ABSTRACT

Objective: To understand the perception and utilization of health education for the rational use of medicines (RUM) by physicians working in primary healthcare. Methods: Qualitative, descriptive, and exploratory research, conducted in 2011, with seven physicians of the Family Health Strategy, by means of individual semi-structured interview. Data was analysed through the content analysis technique, emerging three thematic categories and their subcategories: partial perception of the concept of rational medicines use; partial perception of the concept of health education; not valuing the potentiality of employing health education in rational medicines use. Results: The results showed that the physicians’ perception of the concepts are fragmented and divided into concepts related to the professionals, the disease, the drug, and to the patient and community. Conclusion: The use of health education by the physicians prioritizes its traditional model, with emphasis on the transmission of technical-scientific knowledge.

Descriptors: Health Education; Drug Utilization; Family Health; Qualitative Research.
INTRODUCTION

All over the world, more than 50% of medicines are prescribed, sold and dispensed in an inappropriate way\(^4\). This irrational practice is not exclusive to Brazil, and is considered an important public health problem worldwide, with major economic consequences\(^5\). The symbolism carried by drugs within the society has contributed to their irrational use. Massive advertising and ease of access to medicines in pharmacies lead to belief that these products are free of risk. Moreover, the low frequency of texts dealing with the risks of drug use tends to reinforce the myth of health promoted by the use, and the symbolic character of their healing power\(^3,4\).

Health education consists in the field of theory and practice that deals with the relationship between knowledge and the processes of health and illness of the individuals and the community\(^5\). This construction of knowledge is transversalised by a possible dialogue between the established knowledge, elaborated by the scientific production and subject to a permanent review, and common sense, resulting from everyday life experiences and based on perceptual and affective relations, with their own meanings\(^5\).

These aspects, however, are not enough to transform the user’s quotidian, given the key role played by the pedagogy used, being the problem-based pedagogy able to do so\(^6\).

The development of educational activities of public character represents a means to achieve the rational use of medicines, as proposed by the World Health Organization (WHO)\(^1\), which recognizes the pharmacist as the most skilled professional for this work, and even to provide technical advice to other health professionals\(^7\). It also set as the major challenge for the next decade the improvement in the rational use of drugs, with a need to promote the evaluation of such use and monitor their consumption\(^1\).

Strategies to promote rational use of medicines are distributed according to the target-audience whose awareness one desires to raise, being categorized as educational, managerial, and regulatory strategies\(^2\). New educational and managerial strategies to deal with the continuing education of physicians are designed and implemented\(^8\).

Studies in large organizations and, to a lesser extent, in the health system, consistently point to the importance of informal networks and professional communities to bring major changes\(^9\). One of the instruments that has been used during the educational practices is the community of practice. These communities are organizations defined by sharing a practice among their different members\(^10\).

In Brazil, the Ministry of Health has proposed Permanent Education as a strategy to transform the practices of training, attention, management, policy-making, popular participation, and social control in the health sector\(^11\). In the state of Minas Gerais, the Permanent Education Program for doctors in the family health strategy aims to induce a culture of change and renewal of the professional practice, and create a system of permanent improvement of clinical performance, striving for excellence in care to patients\(^11\).

Studies evaluating health education in the use of medicines are focused on presenting results that reflect the practices found, not bothering to indicate possible ways of acting to reverse such practices, and health professionals do not feel sufficiently prepared to develop a professional practice closer to the user\(^12\).

There is, therefore, the need to explain why the health education activities are not reaching the expected goals. Study on these issues is justified since there are few qualitative studies that systematically address the educational activities in health from the perspective of the physician, both in national and international literature.

Thus, the purpose of this work is to understand the perception and use of health education for the rational use of medicines (RUM) by doctors inserted in primary health care.

METHODS

This was a qualitative, descriptive, and exploratory research, in primary healthcare settings, using the Family Health Strategy (FHS) in the city of Teofilo Otoni-MG, and held in March and April 2011.

The number of investigated participants was considered sufficient when the survey data became repetitive, failing to add new information\(^13\). The inclusion criteria was being a doctor and being inserted into the FHS for a period exceeding six months. The exclusion criterion occurred with the rejection to participate in the study, thus totalling seven participants in this study.
Data collection took place in the medical office of the FHS unit, after reading the research objectives and obtaining the Free and Informed Consent Term. The individual semi-structured interview had two parts, the first addressing the respondents’ identification data, with the sociodemographic variables, while the second part brought the guiding questions related to the study objectives: ‘What is your understanding about rational use of medicines?’; ‘What is the importance of educational activities for the correct use of medicines?’; ‘At some point in your professional activities, do you carry out educational activities for promotion of RUM? Where? How? Which ones?’; ‘What are the most suitable professionals for this task?’; and ‘How do you see the presence of the pharmacist in this perspective?’.

The taped interviews, with average duration of 35 minutes, were then transcribed, allowing fully availability of the information provided by the participants and enabling the reliability of data.

For data analysis, the content analysis technique was used, in the thematic mode, with categories not defined a priori. At first, a brief reading of the interviews was performed, defining the registration and context units. Subsequently, the categories of analysis were defined, thus allowing to group the registration and context units with common characteristics, or related to one another. Finally, data interpretation proceeded, seeking to unravel the underlying content to what was expressed. In the analysis of the results, the speeches were coded as M1, M2, M3, M4, M5, M6 and M7.

From the transcripts of the taped interviews, emerged the following categories and subcategories: ‘Perception of the concept of rational use of medicine in a partial way’ with its subcategories exploring concepts related to the professionals, the illness, the medicine, and the patient and the community; ‘Perception of the concept of Health Education in a partial way’, having as subcategories concepts related to the professionals, the illness, the medicine, and the patient and the community; ‘Non-appreciation of the potential use of Health Education in the RUM’, with its subcategories dealing with concepts related to the patient and community, and to the professionals.

This research is in accordance with the principles of the Declaration of Helsinki and was approved by the Research Ethics Committee of the State University of Montes Claros (UNIMONTES), under opinion No. 2051/10.

RESULTS AND DISCUSSION

Seven doctors were interviewed: five male and two female; four married, two separated, and one single person; aged between 27 and 41 years.

Working time in the FHS ranged from one and a half to 13 years, but only one doctor were graduate in an specialization course in Family Health; others had other specialties (dermatology, geriatrics, endocrinology, plastic surgery, and infectious diseases). This data confirms Brazil’s reality, where most doctors included in the Unified Health System (SUS) is generalist(15).

With regard to continuing education, only one doctor attended training on the rational use of medicines (URM). All the others studied the subject only during the Medicine undergraduate program, which is at odds with WHO guidelines, that indicate the formal and permanent education in pharmacotherapy for the health team(1).

The thematic categories and their subcategories, along with the speeches of the doctors interviewed are presented following.

‘Perception of the concept of rational medicine use in a partial way’

This category emerged from the concept proposed by WHO on the URM, which defines: ‘The patient receives the appropriate medication to their clinical need, in the correct dose and dosage, for an appropriate period of time and at the lowest cost to them and to the community(1)’.

It was noticed that doctors have fragmented concepts, one complementing the other, but, in general, not in full. Those concepts can be divided into the ones related to the professionals, the illness, the medicine, and the patient and the community.

Concepts related to the professionals

WHO proposes that, for the rational use of medicines, it is initially necessary to establish the need to use, prescribing the appropriate medication, according to the proven and acceptable efficacy and safety dictates(1). From this perspective, the doctors’ knowledge, as well as the skills and attitudes related to prescription, are important factors in the prescription of medicines.

‘RUM is one prescribing the medicine according to the indication.’ (M2)

‘If you treat the patient, that is better, the other is better.’ (M1)

‘I have a light hand when prescribing medications.’ (M6)

The rational use of a medicine begins with the quality of the product that is being administered, through the appropriate indication and the optimal dosage(10). However, the increased complexity of the prescription renders the individual susceptible to medicine interactions, possible
adverse reactions, the appearance of comorbidities and, consequently, to compromise in their quality of life(17).

Concepts related to the illness

The drug should be appropriate to the clinical needs(1), and the prescriber is responsible for the indication of a drug based on the interpretation of what the patient tells you(19).

‘Prescribing in accordance with the precise indication of the pathology the patient has.’ (M2)

‘Why to use it and for which pathology it should be used.’ (M5)

By the speeches, it is evident that the professionals’ knowledge clearly establishes the boundary between the normal and the pathological, translated into a pattern that provides the basis for diagnoses and interventions(19).

“It’s the proper use for certain diseases […] and that the disease must be treated.” (M1).

At this first moment, the reports do not bring the focus of health promotion, supported in the Ottawa Charter with the positive view of health, identifying it with well-being and quality of life, not simply with the absence of disease(20).

Concepts related to the medicine

Recognized as essential tools in healthcare, drugs play a central role in therapeutics(4). In pharmacology, it is always necessary to analyse the cost-benefit of using each drug and the possibility of iatrogenic responses. Therefore, it takes knowledge in pharmacology, biochemistry, physiology, pathology, microbiology and minimal knowledge of drug interactions(21). The therapeutic indication is closely related to an accurate diagnosis (16). Whereas the dosage takes into account the diagnosis and the user’s individual characteristics(21), as described in these narratives:

‘Prescribing the medicine at the proper moment, in the correct dosage.’ (M1)

‘Every medicine has its beneficial effect and its harmful effect.’ (M4)

‘The best that you have, you should consider it: the action, the resistance factors…’ (M5)

Thus, it is necessary that the drug is adequately prescribed in the pharmaceutical form, showing its doses and duration of treatment(1). And with the proper use, for the achievement of the therapeutic goals(22).

Concepts related to the patient and the community

The access to medicines that are essential to public health is the first step in establishing a drug policy(18). It is important that they are available in a timely manner(1).

‘We know that… what good would it make, if we close a diagnosis, prescribe a drug… I might even consider it adequate, but, what if the patient doesn’t use it?’ (M7)

It is also important that it has an affordable price(1), since this can influence on the use of the remainder of the medical care(18).

“The best that you have, you have to take into account the cost-effectiveness.” (M5)

‘I think that RUM means that you prescribe the medicine evaluating the cost-effectiveness.’ (M4)

And that it always meets the required quality criteria; that it is dispensed under appropriate conditions, with the necessary guidance and responsibility(1).

‘Rational use, I understand as a controlled use within the guidelines that are made by the doctor at the moment time of the medicine prescription.’ (M3)

And that the therapeutic regimen already prescribed is followed, as best as possible(1):

‘Whether the patient had a good response or not.’ (M1)

The proper use of drugs depends not only on quality prescriptions, but also on a responsible dispensation(18). It was noticed, through the speech contained in this subcategory, the participation of the prescriber and the patient, not being recognized the role of the dispenser, responsible for the correct dispensing, including appropriate information on the drugs prescribed. The interaction between doctor, pharmacist and patient enables the emergence of expectations, demands and exchange of information that will have direct consequences on the therapeutics outcome(18).

The requirements for the promotion of the RUM are much more complex and involve a number of variables. To be fulfilled, the participation of various social actors should be provided: patients, health professionals, legislators, policy makers, industry, commerce and government(23).

‘Perception of the concept of Health Education in a partial way’

This category comprises elements that identify the health education conceptions by the doctors within the Family Health Strategy, interviewed in this study, being perceived that they also have fragmented concepts of health education, and one can divide them into concepts related to the professional, the illness, the medicine, and the patient and the community.
Health Education related to the professionals

Among the fundamental interventions for promotion of the URM, the continuing medical education is highlighted as a requirement for the professional performance and the education of the population on drugs\(^1\).

The Continuing Education on Health is a strategy of health practices transformation, the medical professional’s adherence being one of the challenges to its effectiveness\(^2\), since the doctor’s learning needs are daily. For medical care, questions may arise, which would bring benefits for himself and his patient, if addressed before any decision. This is a routine process. Not made from periodic events; it is a permanent education\(^8\).

‘I do it on my own. Once a month, I choose a theme.’ (M5)

There is no doubt that the risks associated with the therapeutics may be minimized if there is awareness on the part of the health professionals towards the improvement in the quality of information or the discussion of treatment alternatives to resolve the patient’s complaint\(^12\).

The following lines reflect the specialty of the professional in health education activities:

‘Within my training in geriatrics, we have to deeply understand both the diseases and the side effects of medications [...] My conduct is always a geriatric conduct.’ (M6)

The presence of specialists working as generalists in the service limits the process of assistance, since the fragmentation of knowledge hinders the entirety of health actions, and changes are necessary in both scenarios, in education and in the health services as well, so that effective changes occur in the healthcare paradigm\(^15\).

Health Education related to the illness

The way the population understands and conceptualizes the diseases and treatments is one of the factors that influence the use of medicines and treatment adherence. Cultural factors influence the perception and determine which signs and symptoms are perceived as ‘abnormal’ and yield a pattern of illness for the patients and those around them\(^25\).

The modification in the conduct of subjects investigated in a study\(^26\) was linked to a process of knowledge-recognition of the disease, based on their representations and experiences with the illness\(^26\). It is important that health education seeks to explore how the disease is culturally elaborated, attempting to bring the subject to the recognition of it as something anomalous, removing the vision of being normal, natural\(^26\).

It can be observed that doctors have a curative vision, focusing on pathologies, with a commanding professional-patient relationship, according to the traditional model of health education. They do not manage to undress the rigor of scientific knowledge directed at prevention, at the biological.

‘Any little headache does not need to use antibiotics [...] always evaluate the environment where one lives to prevent certain diseases.’ (M1)

‘I orientate that infection is different from inflammation.’ (M3)

The organization mode based on this biomedical model, in which actions are mostly thought for the diseases, not for the patients, sets up barriers for both the user and the professional in the development of health actions\(^25\).

Health Education related to the medicine

It is necessary that the population is oriented on how to proceed regarding the use of drugs, so that they have a safe action, and to reduce the risk of side effects or adverse drug interactions\(^23\). The education about the medication use is involved in most activities related to the establishment and maintenance of the individual’s health:

‘Educational action prevents the abusive intake of certain drugs [...] and also prevents the side effects of associations between them.’ (M6)

‘Whenever possible, I try to orient about what the medicine is for.’ (M4)

It is necessary that the society is aware and understands that the same medicine that cures can kill or lead to permanent damage\(^23\). It was noted the importance of the professional in also pointing out the negative aspects of the medicines, such as transient effects, adverse effects, and possible rebound effects.

‘I address the need to take it for enough time, the required amount, I explain why, (talk) about the resistance.’ (M5)

Health Education related to the patient and the community

The patient and the public should have access to the correct, objective, and relevant information regarding medications, in order to obtain greater adaptation in their use, besides avoiding unnecessary self-medication\(^4\). A search found this as a common practice in children, carried out by the ones responsible for them\(^27\).

The population’s awareness of the dangers of self-medication, sought by the health professionals, is present in most of the interviews, since that is a common practice, often being influenced by friends, family, and pharmacy clerks.
‘We always advise (the patient) not to self-medicate.’ (M3)

Self-medication is defined as the practice of ingesting drugs without the advice and monitoring of a qualified health professional(28).

Adherence to treatment is complex and involves many factors such as user’s characteristics, disease characteristics, cultural and lifestyle customs, drug treatment (adverse reactions, complex schemes) and institutional difficulties. A decisive factor is the trust in the health team, in the prescription, and in the doctor(25).

‘Give freedom to the patient, so he/she doesn’t feel embarrassed to come back to seek it, understand? A new therapeutic approach based on trust, of course!’ (M4)

Health education, as a social practice, brings implicit the cultural vision based on values, beliefs, and world views, situated in specific time and space(29).

‘Of course this is a long-time job, because it’s a habit change, a change of culture.’ (M3)

Workers should reflect on the cultural differences and act in the perspective of humanising, critical, reflective education, focused on the formation of the integral and autonomous man(29).

‘Non-appreciation of the potential use of Health Education in the RUM’

This category aims at identifying the ways Health Education on drugs is used by the investigated FHS physicians. A number of problems and challenges in their practice, and limitations in the use of health education were perceived, with a certain ingenuity in the transfer of knowledge. Health education uses have been identified related to the patient and community, and related to the professionals.

Utilization of health education related to the patients and the community

By questioning the health education practices developed by doctors, it was observed that they perform them only during medical consultation, merely limited to guidelines to the patient.

‘I use it from patient to patient, only during the consultation.’ (M1)

‘I do educational activity during the medical consultation.’ (M6)

‘There is no specific training, Guidance is given at the time of consultation.’ (M3)

Health education activities for physicians in primary care still focus on the diagnostic and therapeutic approach, with few opportunities of critical reflection on the program guidelines(5).

Changing the physician’s professional practice is a complex process, given that the acquisition of new knowledge, skills, and attitudes is insufficient to undertake a new practice. When the physicians become aware and understand the new evidence, they can change their practice and improve care for their patients(9). Knowledge and learning have become the new strategic imperatives of the organizations(30), and knowledge, not just information, the main source of potential of an organization(31).

From this perspective, the term ‘knowledge management’ is understood as a set of processes that guides the creation, dissemination and use of knowledge to fully achieve the goals of an organization, only being effective when there is collective identity and the existence of a wide social network, the human networks being one of the key vehicles for knowledge sharing(9). An example of such networks are the communities of practice (COP), which gather people informally through common interests towards learning and its application. In a community of practice, knowledge is constructed while individuals share ideas through collaborative mechanisms, such as narratives and collective work(9).

In most cases, the production and transmission of information about the medicines is not necessarily translated into knowledge(18). Therefore, dialogue should be central in the attitude of health professionals, who must learn to listen and respect, and should simultaneously expose what they know about a certain topic. Professionals and users can thus build, in a shared way, a knowledge about the health-disease process(32).

‘I try to do my best so that those illiterate patients leave with the information in their head, since they are illiterate …’ (M2)

The guidelines on medicines provided to patients are critical to treatment success, since their absence is a major cause of the incorrect use of medications(22). However, there are professionals who do not orientate the patients due to lack of time.

‘[...] Very little, due to lack of time. We use, but we don’t really get to inform the patient.’ (M7)

From this perspective, the means to deliver information to the patient need to be improved. This involves the training of professionals, the reorganization of the time devoted to guidance by the prescriber, the direct role of the pharmacist in dispensing the drug, as well as the organization of
services, so that the information can be transmitted to the patient(22).

According to WHO, work overload on these professionals is one of the main reasons that contribute to the irrational use of drugs(31).

A study on the profile of professionals within the Primary Healthcare in the city of Montes Claros, Minas Gerais, observed that, as regards the availability for exclusive dedication, 22.3% of the professionals perform activities in other institutions, accumulating other activities(33).

The investigated professionals suggested the lecture as the main health education action to be developed in the unit.

‘[...] through lectures, because they understand much better when we gather.’ (M1)

‘I think that the cheapest and most efficient strategy would be the lectures.’ (M4)

‘What we could do is to include in the lectures orientations on the rational use of medicines.’ (M6).

‘Presenting lectures, distributing pamphlets to those who can read, showing to the ones who can’t. I think that an informative guide on the most used medication.’ (M1)

Health education, despite being the main focus of the Family Health Strategy, is still far beneath the expectations, as it is performed only at the time when other healthcare proceedings are provided, mainly focused on disease, and that should not be the only the purpose of the educational work(34).

The work of the Family Health teams is based on the theoretical framework of surveillance and health promotion, therefore, they must plan their work process not only to meet the spontaneous demand, but especially to develop actions to people who still do not know or do not attend the health service(29).

‘We could be working the enrolled population as a whole [...] work it by microareas and make them aware towards the medications use.’ (M5)

The team should also be responsible for the enrolled population in its territory, restoring the bonds of commitment and co-responsibility between the professionals and the population, within the principles of the Unified Health System (SUS)(29).

The results explained in this subcategory found that the majority of FHS professionals are unaware of the basics of health education and performs vertical educational practices, moving away from the health promotion proposal and not favouring the creation of bonds between them and population.

Utilization of health education related to the professionals

When questioned about the most suitable professionals to perform this work, the participation of all the professionals who comprise the team was considered relevant.

‘[...] Within the FHS, I think that all, including the doctor, the nurse, and the CHW.’ (M6)

‘I think that he [doctor] should go to the field, given his power of persuasion.’ (M5)

‘In the FHS team, I think the doctor and the nurse, since we don’t have the other professionals.’ (M7)

Health education is an important tool for health promotion and guarantee of the fundamental human rights. The nurse performs this practice associated with the care provided at all stages of human life(35). It is believed that, through health education as a dialogic teaching method, in search for shared construction of knowledge, nurses can learn to respect and enhance the user’s autonomy in the struggle for better health status(32).

‘Nursing is the profession of care more eminently linked to changes in behaviour, in its educative axis.’ (M5)

There is often a gap between what users and health professionals think and feel. Therefore, the role of the community worker on the team is important, as they belong to that community, and thus know the problems, the health and culture needs of the local population and the difficulties in facing them, and so can act as a facilitator of the relationship between team and the community(29).

‘The CHW are the FHS voice in the community.’ (M6)

‘Actually, we need to get to bring the CHW closer to the patient, isn’t it?’ (M2)

The pharmacist’s contribution within the team was also considered relevant as advisor and collaborator in the health education activities:

‘I think the doctor, the pharmacist and the nurse are the only three areas that could have technical background to perform this kind of work.’ (M4)

‘It would be interesting to have a pharmacist with us, to give this guidance, to give further support, to be present in the team also.’ (M5)

‘He would be important exactly to orientate the CHW (the pharmacist).’ (M2)

The perception of doctors in these speeches recognizes the importance of the pharmacist in primary care and their contribution possibilities. In the same perspective, WHO
recognizes the pharmacist as the professional most able to conduct actions aimed at improving access and promoting the RUM, and also to provide technical counselling to the other health professionals(7).

Nevertheless, this reality is not present, because the health education activities on the RUM are often considered incipient in the public health service.

Moreover, the pharmaceutical assistance is often performed with the primary goal of ensuring the supply of medicines in the units through the processes of selection, programming, acquisition, storage, prescription, and dispensing(36). As can be seen in the following statements, the professionals consider important the presence of the pharmacy in the unit.

‘The patient would already leave with the prescription, take the medication, and could get additional information with the pharmacist about the medicines.’ (M4)

‘I think there should be a pharmacy. The pharmacy with the pharmacist.’ (M3)

‘I even find it strange that in our region there’s no pharmacist in the unit... I find it fundamental to have a basic pharmacy.’ (M1)

The pharmacist needs to promote the rational use of medicines and therapeutic education in the FHS. The treatment, this way, becomes more effective and enables the user to know how to deal with possible side effects and drug interactions, contributing to treatment adherence. Therefore, it is necessary to consider the pharmacist’s potential to contribute, and effectively incorporate this professional into the family health teams in many various activities, promoting health and preventing diseases(37).

The participation of the multidisciplinary team in educational activities on health and the incorporation of the pharmacist in this perspective should happen after some preparedness. In order to achieve the incorporation of ideas and correct practices that become part of people’s quotidian, so that their real needs are met, it is important, at first, that education fosters ideas, so that these are incorporated into practice, then generating behaviour change.

The adoption of RUM promotion strategies can bring several benefits, such as efficacy, safety, improvement in the standard of care, significant cost savings, mortality and morbidity decrease, and quality of life for the population, being, therefore, of great social and scientific relevance.

Generally, one can realize that there is no actual record on whether the doctors within the Family Health Strategy in Teófilo Otoni, MG, effectively used ‘health education’ in contribution to the promotion of rational use of medicines. Considering the need to strengthen the community capacity for the use of medicines, one seeks to identify whether doctors in the Family Health Program exchange information or promote discussion with the public and the team about medications.

The fact that the research was performed only at the local level can be considered a limitation of this study, so that similar investigations in other states in Brazil are necessary for possible systematizations.

**FINAL CONSIDERATIONS**

The perception and use of health education by physicians in this study prioritize the traditional model of health education, focusing on the transmission of technical and scientific knowledge. It is noticed that the concepts are fragmented; lack of knowledge about the RUM in previous training; use of methodologies applied sporadically and in a paternalistic perspective. It is also noticed the concern about disease prevention, rather than health promotion; low availability on the part of the professionals; and failure to recognize the needs, in their actions. It is suggested that health education is carried out with training on the methodologies, the professional being prepared to perform them. Moreover, that the incorporation of the pharmacist in the team, as suggested by the professionals and recommended by the WHO, occurs with the incorporation of ideas and practices that enable a change in behaviour.

This work can contribute to the debate on the transformation of the educational practice, so that health education activities are understood not as an additional activity to be held, but as a tool to reorient the indiscriminate use of drugs. In this sense, that one can demystify the symbolism that is attributed to the drug in the health-disease process, and that medical consultation is not merely reduced to a drug prescription. A change in attitude is proposed, not necessarily adding one more activity, since it is in the everyday life, in the practice of the regular activities, that the educational activity is established; but it is necessary that the professional is able and willing to change their actions for the good of the population.

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