with special needs (4,17, 18) – namely a heterogeneous group of patients with physical, psycho-mental or emotional problems, manifested as different degrees of disability. The chronic pathology of these patients is added to the physiological development factors
specific to childhood, which calls for additional care as to their alimentation, development of speech, perception of their own image and social insertion, education, etc. One should not leave aside the fact that certain important complications specific to oral pathology, such as chronic pain, infections or malnutrition considerably increase the morbi-mortality of the children with special needs, by their cumulated effects, intensified by their disabling pathology.

If these first two groups of patients are recognized in literature per se, universally and independently on other conjunct factors, the situation is dramatically different in other groups of vulnerable children with an internationally different incidence, mainly depending on the so-called social gradient in oral health.

Thus, one should consider the super-developed countries, such as the United States of America, where vulnerabilization acts by means of factors related to race, generalized lack of access to advanced systems of health insurance, poor communication between the decision-makers and society or the general non-availability of the last generation technical infrastructure, whichever the environment the child comes from (urban, rural) or the socio-economic status of the family (4,13, 19). Under such circumstances, the vulnerability may be lowered through macrostructural attitudes depending on the political forces (adjustment of the health insurances policies, of sustainable development policies in the medical field, creation of treatment centers with a homogeneous geographical development, a better communication among the decision-makers by means of public debates, etc.).

On the other hand, countries with a non-homogeneous geographical development or developing countries, such as Brasil, view among the factors inducing vulnerability the following: low education level of the parents (less than 5 years of school), low income per family member, school absenteeism, a poor compulsory immunization or a higher incidence of the chronic pediatric pathology (manifested as deficient growth, under-weight, etc.) (4,14). In such cases, the danger of vulnerability continues at adult ages, too; melioration of morbidities depends on the improvement of the social and economic status, as well as on the availability of free services of primary care of oral and general health (public health insurance) (4).

Countries with geographical areas characterized by poor development, such as Tanzania, record cases of vulnerabilization in pediatric oral health, e.g. inequities and internal discrimination caused by socio-economic reasons (income, occupation or education of parents and of the other members of the family), lack of access to some elementary treatment methods in a population with a poor oral condition and, therefore, with great expectations; this lack of access to medical mainly manifests in the pediatric population, complaints being uttered as to the special attention paid to adults, to the detriment of children (15). This category of countries needs a more extended support from the international community to attain certain basic standards regulating the access of children to services of oral health care. The improvement of the disparities manifested at the level of medical care in pediatric dentistry
should observe the traditional, cultural and sovereign values of each state. Extensive programs of health education, accompanied by the availability of some decent technical and medical devices may significantly solve the problem of children’s access to dental medicine.

At global level, the problem of unequal access to medical care in pediatric dentistry mainly affects the groups of patients with a low socio-economic level – groups always facing risks by a pronounced addressability to the pedodontist (20). First of all, the international experience on oral pathology to which the vulnerable groups are exposed involves the dental caries. By the serious and plurivalent complications it may induce (especially infection and malnutrition), this aspect raises a very severe problem for public health. In spite of the scientific medical advances recorded in the field, dental caries still appears as a pandemic pathology at global level (16). Whichever any other incidental factors, dental caries should be considered by itself as a vulnerable context for children, given the risks to which they are exposed.

Last but not least, a special category of patients is represented by the persons exposed to abuse and negligence. In this respect, literature data mentions groups of children suffering from mental retardation, those in foster care as well as the refugees, belonging to families requiring political asylum, or those included in programs of reeducation and social reinsertion, viewed vulnerable groups, and subjected to abuse and negligence (17).

Conclusions

Firstly, the situations of vulnerability in the domain of pediatric dentistry should be differentiated from the constituted vulnerable groups. The latter ones have a heterogeneous character at international level, having – according to a social gradient of vulnerability - different locations on different geo-climate related areas.

As to pediatric dentistry, the vulnerability induces disparity as to the access to specialized medical care, thus creating positive feed-back systems which generate specific pathological contexts with systemic influences. In such cases, the therapeutic intervention should be a causal one, involving specific measures taken against the factors of vulnerability.

A special situation is that of the dental caries – a pandemic problem with all features of a vulnerable element of its own. To reduce the epidemiological situation at global level, the corrective intervention should be always a conjunction: both medical and social, adapted to the various levels of vulnerability and having sustainability and support from the healthcare policies of each country.

The investigation and defining of the vulnerable groups specific to pediatric dentistry constitute a necessary stage for taking the necessary prophylactic, diagnosis and treatment measures for various populations of patients. In this way, solving of certain nosological contexts specific to pediatric dentistry may definitely contribute to reducing the general pediatric morbi-mortality.
References

i For more details, see the United Nations Development Programme 2000, UN Millenium Development Goals for 2015, an UN project proposing an internationally joint effort for improving the access to public health services. Available at http://www.undp.org/mdg/basics.shtml;

ii On one hand, this may be of physical nature, with effects upon the power of discernment, on the other, it may be legal, induced by the character of the infant condition, or by the temporary or permanent legal declaration of the juridical incapacity of the involved person;

iii Patients included in reeducation programs, prisoners, persons in foster care, etc.;

iv This category also includes the group of patients requiring diagnosis or therapeutical medical care not covered by the insurance services;

v Published in M. Of. no. 905/December 20, 2011, Part I;

vi Referring to the transfer of all attributions and competences exercised by the Ministry of Public Health towards the authorities of the local public administration, M. Of. nr. 808/December 3, 2008, item 7, align. (2);

vii M. Of. nr. 91/February 16, 2009, see the Appendices, item 5, letter h);

viii Concept introduced by World Health Organization, see WHO International Collaborative studies (ICS-I, II);

ix The new Constitution of Brasil, adopted in 1988, decided the creation of the Unified Public Health System (SUS), operational as early as 1990-1994, still under continuous development, the latest modifications - referring to the implementation of a Family Health Program including free medical stomatological assistance, concomitantly with the settlement of centers of stomatological health for both children and adults (Dental Speciality Center) - being made in 2009. Details at: http://portalsaudesaude.saude.gov.br;

x An overwhelmig number of children subjected to abuse and neglect show an especially complex traumatic and non-traumatic oro-facial pathology.