

**III SIMPOSIO INTERNACIONAL DE ATENÇÃO FARMACÊUTICA/I  
ENCONTRO DE PESQUISADORES EM ATENÇÃO FARMACÊUTICA -  
EPAF**



**LOCAL DE REALIZAÇÃO:**

**UNIFAL-MG**

**ALFENAS/MG**

## APRESENTAÇÃO DO EVENTO

A área de ciências farmacêuticas é dinâmica e apresenta-se em constante desenvolvimento; novas tendências, novos conhecimentos e novas pesquisas fazem parte do cotidiano do estudo farmacêutico. Nesse contexto, a Atenção Farmacêutica tem-se destacado como um resgate da essência do profissional farmacêutico. Trazendo à sociedade novamente a importância das ciências farmacêuticas no cuidado com o paciente e não somente na produção de medicamentos.

Em 1990, Hepler & Strand estabeleceram que “a missão principal do farmacêutico é prover a atenção farmacêutica, que é a provisão responsável de cuidados relacionados a medicamentos com o propósito de conseguir resultados definitivos que melhorem a qualidade de vida dos pacientes” (BISSON, 2007).

A Atenção Farmacêutica compreende, além da terapia medicamentosa, decisões sobre a medicação de cada paciente. Isso envolve a seleção dos fármacos, doses, vias e métodos de administração; monitorização terapêutica; informações ao paciente e à equipe multidisciplinar de saúde; e o aconselhamento do cliente, visto que o alcance dos objetivos terapêuticos depende muito dele próprio, o qual pode ter dificuldade de adesão ao tratamento medicamentoso, ou responder imprevisivelmente ao mesmo devido às diferenças biológicas. Vê-se, então, a necessidade de uma relação de confiança entre farmacêutico e paciente em um acompanhamento farmacoterapêutico, tendo-se o consentimento pleno do paciente e autorização formal para o farmacêutico exercer suas atividades.

A Universidade Federal de Alfenas, antiga Escola de Farmácia e Odontologia de Alfenas, tem uma história de quase 100 anos contribuindo para a formação de profissionais farmacêuticos no Brasil. Com a preocupação constante de formar profissionais capacitados, atualizados e preparados para o mercado de trabalho com qualidade e conhecimento científico a UNIFAL-MG mais uma vez procura trazer sua contribuição ao ensino farmacêutico promovendo o III Simpósio Internacional de Atenção Farmacêutica da UNIFAL-MG e I Encontro de Pesquisadores em Atenção Farmacêutica - EPAF. Aliando nosso corpo docente e pesquisadores farmacêuticos respeitados do Brasil, Espanha e Portugal; buscamos a realização de um evento de qualidade que possa fornecer a alunos de graduação, pós-graduação e profissionais as novas pesquisas e metodologias empregadas na pesquisa do acompanhamento farmacoterapêutico, o cuidado e preocupação com a recuperação da qualidade de vida do paciente, serviços esses prestados pela Atenção Farmacêutica.

## COMISSÃO ORGANIZADORA:

### **Coordenação do evento:**

Dra. Luciene Alves Moreira Marques – Coordenadora e Professora de Atenção Farmacêutica

Dr. Ricardo Radighieri Rascado – Vice-coordenador e professor de Atenção Farmacêutica

### **Comissão Científica:**

Dra. Sandra Maria Oliveira Morais Veiga

### **Avaliadores dos resumos:**

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Dra. Lara Cristina Silva

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**Comissão de Infra-estrutura:**

MsC. Amilton Marques

MsC. Verônica Ferreira Magalhães

Farm. Patrick Ricardo da Silva

**Apoio:**



Fundação de Amparo à Pesquisa do  
Estado de Minas Gerais

## **TRABALHOS PREMIADOS COM MENÇÃO HONROSA:**

Effectiveness of Pharmaceutical Care in patients suffering from depression –Nayna Cândida Gomes, primeiro lugar

Implementation of clinical pharmacy service for preventing medication errors in intensive care unit of women's public health – Larissa Saito Da Costa, primeiro lugar

Pharmaceutical Care to sickle cell anemia patients: A pilot study – Ariane Biolcati Trindade, segundo lugar

Security problem cyclosporine: suspected adverse reaction – hepatotoxicity – Ana Carolina De Souza E Silva, terceiro lugar

## **01-ADHERENCE TO DRUG TREATMENT IN PATIENTS OF A COMMUNITY PHARMACY OF FEDERAL UNIVERSITY OF GOIÁS**

TAYSE SILVA DOS SANTOS, THAISSA COSTA CARDOSO, LUCIANA RESENDE PRUDENTE, TATYANA XAVIER ALMEIDA MATTEUCCI FERREIRA, NATHALIE DE LOURDES SOUZA DEWULF

Federal University of Goiás, School of Pharmacy

Adherence to medication can be conceptualized as the degree of agreement between the behavior of a person in relation to the advice of the doctor or other healthcare professional. The low level of adherence, about multifactorial influences, can negatively affect both, the clinical evolution of the patient and the quality of life of them, resulting in personal, social and economic consequences. The aim of this study was to identify the adherence's level of users served by the University Pharmacy of Federal University of Goiás. The study was approved by the institution's ethics committee and the questions were done by signing the term of informed consent. It was used the Morisky test to identify the degree of adherence to medication and the admitted behavior in relation to the drug use. These questions also allow to distinguish whether the The low degree behavior is intentional or unintentional. Among the 37 patients interviewed, 12 (32.4%) had high-grade behavior of adherence, 7 (18.9%) unintentional low adherence, 5 (13.5%) intentional low adherence and 13 (35.1 %) had both types of behavior. With the current study, it can be observed the high rate of poor adherence to drug treatment intentional and unintentional. These rates are higher than those found by the World Health Organization for developing countries. Thus, it emphasizes the importance of the development of healthcare technologies to improve the adherence to treatment, considering the characteristics of intentional and unintentional behaviors of the patients.

## **02- ADVERSE REACTIONS AND QUALITY OF LIFE IN HEAD AND NECK CANCER PATIENTS TREATING WITH CISPLATIN CHEMOTHERAPY AND RADIOTHERAPY**

MARÍLIA BERLOFA VISACRI<sup>1</sup>, CINTHIA MADEIRA DE SOUZA<sup>1</sup>, PAMELA DIAS<sup>1</sup>, GRAZIELE BALDAN FERRARI<sup>1</sup>, RAFAELA PIMENTEL<sup>2</sup>, PRISCILA GAVA MAZZOLA<sup>1</sup>, CARMEN SILVIA PASSOS LIMA<sup>1</sup>, PATRÍCIA MORIEL<sup>1</sup>.

Faculty of Medical Sciences<sup>1</sup>; Institute of Biology<sup>2</sup>, State University of Campinas, Brazil.

Cisplatin (CDDP) and radiotherapy (RTx) are highly toxic treatments and can reduce quality of life (QoL) of oncologic patients. The objective of this study was to evaluate the adverse reactions (ARs) and the alteration of QoL of head and neck cancer (HNC) patients treated with CDDP and RTx. This is an observational, longitudinal and prospective study, conducted in a University Hospital and approved by institutional Ethics Committee. Clinical pharmacists consulted outpatients before and after 3 cycles (every 21 days) of CDDP (80-100mg/m<sup>2</sup>) to evaluate ARs and QoL. Hematologic, renal, gastrointestinal ARs were classified by Common Toxicity Criteria (v.4.0) (grade 0 to 4) and QoL was assessed by the University of Washington questionnaire (v. 4.0). Thirty-two patients were followed (84.4% male; 53.0±9.0 years; 71.9% pharynx cancer; 96.9% tumors staged as III-IV). Hemoglobin, lymphocytes, neutrophils and platelets, after each cycle of CDDP, were significantly lower than the baseline. The findings indicate that 62.5% of patients develop neutropenia (40.6% grade 1-2), 100.0% lymphopenia (50.0% grade 1-2), 28.1% thrombocytopenia (25.0% grade 1-2) and 93.7% anemia (78.1% grade 1-2). With regard to renal changes, significant difference was found between the creatinine after the 1st cycle compared to the baseline and acute renal failure was present in 25% of patients. Nausea was present in 93.8% of patients (78.1% grade 1-2), vomiting in 81.3% (62.6% grade 1-2), and diarrhea in 28.1% (25.0% grade 1-2). When comparing the mean scores of QoL after each cycle with the baseline, just the mean score after the 2nd cycle showed significant reduction, although the QoL after the 1st and 3rd cycle was reduced too. CDDP chemotherapy and RTx is really debilitating, but the majority of ARs were classified grade 1 and 2, and the QoL is significantly affected. Supported by: CAPES; FAPESP; PIBIC; Teuto®.

### **03-ADVERSE REACTIONS IN PATIENTS WITH BREAST CANCER: A RETROSPECTIVE STUDY IN A PRIVATE CLINIC OF TERESINA – PI**

STANLEY SOUSA MADEIRA, RAQUEL NOLETO, KELLY CARVALHO, BÁRBARA CRISTINA SILVA HOLANDA QUEIROZ, WENYSSON NOLETO, FERNANDO LOPES GOMES FILHO, JOSEANA MARTINS SOARES DE RODRIGUES LEITÃO

St. Augustine College, Department of research and scientific initiation.

Breast cancer, among the malignancies affecting women of childbearing ages, is the most common worldwide. For this reason, breast cancer is the most feared, because there is the likelihood of impaired reproductive capacity and also because of the treatment, which is based on medicines that are able to provide numerous adverse effects to patients. According to the World Health Organization (WHO) adverse drug reaction (ADR) is any response harmful or undesirable and unintended that occurs at doses normally used in man for prophylaxis, diagnosis, treatment of illness or for modification of physiological function. Thinking about the high incidence of such illness and quality of life of undergoing treatment patients, this study aimed to identify and assess adverse reactions to chemotherapy in patients diagnosed with breast cancer, discussing barriers that minimize the possibility of such losses. For this study, the scenario chosen for the research was a clinical oncology in Teresina - Piauí. The analysis presented retrospectively with exploratory and descriptive approach in a sample of 56 records of patients treated during the period of May till November 2012, and hence it was possible to observe the presence of adverse effects of treatment. It was observed that 44.6% of undergoing treatment Patients who were taking derived anticancer drugs Experienced some kind of RAMs as nausea, fatigue, vomiting and alopecia are those most prevalent. From the study, it is concluded that there is a high incidence of ADRs Related to different treatments with anticancer drugs. Therefore, it requires effective measures need to reduce such incidences, so patients will be able to adhere to the treatments safely.

### **04- AN ALGORITHM DEVELOPMENT TO FACILITATE THE PHARMACEUTICAL CARE PRACTICE IN A PUBLIC HEALTH SYSTEM**

FELIPE DIAS CARVALHO; ESTAEL LUZIA COELHO MADEIRA DA CRUZ; TAIS NADER CHRYSOSTOMO MASSARO; REGINA CÉLIA GARCIA DE ANDRADE.

Faculdade de Ciências Farmacêuticas de Ribeirão Preto, Universidade de São Paulo.

The Pharmaceutical Care (PharmCare), Which is a sanitary practice recognized worldwide, is inherent to the pharmacist and aims to combat an important social problem of morbidity and mortality related to drugs. Applying a care process, focused on the patient, and with a clear and defined responsibility of the professional, this model of practice refers to the concern of the individual as a whole, contributing to a good quality of life. The process of PharmCare follows a sequence of steps known as a clinical method, that requires a well structured plan. It is known that the use of algorithms allows the clear identification of the steps (flowchart) of process execution. The method becomes visible as a whole, and brings advantages such as the systematization and ease use. At this panorama, our objective was to develop an algorithm, based on the literature and, especially in Dáder methodology, with the aim of encourage and facilitate the practice of PharmCare embedded in scenarios of extension (assistance), teaching, and search. For the confection of the algorithm and flowcharts, standardized symbology was used, with different colors and specific representations for behaviors such as decision making, waiting and analysis. In this way the work resulted in an algorithm that contains many steps (A to F), and some of them originate new flowcharts. In this way we have the address of all phases of the PharmCare process, since the service provision until patient discharge. The six flowcharts generated were: (A) identification of potential participants, (B) situational anamnesis, (C) study and evaluation of the patient's situation, (D) preparation and / or review of pharmaceutical intervention plan, (E) pharmaceutical intervention with the patient, (F) Pharmaceutical care intervention (follow-up). The use of this tool and simplified the practice of PharmCare, allowing its use during the teaching while it was carried out in the discipline “Pharmaceutical Care Practice”.

## **05- ANALYSIS OF PHARMACOTHERAPEUTIC FOLLOW NEED FOR PATIENTS WITH DYSLIPIDEMIA**

SANDRA MARCELA CONTRERAS ARÉVALO; ESTEFANI ALVES, Dr<sup>a</sup> CLARICE CHEMELLO, Dr<sup>a</sup> Prof<sup>sa</sup> MARENI ROCHA FARIAS

Universidade Federal de Santa Catarina, Centro de Ciências da Saúde, Departamento de Ciências Farmacêuticas

Dyslipidemia is a disorder related to a high risk of developing cardiovascular disease, a major cause of death worldwide. The combination of diet, physical exercise and the use of lipid-lowering drugs, are some of the strategies used to reduce cholesterol levels, however, not all patients achieve the best clinical outcomes of their treatment. Pharmaceutical Care, which main activity is the Pharmacotherapeutic follow-up, is a clinical service developed by the pharmacist to minimize morbidity related to medicines through a link established with the patient. In order to provide the Pharmacotherapeutic Follow service to the patients treated with atorvastatin at the Pharmacy School UFSC/PMF, an initial analysis of the needs of each patient to receive the personalized attention was done. Patients must present at least 3 of the following criterias: age (women  $\geq 55$  years, men  $\geq 45$  years), polymedicated ( $\geq 3$  medicines), history of cardiovascular events, concomitant diseases (diabetes and hypertension), not-adherent and interest in the service. This descriptive pilot study was performed in February and March 2013 at the Pharmacy School UFSC/PMF. A questionnaire developed for this research (containing questions regarding about four main themes: socio-economic data, information about diet and exercises, clinical and laboratorial data and adherence) was applied to the patients on the same day they received their treatment. A total of 204 patients were interviewed, after signing an informed consent, 44% was woman, mean age  $63,3 \pm 9,5$  years. Of this total, 84% of women and 96% of men satisfy the age requirement, 44% was polymedicated, 48% already presented a cardiovascular event (myocardial infarction, angina, angioplasty, catheterization, arrhythmia, stroke, peripheral occlusive disease), 19% have diabetes and hypertension, 26% were non-adherent, and 60% of them satisfy at least 3 inclusion criteria to be followed-up. Knowing the patients' profile with dyslipidemia will assist the pharmacist to select patients who really need Pharmacotherapeutic Follow and thus facilitate the implementation of the Pharmacotherapeutic Follow service at the Pharmacy School UFSC/PMF.

## **06- ANALYSIS OF PRESCRIPTIONS DISPENSED HEALTH UNIT IN A FAMILY JEQUIÉ, BAHIA, BRAZIL**

LUCAS DE ALMEIDA SILVA\*, ANNY CAROLLINY TIGRE ALMEIDA CHAVES, INOCÊNCIO SILVA DE JESUS, SUÉLLYN DOS SANTOS GONÇALVES, LUCIANA AMARAL DE FARIA, MARIA PATRÍCIA MILAGRES

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The prescription drug is a legal document written by qualified professionals and is the primary means of communication between prescribers and dispensers (Marin et al, 2003). This is an essential tool for the success of therapy, as well as the rational use of medicines, since prescribed under guidance of the World Health Organization (WHO) and the National Drug Policy (GIROTTO & SILVA, 2006). The objective of this study was to know the profile prescriptions dispensed by the Family Health Unit (FHU) of Jequié, Bahia, according to the indicators of quality use of medicines recommended by WHO. We conducted a cross sectional study. Precisa de um substantivo ex: cross section test, descriptive and quantitative character, from the analysis of 561 prescriptions dispensed at FHU, between January and March 2013. We used prescription indicators proposed by WHO, also identifying the most prescribed therapeutic class. In the survey carried out, was analyzed 561 prescriptions in which 1152 drugs were prescribed 1152 drugs, with an average of 2.05 per prescription, similar result found by Giroto & Silva (2006), with 2 per prescription and lower than that found by Santos & Nitri (2004) which was 2.2. This finding is within the recommended by WHO which is 1.2 to 2.2 drugs per prescription. It was observed that 83.96% of prescriptions drugs had name of the active, very close to the result found by Farias et al, (2006), 84.2%, but below that established by the WHO and by Law No. 9787/99. In 11.76% of the prescriptions found at least one antibiotic, number considered satisfactory according to WHO recommendations. The percentage of injecting drugs was also below the maximum set by the WHO, 1.78%. The antihypertensive were the most often prescribed (35.60%), followed by antidiabetics (8.42%) and antibiotics (6.93%). The results show that the profile of the prescriptions analyzed in Jequié, Bahia, may be considered acceptable when compared to other studies used as reference. However, it is necessary to implement a continuous assessment of the quality of prescriptions, as well as the continuing education of physicians.



## **07- ANALYSIS OF THE EVOLUTION OF THE NUMBER OF NOTIFICATIONS TO RISK MANAGEMENT SECTOR OF A SENTINEL HOSPITAL**

JOÃO PAULO VILELA RODRIGUES<sup>1</sup>, LILIAN PEREIRA PRIMO<sup>2</sup>, LORENA ROCHA AYRES<sup>1</sup>, MICHELLY MARTINS NAGAI<sup>1</sup>, MÁRCIO ANTÔNIO MOTTA<sup>2</sup> ANDRÉA CRISTINA SOARES VENDRUSCOLO<sup>2</sup>

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Sentinel hospitals are a network of hospitals prepared to investigate and report to the National Agency of Sanitary Surveillance (ANVISA), complaints involving health products and processes, including those related to pharmacovigilance, which studies adverse reactions or other problems related to drugs. In recent years, there has been a growth in the number of notifications made in the country, more than half of these made by the sentinel hospitals network. In this context, the objective of this study was to analyze the evolution in the number of notifications sent to the Risk Management (RM) Sector of Hospital das Clínicas de Ribeirão Preto (HCFMRP/USP) in recent years, and the involvement of the pharmacist in this service. A retrospective observational study was conducted, a survey was made of the number of notifications from 2005 to 2012 and the participation of the pharmacist in the number of reported errors in patient care that were prevented between 2009 and 2012. In 2012, the number of notifications was almost 20 times higher than in 2005. Regarding the involvement of the pharmacists in preventing errors, there were nine notifications in 2010 and 147 in 2012. The study showed the positive impact of educational work provided by the RM, the implementation of electronic reporting system conducted in late 2010 and the largest participation of pharmacists on Clinical Pharmacy activities and Patient Safety Committees.

## **08- ANALYSIS OF THE LIPID PROFILE OF INSTITUTIONALIZED ELDERLY**

MARIANA MOREIRA DE LIMA<sup>1</sup>, FLÁVIA CARNAVALLI<sup>1</sup>, ARIANE BIOLCATI TRINDADE<sup>1</sup>, JEAN LEANDRO DOS SANTOS<sup>1</sup>

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The growing number of elderly people in Brazil draws attention because it will cause economic, social, and health changes. It has been found that senior citizen have a higher predisposition to develop dyslipidemia. Abnormal levels of serum lipids may predispose and / or aggravate atherosclerosis and associated diseases. This study aimed to analyze the lipid profile of institutionalized senior citizen in two residences in the city of Araraquara-SP. It was conducted a cross-sectional observational study on 187 elderly patients. The inclusion criteria was being over 60 years for both sexes. It was performed blood analysis of serum cholesterol and triglycerides and fractions. The results showed that among the 187 seniors, only 171 agreed to participate and met the inclusion criteria. Between He 171 patients, 63.2% were women, who 75.0% had some type of dyslipidemia. In the male group, 60.3% had dyslipidemia. Overall 69.6% of participants had altered lipid profile, who 19.3% had hypercholesterolemia, 35.3% low HDL in combination, only 30.3% had low HDL, 11.8% mixed hyperlipidemia and 3.4% hypertriglyceridemia. By analyzing the data, it is clearly concluded that a significant portion of Elderly patients had dyslipidemia, in these two institutions. Because of this, intervention strategies are required to manage the disease and prevent complications.

## **09- ANALYSIS OF THE OF ANTI-INFECTIVE AGENTS PRESCRIPTIONS IN A COMMUNITY PHARMACY IN DIVINÓPOLIS – MG**

THAIS TORRES ARÊDES<sup>1</sup>, ALINE APARECIDA SALDANHA<sup>1</sup>, MARIANA LINHARES PEREIRA<sup>1</sup>.

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The efficiency of pharmacotherapy is compromised by incomplete, illegible or with erasures prescription, leading to impairment in treatment and medication errors. The identification of medication errors with anti-infective may help the development of new practices that ensure rational and appropriate use of drugs, promoting patient safety. The analysis of prescription may contribute for a preliminary therapy quality evaluation, And it also shows compliance troubles, drug adverse reactions and therapeutic failure. The Resolution(RDC) number 20, dated 2011, May 5, provides rules for prescription and dispensing anti-infective drugs. Analyze the legal, technical and pharmacologic requirements for antiinfectives drugs prescriptions in the beginning of the validity of RDC 20/2011 and 14 months later. All antiinfectives prescriptions dispensed in a community pharmacy in Divinópolis-MG, from 2010(November, December), 2011(January, February) and 2012(April) were analyzed. The data were collected using a questionnaire. The analysis was performed by describing (mean, median, range and standard deviation) the variables regarding the use of these drugs. 224 anti-infective drugs were analyzed in 203 prescriptions. Amoxicillin was prescribed more frequently (28.86%). The predominant indication of use was for systemic use (80.49%). Tablets (42%) and oral route (80%) were found in the most of prescriptions. Absence of age (24.94%), gender (25.45%) and drug delivery system not reported (12.02%) were the most prevalent inadequacies. The inadequacies persisted throughout the study. This found demonstrates the need for more information to prescribers. We hope these data provide information to prescribers, to improve the effectiveness and safety of patient care and therefore promotes the anti-infective drugs rational use.

## **10 -ANALYSIS OF THE PHARMACOVIGILANCE NOTIFICATIONS PERFORMED IN HCFMRP/USP IN 2012**

MICHELLY MARTINS NAGAI<sup>1</sup>, JOÃO PAULO VILELA RODRIGUES<sup>1</sup>, LORENA ROCHA AYRES<sup>1</sup>, ANAÍ NICOLI CABRAL<sup>1</sup>, LILIAN PEREIRA PRIMO<sup>2</sup>, MÁRCIO ANTÔNIO MOTTA<sup>2</sup>, ANDRÉA CRISTINA SOARES VENDRUSCOLO<sup>2</sup>

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Introduction: Pharmacovigilance is the science that studies the detection, assessment, understanding and prevention of drug related problems (DRP), including adverse effects. It is a useful tool to evaluate safety and efficacy of drugs through the gathering and analysis of DRP notifications that may result in adverse drug event (ADE). ADE is defined as any injury to the patient caused by the use of medicines. In Brazil, the majority Pharmacovigilance notifications is performed by sentinel hospitals, structured health centers, and by professionals trained for this activity. Knowing the types of DRP and its incidence is critical to promote the rational use of medicines. In this context, the objective of this study was to analyze the DRP notifications sent to the Risk Management (RM) sector of the Hospital das Clínicas de Ribeirão Preto (HCFMRP/USP), through spontaneous notifications, in 2012. Methodology: In the retrospective descriptive study performed, a survey of the types and number of notifications performed in 2012 was conducted. Results: Thirty four adverse reactions, 28 therapeutic ineffectiveness, 276 technical complaints, two problems occurred with “off-label” use of medications and 342 with prescribing, dispensing or administering medications errors were notified. Conclusion: Maintaining a pharmacovigilance service as performed by the RM of HCFMRP/USP, via electronic notification system, is necessary to promote the rational use of medicines since it generates information about medication which is useful to offer greater safety to patient.

## **11- ASSESSING THE PHARMACEUTICAL CARE IN BRAZIL: IDENTIFICATION OF EDUCATION SCENARIOS**

BRUNA PIACESI BATISTA CHAVES, LISIANE DA SILVEIRA EV, WANDICLÉCIA RODRIGUES FERREIRA

Universidade Federal de Ouro Preto

Pharmaceutical Care is an intervention practice in which the pharmaceutical professional interacts directly with the patient to attend his medication necessities in order to reach defined therapeutic results in health and life quality. It is a relatively new practice in Brazil and it has been introduced with different views and comprehensions, without any systematic technical rule. The aim of this study is to assess the development status of Pharmaceutical Care Teaching in Brazil. In that country, there are 354 Higher Education Institutions (H.E.I.'s) accredited by National Education Department that hold Pharmacy course. We've got the contacts of 227 HEI's, obtained in their internet pages or with Federal Council Pharmacy's help. The criterion for inclusion was that: the HEI's should be featured on National Education Department site (<http://emec.mec.gov.br/>) during the period of our assessment. Exclusion criteria were: Either Pharmacy course coordination's email was unlisted on HEI's site, or couldn't be obtained by an email solicitation to Administrative Office, or wasn't known by Federal Council Pharmacy's. We've sent them an e-mail containing a structured questionnaire to be answered by the course coordinators. Among the 82 HEI's that answered the questionnaire, there were 73 which have Pharmaceutical Care as a curriculum course – compulsory in 65 (89,04%) of them, elective in 5 (6,85%) and facultative in 2 (2,74%). About the course's existence time in curriculum structure, 36 (49,31%) reported to be 1 to 5 years, 31 (42,47%) reported 5 to 10 years and 6 (8,22%) reported more than 10 years of existence. Despite of the small number of answered questionnaires, this first data indicates a recent introduction of Pharmaceutical Care teaching in Brazilian Pharmacy courses, since only 8,22% of HEI's have been teaching the course for more than 10 years. Considering the first Pharmaceutical Care references in literature to be from 1980's, we conclude that, in Brazil, the Pharmacy courses should emphasize this professional practice that has a great impact in health.

## **12 - ASSESSMENT OF COGNITION IN INSTITUTIONALIZED ELDERLY**

MARIANA MOREIRA DE LIMA, ARIANE BIOLCATI TRINDADE, FLÁVIA CARNAVALLI, JEAN LEANDRO DOS SANTOS

School of Pharmaceutical Science – FCF UNESP Araraquara

Introduction: Population aging is now a reality, it is estimated that in 2050 there are 2 billion people over 60 years in the world. The Seniors present peculiar problems, and require suitable treatments for this age group. In the aging process, a major problem is related to memory disorders, and these can have a significant impact on daily activities and quality of individuals due. The aim of this study is to assess the cognition of institutionalized Elderly patients in two homes in the city of Araraquara-SP through the Mini-Mental State Examination (MMSE). Methodology: The study was observational Cross with 67 seniors, 43 women and 24 men, who had more than 60 years. To assess cognition was used Mini-Mental State Examination in version validated by Bertolucci et al., In 1994. The cutoff points used in the MMSE were differentiated by education. Results among the 67 seniors, 41.8% have changes in cognition test, of these, 75.0% were women, 42.8% were aged between 70 and 79 years. Of the patients with abnormal test cognition, 57.1% were above 80 years. Regarding education, 39.3% were illiterate, 50.0% have low education, average schooling was 7.1% and 3.6% for higher education levels. Conclusion: A representative number of elderly subjects with altered cognition, they can even harm their care with medication use. It takes special care strategies with these them o prevent disability and promote health to improve the quality of life.

### **13- ASSESSMENT OF RESILIENCE IN PATIENTS WITH DEPRESSION UNDER PHARMACOTHERAPY FOLLOW-UP**

NAYNA CÂNDIDA GOMES, PEDRO HENRIQUE OLIVEIRA ABRÃO, MARIA ROSANA FERNANDES, LUCIENE ALVES MOREIRA MARQUES.

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Resilience is a favorable individual personality trait and is directly related to a dynamic process of adaptation of human beings. Studies show that resilience, the capacity of self-regulation and self-esteem to face even difficult and adverse facts can be correlated with depression and quality of life scores. It is expected that individuals with high scores of resilience have low scores of depression and a better quality of life. The present study was proposed to shed light on the correlation of depression and resilience scores, in view of the lack of substantial research about the topic. Besides, depression is a disorder with high prevalence rates and is a leading cause of disability, resulting in increased work absenteeism in the world. This study aimed to assess resilience in depressive patients under pharmacotherapy follow-up. So far, 10 female patients over 18 years of age, living in urban areas and who had a first episode of depression or recurrent episodes were selected. Patients with evident cognitive impairment that might jeopardize the completion of the questionnaires were excluded. The Resilience Scale composed of 25 items, ranging from 1 = "I completely disagree" to 7 = "I completely agree" was applied. (ARMANDO, 2010), with scores ranging from 25 to 175. The sample consisted of 100% female patients with a mean age of 48.4 years  $\pm$  9.35. One hundred percent of the sample had chronic depression symptoms (11.7 years  $\pm$  11.65). To describe the relationship between resilience and number of years in treatment for depression, resilience and PHQ-9 and resilience and Beck inventory, linear regression models that showed low coefficients of correlation  $R^2 = 12.48\%$ ,  $R^2 = 11.65\%$  and  $R^2 = 10.94\%$  respectively, ( $p > 0.05$ ) were adjusted. The small sample size was a limitation of the present study, and this may explain the lack of relationship between resilience and the factors surveyed. These results are partial, and further studies with a larger population will be conducted.

### **14- AURICULOCUPUNTURE CONTRIBUTES TO WEIGHT REDUCTION AND ANXIETY IN OBESITY AND OVERWEIGHT PATIENTS**

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Acupuncture is a specialization of the pharmacist and is offered free by the Brazilian public health system. It is one of the obligations of the pharmacist to know and guide the patient regarding alternative treatments. Auricular acupuncture is a technique of traditional Chinese medicine used for the treatment of various pathologies and remains understudied for weight reduction. Obesity is a serious public health problem, affecting more than 50% of the Brazilian population. Treatments include diet, exercise and rare drugs. For this reason, many patients are using irrational or illegal drugs to lose weight. The objective of this study was to evaluate if there are weight reduction and anxiety in patients undergoing auriculoacupuncture sessions with mustard seeds. The study was approved by the Ethics Committee of UNIFAL-MG and the volunteers have given their free and informed consent. It was a pragmatic clinical study, with two periods: control (5 weeks) and standardized weekly sessions of auriculoacupuncture (5 weeks). The 38 women were overweight or obese, with a BMI of  $31.3 \pm 4.5$  (mean  $\pm$  SD) age of 38.6 years ( $\pm$  12.6) and believed in acupuncture. Most of them Did not diet (68.4%), Didn't exercise (68.4%) and Didn't smoke (81.6%). A weight loss, more than 1% in 5 weeks is considered to be significant, since 10% per year is a healthy weight reduction. After the sessions with auriculoacupuncture (5 weeks) the majority of women (66%) lost more than 1% of the initial weight and a few women (21%) got fat compared to control (37% and 37%, respectively). The average weight loss after auriculoacupuncture was 1.8%, while in the control period was 0.6%. Evaluation of anxiety was made through the STAI (State-Trait Anxiety Inventory). Scores of STAI reduced after auriculoacupuncture sessions. The anxiety trait (STAI T) reduced by 10%, and the state of anxiety (STAI S) reduced by 22%. In addition there were no reports of adverse reactions, and patients reported improvement in such as headache, irritation, stress and gastro-intestinal disorders. There was a reduction of weight and anxiety after auriculoacupuncture sessions.

## **15- EVALUATION OF ANALGESIC USE AND SELF-MEDICATION IN PHARMACY AND NURSING STUDENTS OF FEDERAL UNIVERSITY OF PARAÍBA**

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According to the International Association for the Study of Pain (IASP), pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. Self-prescription by pharmacy and nursing students is inappropriate self-treatment and represent serious issues for them. Self-medication is the use of non-prescription drugs, where the user himself decides which drug to use. The aim of the present study was to evaluate the analgesic use for pain decrease and self-medication in pharmacy and nursing students of Federal University of Paraíba. Initially, the following databases were searched: PubMed, PsychInfo, EBSCO, Medline, BioMed central and Science Direct. Inclusion criteria specified research assessing self-treatment and self-medication of prescription drugs among students. Only peer-reviewed English language empirical studies published between 2002 and 2013 were included. In this work were used 50 pharmacy students and 50 nursing students of Federal University of Paraíba. It was applied a questionnaire for them about self-medication. The mean number of beginner pharmacy students reporting self-prescription using analgesic was 63.3% and 60.0% for beginner nursing students. Similar results were observed at the end of the course for pharmacy (70%) and nursing (75%) students. Only 14% of pharmacy students and 12% of nursing students seek the doctor when the pain becomes unbearable. In conclusion, this study show self-treatment is strongly involved in the people's culture and many pharmacy and nursing students practice self-medication.

## **16- EVALUATION OF THE UTILIZATION PROFILE OF ANTIMICROBIAL DISPENSED IN A DRUGSTORE FROM MANGABEIRA, JOÃO PESSOA/ PARAÍBA**

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1. Pharmacists and students of Specialization in Pharmaceutical Care and Clinical Pharmacotherapy (IPOG); 2 Industrial Pharmacist, Master in Pharmacology and student of Specialization in Pharmaceutical Care and Clinical Pharmacotherapy (IPOG).

The indiscriminate use of antibiotics has increased the number of resistant microbial strains, a fact that has become a public health problem. In order to establish a criteria for dispensing, to control the use of this class of drugs and to contribute to the rational use, the ANVISA published in 2011, the RDC/20. The aim of this study was to evaluate the pattern of the prescriptions of this therapeutic class and to determine the profile use in a drugstore in Mangabeira, João Pessoa / Paraíba. We performed a retrospective study, quantitative, descriptive and transversal of 602 retained antimicrobial prescriptions between the months of October to December 2012. Data was registered and analyzed by Microsoft Excel © 2010. The findings of this study showed that 59.32% of prescriptions were intended for female patients, 93.18% were prescribed by doctors, 20.84% were directed for patients aged 21 to 30 years and 54.48% of the prescriptions were from the public health system. Regarding the prescribed form, 18.93% were drug reference, 34.71% similar and 46, 34% generic. There were prescribed 42 different active principles and amoxicillin was the most frequent (20.92%), followed by azithromycin (19.1%), ciprofloxacin (12.12%) and cephalixin (11.12%). The class of beta-lactams was the most prescribed (23.07% penicillins and 13.74% cephalosporins) followed by macrolides (20.78%) and quinolones (19.14%). Thus, we conclude that women frequently lookfor health care system if compared to men, most of drugs were prescribed by generic names as recommended by the Ministry of Health and that penicillins are the most prescribed for the treatment of community infections in the studied area, which should, therefore, increase the orientation at the time of dispensing pharmaceuticals to assist in their rational use.

## 17- BARRIERS TO IMPLEMENTATION OF PHARMACEUTICAL SERVICES IN FARMÁCIA POPULAR OF BRASIL, IN SERGIPE

ADRIANA OLIVEIRA DOS SANTOS SILVA<sup>2</sup>; CINARA SANTOS SOUZA<sup>2</sup>; TATIANE CRISTINA MARQUES<sup>1</sup>; GISELLE DE CARVALHO BRITO<sup>1</sup>; EULÁLIA LINS VICTOR<sup>2</sup>; MARIA CRISTIANE TRINDADE DE ALMEIDA<sup>2</sup>; DIVALDO PEREIRA DE LYRA JR.<sup>1</sup>.

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The “Farmácia Popular do Brasil” is a government program that aims to increase the population's access to essential drugs available at low cost. The structure of pharmacies is differentiated, allowing the activeness of the pharmacist in patient care. In 2012, the partnership held between MTM Care Institute and Funesa enabled the implementation of four types of pharmaceutical services (Measuring Clinical Parameters, Dispensation, Medication Review and Pharmaceutical Care) in three community pharmacies. Thus, the present study aimed to describe the main barriers to the implementation of Pharmaceutical Services in “Farmácia Popular do Brasil”. We used exploratory qualitative methodology, and data collected through interviews with five professionals of the Farmácia Popular do Brasil, these two were pharmacists and three were pharmacy assistants. For data analysis, we used the technique of Content Analysis for identify the core sense and categorize the outcomes. The main barriers were: *Lack of diary Scheduling* (the service should be provided on the same day the service was scheduled); *Daily availability of Pharmaceutical Services* (all services must be available to meet the greatest number of patients); *The time expected to be attended*; *Lack of database with prior information about the patient*, *High Number of bureaucratic and Management Services*; *Difficulty in the padronization and using some instruments*, etc. Although the survey about the difficulties of implementation has appointed eight major barriers, they did not alter the positive results of these units Pharmaceutical Services. In 2013, such problems must be solved in order to consolidate the practice of Pharmaceutical Services. The study was supported by Funesa, CAPES and MTM Care Institute.

## 18- BARRIERS TO MEDICATION ADHERENCE IN PATIENTS WITH POOR METABOLIC CONTROL OF TYPE 2 DIABETES

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Type 2 diabetes is a complex, progressive endocrine and metabolic disease that typically requires substantial lifestyle changes and multiple medications to lower blood glucose, reduce cardiovascular risk and address comorbidities. Despite an extensive range of available and effective treatments, up to 50% of patients do not achieve glycemic control (hemoglobin A1c < 7.0%). Poor adherence is an important challenge to healthcare professionals because it jeopardizes treatment success and increases the risk of serious complications. The purpose of this study was to characterize the adherence and barriers to adherence for patients with poorly controlled type 2 diabetes. This was a cross-sectional analysis of baseline data from a study of medication management for diabetic patients conducted at University Hospital of University of São Paulo. Evaluation measures for medication adherence included self-reported adherence using the Morisky-Green-Levine (MGL) and Haynes-Sackett (HS) tests. Seventy subjects were studied. Average age was 62.4 years ( $\pm 7.8$ ), and 68.5% were female. The number of medicines prescribed per patient was 6.9 ( $\pm 1.8$ ), of which 2.5 ( $\pm 0.7$ ) were hypoglycemic, especially of subgroup Biguanide (80.0%). The mean of hemoglobin A1c was 9.0% ( $\pm 1.4$ ) and fast plasma glucose was 155.8 mg/dL ( $\pm 62.9$ ). Adherence prevalence was 40.0% (MGL), 51.4% (HS), and 34.3% in both tests. The most common adherence challenges included patient who forgot to take (the medicine) (44.3%), or preferred not to take (26.2%) and, or Who didn't understand the directions (19.2%). In this study, we observed high rates of non adherence among patients with type 2 diabetes and potential barriers which may contribute to less than desired control. The results suggest that medication management services, acting as an alternative in a multidisciplinary team, could enhance adherence and improve health outcomes of patients. Financial support: FAPESP, CAPES

## 19- BIOACTIVITY OF PLANTS EXTRACTS FOUND IN BRAZIL

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The use of medicinal plants is reported since ancient times, but currently its implementation in health care to need scientific endeavors for ensure both safety and effectiveness. Besides of use as phytochemicals, there is a great interest as a source of new medicines, especially in Brazil that offers a huge biodiversity, although only share of these has been explored. Methicillin Resistant *Staphylococcus aureus* (MRSA) is an important nosocomial pathogen due to its multidrug resistance, at least partly because indiscriminate use of the available antimicrobials, it becoming a public health problem all over the world, which directs efforts in search of new antimicrobials. Given this background threat, the focus this research was to evaluate the *in vitro* bioactivity of *Bidens pilosa*, *Eugenia pyriformis*, and *Plinia cauliflora* from the Cerrado of Minas Gerais in Brazil. All the hydroalcoholic extracts were obtained by steeping. Through both agar diffusion and determination of minimum inhibitory concentration (MIC) by broth microdilution was evaluated the antimicrobial activity of extracts from of these plants according to CLSI, (2003), M7-A6 document, against isolates of MRSA (n=60) from the aerial environment at the odontological clinic and *S. aureus* ATCC<sup>®</sup> 6538. Parallel, toxicity test on cell culture by using MTT method and phytochemical screening of the extracts complemented the survey. The extracts from the leaf, stem, and rind fruit of *P. cauliflora*; stem and leaf of *E. pyriformis*; and flower, stem, and leaf of *B. pilosa* growth inhibited of MRSA with inhibition zones diameters ranging from 5.00 to 23.00 mm and MIC from 6.25 to 50.00 mg/ml. Extract from the leaf of *B. pilosa* showed inhibitory activity significantly best against MRSA than positive control and extracts were more actives against *S. aureus* ATCC<sup>®</sup> 6538 than on isolates (p<0.05). As for the toxicity, extracts from the leaf and stem of *P. cauliflora*, leaf and root of *B. pilosa*, and stem of *E. pyriformis* do not showed toxicity. On the other hand, the 50% cytotoxic concentration (CC<sub>50</sub>) ranged from 1.30 to 9.56 mg/ml for other extracts. Therefore, extract from the leaf of *B. pilosa* showed the better *in vitro* anti-MRSA activity and better selectivity index - SI - (SI= CC<sub>50</sub>/MIC) with lower toxicity and MIC. Moreover, it was observed among extracts presence variable of alkaloids, flavonoids, tannins, and saponins. Nevertheless there was total absence of anthraquinones.

Funding Source: FAPEMIG

## 20- BIRTH CONTROL METHODS AND STD KNOWLEDGE EVALUATION IN YOUNG ADULTS POPULATION, DIVINÓPOLIS – MG – BRASIL

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<sup>1</sup>Federal University of São João Del-Rei, Department: Campus Centro Oeste D. Lindu

The development of birth control methods (BCM) allows us to prevent pregnancy and plan the timing of pregnancy. Some of these methods, such condoms, also work in the prevention of STD. But even with all guidelines regarding these, we found individuals who are not prepared to face sexuality with personal security, structured knowledge for its own protection. This study was submitted by the Ethics Committee of the Federal University of São João Del-Rei. The aim of this cross-sectional study was to analyze young adults' level of knowledge about BCM and STD in Divinópolis, MG, Brasil. 27 objective and 19 True or False questions were applied to men and women to examine the knowledge of those subjects about sexuality and contraception. The data collection instrument was answered by 25 people, including 17 (65.4%) women aged between 18 and 30 years. Oral contraceptives and condoms were considered best known for 24 (92.3%) people. These same methods were cited as being the most suitable for constant partner (69.2%) and not constant partners (96.2%). Schools (57.7%) and educational lectures (61.5%) were identified as the main sources to acquire knowledge about the BCM and STD. Only two people answered correctly all of the 19 True or False questions, that assessed knowledge of BCM (10 issues) and STD (nine issues) 26.9% of all subjects answered correctly questions about contraceptive methods and 34.6 % on STD. Among these questions, those that have not been answered or/and answered incorrectly, were those relating to the use of the IUD, how to use the "morning after" pill and STD's transmission, with 38, 5%, 26.9% and 30.8% errors, respectively. It should be emphasized that these results were preliminary, obtained from a pilot study. The data will be collect in 2013, June. Considering the results presented, it is possible to identify gaps in knowledge about BCM and STD. Thus, there is necessary to intensify their efforts and educational strategies, increasing knowledge about STDs and BCM and contributing to minimize inappropriate outcomes.

## 21- CASE REPORT OF PHARMACEUTICAL CARE FOR PATIENTS IN HEMODIALYSIS

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Through Pharmaceutical Care (PC), the patient with chronic kidney disease can receive guidance from pharmacist seeking better therapeutic result. The objective of this work is to show the importance of pharmaceutical care to patients with chronic kidney disease, through the description of clinical case. We will report the case of male patient, 20 years old, with high school, on dialysis for 12 months, with hypertension, nephritic syndrome and chronic allergic purpura. The patient had difficulties to conduct the treatment continuously, already having left the same, which resulted in hospitalization in critical condition. Blood pressure before dialysis was around 170/80mmHg. He has anemia (hematocrit 21.2%), elevated phosphorus (8.80 mg/dL) and PTH (118.6 pg/ml), and hypocalcaemia (8.1 mg /dl). The patient had been prescribed furosemida 40mg 2x/day, enalapril 5mg and 25mg atenolol. However, he was using furosemide 3x/day, clonidine 0.150mg 2x/day and amlodipine 5mg 2x/day. Therefore, the patient presented Negative Outcome Associated with Medicines of the type needed, because he was using two non-prescribed drugs (clonidine and amlodipine), and did not use the prescribed drugs enalapril and atenolol. Also furosemide was being used in a dose higher than prescribed, which could cause a Negative Outcome Associated with Medicines of safety. The intervention was conducted to promote rational use of medicines. Through PC, was established direct communication with the patient and the physician, occurring adjustment of drugs that were being used incorrectly. Furthermore, it was discussed with the patient the importance of following treatment and medical recommendations. We conclude that PC through the pharmacist plays a key role in the management of the disease and the identification of negative outcomes associated with medicines, which can affect the quality of life and the rates of morbidity and mortality in these patients.

## 22- CHARACTERISTICS AND FACTORS ASSOCIATED WITH PHARMACISTS INTERVENTIONS DURING THE MEDICINES DISPENSING PROCESS IN A UNIVERSITY PHARMACY

TATYANA XAVIER ALMEIDA MATTEUCCI FERREIRA; LUCIANA RESENDE PRUDENTE; THAISSA COSTA CARDOSO, NATHALIE DE LOURDES SOUZA DEWULF; RITA GORETI AMARAL

Goiás Federal University / Faculty of Pharmacy

Community pharmacists occupy privileged position to identify and adjust drug related problems before dispensing medicines, ensuring a rational drug use. The aim of this study was to describe and identify factors associated with the need for pharmaceutical interventions performed during medicines dispensing in a University Pharmacy. A cross-sectional study conducted to evaluate the medicines dispensing process. The Ethics Committee of the Goiás Federal University approved this study. Between January 21<sup>th</sup> and February 29<sup>th</sup> 2013 were analyzed records of dispensing medicines performed at 37 patients. Of these 37 patients, pharmaceutical interventions were performed in 19 patients (51.3%) with an average of 1.2 interventions per patient. Among the problems associated with drugs that cause these interventions include those related to the inability of the patient to the correct use of the product (60.9%), inadequacy of the drug to the patient (21.7%) and dosage problems (17, 4%). With respect to the characteristics related to the patient who received intervention, highlights the female gender (68.4%) and age above 60 years (47.4%). With regard to the features related to the health system, include the use of the Unified Health System (78.9%) and the use of the Pharmacy University services for the first time (78.9%). With respect to the features related to drugs, there was a greater frequency of interventions in drug of the metabolism and digestive system (47.4%), followed by drugs of the musculoskeletal system (15.8%). The high frequency of pharmaceutical interventions showed the importance of the role of the pharmacist in dispensing medications, identifying potential issues related to pharmacotherapy and contributing to the correct use of medicines.



## **23- CLINICAL AND SOCIOECONOMIC PROFILE OF HEMODIALYSIS PATIENTS PARTICIPATING IN A PHARMACEUTICAL CARE CLINICAL TRIAL**

MAURICE NETO DE SOUZA<sup>1</sup>, KELLEN PEREIRA MACIEL<sup>2</sup>, MIRIAM MOREIRA MUSSI<sup>2</sup>, MARISTELA BÖHLKE<sup>2</sup>, JOÃO PEDRO MUSSI LAYDNER<sup>1</sup>, JONAS RONI PETER<sup>3</sup>, VANESSA DA ROSA CÂMPARA<sup>2</sup>, MICHELE TANCINI VIEIRA<sup>2</sup>, CYNARA SILVA SILVEIRA<sup>2</sup>, CAMILA CORRÊA COLVARA<sup>2</sup>, MARYSABEL PINTO TELIS SILVEIRA<sup>1</sup>.

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According to the 2011 Census of the Brazilian Society of Nephrology, nearly 100 thousand people were on dialysis in Brazil, 85% of which was funded by the public Unified Health System. The present study aimed to determine the profile of hemodialysis patients treated at the University Hospital São Francisco de Paula in Pelotas, Brazil, which participated of a pharmaceutical care clinical trial from June 2012 to February 2013. The socio-demographic data was collected through a specific questionnaire. Clinical and laboratory data were obtained from medical records. We evaluated 48 individuals, mostly male (72.9%) and white (52.1%). The mean age and years of education were, respectively, 54 (SD 16) and 8 years (SD 4). The median monthly household income was U\$ 626.21 (IQR 331.80-1056.80), and all patients were living at home, 79.2% with their family. It was observed that 79.2% of patients did not have a job and 85.4% were receiving financial benefit. All patients had comorbidities, more frequently hypertension (70.8%) and diabetes (27.1%). Most patients (52.1%) had been on hemodialysis for longer than 24 months. The mean values observed for hematocrit were 36.4%, phosphorus 5.8 mg/dl, potassium 5.38 mmol/L, PTH 306.7 pg/ml, and saturation of transferrin 36.9%. The mean interdialytic weight gain was 2,393.1 g (SD 793.7), the mean systolic and diastolic blood pressure were 151mmHg and 86.8 mmHg, respectively. We conclude that the pharmaceutical care, working together with all healthcare team, could have an important role in helping to improve clinical and quality of life outcomes for these patients.

## **24- CLINICAL ASPECTS RELEVANT TO THE PHARMACOTHERAPEUTIC FOLLOW-UP OF PARKINSON'S DISEASE PATIENTS**

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Federal University of Santa Catarina, Center for Health Sciences, Department of Pharmaceutical Sciences

Pharmaceutical Care, which main activity is the Pharmacotherapeutic follow-up, is a clinical service developed by the pharmacist to minimize morbidity related to medicines through an interaction established with the patient. Parkinson's Disease is a neurodegenerative disease, which clinical manifestations (motor and non-motor) associated to medicines early and late side effects make its management complex. As part of the healthcare team, the pharmacist needs knowledge regarding the whole patient and it includes patient's behavior, beliefs, treatment effectiveness and quality of life. Thus, this work describes relevant clinical aspects and interventions of care resulting of Pharmacotherapeutic follow-up. Parkinson's disease patients were included as convenience sample and signed the informed consent to participate in a quasi-experimental pre-post follow-up pilot study performed from September 2012 to March 2013, at the Pharmacy School UFSC/PMF. The follow-up method applied was a mixture of Dader and Pharmacotherapy work-up methods and the clinical analysis was made by SOAP. As Parkinson's disease is a multifactorial disease, the pharmacist should be aware of other symptoms besides the classic ones. Firstly, the pharmacist must have technical abilities to assess whether the treatment is effective considering the disease progression. Therefore, pharmacist should observe motor and non-motor symptoms respectively: tremor or rigidity and dysautonomias (dysphagia, sialorrhea, postural hypotension, and constipation, gastric, urinary and sexual disorders). Besides the classic symptoms, there are others resulting from medicines that arise with disease progression that deserve attention: sleep disturbances, depression, hallucinations and dementia. Among the key interventions for these patients should highlight those related to adherence, counseling regarding food-drug interactions, diet and lifestyle habits that improve constipation, measures to improve sleep (sleep hygiene), measures to help improve speech and swallowing and encouraging appropriate physical activity. The experience with this group demonstrated that the pharmacist needs a holistic view of the patient, making decisions and interventions that should not only be directed to the drug, but also, and not least, to the non-pharmacological measures. Financial Support: CAPES

## **25- CLINICAL PHARMACIST PERFORMANCE IN MULTIPROFESSIONAL TEAM IN A TEACHING HOSPITAL**

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1 – Federal University of Minas Gerais 2 – University Hospital Risoleta Tolentino Neves

Changes that comes from senescence causes an impact on the metabolism of drugs in elderly patients. This makes them more susceptible to intoxication and adverse drug reactions. Besides, elderly often shows a larger number of comorbidities, associated to a complex pharmacotherapy, which difficult the effectiveness and adherence. Seeking to suit pharmacotherapy and to prevent further complications, it is indispensable to develop practice of clinical pharmacy. Wishing to contribute on elderly's pharmacotherapy safety in a teaching hospital, pharmacists linked to multiprofessional internship provides clinical pharmacy service. Patients are selected through active search or clinical suggestion. At first contact, previous clinical historic and subjective data are identified. Afterwards, a pharmacotherapy analysis is made and interventions along with medical staff, if needed. All medicines used are analyzed focusing effectiveness and safety. From March 2012 to February 2013, 193 patients were accompanied; their average age is 76 years old. During the held of the experiment, 349 pharmaceuticals evolution were made (1.80 per patient), 225 considerations (1.16 per patient) and 573 interventions (2.97 per patient). From a total of evolutions, 19% had a catheter enthrall record, 10.31% registered a renal clearance lower than 30mL/min, 32.8% had renal clearance between 30 and 60mL/min and 9.75% reported moderate or intense ache. The most relevant intervention were orientation post-discharged (16,75%) and potential medicinal interaction (16, 6%) warnings, as well as decrease of medicament dose (9,77%). 49.74% of accompanied patients received pharmaceuticals orientation post-discharged, 81.25% out of these were referenced to primary attention, through the pharmacotherapeutic summary, to continuity of care. During the follow up was noticed that pharmacotherapeutic segment contributed in a effective way to prevent, to detect and to solve related problems to medicament, health problems and increase life quality.

## **26- CLINICAL, SOCIAL AND ECONOMIC IMPACT OF PHARMACEUTICAL CARE IN THE CONTROL OF HYPERTENSIVE OUTPATIENTS**

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Pharmaceutical care aims to provide a correct, effective, safe and appropriate drug therapy for patients. It is a practice based on a systematic, rational and comprehensive pharmaceutical care to satisfy patients' needs regarding their medications, improving quality of life and reducing morbidity and mortality. It can be helpful in the management of hypertension. A pharmaceutical care model was implemented in two health care units (UBDS/CSE Sumarezinho and UBS Dom Mielle) of Ribeirão Preto –SP in order to investigate clinic, social and economic aspects of this service. One hundred and four patients were followed up in 12 pharmaceutical consultations. An average reduction occurred in: body mass index ( $0.82 \pm 1.11$  Kg); systolic blood pressure ( $18.18 \pm 12.45$  mmHg); diastolic blood pressure ( $7.18 \pm 4.28$  mmHg); and Framingham risk score (3.75%). We identified an average of two antihypertensive medications/ patient, which were mainly thiazide diuretics, ECA inhibitors and beta blockers. At the beginning of the follow up, only 45.19% of patients were adherent to treatment. However, at the end, all of them were adherent for at least 3 months. Eight components of the social assessment of SF-36 (an instrument used to assess quality of life) and patient's satisfaction with pharmaceutical services have improved, which received an average score of  $4.61 \pm 0.73$ . There was a 3.77% reduction in coronary risk equivalent to a cost reduction of R\$67.82/patient, reaching R\$26,048.88/month. Pharmaceutical care improved blood pressure control, clinical aspects and quality of life of the patients and was economically efficient.

## **27- DEPLOYMENT OF PHARMACEUTICAL ASSISTANCE AS A MEANS OF SOCIAL COMMUNICATION THROUGH PROGRAM RADIOVISÃO IN RADIO SANTO ANGELO AM (903KHz).**

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The periodic radio programs can be useful to professionals in the pharmaceutical area, serving as disseminators of information on topics related to health. This work aims at the Introduction of pharmaceutical care for the placement of a radio program with guidelines on the correct use and handling of medicines. The survey instrument was serving educational programs on the radio serial called Dose of Health with information on the proper use and proper storage of medications, transmitted once a week at a fixed time. The sample was determined from the calculation of sampling error in 384 individuals selected by convenience and neighborhoods and homes randomly selected through a lottery map of Santo Angelo / RS. The instrument for data collection was based on interviews. As a result we can see that the means of communication that the interviewed population has more uses and is the radio (86%). Most respondents heard the Program Dose of Health (51%) and 73% of these said they understand the information provided. The majority (99%) of respondents think it is important the presence of the pharmacist in drug stores and pharmacies but 7% looking for this service. Thus, we see the importance of developing media disseminate health education aiding in the rational use of medicines and professional insertion in the society.

## **28- DESCRIPTION OF PHARMACEUTICAL CARE TO ASSESS THEIR EFFECTIVENESS ON ADHERENCE TO ANTIRETROVIRAL THERAPY- A RANDOMIZED CLINICAL TRIAL**

MICHELE ZSCHORNACK STRELOW<sup>1</sup>; MARYSABEL PINTO TELIS SILVEIRA<sup>1</sup>, MARÍLIA CRUZ GUTTIER<sup>1</sup>, CEZAR ARTHUR TAVARES PINHEIRO<sup>1</sup>, TATIANA VANESSA SILVEIRA PEREIRA, LEILA BELTRAMI MOREIRA<sup>2</sup>, JESSICA POSSIGNOLLO<sup>1</sup>, MAURICE NETO DE SOUZA<sup>1</sup>.

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In the framework of pharmaceutical care (PC), pharmacotherapy follow-up requires developing, implementing and monitoring an individual care plan to solve drug-related problems (DRP). HIV/AIDS patients use complex regimens, factor that could lessen adherence, which in turn, is associated with increased viral replication and the development of drug-resistance. Studies have shown that perception of side-effects also lessens adherence, reinforcing the need to prevent, identify and solve problems during antiretroviral treatment and to avoid DRP through PC. We describe a program of PC for HIV/AIDS patients and our planned randomized controlled trial, to evaluate PC program for HIV-infected patients using antiretroviral treatment, through the Dáder method. Randomized clinical trial method was used for this study. Patients were interviewed when they collected drugs or have their medical visit. Data were collected through questionnaires demographic and self-reported adherence to the antiretrovirals and self-efficacy, for 12 months. Viral load and CD4 were measured. The PC program consists of color labeling the antiretrovirals and giving patients a card with prescription information. There was a high satisfaction with PC by patients and service professionals and improving education in ART. Were identified 94 negative outcomes associated with medicines (50 related to the need, still, 20 does not use medication that requires medication and 30 used does not need, 40 related to ineffectiveness and 4 with no security), being resolved 41. Were identified and resolved 14 medication errors, being that all patients using the drug didanosine used incorrectly. This study increased the rational use of medicines, provide information about HIV-infected patients' pharmaceutical care and will hopefully provide a validated model of pharmaceutical care for specialized health centers that will supplement their care. This study was supported in part by a grant to the University of California, San Francisco from the U.S. National Institutes of Health, Fogarty International Center (International Clinical, Operational and Health Services Research Training Award, D43TW005799).

## **29- DISCOVERY PLACE: THE PHARMACEUTICAL CARE ON ASSISTANCE, RESEARCH AND QUALITY TEACHING.**

PRISCILLA ALVES ROCHA<sup>1</sup>, MARIA DE FATIMA SILVA MIYAMOTO<sup>1</sup>, MARIA CLEUSA MARTINS<sup>1</sup>, MARCIA LUCIA DE MARIO MARIN<sup>1</sup>, ANDREA CASSIA SFORSIN, WILSON POLLARA<sup>2</sup>, VANUSA BARBOSA PINTO<sup>1</sup>.

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Currently, Clinical Pharmacy specialization has been the choice of many professionals who want to join in assistance area. In June 2008, it was opened the Pharmaceutical Care Unit that was created at the tertiary public hospital's pharmacy. At this moment, the purpose were standardizing the pharmacist's actions in the care of outpatients, adding professionals in health teams and contribute for the training of Pharmaceutical Care specialists. The aim was demonstrate the impact of the Pharmaceutical Care implementation on assistance, research and quality teaching. This was a retrospective study that was conducted in a high complexity university public hospital in the period from 2008 to 2012. Firstly, it was defined for implementation: team, medical clinic and monitoring patient method (questionnaires, documentation and forms for guidance). Then, it was established a partnership with the Continuing Education Unit of the Hospital Pharmacy that is responsible for Hospital and Clinical Pharmacy Specialization Course, for the participation of pharmacists in practice and research in Pharmaceutical Care. It was attended 106 patients in pharmacotherapeutic follow-up since the start of Pharmaceutical Care Unit activities, being initially deployed in Geriatric Unit and later in others units (Endocrinology, Pneumology and Clinical Nutrition). Concerning to Pharmaceutical Orientation, 7050 patients was attended in three distinct programs (Promotion for drugs correct use in older, Correct Use of Inhalation Devices and Pharmaceutical Care Week) and 51 pharmacists still were trained. The Specialization Course students have produced 11 research works in Pharmaceutical Care, contributing to the improvement of this practice along to units involved. Therefore, the created of Pharmaceutical Care Unit in hospital pharmacy showed positive impact, being an important part of the pillars of assistance, research and teaching for the development of a quality service and training professionals.

## **30- DISTANCE CONTINUING EDUCATION: PHARMCEUTICAL CARE SPECIAL INTEREST GROUPS**

CARINE RAQUEL BLATT<sup>1</sup>, MARLENE ZANIN<sup>2</sup>, KAREN SARMENTO COSTA<sup>3</sup>, LUIZ ARY MESSINA<sup>4</sup>.

<sup>1</sup>Universidade Federal de Ciências da Saúde de Porto Alegre, <sup>2</sup>Universidade Federal de Santa Catarina, <sup>3</sup>Ministério da Saúde – Departamento de Assistência Farmacêutica, <sup>4</sup>Ministério da Saúde – Rede Universitária de Telemedicina.

Nowadays the pharmaceutical professional must be in constant update due information demand to pharmaceutical job and due to revolution from health knowledge and new technologies. Telemedicine University Network (in Portuguese RUTE) from Technology and Science Ministry and coordinated by National Research and Teaching Network encourages experiences exchange between health professional through Special Interest Groups (SIG). This is an opportunity to update many health professionals. The aim is describe the Pharmaceutical Care SIG. This Special Interest Groups aims improve pharmaceutical services and care through experiences exchange using distance education. The conferences occur monthly on second Friday using web conference between 10:30 to 12:00. Disclosure of lectures is RUTE website (<http://rute.rnp.br/>), blog website (<http://sigcuidadosfarmaceuticos.blogspot.com.br/>) and facebook web site (<http://www.facebook.com/#!/SigCuidadosFarmaceuticos>) and emails list. This event is free and new participants have access sending email to [sigcuidadosfarmaceuticos@gmail.com](mailto:sigcuidadosfarmaceuticos@gmail.com). Until this moment 22 educations and services institutions are registered. Web conference meeting are recorded and people may to see the video accessing link available later. First lecture was September 2012 and until this moment was done six web conference. Number of participants ranged between 15 to 22. Use of education technology are great tool to pharmaceutical professionals uptade and may contribute to care qualification in health services. Moreover, the Network telemedicine provided an opportunity to experiences exchange easily and cheap. There is still need more disclosure of Pharmaceutical Care SIG.

### 31- DISTRIBUTION ESTRATEGY OF THE MISOPROSTOL IN THE STATE OF MINAS GERAIS

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Secretaria Estadual de Saúde de Minas Gerais/Superintendência de Assistência Farmacêutica

Misoprostol is a synthetic prostaglandin E1 analog that was developed for the prevention and treatment of nonsteroidal anti-inflammatory drug induced gastric ulcers. Nowadays, misoprostol has wide use in obstetrics due to its action in maturation and contractions of the uterine cervix, and it has been indicated to “induced abortion” and childbirth labour.

In Brazil, abortion is legal only in cases of rape and high-risk pregnancy. Because that issue and also the serious problems due to the irrational use of misoprostol, its access is restricted to hospitals. Thus, it is important to monitor the distribution and use of the drug. The goal of this work is to show the flow of distribution of misoprostol in state of Minas Gerais (MG) Brazil, in order to help health professionals with planning and distribution of the drug. In this work, we present a survey about official publications of Department of Health (MS) and National Agency for Sanitary Vigilance that regulate the use of misoprostol in Brazil as well as its distribution in MG. MS defines that the establishments able to receive misoprostol are those whose registered childbirths is greater than 1000 per year in the Hospital and Ambulatory Information System. We collect information about the distributed pharmaceutical units through monthly reports of Integrated Pharmaceutical Care Management System (SIGAF) in the period of August 2012 to March 2013. In MG, since August 2012, the distribution of the drug is accomplished via SIGAF. Misoprostol is available in the form of vaginal capsular shaped tablets in 25 and 200 mcg. We observed that the amount of maternities that registered more than 1000 births/years in MG, 48.9% of them are able to receive the drug. Besides, from the total health units, 30% are concentrated in the metropolitan region of Belo Horizonte. These results show the evidence for the need of safe and rational use of misoprostol, and it is primordial the monitoring of the use of misoprostol by a multidisciplinary team to the patients who will use the drug. The irrational use of drugs is a notable public health problem. Thus, we must consider the contribution of the pharmacist and incorporate her to the health teams to ensure better use of medications and decrease costs related to pharmacotherapy.

### 32- DRUG AND FOOD INTERACTIONS: A FIELD FOR PHARMACEUTICAL CARE INTERVENTION

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1 Industrial Pharmacist, Master in Pharmacology and student of Pharmaceutical Care and Clinical Pharmacotherapy Specialization (IPOG), 2 Pharmacist, 3 Pharmacy graduating student, 4 Pharmacists, PhD Professors from Physiology and Patology Department/CCS/Federal University of Paraíba (UFPB)

Drug administration with food is recommended by the possibility of greater drug or nutrient absorption, reducing the irritant effect of certain active substances in the gastrointestinal mucosa and assisting in adherence of therapy, being related to administration of a drug in the main meals. However, such interaction might not be benefic, being crucial to suspend the intake of some nutrients during the treatment. Drugs, including antibiotics, antacids and laxatives may affect the nutrients absorption, and in some cases might constitute a Drug Related Problems (DRP) that occasionally generates a Negative Outcomes Associated with Medication (NOM). In this way appears clinical pharmacist who together with other health professionals, interferes rationally in this occurrence pharmaceutical, resolving and preventing problem or even the co-morbidities appearance related to irrational use of medicines. This study aimed to explore the interactions between drugs and food, their mechanisms, effects on organisms and risks for patients, through a literature review, using periodicals, journals and specialized books providing a critical analysis of these problematic, updating pharmacists and other health professionals. Results were expressed on a table where it is presented the drugs, nutrients, mechanisms and effects of these associations. To illustrate, diazepam and high-fat nutrients administration can generate an interaction, because of renal drug excretion decreased, making the substance stays longer in the body, which enhances the effect of it, leading the user to intoxication. An alkaline diet enhances the excretion of non-anti-inflammatory drugs (NSAIDs) causes an increase in urine pH and ionization of NSAIDs, resulting in a reduction of tubular drug reabsorption. Thus, we conclude that it is essential prior knowledge of these types of associations and guidance provided by a multidisciplinary team, in which clinical pharmacists excel to solve and prevent DRPs, NOMs, avoiding damage to treatment and/or nutritional individual's status.

### **33- DRUG DISPENSING SYSTEM WITH ELECTRONIC MONITORING**

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Considering that over 50% of the population makes misuse of their medicines and the use of interventions in the dispensation can reduce medication errors, this study aimed to develop a system for dispensing drugs with electronic monitoring to improve adherence to treatment of patients using many medications, especially those with chronic diseases and those who have difficulties in the proper use of their medications. Development of a prototype system for dispensing drugs using an electronic device microcontroller (Arduino open platform). The system consists of the following components: acrylic boxes + drug packaging + identifying labels + electronic system (alarm and data logging). The acrylic box contains sub compartments for engaging the packaging of medication for one month. The packaging of drugs are produced in PVC plastic material and have a zipper in the upper opening for placing and removal of medication, enabling reuse. The packages are marked with days of the month and labels identifying the correct time to use the medication. To build the electronic system, was chosen the Arduino, the open platform, which is connected the following components: display LCD; pressure sensor resistant; light emitting diode (LED); buzzer; SD Memory Card, and 9V power supply. For communication with other devices, like computers, was used a serial port to connect via USB. The prototype works by recording the times at which drugs should be consumed, warning the patient through an alarm the moment you should consume a particular drug. Moreover, the system performs the electronic record concerning schedules and drugs that have been withdrawn for consumption (control opening and closing of the box). The system alerts, via a beep and light, controls and records the data on the time in which the patient used his medication, according to the schedule previously registered in the system. The registry can assist health professionals to assess the progress of treatment of patients and whether they are correctly following the prescribed treatment. Financial support: CNPq, FAPESP.

### **34- DRUG INTERACTIONS BETWEEN HERBAL ANS CHEMOTHERAPEUTIC IN PATIENTS SERVED IN CONSULTING PHARMACIST - UNIFENAS CAMPUS VARGINHA.**

GIANI GIANESINI LEONEL HAAS e LEILA DA SILVA AZEVEDO.

Universidade José do Rosário Vellano -UNIFENAS-.

By the population, created the myth that everything is natural does not hurt, and that its use could be unrestricted. However, the herbal assets that have effects on the organism, but would not have pharmacological effects therefore are able to interfere and react with the drugs administered. The interactions are described as the interference potential of an action on another, it is important to report that there are beneficial interactions that act as synergism and potentiation in the treatment, as there are also those that can inhibit actions that produce effects contrary to those desired. These interactions are difficult to detect, entailing over time, and are changed according to the physiological functions of each individual and their environmental change. The purpose of this work is to identify, analyze and quantify the interactions of herbal medicines and other drugs, by consulting the records of patients of Pharmacist Office at Unifenas, Campus Varginha. Were consulted data from clinical records of all patients seen from 2009 to 2012 in order to conduct the survey data of herbal medicines and chemotherapy in combination, to analyze the interactions between them, using for this purpose literatures scientific. Through this work it was possible to identify the importance of rational drug prescription, even if this is a herbal identifying interactions of great importance in the treatment of the patient.

### **35- DRUG THERAPY DIFFICULTIES IN PEDIATRIC GASTROENTEROLOGY: REVIEW OF LITERATURE**

LAÍS PRADO CAMPOS<sup>1</sup>, MÔNICA DE FARIA REZENDE<sup>1</sup>, Tatyana Xavier almeida Matteucci Ferreira<sup>1</sup>, ADRIANA HELENA DE MATOS ABE<sup>2</sup>, RICARDO NEVES MARRETO<sup>1</sup>, NATHALIE DE LOURDES SOUZA DEWULF<sup>1</sup>.

1 – School of Pharmacy, Federal University of Goiás, 2 - Clinical Hospital, Federal University of Goiás.

Clinical trials in children are not included in the development of most drugs available on the market. One of the consequences may be intoxication caused by changes of dosages or pharmaceutical forms from drugs commercialized in the solid form. Researches and debates have been focusing the pediatric field in order to adapt currently available therapies. The aim of the study was to identify in the literature, main prescription related problems and solutions, as well as adaptations to drug therapies available on the market. This was a descriptive and bibliographic study of original articles, thesis and dissertations published in the period of 2007 and 2012 in the Federal University of Goiás, CAPES, LILACS-BIREME, Scielo and Pubmed databases. Eighteen articles were included for analysis. Children from 3 months to 1 year old were studied in 89% of the articles, 44% of the studies were published between 2008 and 2011, 22% consisted of prospective, descriptive study, 67% were in English, 67% were performed in public institutions; 28% presented analysis of prescription as part of methodology, 67% included the ATC code A02, 39% cited the use of either unlicensed drugs or off label practice, 17% considered the absence of formulations for pediatric usage as a problem and 28% suggested the provision of institutional data to promote the Rational Use of Medicines and clinical researches for reliable results. In spite of the small number of publications, promising politics and legislation supporting both tests in children and researches towards the end of unlicensed drugs or off label use have been developed.

### **36- EDUCATIVE ACTIVITIES ABOUT RATIONAL USE OF DRUGS FOR BASIC EDUCATION'S STUDENTS**

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The Rational Drugs Use is the situation in which the patients receive appropriate drugs to its clinical necessities in the correct dose for a period from adequate time and an accessible cost. The self-medication and the self-prescription constitute practice among others dangerous whose consequences can be: disguise of a disease, being late the medical assistance in cases where really it is necessary, appearance of adverse reactions, drugs interactions, increase of the resistance to antimicrobial agents, incorrect choice of the drugs and risk of abuse and chemical dependence. Based in these facts, the aim of this study was to intensify the knowledge on rational drugs use in children of school of basic level, contributing for a bigger awareness on health, drugs and self-medication. Sixty students of basic education, both sex, between four to ten years old and their teachers participated of this study. Educative activities were realized for children of school. To collected the data was used a questioner filled before and after the accomplishment of the educative activities, applied with teachers and the students to evaluate and to characterize the level of knowledge about the rational drugs use. However, the answers were compared before and after the accomplishment of educative interventions. After realize of educative activities 100% of the children will not use drugs without doctor's orientation, as well as they will not use drugs without parents' knowledge. It was emphasized in this work the places where the drugs cannot be stored, as for example: kitchen and bathroom. In conclusion, these results show the educative activities developed with children influence of positive form in the attitudes for the rational drugs use.

### **37- EFFECT OF IMPLEMENTATION OF PHARMACEUTICAL SERVICES IN A COMMUNITY PHARMACY**

THAYS CARNEIRO BOAVENTURA<sup>2</sup>; VYVIAN ALVES DE OLIVEIRA<sup>2</sup>; BLÍCIE JENNIFER BALISA-ROCHA<sup>1</sup>; GISELLE DE CARVALHO BRITO<sup>1</sup>; EULÁLIA LINS VICTOR<sup>2</sup>; MARIA CRISTIANE TRINDADE DE ALMEIDA<sup>2</sup>; DIVALDO PEREIRA DE LYRA JR.<sup>1</sup>.

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The pharmaceutical patient-centered services have emerged as an alternative to improve the quality of medication use process, in recent decades, benefiting patients and health services. This study aims to describe the effect of the implementation of Pharmaceutical Care Services, in a community pharmacy. The services were deployed from September 2012 to February 2013, a consulting unit of the “Farmácia Popular do Brasil”, administered by the State Foundation for Health in Sergipe (Funesa). Therefore, pharmacists were trained and conducted interventions both in structure and in the processes of care for Services: Dispensing, Measuring Clinical Parameters, Medication Review and Pharmaceutical Care. Furthermore, tools have been developed for documentation and informational materials. The main results were modifying the layout of the pharmacy for dispensing, the organization's private room to meet pharmaceutical and manufacturing of custom chips. The data showed that the Dispensation 96% of the 202 patients analyzed did not understand correctly about the drugs in use, 85% do not take their medications correctly and 62% do not fully understand the health problems. In 100% of Dispensations were addressed themes of health education, such as storage and proper use of medications. Furthermore, the problems associated with pharmacotherapeutic behavioral issues were avoidable prevented or resolved by services Review of Pharmacotherapy and Pharmaceutical Care. So, it can be conclude that the adjustments made in the physical space spurred greater privacy and trust in the relationship Pharmacist-patient as well as the establishment of standardized and optimized flows attendances. Moreover, the deployment of Pharmaceutical Services contributed to the detection, prevention and resolution of drug therapy problems. The study was supported by Funesa, CAPES and MTM Care Institute.

### **38- EFFECT OF PACKAGE INSERTS ON PHARMACOTHERAPY ADHERENCE: A SURVEY WITH PATIENTS USING SIMVASTATIN**

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Patient adherence to pharmacotherapy is an important factor in achieving positive clinical outcomes. However earlier studies showed that almost half of patients with dyslipidaemia do not adhere to their drug therapy treatment. The aim of this study was to evaluate the effect of package inserts of simvastatin on pharmacotherapy adherence. A randomized controlled clinical trial was carried out from March 2012 to August 2012 in Basic Health Units of Salto Grande, Sao Paulo, Brazil. Patients who started the use of simvastatin during the study period were randomly divided in two groups: control (package insert was not delivered to these patients, n = 52) and intervention (package insert was delivered to these patients, n = 51). Simvastatin was dispensed to these patients for a period of 30 days, following the dosage of the medical prescription. Adherence to pharmacotherapy was evaluated 30 days after the first dispensing of simvastatin using two indirect methods: Morisky-Green test and computerized dispensed medication history. Chi-square test was used for categorical variables. A p value of < 0.05 was considered to be statistically significant. We also asked patients of the intervention group the following questions: did you read the package insert, did you understand the instructions written in the package insert and did the package insert influenced in your behavior referent to medication use. No significant differences between the groups was verified according to the Morisky-Green test (35.3% patients of intervention group rated as adherent vs. 36.5% patients of control group rated as adherent, p = 0.8) and the computerized dispensed medication history (37.3% patients of intervention group rated as adherent vs. 40.4% patients of control group rated as adherent, p = 0.8). Half of the patients of the intervention group said that did not read the package insert, 11 patients (21.5%) said that understand the instructions written in the package insert and 6 patients (11.8%) said that the package insert influenced in their behavior of medication use. Our results suggest that simvastatin package insert did not influence patient adherence to pharmacotherapy. Changes in package insert are needed to improve their utility to the patients.



### **39- EFFECTIVENESS OF PHARMACEUTICAL CARE IN PATIENTS SUFFERING FROM DEPRESSION**

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Universidade Federal de Alfenas - MG, Atenção Farmacêutica /Faculdade de Ciências Farmacêuticas

Depression is an abnormal change in the person's mood and can be manifested in various ways, amongst which there is a predominance of anhedonia and feelings of emptiness. As this is a disease with high prevalence and is a leading cause of disability, resulting in increased work absenteeism, the present study proposes to assess the effectiveness of Pharmaceutical Care through pharmacotherapy follow-up in patients diagnosed with depression. So far, 10 female patients over 18 years of age, living in urban areas and who had a first episode of depression or recurrent episodes were selected. Patients with evident cognitive impairment that might compromise the completion of the questionnaires were excluded. This is an uncontrolled and nonrandomized study. The patients were monitored for eight months through telephone calls and four residence visits. The pharmacist assessed the depressive and anxiety symptoms and the need for pharmaceutical intervention with the prescriber. The questionnaires used were: Dáder Method, PHQ-9 and the Beck anxiety inventory. The data were analyzed in Bioestat 5.0 software by non-parametric Wilcoxon test. The partial results obtained by comparing two measures of the PHQ-9 and Beck anxiety inventory demonstrated a statistically significant reduction in depressive (p-value: 0.0150), and anxiety (p-value: 0.0125) symptoms. There was a decrease of 50% of severe cases of anxiety and 27.27% of the patients showed improvement in anxiety symptoms: from some degree of anxiety to minimum (normal) anxiety. There was a decrease of 66.66% of the cases of moderate-severe depression and 27.27% of the patients had remission of depressive symptoms. Essential pharmaceutical interventions were performed to solve PRM in the form of oral communication between pharmacist-patient or pharmacist-patient-doctor, and also advised the patient on the importance of adherence to treatment and of practicing activities that makes him/her feel good. Pharmaceutical care has so far been effective in reducing depressive and anxiety symptoms.

### **40- EVALUATION OF CLINICAL AND ECONOMIC IMPACT OF PHARMACEUTICAL CARE UNDER UNIQUE HEALTH SYSTEM**

AUTORES: LAURO CÉSAR DA SILVA MADURO, CLÁUDIO LUIZ FERREIRA JÚNIOR, DANIELA RIBEIRO LIMA, MARCONI RICARDO DUPIM, RENATA ALINE DE ANDRADE

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Hypertension and diabetes are diseases that are difficult to detect and control. Despite the large therapeutic methods available, most patients with diabetes and / or hypertension do not have their blood glucose levels and blood pressure (BP) control. This causes not only damage your health, but also the budget of the Unique Health System (SUS), generating spending on treatment, hospitalizations and other avoidable problems. In this context, the Pharmaceutical Care (AtenFar) is presented as a tool to assist these patients by monitoring pharmacotherapy. The practice may contribute to the control of biochemical and physiological parameters, which leads to consequent savings for SUS. The objective of this study was to evaluate the clinical impact (control of biochemical and physiological parameters) and cost of pharmaceutical care service offered at the basic pharmacy in Diamantina, MG. Pharmacotherapeutic follow-up was conducted with 54 patients, both genders, with more than 45 years diagnosed as hypertensive and / or diabetic, based on the method Dáder. The project was approved by the Ethics and Research Committee of UFVJM, second record No. 043, 2010. We compared the clinical status of patients before and after AtenFar pharmaceutical intervention. It was observed that the number of control patients without BP decreased from 32 to 11 (62% to 21%) and number of patients who were not controlled blood glucose levels decreased from 11 to 4 (65% to 23%). We also carried out the economic evaluation. The data showed that spending on treatments without positive clinical outcome significantly reduced after AtenFar. Thus, the AtenFar service, whether in identifying, resolving or preventing drug related problems, positively influenced the therapeutic helping reduce and control blood pressure levels and blood glucose, and the optimization of financial resources, showing how important is the presence clinical pharmacist in the multidisciplinary health team. Financial Aid: FAPEMIG, PET-Saúde UFVJM

#### **41- EVALUATION OF CLINICAL AND HUMANISTIC OUTCOMES OF THE DISPENSING PROCESS PROVIDED BY PHARMACISTS IN A UNIVERSITY PHARMACY**

TATYANA XAVIER ALMEIDA MATTEUCCI FERREIRA; LUCIANA RESENDE PRUDENTE; THAISSA COSTA CARDOSO, RENATA AIRES XAVIER, NATHALIE DE LOURDES SOUZA DEWULF; RITA GORETI AMARAL

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The evaluation of pharmaceutical care can be performed according to the parameters in the quality assessment of health services: structure, process and outcomes. The aim of this study was to assess the humanistic outcome (level of knowledge of medicines) and clinical outcome (adherence) of the medicines dispensing process provided by pharmacists in the University Pharmacy of the Pharmacy Faculty in Goiás Federal University. The evaluation was conducted by applying validated instruments to assess level of knowledge of medicines and adherence to treatment to the pharmacy patients, before and after the medicines dispensing process. The Ethics Committee of the Goiás Federal University approved this study. From January 21<sup>th</sup> to February 29<sup>th</sup> 2013, 37 patients were assessed. Prior to medicine dispensing, the level of knowledge about drug therapy was considered good in 10,8% of participants, fair in 43,2%, and insufficient in 45,9%. After medicine dispensing, the level of knowledge about drug therapy was considered good in 48,6% of participants, fair in 27,0%, and insufficient in 24,3%. Regarding adherence, prior to dispensing, 78.3% of patients were non-adherent to medication and 21.7% of patients were highly adherent. After dispensing, 67.5% of patients were non-adherent to medication and 32.5% of patients were highly adherent. The dispensing process provided by pharmacists can improve the level of knowledge of medicines used by patients and their adherence to treatment. The level of knowledge of medicines and adherence to treatment may contribute to rational use of the drugs, which could increase the chances of success of pharmacotherapy.

#### **42- EVALUATION OF DRUG INTERACTIONS IN USERS OF PUBLIC PHARMACIES IN DIVINÓPOLIS – MG**

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Drug interactions unwanted reduce the effectiveness and safety of treatments. We conducted a cross-sectional study, population-based on a stratified random sample of 517 patients >18 years, carrying the prescription of their medications, in May to July 2012, in pharmacies of primary health care in Divinópolis-MG. Drug interactions of clinical importance, significance 3, were judged using MICROMEDEX/DRUGDEX (2013) and Tatro (2012). It was constituted a database program in IBM SPSS, descriptive statistical analyzes of central tendency and variability was generated. The study was approved by the Institutional Human Experimentation Committee of São João de Deus Hospital process under number 154/2011. The results of this study found a median age of 58.8 years and range from 18 to 86 years. More than seventy three of respondents were female, 7.5% were illiterate and 55.1% studied less than 4 years and 54.9% living with a partner. We reported a total of 6.579 medical consultations in the last year, a median of 3.0 visits per patient. The total number of medications in prescriptions was 1.794, median 3.0 and range from 1.0 to 14.0. Polypharmacy occurred in 26.3% of cases. Of the 517 individuals surveyed there were 556 drug-drug interactions, 34.2% had at least one drug interaction. In MICROMEDEX/DRUGDEX (2013) were found 462 drug interactions, these were among the most frequent hypoglycemic and beta-blocker interactions with 92 (19.9%), followed by captopril and hydrochlorothiazide with 51 (11.0%), simvastatin and levothyroxine sodium with 39 (8.4%), AAS and Hydrochlorothiazide with 37 (8.0%), Captopril with AAS 23 (5.0%) and simvastatin and amlodipine with 15 (3.3%). According to Tatro (2012) 176 interactions were found between the most common are aspirin and beta-blocker interactions with 25 (14.2%), followed by AAS and Captopril with 23 (13.1%) and AAS with Glibenclamide 13 (7.4%). There was a low correlation between the bases used. The high frequency of drug interactions, especially between drugs of chronic use and prescribed, point out the importance of pharmacists in order to promote a pharmacotherapeutic monitoring, among other activities.

#### 43- EVALUATION OF EFFECTIVENESS OF PHARMACEUTICAL CARE TREATMENT OF PATIENTS WITH BIPOLAR DISORDER

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Bipolar disorder (BD) is a chronic mood disorder responsible for many hospitalizations per year, when there is little or no treatment adherence. The aim of this study is to evaluate the effectiveness of pharmacotherapeutic follow-up in individuals diagnosed with BD. This is a randomized and controlled clinical study conducted with patients undergoing treatment in Alzira Velano Hospital. The study was approved by the Ethics Committee of The Federal University of Alfenas (UNIFAL). The 13 patients referred by the psychiatrist, were randomized by lot into two groups, a control group (n = 8) and an experimental one (n = 5). The Experimental Group (EG), besides the usual care, also received pharmaceutical care based on the Dader Method, while the control group (CG) didn't receive any pharmaceutical interventions, which allowed result comparison between the two groups. The questionnaires "Attitudes in Relation to Medication" and "Treatment adherence", were applied to both groups, at the beginning, as well as at the end of the study. The CG patients mean age is 47 years and 62.5% are women, while the EG patients mean age is 51 years and 100% are women. The instruments used to assess attitudes towards medication and adherence showed a fall in negative responses in the second application compared to the first one. The EG presented a 28.24% decrease in negative attitudes towards medicines while the CG had a 57.57% decrease. There was an increase in positive attitudes for adherence, which was 10,94% for the CG and 15,78% for the EG. In relation to satisfaction, GE showed average level of satisfaction of 4.47 on a scale of 0 to 5. The partial results indicate that pharmaceutical care didn't influence the EG when compared to the CG (without pharmaceutical care). Possibly the partial result isn't in agreement with that expected due to the low number of patients. The number of patients in project is 25 for each group.

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#### 44- EVALUATION OF MEDICATIONS RETURNS TO A SPECIALIZED PHARMACY OF A GENERAL HOSPITAL

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**INTRODUCTION:** Drugs dispensing in quantities greater than necessary to the prescribed treatment and changes in drugs regimen are the main causes that contributes to unused drugs, which generally receive two destinations: the disposal or the reuse. Reused medications can bring significant savings to the health system, because spending on pharmaceutical products consume about 20% of public investment in the health sector. Thus, the present study aimed to evaluate the drugs disposal profile of the Specialized Pharmacy called Componente Especializado da Assistência Farmacêutica (CEAF) of the General Hospital of Ribeirão Preto (HCFMRP-USP). **METHODS:** This cross-sectional and descriptive study was conducted between July 1<sup>st</sup>, 2011 and July 30<sup>th</sup>, 2011 with patients who returned their medications to the pharmacy of CEAF. They answered a questionnaire and the data obtained were analyzed. The physical aspects of the drugs were evaluated in order to select those likely to reuse and which should be discarded. The savings achieved through reuse was calculated based on the price list of the Ministry of Health. The study was approved by the Research Ethics Committee of HCFMRP-USP. **RESULTS:** The pharmacy received 34 returns in the study period and 76.4% of the medications were able to be reused as they were intact and within the expiration date. The savings generated by the reuse of medications was R\$ 4,743.34, representing 82.4% of the total value of the returned items. **CONCLUSIONS:** The return of unused medications should be encouraged because of the benefits that this practice represents. However, the implementation of more effective policies for waste management and guidance to the population about the ideal storage conditions of medications are necessary to ensure the integrity of the active moiety and patients' safety. **FUNDING:** None to disclosure.

#### **45- EVALUATION OF PRACTICE OF PHARMACEUTICAL DISPENSING THROUGH TECHNICAL SIMULATED PATIENT: CASE STUDY**

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The simulated patient technique is the participation of an individual trained to act like a real patient in order to test some clinical situations. This technique has been used in educative activities in the studies that evaluate the practice of Pharmaceutical Services. Therefore, this case study aims to evaluate the profile of five pharmacists with simulated patient technique. In the evaluation, each of the pharmacists who worked in three units of the Farmácia Popular of Brazil managed by the Funesa was exposed to two situations compatible to those occurring in actual pharmacies, in which two simulated patients trained interpreted distinct roles: active and passive simulation. Each call was recorded on video and the recordings were analyzed by completing the semi-structured questionnaire adapted to Portuguese that assessed elements of verbal and non-verbal, understandability orientation and the overall impression of the service. Analysis of the videos was performed by three experts that met this instrument consensually. In both situations, all pharmacists provided information even when not asked and emphasized aspects of the dosage of the drugs ordered. However, differences were observed in front of the pharmacist care attitudes of patients. The study was supported by Funesa, CAPES and MTM Care Institute.

#### **46- EVALUATION OF THE EPIDEMIOLOGIC AND THERAPEUTIC PROFILE OF KIDNEY CHRONIC PATIENTS ASSISTED BY SUS IN TERESINA – PIAUI**

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Chronic diseases are increasing every day due to changes in the rhythm of life. Chronic kidney disease (CKD) is highlighted in this scenario, since it is now a major public health problem. In Teresina-PI, chronic renal patients have their medications dispensed free of charge by the Specialized Pharmaceutical Services (CEAF) in this capital. This body is responsible for supplying the drug distribution hubs of special drugs to people who need this class of substances in the capital and throughout the state. Noting this fact, aimed to evaluate the epidemiological and therapeutic efficacy of chronic renal failure patients treated at eight clinics specializing in the treatment and / or monitoring of patients with chronic renal failure and transplant the SUS in Teresina, Piauí and have their medications dispensed at the pharmacy CEAF, popularly known as pharmacy medicines exceptional. The survey of epidemiology and therapy of these patients was carried out through a quantitative descriptive study to collect data from the clinical files and computerized system (SISMEDEX) standard pharmacy CEAF was observed where the incidence of DRCs and collected the data of drug therapies most used during the year 2012. Among the 1935 patients enrolled, 62.79% were male and the age group with the highest incidence was 50-59 years (20.98%). Regarding the treatment of choice, the epoetin alfa has the largest number of users (1614) in chronic kidney disease in the final state (CID N180), representing 30% of total renal and other (CID N188) corresponding to the remaining 70%. In patients undergoing kidney transplants (CID Z940), the tacrolimus is more medicine dispensed (158 users). We also observed a large number of therapies involving combinations of drugs. According to this survey, it was observed that the data are consistent with the literature, in the case of male predominance, epoetin alfa as the drug of choice for renal failure and tacrolimus as an immunosuppressant in transplant patients.

#### **47- EVALUATION OF THE KNOWLEDGE OF PHARMACISTS TO PERFORM ADEQUATE PHARMACEUTICAL SERVICES IN DRUGSTORES**

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The pharmacy profession has been going through a transition phase in which it is necessary to recover the role responsible for the pharmacotherapy, intrinsic to this professional. Based on this context, it is essential that the pharmacist have accurate knowledge to perform his duties, as well as some major services such as dispensing medications and Pharmaceutical Care (PC). Thus, the main goal of this investigation was to evaluate the knowledge of pharmacists for dispensing and holding the PC in drugstores. A cross-sectional descriptive study was carried out in the cities of Ribeirão Preto/SP, Araraquara/SP, Londrina/PR and Alfnas/MG. All data collection was conducted during business hours by the same investigator who applied a previously validated questionnaire to participants. The information collected was filed in a database by two researchers independently. The study was approved by the Ethical Comitee of the School of Pharmaceutical Sciences of Ribeirão Preto under CAAE 03872312.1.0000.5403. A single researcher visited 486 drugstores but only 112 professionals have taken part in the study. Concerning this study we have come to the conclusion that 72.3% (n=81) were female, 55.4% (n=62) held the position of technical managers and 49.1% (n=55) had worked at the same drugstore for about five years. The private schools were responsible for the formation of 73% (n=81) of professionals, 41.1% (n=46) were generalists and 88 pharmacists (78.6%) reported they taking a postgraduate course. Seven questions in the questionnaire aimed to assess participants' knowledge: 30 (65.2%) of them got four questions right and 65 (58%) did not know the concept of PC. Despite this, 73.8% (n=79) of the professionals reported performing PC in drugstores. There seems to be gaps in the knowledge of pharmacists that impair the satisfactory completion of the dispensation and PC in drugstores by these professionals. CAPES.

#### **48- EVALUATION OF UNLICENSED AND OFF-LABEL ANTIEPILEPTIC DRUGS PRESCRIBED TO CHILDREN: BRAZILIAN REGULATORY AGENCY VERSUS FDA**

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The prescription of drugs in pediatrics is frequently based on adjusting the doses of formulations commercialized for adults, resulting in their use without clinical data on their effectiveness and safety. Epileptic seizures are neurological disorders most common in children and antiepileptic drugs (AED) represent the basis of treatment for the majority of patients, but many of the AED prescribed to pediatrics are used unlicensed and off-label. In this way, the objective of this study was to analyze the prevalence of unlicensed and off-label AED use, in the pediatric population, according to the Food and Drug Administration (FDA) and Brazilian Regulatory Agency (ANVISA). A cross-sectional, retrospective and observational study was carried out at Hospital das Clínicas da Faculdade de Medicina de Ribeirão Preto (HCFMRP-USP). After approval by the Ethics in Research Committee of HCFMRP-USP, the daily prescriptions of all the hospitalized children below 12 years old in the period between August 2008 and July 2009, who received at least one prescription of AED, were chosen. Data of the registration number, drug prescribed, dosage, route and administration frequency were collected, and then AED prescribed to children were classified as unlicensed and off-label according to the FDA and ANVISA. Of the 6637 pediatric patients identified during the study period, 583 patients (9.0%) received at least one AED. Unlicensed AED were prescribed to 287 patients, of which 99.1% received extemporaneous preparation. The AED classified in off-label were prescribed to 40.5% and 0.5% patients according to the FDA and ANVISA, respectively. According to FDA, the most prescribed off-label drug was Phenobarbital since it is only recommended for use by those over 18 years old. The prescription of unlicensed and off-label AED was very common. Extemporaneous preparations were commonly used to adjust the dose and facilitate the administration of drugs to pediatric patients. Data from off-label use demonstrate the absence of uniformity in action between ANVISA and the FDA. Data indicate that the FDA is more rigid in relation to regulation of AED in the pediatric population.

#### **49- FREQUENCY OF ADVERSE EFFECTS CAUSED BY AMINOGLYCOSIDES**

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Aminoglycosides antibiotics are broad clinical use, are effective against gram-negative bacteria, act on bacterial ribosome exerting bactericidal effect. The main toxic effects associated to these drugs are: ototoxicity, that is most prevalent and obliges immediate suspension of the drug; nephrotoxicity, where the effect occurs by the accumulation of toxic substances in the kidneys and, neuromuscular blockade, causing respiratory failure (Oliveira et al. 2006). Streptomycin, gentamicin, neomycin, and amikacin are aminoglycosides with higher reported toxic effects. The aim of this study was to evaluate the frequency of toxic effects caused by aminoglycosides. We conducted a bibliographic review in the search sites SciELO Bireme and Google Scholar, with 24 articles published between the years 2002 to 2012 utilizing keywords like: Aminoglycosides, adverse drug reaction and toxic effects. The frequency has been verified of the effects of ototoxicity, nephrotoxicity and neuromuscular blockade, associated with the use of streptomycin, gentamicin, amikacin and neomycin. Through the bibliographical survey, could verify the frequency of the most common adverse effects of aminoglycosides. The ototoxicity causes lesions cochlear and vestibular is frequent in 52% of patients who use streptomycin, 44% who use gentamicin, amikacin 40% and 32% neomycin. The nephrotoxicity, resulting from the accumulation of substances in the renal tubules, is common in 24% of patients who used gentamicin and amikacin, streptomycin 20% and 16% neomycin. With lower prevalence, neuromuscular blockade which may cause respiratory failure occurs in 12% of patients that make use of amikacin, 8% of streptomycin and of gentamicin and 4% of neomycin (ARBEX et al. 2010). The use of aminoglycosides has direct consequences as the occurrence of adverse effects that can bring about the onset of other diseases or imply in non-adherence to treatment with antimicrobials. To check the occurrence of adverse effects is an important parameter in the patient's therapeutic intervention.

#### **50- HEALTH EDUCATION FOR USERS OF A PHARMACEUTICAL CARE SERVICE IN PRIMARY HEALTH CARE**

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Federal University of São João Del-Rei

Introduction: The health education composes the field of action of pharmaceutical care practitioner in primary health care. During the second year of the university extension program Drug therapy problems in the Family Health Strategy, in addition to clinical care conducted by Pharmaceutical Care Service (PCS), there were promoted health education activities for people with diabetes mellitus, the main users of the PCS that year. The aim was to contribute to the construction of knowledge about their own health status. Methodology: there were formed two operative groups for people with diabetes two Operative Groups for People with diabetes mellitus (OGPDM). The group meetings were planned, organized and coordinated by a student under the guidance and supervision of the professor responsible for the program and the pharmacist involved. There were used oral expositions dialogued with visual support and language suited to the characteristics of the participants. Then, there were used dynamics to optimize the educational process and encourage greater integration of those involved. In 2012, quantitative research was conducted to assess clinical results of PCS's users. Results: Forty-three patients with diabetes mellitus accompanied by PCS in 2011 participated in the activities of the OGPDM, 08 meetings have been conducted. The benefits were seen in everyday clinical practice, with greater involvement of users with their treatments, which helped to prevent and resolve drug therapy problems. There was also greater integration between health professionals and patients, improving adherence to PCS. Conclusion: The health education targeted to users of PCS complemented and increased the effectiveness of individual clinical care. The knowledge about the health status and treatment stimulated the users the autonomy to self-care, improving the prevention and resolution of drug therapy problems.

## **51- HOSPITAL ADMISSION OF ONCOLOGY PATIENTS FOR NAUSEA AND VOMITING INDUCED BY ANTINEOPLASTIC CHEMOTHERAPY**

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Adverse events of drugs occur frequently in hospitalized patients. In the case of cancer patients these risks are increased due to the complexity of treatment. Among the major side effects, there are the nausea and vomiting. Therefore, before patients begin chemotherapy, they must administer antiemetic drugs, which are not always effective. This study aimed to analyze emergency room admissions of cancer patients undergoing chemotherapy and reporting nausea and vomiting even after prophylactic treatment with antiemetics. This retrospective, descriptive, and observational study was realized at a cancer hospital in João Pessoa, Paraíba. The analysis was conducted from December/2011 to March/2012, through the hospital admission forms and the data processing system of the hospital. The criteria for inclusion in this study were minimum age of 18 years old, participation in SUS (The National Public Health Service), with nausea and vomiting being the principle motive for emergency admission. An average of  $79.25 (10.24) \pm 28.72$  individuals were being admitted per month, of which 13% showed acute symptoms and 55% showed delayed symptoms. The prevalence was for females (70.73%) of the sample, and older people between 39 and 59 years of age. The condition predominated for low emetogenic chemotherapy treatments (50.36%), followed by moderate (23.36%), and high (16.06%) emetogenic treatments. Failure to control these events can increase or prolong hospitalizations, interfere in anticancer treatments (by generating chemotherapeutic intolerance), affect life quality, raise costs, and may even lead to death. Thus we see the importance of clinical observation and treatment for patients presenting these symptoms, to assess their profiles, and the real causes for their symptoms, when considering their resolution.

## **52- HOW ANTIMICROBIALS CONTROLLED SALE INFLUENCE BACTERIAL RESISTANCE IN BRAZIL?**

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Bacterial resistance to antimicrobials is an important issue in public health once it threatens the efficacy of therapeutic treatment of infectious diseases. Increase in bacterial resistance is associated with abusive and inadequate use of antimicrobials. In Brazil, due to wide use of antimicrobials without medical prescription, a governmental resolution was implemented to control sales of these medicines. The objective of the study was to outline the profile of bacterial resistance in cases of Urinary Tract Infection (UTI) before and after the governmental resolution. Data collection (1 year before and 1 year after resolution) regarding bacterial resistance was performed by a computer system analyzing all urine cultures diagnosed with UTI (*E. coli* agent), during the study period at emergency room of a university hospital. In a month, urine samples of 37.0% of the 140 UTI cases were cultured and the most prescribed antimicrobials were ciprofloxacin and norfloxacin. Amongst the 597 patients selected for the period before the resolution (72.9% women,  $42.5 \pm 25.3$  years), 352 (59.0%) were resistant to at least one of the antimicrobials analyzed. A year after the resolution, it is observed that from 924 patients (84.2% women,  $40.0 \pm 22.8$  years), 592 (56.9%) were resistant to at least one of the antimicrobials analyzed. In both times greater resistance to ampicillin was detected, followed by ciprofloxacin and trimethoprim-sulfamethoxazole, the last two antimicrobials of choice in the treatment of UTI. We noticed a slight drop in the percentage of bacterial resistance, but it is too early to assure that this result is a direct reflects of RDC No. 20/2011, as other factors can also impact on these indices.

### **53- IMPLEMENTATION OF A CLINICAL PHARMACY SERVICE AND ANALYSIS OF THE PHARMACOTHERAPEUTIC INTERVENTIONS IN THE NEUROLOGY SECTOR OF HCFMRP/USP**

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Introduction: Neurological diseases are common in the population and there is a lack of well defined protocols for the treatment of some of them. The management of drug therapy is also difficult in relation to toxicity, drug interactions and complexity of treatment. Clinical Pharmacy (CP) is a tool that can provide safe and effective therapies to hospitalized patients. The aim of this study is to describe the pharmacotherapeutic interventions (PI) conducted by clinical pharmacists and the degree of acceptance by physicians during the first year of this service implementation in Neurology Sector of Hospital das Clínicas de Ribeirão Preto (HCFMRP-USP). Methods: We retrospectively revised pharmacists' interventions records from 109 hospitalized patients between December, 2011 and December, 2012. We included adults of both sexes, regardless of the reason of admission. It was considered only the PI performed together with the medical staff that was documented. Results: The CP team made 74 PI, of which 64 (86%) were accepted by the physicians. There were sixteen dose changes, twelve discontinuations due to adverse reactions and/or drug interactions, eighteen changes in forms of administration, nine discontinuation unnecessary and/or ineffective treatment, two changes in treatment period, four introduction of a new drug, nine drug or treatment changes and four pharmaceutical formulation changes. Conclusion: The results show that CP is an important tool for the safety and effectiveness of the treatment of hospitalized patients, which is confirmed by the high degree of adherence from the medical team to the PI performed.

### **54- IMPLEMENTATION OF CLINICAL PHARMACY SERVICE FOR PREVENTING MEDICATION ERRORS IN INTENSIVE CARE UNIT OF WOMEN'S PUBLIC HEALTH**

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1-Faculty of Medical Sciences – UNICAMP/ 2-Faculty of Pharmacy, Catholic University of Campinas/ 3-Intensive Care Unit of CAISM-UNICAMP/ 4-Pharmacy Service – CAISM-UNICAMP

Clinical Pharmacy in Intensive Care Unit (ICU) is an established practice in international centers that contributes to patient safety, but in Brazil this area faces many difficulties to be implemented in public system, especially in women's health care. This study aimed to evaluate the impact of this merger activity through the quantification of pharmacy interventions and prevented medication errors, assessing the clinical significance of them. The study was conducted between February 2012/ February 2013 in the ICU of a University Women's Hospital. The pharmacist performed interventions during case discussions at bedside visits, quantifying and dividing them into accepted or not by the medical team. Prevented medication errors were also quantified, and the clinical significance of them and of the interventions was assessed using a slightly modified version of Overhage. We monitored 224 patients (110 obstetrics, 96 oncological and 18 gynecological) throughout the study, with mean age of  $44.4 \pm 18.1$  \* years old (\*mean  $\pm$  standard deviation). In total, 1259 prescriptions were evaluated, in which 104 prescribing errors were identified. Ninety of these errors were prevented, in which the most common were dosage higher than correct (n=17) and unsafe medication due to potential drug interaction (n=17). A hundred thirty interventions were performed, in which 116 were accepted, 4 partially accepted and 10 not accepted; the most common were dosage (n=30) and drug information (n=17). Most of prevented errors were significant (n=74) and serious (n=18); most of interventions were significant (n=67) and somewhat significant (n=18). We conclude that Clinical Pharmacy implementation contributed to patient safety by preventing medication errors and reducing risks from drug therapy, demonstrating the importance of the pharmacist inserted in the multidisciplinary team in women's health care. Financial support: CAPES.



## **55- IMPLEMENTATION OF PHARMACOTHERAPY REVIEW AS STRATEGY FOR PATIENT CARE: PILOT STUDY**

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A Medication Review is the systematic assessment of all the patient's needs related to medicine, by the pharmacist. This study aims to describe the implementation process of the Medication Review as a strategy for patient care. This is a pilot study to deploy the service on Medication Review of a unit of the Farmácia Popular of Brazil administered by Funesa, from September to November 2012. The implementation process was accomplished in three steps: 1. Standardization of processes and service 2. Guidance staff regarding referral of patients to the Dispensation Service Medication Review, and 3. Consultation of Medication Review performed in two visits per patient. In the first consultation, the pharmacist documented the socio-demographic and drug therapy data of patients. The second query established pharmaceutical interventions for patients with more complex pharmacotherapeutic problems. In this period, 12 patients were referred to the service of the Medication Review. The total of 23 consultations was performed and 37 interventions were recorded. Amounted to nine types of pharmaceutical interventions, the most frequent health education (n = 9) and the organization of schedules of drug administration (n = 8). Between patients treated, four showed improvement in clinical status, a worsened and seven remained in the initial situation. Among the patients, two were referred for medication therapy management. We conclude that the service Medication Review was effective to the patients and may be used for whom more need care than in Dispensation. Furthermore, it can be used as an indicator for patients who have drug therapy problems more complex and require tracking medication therapy management. The study was supported by Funesa, CAPES and MTM Care Institute.

## **56- IMPROVEMENT OF VARIOUS SYMPTOMS AFTER A AURICULOACUPUNCTURE SESSION**

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Acupuncture is a specialization of the pharmacist and is offered free by the Brazilian public health system. Acupuncture originates from Chinese traditional medicine and is a holistic manner to treat patient. It is one of the obligations of the pharmacist to know and guide the patient regarding alternative treatments. The aim of this study was to evaluate the relief of symptomatic complaints of the patients after one session of auriculoacupuncture. The study was conducted in UNIFAL-MG by an acupuncturist Pharmacist. Auriculoacupuncture technique used was one by Paul Nogier with mustard seeds instead of needles. Data analysis was performed using different percentage scores from 0 to 10 (11-point Likert scale) for each complaint of the patient, before (within 3 days) and after (4 days) treatment with auriculoacupuncture. Between the 112 patients who were treated with auriculoacupuncture, 83 completed this study. Among 83 participants, 84.3% were women, aged 29 years (median), 77.1% believed in acupuncture and 84.3% asked to participate in the study. The most frequent complaints of patients in this study were: anxiety (64%), muscle tension (34%), headache (34%), irritability (26%), tension / stress (22%), nervousness (19%) , mental agitation (19%), fatigue (19%) and stomach problems (17%). On average, patients had 6.3 complaints, and these, 2.3 alleviated by over 50%, 2.5 relieved from 30 to 50% and 1.6 alleviated less than 30%. Thirty percent of the patients experienced relief greater than 50% in more than half of their complaints and 75% in at least one complaint. Only 6% of patients experienced worsening of some symptoms after auriculoacupuncture. On average, each patient presented a relief of 43% overall. The therapeutic outcome depends on the balance between the control of symptoms and side effects of treatment. The auriculoacupuncture alleviated many symptoms without side effects while improving the overall condition of the patients.

## **57- INDICATORS OF DIABETIC PATIENTS FOR PHARMACEUTICAL ATTENTION USERS OF INSULIN**

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Federal University of the Valleys Jequitinhonha and Mucuri; Support Center for Family Health Diamantina

Introduction: The pharmaceutical care is a practice that has the commitment and responsibility to prevent, promote and restore the health of the patient, the proposal is to ensure the appropriate drug therapy to treat the health problems effectively, efficiently and safely. Objective: Assess the indicators of pharmaceutical care services for patients insulin-dependents registered at Basic Health Unit of the Diamantina-MG. Methods: We conducted a pharmacotherapeutic monitoring of 17 patients received insulin-dependent diabetics in a Family Health Strategy (FHS) in the city of Diamantina, MG. There were collected by pharmaceutical consultations second method of Dader. For the evaluation of pharmaceutical care service : profile of drugs used, problems related to drug use (DRPs) identified, capillary glycemia and blood pressure before and after the service, all were used as indicators for the evaluation of pharmaceutical care service. Results: 52.9% of patients were monitored using intensive insulin therapy. Among the drugs of the cardiovascular system, 26.9% of them acted on the renin angiotensin system; 23.1% diuretics, antilipemics 17.3%, 15.4% calcium channel blockers, beta-blockers 11.5%. 17.6% of patients had some type of health untreated problem, 47.0% did not adhere to the treatment proposed by the doctor, 29.4% presented any adverse reaction to medication, 29.4% were following their prescriptions however the drugs interact with each other or with feeding, 41.2% required additional medication, 41.2% were using any drug considered unnecessary and 11.8% were using drugs ineffective. On the evaluation of the patients who participated in three or more pharmaceutical consultations, 52.9% of patients had their blood pressure values lower and 41.2% had low blood glucose in capillary. Conclusion: These results demonstrate the importance of pharmaceutical care for rationalization of pharmacotherapy and improving the quality of life of diabetic patients using insulin. Also, could subsidize health actions under the Family Health Strategy. Financial aid: FAPEMIG; PRO-PET-Saúde UFVJM

## **58- KNOWLEDGE AND PRACTICES OF LIVING WITH HIV / AIDS IN RESIDENTS OF LONG-STAY SHELTERS IN ANTIRETROVIRAL THERAPY**

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With the advent of antiretroviral therapy for the treatment of infection with Human Immunodeficiency Virus (HIV), there was a significant increase in survival time and hence the expectation of an improved life quality. These improvements are directly related to the distribution of medicines and universal compliance to the use of these drugs. What is necessary in the context HIV / AIDS is seeking the causes of non-compliance to the development of alternative therapies that improve patients' compliance to antiretroviral therapy. The research objective was to assess the knowledge and practices of HIV / AIDS residents of long-stay shelters in Teresina-PI on Antiretroviral Therapy (ART) considering the factors that facilitate and hinder the medication use. Using the method of field research with descriptive exploratory qualitative approach, we interviewed patients of both sexes, aged over 18, people with HIV assisted by the institution mentioned. Data was collected through semi-structured interviews with the aid of a voice recorder. The questions were diagrammed to generate data on the aspect of membership, and socioeconomic knowledge and practices associated with ART. The study was approved by the research ethics committee of UFPI under the No CAAE 0071.0.045.000 of -11. Out of the drugs used, the most common among respondents were: Lopinavir + Ritonavir, Lamivudine and Efavirez. The data collected showed difficulties in understanding patients on antiretroviral treatment. Most of them could not remember the correct names of the drugs and the time to use them. At the end of the study, it was concluded that despite the wide acceptance of patients on ART, there is lack of information, problems related to drug use and RAM that could be minimized with the inclusion of a pharmaceutical care service to achieve high effectiveness and security in this complex therapy, as well as the prospect of studies on compliance to the antiretroviral therapy.

## **59-KNOWLEDGE OF PATIENTS ON DRUGS PRESCRIBED IN OUTPATIENT CLINICS OF A UNIVERSITY HOSPITAL IN NORTHEAST BRAZIL**

TATIANE CRISTINA MARQUES, RAFAELLA DE OLIVEIRA SANTOS SILVA, GENIVAL ARAÚJO DOS SANTOS JÚNIOR, CARINA CARVALHO SILVESTRE, LUIZA CORREIA CUNHA, ALISSON SILVA SIQUEIRA, DIVALDO PEREIRA DE LYRA JR., FRANCILENE AMARAL DA SILVA

Federal University of Sergipe, Pharmacy Department

In Brazil, there is a lack of attention paid to the correct use of medicines and the patients' understanding. As a result, it contributes to the high incidence of adverse reactions and abandonment of pharmacotherapy. Thus, this study aimed to evaluate patients' knowledge about prescription drugs in outpatient clinics of a university hospital. A cross sectional study was carried out from August 2011 to February 2013 in the outpatient clinics of University Hospital, in Aracaju-SE, in Northeast Brazil. The study included adult patients (age  $\geq 18$  years) who had one or more prescription medications. Data was collected immediately after medical consultation, through interviews using the instrument developed by Fröhlich (2010). This instrument consists of questions such as: drug name, indication, dose, time of administration, duration of treatment, methods of use, among others. The patient's knowledge about the prescription was categorized into three levels: good, fair and low. Descriptive statistics were used to analyze the data. The study included 100 patients with a mean age of  $47.3 \pm 12.3$  years. 46 of them (46%) had incomplete primary education and most ( $n = 86$ , 86%) were female. In the study, 273 drugs were prescribed, with an average  $2.73 \pm 1.48$  per prescription. Between these drugs, 73.6% were prescribed according to the Brazilian Nonproprietary Name (DCB). The level of knowledge of pharmacotherapy was considered insufficient for 56 (56%), regular for 36 (36%) and good for eight (8%) of respondents. The variables with the most correct answers were: therapeutic indication (79%) and drug dose (65%). However, only nine (9%) of patients responded correctly about what to do in case of missing one or more doses of pharmacotherapy and 17 (17%) of drug interactions. Among the interviewees, 46 (46%) responded that they needed more information to complete the treatment. In the group of respondents, who want more information, 51 (94%) wanted information about drug interactions and 52 (96%) about adverse reaction. In conclusion, the data suggest that most patients have insufficient knowledge level about the use of prescription drugs.

## **60- LEVEL OF INFORMATION ABOUT THE DISEASE AND THE TREATMENT: AN OVERVIEW OF A GROUP OF BREAST CANCER PATIENTS IN PHARMACOTHERAPEUTIC FOLLOW-UP**

ALINE CRUZ, JACQUELINE MARQUES DOS SANTOS, VALÉRIA DE SOUZA SANTOS HOLSBACK, ALINE ANTONIOLI DE BARROS, ROBERTA PARO DE CARVALHO, LUIZ CARLOS TEIXEIRA, PRISCILA GAVA MAZZOLA

University of Campinas: School of Medical Sciences and Center of Integral Services for the Health of Women

The information of the patient about her own disease and treatment has an important role on her self-care and adherence to suggested therapy. Pharmaceutical Care can help to identify information gaps and then plan strategies to clarify and educate the patients. We aimed to investigate the amount of information received about different aspects of treatment and satisfaction with the information in the perception of breast cancer patients receiving endocrine therapy with tamoxifen (estrogen antagonist). At the first pharmaceutical consult, the EORTC QLQ-INFO25, a tool to evaluate the information received by cancer patients, which offers four answer choices for each question: 'not at all', 'a little', 'quite a bit' and 'very much' was applied to 38 patients. Followed patients were aged between 38 and 83 years old (mean: 55.8), all undergoing hormonal treatment. According to the answers of different items, we observed that patients considered they received 'quite a bit' or 'very much' information about diagnosis (71%), extension (57%) and treatment (82%) of their disease. On the other hand, most said they received 'not at all' information about the possible causes of the tumor (42%), the effects of treatment on their sexual activity (42%) and additional help outside the hospital (66%). Most patients expressed a desire to receive more information (59%), and those who considered themselves 'quite a bit' or 'very much' satisfied with the amount of received information represented 69% of the followed patients. Furthermore, 84% of them said that the information received was 'quite a bit' or 'very much' useful. In conclusion, patients on hormone therapy for breast cancer consider themselves well informed on various aspects of their disease and treatment, considering useful the received information. Moreover, some aspects are still poorly discussed with patients, who reported the desire to receive further information. From this survey and the provision of Pharmaceutical Care services we can develop educational actions to disseminate information to this group of patients. Financial Support: Federal Agency for Support and Evaluation of Postgraduate Education (CAPES).

## **61- LOW SENSITIVITY OF THE MORISKY TEST TO EVALUATE HIV/AIDS PATIENTS' COMPLIANCE WITH THE ANTI RETROVIRUS TREATMENT**

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Brazil was one of the first countries in the world to use significant health policies to improve HIV patients' care. Since 1996, with the publication of the Law 9313, free and universal access to anti retrovirus treatment in Brazil has been guaranteed. High rate of compliance with the anti retrovirus therapy is required to ensure maximum viral suppression and avoid treatment failure. Several methods have been used to measure compliance, including the Morisky method. This scale is used to measure the compliance with the drug therapy and the intentional as well as unintentional (based on forgetfulness or drug discontinuation) noncompliance. Thus, this tool is used in many researches in Brazil. The present study aimed at evaluating the use of the Morisky method to measure the compliance of the HIV/AIDS anti retrovirus treatment users at the Natan Portela Institute for Tropical Diseases (NPITD) in the city of Teresina (PI). The study was approved by the CEP/UFPI under the number CAAE 0072.0.045.000-11. A total of 85 patients participated in the study, who were older than 18 years and anti retrovirus users with a confirmed diagnosis of HIV/AIDS. The following methods of compliance were used: record of drug withdrawal at the pharmacy (RP), the Morisky test (MRK), the self-report compliance (SC) and combined compliance (CC) among the methods that correlated. Significant association was observed between compliance according to SC and RP ( $P < 0.05$ ). The method of compliance (CC) showed significant association with AR and RF ( $P < 0.001$ ). However, the method MRK showed no correlation with the methods used in the study. Probably, the aforementioned method has no sensitivity for identifying the noncompliance with complex treatment as the anti retrovirus treatment. Therefore, the method has limited application for groups of patients with HIV/AIDS.

## **62-THE MAJOR DRUG INTERACTIONS WITH ANTIBIOTICS**

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Universidade Estadual do Sudoeste da Bahia-UESB, Departamento de Química e Exatas –DQE, Jequié–Bahia

Antibiotics are among the most prescribed drugs, and account for 20% to 50% of drug expenditure. It is estimated that their use is inappropriate in about 50% of the cases (VLAHOVIC, 2000). Antibiotics are part of the most consumed drug class and are characterized by a high incidence of adverse reactions and interactions (LOURO, 2004). The aim of this study was to identify the major drug interactions with antibiotics. Researches were conducted in LILACS and SciELO electronic databases, using descriptors such as drug interactions and antibiotics. Twenty articles, from 2000 to 2012, were listed and addressed the major drug interactions with antibiotics. Several studies point to antibiotics as a drug group that causes the most adverse events and interactions (GALLELLI et al. 2,002. MAZZEO et al. 2004). Clarithromycin is an inhibitor of the cytochrome P450 enzyme, which may cause an increase in the plasma concentration of digoxin, a drug used to treat congestive heart diseases (PORRAS et al., 2005), predisposing the patient to their toxic effects, such as vision disturbances and heart arrhythmias (RUBINSTEIN, 2001). Theophylline, a bronchodilator drug used in the treatment of bronchial asthma, has increased its serum concentration when combined with tetracycline (MEECHAN, 2002). Levofloxacin interacts with warfarin increasing its anticoagulant effect (JONES and FUGATE, 2002). Some authors warn that tetracycline, metronidazole, ampicillin and erythromycin may reduce the effectiveness of oral contraceptives, thereby increasing the risk of pregnancy (MEECHAN, 2002). The antibiotics that are most commonly involved in interactions are the tetracyclines, erythromycin and clarithromycin, decreasing the renal excretion or enzyme inhibition of other drugs. It is necessary that health professionals, physicians and pharmacists should be aware of the possible drug interactions and complications, as well as the ability to propose alternative therapeutic strategies to prevent the occurrence of these diseases, thereby ensuring the patient's welfare and health.

### **63- ASSESSMENT OF THE COGNITION IN THE INSTITUTIONALIZED ELDERLY**

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**Introduction:** The aging population is a reality now, it is estimated that in 2050 there will be about 2 billion, more than 60 years old people in the world. The seniors present peculiar problems, and require treatments which are suitable for this age group. In the aging process, a major problem is related to memory disorders, which can have a significant impact on the individuals' daily activities and quality of life. The aim of this study is to assess the cognition of the institutionalized elderly in two care homes in the city of Araraquara - SP, through the Mini-Mental State Examination (MMSE). **Methodology:** The study was cross observational with 67 seniors, 43 women and 24 men, who had more than 60 years. To assess cognition the Mini-Mental State Examination was used in the validated version by Bertolucci et al., In 1994. The cutoff points used in the MMSE were differentiated by education. **Results:** Of the 67 seniors, 41.8% had changes in the cognition test, of these, 75.0% were women, 42.8% , aged between 70 and 79 years. Of the patients with abnormal test cognition, 57.1% were above 80 years. Regarding education, 39.3% were illiterate, 50.0% had low education, average schooling was 7.1% and 3.6% had higher education levels. **Conclusion:** The number of the elderly with changed cognition was substantial and they may harm themselves as well as the care given to them through the use of medication. Special care strategies should be taken with these elderly to prevent their disability and to improve their health as well as their quality of life.

### **64- MEDICATION ADHERENCE: A CALL FOR PHARMACEUTICAL ORIENTATION**

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With the aging of the population, there is a growing number of people who have several comorbid conditions and make use of a variety of drugs. These factors make it more difficult to accomplish medication adherence, due to the difficulty to remember the doses that should be taken by the patients and also due to the lack of orientation about the importance of the continuous use of drugs. The aim of this study was to verify the process of medication adherence in hospitalized patients, through the Morisky questionnaire. We conducted a prospective, observational, cohort study from January 2013 to February 2013 at the Surgical Clinic of the University Hospital in the University of São Paulo (HU-USP). We included 115 admitted patients who were over the age of 18 years, with hospitalization time of up to 120 hours and under the use of continuous medication. About 63% of the patients had poor adherence to drug therapy and the main factors associated with this were forgetting the doses and the delay in their administration. There was no significant distribution of adherence in relation to where the patient takes the drug, the presence of a poly-pharmacy or a conducting medical monitoring, gender and age. Moreover, it was possible to observe a remarkable downtrend in medication adherence in male patients and in patients below 60 years of age. This study reveals the extent of the problem of poor medication adherence by patients from HU-USP, demonstrating the importance and necessity of a clinical pharmacist, exclusively for discharging orientations about medication, in order to ensure therapy effectiveness and safety.

## **65- MEDICATION ERRORS IN COMMUNITY PHARMACIES**

KÊNIA MÔNICA SANTOS MORAIS, FRANCINE PAZINI, ANA LÚCIA TEIXEIRA DE CARVALHO ZAMPIERI

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The pharmacist is the professional responsible for receipting medicines, and providing pharmaceutical care, minimizing or eliminating medication errors. The aim of this study was to evaluate medicine dispensing in community pharmacies in Anápolis, Goiás, focusing on possible medication errors found out through the review of the prescriptions. We evaluated 21 pharmacies where a simulated prescription was presented (patient's name and medicines unreadable, without doctor's stamp, without identifying the office or clinic and/or nonexistent CRM). We observed the attitude of the attendant, with a subsequent application of a semi-structured questionnaire about the act of dispensing. The study attended the 196/1996 resolution (Protocol number 078/2010-CEP-UniEVANGÉLICA). The results showed that there were 13 pharmacists in 19 pharmacies and that among the attendants, 06 were pharmacists, 09 clerks, 05 owners and 01 manager, aged between 20 and 52, the majority being young (20 to 30 years). The experience time ranged between 1 month to 31 years. The pharmacist was required 13 times, intervening and preventing the improper dispensing of medicines. Moreover, 02 clerks did not ask for the pharmacist's advice, suggesting a medicine of their own choice. An important fact was that the authenticity of the presented prescriptions were not questioned by any of the professionals. About the act of dispensing they said that they did not always understand the requirements, seeking help from more experienced colleagues or from the pharmacist, and that they used to check more rigorously the prescriptions with a retention. Only 10 replied that they investigated the user regarding the use of the medicine. On the monitoring of ongoing medicines, 03 said that they never follow, 02 said, that they do, almost always, and 14 said, sometimes. About generic medicines, 13 attendants mentioned that they recommended generic brands, 01 recommended similar and 05 declined to give their opinion. It was concluded that, in the majority of the cases, pharmaceutical care was performed, but not entirely, demonstrating the need for awareness from the professionals involved.

## **66- MEDICATION RECONCILIATION: A PROSPECTIVE STUDY IN ADULT PATIENTS**

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Medication reconciliation is a process of comparison between the lists of continuous drug prescription that the patient was having at home with a list of medications prescribed during hospitalization, in order to avoid medication errors. The aim of this study was to verify the reconciliation process through the analysis of observed discrepancies and performed pharmaceutical interventions. We conducted a prospective observational cohort study from January 2013 to March 2013 at the Surgical Clinic of the University Hospital in the University of São Paulo (HU-USP). We included 117 admitted patients that were over the age of 18 years, with hospitalization time up to 120 hours and under continuous medication use. Seventy percent of the hospital prescriptions presented discrepancies between the medications the patient was taking at home and those which were being prescribed at the hospital. One third of these discrepancies had the potential to cause moderate discomfort or clinical deterioration of the patient. In addition, 90% of the interventions were accepted by the medical staff. Also, more than 60% of the discrepancies were considered intentional and the main reasons were the suspension of the surgery, the absence of income and necessity. The study reveals the importance of performing medication reconciliation early, at the patient's admission, in order to ensure him greater safety and therapeutic effectiveness during hospitalization.

## **67- MEDICINAL PLANTS COMMERCIALIZED IN THE PUBLIC MARKETS OF JOÃO PESSOA AND THEIR INTERACTION WITH SYNTHETIC DRUGS FROM THE PHARMACOLOGICAL CLASSES**

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The use of medicinal plants is an ancient tradition of the human beings and this has probably contributed to create the myth that considers them totally safe, favoring only their benefits. However, medicinal plants, used for therapeutic purposes, are considered to be xenobiotics and, besides other toxic responses, their combination with synthetic drugs can lead to diverse drug interactions. Therefore, the aim of this study was to evaluate the possible interactions between medicinal plants, the most traded in public markets of João Pessoa by “raizeiros” - medicinal plant sellers - , and the synthetic classes of drugs, which are the most used by the population. Thus, a survey was carried out among the “raizeiros” from the public markets of João Pessoa, about these professionals and their most popular plants. The instrument used for this was a semi-structured questionnaire with a quantitative/qualitative character. After this survey, possible interactions between plants and the most consumed drugs were researched in literature. From the plants cited by the “raizeiros”, the most marked were barmatiman (20%), chamomile and marcela (17%), pomegranate, purple cashew (13%), rosemary, quixaba, eucalyptus, fennel, senna and bilberry - boldo - (11%), among others, being primarily intended for inflammatory processes (40%), as expectorant (20%), soothing (16%), for diabetes (12%), as anti-hypertensive (8%), and for disturbances involving cholesterol (4%). Chamomile, when used with phenobarbital, presents a more potential effect of this drug, as well as boldo, which must not be administered with anticoagulants (such as acetylsalicylic acid), for the same reason; eucalyptus can promote changes in the nervous system when taken with benzodiazepines, barbiturates, narcotics, some antidepressants and alcohol; fennel has a sedative action and as soon as administered with hypnotic drugs might prolong the effects of the latter; senna, for its laxative action might reduce the absorption of drugs orally administered. Thus, preventing the concomitant use between plant and synthetic medicine is necessary and the pharmacist has an essential role to achieve this.

## **68-MONITORING CISPLATIN EXCRETION AND ITS RELATION WITH ADVERSE REACTIONS IN HEAD AND NECK CANCER PATIENTS**

MARÍLIA BERLOFA VISACRI, CINTHIA MADEIRA DE SOUZA, PAMELA DIAS, GRAZIELE BALDAN FERRARI, RAFAELA PIMENTEL, ANNA PAULA LOURENÇO, EDER PINCINATO DE CARVALHO, PRISCILA GAVA MAZZOLA, CARMEN SILVIA PASSOS LIMA, PATRÍCIA MORIEL.

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Adverse events of Chemotherapy are known and it is necessary to study the possible markers that can predict or prevent clinical events for a better prognosis. The aim of this research was to relate adverse reactions with urine excretion of cisplatin in head and neck cancer outpatients. This is a clinical study with consecutive sampling, conducted in a University Hospital and approved by the institutional Ethics Committee. Urine was collected after the first cycle of chemotherapy with cisplatin (80-100mg/m<sup>2</sup>) within 3 intervals (0-12, 12-24, 24-48 h) and cisplatin was quantified by HPLC. Hematologic, renal and gastrointestinal toxicities were investigated by a clinical pharmacist and severity was classified by Common Terminology Criteria of Adverse Events (version 4.0) (grade 0 to 4). We studied 59 patients (86.4% male, 55.6 ± 9.4 years, 66.1% had pharynx cancer, 94.9% had tumors staged as III-IV). Most cisplatin elimination occurred during the first 12 hours (7.0 ± 6.3 ng/mg; total cisplatin eliminated: 8.0 ± 6.6 ng/mg). The main identified events were hematologic (reduction of hemoglobin: 79.7% (47.5% grade 1), leucopenia: 40.7% (20.3% grade 1), neutropenia: 28.8% (11.7% grade 1), lymphopenia: 81.3% (38.9% grade 2) and trombocytopenia: 20.3% (18.9% grade 1)); followed by gastrointestinal (nausea: 64.4% (30.5% grade 2), vomiting: 45.8% (18.6% grade 1) and diarrhea: 11.9% (6.8% grade 1)) and renal (acute renal failure: 20.3% (13.5% grade 1)). However, no relation between severity of adverse reactions and cisplatin level eliminated in the urine was reported. This study shows high incidence of cisplatin adverse events and no correlation with cisplatin excretion levels. Therefore, other markers (genetic and/or pharmacokinetic parameters) should be studied to elucidate and prevent adverse events. Supported by: CAPES; FAPESP; PIBIC; Teuto®.

## **69- NAFAU – NÚCLEO DE ATENÇÃO FARMACÊUTICA DA UNIFAL – MG: ONE-YEAR EXPERIENCE**

MATHEUS PEREIRA DE ARAÚJO, CAROLINA BORGIS TERSI, ISABELLA DE CÁSSIA LIMA MUNHOZ, MARIA THEREZA DE ANDRADE PEREIRA SANTOS, NADIELLE GONÇALVES SIQUEIRA, NAYNA CANDIDA GOMES, ORIANA SABATINA D'ALESSANDRO ROMANO, WALTER LUIZ LADA DA SILVEIRA, PAULA DE SOUSA MOREIRA, RICARDO RADIGHIERI RASCADO, LUCIENE ALVES MOREIRA MARQUES

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Unifal Pharmaceutical Care Center is an extracurricular complex engaged with the Pharmacy course, essential to the desired professional performance consolidation, which is inherent to the general pharmaceutical profile. This program aims to apprise the population, to show that the Drugstore is a healthcare establishment, and mainly guides the patient, in order to have an improvement in one's quality of life by diagnosing the negative therapeutic results and showing the correct and rational usage of medicine. Its aims are: to stimulate research, knowledge and Pharmaceutical Care scope. It occurs through weekly meetings, organized events, health care campaigns and the patients' drug-therapeutic treatment tracking. In a little more than a year, NAFAU has developed the "AtenFar no Seu Lar" extension program and the studies focused on Pharmaceutical Care and promoted a short-length course about Pharmaceutical Care to HIV patients; lectures about the accurate usage of some medication; workshop about inhalation devices and speeches about Pharmaceutical Care when using hormonal contraceptives. NAFAU also took part in the following events: Rational Use of Medicine Campaign, Health Saturday, Best Age Campaign, HIV's Combat International Day, Women's International Day, and campaigns to launch the university drugstore. In these events, more than four hundred people were advised about the proper use of some medicines, sexually transmitted diseases, endometriosis and healthcare daily habits. On these occasions, besides advising, there were also provided other services, such as: blood pressure and blood glucose monitoring. NAFAU is still engaged in the III International Symposium on Pharmaceutical Care organization and in the I Pharmaceutical Care Researchers Meeting. Thus, NAFAU aims to reassert the importance of the pharmacist as a healthcare professional.

## **70- OBJECTIVE STRUCTURED CLINICAL EXAMINATIONS (OSCE): AN EXPERIENCE IN THE ASSESSMENT OF PHARMACEUTICAL SEMIOLOGY STUDENTS**

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The Objective Structured Clinical Evaluation (OSCE) has been used as a method of clinical evaluation in the principal health courses. This has been considered a reliable method of assessing the clinical competence of health science students because it objectively measures technical skills, attitudes and decision-making strategies. This study aimed to evaluate the pharmacy student's performance in three specific components: a) communication skills b) completeness of questioning and, c) instructions to the patient. The data for this study came from a high-stake OSCE used as the final examination for the clinical discipline of Pharmaceutical Semiology (sixth period students). The data utilized was from a group of 14 pharmacy students of both sexes, who were assessed under the same conditions. This OSCE comprised 10 seven-minute stations, all with simulated patients for the assessment of history-taking skills, instructions to patient and solving the health problem. In all stations the student should have assessed history-taking skills, and disease symptoms, as well as extract the main health problem. These checklists contained standard items related to communication and interaction with the patient and a number of different items covering the relevant subjects that were expected to be addressed in the interview, according to the specific station content (Migraine, Tension Headache, Oral hygiene, Pediculosis, Diarrhea, Colds). Our results show that the evaluated OSCE stations were considered good. The students' performance was considered satisfactory, providing information and guidance to the patient and showing communication skills (on average 74,7 and 87%, respectively). The identification of health issues obtained a score of 9.45 out of a total of 12, indicating that students have achieved good identification of the problems presented in the simulation. In solving the patient's problems, the students achieved a positive result and achieved score of 3.5 near the maximum score of 4 points. Our results showed that the OSCE exam evaluated skills distinctly different than the traditional exam for undergraduates and also showed good internal consistency, thus complementing the traditional examination.



## **71- PATIENT SATISFACTION WITH THE PHARMACEUTICAL SERVICES RENDERED BY THREE COMMUNITY PHARMACIES IN THE STATE OF SERGIPE**

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In recent years, pharmaceutical practice has changed its focus to the production of medicines for the development of patient care. In this context, patient satisfaction is considered as a leading indicator of the humanistic outcomes of Pharmaceutical Services. Therefore, this study aims to assess patients' satisfaction regarding the deployment of Pharmaceutical Services (Medication Review and Pharmaceutical Care) in "Farmácia Popular do Brasil" (Popular Pharmacy in Brazil) in three cities in the State of Sergipe, from August to October 2012. One hundred and twenty one patients, who received care and medications, purchased in these pharmacies were part of the study. A structured instrument, validated in Portuguese, was adapted to analyze seven items related to general aspects of care, the quality of answers and courtesy of the staff of pharmacies. The answers were categorized by a Likert scale as "excellent", "very good", "good", "bad" and "very bad". The results were better than those obtained in 2011, when the majority of the patients (60%) considered the traditional services "good" and only 10% "excellent". After the implementation of differentiated Pharmaceutical Services in 2012 high occurrences of "excellent" answers were detected on items such as: "the courtesy and respect shown by employees" with 59.3% (n = 76) and "the time available to meet you" with 52.3% (n = 70). However, some items such as "professional appearance of the pharmacy" with 44.0% (n = 57) indicate greater need for interventions. The assessment showed improvement in patient satisfaction after implanting the Pharmaceutical Services in the three community pharmacies, suggesting that the quality of pharmaceutical care transcends besides optimizing drug-therapy. The study was supported by Funesa, CAPES and MTM Care Institute.

## **72- PATIENT-RELATED NEEDS: AN IMPORTANT INDICATOR FOR PHARMACEUTICAL CARE**

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Research Group on Pharmaceutical Care and Studies on Medication Use (NAFEUM)

Recently, there has been increased discussion concerning the assessment of patient-related needs in pharmaceutical care. A cross-sectional study was performed to describe patient needs identified in the pharmaceutical care center (SAF) at the University of Southern Santa Catarina (UNISUL). For that purpose, a documentary analysis of the pharmaceutical care center was performed to describe the profile of the surveyed patients and to identify negative drug-therapy outcomes and patient-related needs. In all, 88 pharmaceutical records, containing the register of 3.3 (SD: 5.2) interviews on average were analyzed. The patients were aged between 4 and 86 years; 76.1% were women, and 88.5% had at least eight years of schooling. At the first interview, the surveyed patients had 4.9 (SD: 2.2) health problems and used 6.7 (SD: 3.3) medicines. The number of negative drug-therapy outcomes found per patient ranged between zero and 9 (: 2.8, SD: 2.0) during the follow-up period. The number of identified needs ranged from zero to 10 (: 2.7, SD: 2.4). Of these, the most common were related to information about drug-therapy (26.1%), disease monitoring (16.8%), care with food (13.9%), referral to other health care professionals (11, 3%), non-pharmacological therapies (9.2%), information on diseases (8.0%), guidance on responsible self-medication (5.5%) and physical exercise (5.4%). Even though the process of pharmaceutical care is centered on drug-therapy, there are other patient-related needs that must be met during the health care process. Financial Support: FAPESC

### **73- PERSONAL FACTORS THAT CONTRIBUTE TO NO ADHERENCE TO ANTI-RETROVIRUS THERAPY - EVALUATION OF SELF-EFFICACY EXPECTATION**

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The appraisal of self-efficacy expectation of adherence to anti-retrovirus therapy (ART) is an important measure to check the patient's ability to adhere to the treatment, in view of the daily obstacles that may interfere with adhesion. The aim of this study was to identify personal factors that may contribute to non-adherence to Highly Active Anti-retrovirus Therapy (HAART) in HIV-positive patients by evaluating the expectation of self-efficacy. A descriptive study of 332 subjects registered in the Specialized Assistance Service (SAE-Pelotas) was conducted, during one year, totalizing 1222 evaluations through the instrument of self-efficacy expectation. The situations mostly mentioned by patients as possible causes of medicines intake were: "If the drugs are causing some bad effect (17.27%), if I have to take medication several times a day (9.49%), if I have to take many pills (8.51%), if it's a party and I want to drink (7.94%), if I'm busy or having fun (7.69%), if the medicine is hard to swallow (6.06%), if the doctor who meets me varies a lot (5.65%), if I'm doing things out of my routine (5.48%), if I'm going out (5.32%), if I'm with someone who I don't want him to know that I'm HIV-positive (5.07%)". In conclusion, the understanding of these factors by health professionals can improve patient adherence because through this analysis it is possible to establish strategies that seek its prevention by promoting an increase of adherence and maintaining the patients' quality of life. This study was supported in part by a grant to the University of California, San Francisco from the U.S. National Institutes of Health, Fogarty International Center (International Clinical, Operational and Health Services Research Training Award, D43TW005799).

### **74- PHARMACEUTICAL CARE: A REVIEW OF THE STUDIES PUBLISHED IN BRAZIL**

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**INTRODUCTION:** Analyzing the concept of Pharmaceutical Care (PC), we can see that this practice should be focused on patient care, improving clinical, humanistic and economic outcomes during the pharmaco-therapeutic follow up. Thus the aim of this study was to evaluate the conformity of the articles published by Brazilian researchers with the proposed Brazilian Consensus on Pharmaceutical Care on course since 2002. **METHODS:** A review of literature was conducted in March 2013 in Scielo database using the keywords "Atenção Farmacêutica" or "Pharmaceutical Care". We considered as inclusion criteria, works that presented prospective and/or ambispective design and which performed pharmaco-therapeutic follow up. Review articles, duplicates and those which were not conducted in Brazil were excluded. **RESULTS:** Of the 84 articles found, nine (10.71%) attended the inclusion criteria of the study. We included studies published between 2008 and 2013. The south and southeast regions were responsible for 77.7% (n = 7) of the studies. The public sector and universities are the places where these studies were performed and the majority included patients with chronic diseases of high prevalence in Brazil. The pharmaco-therapeutic follow up lasted in average nine months. The clinical aspects were considered as the main indicator of the evaluation of the outcomes, mainly the resolution of PRM (n = 6), in detriment of the humanistic (n = 182) and economic aspects (n = 1). Verbal and written interventions in 66.67% (n = 6) of the studies were performed, the others used only verbal intervention. Twenty-seven articles were excluded because they just suggested or evaluated the PC. **CONCLUSION:** Articles about pharmaco-therapeutic follow up are scarce however they followed the proposal of the Brazilian Consensus on Pharmaceutical Care. Therefore, we suggest the elaboration of strategies motivating the conduction of researches in this area in all regions of the country, in the private sector and with different groups of patients to obtain clinical, humanistic and economic improvements that will benefit the patients and the health system.

## **75- PHARMACEUTICAL CARE FOR DEPRESSION PATIENTS USING TELEMEDICINE STRATEGY**

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Mood disorders currently represent a public health problem and depression is the most prevalent of them. The use of antidepressants has increased dramatically. However, these patients require special attention. It is estimated that about 1/3 of the patients discontinue the antidepressant treatment in the first month and 45% do not exceed the third month. The Pharmaceutical Care (PC) into the context of mental health can significantly contribute, and coupled with telemedicine, is an alternative to reach the population with relative practicality. The aim of this study was to evaluate the pharmaco-therapeutic monitoring effectiveness by PC according to the Dader methodology, with the strategy of telemedicine in patients using antidepressants. We selected 22 patients diagnosed with Depression (F32-F33), SUS's users, who answered the questionnaires, initially PHQ-9 depression, the Beck Anxiety Inventory, the questionnaire of adherence to treatment by the Morisky's et al. (1986) method, and the Dader's method. The patients were evaluated with a first visit, two telephone calls in the first and the second months, another visit after 3 months, two more phone calls in the 4th and 5th months and a final visit completing 6 months of study. The average age of the patients was 53 years and most of them, 70,5%, had nine years of education. A global improvement was observed in 86% of the patients. Regarding depressive symptoms, the median decreased the PHQ-9 score from 10.50 to 3.00 ( $p < 0.0001$ ) and, regarding anxiety symptoms, a reduction in the median scores of Beck from 20.00 to 8.00 ( $p < 0.0001$ ). When comparing the final adherence in relation to the initial statistically significant improvement was obtained ( $p = 0.0014$ ). There were 52 interventions and 28 contained these actions in the education of the patient. Note that there was a considerable decrease in the anxiety symptoms, followed by a decrease in the depressive symptoms. Due to the increased adhesion, the effectiveness of the treatment also increased and the symptoms decreased. Based on these results, it is possible to conclude that pharmaco-therapeutic interventions were effective when combined with phone interventions.

## **76- PHARMACEUTICAL CARE FOR PATIENTS WITH HYPERTENSION IN FAMILY HEALTH STRATEGY OF GOIÂNIA-GO**

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Pharmaceutical Care aims to achieve definite outcomes that improve a patient's quality of life, especially in chronic diseases such as systemic hypertension. The aim of this study was to analyze a model of Pharmaceutical Care in patients with systemic hypertension assisted by Family Health Strategy (FHS). This was a longitudinal study with patients assisted by FHS in a Basic Health Unit in Goiânia-GO. Fourteen patients with systemic hypertension, who received six home visits as drug-therapy follow up, participated in the study. One hundred and forty two Drug Related Problems were recorded, the most frequent being the lack of effectiveness of the treatment (33.8%). One hundred and thirty three pharmaceutical interventions were carried out, of which 92.6% were of the pharmacist-patient type. 65.2% of the interventions were accepted and 48,8% were executed. It was observed that nine patients did not alter the level of cardiovascular risk and three migrated the risk levels from higher to lower levels. Among patients with hypertension and diabetes reduction in fasting glucose was observed in six. The Pharmaceutical Care model proposed was able to detect DRP proposing interventions to resolve and prevent them, and consequently may have contributed to the improvement of clinical parameters such as fasting glucose and cardiovascular risk in hypertensive patients assisted by the FHS. Financial support FAPEG.

## 77- PHARMACEUTICAL CARE IN HYPERTENSIVE PATIENTS: A PILOT STUDY

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Systemic arterial hypertension (SAH) is considered to be one of the most important public health problems. The disease is commonly associated with other diseases such as diabetes and dyslipidemias. The adherence to treatment and the correct use of medicines are important factors for therapeutic success. It has been estimated by the World Health Organization (WHO), that more than 50% of the patients with SAH do not demonstrate adherence to treatment. Pharmaceutical care can be defined as a direct interaction of the pharmacist with the patient, aiming to a rational drug-therapy and achieving measurable results focused on disease control. The present study aimed to establish a pilot project for Pharmaceutical Care in 20 hypertensive patients, in a private pharmacy in the city of Matão/SP. The methodology used for pharmacotherapeutic follow up of the selected hypertensive patients, was adapted from the Dader methodology. The patients were divided into a control group and an intervention group. The patients of the control group and intervention group had their blood pressure (BP) measured in all meetings (average three times/week) for three months. The intervention group received pharmacotherapeutic follow up by pharmacist. We have found out that 70% (14) had some kind of *drug related problems* (DRPs). The DRPs 1, which is related to non-adherence to therapy, was the most commonly found DRP. The kind of pharmaceutical interventions that were performed in this study were educational (73.7%). After applying pharmaceutical care, we have found that patients demonstrated greater adherence to therapy and learnt more about their medicines and disease. Among the 20 patients who participated in the pilot study, 45% had uncontrolled BP ( $\geq 140 \times 90$  mmHg) in the first interview. After the pharmaceutical interventions the number was reduced to 20% with uncontrolled BP. It may be concluded that the pharmaceutical interventions were effective in order to optimize therapeutic outcomes and achieve better quality of life of the patients. Acknowledgements: The pharmacists Rosa Lilia Mastropietro Modé and Cyro Virginio Modé Filho.

## 78- PHARMACEUTICAL CARE OF SHORT BOWEL SYNDROME PATIENTS: A CASE REPORT

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The short bowel syndrome (SBS) is a state of intestinal lack of absorption characterized by the presence of less than 200 centimeters of functional small intestine, associated with severe nutritional deficiencies. The patient needs a continuous use of drugs to minimize the symptoms and prevent comorbidities. This paper is a case report of a patient's pharmaceutical care with SBS, aiming to describe the resolution of negative results associated with medicines (NRM), as well as the improvement of treatment adherence and its interfering factors. Pharmacotherapeutic monitoring was carried out at the Multidisciplinary Assistance Ambulatory for the Short Bowel Syndrome of “Hospital das Clínicas”, in The University of São Paulo's Medicine School (HC FMUSP), according to the Dader methodology, from August/12 to January/13. The following topics were evaluated at the beginning and the end of the monitoring process: body weight and body mass index (BMI); plasma electrolytes, vitamin B12, among others; number of drugs in use; adherence to the treatment; factors that influence adherence. This study was previously approved by the Ethics Commission for Research Project Analysis at the HCFMUSP (process # 66165/12). The case reported is of a patient who has suffered SBS for five years, male, 31 years old with co-morbidities (osteoporosis, kidney stones, splenomegaly and bronchitis) and low economic and educational level. Initially with BMI of 16.2, weight 36.5 kg, anemic, malnourished, in use of 15 drugs and identified with low adherence to them, particularly related to lack of perception about the need for treatment, low motivation, and lack of economic conditions to buy nonstandard drugs. Ten NRM were detected, the most frequent being quantitative ineffectiveness. After four months of follow-up, improvements towards adherence and its predisposing factors were obtained; BMI 18; weight 40.6 kg, normalization of the total and ionized calcium, chlorine, phosphate and iron saturation besides a tendency towards improvement in other parameters. It is concluded that the pharmaceutical care was effective in improving 60% of the detected NRM, which resulted in the patient's weight gain, and that a longer follow-up time is necessary to achieve more positive and concrete results considering the complexity of the SBS. Financial Support: Administrative Development Foundation (Fundap).

## **79- PHARMACEUTICAL CARE INTERVENTION (PCI) TO AN ELDERLY PATIENT WITH UNCONTROLLED METABOLIC SYNDROME: A CASE REPORT**

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During PCI, the pharmacist is responsible for the patient's need for the medications, searching for specific therapeutic results. Referred in this panorama was the case of MSJ, female, 77 years old, illiterate, non-adherent to therapy. She was referred by the PCI service, suffering from T2DM, hypertension, chronic heart failure, dyslipidemia, all uncontrolled. The clinical deterioration had a negative impact on her quality of life, leading her to not believe in her health's improvement. The aim of the PCI was to have the patient's awareness related to her health problems, exposure to risks and drug identification. After this, we developed a therapeutic plan, including weekly home visits in order to have a approach of her health-disease conditions. To improve adherence, the drugs were placed in an organizer box, separated according to the time to be taken. Moreover, the application procedures of insulin were corrected, emphasizing the preparation, storage, castor application, use and disposal of syringes. Seventeen vials of insulin were taken away from her, due to improper storage. Also, she was advised about hygiene aspects, nutrition and healthy habits. With fasting blood glucose above 600mg/dl, Regular insulin was necessary to be introduced. After two months of follow-up, the patient was able to recognize her drugs (12), associating them with the disease, as well as the time and frequency to be taken. The correct preparation and application of NPH and Regular insulin resulted in the reduction of fasting blood glucose, from 433 to 173mg/dl, besides reducing the complaints caused by hyperglycemia. The patient's self-esteem was enhanced, increasing her interest related to health problems, as well as cooperating to solve and control them. Although it was not finalized, the PCI showed the importance of not only enhancing the diagnosis and its cause but also emphasizing the individual's integrability, in order to improve the patient's quality of life.

## **80- PHARMACEUTICAL CARE FOR PATIENTS ENROLLED IN THE HIPERDIA PROGRAM ATTENDED AT THE FHS/CAIC IN MACHADO-MG.**

ZAQUEU BRUNO DA SILVA; LEILA DA SILVA AZEVEDO  
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One of the steps of Pharmaceutical Care, includes the pharmacist's specific actions, in the context of patient care, which aim to promote the rational use of medicines. Through this practice, drug-related problems (DRP) are identified, as well as drug interactions existing in patient care, become adaptable to his/her specific needs and to the place he/she lives. The aim of this study was to leave pharmaceutical care, during home visits, to the patients enrolled in the HIPERDIA PROGRAM and attended at the FHS/CAIC in Machado-MG. The chosen methodology in conducting Pharmaceutical Care was the Dáder method, which has an optimizer protocol of the steps in the process of pharmaceutical care in order to obtain results in the identification of DRP and drug interactions. Ten patients were followed up, aged 48-65 years in the period July-December 2012. The project was approved by the Research Ethics Unifenas and all patients signed an Informed Consent Form. The average number of drugs used per patient was 6.9. The most common medications used for diabetes control were: glibenclamide, metformin and NPH insulin. For hypertension drugs, the most used were: Captopril and Hydrochlorothiazide. Regarding the DRP, nine patients showed some indication DRP, eight showed some DRP with effectiveness and eight had some DRP with security. Pharmaceutical interventions were held with patients to solve the DRP through advise about better nutrition, tables or schedules for the administration of medications, appropriate to each patient's routine and the interactions with food, separation of drugs in boxes for patients who had difficulties using the medications and referrals of patients to medical specialists. On the relevance of the obtained data, it was noted that the lack of techniques and guidelines to the patients as well as their anxieties are higher in relation to their drug-therapy. A home visit provided a strategic approach of the relationship between the patient and the professional; such proximity allowed the understanding of extrinsic factors relating to appropriately directed drug therapy and interventions. The use of the Dáder method was essential for carrying out the pharmaceutical interventions as it efficiently allows the assessment of the patient's pharmacological picture. The identification and resolution of DRP are the results of the actions of the pharmacist taken at the time of consultation, intervention by the prescriber, or after the case study. The Pharmaceutical Care proves to be a feasible and effective alternative in solving these problems because it transcends the act of guidance in the search for a suitable clinical result for these patients.

## **81-PHARMACEUTICAL CARE FOR ANTI-RETROVIRUS THERAPY IN THE TREATMENT OF NAÏVE PATIENTS**

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The HIV (Human Immunodeficiency Virus) is a big international health problem. The aim of this study is to present a strategy of pharmaceutical care to promote the anti-retrovirus therapy treatment accomplishment (ART) - in Portuguese (TARV) - and evaluate its application with tangible results. Sixteen HIV-infected patients, who attended the CTA (Alfnas Testing and Advising Center) were studied. For each patient the following pharmacotherapeutic sequence was given, interviewing all of them seven months after its beginning: 1st Meeting – Simplified Medication Adherence Questionnaire (SMAQ) fulfillment and HIV/AIDS Targeted Quality of Life form (HAT-QoL), pharmaceutical attention form fulfillment, clinical exams' analysis (viral load and CD4 counting); 2nd Meeting – Goal-setting presentation and the suggestion of having a journal to note the medication intake; 3rd Meeting – Goal-setting tracking, PRM checking; educative intervention in the medication; 4th Meeting - Goal-setting tracking, drug related problems' checking; educative intervention in the medication; 5th Meeting - SMAQ forms fulfillment and quality of life specific for HIV-infected analysis (HAT-QoL) and pharmaceutical intervention approval analysis. The meetings took place every other month; approximately, except for the last one which took place two months later. The data referred to 8 patients, once the rest of the data had not been analyzed yet. The patients' age rate was 42.25 years, being 62.5% women. Pharmaceutical Care was able to help increasing CD4 from 426.87 cells/mm<sup>3</sup> to 527.62 cells/mm<sup>3</sup> (p=0.0371, test t-Student combined). The viral load remained undetectable for 62.5% of the patients and for 25% of them there was a viral load decrease. The CD4/CD8 ratio increased in 50% of the patients. Data related to adherence and quality of life, at the end of the study, has not been totally collected yet. In conclusion, these partial results show us the importance of Pharmaceutical Care for HIV-infected patients.

## **82- PHARMACEUTICAL CARE TO ELDERLY PATIENTS AT A LONG PERMANENCE INSTITUTE**

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The increase in the number of elderly people with chronic diseases has grown up and consequently the use of drugs as well as poly-pharmacy. Therefore their right and rational usage has become indispensable. The aim of this study was to give pharmaceutical care to fourteen elderly patients from an Institute of long permanence (ILPI), located in Anápolis, Goiás, being there due to the detection and solution of probable issues related to drugs (PRM's). The research was qualitative/quantitative, consisting of reserved interviews, after the authorization of the Ethical committee in research (CEP) of UniEVANGÉLICA (protocol 001/2010). Health forms, drugs and social habits (Machucca et al 2004; Lima e Zampieri, 2009) were used. After collecting the data, they were analyzed. The results have shown the use of poly-pharmacy in thirteen of the fourteen elderly. The patients' ages ranged from 63 to 92, most of them female (8), widows (8) and all of them lived alone. Although literate, they had difficulty in reading and writing. The chronic disease evidenced were hypertension (11), depression (7), gastritis (6), spinal disorders (5) and diabetes (2). The most used medicines were captopril, hydrochlorothiazide, furosemide, amitriptyline, acetyl salicylic acid, ranitidine, paracetamol and the masterful association of chloroquine + nimesulide + prednisone + ranitidine. About the social habits there were reports on consumption of coffee (11) and alcohol (2). As for the PRMs, six elderly showed PRM security to adverse reaction (dizziness, tremor and nausea) by the use of amitriptyline, ranitidine, acetyl salicylic acid; eight showed PRM security on type of drug interaction, being 1 among nimesulide, 5 among nimesulide and furosemide, captopril, hydrochlorothiazide; and 5 PRM in adhesion. The paper allowed to know the PRMs and to find solutions to each patient, which shows the importance of the pharmacist in this issue. Aid in scholarship and research: FUNADESP/UniEVANGÉLICA.

### **83- PHARMACEUTICAL CARE TO PROMOTE SELF-CARE AND IMPROVING QUALITY OF LIFE IN HEMODIALYSIS PATIENTS**

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Chronic kidney disease (CKD) patients on dialysis, have a compromised quality of life (QOL), due to the strict therapy, the symptoms of an irreversible disease, diet modifications and changes in social life. Pharmaceutical care (PC) can improve this process by offering extensive care, aiming to identify and correct incompatibilities regarding the use of medicines and by monitoring the adherence to the treatment and diet, aiming to improve the QOL of dialysis patients. The aim of this study was to evaluate the baseline QOL of participants included in a randomized clinical trial designed to evaluate the effect of the PC on QOL of CKD adult patients treated by hemodialysis. The QOL was measured (N=48) by the *Kidney Disease Quality of Life Short Form (KDQOL-SF)* and laboratory as well as clinical data were obtained by medical records. The majority were men (73%), ages ranged from 19 to 82 years with a mean of 53.5 (SD 15.7). The median monthly income was R\$ 1,290.00 (IQR 683.50-2177.00). The years of study ranged from 0 to 15, median of 8 (IQR 4-11). The mean time on dialysis was 32 months (SD 22.5), number of drugs was 5.8 (SD 3.1) ranging from 1 to 15 and number of tablets per day 11 (SD 7), ranging from 1 to 35. The most frequent comorbidities were diabetes (27%), hypertension (71%), heart failure (15%) and peripheral artery disease (13%). The highest mean scores of the specific dimensions of the SF-KDQOL were dialysis staff encouragement (87.23, SD 20.1); quality of social interaction (83.12, SD 17.79) and sexual function (82.61, SD 26.04). The generic were emotional well-being (72.42, SD 19.85), social function (72.28, SD 28) and pain (65.81, SD 2.89). We conclude that the PC may be of great importance given the complexity of the treatment, the need for good medicines, diet and lifestyle adherence, and to improve QOL of CKD patients.

### **84- PHARMACEUTICAL CARE TO SICKLE CELL ANEMIA PATIENTS: A PILOT STUDY**

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Introduction: Sickle Cell Anemia is the hereditary hematologic disease most prevalent in the world and patients require special care in order to improve the drug-therapy effectiveness and their quality of life. The aim of this study was to create a specific Pharmaceutical Care method for these people who are affected by a series of health complications, lack of access to information and drugs for the treatment. Methodology: six patients with sickle cell disease were followed up in this pilot study. A questionnaire of pharmaceutical follow up was developed. It comprised all aspects related to the patient's health, quality of life and drug-therapy. Results: Twelve Drug Related Problems (DRPs) were identified and 39 pharmaceutical interventions were carried out. The answers in the questionnaire were scaled and each patient was classified in terms of health, drug-therapy and quality of life. Objective parameters were evaluated and a positive evolution in the patient's general state was noted. All of them received pharmaceutical care and information about the correct use of medicines. The patients had DRPs solved by pharmacist's direct interventions or by the physician - pharmacist collaboration. Pharmaceutical care improves health (including increase in fetal haemoglobin) and quality of life of sickle cell anemia patients.

## **85- PHARMACEUTICAL INTERVENTION IN PHARMACOTHERAPY**

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Pharmaceutical Care conceptualizes itself as a practice in which the patient is the main beneficiary of the actions of the pharmacist. An environment considered conducive to the development of technological models of drug use and evaluation of its impact on users' quality of life is the Family Health Strategy (FHS). Therefore, the aim of this study was to evaluate the service of Pharmaceutical Care / Pharmacotherapeutic Follow up of hypertensive patients enrolled in the FHSs in the city of Diamantina, Minas Gerais. The method consisted of drug-therapy attendance of 17 patients with hypertension and insulin dependent diabetes, enrolled in Family Health Strategies in Diamantina-Minas Gerais. Data were collected through pharmaceutical consultations according to the Dáder method and statistical research procedure was applied. The study included 17 patients, 14 women and 3 men. A total of 40 DRPs were found whose average was  $2.35 \pm 0.76$ . The study showed that 29% of the patients had adverse drug reactions (ADRs) and 41% drug interactions with food. All pharmacotherapeutic interventions, proposed within the group, were accepted by the prescribers, where 35% of the patients had reduced the number of medications and all had changes in their prescriptions, including changes in the dosage. The AtenFar service influenced the therapeutic optimization, mainly through identification, resolution and prevention of problems related to drug use. The detected DRPs, mostly solved by interventions of the pharmacist, thus emphasizing the importance of this professional in a multidisciplinary team, oriented to the health care of patients with SAH.

## **86- PHARMACEUTICAL ORIENTATION AT THE TIME OF HOSPITAL DISCHARGE: STRENGTHENING ADHERENCE AND PROVIDING CONTINUITY OF CARE**

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The transitional process of care is presented as a critical moment to the patient's safety. Among them, hospital discharge is a situation which breaks the pharmacotherapeutic care process, including changes in medication and lack of information exchanged among health professionals from other attention levels. When this problem was detected, the reorientation of pharmaceutical service has occurred at the time of being discharged from the hospital, in the context of multi-professional internship for the health of the elderly. Patients are accompanied during the whole hospitalization, when their demands and necessities, in what refers to domiciliary medical treatment, are identified. At the time of hospital discharge, they receive orientation to new medication prescription, posology, administration and access. According to each patient's profile, adherent adjunct methods were build, as an organizer box and adjunct record of medication usage. Besides, the elaboration of "pharmacotherapeutic care transition protocol" was proposed, which was sent to primary attention professionals. From March 2012 to February 2013, a total of 96 patients - average age is 74 years old - received pharmaceutical orientations as they were discharged. Out of these patients, 58% left the hospital with a higher number of prescribed medicines, when compared to their before regress use. In average, the number of medicines used per patient were 4 before being hospitalized and 6 after they were discharged. As for the medication administration, 41.67% of the patients needed family care before admission. This number increased to 50% when they were discharged, showing the fragility caused by hospitalization. In relation to pharmaceutical interventions, 100% of the patients received a dosage orientation record, 64.58% were oriented in relation to access, and medicine-organizer boxes were made to 20% of the patients in order to avoid administration mistakes and improve adherence. Of the oriented patients, 81.25% were referred to primary attention to keep treatment. In this process, the pharmacotherapeutic orientation service, after discharging patients, brought benefits and contributed to a better understanding of adherence to drug-therapy as well as to a better referencing quality.



## **87- PHARMACOTHERAPEUTIC FOLLOW-UP IN HEAD AND NECK CANCER**

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The pharmacist has a key role in the detection, prevention and resolution of drug related problems (DRPs). This is even more important in the case of cancer patients, where the high number of treatment protocols and the extensive supportive therapy increases the number of the used drugs. The aim of this work was to analyze and characterize of pharmacotherapeutic follow-up and pharmacist's interventions in head and neck cancer patients treated with concomitant cisplatin (CDDP-CT) and radiotherapy. Twenty-nine patients (89.7% male,  $56.3 \pm 9.9$  years old) from a University Hospital in Brazil were selected for interviews. The interviews were carried out after the first medical appointment and the appointments were marked after and before the first cycle of CDDP-CT. We classified and quantified the real and potential DRPs based on PWDT method (Necessity, Effectiveness, Security and Compliance) and the pharmacist's interventions were classified as solving, preventive and for a better quality of life. The interventions were performed with the patient or with a multidisciplinary team (physicians, nurse and nutritionist). Drug interactions were checked using Micromedex™. Eight hundred forty six pharmacist interventions ( $29.1 \pm 7.1$  pharmacist interventions/ patient) were held, and of this total, 49.9% were of the appointments before the first cycle of CDDP-CT ( $14.6 \pm 3.7^*$  pharmacist interventions/ patient) and 78.7% were classified as preventive ( $23.0 \pm 5.3$  preventive pharmacist interventions / patient), where 60.5% were related to Compliance and 35.6% to Security. Considering the high number of pharmaceutical interventions performed in the study, it can be considered that the pharmacist may have a great contribution in cancer treatment, working primarily on the prevention of symptoms that impair the quality of life of the patient. Supported by: CAPES; FAPESP; PIBIC; Teuto®.

## **88- PHARMACOTHERAPEUTIC FOLLOW-UP SERVICE PROTOCOL IN DYSLIPIDEMIA**

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Dyslipidemia is an altered metabolism of circulating lipoproteins. It is considered as a risk factor for cardiovascular diseases. In Brazil, cardiovascular diseases are the major cause of mortality. A therapeutic approach to minimize this risk factor is the main way to combat this problem. This important work focuses on prevention. Pharmacotherapeutic follow-up service is a tool to improve the treatment and quality of life of these patients, since most of them being treated with lipid-lowering therapy, do not reach to the goal for several reasons. This paper discusses the development of a Pharmacotherapeutic protocol tracking service in Unit Family and Community Health UNIVALI - Itajai, in the period from May to November 2012. The tracking method used was a combination of pharmacotherapeutic methods, Dader and PWDT. It was based on the IV Brazilian Guidelines on Dyslipidemia. The patient was referred by a doctor, was interviewed at the first visit and, if needed, returns were scheduled to monitor the outcome of the interventions. The tracking service comprised three stages: interview (consultation), assessment and action plan. In the consultation stage, a guide form was applied to collect demographic, social, lifestyle, history, experience with medications, treatment, risk factors, laboratory results, and a physical examination to assess measures. In the evaluation phase, the type of dyslipidemia was identified, the risk factor of the patient was estimated, targets and therapeutic measures were determined, and the treatment with the study's drug was evaluated (adverse reactions, interactions, dose, necessity, safety and efficacy). In the action plan, the protocol aimed guidance on aspects such as change of lifestyle, strengthening of the link, need for intervention, program return and to finish attendance with the recording of data by the evolution in the patient's record, using the SOAP method. The protocol met the specific needs of patients with dyslipidemia, guided the review stage directing the study to the most relevant aspects of the treatment, seeking a safe and effective drug-therapy focused on rational drug use.

## **89- PHARMACOTHERAPEUTIC MONITORING IN A PHARMACIST OFFICE SCHOOL CAMPUS AT UNIFENAS IN VARGINHA**

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Pharmaceutical care involves the process through which a pharmacist cooperates with a patient and other professionals in the design, implementation and monitoring of the patient's drug-therapy, which will produce specific therapeutic outcomes. This involves the functions of identifying, solving and preventing Drug-Therapy Problems (DTP) promoting direct benefits to the patients. The aim of this study was Pharmacotherapeutic monitoring in patients of the Pharmacist Office School Campus at Unifenas in Varginha, aiming to contribute to the protection and recovery of the patient's health by identifying and seeking resolution of DTP, improving the quality of life of the user. The methodology was the adapted Dáder Methodology. This study followed 70 patients, aged from 31 to 80 years, of both sexes and those with chronic diseases, in the period from 2009 to 2012. The project was approved by the Research Ethics Unifenas (Opinion No. 115/2011). The most frequent diseases were hypertension (80%), diabetes (38.57%), depression (28.57%), arthritis (12.86%), osteoporosis (11.43%) and gout (10%). The average number of medications per patient was 5.98. The most frequent DTP found was DTP 6 (64.29%) due to adverse reactions to medication. DTP 1 showed 28.57% where the patient had a health problem for not using the medication needed. 15.71% of the patients had DTP 2 where the patient presented a health problem for using an unnecessary drug, this may be due to polypharmacy and self-medication. DTP4 was found in 14.29% of the patients, occurred due to an ineffective use of a lower than the needed dosage, this is due to dosages missed by the patient or the medical prescriptions at lower dosages. With 12.86% appears DTP 5 where the patient presented a problem of using a dosage or a frequency higher than is needed. With a smaller percentage was found DTP 3 (7.14%), where the patient did not respond to the treatment, this can occur because of drug ineffectiveness. All patients were oriented about the pathology, risks of self-medication, healthy lifestyles and nutrition and guidance on proper use and storage of medicines. Regarding pharmaceutical interventions, quantification of drugs occurred with 42.86% of the patients and 2.86% had direct intervention with the doctor. It was concluded that the Pharmaceutical Care is a relevant strategy for health promotion, improvement of the clinical picture of the patient and optimization of the rational use of medicines, with a positive number of pharmacotherapeutic troubleshooters and reduction of DTP as well as effectiveness in treatment adherence.

## **90- PHARMACOTHERAPY FAILURE DETECTION IN AMBULATORY PATIENTS IN A PRIMARY HEALTHCARE UNIT IN DIVINÓPOLIS (MG)/BRAZIL.**

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Pharmaceutical care is a practice where the pharmacist is responsible for the needs of the patient related to drugs, and is done by detecting and solving the Drug Related Problems (DRP). A prospective cohort survey of 75 outpatients, assisted by a pharmaceutical care program in a primary healthcare unit in Divinópolis, Minas Gerais, Brazil, was carried out over a period of 12 months. Pharmaceutical care was assessed using the following information: disease and drug profile, types of DRP; main causes of DRP; interventions carried out by the pharmacist. The database was built and saved in Excel and processed by the Statistical Package for the Social Sciences version 16.0. The study was approved by the Institutional Human Experimentation Committee of UFSJ under process number 007/2011. Seventy five patients have been followed up; these patients have been submitted to 290 pharmacotherapeutic accompaniments, medially 3 meetings per patient. The following was observed: the prevalence of hypertension 25.5%, diabetes mellitus 19.6%, dyslipidemia 17.6% and anxiety disorder 6.3%. There was a high prevalence of drug related problems (40.7%), DRP ratio of 3.0 per patient. The main causes of the problems were: drug interaction 11.4%, the patient forgets to take it 10.0%, adverse event 9.6% , no indication 9.1%, did not understand the instructions 7.3%, product unsafe for the patient 6.8%, incorrect dosage 12.3% and more effective medication available 5.0%. We performed a total of 220 interventions to address the problems of drug-therapy failure. The most common requested interventions were: change of medication 24.1%, withdrawal of treatment 18.6% and change of dosage 13.6%. The pharmaceutical care provided by a pharmacist was essential for establishing surveillance on drug related problems and its causes, which is important for the resolution of problems, and provides evidence for healthcare managers about the need for increasing pharmacy staff levels within the SUS. Financial Support: FAPEMIG.

## **91- PHARMACOTHERAPY REVIEW: A STRATEGY OF HEALTH CARE PROVISION DURING PHARMACOTHERAPEUTIC FOLLOW-UP**

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Drug-therapy follow-up has been described as a service designed to organize drug administration to patients aiming to guide them in the proper use of medicines. A cross-sectional study was performed to report the completion of drug-therapy follow-up among patients attending the pharmaceutical care center at the University of Southern Santa Catarina (UNISUL). Documentary analysis of pharmaceutical records was conducted to survey information about the number of patients monitored, number of individuals for which the drug-therapy follow-up was conducted, clinical profile, and medications contained in the medical records, in addition to the description of the process evolution. The pharmaceutical care center was monitoring 92 patients. Initially, the revisions were made verbally, but with the evolution of the service, the reports took a written form. Often these reports contained information related to the organization of the medication to fit into the patient's daily routine, the use scheduling and guidelines, applying artifices such as pictograms and figures. Thirty-seven percent of the patients received reports of the drug-therapy follow-up sometime during the monitoring period. The data revealed that the patients attending the pharmaceutical care center had 4.8 (SD: 2.1) health problems, for which 6.9 (SD: 3.4) medications were used. Out of these, 5.5 (SD: 2.6) were continuous-use medications. The classes of drugs most commonly used were those that acted primarily on the nervous system (32.3%), cardiovascular system (24.4%), and alimentary tract and metabolism (12.4%). Findings revealed that, although drug-therapy follow-up can be performed in combination with other clinical practices, it is an important strategy to promote the rational use of medicines. Financial support: FAPESC

## **92- DRUG-VIGILANCE IN ONCOLOGY: MONITORING THE ADVERSE DRUG REACTIONS OF ANTINEOPLASIC TREATMENT AND SEVERITY DEGREES**

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Adverse drug reactions (ADRs) are common in oncology patients, predictable and, at least, probably preventable in many instances. The improved use of preventive measures has the potential to contribute to reducing the incidence and severity of ADRs. The aim of this study was to assess frequency and severity of ADRs in oncology patients. This is a quantitative, descriptive and exploratory study in drug-vigilance. The patients, during and after chemotherapy sessions at a University Hospital in Brazil from august 2011 to June 2012, were selected for interviews about symptoms related to their chemotherapy. A clinical pharmacist investigated ADRs and their severity was classified by Common Terminology Criteria of Adverse Events (version 4.0) (grade 0 to 4). A total of 100 patients were interviewed, (54.0 % men, 46.0% women; age:  $56.8 \pm 12.1$ ). The most frequent kinds of cancer were gastrointestinal cancer (n=76; 76.0%), head and neck cancer (n=8; 8.0%) and gynecological cancer (n=4; 4.0%). The most prevalent treatment protocols were: fluorouracil + leucovorin + oxaliplatin (FLOX, n=24; 24.0%), irinotecan + fluorouracil + leucovorin (IFL-SALTZ, n=17, 17.0%) and fluorouracil + leucovorin (MACDONALD, n=16, 16.0%). Oncology patients had  $10.5 \pm 4.9$  ADRs (range 2-26). The three most incident ADRs were nausea (66.2%; 55.3% grade 1), xerostomia (59.2%; 68.4% grade 1) and fatigue (57.8%; 43.1% grade 1). It was found that 69.3% of symptoms presented grade 1 of severity, 25.0% grade 2, 4.9% grade 3 and 0.8% grade 4. The effects with grade 3 and 4 should have been notified to the drug-vigilance system, but these were not consistently reported, contributing to under-reporting. Therefore, pharmaceutical follow-up is essential to characterize the ADRs, and to assist in prevention, detection, notification and resolution of these events. Supported by: Pibic/CNPQ; Funcamp.

### **93- PHARMACEUTICAL CARE PLAN IN DIABETIC PATIENTS ON HEMODIALYSIS - DIETARY AND MEDICATION INTERVENTIONS - CASE REPORT**

JÉSSICA POSSIGNOLLO, MIRIAM MOREIRA MUSSI, MARISTELA BÖHLKE, JOÃO PEDRO MUSSI LAYDNER, MAURICE NETO DE SOUZA, VANESSA DA ROSA CÂMPARA, CAMILA CORRÊA COLVARA, MARYSABEL PINTO TELIS SILVEIRA.

Universidade Federal de Pelotas-RS; Universidade Católica de Pelotas-RS.

A pharmaceutical intervention for elderly patients with hypertension and diabetes on hemodialysis is reported, which is part of a pharmaceutical care program for hemodialysis patients. This pharmaceutical care program aims to guide patients regarding medication and diet, so that they acquire more adherence to treatment and have an improved quality of life. A pharmacotherapeutic plan was designed, in which time, method of administration, and the presence of adverse reactions of prescribed medications were verified. The therapeutic intervention was performed by making tables or calendars to facilitate patient guidance on the proper use of medicines (number of pills, time, way of use, whether fasting or with food). In this table, the medicines were labeled with different colors in order to facilitate their identification and reduce errors. The patient was asked to mark the currently used medicines in the table, so there was no doubt about its use. We also carried out an intervention regarding the diet required for hemodialysis patients, which should be high in protein and low in phosphorus, potassium and sodium. The patient was asked about the food that should be consumed with caution (fruit, vegetables, grains, fish and seafood) as well as those that should be avoided (organ meat, peanuts and nuts). Considering that they are diabetic patients, the importance of reducing the amount of carbohydrates was also discussed. Through this intervention, we sought to improve the drug therapy and the hemodialysis results.

### **94- POTENTIAL DRUG INTERACTIONS IN INTENSIVE CARE UNITS**

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The level of technological complexity of this intensive care units (ICU), the elevated number of drugs used and the inherent difficulties in critical care are factors that highlight the need for an elaborated evaluation of drug-therapy used in intensive care medicine. The role of the clinical pharmacist, composed among other factors, by tracking and detecting potential drug interactions (PDI), can be seen as an important contribution to the quality and security of service in the ICU. This study is based on the evaluation of a sample of medical prescriptions of ICU and aims to assess the incidence of potential drug interactions in prescriptions made in the Intensive Care Unit (ICU) of a public health hospital (Clinic Hospital - UNICAMP), to quantify and classify them according to their degree of severity, tracing with it a profile of present PDI in this setting. From January to December 2011, prescriptions of 369 patients were evaluated, all over 18 years old, mean age of  $57.03 \pm 14.62$ , hospitalized for more than 24 hours in adult ICU. Two hundred and five different types of drugs were prescribed in the study period, average of  $13.04 \pm 4.26$  per prescription. Among the evaluated prescriptions, 89% presented PDI, resulting in an average of  $5.00 \pm 5.06$  per prescription. The 405 types of observed PDI in the prescriptions were classified using Micromedex ® database, highlighting the prevalence of moderate and severe PDI present in 74% and 67% of prescriptions, respectively. In addition to the data from the pharmacotherapeutic profile of the ICU under study, statistically significant correlation among PDI and duration of hospital stay in the ICU and the number of prescription drugs was observed in the survey. The results contribute to design the risk profile relative to PDI in intensive care, showing that there is a high incidence of moderate potential drug interactions in prescriptions of ICU. Financial Support: Conselho Nacional de Desenvolvimento Científico e Tecnológico – CNPQ; São Paulo Research Foundation – FAPESP.

## **95- PREDICTORS OF NON-ADHERENCE TO CLINICAL FOLLOW-UP AMONG PATIENTS PARTICIPATING IN A RANDOMIZED TRIAL TESTING A PHARMACEUTICAL CARE INTERVENTION IN HIV-POSITIVE ADULTS IN SOUTHERN BRAZIL**

MARYSABEL PINTO TELIS SILVEIRA<sup>1</sup>, MARÍLIA CRUZ GUTTIER<sup>1</sup>, LEILA BELTRAMI MOREIRA<sup>2</sup>, ALI MIRZAZADEH<sup>3,4</sup>, KIMBERLY PAGE<sup>3</sup>

1.Universidade Federal de Pelotas; 2. Universidade Federal do Rio Grande do Sul; 3.University of California San Francisco, USA; 4.Regional Knowledge Hub for HIV/AIDS surveillance, Kerman University of Medical Sciences, Kerman, Iran as a visiting scholar at UCSF Global Health Sciences Program.

Achieving therapeutic success in HIV infection, defined as virologic suppression, is especially important in order to restore immunity, reduce mortality, increase survival, delay disease progression and morbidity, reduce transmission, and improve quality of life of people living with HIV/AIDS. As with other chronic illnesses, HIV patients require long-term and regular follow-up to maximize HIV care and minimize loss to follow-up, which can result in serious consequences, including disease progression and death. Pharmaceutical Care (PC) is recognized to impact on therapeutic outcomes and clinical care adherence, since patients are the primary beneficiary of the pharmacist's actions. We examined the rate and predictors of non-adherence to clinical follow up (NACFup) in secondary analysis of data from 332 patients who participated in a randomized trial testing a PC intervention on adherence to HIV anti-retrovirus therapy. NACFup was defined as not attending three scheduled routine clinical visits over the one-year study period. Patients were mostly (63%) male, median age was 39 years; 76% had CD4 count  $\geq 200$  cells/mm<sup>3</sup>, and 52% had undetectable viral load. Overall, 52.7% were non-adherent. Factors independently predictive of NACFup were: male (Adjusted OR (AOR) 1.67; 95%CI 1.05-2.66); age  $< 40$  years (vs.  $\geq 41$ ; AOR 2.21; 95%CI 1.42-3.47), and; being in the trial's "control group" (AOR 1.67; 95%CI 1.07-2.61). Results suggest that younger, male patients may benefit from interventions that facilitate engagement in care. Further research assessing implementation of PC into HIV clinical care services, and effects on health outcomes is needed. This study was supported in part by a grant to the University of California, San Francisco from the U.S. National Institutes of Health, Fogarty International Center (International Clinical, Operational and Health Services Research Training Award).

## **96- "RAIZEIROS": THE UNIVERSE OF FOLK MEDICINE PROFESSIONALS AND THEIR ROLE IN THE HEALTH/DISEASE PROCESS OF A POPULATION FROM JOÃO PESSOA**

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"Raizeiros" are professionals consecrated by folk culture, related to the knowledge about the preparation, display and marketing of medicinal plants. These professionals work primarily on streets, fairs and markets, allowing people access to these products and playing a key role in the therapy. This study aimed to evaluate the profile of raizeiros from the public markets of João Pessoa and understand their intervention in the health/disease process of population. For that matter, we performed a close approach using as instrument semi-structured questionnaires with quantitative and qualitative character that was applied during their working hours. Of the interviewed raizeiros (n = 12), 58% were women and 42% men, mostly aged over 60 years (34%) and illiterate (45%), working in different neighborhoods like Grotão (25%), Cruz das Armas (25%), Oitizeiro (17%), Jaguaribe (17%), Alto do Mateus (8%) and Centro (8%). They said their knowledge about medicinal plants came from day-to-day experience (52%), parents (27%) and suppliers (6%), and that they get their products from other local raizeiros (47%) and other states (27%). All of them said that they recognized the plants they sold, and that women were the major users of these (50%). Among the medicinal plants the most requested are barbatimão (20%), chamomile, marcela (17%), pomegranate, mastic, purple cashew (13%) rosemary, quixaba, eucalyptus, fennel, senna and boldo, sucupira (11%), among others, being primarily intended for inflammatory processes (40%), as expectorant (20%), soothing (16%), to diabetes (12%), as antihypertensive (8%), and for treatment of diseases involving cholesterol (4%) where infusion (53%) decoction (40%) being the most suitable preparation forms. Thus, raizeiros present themselves as key players in the maintenance, transmission and dissemination of popular knowledge about plants and their uses, exercising, then, an important role in the relief of the population's diseases.

## **97- RANDOMIZED CONTROLLED TRIAL TO EVALUATE THE IMPACT OF PHARMACEUTICAL CARE ON THERAPEUTIC SUCCESS IN HIV-INFECTED PATIENTS IN SOUTHERN BRAZIL**

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Universidade Federal de Pelotas; University of California San Francisco, USA; Universidade Federal do Rio Grande do Sul

Pharmaceutical Care (PC) is a new pharmaceutical practice, increasingly recognized to impact not only therapeutic outcomes and compliance, but also clinical care adherence, where patients are the primary beneficiaries of the pharmacist's actions. A non-blinded randomized controlled trial evaluated the efficacy of PC (Dáder method) over self-reported anti-retrovirus adherence and undetectable plasma viral load (UPVL), compared with usual care in Brazilian AIDS patients. Most were male (63%), 40.3(±10) years old. After 12 months, 54.2% *versus* 45.8% were adherent (RR=1.05, 95% CI 0.95-1.15, p=0.35), and 50.3% *versus* 49.8% had UPVL (RR=1.08, 95% CI 0.97-1.20, p=0.15). The factors associated with self-reported adherence were regular employment, UPVL, no depressive symptoms, and lower number of tablets. Older age, education, CD4 <200cel/mm<sup>3</sup> and shorter duration of treatment were associated with UPVL. Ninety four drug related problems were reported; 43% of them solved. In sub-group analysis (patients who had experienced therapeutic failure and non-adherence at the beginning of the trial - 50 patients) no differences were found in UPVL (HR 1.35; 95%CI 0.57-3.19). Only education level (>12 years) was independently predictive of viral suppression (HR 7.47 CI95% 1.69-32.91). In conclusion, PC was not associated with increased self-reported adherence to ART or UPVL, it could be due to either high-level of adherence at the baseline or effective usual health care in Southern Brazil. This study was supported in part by a grant to the University of California, San Francisco from the U.S. National Institutes of Health, Fogarty International Center (International Clinical, Operational and Health Services Research Training Award, D43TW005799).

## **98- RATIONAL USE OF ANTIMICROBIALS: AN ANALYSIS OF THE PROFILE OF PRESCRIPTIONS FROM “HOSPITAL UNIVERSITÁRIO LAURO WANDERLEY” PEDIATRIC INFIRMARY**

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Medicine graduating student (UFPB), Industrial Pharmacist, Master in Pharmacology and student of Pharmaceutical Care and Clinical Pharmacotherapy Specialization (IPOG), Biochemical pharmacist and student of Pharmaceutical Care and Clinical Pharmacotherapy Specialization (IPOG), Pharmacists, PhD Professors from Physiology and Patology Department/CCS/Federal University of Paraíba (UFPB)

One of the worldwide concerns about drug use is related to the exacerbated antimicrobial consumption, constituting a pharmaco-economics problem, when considering that most of the health budget is spent on antimicrobials and their irrational use is responsible for increased bacterial resistance. This study aimed to describe the profile of antimicrobial prescriptions from “Hospital Universitário Lauro Wanderley” pediatric infirmary. We conducted a transversal study with descriptive and retrospective feature, previously approved by the Ethics Committee (CAAE: 02721512.9.0000.518). Sixty eight charts with antimicrobial prescriptions were randomly analyzed, from 2010 to 2012. Data were recorded and analyzed by Microsoft Office Excel 2010. The findings of this study showed 55.8% male patients, an average age of 2.9 years, the patients were diagnosed with respiratory and urinary tract infections in 77.9% and 11.7% of cases, respectively. In respiratory infection treatments, the drugs most frequently prescribed were cephalosporin (53.8%) and penicillin (32.7%). Fifty percent of the urinary tract infections were treated with penicillin. It was observed that requests for culture microbial occurred in 11.8% of prescriptions. Thus, we conclude that respiratory infections are responsible for the increase in antimicrobial consumption, especially cephalosporin and penicillin, in pediatric ward. This therapy is often based on clinical data and laboratory tests without performing susceptibility testing. An increase in the monitoring of the use and effectiveness of antimicrobials is recommended to prevent bacterial resistance development as well as considering the need for the use of medicine and verifying if the prescribed drug is the appropriate one, according to the acceptable and proven dictates of efficacy.

## **99- RATIONAL USE OF DRUGS: EDUCATION FOR COMMUNITY HEALTH AGENTS**

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Federal University of Alfenas, Unifal-MG, Food and medicines Department / Faculty of Pharmaceutical Sciences

The rational use of medicines (RUM) is present when patients receive medications appropriate to their clinical conditions, in appropriate dosages, for an appropriate time and at the lowest cost. Thus, it is essential to create strategies that make this an effective practice. The Community Health Agents' Program presents an unquestionable contribution to the promotion of RUM. This study aimed to train Community Health Workers (SCW), have a RUM and encourage the exchange of experience between the health team and the academic pharmacy. Moreover, knowing the main problems related to drug use (PRM). The training was held on the RUM for SCW in Alfenas, MG, through short courses. It addressed the following topics: What are drugs, routes of administration; generic and similar references; fractionation; self-medication; storage; drug interactions; promoting RUM and drug-vigilance. To know the level of information and increase these agents' PRM experience, we applied a simplified questionnaire. Thus, there were two courses, with the participation of 63 SCW and it was found out that, among them, only 29% had been trained. The most frequently reported DRP agents, in their home views are mistaken regarding to the time to take their medication (25.45%), self-medication; (21%) non-adherence (17%), wrong dosage (12%), improper storage (8%), among others. There are many errors in the use of drugs in the attended community. People have little information about the proper use and care of medicines. These data demonstrate the need for training and continuing education of these professionals, since they are in daily contact with the community, thus representing relevant tools for promoting RUM. It was concluded that the SCW were trained to promote RUM. The SCW who are unprepared for guidance on the RUM will have difficulty perceiving and identifying the PRM. The exchange of experience is critical to know the reality of the community and the SCW, as well as their expectations.

## **100- RESULTS OF MEDICATION THERAPY MANAGEMENT IMPLANTATION**

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The aim of this work was the implantation of a medication therapy management service through the inclusion of pharmaceutical service in a multi-professional team for the development of teaching, research and extension activities. This is a case report in a health unity, specialized in elderly people (CRIA – Araraquara, Brazil), from October 2012 to February 2013. The service included a weekly evaluation of pharmaco-therapeutical necessity of elderly patients and their caregivers. The reasons for consultations were: indication of the health team (gerontologist, physician, social assistant and phonon-audiologist) or the interest of the patient for the service. Sixteen patients were seen, and the major causes of the consultation were cognitive deficit, dementia, uncontrolled arterial hypertension and hyperglycemia where there were mainly difficulties for executing the drug-therapy. The performed interventions were: aggregating information for the patients, respecting their previous knowledge and medication experience and stimulating their autonomy. A dosage unitarization was also performed to make the compliance easier (3), a daily follow up of clinical parameters (1), or a weekly follow up (6) for understanding the health problems, in order to develop patient autonomy for better control of their health. This service allowed the training of twenty undergraduate students and nine pharmacists responsible for the pharmaceutical care of the city. Now, the proposition is multiplying the service, offering the same service, under supervision, in basic health unities and family health strategies. Scholarship and financial support of Pró-Reitoria de Extensão Universitária (PROEX) - UNESP

## **101- THE SAFETY OF PREGNANT AND PUERPERAL PATIENTS IN AN INTENSIVE CARE UNIT**

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In the pregnancy-puerperal cycle, a woman may develop complications requiring admission in an Intensive Care Unit (ICU). Therefore, attention is needed to drug-therapy used, evaluating drug interactions (DIs) and the risk-benefit of different medicines during pregnancy and lactation. This study aimed to identify and classify DIs already described in literature, to evaluate and rank the drug risk during pregnancy and lactation of patients admitted to the ICU of a University Hospital. The research was authorized by the Institucional Ethics Committee (CAAE: 1187.0.146.000-11) and was developed from February to December, 2012. We evaluated the electronic prescriptions and medical records of pregnant and lactating women above 18 years old, hospitalized for more than 24 hours in the ICU. The analysis of drug risk in pregnancy was performed by a classification adopted by the Food and Drug Administration (FDA), and the drug risk during lactation was done by consulting the database E-lactancia.org. Ninety four patients (32 pregnant and 62 puerperal) were monitored throughout the study, of which 416 prescriptions were evaluated. The mean age was  $30.0 \pm 7.0$  years old and the mean stay in hospital was  $4.4 \pm 3.2$  days (\*mean  $\pm$  standard deviation). Among the evaluated prescriptions, we found 1246 DIs, in which 53 were contraindicated interactions, 418 major, 550 moderate and 225 minor. There were 92 drugs with the degree of risk A in pregnancy, 465 with B, 432 with C, 55 with D and 5 with X. There were 1137 drugs with degree of risk 0 in lactation, 613 with 1, and 24 with 2. Thus, this study demonstrated that there is a high incidence of DIs used in drug-therapy, and that most of the drugs used by pregnant and puerperal women do not present serious risks to their children. Financial support: PIBIC/CNPq.

## **102- SECURITY PROBLEM OF CYCLOSPORINE: SUSPECTED ADVERSE REACTION – HEPATOTOXICITY**

ANA CAROLINA DE SOUZA E SILVA, ANA VLÁDIA BRASILEIRO DE ARAÚJO SILVA, JÔSEFFER WIANEY TRINDADE MEDEIROS, MARTA MARIA DE FRANÇA FONTELES.

University Federal of Ceará, Hospital Universitário Walter Cantídio

Cyclosporine, a calcineurin inhibitor, is an immune-suppressor used in severe aplastic anemia. The main adverse reactions reported to Cyclosporin is hepatotoxicity. One to 7% of the patients, when using the medicine, may have the adverse reaction. This study aimed to analyze the suspicion of an adverse reaction of cyclosporine, which occurred in a teaching hospital in Ceará, Brazil. In the form of a case report, through active research in the records, a suspicion of adverse reactions to cyclosporine was registered in the service of Hematology, University Hospital Walter Cantídio (HUWC). The Naranjo Algorithm and a system developed by Karch and Lasagna was used for the classification of causality and severity, respectively. The case was described, respecting anonymity. Patient N.S.M.S, 27, female, married, with a history of adynamia, having appetite loss, gingival and trans-vaginal bleeding in November 2012, was routed to HUWC for diagnosis and treatment. On 26/12/2012 she was diagnosed with severe aplastic anemia and received 525mg of cyclosporine on 03/01/2013. On the 16th day she had a jaundice eye, which resulted, based on the clinical picture and ( Indirect Bilirrubiana: 0.93 mg / dL. Ref.: 0.1 to 0.8 mg / dL, Direct Bilirubin : 7.62. Ref: 0.0 to 0.3, bilirubin: 8.55. Ref.: up to 1.1 mg / dL) in a suspension of the cyclosporine on the 17th day because of hepatotoxicity, with an improvement in the clinical status. Through the analysis of the suspected adverse drug reaction (ADR), it can be observed that according to the causality it was considered as probable, and in severity, was rated as moderate. A causal relationship between the suspect of ADR and the cyclosporine drug was demonstrated, which shows an insecurity and alert regarding the use of this drug.



### **103- SURVEY OF THE KNOWLEDGE OF COMMUNITY PHARMACISTS ON COMBINED ORAL CONTRACEPTIVES IN THE SOUTHEAST OF SAO PAULO STATE, BRAZIL**

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The use of combined oral contraceptives (COC) is the most common reversible method of birth control in developed and developing countries. The aim of this study was to evaluate the knowledge of community pharmacists (CPs) on COC. A cross-sectional study was carried out from 1, June, 2012 to 30, October, 2012 in community pharmacies of Assis micro-region and Ourinhos micro-region, Brazil. All the CPs working in community pharmacies located in the above mentioned micro regions, during the study period, registered with the Regional Board of Pharmacy of Sao Paulo State, and working during commercial hours, were invited to participate in this study. The eligible CPs that accepted to participate in the study answered a structured questionnaire developed by our research team. The CPs could not consult any information source to help in the answering of the questionnaire. The questionnaire had the intent to evaluate the knowledge of CPs regarding information on COC use (mechanism of action, method of start to use, drug dosage, recommendations for missed COC dosages) and safety aspects of COCs (contraindications, adverse effects and drug interactions). The structured questionnaire consisted of seven multiple choice questions. Of the 185 contacted CPs, a total of 41 (22.2%) accepted to participate in the study. The majority of the CPs did not know the mechanism of the action (68.3%), how to start to take the pills (56.7%), the drug dosage of the COCs (56.7%) and the recommendations for missed COC dosages (87.8%). A higher number of CPs did not know COC contraindications (43.9%), adverse effects (29.3%) and drug interactions (43.9%). Our results suggest a gap of knowledge of the CPs on COC that could influence negatively in the quality of counseling, provided to the patients, regarding these pills.

### **104- THE IMPACT OF THE PHARMACEUTICAL CARE ON PATIENTS WITH HIV IN HCFMRP/USP**

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**Introduction:** After three decades of epidemic, the Acquired Immunodeficiency Syndrome (AIDS) has established itself as an important public health problem. The human immunodeficiency virus (HIV) is the causative agent of the AIDS and infects a variety of cells of the immune system which makes the infected individual more susceptible to other diseases. For the successful treatment, it's vital to have a good adherence to the antiretroviral therapy (ART), because the poor compliance results in viral resistance and failure of the ART. **Pharmaceutical Care (PC)** is an activity inherent to the pharmacist who takes over the responsibility for drug-therapy and follows the evolution of the patient. The aim of this study was to evaluate the impact of the PC service implanted at the Special Unit of Treatment of Infectious Diseases of the HCFMRP/USP. **Methods:** We conducted a retrospective study of PC records and medical records of adult patients with HIV of both sexes. Patients who have had a pharmaceutical consultation at least three times in the period considered (from May/2012 to March/2013) were included. The last viral load (VL) of patients before the ATENFAR and the last VL after the ATENFAR were considered. **Results:** We included 32 patients, of which 16 (50%) had detectable VL before the PC and VL undetectable after the PC; 6 patients maintained detectable VL, but the VL decreased; 5 patients had an increase of VL; 3 patients maintained undetectable VL; 2 patients didn't have VL available after PC. **Conclusion:** The results are consistent with numerous studies that show the positive impact of PC on chronic diseases like AIDS.

## **105- THE IMPORTANCE OF THE IMPLEMENTATION OF PHARMACEUTICAL CARE IN A HOME CARE IN FORTALEZA, CEARÁ.**

DANIELA FRUTUOSO DE SOUSA, ANA CAROLINA DE SOUZA E SILVA, AUREA JULIANA CIPRIANO DE SOUSA, GÉSSICA CAROLINE HENRIQUE FONTES E FONTES.

UNIMED Lar & Urgente Fortaleza Cooperativa de Trabalho Médico Ltda.

Home care is a recent area for the pharmacist's practice, responsible to get information and solutions for drug related problems (DRP) and interact with the multidisciplinary team. This service also provides guidance about storage, interactions and stability of medicines, promoting their rational use. Therefore, the aim of this study is to demonstrate the importance of pharmacist's role in home care. Fifteen patients were followed from October 2012 to March 2013, in a private home care, the patients being selected classified by service as hospitalized at home, because they need increased assistance and take many drugs. The information was collected through home visits and the analysis of prescriptions, and then fed into a database in Microsoft Excel®. The analysis of the data was performed as: gender and age of the patients, the number of medicines prescribed for each patient, the number of drug interactions (DI), the presence of adverse drug reactions (ADR), the number of pharmaceutical interventions (PI) performed, the number of DPR and the negative outcomes associated with medication (NOM) found, in accordance with the Third Consensus of Granada. The majority of the examined patients were female (n=10; 66.7%), and the median age was  $70 \pm 25.9$  years. Each patient used, in average,  $8 \pm 2.7$  medicines orally or by probe. We identified in  $4 \pm 4.7$  DI average per patient. 38 DRP and NOM were found, an average of  $2 \pm 1.88$  per patient. Among the 38 DRP and NOM reported only one was ADR (6.66%) and the most frequent of DRP was classified as dosages, intervals between dosages and the duration of inappropriate treatment (n=17; 44.7%) and prescription and dispensing errors (n=14; 36.8%). We also carried out 28 PI with  $1 \pm 1.8$  an average for each patient. The presence of a pharmacist at home care was observed to be very important, to identify and solve DRP and NOM through PI carried out by the professional involved in a multidisciplinary team. This contributes to promote the rational use of medicines and improve the patient's quality of life.

## **106- THE OBJECTIVE STRUCTURED CLINICAL EXAMINATION AS A NEW STRATEGY FOR TEACHING AND LEARNING IN THE DISCIPLINE OF PHARMACEUTICAL CARE**

TAÍS NADER CHRYSOSTOMO MASSARO· RUTINÉIA DE FÁTIMA MICHELETTO, MÁRCIA MENDES RUIZ CANTANO, NATHÁLIA RIBEIRO LAMBERTINI, REGINA CÉLIA GARCIA DE ANDRADE

Faculdade de Ciências Farmacêutica de Ribeirão Preto, FCFRP-USP; Faculdade de Medicina de Ribeirão Preto, FMRP-USP

The restructuring of curricula of pharmacy graduation proposes that the pharmacists should be more reflective, critical, humanized and better prepared for the new market trends. Consequently, new pedagogical strategies for teaching and learning have been proposed. The Objective Structured Clinical Examination (OSCE) is an evaluation of the clinical skills and the abilities, exposing the assessed to a situation closer to real life. The aim of this study is to develop a model of OSCE that would contemplate the key phases of the process of pharmaceutical care, to evaluate and train students enrolled at "Pharmaceutical Care", in the Pharmacy College of Ribeirão Preto (FCFRP/USP). For this reason, it was thought of as an adaptation of a pharmaceutical care model, which was divided in stations of actions, that would behold every stage of a standardized patient care (approved by the Research Ethics Committee/FCFRP/USP, protocol 24). The first station, "Pharmaceutical Anamnesis", required that the student, as a pharmacist, interviewed the patient and identified his health problems. The second station, "Analysis of the Situation", called the student to develop a plan of action. The third one, "Intervention Pharmacist - other health professional", promoted the meeting between the pharmacist and a simulated professional (doctor, nurse, etc.), the student had the opportunity to expose the strategies to help de patient solve his health problem. At the last station, "Intervention Pharmacist - Patient", there was a return with the patient and the pharmacist exposed strategies that should solve the problem. Finally, the teacher evaluation, through a checklist, drawn up for the case, covering three areas: knowledge, communication skills and decision making. Thus, this structure expects to collaborate with the new undergraduate in pharmacy. It is a new proposal of assessment at FCFRP/USP and a training camp before clerkship.

**107- TRANSLATION AND CROSS-CULTURAL ADAPTATION OF SUBTITLES OF THE UNITED STATES PHARMACOPEIA - DISPENSING INFORMATION (USP-DI) FOR GUIDANCE TO ELDERLY IN ARACAJU (SE) ABOUT USING DRUGS**

IZADORA MENEZES DA CUNHA BARROS, CARLA FRANCISCA DOS SANTOS CRUZ, THACIANA DOS SANTOS ALCÂNTARA, ALESSANDRA REZENDE MESQUITA, ANNE CAROLINE OLIVEIRA DOS SANTOS, DIVALDO PEREIRA DE LYRA JUNIOR

Federal University of Sergipe/ Laboratory for Teaching and Research in Social Pharmacy, São Cristóvão (SE)

The understanding of prescribed drug-therapy is an essential factor for adherence among elderly patients. Thus, the use of communication devices, such as pictograms, can serve to reinforce the oral and written instructions about medications, dispensed to patients, especially those who have difficulty at understanding. The aim of this study was to translate and culturally adapt a set of pictograms developed by the United States Pharmacopeia-Dispensing Information (USP-DI) to be used as a guidance tool for the elderly in promoting the rational use of medicines. The study was conducted from March to May 2012. The 25 pictogram subtitles of USP-DI were the translation and back translation, and the generated versions were compared by two committees of judges semantic, cultural and idiomatically. The main results showed that the steps of translation and back translation were considered satisfactory and few grammatical changes were necessary to establish cultural equivalence between the English and Portuguese versions. Regarding the assessment of the expert's committee, seven messages showed below 80% concordance between the experts and they have been modified in order to make them clearer and more understandable for the elderly. This study demonstrated that most pictogram subtitles translated into Portuguese presented semantic equivalence with the original version of the USP-DI. In this context, the use of these subtitles, culturally adapted to Brazilian reality, can serve as a supplementary system of verbal communication in the process of pharmaceutical dispensing, increasing the understanding of the information previously provided and promoting the rational use of medicines. This study was supported by CAPES and FAPITEC/SE.

**108- DRUG USE IN PREGNANCY ATTENDED BY A TEAM OF THE FAMILY HEALTH PROGRAM.**

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The use of medication during pregnancy deserves special attention for potential risks to the developing fetus and should be avoided in principle. The effects on the fetus depend on the drug or substance, the patient, the time of gestation at the exposure, frequency and dosage which may result in teratogenicity or several pharmacological and toxicological consequences. This study aimed to evaluate the use of drugs by pregnant women and warn them as well as health professionals about the implications of the use of medication during pregnancy. The survey was conducted from October 2010 to January 2011 with 30 pregnant women enrolled in the FHP (Family Health Program) in the municipality of Cristina-MG. Data were collected through a simple qualitative research. It was observed that most of the studied pregnant women were between 18-23 years, had secondary education and a family income less than three minimum wages. It is noteworthy that 50% of the pregnant women were in their first pregnancy, whereas 16.7% of them reported abortion, all spontaneous. Regarding the consumption of cigarettes, 16.7% made use of it during pregnancy. Only one (3.4%) pregnant women reported having diabetes and hypertension. As for the most used drugs during pregnancy, 76.6% reported using folic acid, 46.6% ferrous sulfate, 43% association of folic acid and ferrous sulfate, 26.6% of multivitamins, 20% of dactil, 16.6 % acetaminophen, 13.3% of scopolamine butyl bromide, 6.6% of dipyron, 6.6% of metoclopramide, 3.3% of insulin and 3.3% methyldopa. Among all the drugs mentioned it was found that 20% belonged to category A, class B 24%, C 32% and none to the categories D and X, as classified by the Food and Drug Administration. The data show that 93.4% of the women reported the use of at least one medication during pregnancy, 10% reported the use of self-medication. Thus, the orientation of pregnant women, population and health professionals through educational measures (courses for pregnant women, brochures, lectures) is necessary for the rational use of medicines. The pharmacist plays a crucial role in the education about the use of drugs in pregnant women.

## **109- UTILIZATION AND KNOWLEDGE ABOUT GENERIC DRUGS IN SOUTHERN BRAZIL - POPULATION-BASED STUDY**

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Universidade Federal de Pelotas

The implementation of the policy of generic drugs in Brazil (1999), months after the creation of ANVISA (National Sanitary Vigilance Agency), reflected an effort by the Ministry of Health to reduce the cost of drug therapy enabling a larger portion of population's access to treatment. This study aims at describing people's knowledge about generics and evaluating the utilization of this product, 12 years after its entry into the Brazilian market. This was a population-based cross-sectional study, conducted in the first semester of 2012 in Pelotas, southern Brazil. A representative household sample was selected following a multiple stage protocol. Census tracts defined by IBGE were the primary sample units, while households in each sampled tract were the secondary sample units. All residents aged 20 years or older were eligible, except those with severe mental impairment. In this study, 2927 adults aged 20 years or older were interviewed. The outcomes studied were the utilization of drugs in the preceding fortnight to the interview, the identification of drugs as generic or not, and population's knowledge about generics, in which the respondent had to identify the characteristics of the generic product packages (presence of the law, the letter g, the yellow stripe and the generic term). Drugs followed the ATC/DDD classification (WHO). Most respondents were female (59%) with an average age of 45 years (SD 16.62). Of these, 77% had used at least one medication in the preceding 15 days to the interview. The use of 6079 medicines was reported, the highest use frequency being for: cardiovascular system (28%), nervous system (25%), alimentary tract (13%) and the muscle-skeletal system (10%). Sixty one point two percent of the drug packages were observed. Among those whose packages were presented (N = 3707), it was found that 36% of the drugs were generic. In relation to the population's knowledge about generics, 87% said the price was lower and 69% the quality of the medicines was equal to the price. Twenty four percent of the respondents were unable to identify the characteristics of generic products, without finding any difference between genders ( $p = 0.053$ ). The lack of the population's knowledge to identify generic drugs through their features can be an obstacle for the utilization of generics by them. The study was approved by the Research Ethics Committee of the Medicine school of the Federal University in Pelotas. The interviews were performed after informed consents. This study was funded by CAPES.

## **110- WRITTEN INFORMATION GIVEN TO PATIENTS OF COMPOUNDED DRUG USERS: LITERATURE REVIEW**

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The success of drug treatment is associated with the patients' health literacy which will allow them to take conscious decisions about their health from verbal or written information provided by health professionals. The provision of written information to drug users is a way to promote health literacy and to support verbal information. In Brazil, there is a regulation for this kind of information dedicated to manufactured drugs, as a leaflet. The aim of this study was to review the literature regarding the information provided to patients using compounded drugs. A literature review was performed on Scielo, Lilacs and Pubmed, from January 1<sup>st</sup>, 2012 to March 20<sup>th</sup>, 2013. A cross research was conducted with "compounded drugs", between the following descriptors in Portuguese, and their counterparts in English: "health education", "leaflets for medicines", "education for patients," leaflets to the patient" and " patient information". No articles were found, which describe the development of materials containing this kind of information or evaluating its importance in literature search. Then, a free search was performed and law 17.051/2012 from Paraná State was found, which was established in January 2013 and forces the provision of leaflets along with compounded drugs, called "magisterial leaflets", and also brings its standardization. This result shows the need to pay greater attention to this issue by health professionals as the availability of such material can promote health literacy regarding compounded medications and avoid accidents in the administration of these drugs, contraindications and reduce drug interactions.

## **111- EFFECTIVENESS OF PHARMACEUTICAL CARE IN PATIENTS WITH HYPERTENSION ASSISTED BY FAMILY HEALTH STRATEGY**

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With Pharmaceutical Care it is intended to achieve definitive results that improve a patient's quality of life, especially in helping patients with chronic diseases such as hypertension. The aim this study was to verify the effectiveness of pharmaceutical care in hypertensive patients assisted by the Family Health Strategy (FHS). A controlled clinical trial was carried out in two Basic Units of the Family Health Strategy of Goiânia-Goiás, Brazil. Fourteen patients participated in the intervention group and 16 in the control group, where both groups received six home visits. The number of patients with controlled blood pressure increased in 7,1% in the intervention group. The decrease of the cardiovascular disease has been shown with 21,4% of patients switching from higher levels of risk to lower levels. In the control group, there was an increase in the number of patients with high risk (25%). In the intervention group, there was a decrease in demand for the emergency departments and the new visits of the physician were justified by events related to hypertension and cardiovascular disease. Pharmaceutical care can contribute to blood pressure control and in the decrease in cardiovascular risk in hypertensive patients assisted by the FHS, and must contribute to the decrease in emergency assistance to new cardiovascular events. Financial support FAPEG.

## **112- MONITORING THE SUPPLEMENTATION OF FERROUS SULPHATE**

SILVIA HELENA FERREIRA SANTIAGO; RENATA RACHIDE NUNES; ELLEN CASSIA FERREIRA; MICHELLI DOS SANTOS; PATRICIA REIS VILELA; JESSICA CRISTINA VIEIRA; LIZANDRA AZEVEDO PEREIRA; JULIANA MIRANDA FERREIRA; LAYLA PAOLA DE MELO LAMBERTI; NAYRA MENDES DA SILVA; SIMONE DE ARAUJO MEDINA MENDONÇA; LILIANA APARECIDA OLIVEIRA SILVA

University Federal of São João Del-Rei, Campus Centro Oeste Dona Lindu  
Secretary of health of Divinópolis

Iron deficiency anemia is the largest magnitude of nutritional deficiency in the world, and children under five years and women of childbearing age, especially during pregnancy are considered to be the most vulnerable segments of the population who have this disease. The aim of this study was to analyze the use of iron supplementation with ferrous sulfate in the preventive treatment of anemia in pregnant women and children among ten families in a neighborhood of the city of Divinópolis - MG. Through interviews, students and pharmaceutical preceptors, analyzed the medicines used by children as well as pregnant and lactating women. It was found that among ten patients who had the profile for the indication of iron supplementation, five were using the ferrous sulfate drug, three children and two pregnant women. Regarding the use of the drug, three patients had taken it together with orange or lemon juice and two patients reported lack of knowledge about the correct mode of administration and therefore used it inappropriately. Together with the responsible preceptors, the students carried out interventions for these patients, advising them to properly administer the drug, along with citrus juice. Therefore, this experience gave the students direct contact with health service, providing them higher learning, as future professionals. And for the population, showed the importance of a professional who is able to provide guidance on the proper use of drugs, thus helping increase the adherence of the treatment and contributing to public health.