



**IV SIMPÓSIO INTERNACIONAL DE
ATENÇÃO FARMACÊUTICA**

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EVALUATION OF PHARMACEUTICAL EQUIVALENCE OF HYDROCHLOROTHIAZIDE TABLETS AVAILABLE IN RIO DE JANEIRO MARKET

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Hypertension is a chronic disease, considered one of the greatest problems of global public health. The implementation of generic and similar drugs on the market aimed to ensure the availability of quality medicines and affordable to the entire population. Hydrochlorothiazide as well as many other medicines for high blood pressure, is available in market in the form of the reference product, similar and generic. In order to check the quality and the pharmaceutical equivalence of hydrochlorothiazide tablets available in the Rio de Janeiro market, there was a comparative study through physical and chemical testing and analysis of various parameters of the dissolution profiles. The study was conducted with reference drugs, generic and similar, testing two different lots of each laboratory. The quality was verified through tests: average weight, hardness, friability, disintegration assay, dissolution and uniformity of unit doses, as described in Brazilian Pharmacopoeia - 5th edition. All samples were adopted in physical and chemical tests, however, similar drugs showed significant differences in the disintegration and hardness test in relation to the reference product. In the analysis of the dissolution profiles, only the generic pharmaceutical demonstrated equivalence to the reference product. In addition, differences were found between these two medicinal products when comparing the dissolution profiles. The results indicate the need for a constant monitoring of the quality and equivalence of pharmaceutical drugs marketed to ensure that the medicines available to the population present desired therapeutic action.

A STUDY OF ANTI-HYPERTENSIVE DRUGS USABILITY BY USERS OF FAMILY HEALTH STRATEGIES IN POÇOS DE CALDAS-MG.

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The Arterial Hypertension (AH) is the chronic pathology of most prevalence in Brazil. The appropriate treatment is the key to a higher survival rate and complications prevention. In Brazil, about 60 to 80% of AH cases can be treated on Health Primary System. The aim of this study is to analyse the health profile of AH carriers using drug treatment and the usability pattern of AH control drugs. There is an ongoing cross-study with registered hypertense people from 7 Family Health Strategies (FHS) located in Poços de Caldas-MG. In each one of the FHS, a microarea was raffled. In each one of them, from the users register made by Health Community Agents, were listed all AH carriers using drug treatment. From this list, according to hypertension numbers in each microarea, were drawn 209 patients. It carried out with house interviews. The statistical analysis will be descriptive, using relative and absolute frequencies. The drugs will be classified trough a system known as Anatomical Therapeutic Chemical (ATC). The project was approved by CEP from FCM-UNICAMP. From 112 interviewed people, 88,4% are aged, 62,5% have familiar background of HAS, 51,7% high rates of cholesterol and neutral fat, 53,6% have good health condition. Three of the patients were victims of heart attack and four of them had a stroke. The most consumed active ingredients were hydrochlorothiazide (48,2%) and losartan (33,9%). 41 of the interviewed people use a 2 drug combination, 18 of them use 3 active ingredients for AH treatment and 28 of them use more than 3 drugs. The most reported combinations were thiazides diuretics with angiotensin converting enzyme inhibitor (ACEI). The most used ingredient is hydrochlorothiazide, agreeing to different directives. Most of them use more than one anti-hypertensive, diverging from the recommendations. It is possible that, part of them, by increasing AH complexity, had the therapeutic scheme modified.

ANÁLISE DO USO DE MEDICAMENTOS EM UM GRUPO DE GESTANTES DE ALFENAS-MG

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When it is necessary the use of drugs during pregnancy, it should take the utmost care to prevent damage to pregnant woman and teratogenic damage or even miscarriage the fetus. Identify the pharmacoepidemiological profile of pregnant women in Alfenas/MG, followed by doctors of SUS during prenatal care. Analyzing the factors associated with pharmacotherapeutic profile of pregnant women. Home interviews were conducted with high-risk pregnancies and normal risk, collection of socioeconomic data, used drugs and FDA classification, to identify the prevalence and factors associated with the use of medication during pregnancy. There was no specific profile, just a heterogeneous group (when considered income, race, education or age). It was verified a significant association between gestational age and the use of medications ($P = 0,0111$). The frequency of use of medications from group A is 4,5 times bigger than group C and 7 times bigger than group D. Similar results were verified comparing group B to groups C and D. The average of the use of medications is closely 3 per pregnant. Two women were using medications from X class. The gestational age of 32 to 36 weeks and 26 to 31 weeks should draw attention once the frequency of medications used in those ages was 26% and 20% respectively, and 18% on the age of 20 to 25 weeks. 17,3% of the woman used medications from a risk class (D and X). The use of risk medication by pregnant women is a reality, even in those who perform medical care during the prenatal period. But often these drugs are used due to lack of better alternatives. The greater integration of pharmacists in prenatal SUS would be of great value to promote rational use of medicines and to exercise more effectively the pharmaceutical care that pregnant women need. It is believed that the studies for the development of new safe medicines for pregnancy should be given priority and the rational use of drugs should be prioritized.

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DOSAGE ADJUSTMENTS FOR ELDERLY PATIENTS WITH DYSPHAGIA

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Dysphagia is the difficult of swallowing due to a lack of cognitive stimuli, frequent in elderly people, which increases up to three times noncompliance to pharmacotherapy. To report a case of pharmacotherapy ineffectiveness in an elderly patient with dysphagia. A 76-year-old man, diagnosed with depression and hypothyroidism, and suspicion of Alzheimer's disease (AD). The main complaints were apathy, restlessness, aggressiveness, hallucinations and difficulty to swallowing the medication. His pharmacotherapy consisted of levothyroxine sodium (38mcg OD), losartan (50mg OD), sertraline (50mg OD), memantine (10mg BID), quetiapine (25mg TID), donepezil (10mg OD) and flunitrazepam (1mg OD), which were macerated and incorporated into yogurt for administration. During the evaluation ineffectiveness problems were identified with sertraline, memantine, donepezil and levothyroxine. On the proposed care plan it was recommended to dilute sertraline in acidic (lemon or orange juice), incorporate memantine and donepezil tablets into bananas and administrate levothyroxine in fasting state; the other drugs were kept being macerated because there wasn't pharmacotechnical impairment nor ineffectiveness evidence outlawing it. Sertraline's maceration in 10-30mL of orange juice enhanced therapeutic effectiveness through improve of mood, physical layout and reducing aggressiveness and agitation. Levothyroxine also had an improve in effectiveness, evidenced by a lack of hallucinations and a 21.8% decrease of the thyroid-stimulating hormone (TSH) in serum level.

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INTERVENTION ASSESSMENT PHARMACEUTICAL TO DRUG THERAPY IN DYSLIPIDEMIC PATIENTS

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Dyslipidemia is a metabolic disease that is a major risk factor for cardiovascular disease. Patients with coronary artery disease undergoing treatment with lipid-lowering, can not achieve the goals recommended to maintain serum levels of cholesterol, triglycerides, LDL and HDL within recommended. This study aimed to verify that the realization of Pharmaceutical Interventions, about a group of non-adherent patients pharmacotherapy, alters the biochemical parameters of dyslipidemia. Over a period of nine months, based on Dáder methodology, the following steps took place: assessment of adherence and design of pharmacotherapeutic profile; division of patients in the control group, which received only dispensation of medicines, and the intervention group, which received pharmaceutical guidelines (verbal and documented); and evaluation of the lipid profile of patients with pharmaceutical intervention and identification of drug-related problems. We evaluated 79 patients and 71% were considered non-adherent to medication treatment. Male patients accounted for 61% of the total and the average age of the intervention group was 55.39 years (\pm 12.87). This group showed a decrease in total cholesterol parameters (- 11.73 mg / dl), LDL (- 7.5 mg / dl) and TGC (-62.73 mg / dl). In both groups had increased HDL value. In the intervention group met 40 PRM and a ratio of 1.43 PRM per individual. This study demonstrated that the group of patients who received pharmaceutical interventions on the proper use of medicines obtained improvement compared to the biochemical parameters of dyslipidemia when compared to the group that did not receive any information. There was also a need for education of patients about their drug therapy, for more than half had an insufficient level of knowledge for an adequate and rational use of treatment.

DELIVERING MEDICATION THERAPY MANAGEMENT IN A SPECIALTY PHARMACY

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Medication Therapy Management (MTM) is a patient-centered clinical service based on the methodological and theoretical framework of pharmaceutical care practice, in which the main role of the pharmacist is to identify, resolve, and prevent drug therapy problems (DTP). The specialty pharmacy component, or Componente Especializado da Assistência Farmacêutica (CEAF), of the Brazilian public health system, encompasses an interesting scenario to implement MTM. It is a system of pharmacies dispensing high cost medications used to treat specific diseases, including Chronic Obstructive Pulmonary Disease (COPD). The World Health Organization proposes COPD management as essential in resource-limited settings. The purpose of this work is to report the experience of offering MTM to COPD patients in a public pharmacy of the CEAF, through a descriptive analysis. The pharmacy has an adequate physical structure, such as private rooms, for individual face-to-face appointments. In MTM, the care process includes an assessment to determine patients' pharmacotherapy needs in order to identify DTP by using a systematic and rational decision-making process. Within this approach, pharmacists ensure that all drugs are appropriate, effective and safe for the patients' conditions and that he/she is able to comply with the treatment. After that, the practitioner builds a care plan in which he/she proposes the necessary interventions and then follows up with the patient to evaluate outcomes. MTM implementation started on September 2014 as a partnership between the Federal University of Minas Gerais and the manager of this CEAF unit. Patients are actively recruited by phone calls. A total of 45 patients are already part of the service and 60 follow-up encounters were made. 86 DTP were found and 53 were solved directly with the patient. Among 33 DTP that need to be solved in partnership with the physician, 10 were already solved. This setting lacks a multiprofessional team, thus the contact with the prescriber is made through letters given to the patients. The MTM service has contributed not only to the improvement of COPD symptoms but also to control other patients' comorbidities. The number of DTP found corroborates the importance of this service and indicates the need to expand MTM to all health care levels as a strategy for promoting rational drug use.

ECONOMIC EVALUATION OF COMMUNITY PHARMACY SERVICES

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Studies have consistently evidenced the positive clinical and humanistic benefits of pharmacist-directed patient care in community pharmacies but the economic evaluations are scarce and equally important as decision-making tools to health managers. The aim of this study was to search for economic evaluations of community pharmacy services published between 2000 and 2014. A review of literature was conducted in March 2015 in Medline and Cochrane databases using the algorithm: “(((drug-dispensation) OR (dispensing) OR (dispensation) OR (community pharmacy dispensing) OR (pharmaceutical care) AND (community pharmacy services) AND ((costs) OR (assessment) OR (pharmacoeconomics) OR (health technology)))”. We considered as inclusion criteria works that presented an economic evaluation of community pharmacy services. Review articles, duplicates and those that not met the inclusion criteria were excluded. Of the 855 articles found, 33 (3,86%) attended the inclusion criteria. Europe and North America were responsible for 90,9% (n = 30) of the studies. The economic evaluation was performed 63,7% (n = 21) in pharmacotherapeutic follow up, 21,2% (n = 7) in medicine review, 9,1% (n = 3) in drug dispensing, 3,0% (n = 1) in pharmaceutical prescription and 3,0% (n = 1) in educational intervention by the pharmacist. The economic evaluation performed was cost-effectiveness in 33,4% (n = 11), avoided costs in 30,3% (n = 10), costs analysis in 24,3% (n = 8), willingness to pay in 9,0% (n = 3) and cost minimization in 3,0% (n = 1). People with chronic diseases, elderly and smokers were the subject in 66,7% (n = 22). All of these studies demonstrated that the pharmacist-directed patient care resulted in some kind of favorable clinical or humanistic outcome and even though the economic evaluation was unfavorable the cost between that and usual care was not different. This justifies the maintenance of the community pharmacy services. It is also necessary to standardize the methodology used for the economic evaluation of this type of light technology with the goal of informing administrators and practitioners.

ADHERENCE STUDY TO DRUG TREATMENT OF PATIENTS WITH HYPERTENSION ATTENDED IN BASIC HEALTH UNIT IN ALFENAS-MG

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Pharmaceutical care is very important to improve adherence to drug treatment, diagnose factors that lead the difficulties of adherence and reduce the number of adverse reactions caused by medicines. This study aims to verify the adherence to drug therapy of hypertensive patients registered and attended in twelve health facilities maintained by the municipality of Alfenas - MG. Data collection was performed through home visits to the studied patients, who responded to a questionnaire. The first stage in such a questionnaire refers to adherence to drug treatment and the second part evaluates the quality of life of patients with hypertension under drug therapy. 196 hypertensive patients and in use of antihypertensive medication were studied. The age group with the highest number of hypertensive patients was the one higher than 60 years old, corresponding to 134 patients. As for the questionnaire about the adherence to the treatment, 96 (48.98%) of respondents were adherent, which leads the 100 (51.02%) remaining to be identified as non-adherent. Within that questionnaire 146 (74.48%) of respondents reported that they do not forget to take their medicine and 112 (57.14%) manifested that they are careful with timetable. 188 (95.91%) reported that when they feel good they do not stop taking their medicine and 188 (95.91%), when they feel bad and 52 (26.53%) reported chest pain without physical exercise. It is not the entire basic health units studied that there are pharmacists to conduct the monitoring and it is concluded that the pharmacotherapeutics monitoring of these patients, performed by pharmacists could improve treatment adherence and reduce adverse reactions reported by patients.

EDUCATIONAL BOOKLET ON DIABETES: CONSTRUCTION AND CONTENT VALIDATION

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Patients with Diabetes Mellitus (DM) require support for self-management education and care. However, many patients with DM do not receive enough support from health services and/or professionals care, which contributes to difficulties in maintaining glycemic control, high risk of DM complications and psychosocial problems. In this context, it is essential to adopt educational and motivational practices such as self-care education, which is the basis for the DM patients' empowerment, fundamental for effective management of the disease treatment. Empowerment is defined as helping patients discover and develop the inherent capacity to be responsible for their own lives. This study aimed to present the results of the construction and content validation of the educational booklet to be used in an educational program for empowerment of patients with DM. The "Educational Booklet on Diabetes" and it was developed covering the actions necessary to diabetes self-care education proposed by the American Association of Diabetes Educators, that are: healthy eating, being physically active, monitoring of blood glucose, medication adherence, good problem-solving skills, healthy coping skills and risk-reduction behaviors. After the construction of an educational booklet, 12 specialists (pharmacists, nutritionists, educators physical, nurses, psychologists, doctors and endocrinologists) evaluated the instrument in two stages using Delphi technique. This technique is a method of trial information used to reach a consensus opinion among these specialists (judges) on a given theme. We consider acceptable an agreement of, at least, 80% among all the specialists. The items reached an agreement less than 80% were reformulated and the material was sent, again, to the specialists for a second stage, until an agreement of 80% or more between all topics. Five patients contributed for final version and demonstrated positive assessment of the educational booklet. The educational booklet present good characteristics of content validate to be used in educational program to empowerment patients with DM in self- management and health care. The construction and content validation of an educational booklet for empowerment requires knowledge and multidisciplinary evaluation, and critical analysis by patients.

EVALUATION OF THE IMPACT OF ANTIEPILEPTIC DRUGS FORMULATION DIVERSITY ON ADVERSE REACTIONS PROFILE

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The use of antiepileptic drugs (AED) is often associated to reported adverse effects (AEs), such as idiosyncratic reactions, dose-related, neurocognitive effects and long-term use complications. The aim of this study was to evaluate the reported adverse events profile in outpatients treated by the Brazilian Unified Health System (SUS) with carbamazepine and/or phenobarbital. Adult outpatients, diagnosed with epilepsy under treatment of carbamazepine and/or phenobarbital by a health institution were included. The evaluation of the profile of reported adverse reactions to drugs was performed through the application of the questionnaire Adverse Events Profile Questionnaire (AEP), using a scale from 1 to 4 (LinkertScale), whereas score 4 indicates more frequent events. The profile of drug therapy adherence was evaluated as well, according to Morisky-Green test. The question was administered to 20 patients, with an average age of 47 years old (SD=12.30), being five males and fifteen females. Eight of these used phenobarbital, fourteen used carbamazepine and two used both drugs. The average score for the questionnaire (21 questions) was 49.9 (SD=17.79). The reported adverse effects (AE) more frequently related were drowsiness (55.0%), depression (50.0%) and memory and agitation problems (45.0%). When related to the drug therapy adherence, it showed up moderate to low adherence while the more frequent adverse events were stomach irritation (20%), mouth or gums issues (20%) and depression (50%). Patients under carbamazepine treatment showed the AE "desire for aggression" more often (75%). It was observed that 60% of the patients showed high AEP scores, equal or superior to 45 points, whereas the most prevalent reported adverse events were associated to the central nervous system and influenced directly on the drug therapy adherence.

EVALUATION OF ADVERSE EFFECTS BY BENZODIAZEPINES USE IN YOUNG UNIVERSITY

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Man has often willing to numerous situations which need to adapt to demands and goings of family external pressures, the social environment, work / school or the environment as well as being charged in responsibilities and obligations. These are the factors that has led to three evils of our time: stress, depression and anxiety exacerbated. Entry in the university coincides with an important period of transition, which involves fundamental developmental tasks, the commitment to the academic world and later with the world of work. So a way to alleviate this tension and have a sense of well being, for many people, has been the use of anxiolytics. Anxiolytics are drugs having the property to act on anxiety and tension are also used in the treatment of insomnia, sleep inducing. The benzodiazepine drugs, in particular, are among the most widely prescribed in the world. The objective is to then evaluate the use and search of adverse reactions by use of benzodiazepines by the university at the Federal University of Alfenas (UNIFAL-MG). It is expected to draw at the end of this work, the profile of use of benzodiazepines, identifying if there is adverse reactions and the concomitant use of this class with alcohol. College of UNIFAL-MG, headquarters campus, were asked to voluntarily participate in the study; after signing the free and informed consent, questionnaires applied in order to identify the use of anxiolytics the class of Benzodiazepines. Among the users identified by the questionnaire they were asked to participate in an interview with the researchers to detect possible adverse reactions caused by these drugs. These adverse drug reactions (ADRs) are posteriorly analyzed and classified as recommended by the National Coordinating Council for Medication Error Reporting and ProVention (NCCMERP quoted by Mastroianni and Varalho, 2013). The causality of RAM are determined as of Naranjo algorithm. The partial results obtained so far revealed that 85% of college attendees feel very anxious in the face of situations evidenced in daily academic life, and 55% make use of anxiolytics and 50% are drug class of benzodiazepines. Adverse reactions reported with the highest incidence are somnolence, decreased libido, nausea, forgetfulness of recent events and dry mouth. It will be further assessed whether these reactions are for drug interactions, since most of the participants using benzodiazepine in combination. It was also observed that a large percentage of participants makes use of concomitant medications with alcohol, which leads to damage.

FACTORS RELATED TO THE DRUG THERAPY ADHERENCE IN DIALYTIC PATIENTS

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Ensure adherence on drug therapy, in general, is not an easy task, even in patients with chronic conditions and/or under dialysis, making necessary efforts from the healthcare team and from the patient, in order to follow their proper therapy. The aim of this study was to evaluate the pharmacotherapeutic profile and the medication adherence in patients with chronic renal failure undergoing dialysis from a large hospital in the Midwest of Minas Gerais. This is a cross-sectional observational study carried out in a philanthropic hospital. The adherence questionnaires Morisky-Green and Brief Medication Questionnaire were used to analyze the dialysis patient adherence to the pharmacological treatment together with the assessment of the presence of polypharmacy and the therapeutic complexity index. The study population was characterized by predominantly male, white, married patients, age 56.5 years old (SD:13.2). The major classes of medications in use were antihypertensive and phosphorus binders. The patient adherence by Morisky-Green test corresponded to the high adherence (50.5%) and by the Brief Medication Questionnaire corresponded to the likely poor adherence (80.6%). The adherence of the patients with chronic renal failure undergoing dialysis to the drug therapy varied according to the test used for adherence.

IMPORTANCE OF PHARMACEUTICAL PROFESSIONAL DURING THE PHARMACOLOGICAL THERAPY OF PEDIATRIC PATIENTS

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The practice of drug therapy in pediatrics is widely used in hospitalized patients, yet the administration errors and the rate of deaths occurred have increased considerably in Brazilian hospitals. The objective of the present study was to evaluate the knowledge of professionals linked to drug administration in pediatric and demonstrate the importance of the pharmacist in hospital environments in order to reduce the number and severity of medication errors occurred. The work was carried out in a Maternal-Infant Unit of a university hospital in southern Minas Gerais. 22 questionnaires were applied to nurse professionals and nursing technicians. The results show that 54.54% of the nursing team did not conduct training to improve the knowledge about dosages and routes of administration of drugs in children. When there is any doubt about the administration of some medicine 68.18% of the professionals request assistance from the supervisor nurse, 22.72% retract directly to the doctor, 4.54% report consult other technical and only 4.54% turn to the pharmacist. 22 of the professionals interviewed, 77.27% reported having a supervisor full time while working and 18.18% state that they have committed some drug administration errors. Among the main medication errors in the sectors studied, 62.5% of professionals cite the prescription error as most prevalent, followed by 25.0% of respondents who stated to be the main medication error the incorrect time of drug administration, 13.63% of the professionals stated to be the failure to the dilution of the drug to be administered. None of the professionals and technician's interviewed cited administration error or dosage of the drug, while 27.27% did not give their opinion on this issue. It is concluded that the pharmaceutical professional has great importance in the hospital environment, in all sectors, including the Maternal-Infant Unit to improve information for professionals on the use of medicines in pediatric as well as reducing the problems related to drugs (PRD's) in that sector.

PHARMACEUTICAL IMPORTANCE TO AVOID PHARMACO-NUTRIENT INTERACTIONS EVIL IN A NURSING INSTITUTION IN A CITY IN SOUTH OF MINAS GERAIS.

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The pharmacist, through pharmaceutical care, pharmacotherapy can follow, guiding and intervening when necessary, seeking improvement in health education and quality of life of patients. This study aims to analyze the possible interactions between food and drugs used to treat hypertension and diabetes administered to the elderly in a nursing home in a city in south of Minas Gerais. It was developed with elderly patients with diabetes and hypertension of the public asylum a city in southern Minas. For data collection a dining table was applied reporting what foods were offered for the elderly. This dining table was filled by cooks during the survey period. In addition to the table, a distribution record was analyzed the drugs for hypertension and diabetes offered to the elderly, given by the administration of the institution. This record contained the drugs used for hypertension and diabetes and administration times of the same. To the possible interactions between drugs and foods offered to the elderly was used Scielo database. The data showed 28 elderly hypertensive patients, 14 hypertensive and diabetic, diabetic and 6, of a total population of 75 elderly residents at the institution. They found 53% (28) of interactions with antihypertensive drugs, 26% (14) with diuretics, 11% (6) with antiplatelet and 9% (5) with oral hypoglycemic agents. After analyzing the results, we can conclude that there are numerous possibilities for drug-nutrient interactions, which may cause damage to the drug effect and / or nutritional state of the patient.

INSULIN SELF-ADMINISTRATION TECHNIQUE WITH DISPOSABLE SYRINGE AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS ATTENDED IN PRIMARY HEALTH CARE UNITS.

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Due to the progressive nature of type 2 diabetes mellitus, insulin therapy is used in many patients with type 2 DM. Inadequate insulin administration techniques can influence in the effectiveness of drug treatment. This study aimed to evaluate the insulin self-administration techniques with disposable syringe among patients with type 2 DM attended in primary health care units (PHCUs). A cross-sectional study was carried out in PHCUs of Ourinhos microrregion, Sao Paulo State, during March - June 2015. A convenience sample of 100 patients with type 2 DM, with ≥ 18 years, using insulin (alone or in combination with oral antidiabetics) was randomly selected. Three researchers evaluated the insulin self-administration technique by direct observation (patients received one disposable syringe, one bottle of insulin, cotton and alcohol; they were oriented to simulate their self-administration technique) using a check-list developed by Stacciarini et al. Descriptive statistics and multiple logistic regression were used. The majority of our sample was female (72.0%), with a mean age of 58.4 ± 3.7 years, a mean of 4.7 ± 1.2 years of scholarship, and a mean monthly family income per individual of $R\$ 542.2 \pm 74.3$. In terms of disease diagnose, the mean was 7.4 ± 2.1 years, with a mean duration of insulin self-administration of 3.1 ± 1.2 years. Only 4.0% of our sample carried out correctly every steps of insulin self-administration technique. A total of 90.0% did not wash their hands, 96.0% did not observed insulin characteristics, 42.0% did not mixed insulin before administration, 21% mixed insulin vigorously, 96.0% did not wipe the rubber top of the insulin bottle with alcohol, 46.0% did not inject air into the insulin bottle before draw up the insulin dose, clean the skin with alcohol and allows it to dry, 12.0% did not pinch a fold of skin, 8.0% did not inject the needle at a 90-degree angle. The logistic regression showed that higher scholarship was associated with better insulin self-administration techniques (OR = 1.7, CI95% 1.2-2.3). Our results showed that most of the patient did not carry out adequate insulin self-administration technique with disposable syringe; there is a need to adopt strategies to improve these results.

PHARMACEUTICAL CARE CENTER OF UNIFAL-MG – NAFAU

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The Pharmaceutical Care Center of Unifal is an extracurricular component to the course of Pharmacy, indispensable to the consolidation of the desired professional performance inherent to the general pharmaceutical profile. The NAFAU aims to develop teaching, research and extension in the area of pharmaceutical care, encourage teamwork, promoting curricular and extracurricular teaching, creating a bond of trust between the patient and the pharmacy student, showing the importance of pharmacist in public health and promoting the view that pharmacy is a health establishment. The core is composed of 16 members graduating in pharmacy committed to carry out activities in pharmaceutical care area, which are: weekly meetings lasting an average of two hours, pharmacotherapeutic monitoring of patients on medication adherence workshop, seminar series, directed studies note pharmaceuticals (EDAF), health orientation campaigns on campus based university in the central square and the street market of Alfenas, always performing pharmaceutical guidelines, blood glucose measurements, cholesterol, blood pressure and promoting the rational use of medicines. During 2014 and 2015, it reached more than 700 people. 3 large health orientation campaigns were conducted; a cycle of seminars whose topics were pharmacotherapy of pain, depression and suicide, drug addiction, pharmacotherapy of dyslipidemias; one medication adherence workshop with academics and health agents of the Family Health Program; and directed studies with an emphasis on mental health. So, given the need for awareness of rational use of medicines and pharmacotherapeutic monitoring, NAFAU comes to reaffirm further the pharmacist's role as a health professional in the context of pharmaceutical care.

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MEDICATION THERAPY MANAGEMENT IN A MULTIDISCIPLINARY HEALTHCARE TEAM

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Medication Therapy Management is a service, based on the theoretical framework of Pharmaceutical Care, in which the professional is responsible for the patients' pharmacotherapeutic needs and is committed to achieve their therapeutic goals. This service can happen collaboratively with other health professionals and this integration has positive effects on clinical and economic outcomes. The aim of this work was to understand the inter-relationships and challenges surrounding the implementation of Medication Therapy Management in a health team of a diabetes multidisciplinary clinic, using ethnography methodology. The methods used were participant observation with notes in a diary and semi-structured interviews with the healthcare members. The practical scenario of this study is a diabetes multidisciplinary clinic that has specific characteristics such as team discussions and space for health education. This team consists of physicians, residents and medical students, dietitians, pharmacists and pharmacy academics, that work together to treat patients suffering from diabetes mellitus in more advanced stages. After almost two years of experience and thirty-five patients followed collaboratively, the Medication Therapy Management service can be considered inserted on the team. After some attempts, it was agreed that patients would be referred from physicians and the decision toward the pharmacotherapy would be made together. Time, trust and respect are essential for the successful establishment of relationship. Knowing the role of each in the team enables better interaction of professionals. The service is positively seen because it offers multiprofessional care and allows various points of view about the same patient, increasing the possibility of establishing an adequate therapeutic relationship. The dialogue that is necessary to the clinical care in teams opens space for creation of new, communicatively achieved knowledge.

PHARMACOTHERAPY OF INSTITUTIONALIZED ELDERLY PEOPLE FROM A CITY IN THE SOUTHERN MINAS GERAIS

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Elderly make varied drugs intake at different times and dosages prescribed by different doctors, which can cause confusion in relation to its correct use. This study aimed to analyse the main classes of drugs used by the elderly people in a nursing home in the town of Alfenas - MG and associated with this, determine the importance of pharmacists in pharmacotherapeutic monitoring of these patients. Questionnaires were applied and analyzed the elderly medical records from the institution for recruitment of the main drugs used and assessment of adherence to the treatment. The study revealed that the most prevalent diseases among the elderly people studied were hypertension (n = 33, 16 females and 17 males), diabetes (n = 12, with 6 of each sex), hypothyroidism (n = 9, being 5 male patients and 4 female) and mental deficiencies (n = 15, being 6 males and 9 females). The results showed that the drugs most commonly used by seniors are: vitamin supplements, captopril, omeprazole and losartan. It was verified a wide variety of drugs prescribed for each elderly, ranging from 1 to 10 medications among older people who received medical prescriptions. It was found that the nursing home has a special care regarding to self-medication, not allowing the elderly to do it, however, there is no pharmacist in the institution to monitor the drug therapy of patients. All drugs are administered by nurses. It was concluded that the elderly are patients using polytherapy for treatment of their pathologies, requiring a pharmacotherapeutic monitoring performed by pharmacists to avoid adverse reactions or harmful drug interactions.

LOCAL SKIN REACTIONS CAUSED BY INSULIN ADMINISTRATION ON DIABETIC PATIENTS FROM A CITY OF MINAS GERAIS

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Insulin is the main treatment used by people with diabetes mellitus (DM) type 1, it is also a treatment option for some patients with DM type 2. Several instruments for insulin self-administration are available, such as plastic syringes and pen device (Down, 2012). However, if the injection technique is faulty, in addition to directly affect glycemic control, errors in the administration of insulin gives rise to complications at the injection site (Strauss et al. 2002; Frid et al, 2010). The aim of this study was to describe local skin reactions related to the injection of insulin, reported by individuals with DM, and its main causative factors and consequences, through a descriptive study with a quantitative approach. The study was carried out among patients with DM type 1 or type 2, insulin users, served by dispensing units in the municipality of Divinópolis, MG. The population of study consisted of 81 insulin users. Data collection was performed by applying a systematic survey held after the signing of the Written Informed Consent Form (WICF), and it consisted of closed questions covering sociodemographic, diagnostic and treatment variables, disease period and time of insulin use; and related to insulin injection including the reactions that have occurred in the injection site. This study was approved by the Ethics Committee on Human Research of the UFSJ-CCO. The results showed that more than half of the participants performed the rotation of the injection site; however, approximately 70% of the participants have some kind of skin reaction. The most frequently reported reactions were bruising and swelling, and complications were related to the insulin usage time, showing that, in the long term, the use of insulin makes it more likely to have some kind of reaction. Improper application techniques are also a cause for the appearance of reactions at the application site. Thus, we conclude that the correct application technique and the rotation of the injection site are essential factors to prevent the onset of skin reactions. It is important to emphasize the importance of health education for guidance on the correct insulin application technique to reduce these reactions.

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PROFILE OF DRUGS CONTAINED IN PHARMACIES HOMEMADE FROM BRAZIL

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As common in the treatment of diseases, the use of drugs is one of the most frequently used methods today. This practice involves the storage of medicines in the home and this may favor the indiscriminate use, self-medication and inadequate disposal. Therefore, it becomes important to know the profile of medicines stored in households, and this study aims to analyze Brazilian articles describing the drug profile stored in home pharmacies. For this was held a narrative review with search of articles indexed in the databases: PubMed, ScienceDirect and SciELO, published by March 2015. Twenty articles were selected, the majority (70%) was from South region of Brazil, followed by the Southeast (20%), North (5%) and Northeast (5%). Regarding the number of visited residences, this ranged 31-3,182, and an mean of 472 residents. It was found an mean of 1,668 medicines for study, ranging 70-4,651 drugs. In thirteen articles (65%) were found expired medicines in the home, ranging 10-441 drugs/study, mean of 172 medicines. About drugs not expired, these ranged 39-2,930, with mean of 523 medicines / study. The therapeutic classes most prevalent were: analgesic, antihypertensive, antidiabetic, diuretics and anti-inflammatories. The solid pharmaceutical form was the most prevalent in the studies analyzed.

PRESCRIPTION PATTERNS OF INSULIN AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS ATTENDED IN PRIMARY HEALTH CARE UNITS.

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The prevalence of type 2 diabetes mellitus (DM) is growing at an epidemic rate. Widely accepted treatment guidelines recommend early insulin initiation and subsequent insulin intensification to achieve glycemic control. This study aimed to evaluate the pattern of insulin therapy among patients with type 2 DM attended in primary health care units (PHCUs). A cross-sectional study was carried out in PHCUs of Ourinhos microrregion, Sao Paulo State, during March - June 2015. A convenience sample of 100 patients with type 2 DM, with ≥ 18 years, using insulin (alone or in combination with oral antidiabetics) was randomly selected. Drug prescriptions, medical records, and patient interview were used to assess drug therapy and clinical outcomes (blood fasting glucose [BFG] and A1C hemoglobin). We used Brazilian Diabetes Society (SBD) position statement regarding insulin therapy on type 2 DM as standard of insulin therapy. In terms of disease diagnose, the mean was 7.4 ± 2.1 years, with a mean duration of insulin therapy of 3.1 ± 1.2 years. Dual therapy was found on 35% of our sample: 25% used insulin NPH at bedtime plus metformin, and 10% used insulin NPH at bedtime plus glyburide. Triple therapy was found on 35%: 15% used metformin, glyburide and insulin NPH at bedtime, 15% used metformin, pioglitazone, and insulin NPH at bedtime, 5% used metformin, insulin regular before lunch and dinner, and insulin NPH at bedtime. Therapy with four drugs was found on 20%: 15% used metformin, glyburide, insulin regular before lunch and dinner, and insulin NPH at breakfast and bedtime, 5% used metformin, gliclazide, vildagliptin and insulin at bedtime. Ten percent of our sample used insulin regular three times per day and insulin NPH twice a day. Mean BFG and A1C hemoglobin was $164.0\text{mg/dL} \pm 45.2$, and $7.9\% \pm 0.7$, respectively. Every drug prescriptions assessed follow SDB statements regarding insulin therapy. Higher insulin dose and the use of insulin regular were associated with better glycemic outcomes. Our results showed that prescription patterns followed SDB standards and there is high number of patients achieving adequate glycemic control.

THE INFLUENCE OF THE QUALITY OF LIFE ON PHARMACOTHERAPY ADHERENCE IN DIALYSIS PATIENTS

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Chronic Kidney Disease is considered to be a public health issue worldwide, due to its increasing prevalence, high demanded costs for patients maintenance as much as its high mortality and morbidity. This project had as aim evaluate the influence of quality of life under the adherence to pharmacologic treatment of chronic kidney disease patients submitted to dialyses and the influence of clinic, social economic and demographic factors about their well-being. The Health State SF-36 survey was utilized, and translated and validated to the Portuguese language, to evaluate the quality of life and the de Morisky-Green and Brief Medication Questionnaire Tests to analyze the adherence profile for the pharmacologic treatment. This study was approved by Ethics in Research Committee of the Federal Sao Joao del-Rei University, under the approval number 641.045/2014. The variables: age, female gender and the presence of other comorbidities in association with Chronic Kidney Disease shows negative relation with quality of life. The results did not present similarity between the adherence profile for the pharmacologic treatment obtained by Morisky-Green and Brief Medication Questionnaire, however, both show that low adherence to pharmacologic treatment can be associate with the less well-being. Through this study, it is possible conclude that has influence of clinics and social demographics factors with the low quality of life to those patients and that may have relation with the low adherence to the pharmacologic treatment.

POTENTIAL DRUG-DRUG INTERACTION IN PEDIATRIC INPATIENT

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Pediatric inpatients are usually exposed to various medications during the length of stay in the hospital, increasing the risk of drug-drug interactions (DDI). The topic DDI is known as a major concern in health care, and the prescription evaluation by pharmacist could result in identification and reduction of such problems. The aims of this study were to analyze the prevalence and characteristics of DDI in pediatric patients treated in a Brazilian teaching hospital. A retrospective observational study was conducted in a pediatric department of a teaching hospital in Goiânia, Goiás for a period of March 01st to April 01st 2014. Exclusion criteria: medical records that have not been found in three subsequent requests. The social-demographic and clinical characteristics and the medication prescribed was collected from the medical records and documented in a form. Drug interactions were identified and classified using Micromedex® system. The interactions were stratified according to the seriousness (minor, moderate and major) and descriptive analysis was used to report the findings. Thirty one patients were included. The mean of age (\pm SD) of the population was 6.9 (\pm 5.8) years old, of which 64.5% were male and 35.5% female. The mean length of stay (\pm SD) was 12.7 (\pm 12.7). Thirteen patients (41.9%) presented some kind of DDI on the prescriptions and 66 DDI were identified (2.1 DDI per patient). Majority (63.6% %, n=42) of the interactions were moderate and 27.3% (n=8) was classified like major and 9.1% (n=6) like a minor DDI. The interactions between domperidone and ranitidine (4.5%) and between spironolactone and enalapril (4.5%) comprised most classes of major DDI, followed by the interactions between fentanyl and midazolam (3.0%). The therapeutic groups most involved were antihypertensive and antimicrobials. Exposure to drug interactions is common among hospitalized children, thus the study highlighted the need to effectively monitor DDIs to improve patient safety. Moreover, the presence of the pharmacist, as a member of the multidisciplinary team, can contribute by detecting drug interactions and ensuring a safe drug therapy.

PREVALENCE OF EXPIRED MEDICINES STORED AT HOME

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The presence of expired medicines in the home has become a public health problem in Brazil, and this may cause clinical and economic impact for the patient and for the health system, such as, risk of intoxication and unnecessary expenses with losses and disposal of medicines. Thus, the present study aims to estimate the prevalence of expired medicines stored at home of users of primary health care of Public Health System (SUS) in Divinópolis-MG. A cross-sectional study was conducted with users of primary health care services. A structured questionnaire was used for the interviews. The respondents were invited to participate of the study when they were in health unit, and the interviews were conducted in the homes of participants. The expiration dates of all medicines contained in the residence were analyzed. The data were entered in Epi Info® and descriptive analyzes were performed in Stata® version 12. Descriptive analysis was performed using the distribution ratio for categorical variables. Besides of the prevalence calculation, it was analyzed the proportion of expired medicines in the home that had at least one expired medication through the following calculation: "Proportion of expired medications: total of expired medicines/ total medicines in the home ". It was interviewed 127 patients, 119 women (93.8%) and the majority does not have complete elementary education (70%). Family income varied from R\$ 240,00 to R \$ 9,000.00, with a mean of 1,842 (SD = Standard Deviation = 1,231.1). The mean of medicines/home was 13.1 (SD = 7.6), ranging 2 to 48 medicines/residence. The prevalence of home with at least one expired medication was 47.2% (n = 60), mean of 1.6 (SD = 2.5) medicines/home. Considering the home that had at least one expired medicine (n = 60), it was observed that 3.7% to 83.3% of the medicines were expired, mean 23.0% (SD = 23.8). Therefore, it is observed that the prevalence of expired medicines stored at home is higher than other Brazilian studies. These results show the need to implement educational activities for the population and incentive policies to the correct disposal of expired medicines.

PREVENTION OF MEDICATION ERRORS IN PEDIATRIC INPATIENTS BY PHARMACISTS: A LITERATURE REVIEW

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Medication errors cause appreciable morbidity and mortality in children. Pharmacist's interventions may reduce medication errors in pediatric hospitals, improving the quality of patient care in collaboration with multidisciplinary healthcare team. The objective of this study was to review studies on medication errors in pediatric patients detected and prevented by pharmacists. A bibliographic search was performed using Medline and LILACS databases for studies published between March 2005 and April 2015 evaluating medication error prevented by pharmacists in pediatric inpatient. Inclusion criteria were: pediatric population, studies in English, Portuguese or Spanish, studies in populations not selected for specific diseases or drugs. The search strategy employed the following algorithm: (child OR children OR pediatric OR paediatric OR neonatal) AND (pharmacy OR pharmacist) AND (pharmaceutical intervention OR pharmaceutical care) AND (hospital OR inpatient) AND (medication error). Two independent reviewers screened articles for eligibility and data extraction. The extracted data was: main intervention, global acceptance rate for recommendations and impact of recommendation. A total of 133 articles were found in the search and 11 articles were selected for full-text review. For collected data 3 articles were included. Two Spanish articles showed just prescribing errors and a Dutch article showed many types of medication errors. Dosing errors were the most common medication error detected by pharmacists. The percentage of dosing errors intercepted by pharmacists ranged from 36.8 to 61.4% (mean: 49.2%). The global average rate of acceptance of pharmacist's recommendations was 94.9%. Two articles analyzed the impact of the interventions and the rates of very significant pharmacists' interventions were 1.1% and 11.1%. The results showed that the pharmaceutical interventions had a major impact in preventing dose errors, improving the use of medications in children. Furthermore, this study showed that most interventions were accepted and it helped to reinforce the need of presence of pharmacist on the healthcare team.

PROVISION OF PHARMACEUTICAL SERVICES TO THE POPULATION OF ALFENAS

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The pharmaceutical services are activities performed by the pharmacist that are part of pharmaceutical care. These include measurement of blood pressure, capillary glycemia and other biochemical parameters, earrings placement, application of injectables among others. The objective was to provide pharmaceutical services to the population of Alfenas-MG, promoting the health of the population in question, through health campaigns conducted in various locations of the city of Alfenas-MG. The project was developed by members of the NFAU (Pharmaceutical Care Center of Unifal-MG) with 16 students in pharmacy under the supervision of a pharmaceutical responsible for the project. Health campaigns were developed to promote the rational use of medication and consequently the health of the population, these were carried out in the city center, in the street market held on Sundays and the Federal University of Alfenas, with the strategy meet the highest number of patients. During the measurement of parameters, patients answered questions from a data collection form. During 2015, struck up a target audience of 216 people with an average age of 54 years (± 15.859) and 39.15% female and 60.85% male. Of these, 72.33% had normal blood pressure (less than 140x80 mmHg). He conducted measurements of glucose in 117 people, with 23.93% had altered blood glucose levels (above 140 mg / dL). As for total cholesterol, total 83 persons, 15 (18.07%) had total cholesterol values changed (greater than 200 mg / dL). Patients with altered parameters were instructed on how to proceed. In addition, patients whose parameters have shown altered will be offered the following pharmacotherapeutic conducted by NFAU. It follows thus that health campaigns are important not only as specific actions but also to select patients in need of pharmacotherapeutic follow-up.

RATIONAL DRUG USE IN PREGNANCY AND GUIDELINES

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Pregnancy is evaluated as a critical period and should analyze the risk/benefit of any drug treatment, because many drugs can cross the placenta and reach the bloodstream of the fetus, bringing serious consequences in its development. The methodology consisted in providing pharmaceutical care to pregnant women, providing information about the rational use of medicines during pregnancy and performs pharmacotherapeutic follow. For execution of the project was used Dader Method (2010). We selected 30 pregnant women living in Alfenas municipality, that make use of the Unified Health System (SUS) and registered Family Health Program (FHP) in the municipality. The women were followed throughout pregnancy and for at least six months. The visits were carried out fortnightly. He began the work, conducting a training course for community health workers (CHW) in the city of Alfenas, MG, Brazil. Before the short course was administered a questionnaire to CHW in order to know the level of information on the subject and medicines to related problems (MRP) that agents experience in their professional practice, and identified that the main questions are about the use of medicines. Two educational booklets have been prepared for distribution to the ACS and for pregnant women followed. The initial approach of pregnant women occurred in the FHP. The invited mothers, only 12 accepted the monitoring. Most of the patients were between 30 and 40 years, was married, she worked outside the home, had complete or incomplete high school and said the pregnancy was unplanned. Only a pregnant woman had chronic disease. No patient had grievances concerning the misuse nor problems related to drugs, so the pharmaceutical intervention focused on educational activities. The role of the pharmacist was to provide basic guidelines for maintaining the health of pregnant women, avoiding potential problems with drug use. All pregnant women who accepted the pharmacotherapeutic monitoring service rated it as satisfactory and said that would indicate to others. Pregnant women who participated in the project realized the importance of pharmaceutical care.

MEDICATION RECONCILIATION FOR PATIENTS IN CANCER TREATMENT THROUGH THE USE OF AN ELECTRONIC REGISTRATION SYSTEM VIA WEB

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Patient safety and quality of health care in the use of drugs has been the focus of concern and worldwide studies. Patients undergoing cancer treatment may be especially vulnerable to damage after hospital discharge and the occurrence of adverse events related to drugs, which might result in care in emergency rooms or hospital readmission. The present study has as main objective the participation of medication reconciliation studies for women undergoing treatment for breast cancer, using an software "Integrated System for Patients" in hospital "Casa de Caridade de Alfenas Nossa Senhora do Perpétuo Socorro" in order to meet the strategies used in this hospital to minimize the risk of adverse events to the use of drugs. The study was approved by the Ethics Committee of Unifal - MG (CAAE: 36991114.0.0000.5142). The study has followed 36 patients being treated for breast cancer. The average age is 56 years, and the treatment time by an average of three years. Regarding treatment, 100% of patients have done breast removal surgery, chemotherapy and radiotherapy. Regarding the instrument for assessing quality of life, 44.4% of patients rated their health status and with longer note 4 for overall quality of life, 36.1% of patients responded with Note 5 (with a minimum of 1 - bad and maximum 7 - great). The most widely used drug for cancer treatment Tamoxifen was (33.33%). The main complaint with regard to chemotherapy was "pains" with 19.4% - "much pain" - after chemotherapy. Drug reconciliation was suggested to 36 patients. Among the therapeutic classes, antiulcer the most been reconciled (47.22%), antihypertensives (36.11%), antilipemics (27.11%) and oral hypoglycemic agents (25%). Guidelines for medicines, food and restriction of tobacco use were given to patients. We conclude with these results that the pharmacist in monitoring drug reconciliation was important for patients undergoing cancer treatment.

TEN YEARS OF RDC 306/2004: STRUCTURE EVALUATION OF A MEDIUM CITY ON MINAS GERAIS

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The aim of this study was to evaluate the existence and the Health Care Waste Management Plan structure (HCWMP) in a medium city in Minas Gerais, Brazil. Observational transversal study evaluating the HCWMP situation and quality. It were developed a detailed form of the HCWMP and an assessment tool. Ten health facilities were selected randomly. The accordance percentage was calculated by the quantity of adequate observations regarding the total of assessment tool observations. Eight health facilities participated in this study, two hospitals, two drugstores, two clinical laboratories, a hemocenter and a basic health unit. From that, six (75%) produce waste from the groups A, B, D, and E; four of them were producers of groups A1 and A4, and two of them were groups A3 and A4, the others (25%) produce groups B, D, and E. In all establishments, the waste was segregated on the moment of generation. On group B, 62,5% from the facilities presented accordance higher than 60% in the management of Wastes from Health Services. On group D, only 25% of the facilities presented accordance higher than 60%. Group E, presented 100% of accordance in eight facilities. It was also found that employees responsible for wastes used Individual Protection Equipment. Even though obtained results were positive in the HCWMP evaluation, mistakes in the WHS management were observed, which makes urgent the awareness about the importance of a correct waste management due associated risks to the environment, workers, and community.

THE IMPORTANCE OF PHAMACOTHERAPEUTIC FOLLOW-UP IN THE TREATMENT OF WOMEN WITH BREAST CANCER

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The pharmacotherapeutic follow-up in breast cancer patients is important to avoid unnecessary expenses with the selected therapy, improve their adhesion to treatment and general health conditions, and reduce the risk for adverse effects. The present study aims: (a) to identify the most common types of breast cancer treatments and their respective adverse effects; (b) to examine the patients' adhesion to treatment. Data were collected by means of a questionnaire applied to 34 women breast cancer patients followed at the Santa Casa de Misericórdia Hospital in Alfenas/MG. The analyzed variables were: when the disease was diagnosed, types of therapies employed, medicines given to the patients, adverse effects, and patient's adhesion to treatment. The study was approved by the Ethics Committee on the advice number 951.055. We found that breast cancer was usually diagnosed in the pre- and postmenopausal periods. Chemotherapy was the most common type of treatment, followed by hormone therapy, radiation therapy, and mastectomy. Seventy percent of the patients undergoing hormone therapy also received tamoxifen alone or in combination with other medicines. Only one of the 34 patients was not treated with chemotherapy alone or associated with hormone therapy. Patients undergoing chemotherapy alone (n=16) mentioned nausea (56.25%), while patients undergoing chemotherapy plus hormone therapy (n=17) mentioned nausea (35.29%) and hot flashes (23.62%) as the most frequent side effects. Regarding adhesion to treatment, 88.24% of the patients took medicine every day; in this subgroup (n=30), 93.33% of the patients reported that they never forgot to take their medication, and 6.66% of the patients reported that they forgot to take their medication once a week. In the group of patients taking medicines not prescribed for continuous use (n=18), 88.88%, 5.55%, and 5.55% of them displayed a very good, good, and bad assiduity, respectively. A pharmacist did not follow the studied patients during their treatment. Therefore, the pharmacotherapeutic follow-up in breast cancer patients shall help to improve their adhesion to treatment and reduce both the frequency and intensity of the adverse effects caused by medicines used in breast cancer therapy.

THE ROLE OF THE PHARMACEUTIST IN THE SELF-MEDICATION IN ELDERLY PEOPLE ASSISTED BY DENTAL SERVICE

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The act of self-medicate can be very harmful to the health, and nowadays this is increasing in Brazil. It's important that the pharmaceutical provides patient care, keeping an active role in our society and putting their physiological and pharmacist knowledge accessible to the population. The pharmacist helps in the choosing of the most appropriate pharmacotherapy for each patient. This work aims to identify the determinants associated with the profile of the self-medicate in the elderly population that is attended by a dental service at a University in the south of Minas Gerais. It's a field study with a qualitative and quantitative approach, in which the instrument used was composed of structured interviews guided by questionnaires, with objective questions by clarifying and signing the consent form. Twenty elderly were interviewed which 90% (n=19) reported using some type of medication without prescription, (70%; n = 12) have a health problem, especially systemic hypertension in 11 patients. Of the total respondents (45%; n = 9) usually seek the health service. When asked about the medicines they use without prescription, 100% reported use of analgesics / antipyretics. The main responsible for the indication of these medicines are the relatives (75%; n=15). The present study proves that selfmedication is common among the elderly, where 9 out of 10 users of remedy take at least one medicinal product without indication of a qualified professional. The pharmacist plays an important role in self-medication, making it essential for this practice be carried out responsibly. Thus, the pharmacist as a specialist in drugs has a duty to inform and guide the patient in the dispensation, carefully selecting the most suitable drug, evaluating the need to use, contributing to improving the quality of life of patients.

USE OF SIMULATED PATIENTS TO EVALUATE INSULIN DISPENSING PRACTICES OF COMMUNITY PHARMACISTS.

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Inadequate insulin administration techniques can influence in the effectiveness and safety of drug treatment. Community pharmacists (CPs) are in a strategic position to improve insulin administration techniques because they are the last health professional to interact with patients before drug use. This study aimed to evaluate the insulin dispensing practices of CPs. A cross-sectional study was carried out on Assis and Ourinhos microrregions, between January – May 2015. Four simulated patients (SPs) (with counseled audio recording) visited community pharmacies with a prescription for insulin NPH. The audio recording of every SP visit was listened to independently by 3 researchers to evaluate the insulin dispensing practice. The percentage of CPs who performed a screening for safe use of insulin (i.e., taking of patients' medical and drug therapy history) and provided counseling (a check list proposed by Obreli-Neto et al. was used) were evaluated. Of the 185 CPs contacted, 38 (20.5%) agreed to participate in the study and finished the study protocol. None CP asked the SP a question screening for safe use of insulin. Only 2.6% of our sample provided counseling on every steps of insulin use. A total of 97.4% did not counsel about wash hands as the first step, 97.4% did not counsel to observe insulin characteristics before use, 94.8% did not counsel to mix insulin (not vigorously) before administration, 97.4% did not counsel to wipe the rubber top of the insulin bottle with alcohol before use, 97.4% did not counsel to inject air into the insulin bottle before draw up the insulin dose, 97.4% did not counsel to clean the skin with alcohol and allows it to dry, 97.4% did not counsel to pinch a fold of skin, 97.4% did not counsel to inject the needle at a 90-degree angle. The median duration of dispensation was 156 seconds (range 100 – 201 seconds), and the CPs dialogue with the SPs was focused on providing information about conditions of payments (program Farmácia Popular do Brasil). The CPs evaluated did not dispense insulin appropriately and could influence in the occurrence of negative outcomes such as administration of wrong dose and the prevalence of lipodystrophy. Efforts are needed to improve insulin dispensing practices of these CPs.

THE USE OF PROPHYLACTIC OMEPRAZOLE AND THE POTENTIAL IMPACT ON RENAL FUNCTION

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Omeprazole is a widely used drug; in most cases, it is effective and safe. However, studies have found omeprazole to be the drug most frequently related to hospital admissions due to adverse drug reactions (ADRs). The ADRs could have occurred as a result of abuse or irrational prescribing of omeprazole. Despite that possibility, the risks and benefits of prophylactic omeprazole considering the approved and off-label uses and the potential consequences for patient safety have not been assessed. The objective was to identify and assess the risk of adverse drug events and the benefit provided by the effective use of prophylactic omeprazole in hospitalized patients. This observational cohort study was conducted from August to October 2013 and December 2013 to May 2014 at the Américo Brasiliense State Hospital. The inpatients were classified into three groups: a) approved use of prophylactic omeprazole b) off-label use of prophylactic omeprazole, and c) not using omeprazole. Patients who used no prophylactic omeprazole were excluded. The patients were monitored daily with the aid of a pre-established research protocol. Data were tabulated according to drug effectiveness or ineffectiveness and presence of adverse events in the three groups. Research Ethics Committee - CAAE 28217914.6.0000.5426. A total of 427 hospitalized patients were monitored in the study. Of these, 136 patients were exposed to prophylactic omeprazole used off-label and 52 exposed approved use of prophylactic omeprazole. Two cases of suspected ineffectiveness and 14 adverse events were recorded. There was a significant difference in serum creatinine and urea for patients using approved use of prophylactic omeprazole. There are twice as many patients using off-label prophylactic omeprazole as patients using it for approved indications. There was a significant difference in the increase in serum creatinine and urea for patients exposed to approved use of prophylactic omeprazole, but there was no association of prophylactic omeprazole with others risk factors.

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VARIABLE COSTING APPROACH TO ESTIMATE THE COSTS IN DELIVER COMMUNITY PHARMACY DISPENSING SERVICE

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Many reasons exist for community pharmacies to implement value-added services and profitability may not be the most important consideration. Give value to a service requires that the costs of service delivery are known and considered. Several approaches exist to costing goods and services according to the desired purpose. Among these approaches is the variable costing that considers the fixed costs as fixed expenses for a period and only the variable costs is attributed to the good or service. This approach can be used to determine the reimbursement by health insurance and to give value to the services offered in community pharmacies because it will consider the pharmacist time as the major contributor in deliver a cognitive pharmacist-directed patient care. The aim of this is use the variable costing approach to estimate the value to deliver one unit of the dispensing service to a patient in a university pharmacy in Goiânia, Goiás, Brazil. It was considered the time of the human resource, the pharmacist, as a variable cost. It was used the average of the last six months of pharmacist's salary of R\$ 4.792,43, for 40 hours per week, in a four week month, without the labor charges, and the average time required for dispensing drugs of 11.5 minutes for one patient to estimate the value to deliver one unit of the service. The average value to deliver one unit of the dispensing service, under these conditions, to a patient was approximately R\$ 5,75. This value, R\$ 0,50 per minute, as a variable cost, can change as the time and purpose of the service provided but this approach can be used for various types of pharmaceutical services. Other approaches, such as activity-based costing and absorption costing may provide values added indirect costs to the offered service but it depends on the purpose of the analyzed place. This approach and value can also promote and support discussions and reflections on the willingness to pay for pharmaceutical services in the community pharmacies.

USER SATISFACTION EVALUATION OF PHARMACEUTICAL SERVICES IN A PUBLIC PHARMACY IN MINAS GERAIS, BRAZIL.

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The evaluation of the degree of satisfaction from users of the health system is an important indicator to consider when planning actions and is one of the central aspects to assess the perception of the services provided to population. Therefore, this study aims to evaluate the quality of services provided by the public pharmacy in a small town, in the user's perspective. A survey study was undertaken in a city with about 152,435/persons in the southern region of Minas Gerais. It is a descriptive research, obtained from the application of a questionnaire to frequent users of the unit in order to verify the level of satisfaction with these services. Randomly, we interviewed 50 users of both sexes, aged 21-80 years and from different educational levels, in alternating days and hours. Regarding the level of satisfaction with the reception staff, 14% (n=7) felt very satisfied, 78% (n=39) satisfied and 2% (n=1) dissatisfied; in relation to the withdrawal of all medications prescribed by the doctor, 12% (n = 6) very satisfied, 74% (n=37) satisfied and 12% (n = 6) dissatisfied. Regarding the orientation received from unit employees at the time of delivery of the medication, only 6% (n=3) considered very satisfactory, 70% (n=35) satisfactory and 8% (n=4) insufficient. When evaluating the average service time, only 8% (n=4) considered the service slow. When questioned about the quality of service provided by the central pharmacy, 8% (n=4) considered the treatment excellent and 82% (n=41) great. Thus, it was found that most part of the users expressed satisfaction with the pharmaceutical services of the central unit of the municipality, despite complaints related to the attendance. The user perception is extremely important when sizing the reflection of the actions that have been developed in the health sector, and is an important indicator for the manager to develop actions always aiming to improve and provide dignity to employees and users.

VOICES OF SILENCE: PROFILE FOR DEAF DRUG USE

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According to the sense conducted in 2010 by IBGE, about 9.7 million Brazilians have hearing impairment, which represents 5.1% of the population. These data allow us to evaluate that today is no longer interest only a minority inclusion of people with hearing disabilities and the equalization of opportunities. The hearing impaired, require access to health, not necessarily related to the disability itself. Thus, the pharmaceutical care can be used in order to ensure or guarantee a correct process of use of medicines, since, undoubtedly, this remarkably increases the likelihood of successful outcome. Through questionnaires, invited the deaf who voluntarily demonstrated interest in participating in this research in order to obtain the drug usage profile used by this population, such as: the use of non-prescription medicines medical, problems related to the use of the drug; lifestyle; use of harmful substances, among others. The results demonstrated the difficulty of 61% the deaf in medical consultation, with no understanding by the patient of what the doctor is talking about and not understanding the doctor about what your deaf patients want to report, so most visits to the doctor are performed along with some listener, whether family members or even the translator himself. About the purchase of medicines, half of respondents reported making use of self-medication, and 47,6% deaf respondents did not go to the pharmacy alone, when they do take written what they need. 50% deaf people do not know since when using medicines and most do continuous use without end forecast. They reported not forget to administer the medicine, do not use higher dose when you feel bad, and not stop giving when it feels right. Most said feel better after the start of drug therapy. Some reported feeling adverse symptoms, but showed little knowledge about the drug as precautions best way to manage or adverse reactions. Thus, this authors shown that lack in the health professionals the interest in offering humanized care and quality to this part of the population. And, the lack the Universities and Colleges offer curricular the LBS courses and emphasize the importance of students to attend these classes. Also the Government lack offer health care places with more resources to facilitate access of the deaf, and encourage social inclusion of this population.

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DETERMINATION OF LEVELS OF CARBOXYHEMOGLOBIN AND METHEMOGLOBIN IN DONATED BAGS OF BLOOD

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To determine the percentage of COHb and MeHb in blood from blood donors, and to compare such levels in smokers and nonsmokers during the time course of blood storage. The concentrations of COHb and MeHb were determined in the bag blood of smokers and nonsmokers during the time course of donated blood storage. For comparison of groups, the Student t test was used. Results: The mean COHb concentration in blood from smokers was 12.18% and from non-smokers was 3.40%. Compared to levels determined on the 1st, 10th and 20th day of storage of the bag, the average was 11.51%, 14.00% and 11.04%, showing a significant change in the percentage of COHb during storage. The MeHb values obtained from the blood of smokers and nonsmokers were statistically similar (p value <0.05). These results suggest the need to assess the levels of carboxyhemoglobin and methemoglobin found in blood banks as high levels of these pigments may have adverse effects as combined with the variation in the utilisation of O₂ by cells, especially in patients who are susceptible to heart and lung disorders and paediatric patients.