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**BRAZILIAN ASSOCIATION FOR
ORAL HEALTH PROMOTION**

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ABSTRACTS

All abstracts appear as submitted by the authors without editing



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001 Relationship between degree of fluorosis and enamel hypomineralization

MARÍN, L.M.*; CASTELLANOS, J.E.; TENUTA, L.M.A.; MARTIGNON, S.; CURY, J.A.

Background: The clinical manifestations seen in fluorotic teeth have been associated with the histological changes provoked in the subsurface hypomineralized areas, but the degree of hypomineralization has not been measured and associated with the level of fluorosis. **Aim:** To determine enamel subsurface hypomineralization in teeth with different degrees of fluorosis. **Methods:** Forty-nine third unerupted human teeth were visually classified according to the Thylstrup & Fejerskov (TF) index in sound (TF0) and fluorosed (TF1 to 4). Teeth were cut transversely through the middle third of the crown and one enamel block (4x2x4 mm) was obtained. Enamel blocks were embedded in acrylic resin, flattened and polished. Cross-sectional microhardness (CSMH) was used as indicator of hypomineralization because there is a high correlation between CSMH and percentage of mineral in enamel. Three rows of 20 indentations each were made, one in the central region of each block and the other two 100µm below and above this. The set of data were curved-fitted to graph the CSMH profile. Hypomineralization area (ΔShypomineralization) was determined from the difference between the area under the curve of sound and hypomineralized enamel. The data obtained were grouped as TF0, TF1-2 and TF3-4 for the statistical analysis: ANOVA and Tukey test (p<0.05). **Results:** The KHN values through-out enamel were lower with increasing fluorosis severity. The fluorosis severity showed an effect on ΔShypomineralization, being the data obtained from TF3-4 statistically higher than the other groups (p<0.05). **Conclusions:** The severity of fluorosis is directly associated with enamel subsurface hypomineralization found in fluorotic teeth.

002 Evaluation the role of dental schools in the school environment: a quali-quantitative study

SIMPRIANO, D.C.A.B.*; KUBO, F.M.M.; MIALHE, F.B.

Background: The health promotion should be multidisciplinary and intersectoral. Teachers of elementary school, when well grounded and empowered, can become multipliers of health workers. **Aim:** This study investigated using Collective Subject Discourse methods (DSC), such as dental schools could help elementary school teachers working with students the oral health issue across the board. **Methods:** The sample consisted of 80 teachers from first to fourth grade of elementary school in the city of Indaiaçu-SP. The responses were analyzed by qualitative research technique of DSC. **Results:** Presented to the quantitatitativos results. The synthesis of the central ideas were guiding students through lectures, videos, jokes, games and other activities (n 32), train teachers on the subject oral health (n 11), guide parents and / or community about the importance to adopt healthy habits regarding oral health (n 28), the need of oral / dental evaluation in schools and, if necessary, make referrals to health agencies (n 9), provide (more) apprenticeship positions for dental students can act in schools (n 8), develop teaching materials on the subject oral health (n 23), advise on the importance of oral health lectures, events and activities (without further elaboration) (n 17), response discarded for not answering the question (n 5). **Conclusions:** For the participating teachers, the best way colleges help in the development of oral health theme would be guiding students, parents and the community about the importance of oral health, developing educational materials and empowering teachers on the subject.

003 The dental caries experience of inhabitants of Manaus and São Paulo related to the fluoridation in the public water supply system

OLIVATI, F.N.*; MEIRELLES, M.P.M.; MARQUES, T.C.N.; FRANCO, D.H.; SOUSA, M.L.R.

Background: The fluoridation in the public water supply systems part of the health improvement proposal, being considered an effective and consolidated measure as well as having low costs for the prevention and control of dental caries. **Aim:** This study aimed at comparing the dental caries experience of two cities in Brazil: São Paulo, which adds fluoride to its public water supply system and Manaus, which does not add fluoride to its public water supply system. **Methods:** This study was based on the data collected by SB Brasil 2010 project and those data were evaluated and compared with dtmf, DMFT and SiC index. Among the 2.176 individuals examined, there were children, adolescents, adults and elders. The dental examinations followed the methods proposed by WHO. **Results:** were showed that the dtmf, DMFT as well as SiC were higher in Manaus compared to São Paulo, at the ages of 5 and 12 years old (p<0.001). The percentage of decayed and missed teeth was higher and the restored ones was lower at the ages of 15 and 19 years old and the percentage of free decay among adults and elders in those cities was not significant. **Conclusions:** From the results, it was identified that São Paulo showed a better oral health condition in children and adolescents, while there was no difference among adults and elders, compared to Manaus, demonstrating that part of the population with access to fluoridated water benefitted from this method.

004 Impact of oral conditions on oral health-related quality of life of children liver transplant candidates – a pilot study

VIDIGAL, E.A.*; ABANTO, J.; ALVES, F.A.; BÖNECKER, M.

Background: Preschool children with end-stage liver disease tend to suffer of dental problems, which can negatively affect their oral health-related quality of life (OHRQoL). **Aim:** The purpose of this study was to assess the prevalence of oral diseases and their impact on OHRQoL in preschool children candidates for liver transplant. **Methods:** Seventeen preschool children aged 12 to 36 months with biliary liver atresia who were in program to liver transplant at the AC Camargo Cancer Center were examined. Presence of gingivitis, dental plaque (OHI-S), dental caries (dmf-t), dental hypoplasia (DED-Index) and hyperbilirrubinemic stain of teeth were evaluated by one trained and calibrated examiner prior to liver transplantation. Parents answered the Brazilian version of the Early Childhood Oral Health Impact Scale (B-ECOHIS). Descriptive analyses were performed. **Results:** Hyperbilirrubinemic stain (70,6%), presence of dental plaque (47,1%) and dental caries (41,2%) showed the higher rates. The mean (standard deviation) B-ECOHIS score was 6.52(4.74). Parent's distress domain showed the highest mean score (3.41(2.26)). **Conclusions:** Hyperbilirrubinemic stain was the most frequent oral problem in preschool children liver transplant candidate and may be responsible for a negative impact on the OHRQoL.

005 Oral health in a programmed children's initiative: indicators and objectives of a primary health care service

FAUSTINO-SILVA, D.D.*; SCHWENDLER, A.; FAMER ROCHA, C.M.F.

Background: early childhood is the ideal time to introduce good habits and begin an educational/preventive oral health program. Given the importance of prioritizing educational initiatives aimed at this population within Primary Health Care, the Community Health Service of the Grupo Hospitalar Conceição (SSC-GHC) implemented a Programmed Oral Health Initiative for children under the age of 4 years. **Aim:** assess compliance with goals and indicator distribution for the Children's Programmed Oral Health Initiative at Health Care Units (US) of the SSC-GHC. **Methods:** this is a cross-sectional analytical study using a quantitative approach to analyze the coverage of dental visits in the service's 12 Health Care Units. A total of 660 children born in 2010 were included in the study, based on information collected from the institution's information system. **Results:** in regard to coverage of dental visits, the health care units failed to meet the objectives established by the service. Most of the children studied (41%) had their first dental visit in their first year of life. With respect to the total number of visits, 22% had never seen a dentist and 8% had completed all four expected consultations. There was a positive relationship between the ratio of the total population and 0 to 4-year-olds enrolled from the area with the number of Oral Health Team (ESB) members and coverage in the first year of life for each US (p0.001 and 00.008, respectively). **Conclusions:** Although few children are properly monitored in terms of the objectives established, coverage percentages were higher than those found in the literature, indicating that programmatic and surveillance initiatives can be effective in children's oral health care.

006 Simplifying the aesthetic and functional full-mouth rehabilitation in child with structurally abnormal teeth

FERREIRA, F.R.*; SAITO, W.A.; REYES, A.; ALVAREZ-VIDIGAL, E.; KOHARA, E.K.; WANDERLEY, M.T.; MENDES, F.M.; BRAGA, M.M.

Dental anomalies, as imperfect dentinogenesis and other teratogenic defects characterized by intense dental discolouration and possible association with worsening factors, may lead to severe aesthetic, functional and psychosocial impact on children's lives. Due to that, measures to minimize these effects are desirable since early ages. Describing a simplified purpose to rehabilitate strongly discoloured and excessively attrition in primary dentition in order to return her aesthetic and oral functions. A 6-year-old girl sought the dental clinic for treatment due to her dental appearance and difficult to chewing. Although the dental abnormalities diagnosis has not been concluded until the moment, dental procedures to return aesthetics and oral function had to be performed. Aiming to simplify the process, we opted for reconstructing teeth in a model and using a vacuform matrix loaded with composite resin and applied to the unprepared etched teeth. The restorative treatment lasted seven 2-hour-clinical sessions and was well accepted by the child. Besides the aesthetical smile, the restorations permitted increasing the vertical dimension and improved child's oral function. The child and her mother declared to be very satisfied with the final result of the proposed treatment. This simplified technique for full-mouth rehabilitating reduced the clinical hours with child and reached a satisfactory result considering both aesthetics and oral function. Consequently, it could be expected an improvement in this child's psychosocial condition and quality of life.

007 Esthetics and functional oral rehabilitation: case report

MOREIRA, K.M.S.*; CARDOSO, M.; INAGAKI, L.T.; MARTINS, L.F.B.; PASCON, F.M.; GALVÃO, M.B.D.; RONTANI, R.M.P.

Despite all the existing means for prevention, dental caries is still a public health problem. A big part of the population has not access to guidance, prevention and treatment of this disease. The study aimed to report the clinical case of a patient with five years of age, male gender and early childhood caries. The clinical examination revealed total destruction of upper deciduous teeth and partial of the lower teeth involvement. The radiographic examination confirmed the indication to pulpectomias in 75, 84 and 85 teeth. We prepared the treatment plan: oral middle adequate, removing up focus of infection through of extractions, root canal treatment and restoration. Topical applications of fluoride varnish was performed and after restoration in the 85, 83, 75 and 73 teeth with composite and steel crowns in the 74 and 84 teeth. Dietary and oral hygiene guidance was performed to family and child. Upper total prosthesis was made. The child was transferred for fonaudiologia. Preservation of the total prosthesis was 7 and 14 days after the installed. Treatment success was observed, since the masticatory and aesthetic functions were reestablished, returning to child the self-esteem.

008 Evaluation of a protocol to simulate in vitro the decreased absorption of F from toothpaste due to gastric content

LIMA-ARSATI, Y.B.O.*; ANDRADE, H.K.; GOMES, A.R.L.F.

Background: in vivo studies show that fluoride (F) absorption from toothpaste is decreased after meals due to gastric content. The studies that estimate F dose from diet and toothpaste do not take in account this F inactivation, leading to overestimated doses. **Aim:** to evaluate a protocol to simulate in vitro the decreased absorption of F from toothpaste due to gastric content. **Methods:** samples of duplicate-diet (24h) were collected from 20 children aged 1 to 3 years. Their brushing habits were determined in our previous study, showing that they ingested ~ 0.35g of toothpaste per brushing. F was determined in samples of Diet and Diet+Toothpaste (standard amount of 967.8 µg F/g toothpaste), after incubation in 0.01M HCl/2 hours, centrifugation and buffering with TISAB II. F analysis were performed using ion-specific electrode. Original Fluoride (OF) was calculated by adding the amount of F in Diet to the amount of F in Toothpaste samples. Recovered Fluoride (RF) was the amount of F in samples Diet+Toothpaste. **Results:** OF15.954±1.730 µg F RF15.212±1.805 µg F. RF was statistically lower than OF (P0.011 t-paired test), but this reduction of 4.5% is not consistent with the inactivation of F from toothpaste by gastric content reported in the literature by in vivo studies. **Conclusions:** the evaluated protocol did not reproduce in vitro the decreased absorption of F from toothpaste due to gastric content. However, it is an interesting method for F analysis in diet samples, due to its simplicity and low cost.

009 Dental microabrasion and at-home whitening: an effective association for aesthetic problems.

COELHO, C.S.S.*; BRITO, M.H.S.F.; SOUSA, G.P.; SILVA, M.A.F.; MENDES, R.F.; MOURA, L.F.A.D.; LIMA, M.M.; DE MOURA, M.S.

Enamel microabrasion is an efficient method for the removal of superficial enamel white spots caused by caries or dental fluorosis. This study reports two cases of the combined use of enamel microabrasion and at-home tooth whitening. Case 1: a 9 year-old female was diagnosed by a clinical dentist as having enamel white spots due to caries. She had been prescribed daily mouth washes with 2% sodium fluoride solution. On clinical examination at The Universidade Federal do Piauí (UFPI), the permanent first molars and incisors presented a TF 4 (moderate) fluorosis level. Eight years later, when the patient presented the complete permanent dentition, she was diagnosed with fluorosis TF 4 level and TF 5 (loss of hard tissue) in some teeth. Case 2: a 10 year-old male with poor oral hygiene habits and non-compliant with the recommended preventive oral hygiene procedures during orthodontic treatment. At the end of treatment, he had widespread caries white spot lesions. After removal of the braces, the hygiene recommendations were reinforced by the dentist for two months. Afterwards, enamel microabrasion was carried out on the buccal surfaces of the aesthetically important teeth. In both reported cases, enamel microabrasion was carried out using a 37% phosphoric acid gel and pumice paste on a 1:1 (v/v) ratio and the tooth whitening was carried out using 16% carbamide peroxide gel due to the yellowish appearance of the teeth after microabrasion. Conclusion: The combination of the methods was successful to recover the aesthetic appearance of the smile.

010 Evaluation of the daily intake of coffee, cola and guaraná soft drinks on bone mineral density and blood mineral levels

COSTA, E.D.*; ALONSO, M.B.C.C.; SILVA, A.I.V.; AMBROSANO, G.M.B.; MARCONDES, F.K.; WATANABE, P.C.A.; HAIT, F.

Background: Nutrition is an important modifying factor in the development and maintenance of bone mass. **Aim:** To determine the effects of the daily intake of coffee, cola and guaraná soft drinks on bone mineral density and blood levels of calcium (Ca), phosphorus (Pi) and magnesium (Mg) in male and female rats. **Methods:** Sixty-days-old Wistar rats were divided into four groups according to the test drink, namely control (water), cola, guaraná and coffee. After 48 days, all animals were sacrificed, had their blood collected for biochemical analyzes and their femora evaluated for bone mineral density (BMD) and bone mineral content (BMC). **Results:** All animals gained weight during the experiment. Consumption was highest for cola and lowest for coffee. Changes in BMD appeared only in females of the coffee group. As for BMC, males showed higher values across groups, while coffee intake provoked significant BMC reduction in females. Regarding blood biochemistry, males showed higher serum Ca levels across groups. While Pi levels were similar across groups for females, males in the guaraná group showed significantly lower Pi levels. Coffee intake produced a significant increase in Mg levels regardless of gender. **Conclusions:** Taken together, our data suggest that daily coffee intake can lead to decreased BMD and BMC in female rats, and that habitual consumption of coffee, cola and guaraná soft drinks may induce changes in the levels of blood minerals essentially related to bone metabolism.

011 Saddle seat: new ergonomic concept in the clinical practice of the dentists - literature review

GOUVÊA, G.R.*; SILVA, M.A.V.; SOFIA POLETTI; UEMURA,S.T.; ZANATTA, J.; BULGARELLI, J.V.; PEREIRA, A.C.

The implementation of an ergonomic sitting posture is necessary, once that the majority of the dentists complains about musculoskeletal injuries. Those can be caused by the seat used in the clinical practice. Investigate the produced knowledge in scientific literature about the new ergonomic equipment of mobile sustentation in sitting posture of dentists, through the saddle seat. It is a literature review based on specialized literature through the consult of selected scientific articles in data base of Scopus and Medline in the years of 2014 and 2015. It was found 6 articles and 1 thesis that addressed this theme. The saddle seat differs from other kinds of seat especially because of the angle of the knee that can vary between 120° to 130°, differently of the 90° angle that is commonly used by the dentists. With a bigger angular amplitude between pelvis and knees an improvement of the lymphatic and peripheral circulation of the lower extremities, prevents pathologies in the circulatory system, the tension in hamstrings are relieved, enabling lumbar, thoracic and cervical vertebrae to get in an anatomic position keeping postural control and the prevention of the Work Related Musculoskeletal Disorders (WMSD). The saddle seat can be a strategy to prevent, stabilize and treat postural problems that affects dentists, allowing them to adopt an anatomic posture and keep an ergonomic posture in clinical practices. Its necessary more longitudinal experimental studies that evaluate the impact of this kind of seat in posture health of the dentists.

012 Water fluoridation: An approach based on the string literature.

LEITE, C.N.*; NARVAI, P.C.

Fluoridation of public water supplies is among the most important public health measures for control of dental caries. The aim of this paper is to present the history of water fluoridation in Brazil as well as around the world, with the intention of showing the importance of this process to the reduction of tooth decay. As a strategy the popular Literature of Cordel was chosen, considering its efficiency and usefulness in oral communication process, and also in the understanding that it could be an important tool in the process of dissemination of different fields of scientific knowledge. As a result, we have noticed that the Cordel that we have produced has significantly contributed to the dissemination of the issue discussed in this paper. What shows us that Literature of Cordel can really contribute to science, demystifying the wrong understanding of important data to be traditional, popular and assessable.

013 Assessment of oral health knowledge of community health workers linked to family health strategy

SILVA, M.A.V.*; GOUVÊA, G.R.; GUERRA, L.M.; MIALHE, F.L.

Background: In 2013, over 250 thousand Community Health Workers (CHW) and more than 22 thousand Oral Health Teams (OHT) were working in Brazil in order to collaborate in health promotion and disease prevention. **Aim:** To compare the work process and the oral health knowledge of CHW who work with and without OHT. **Methods:** A total of 162 subjects participated in the study, with 81 CHW linked to the Family Health Unit with OHT and 81 CHW linked to the Family Health Unit without OHT. We used a form containing data on income, education and length of service, 7 items on the work process, behavior, self-perception of oral health and household access to dental services, as well as 12 questions on validated knowledge of the health-disease. **Results:** The results showed that the differences observed between the CHW groups were statistically significant ($p < 0,05$) when analyzing the total knowledge of questionnaire scores on oral health-disease ($p < 0,0021$). Regarding the other study variables, only the questions that focused on training in oral health ($p < 0,0002$) and household access to dental care ($p < 0,0001$) had statistically significant differences when compared the two groups of CHW. **Conclusions:** Knowledge about oral health / disease CHW linked to the Family Health Unit with OHT process is best, and that the number of CHW who has had training in oral health was significantly higher in the group with OHT.

014 Inequalities on oral health among adults

BATISTA, M.J.*; SOUSA, M.L.R.

Aim: The objective of this study was to evaluate social inequalities in oral health among adults. **Methods:** In Piracicaba, Brazil, a cross-sectional study selected by a probabilistic sampling, 248 adults aged 20 to 64 years. Caries (DMFT) and periodontal disease (CPI) were evaluated according to WHO criteria. OHIP-14 was used to evaluate quality of life related to oral health. Health inequalities were assessed by social class, education, family income and type of dental service obtained from a questionnaire. Analyses were performed for each outcome (clinical status) with socioeconomic variables by binary logistic regression or multinomial logistic regression adjusted by age and sex. **Results:** Among adults, 35.4% (29.7-41.4) presented untreated caries 43.0% (32.7-53.9) had periodontal pockets over 4 mm 19.5% (20.3-24.4) have lost any teeth due to dental diseases and 48.1% (41.6-54.7) reported severe impacts on OHIP (fairly/very often). Impact of oral health on quality of life, decayed teeth and tooth loss varied according to the gradients of social class, family income and education ($p < 0.05$). Having decayed teeth was associated with type of dental service. In the middle social class 46.1% had missing teeth and 1.8% lost more than 13 teeth in the lower social class, this percentage was 17.2% and 32.9% respectively ($p < 0.05$). **Conclusions:** Clinical attachment loss was associated with social class e income. Social inequities could be reflected in these adults oral health, including the impact of oral health on quality of life independently of age and sex. These results showed the determinants of health role play among this adult population.

015 CaF₂ formation in sound and carious enamel by fluoridated mouthrinse or gel

LIMA, C.V.*; NORONHA, M.S.; OLIVEIRA, B.E.C.; CALDARELLI, P.G.; SOUZA, J.G.S.; TABCHOURY, C.P.M.; TENUTA, L.M.A.; CURY, J.A.

Background. It has been reported that the reactivity of fluoride with carious enamel is higher than sound, however this fact has not been widely explored in the literature. In addition, the presence of other ingredients in commercial formulations can interfere with this reactivity. **Aim.** To compare the reactivity of two commercial products, a F-mouthrinse and a F-gel, with sound and carious enamel. **Methods.** For this in vitro, randomized and blind study, bovine enamel slabs, sound and with provoked incipient caries lesions, were divided into 5 groups (n6): 1) Negative control (purified water) 2) NaF solution containing 225 ppm F (Control of commercial mouthrinse) 3) Colgate Plax®, 225 ppm F 4) NaF solution containing 9,000 ppm F (control of commercial F-gel) and 5) Neutral Gel 9,000 ppm F (F-gel), DFL®. The duration of exposure to the treatment was 4 minutes. Loosely bound fluoride ("CaF₂") was extracted with KOH and fluoride concentration was determined with ion specific electrode, being the results expressed in µg F/cm². The data were analyzed by two-way ANOVA followed by Tukey test at 5% of significance. **Results:** There was a larger formation of "CaF₂" on carious enamel than on sound ($p < 0.0001$). All treatments significantly increased "CaF₂" concentration in enamel compared with the negative control ($p < 0.0001$). The commercial F-gel formed greater "CaF₂" concentration on enamel than F-mouthrinse ($p < 0.0001$), but they did not differ from their respective controls ($p > 0.05$). **Conclusions:** Incipient caries lesions can benefit more than sound enamel by either professional application of fluoride or the daily use of mouthrinse.

016 Antimicrobial use in early childhood and its association with dental enamel defects in Primary Health Care

FAUSTINO-SILVA, D.D.*; ROCHA, A.F.; ROCHA, B.S.

Background: the dental enamel is a highly mineralized tissue and without metabolic activity after formed, which means that the disturbances during development may manifest as permanent defects in erupted teeth. A change of great importance is the molar-incisor hypomineralization (MIH), which has systemic etiology and affects the first permanent molars and the permanent incisors. It has been pointed out in the literature a relationship of antimicrobial use with MIH, especially amoxicillin. **Aim:** to determine whether there is an association between the use of antibiotics early in life and the development of dental enamel hypoplasia (DEH) in permanent teeth of 6-12 years children in Primary Health Care. **Methods:** This is a cross-sectional study, in which were included children examined who had at least one visit in your health unit in the first months of life and during the first four years and excluded all those who did not have regular monitoring in their health units throughout this period, as well as children whose files were not found. Of the 228 children examined by trained and calibrated dentists, 144 remained in evaluation of the records of the antimicrobial use and infections in early childhood. **Results:** Amoxicillin was the most prescribed drug in all age groups assessed, followed by sulfamethoxazole+trimethoprim. Of the 144 children, 43 (29.9%) had normal dentition and 101 had DEH (70.1%). 17 patients had prescriptions of antibiotics at least once in their lives in the first 4 years of life, and of these, 13 had some type of DEH. Among patients who had DEH, amoxicillin has been the most widely prescribed drug, at least 6 patients using more than 6 times over the first 4 years. There was no statistically significant association for either cases. **Conclusions:** This study concludes that there was a high prevalence of children with DEH and that amoxicillin was the most prescribed drug in the first 4 years of life of these patients and this may be related to the development of opacities and hypoplasia, even if they are necessary and longitudinal studies with sample more representative to prove this relationship.

017 Relationship between Asthma, Malocclusion and Mouth Breathing in Primary Health Care children

FAUSTINO-SILVA, D.D.*; SANTOS, N.M.L.; REZENDE, G.; HUGO, F.N.; HILGERT, J.B.

Background: asthma is a chronic inflammatory disease of high prevalence in children and possible oral effects in children and adolescents. **Aim:** to assess the possible relationship between asthma and mouth breathing and malocclusion in the Primary Health Care context. **Methods:** cross-sectional study with a sample of 228 children between 6 and 12 years, divided into a group of asthmatic (n 112) and other non-asthmatic (n 116), in two Basic Health Units, located in the city of Porto Alegre, Rio Grande do Sul, Brazil. The evaluation consisted of oral examination conducted by two trained dentists and calibrated (κ 0.85 to 1.00), structured interviews with parents and data records. Data were analyzed with SPSS, using the Poisson Regression, the statistical significance level of $p < 0.05$. **Results:** the most common type of asthma was Intermittent, in 62 children (55.4%), followed by Mild Persistent, in 38 children (33.9%). The most used drug was salbutamol (a short-acting bronchodilator) in 95 children (84.8%), followed by 35 children (31.3%) who used budesonide (an inhaled corticosteroid), 33 children (29.4%) who used systemic corticosteroids and 28 children (25%) who used beclomethasone (inhaled corticosteroid). Asthma [PR 2.12 (95% CI: 1.46-3.08), $p < 0.001$] and the use of pacifiers [PR 1.98 (95% CI: 1.27-3.07), $p < 0.001$] were associated with mouth breathing, in the final multivariate model (Table 2). Age [PR 1.02 (95% CI: 1.00-1.03), $p 0.039$] and thumb sucking [PR 1.08 (95% CI: 1.03-1.13), $p 0.001$] were associated with malocclusion in the final multivariate model. **Conclusions:** there is a need to qualify the comprehensive care of asthmatic children and adolescents because this approach to asthmatic people's oral health is the way to effectively practice interdisciplinary and complete care.

018 Evaluation of dental caries previous knowledge from undergraduate dental students

JUNIOR, M.F.S.*; SANTOS, G.F.; GAVI, R.S.; GOMES, M.J.; DAROZ, L.G.D.; CLAUDIA BATITUCCI DOS SANTOS DAROZ, C.B.

Background: The previous knowledge of the causal factors, of the development and of the evolution aspects from a disease, such as caries, should be points of discussion throughout the individual's academic formation as part of health education. **Aim:** To evaluate dental caries previous and acquired knowledge from undergraduate dental students from Espírito Santo Federal University (UFES). **Methods:** Undergraduate Dental students (N121) answered a questionnaire about the previous and the acquired knowledge of dental caries. A pilot study concluded in another Dental College validated the questionnaire. **Results:** Respondents (38.8%) stated that most of the knowledge about dental caries disease was acquired after the entrance in the Dental College while 28.1% and 13.2% stated from home/family and from private dentist, respectively. The knowledge about the disease improved oral health daycare of 95% of the respondents. No significant difference about dental caries' knowledge between the students from the middle of the course and from the last year of the course could be observed although when asked about dental restoration and about the consequences of dental caries, significant differences were found among the students in the beginning of the course (χ^2 -square, $p < 0.05$). Significant difference about the knowledge acquired after the entrance in the Dental College compared to before was observed among the students from the middle of the course (McNemar test, $p < 0.05$). **Conclusions:** Dental caries real knowledge was acquired after students started Dental College, becoming evident in the middle of the course. There was relevance from the collected responses with the oral health daycare.

019 Rondon Project: Awakening looks for Oral Health in the city of Piripituba/PB in Health Program actions in School

AGUIAR, B.M.*; PERIN, P.C.P.; LEITE, C.N.; BERGAMASCHI, M.

Background: The oral health promotion is the process of producing favorable general living conditions to a healthy development of the mouth, in view of the biological and social role that it represents. **Aim:** Given these considerations, this study aimed to promote partnership with professional Dentists and Public School System educators so that it includes the practice of supervised brushing and guidance in oral and general health in schools. **Methods:** It was conducted in January and February 2015, in the city of Piripituba, state of Paraíba, Rondon operation "Porta do Sol" project, linked to Brazil's Ministry of Defence. The methods employed with the 119 local teachers of kindergarten, elementary, youth and adult education (EJA) and health professionals was through the use of visual aids such as banners, brochures, lectures and guides from the Ministry of Health and Education. **Results:** In the course of the lectures and meetings, it was realized the need for health activities in schools, and from this finding we could stimulate greater interest from educators and professional Dentists to seek a viable and more effective alternative to inclusion of such activities. **Conclusions:** As a result, we can see that health education as a mean of health promotion in the school environment is done by building partnerships between health and education professionals, highlighting the long-term social change potential entering this theme in the reality of students, who will be the future trainers and processors of that local reality.

020 Oral health of the elderly treated in the Family Health Strategy: reports and perceptions on tooth loss

SILVA, M.A.S.*; LAURIS, J.R.P.; TOMITA, N.E.

Background: This study focuses on the oral health conditions of the elderly since, with aging, some changes occur in the mouth and other changes happen due to cultural, care, economic and social factors, such as tooth loss. **Aim:** To obtain self-perceptual information on the oral health conditions of older people living in the City of Bauru, São Paulo State, treated in the Family Health Strategy. **Methods:** This cross-sectional study consisted of interviews made with subjects aged 60 or over, of both genders, living in a neighborhood known as Bairro Santa Edwignes, north of Bauru, an area under the responsibility of a Family Health Center (2012). We collected information on the self-perception of the general condition of the teeth, presence of teeth, use of dental prosthesis and interference in mastication. The instrument used was the structured questionnaire Brazil Old Age Schedule (BOAS). The descriptive statistical analysis shows the relative and absolute frequencies. **Results:** We interviewed 122 old people, 41 male and 81 female, aged 60 to 89 years old. The self-referred oral conditions were: 58.2% had a negative perception on their teeth general condition 96.7% reported tooth absence 76.2% claimed to use some type of dental prosthesis and 59% believe that tooth absence does not interfere in mastication. **Conclusions:** Having a significant percentage of self-referred edentulism, this social stratum understands the precariousness of their objective condition of oral health, marked by tooth loss. However, the fact that tooth loss is considered natural in aging produces speeches that denote a functional adaptation to the absence of teeth, which is a reflection of the scarcity of information and access to treatment that marks the groups located in the periphery of society (geographic, social and cultural).

021 Techniques of sealant application: Clinical guideline on case report

MOREIRA, K.M.S.*; CARDOSO, A.A.; IWAMOTO, A.S.; PASCON, F.M.; KANTOVITZ, K.R.; RONTANI, R.M.P.

Dental sealants are used as additional prevention of dental caries on occlusal surfaces, since they act as protective barrier. The objective of this study was to present a clinical report focused on the different sealant techniques of resin and ionomer sealant and their main indications, in order to facilitate dental clinical practice. M.E.M.O. aged of 6y and 8mo., female gender, with presence of active white spot lesions on the erupted first permanent molars, high biofilm index (80%), frequent cariogenic ingestion and previous history of caries on primary teeth. Bitewing radiographs were performed from the focused teeth, oral hygiene instruction and guidance of the diet, emphasizing the importance of the patient and family core compliance. The conventional encapsulated ionomer sealant was applied on the tooth 16, resin sealant with intermediary adhesive layer on the 46 and resin sealant on the tooth 36. The tooth 26 was not present in the oral cavity, yet. The type of sealant was indicated according to the dental eruption stage and clinical techniques followed the specifications of each sealer material. Due to greater difficulty of humidity control in the partially erupted teeth (16 and 46), two step by step of different types of sealants were described. Application of sealant requires appropriate indication and technique to contribute in the reducing the failure of dental treatment.

022 Psychometric properties of an instrument to assess infection control practices in oral radiology

COSTA, E.D.*; PINELLI, C.; TAGLIAFERRO, E.P.S.; CORRENTE, J.E.; AMBROSANO, G.M.B.

Background: Infection control is an important issue in Dentistry because of concern of transmissible diseases in health care settings. In the intraoral radiographic procedures the contact with saliva and/or blood is common and deserves more attention. **Aim:** To develop an instrument to assess infection control practices in intraoral examinations in Oral Radiology. **Methods:** A questionnaire with 17 multiple-choice questions divided into three domains, related to hands hygiene frequently, type of radiographic equipment used, protection/disinfection of surfaces of the X-ray equipment and accessories and disinfectant type used for cleaning/disinfecting. The psychometric properties were evaluated by means of reliability (participation of 115 dental students) and validity (participation of 641 dental students, 20 PhD students in Oral Radiology, 15 teachers of Oral Radiography and 3 Radiology technicians). **Results:** The reliability by test-retest indicated adequate reproducibility values ($0.722 \leq ICC \leq 1.000$ and $0.662 \leq \kappa \leq 0.913$) and excellent internal consistency (Cronbach's alpha 0.88). The validity verified by the content validity and the factor analysis resulted in a reduction of some items of the questionnaire and reunification of the issues in new domains. Significant differences were observed when answers were evaluated among the academic group, PhD students and teachers. **Conclusions:** The developed instrument was considered reliable for evaluating infection control practices in Oral Radiology in health settings.

023 Use of fluoridated toothpaste by pre-school children

SILVA, M.A.F.*; COELHO, C.S.S.; CARVALHO, N.S.R.; BRITO, M.H.S.F.; ALBUQUERQUE, H.C.L.; MOURA, L.F.A.D.; LIMA, M.D.M.; MOURA, M.S.

Background: Based on scientific evidence, the Brazilian and American Academies of Pediatric Dentistry and Pediatrics recommend the use of fluoridated toothpastes for controlling dental caries after the eruption of the first tooth. **Aim:** This study aimed to evaluate the use of fluoride dentifrice by preschool children. **Methods:** A total of 308 children, 02-05 years of age who attended public and private day care centers in Teresina, Piauí were evaluated. Parents answered a questionnaire on socio-demographic and oral hygiene habits. **Results:** 62.7% of children were from private centers and 71.1% of mothers had above 11 years of schooling. When asked about the first toothpaste used by their children (around the first year of life) 64% reported that their child used toothpaste without fluoride, 59.7% of which had been the parents' decision to use, 24.0% had been recommended by dentists and 11.3% by the pediatricians. Regarding the type of toothpaste used at the time of this study, 37.3% used toothpaste for children without fluoride, 46.1% use fluoride toothpaste for children, and 16.6% use toothpaste for adults. In 41.8% of the cases, the parents reported that the children swallow toothpaste while brushing. When asked what could cause this swallowing, 75.6% of parents said they did not know. When asked about the attitude taken to prevent the ingestion of toothpaste 43.8% reported not taking any action. **Conclusions:** A significant percentage of pre-school children use toothpaste without fluoride and are therefore more susceptible to the development of dental caries.

024 Susceptibility of Streptococcus mutans to the phytochemical citronellol

BEZERRA, L.M.D.*; SOUSA, F.O.G.S.A.; CURY, A.A.D.B.

Background: Substances derived from plants may represent a promising strategy in preventive dentistry due their antimicrobial potencial. The citronellol is a monoterpene found in the essential oils of citronella-grass (*Cymbopogon winterianus jowitt*), lemongrass (*Cymbopogon citratus*) and bushy matgrass (*Lippia alba*), whose antibacterial, antifungal and anticonvulsant activity, have been described in the literature. **Aim:** evaluate in vitro antibacterial activity of citronellol against *Streptococcus mutans*. **Methods:** it was determined the Minimum Inhibitory Concentration (MIC) by microdilution technique and Minimum Bactericidal Concentration (MBC) through the subculture of MICs. The chlorhexidine digluconate was used as positive control and the assays were performed in triplicate. The reading for MIC determination was performed through the visual method after 18 hs, the TCT 0.5% dye (2, 3, 5 triphenyl tetrazolium chloride) was inserted in all wells to confirm the presence of viable microorganisms in non-inhibitory concentrations, once such dye reflects the action of dehydrogenase enzymes, involved in the process of cellular breathing. **Results:** The Citronellol showed MIC of 234,375 µg/mL against *S. mutans*, the chlorhexidine digluconate, in turn, had MIC of 2,34 µg/mL. For MBC it was obtained the values of 7500 µg/mL and 4,68 µg/mL for citronellol and chlorhexidine digluconate respectively. **Conclusions:** the microorganism was susceptible to citronellol. Besides that, its primarily bacteriostatic activity could be very important in the maintenance of biofilm's equilibrium, once the microorganism will be inhibited but not extinct, what could lead to the growth of other microorganisms that could be even more pathogenic.

025 Quality of water fluoridation comparing ordinance 635/BSB/1975 and Cecol/USP recommendation

BERGAMO, E.T.P.*; BARBANA, M.; TERADA, R.S.S.; CURY, A.A.D.B.; CURY, J.A.; FUJIMAKI, M.

Background: An adequate concentration of F in drinking water is necessary for the effect of fluoridation to reach its maximum anticaries benefit with a minimum risk of fluorosis. **Aim:** Thus, this study evaluated the concentration of fluoride (F) in water of Maringá, PR, Brazil, considering a new classification for F concentration based on the anticaries benefit and risk of fluorosis (CECOL/USP) compared to the current classification (635/BSB/1975). **Methods:** Water samples (n325) were collected monthly during one year from 28 distribution water network, 20 from the treatment plant and 8 from artesian wells. F concentration was determined using specific ion electrode. **Results:** The average F concentration was 0.77 mg F/L (ppm F), ranging from 0.44 to 1.22 mg F/L. Considering all water samples analyzed, while 68.7% were within the beneficial range by the ordinance 635/BSB/1975, 97.5% of them were classified by CECOL/USP recommendation as adequate in terms of caries control and fluorosis risks. However, this difference of almost 29% was lower (27.4%) when only the water from artesian wells was compared. **Conclusions:** Although the classification of the quality of water fluoridation by Cecol/USP is more conservative than the current ordinance, it is more appropriate because it takes into account that both caries and fluorosis are chronic disease and the time of duration of the dose is more relevant that occasional variation below or above the optimal range.

027 Dental Hygienists acting in the prevention of dental caries: a literature review

UCHIDA, T.H.*; TERADA, R.S.S.; PASCOTTO, R.C.; FUJIMAKI, M.

Dental Hygienists (DH) are important members of the oral health team, which are inserted in the Family Health Strategy and is one of the tasks significantly contribute to the development of educational activities, working in health promotion and in the control of oral diseases, particularly dental caries. The aim of this study was to review the literature regarding the role of the DH in the oral health team forward to preventive practices for the control of dental caries. The databases were consulted, Pubmed, Web of Science, Lilacs, Virtual Health Library and Brazilian Dental Library. There were 18 articles making an approach to the knowledge, practices and opinions of DHs about preventing tooth decay and its early detection. Most research found pointed to the importance of the DH work with actions aimed at prevention and health promotion. A study in Norway showed that DHs of work in oral health education, providing information on diet, hygiene and fluoride, resulted in 70% of children under 5 years and 66% of young people under 12 with no decayed tooth, and most of these children were only met by DHs. In USA, 14% of 6,723 DHs understand that their main role is to prevent and not in clinical work. International studies have valued the presence of DH within the team, principally in children, showing that the number of DHs and the proportion of children receiving preventive care by a DH are increasing. The DH plays an important role in the development of actions aimed at disease prevention and health promotion can significantly contribute to the reduction of dental caries.

029 Pathogenic microorganisms in the oral cavity and oropharynx of neurological disorders and enteral nutrition patients.

CUNHA-CORREIA, A.S.*; CORREIA, T.M.; PEREIRA, M.F.; RANIERI, R.V.; AGUIAR, S.M.H.C.A.; SCHWEITZER, C.M.; GAETTTI-JARDIM JR, E.

Background: Enteral nutrition involves accumulation of dental calculus, and respiratory complications associated with contaminants of the oral biofilm or oropharynx. **Aim:** Evaluate, by culture and polymerase chain reaction (PCR), the presence of periodontopathogens and opportunistic pathogens in patients with neurological disorders and enteral nutrition and also propose a biofilm control protocol. **Methods:** The evaluated patients were divided into two groups: (GTG, n 11) Gastrostomy Group, with neurological disorders and enteral nutrition patients and (CG, n13) Control Group, with neurological disorders and oral feeding patients. Oral clinical indices like gingival bleeding (GBI), and simplified oral hygiene index (OHI-S) were collected. A prevention protocol of monthly dental appointments, daily tooth brushing, daily use of dental-floss, and daily oral cleaning with gauze embedded in chlorhexidine digluconate solution (0.12%) added with xylitol (5%), was established. Saliva, mucous and oropharyngeal secretion, subgingival and supragingival biofilm specimens was carried out before and 12 months after introduction of the preventive protocol. The chi-square test, Mann-Whitney's test, Pearson's correlation tests, Spearman's test and Kendall's test were used. **Results:** The occurrence of yeasts (89%, p<0.05), E. corrodens (53.6%, p<0.01) and members of the Mollicutes class (63.6%, p<0.01) was higher among GTG patients while the Enterobacteriaceae family did not differ between groups. Clinically, the GTG presented an average 61% reduction of OHI-S and elimination of gingival bleeding. **Conclusions:** Patients with neurological disorders and enteral nutrition present alteration in their resident microbiota. A preventive protocol improved oral health, aiding in the prevention of septic events in these patients.

026 Evaluation of bleached enamel exposed to different mouthwashes

VIEIRA-JUNIOR, W.F.*; FERRAZ, L.N.; AMBROSANO, G.M.B.; AGUIAR, F.H.B.; LOVADINO, J.R.; LIMA, D.A.N.L.

Background: The effect of mouthwashes exposure after in office dental bleaching is unexplored and unknown. **Aim:** To evaluate, in vitro, the effect of mouthwashes exposure on chromatic and morphological properties of bleached enamel. **Methods:** Sixty bovine enamel blocks were bleached with 35% hydrogen peroxide and randomly divided into six groups in accordance with mouthwash exposure (n10): G1) Periogard Colgate®, G2) Plax Classic Colgate®, G3) Plax Whitening Colgate®, G4) Luminous White Colgate®, G5) Listerine® Tartar Control e G6) distilled water (control). After bleaching, the specimens were immersed in mouthwash twice daily for 14 days (manufacturer's instructions). The specimens were stored in artificial saliva during the experiment. Enamel roughness (Ra) and color analysis (ΔE formula, L, a and b) were performed in the frames: before treatment (T0), after 24 hours of bleaching (T1) and after 14 days of mouthwash exposure (T2). Color was assessed by reflectance spectrophotometry and quantification were done using CIELab coordinate system. Scanning electron microscopy (SEM) analysis was used to evaluate enamel morphology. Statistical analysis: Ra- ANOVA (Proc Mixed), color - L, a, b- Friedman, Kruskal-Wallis, Dunn and ΔE - ANOVA and Tukey-Kramer (p <0.05). **Results:** Ra, G3 and G5 did not recover the initial Ra compared to control. G5 showed increasing in roughness (T1xT2). Color analysis, G2 presented values of a (a+redness) statistically different between times (T1xT2) and ΔE value was clinically perceptible ($\Delta E3.33$). SEM, G3 and G5 showed enamel demineralization with mineral loss and porosity. **Conclusions:** Listerine® Tartar Control increased roughness and Colgate® Plax Classic changed the color of bleached enamel.

028 Evaluation of physical properties of a nanocomposite after aging, bleaching, and staining

GOUEIA, T.H.N.*; PÚBLIO, J.C.; AMBROSANO, G.M.B.; PAULILLO, L.A.M.S.; AGUIAR, F.H.B.; LIMA, D.A.N.L.

Aim: The objective of the in vitro study was to assess the effect accelerated artificial aging, bleaching agents and coffee staining on the color, gloss, roughness and microhardness of a nanocomposite. **Methods:** One hundred twenty samples (7 mm x 2 mm) were prepared and randomly divided into 2 groups (n 60) depending on the aging. Each group was further subdivided into 6 subgroups (n 10) according to the bleaching and staining as follows: 10% carbamide peroxide (10% CP), 10% CP + staining, 35% hydrogen peroxide (35% HP), 35% HP + staining, without bleaching treatment (WB) and WB + staining. Scanning electron microscopy was performed for qualitative analysis of the resin surface. Data were submitted to three-way analysis of variance (ANOVA) and Tukey's test for multiple comparisons. As for ΔE , multiple comparisons were performed by using Tukey's and Dunnett's tests (α 0.05). **Results:** The bleaching reduced significantly the microhardness of the nanocomposite in without aging groups. All physical properties were found to be negatively changed after the aging process, with bleaching treatment with 10% CP increasing significantly the roughness and loss of gloss compared to the 35% HP. Staining reduced microhardness of both with and without aging nanocomposite as well as the color of the former ($\Delta E > 25$), a significantly different result compared to controls. **Conclusions:** The bleaching reduced the microhardness of the nanocomposite, whereas the aging process changed all the properties studied. The bleaching favored extrinsic staining of the with aging nanocomposite.

030 Doctors and nurses' knowledge, attitudes and practices in oral health in childcare, in primary health care

FAUSTINO-SILVA, D.D.*; REIS, M.L.; LUVISON, I.R.

Background: The care of the oral health of the future baby should begin during the prenatal period, at which time the pregnant woman is more open to receive information concerning the child's health. Care actions in the first year of life should be conducted in a multidisciplinary way, avoiding the creation of specific oral health programs isolated but integrated with the health team. **Aim:** investigate the knowledge, attitudes and practices in oral health in childcare doctors and nurses, contractors and residents of the Community Health Service Hospital Concept Group (SSC-GHC), located in the city of Porto Alegre, Rio Grande do Sul, Brazil. **Methods:** application of a questionnaire with 32 multiple-choice questions, developed by the researchers to assess the knowledge, attitudes and practices (CAP) in oral health in childcare doctors and nurses, contractors and residents, in eleven of the twelve health units of the SSC-GHC. The sample was composed of 47 doctors and 27 nurses. Data were tabulated and analyzed using the SPSS software using the chi-square test and t test, with statistical significance level of p <0.05. **Results:** the results show that there is little significant difference between the knowledge, practices and attitudes of doctors and nurses of the SSC-GHC, including in relation to the time of training / professional practice. **Conclusions:** there is still lack of many in a few points on oral health in childcare, requiring permanent educations on the topic.

031 Dental caries, enamel defects and erosion in asthmatic children in primary health care

FAUSTINO-SILVA, D.D.*; REZENDE, G.; DOS SANTOS, N.M.L.; BALBINOT HILGERT, J.; HUGO, F.N.

Background: Asthma is a chronic inflammatory disease of high prevalence in children and possible oral effects in children and adolescents. **Aim:** to assess the relationship between asthma disease and the occurrence of dental caries, enamel defects and dental erosion. **Methods:** cross-sectional study with a sample of 228 children between 6 and 12 years, divided into a group of asthmatic (n 112) and other non-asthmatic (n 116), in two Basic Health Units, located in the city of Porto Alegre, Rio Grande do Sul, Brazil. The evaluation consisted of oral examination conducted by two trained dentists and calibrated (κ 0.69 to 1.00), structured interviews with parents and data records. Data were analyzed with SPSS, using the Poisson Regression, the statistical significance level of $p < 0.05$. **Results:** most of the children had intermittent asthma and none with severe persistent asthma. Regarding the medication used, most used salbutamol, alone or with other medications. Oral habits and hygiene frequency were evaluated, and most children performs oral hygiene with toothbrush and fluoride toothpaste. Among asthmatic statistically significant differences relate to the number of medications used with caries experience, children who use a greater number of medications have a lower prevalence of dental caries ($p = 0.01$). Considering the enamel defects, children with moderate persistent asthma and uses a greater number of drugs have a higher prevalence of enamel defects, but no statistical significance. About dental erosion when compared with the number of medications, there was no statistically significant association. Regarding maternal education, there was a statistically significant difference between the higher the prevalence of caries to a lower level of education. **Conclusions:** The oral health of asthmatic children, especially the most serious cases, deserves special attention, both by dentists, for the entire health team to identify, limit and reduce the damage caused by these alterations.

032 Motivational interviewing and oral health: Lessons learned from a cross-sectional study of dentists and oral health tech

FAUSTINO-SILVA, D.D.*; HILGERT, J.B.; HUGO, F.N.; MEYER, E.

Background: Motivational Interviewing (MI) is an alternative approach to discussing behavior change that encourages a constructive relationship between health care professionals and patients and provides an opportunity for better treatment results. Although MI has proved effective in the last two decades, most Brazilian health professionals are not familiar with the approach, including Dentists and Oral Health Technicians (OHTs). The main components of MI could be applied when professionals advise and instruct their patients on oral health. **Aim:** assess the prevalence of motivational statements by Dentists and OHTs prior to training, within a Primary Health Care (PHC) setting. **Methods:** the study was conducted at the Community Health Service of the Grupo Hospitalar Conceição in Porto Alegre (Rio Grande do Sul state - RS), with a total of 59 Dentists and OHTs who participated in an 8-hour training session for active learning of basic MI principles. This is a cross-sectional study aimed at assessing the prevalence of motivational statements in written answers to pre-established clinical situations as well as the ability to identify basic MI skills, such as asking open-ended questions, capacity for reflective listening, providing affirmations and summary statements in a dialogue interview. **Results:** For the "Open-ended Questions" item, 76% of the sample was able to identify these however, as expected, 65% of participants did not recognize Affirmations, 58% did not detect Summary Statements and could not identify Reflective Listening. Half of the sample did not notice when the patient's statements might signal resistance to behavior change. Finally, the exercises demonstrated that half of the professionals assessed use advice/persuasion or direct confrontation, which are likely to increase resistance and should be avoided. **Conclusions:** training is needed to ensure that oral health teams in PHC provide care within the spirit of MI.

033 Oral impact on daily performance among brazilian adolescents

KAIEDA, A.K.*; BULGARELI, J.V.; VAZQUEZ, F.L.; MARQUES, T.C.N.; PEREIRA, A.C.; AMBROSANO, G.M.B.; CORTELLAZZI, K.L.

Background: The Oral Impact on Daily Performance (OIDP) is the instrument used to measured oral problems perceptions through the frequency and severity. **Aim:** This study investigated the relationship between the Oral Impact on Daily Performance and individual and contextual factors among Brazilian adolescents. **Methods:** An analytical cross-sectional study was conducted in Piracicaba, in 2012, with 877 adolescents aged 13-19 years-old, from 21 state schools and 34 Family Health Units. The dependent variable was OIDP. The independent variables were classified as individual (components of the DAÍ - Dental Aesthetic Index, sex and age) and contextual (Social Exclusion Index) variable. The multilevel regression model was estimated by the PROC GLIMMIX ("Generalized Linear Models-Mixed") procedure, considering the individuals' variables as being Level 1 and the contextual variables as being Level 2, and the statistical significance was evaluated at level of significance of 5%. **Results:** The mean age was 15.31 (standard deviation 1.09) and 46.86% of the sample was male. Male were found to have higher impact of OIDP ($p < 0.0001$). There was no increase in OIDP with an increase of lost teeth in the upper arch (0.0477) and maxillary overjet in millimeters ($p = 0.0171$). The social Exclusion Index was not significant in the model ($p = 0.0913$). **Conclusions:** Individual variables were related to the OIDP in underprivileged Brazilian adolescents.

034 Motivational interviewing and oral health: Importance attributed by primary health care dental professionals

FAUSTINO-SILVA, D.D.*; HILGERT, J.B.; HUGO, F.N.; MEYER, E.

Background: Motivational Interviewing (MI) is a simple evidence-based approach that is highly effective in addressing behavior change among patients in health care settings, including the field of oral health within Primary Health Care. The approach is consistent with contemporary theories on behavior change. It is a client-centered communication style that encourages and strengthens patients' intrinsic motivation to achieve positive change. **Aim:** evaluate the importance and confidence of professional oral health teams in terms of MI. **Methods:** cross-sectional analytical study conducted at the Community Health Service of the Grupo Hospitalar Conceição in Porto Alegre, Rio Grande do Sul state (RS), within a Primary Health Care setting. A total of 59 Dentists and Oral Health Technicians (OHTs) participated in an 8-hour training session for active learning of basic MI principles. Training was didactic in nature and consisted of theoretical elements and practical activities, such as debates and role-playing. Pre- and post-test results were assessed using objective measures entitled the Importance and Confidence Scale. This visual analog scale asks respondents to indicate how important it is to learn about MI and how confident they would feel about applying it in clinical practice on a scale of 0 to 10, where 0 corresponds to "not important" and 10 "very important". **Results:** According to the Importance Scale, before training 25% of the sample attributed an importance level of 10 to MI, rising to 50% after training. On the Confidence Scale level 8 was selected by 20% of participants prior to training, increasing to 32% once training was complete. Participants exhibited a significant positive increase ($p < 0.005$) in measures related to Importance and Confidence. Analysis of post-training measurements on the confidence scale suggests that some participants their ability to apply MI, while others overestimated it. **Conclusions:** training professionals from PHC oral health teams has the potential to increase the importance they attribute to addressing behavior changes in their patients and their confidence in applying these techniques, within the spirit of MI.

035 Epidemiological profile of caries in children 12 years of age in São Borja-RS

PAZ, A.H.*; PAZ, D.S.; BRIZON, V.S.C.; PEREIRA, A.C.; MENEZES, M.C.

Background: prevalence of caries in schoolchildren of 12 years old in São Borja-RS. **Aim:** Evaluate the DMFT index of school 12 years of age in São Borja-RS, to determine the prevalence of caries in these children between 2008 and 2014 and also evaluate access of this population to the treatment of disease. **Methods:** This cross-sectional study was conducted on a regular basis every two. Data collection was implemented by dentists of the Health Department in all public schools in the city. DMFT were collected from all students 12 years of age who were enrolled in schools. **Results:** Participants were 2290 students from 12 years of age, 53.23% were females. In this study, it was found that the prevalence of dental caries among adolescents was 43.27% in permanent teeth. The decay rate decreased over time, as the DMFT in 2008 spent 0.9 to 0.7 in 2014. The number of filled teeth exceeded that of decayed in 2014, reducing the number of extracted teeth, showing therefore greater access to treatment of the disease. **Conclusions:** It is essential that cross-sectional studies are conducted sequenced way, because it is through them that allow carrying out the services offered and planning future health programs appropriate for the community.

036 Molar Incisor Hypomineralization (MIH): a case report.

TOMO, S.*; CORREIA, T.M.; FORTUNATO, J.B.; SAKASHITA, M.S.; BOER, N. P.; CUNHA-CORREIA, A.S.

Molar incisor hypomineralization (MIH) describes a clinical statement of dental hypomineralization of systemic origin, which affects one or more first permanent molars (FPMs) frequently associated to permanent incisors (PIs) affected. Etiological associations with systemic conditions or environmental insults during the child's first three years of life have been implicated. This report a ten years old female patient complaining of tooth sensitivity, difficulty eating, speaking, facial muscle pain, and dental caries in posterior teeth. Case-report: the clinical and radiographic examination, was observed a discrepancy between the bony bases with apparent mandibular protrusion and dental hypoplastic stains in permanent incisors, as well as extensive injuries in the enamel of the first permanent molars, exposing the dentin. Treatment plan was performed treatment with fluoride using varnish, shallow restorations with glass ionomer cement photopolymerized for the adequacy of oral environment. It is evident that molar incisor hypomineralization has important variations in their clinical characteristics such as color, texture and depth of the lesions, which indicate the degree of severity of the change and determine the appropriate choice of treatment.

037 Association between indicators of vulnerability and oral health status of adolescents

LUCCHETTE, A.C.T.*; VAZQUEZ, F.L.; TAGLIETTA, M.F.A.; GUERRA, L.M.; PEREIRA, A.C.; BULGARELI, J.V.; CORTELLAZZI, K.L.

Background: The worsening of social vulnerability influences in the health-disease, including diseases of the oral cavity. **Aim:** To evaluate the association between social vulnerability and Family Grant Program with oral diseases and socioeconomic factors in adolescents of Piracicaba-SP. **Methods:** 1179 individuals aged 15-19 years of age from 34 Family Health Units and 21 state schools. Clinical examinations were performed under artificial light, using periodontal probe and dental mirror. Data were collected from clinical variables (caries, periodontal disease, fluorosis and caries risk) and socioeconomic (family income, number of people in family, housing, education of father and mother, São Paulo State Social Vulnerability Index - IDLH and Family Grant Program - GMP. To verify the association between the dependent variables (IDLH and GMP) with the independent variables (clinical and socioeconomic) was used bivariate analysis by Chi-square significance level of 5%. **Results:** It was found that 60.9% of individuals who had not lost tooth, 67.4% of those parents had high school and college, and 58.3% with caries risk A, B, C and D were in the group with low vulnerability. Teenagers lack of decayed teeth (81.1%), missing component (79.4%), DMFT (83.1%) and IPC (81.1%), with caries risk A, B, C and D (81.3%), higher income (85.6%), fewer people in the home (86.2%), higher educational level of the father (89.9%) and mothers (88.2%) belonged to the group that did not receive the benefit Family Grant. **Conclusions:** It was concluded that oral health policies with socially oriented promotion and recovery should be focused primarily adolescents with low socioeconomic status.

038 Access flow study through health care center of beds macro-regional regulation in the north of parana state

BADO, F.M.R.*; LUCCHETTE, A.C.T.; BUGES, A.F.C.; MENEGHIM, M.C.; GUERRA, L.M.; PEREIRA, A.C.

Background: The Unified Health System provide universal access, effective care and quality in health care services of the Brazilian population. Mechanisms such as public health regulation are operated, which controls the balance between the supply of services and the demand of users with the purpose of correcting market failures and promoting social welfare. **Aim:** The present study identified the obstructions to access through a quantitative and qualitative analysis in hospital assistance of medium and high complexity by investigating macro-regional Macro Norte's hospital beds center, and was conducted in two stages. **Methods:** In the quantitative, data registry of hospital beds with soliciting municipality, performing municipality and executing region, used accommodations and performed access, were collected. By analyzing the quantitative data, the second stage of the qualitative was carried out, which consisted of interviews with municipal and state supervisors. **Results:** In the first part, it was verified that 11% of the registered cases had not been regulated, and that, for 36% of them, the access was not provided by routine mechanisms. It was confirmed that performance and bed accommodation were different in each health regulation's region. In the qualitative stage of the research, failures were pointed out, such as deficient attendance infrastructure, frailty in contracts between providers and with , vulnerability of health assistance networks, the role of regulation in promoting access and interference in regulatory actions. **Conclusions:** Macro North has been serving the purposes user access at emergency times, even though it does not maximum performance by organizational and structural problems.

039 Individual and contextual variables related to periodontal disease: multilevel analysis in underprivileged teenagers

OLIVEIRA, M.C.*; VAZQUEZ, F.L.; CORTELLAZZI, K.L.; GUERRA, L.M.; ZANIN, L.; MARQUES, A.C.; AMBROSANO, G.M.B.; PEREIRA, A.C.

Background: Adolescents are a group with particular characteristics, as they are subject to a range of psychosocial changes and exposure to situations of risk. **Aim:** to investigate the individual and contextual risk indicators of periodontal disease in underprivileged adolescents, and the disparity in distribution of the disease. **Methods:** Cross-sectional analytical study, conducted in the city of Piracicaba, SP, Brazil, in 2012. The probabilistic sample was composed of 1,130 adolescents from 15-19 years of age, randomly selected from 21 state schools and 34 Primary Health Units - Family Health (PHU-FH). The dependent variable studied was presence of periodontal disease (CPI). The independent variables were classified into individual and contextual. The multilevel regression model was estimated by the PROC GLIMMIX (Generalized Linear Models-Mixed) procedure, considering the individuals' variables as Level 2 and the contextual variables of the suburbs as Level 3. **Results:** As regards the individual variables, the adolescents who never had toothache, and with a lower impact on oral health, and resided in homes with higher percentage of domestic sewage percentage had less periodontal disease. **Conclusions:** individual and contextual variables were associated with the presence of periodontal disease in underprivileged adolescents, indicating that they must be taken into consideration in the formulation of policies directed towards oral health promotion and prevention activities in this group.

040 Interdisciplinary in esthetic and functional rehabilitation of patients with early loss of deciduous teeth

GIOVANI, P.A.*; RODRIGUES, L.P.; MONTES, A.B.M.; KANTOVITZ, K.R.; MAGNANI, M.B.B.A.; GAVIÃO, M.B.D.

The early loss of deciduous teeth can be responsible for malocclusion. The case report discusses a multi-disciplinary approach to oral functional and esthetic rehabilitation on two high-caries-risk children due to endodontic complications associated with wide-spread dental caries. Both 8-years-old patients were referred to the Piracicaba Dental School whose main complaint was pain. After intra-oral examination, the first patient was diagnosed with failure of previous endodontic treatment of mandibular left second primary molar with association of bone lyse involving the first premolar germ. In addition, there was an agenesis of mandibular left second premolar. The second patient presented extensive caries lesions of mandibular left first and second primary molar and mandibular right second primary molar, bone lysis, crypt rupture and periodontal infection affecting the germ of a mandibular left first premolar. In both cases, the tooth extractions were indicated following by esthetic and functional appliance to preserve the arch space and avoid early eruption of the successors, which were in the early stages of root formation. After 10-month follow-up, during clinical and radiographic evaluations could notice that the patients did not show phoniatric alterations and mesial movement of first permanent molar, preventing dental arch length. However, accelerated eruption of permanent teeth could be observed. Also, parents reported patients' esthetic satisfaction. It can be concluded that the integrated treatment between Pediatric Dentistry and Orthodontics could avoid malocclusion and improve evidentially the patient's facial esthetics, allowing better patients' quality of life.

041 Non syndromic oligodontia: a case report

TOMO, S.*; SIMONATO, L.E.

Oligodontia is the term used to describe a rare and severe degree of dental agenesis, characterized by the congenital absence of more than six dental elements excluding the third molars, which are the most frequently missing teeth in cases of dental agenesis. The prevalence rates of this condition varies around 0.3% and the most frequently missing teeth are the maxillary lateral incisors and the mandibular second pre-molars. This condition may be associated to a syndrome or occur as a non-syndromic form, in familial traits or sporadic in nature cases. It has been shown that the congenital absence of dental elements are given to defects in specific genes, mainly the PAX9 and MSX1 genes, which plays key roles on the teeth development. Several authors stand up for the hypothesis of the human dental reduction of size and number given to evolutionary factors, specifically, changes in dietary patterns. This report presents a case of a 20 years old male patient diagnosed with oligodontia due to the congenital absence of 11 dental elements, there were no systemic alterations or hereditary data associated. The preventive orthodontic intervention, performed in early age, allowed the patient to develop without any occlusion or phonetic alteration.

042 Treating multicystic ameloblastoma in anterior mandible by partial mandibulectomy: a case report

LIMA, K.F.A.*; SILVA, D.S.; TOMO, S.; LÚCIA, M.B.I.; SIMONATO, L.E.

Multicystic ameloblastoma is the most common of all odontogenic tumors originating from odontogenic epithelium, and despite it is considered a benign tumor in nature, it shows a wide aggressive behavior, growing through the trabeculae of the spongy bone. According to some authors the diagnosis may be performed by imaginologic exams, nevertheless, others affirm that the golden standard for diagnosing this pathology is the biopsy. The treatment choose for the multicystic ameloblastoma is also controversial, however, it is know that the best treatment is the surgical resection with a margin of 1,5cm of healthy bone. This case report aims to present a rare case of a multicystic ameloblastoma occurring in the anterior mandible of a 55 years old female patient, which the hypothetical diagnosis was based on the history of the lesion associated to imaginologic tests. The chosen treatment for the tumor was the partial mandibulectomy, aiming to avoid recurrence, once the literature points high recurrence rates in ameloblastic tumors conservatively treated. The microscopic evaluation of the tumor confirmed the diagnosis of multicystic ameloblastoma.

043 Validity and reliability of the quality of masticatory function questionnaire applied in Brazilian adolescents

MAMANI, M.H.*; CASTELO, P.M.; BARBOSA, T.S.

Background: proper chewing and swallowing functions have great importance in general health, since it potentially affects food's digestion and the subject's nutritional status. **Aim:** The aim was to assess the validity and reliability of the self-applied Quality of Masticatory Function Questionnaire (QMFQ) in a convenience (non-referred) sample of Brazilian adolescents divided into three groups: control (n57), dental caries (n51) and malocclusion (n54). **Methods:** caries experience and malocclusion were evaluated using DMF-S index (number of decayed, missing and filled primary and permanent surfaces) and Index of Orthodontic Treatment Need, respectively. QMFQ comprises 26 items regarding frequency and intensity of chewing problems with five domains: Food-Mastication, Habits, Meat, Fruits and Vegetables. Data were submitted to descriptive statistics, Kolmogorov-Smirnov and Chi-square tests. Psychometric evaluation included measures of reliability (internal consistency - Cronbach's alpha and matrix of correlation) and discriminant validity (Kruskal-Wallis/Dunn post-test). **Results:** the instrument showed satisfactory internal consistency, with significant positive correlations between the domains scores except between Habits and Vegetables. Total scale Cronbach's alpha coefficient was 0.87 and the coefficient did not increase significantly with the removal of each domain. Significant differences were found between controls and caries group in Food-Mastication, Meat and Fruits scores. Caries group also showed higher median values in Food-Mastication and Fruits than the malocclusion group. **Conclusions:** the Quality of Masticatory Function Questionnaire showed acceptable properties in terms of internal consistency, reliability, and discriminant validity in evaluating the impact of caries experience on the quality of masticatory function perception of Brazilian adolescents.

045 The impact of oral health on quality of life of addicted persons

MARQUES, T.C.N.*; SARRACINI, K.L.M.; CORTELLAZZI, K.L.; MIALHE, F.L.; MENEHIM, M.C.; PEREIRA, A.C.; AMBROSANO, G.M.B.

Background: The use of illicit and licit substances has increased worldwide with important health and social consequences, with human lives and productive years of people being lost. **Aim:** The aim of this cross-sectional study was to evaluate the impact of oral health conditions, socioeconomic status and use of specific substances on quality of life of alcohol and drug addicted persons, receiving care at outpatient treatment facilities in Brazil. **Methods:** A random sample of 262 participants, mean age 37 years, from Psychosocial Care Centers for Alcohol and Drugs (CAPS AD) located in three cities in the state of São Paulo, Brazil, were clinically examined for caries experience (DMFT index) by a calibrated examiner. They were asked to complete a series of questionnaires, including the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST), socioeconomic characteristics, and the World Health Organization Quality of Life assessment (WHOQOL), which were considered the outcome variables of the study. Associations between oral health status, socioeconomic characteristics, substance involvement with WHOQOL were investigated by means of the chi-square test and multiple logistic regression analysis with a level of significance $\alpha < 0.05$. **Results:** The mean DMF index of the group was 13.0. Subjects with DMFT > 14 (OR 2.25 CI 95% 1.30-3.89) low-income (OR 2.41 CI 95% 1.15-3.59 1.22-4.77) and users of cocaine / crack (OR 2.02 CI 95% 1.15-3.59) were more likely to have poor general quality of life. **Conclusions:** This study demonstrated that the general quality of life of addicted persons was associated with caries experience, low income and cocaine/crack use.

047 Characterization of novel Spx-regulated genes in Streptococcus mutans

GALVÃO, L.C.C.*; KAJFASZ, J.K.; MILLER, J.J.H.; SCOTT-ANNE, K.; FREIRES, I.A.; FRANCO, G.C.N.; ABRANCHES, J.; ROSALEN, P.L.; A. LEMO, J.A.

Background: Two of the major environmental challenges encountered by Streptococcus mutans in oral biofilms are acid and oxidative stresses. Previously, we showed that the S. mutans transcriptional regulators SpxA1 and SpxA2 are involved in general stress survival. In particular, phenotypic characterization and microarray profiling indicated that SpxA1 and SpxA2, play a major role in activation of oxidative stress genes. We reasoned that some of the uncharacterized genes under SpxA1/A2 positive control are potentially involved in oxidative stress management. **Aim:** To use Spx-regulated genes (SRG) as a tool to identify novel oxidative stress genes in S. mutans. **Methods:** Quantitative real-time PCR was used to evaluate the responses of selected SRG during H2O2 stress in the parent and Δ spx strains and these SRG were selected for downstream mutational analysis. All mutants were characterized in relation to: growth under oxidative stress, iron sensitivity, ability to form biofilms in sucrose, and ability to colonize the teeth of Wistar rats. **Results:** Among 7 SRG tested, transcription of 6 was significantly induced during H2O2 challenge and was strongly dependent on SpxA1. Mutational analysis revealed that inactivation of selected SRG has impact on biofilm formation, growth under oxidative stress and iron sensitivity. In particular, inactivation of smu248 displayed major growth defects in the presence of oxidative stressors, was extremely sensitive to free iron, and showed reduced ability to colonize the teeth of rats. **Conclusions:** Our results serve as an entryway into the characterization of novel genes and pathways that allow S. mutans to cope with oxidative stress.

044 The performance evaluation guiding the quality of attention in oral health (PMAQ) in a northeastern Brazilian city

CAVALCANTE, D.F.B.*; ARRUDA, J.S.T.; MENEHIM, M.C.; PEREIRA, A.C.

Background: There are few studies on evaluation in oral health in Brazil. This scope the Ministry of Health since 2011 has been applying the evaluation of Family Health Teams through the PMAQ (Program for Improvement, Access and Quality). But little attention has been given to the preparation of those teams for this evaluation process. **Aim:** The objective was to analyze the quality of performance indicators in oral health (PMAQ-AB) and information about access and link. **Methods:** Two instruments were applied: a) comparing the data informed with those of dental records and b) the user informed about access, link and confirmation of registered procedures. **Results:** The access was gotten over a period of up to one week, 43.75% registered showed inconsistency (10.93% subrecords) and 37% of the records of "first dental appointment" were invalid. The teams certified had better indicators. **Conclusions:** It was concluded the population had access and link to the oral health teams and significant part of the records of procedures presented inconsistency.

046 Importance of saliva to evaluate the cariogenicity of starch

SOUZA, S.*; SAMPAIO, A.; CAVALCANTI, Y.; CURY, A.A.D.B.; SILVA, W.J.; CURY, J.A.

Background: Saliva has been used in models of cariogenic biofilm to only simulate acquired pellicle formation but when the cariogenicity of starchy products is evaluated it should be present during biofilm formation to simulate the effect of salivary amylase on starch metabolism. **Aim:** Evaluate the suitable exposition of saliva in a biofilm model composed of A. naeslundii, S. gordonii and S. mutans to estimate the cariogenic potential of subproducts of starch. **Methods:** Biofilms (n4) were formed on surface of bovine root-dentin slabs of known surface hardness (SH). The biofilms were exposed 8x/day to 1% starch. The biofilms were exposed to human whole saliva in three different steps: group 1 (acquired pellicle), group 2 (acquired pellicle + presence of saliva in the medium culture) and group 3 (acquired pellicle + presence of saliva in the medium culture and before each treatment with starch). The pH of the culture medium was measured daily to assess the biofilms' acidogenicity. After 96 h of growth, the biofilms were removed from the slabs by sonication and biomass was determined. SH was again assessed in the slabs and percentage of surface hardness loss (%SHL) was calculated. **Results:** The groups did not differ in acidogenicity. Group 3 showed greater biomass (9.3 mg) and %SHL (16.4), which did not differ from the other groups ($p > 0.05$). **Conclusions:** Saliva should be incorporated in biofilm models to evaluate the cariogenicity of starch since it does not interfere in biofilm formation and is essential for starch metabolism.

048 Concentration and activity of salivary carbonic anhydrase vi and dental caries

LOPES, L.M.*; PICCO, D.C.R.; MARQUES, M.R.; LINE, S.R.P.; NOBRE-DOS-SANTOS, M.

Aim: This study aimed to perform a quantitative analysis of the concentration and CA VI activity in saliva and investigate the correlation between these parameters and their relationship with dental caries in 7-9 year-old school children. **Methods:** One hundred school children were divided into two groups (n50): (CF) caries-free group and (C) caries group. Clinical examinations were conducted by one examiner (k 0,684) according to WHO criteria (DMFT) + early caries lesions. From each subject, salivary flow rate (SFR), pH and buffering capacity (BC) were analyzed. Salivary CA VI concentration and activity were performed by ELISA and zymography respectively. The data was submitted to Student's t-test and Pearson correlation analysis ($\alpha 0.05$). **Results:** Our results showed that there was no difference between C and CF groups respectively, regarding the SFR (0,722±0,05, 0,777±0,05 mL/min), salivary pH (7,209±0,05, 7,257±0,04) and BC (423,7±16,55, 455,6±13,54 mmoles HClpH). However, it was observed that the CA VI concentration was significantly higher in CF children (0,8363±0,11 ng/μL) and that the CA VI activity was significantly higher in C children (2,933±0,31). We found no correlation between the CA VI activity and dental caries. Also, a moderate negative correlation between the concentration and CA VI activity in saliva of C children ($r = -0,3627, p < 0,02$) and between salivary pH and dental caries ($r = -0,3635, p < 0,01$) were found. **Conclusions:** A higher concentration of CA VI in caries-free children may suggest a greater protection against dental caries. Moreover, is related to lower activity of isoenzyme and these two parameters were negatively associated.

049 Caries prevalence and treatment needs in eight coastal communities - Pará, Brazil

MATOS, AO*; CARVALHO, DA; SAKAI, GP; JR, SCC; BELINE, T; OGAWA, ES; BARÃO, VAR; AMARAL, RC.

Aim: To know the oral health of children and teenager 0-15 years eight coastal communities of Pará, located the banks of Maró river, tributary of the river Arapiuns, PA. **Methods:** We carried out a visit to each community, lasting three days each visit, being the first day realized an epidemiological investigation in relation to dental caries, treatment needs (WHO criteria). In the second and third days educational, preventive activities were carried out, as well as dental treatment in this population. **Results:** We examined 416 children and teenagers aged 0-15 years, and 183 0-6 years 234 7-15 years, 196 females and 218 males. The average dmft for five years was 5.3 (\pm 4.5) and the DMF to 12 years was 4.0 (\pm 3.1). The most prevalent treatments needs has restore cases 1 and 2 on both sides and extractions age. It was observed that this population is at-risk of tooth decay due to the lack of education regarding oral hygiene and the difficulty of access to the assistance provided by the health service in the region. **Conclusions:** There is the need to meet the oral health of coastal communities, so that they can plan health promotion measures, together with the provision of services.

051 In vitro evaluation of remaining dentine after chemo-mechanical removal of caries in deciduous teeth

MASTRANTONIO, SDS*; PINTO, LAMS.

Background: Traditionally, caries excavation was performed with use of burs, but today there are alternative methods such as chemo-mechanical for caries removal.

Aim: This study analyzed the chemical, morphological and physical characteristics of the remaining dentin after chemo-mechanical and mechanical removal of carious tissue. **Methods:** Thirty-three extracted carious deciduous molars were sectioned mesiodistally through the center of the carious lesion into two similar halves. The 66 specimens were divided into 3 groups according to the method used for caries removal: CS group (Carisolv™), PC group (Pacacárie®) and CB group (low speed conventional bur). The specimens were analyzed under confocal laser scanning microscopy (CLSM), light microscopy (LM), scanning electron microscopy (SEM), energy dispersive analysis of x-rays (EDS) and microhardness. **Results:** In CLSM analysis, it was observed that the chemo-mechanical method removed less carious tissue. SEM/EDS analysis showed that Ca content was statistically significant higher in the CB group. The CS and PC group showed similarity in relation to dentinal surface characteristics and statistical difference to CB group (heavy smear layer with all tubules obstructed). Microhardness of dentine after caries removal was similar regardless of the method. Histological analysis under light microscopy showed more preservation of dentin structure in CS and PC groups. **Conclusions:** Chemo-mechanical method is more conservative in the removal of carious tissue, leaving a dentine surface with less mineral content and no change in dentine microhardness when compared to the remaining tissue after use of conventional bur.

053 SB Project Brazil 2010: individual and contextual factors that impact on the decay of prevalence

ANSELMO, MG*; BATTAGLIA, G; BRIZON, VSC; COPPI, AM; AMBROSANO, GMB; PEREIRA, AC; CORTELLAZZI, KL; SILVA, RP.

Aim: The objective of this study is to identify individual and contextual variables associated with the prevalence of caries in 12 614 individuals allocated the ages of 12 and 15 to 19, examined in the latest epidemiological survey of oral health in Brazil - SBBrasil 2010. **Methods:** The individual independent variables "age", "demography", "harm to oral health", "socioeconomic", "education", "morbidity", "use of dental services" and "self-perception and impact of oral health on health" and contextual "Bolsa Família", "Index" Development of the Unified Health System (IDSUS) ", " Human Development Index (HDI) "and" Interaction GDP / fluoridated water "were raised from secondary data base public and institutional data from the Department of Primary Care, the Ministry of Health of Brazil. **Results:** The results show that self-perceived need for dental treatment and dental impacts on daily performance and the toothache report are directly related variables to the development of caries in this population, while family income higher than R \$ 1,500.00, Value top IDSUS 5.76 and the presence of the interaction of GDP / water fluoridation in the municipalities were considered as protective factors to disease. **Conclusions:** It follows that, in addition to fluoridation policies of the public water supply and access to oral health services in the SUS, proper planning of oral health practices should also include self-reported subjective questions by the population.

050 Spatial analysis of mortality by oral cancer and oropharynx in Brazil

BRIZON, VSC*; FONSECA, EP; FONSECA, SGO, MENEGHIM, MC; PEREIRA, AC.

Background: The oral and oropharynx cancer is a multifactorial and the main risk factors are: tobacco, alcohol, mechanical trauma, biological agents, genetic predisposition, systemic and general condition of the individual. **Aim:** The aim of this study was to correlate the deaths from oral and oropharyngeal cancer in Brazil with the geographical location of people. **Methods:** International Statistical Classification of Diseases and Related Health Problems (ICD-10) was used as reference and underlying cause cancer of the mouth and oropharynx. Data were retrieved from Brazilian Mortality Information System (SIM) and organized in absolute and relative frequency tables to perform the descriptive statistics. **Results:** In 2011, 6973 deaths were recorded for oral and oropharyngeal cancer in Brazil. Being, 5473 (78,49%) men, 1500 (21,51%) women. The geographical distribution of mortality by region were 3499 (50.18%) Southeast, 1533 (21.98%), Northeast (17, 97%) South 434 (6.22%) Percent - West and 254 (3, 64%) North. Regarding the spatial distribution of mortality can be said that it occurred heterogeneously with cluster formation in parts of South, Southeast and Northeast. **Conclusions:** The spatial LISA index query showed that there is spatial autocorrelation for certain states. Deaths from cancer of the mouth and oropharynx have high prevalence and are heterogeneously distributed across regions and states.

052 The effectiveness of strategies to oral health promote in primary health care in Brazil: a comparative study

FILHO, A.D.S.*; KUSMA, S.Z.; MOYSÉS, S.J.; MOYSÉS, S.T.

Background: The oral health services in primary health care (PHC) should achieve full shares in health (BRAZIL, 2011). To be effective, strategies to oral health promote (SOHP) should be structured based on the pillars - equity, participation and sustainability and values - governance, autonomy, empowerment, intersectoral, completeness (Kusma et al, 2010). **Aim:** The paper analyzes the effectiveness of strategies to promote oral health (SOHP) in primary health care (PHC) in 26 Brazilian capitals and the Federal District, mapped in the National Health Promotion Practices Study - E.N.PRO.SA. **Methods:** Comparison analyzes were performed stratified the final scores of 1,819 SOHP-PHC. The key informants were dentists working in the APS in 26 Brazilian capitals and the Federal District. Data collection occurred in the second half of 2013, through the application of Tool Evaluation of the Effectiveness of Promotion of Oral Health Strategies. After a brief description of SOHP, 23 descriptors were answered on a Likert pops, where 1 represents complete disagreement and 5 total agreement. The scores ranged from 23 to 115. The SOHP with scores from 23 to 74, do not include the pillars and values of oral health promotion in the PHC from 75 to 115, come. **Results:** As a result, the 1819 SOHP analyzed, 1,004 (55.19%) SOHP not include the pillars and values of oral health promotion in the PHC and 815 (44.81%) come. The proportion of SOHP that include, by municipality is: Rio de Janeiro (76.9%), Joao Pessoa (75.6%), Palmas (61.5%), São Paulo (60.8%), Belo Horizonte (59.0%), Fortaleza (57.1%), Campo Grande (54.7%), Recife (53.1%), Curitiba (50.3%), Florianópolis (50.0%), São Luís (48.9%), Victoria (43.6%), Porto Velho (42.4%), Porto Alegre (40.4%), Rio Branco (38.9%), Manaus (38.4%), Salvador (37.3%), Natal (37.0%), Goiânia (36.8%), Aracaju (32.5%), Teresina (28.1%), Cuiabá (21.3%), Macapa (19 4%), Belém (13.6%), Brasília (9.5%), Boa Vista (6.7%), Maceió (6.5%). **Conclusions:** Based on the proposed theoretical model (Kusma et al, 2010), concluded that most of the analyzed SOHP, do not include the pillars and values of oral health promotion, demonstrating the low effectiveness of these SOHP. There is great variability in the results in the Brazilian capital, it is important that investments for the qualification of SOHP-PHC, considering the observed inequalities.

054 Botulinum toxin A, a viable form of treatment for gummy smile?

MACHADO, LG; SOUZA, JC*.

Background: The action of the toxin is given by blocking the release of acetylcholine at the neuromuscular junction, which causes a process of muscular inactivity. This inactivity is welcome for treatment of certain muscle disharmony of the face. **Aim:** Let based on the manufacturer's protocol (BOTOX®) and literature to apply the clinical cases that the central complaint is the gummy smile. **Methods:** We use in this clinical study, two female patients who sought the clinic complaining of gummy smile. Photographed patients with Canon EOS Rebel T3 camera with macro lenses 100mm and 50mm (normal) with flash Macro ring lite YN-14 EX. They were imaged preoperatively (botulinum toxin) and after a week. Preparing botulinum toxin A (100 u) diluted in 4 ml of saline solution, the tube We move in circles as recommended by the manufacturer and the hypodermic needle inserted to fill the syringe. Choose the point on the face and apply the minimum dose to achieve the therapeutic effect on muscle activity. **Results:** We had resulted in a response a week the effect of botulinum toxin under the gummy smile. We evaluate salivation and gum quality preoperatively. **Conclusions:** Efficacy, safety and patient satisfaction will be our criteria for evaluation. Botulinum toxin type A was shown to be an option in the treatment of gummy smile for the patient returns a favorable labial position without invasive and costly surgical procedures.

055 The role of probiotics in the control of dental caries

SCHROEDER, T*; RIPPLINGER, T; PINTO, GS; CENCI, MS.

Background: Whereas the prevalence of dental caries has decreased worldwide, the disease still represents a global burden and it is considered the most prevalent chronic disease. Consequently, new methods of prevention such as the use of probiotic bacteria have been investigated aiming the control of the caries process. **Aim:** The aim of this review is to describe the current knowledge about the use of probiotics in caries prevention and the benefits and possible harms to the oral health. **Methods:** The search strategy was carried out in Pubmed and comprised the terms probiotics, caries, Streptococcus mutans and oral health, and their combinations. Original reports and reviews were included. As the inclusion criteria for clinical studies, the trial should have included the use of probiotics for caries prevention. **Results:** Initially found 106 articles, of which, according to the criteria of inclusion and exclusion were selected 94 full texts, included original papers and literature revision. Among these 94 papers, 22 were clinical studies. Half of those had used milk and dairy products, such as yogurt, cheese and ice cream as a way of probiotics consumption. Most clinical studies analysed obtained positive results on reducing the level of cariogenic bacteria on saliva, but the most studies just used surrogates as endpoints. **Conclusions:** The clinical trials on the role of probiotics in the prevention of caries are still very limited and further studies should be conducted to clarify its mechanisms of action and beneficial effects in the oral cavity.

056 Erosive potential of tropical fruit juices

ROMÃO, DA*; VERAS, AGC; HARA, AT; CURY, JA; TABCHOURY, CPM.

Background: Dental erosion has been associated to dietary habits and several studies, mainly in vitro, have evaluated the erosive potential of drinks. **Aim:** Evaluate the effect of juices prepared from Brazilian tropical fruits on dental erosion. **Methods:** An erosive cycling model, with the duration of 5 days, was conducted and bovine slabs (n5/group), selected by surface hardness and profilometry analysis, were treated 4 times/day with the respective solutions (2.5 mL/mm² enamel area): purified water (negative control) 1% citric acid pH 3.75 (positive control) araçá-boi juice camu-camu juice cupuaçu juice taperebá juice and umbu juice. The slabs were immersed in artificial saliva at 37°C without stirring between treatments and during the night. Artificial saliva was changed twice a day (after the 2nd and 4th treatments). The slabs were evaluated for surface hardness at the end of each day to calculate the percentage of surface hardness loss (%SHL) and profilometry analysis was conducted again at the end of the experiment. Data were analyzed by ANOVA followed by Tukey test. **Results:** Araçá-boi, taperebá and umbu juices showed the highest %SHL, differing from the positive control and cupuaçu juice. The profilometry analysis showed that araçá-boi (2.3±1.0 µm) and umbu (3.2±1.1 µm) juices resulted in significantly higher surface loss than the positive control (0.5±0.4 µm). **Conclusions:** The data of the present study suggest that some fruit juices have the potential to cause dental erosion.

057 Concentration of total and reducing sugars on maltodextrins

BOTELHO, JN*; TABCHOURY, CPM; CURY, JA.

Background: Starch is a non-reducing sugar, but it can be enzymatically hydrolyzed in industrial scale, producing maltodextrins with different hydrolysis degrees and reducing by-products. Maltodextrins are classified by their dextrose equivalent (DE), which is a measurement of the amount of reducing sugars, relative to dextrose (DE 100). Thus, a high DE value of maltodextrins means more reducing products of low molecular weight, including maltose and glucose. Maltodextrins are commonly used in industrialized foods and can present cariogenic potential depending on the hydrolysis degree. **Aim:** This study aimed to determine the amount of total and reducing sugars in maltodextrins of distinct DE. **Methods:** The solutions of glucose (positive control) and maltodextrins DE 5, 20 and 40 were prepared in a concentration of 20%, from which the concentrations of total and reducing sugar of the commercial products were calculated. The concentration of total sugar and reducing sugars of the solutions (preparation in triplicate) were determined using colorimetric methods. **Results:** The percentage (mean±SD) of total sugar found in commercial products was 99.2±0.8, 101.4±1.5, 100.7±0.7 and 102.3±1.8 for glucose, maltodextrins DE5, DE20 and DE40 respectively. The percentage of reducing sugars were 100.4±3.3, 3.8±0.0, 12.0±0.2 and 29.9±0.3. **Conclusions:** The findings showed that the hydrolysis degrees in the maltodextrins analyzed were lower than those reported by the manufacturer, what can influence their cariogenic potential.

058 Moisture and presence of Streptococcus oralis affect Candida albicans biofilm growing on an in vitro model of oral mucosa

BERTOLINI, MM*; XU, H; SOBUE, T; THOMPSON, A; CURY, AADB; DONGARI-BAGTZOGLU, A.

Background: Studies using mice and in vitro mucosal models demonstrated that Candida albicans and oral streptococci mixed biofilms present a more pathogenic potential. **Aim:** To evaluate C. albicans biofilm with or without Streptococcus oralis regarding its architecture, mucosal invasion ability and tissue damage, under wet (media-submerged) and semidry (media limited to inoculum) conditions. **Methods:** It was used an in vitro model of human oral mucosa with immortalized keratinocytes (OKF6-TERT2) and 107 cells of C. albicans (reference strain SN425 or a mutant strain with pseudohyphae phenotype ndt80-/-), with or without 106 cells of S. oralis 34. After 16 hours at 37°C and 5% CO₂ incubation, tissue and supernatant were collected for analysis. Biofilm architecture was evaluated by confocal laser scanning microscopy, histology sections stained by hematoxylin and eosin or fluorescent in situ hybridization showed tissue invasion and lactate dehydrogenase was monitored as tissue/cell damage indicator. **Results:** Wild type C. albicans formed homogeneous biofilm under wet conditions without invasion and leading slight tissue damage when present, S. oralis grew mostly in contact with mucosal surface. Under semidry conditions, C. albicans formed a biofilm with well-defined foci, high tissue invasion and damage S. oralis was co-localized with biofilm foci. Mutant ndt80-/- formed a defective biofilm without invasion and tissue damage even for semidry condition S. oralis did not co-localized with this mutant. S. oralis presence promoted increase in fungal invasion and tissue damage under all conditions. **Conclusions:** Moisture and presence of S. oralis affect architecture and virulence of C. albicans mucosal biofilms.

059 Effect of surface polishing on the in vitro formation of carious lesions subsurface

SOARES, AL*; IWAMOTO, AS; REIS, FMM; RONTANI, RMP; KANTOVITZ, KR; PASCON, FM.

Background: Bovine teeth are considered good substitute for human teeth for conducting studies in vitro and in situ. Many of these studies require the polishing of the tooth surface. However, this procedure could influence the demineralization process during formation of the carious lesions subsurface. **Aim:** Thus, the aim of this study was to evaluate the effect of surface polishing of bovine deciduous enamel in the formation of carious lesions subsurface. **Methods:** Fourteen primary bovine teeth were selected, sectioned in order to discard the roots and from the crowns, enamel blocks were obtained (5x5 mm), which were randomly divided into two groups (n = 7): 1) polishing the enamel surface, and 2) absence of polishing the enamel surface. After that, the specimens were submitted to the formation of carious lesions subsurface, immersing them individually in demineralizing solution under saturated with respect to hydroxyapatite, for sixteen hours. The specimens were sectioned again (final thickness of 0.10 ± 0.02 mm) and evaluated concerning the depth of the formed lesion (in µm) using Polarized Light Microscopy. **Results:** The data were submitted to Shapiro-Wilk and ANOVA tests (p<0.05). Absence of significant difference was observed between the groups with and without surface polishing (84.01 ± 45.57 and 66.24 ± 13.88, respectively). **Conclusions:** According to the conditions of this study, it can be concluded that surface polishing of the bovine enamel did not affect the in vitro formation of carious lesions subsurface.

060 Occlusal ART restorations using three different filling materials: preliminary results

COSTA, ICO*; HESSE, D; BONIFÁCIO, CC; RAGGIO, DP.

Background: The Atraumatic restorative treatment (ART) uses more commonly the high viscosity glass ionomer cement (GIC) as filling material however some drawbacks related to this material may limit their indication. This draws the question on how a new developed material called glass carbomer cement (CAR) and compomer (COM) influence the survival rate (SR) of occlusal restorations in primary teeth with the use of the ART technique. **Aim:** To compare SR of three different fillings materials on ART- restorations in primary molarsocclusal cavities. **Methods:** A total of 281 children (4-8 years old) with an occlusal carious lesion were selected and randomly allocated into the three restoration material groups: GIC restoration (Fuji IX - GC), COM restorations (Dyract - Dentsply) and CAR restorations using (Glass Carbomer - GC CORP). The children were treated on school premises following ART principles. Restorations were evaluated after 6 months by a calibrated examiner (Cohen's Kappa Coefficient: κ 0.78). Restorations SR were evaluated using Kaplan-Meier survival analysis and Log-rank test. Rate ratio was calculated and Cox regression analysis was used for testing association with clinical factors (α 5). **Results:** The overall SR was 83.9% and the SR per group was GIC 90% COM81.7% and CAR81.2%. There was no significant difference among the three materials tested (RR 1.05, CI 0.72-1.53, p 0.79). Cox regression analysis showed no influence of any investigated clinical characteristic in the survival rate of restorations. **Conclusion:** There was no difference in the survival rate of the three materials tested in in primary molarsocclusal cavities.

061 Pit and Fissure Sealants in permanent teeth: critical analysis of literature
MOREIRA, KMS*, KANTOVITZ, KS; PESTANA, JT; PASCON, FM; RONTANI, RMP.

Background: Dental sealants have showed to be effective in the dental caries prevention, especially on the occlusal surface. **Aim:** This study performed a critical analysis of the literature about the occlusal pits and fissures sealant materials in permanent teeth of caries-risk patients, discussing the evidences on the sealants indication. **Methods:** The authors searched the Pubmed for papers from 1984-2014. The main search terms were "Clinical Trial", "Sealants" and "Permanent Tooth". The inclusion criteria were: randomized studies showing the retention and progression of caries lesions of different sealants and techniques in sound and/or early enamel caries lesions occlusal surface. Exclusion criteria: sealants fluoride release ability, patient's preference regarding sealing technique, sealing materials used for marginal defects repairing and sealing of dentin lesions. **Results:** Initially, 83 articles were identified, 22 studies were included in the project of critical appraisal by titles, abstracts and/or full versions. Resin and ionomer sealant are the most commonly used. The efficacy of sealer materials was related to retention rate on the enamel substrate. Since resin sealants showed higher retention rate and, consequently, lower increase of caries, they are indicated when the technique can be properly performed. The glass ionomer sealant is an alternative for partially erupted teeth, which preclude the use of rubber dam. **Conclusions:** It can be concluded that resin sealants are the first choice for occlusal pit and fissures sealing.

063 Indirect composite resin restorations for oral rehabilitation of a child with early childhood caries: a case report

HUAMANI, JRS*, FREITAS, CN; MARTINS, LFB; BARBOSA, TS; PASCON, FM; RONTANI, RMP; KANTOVITZ, KR.

Early childhood caries (ECC) is highly prevalent in developing countries. When this disease achieves atypical, progressive, acute, or rampant patterns, it implies serious consequences for the development of the stomatognathic system and for the child's quality of life. Although composite resin has been shown promising alternative to treat extensive carious destruction in posterior teeth. Report a case of a child aged 4 years and 9 months, male, with ECC, submitted to oral rehabilitation using indirect composite resin restorations. Clinical and radiographic examinations revealed the teeth premature loss (51), residual roots (52, 61, 62), caries lesion (53, 63) and extensive carious coronary destructions (55, 65, 75, 85). Diet and oral hygiene instructions were given and supervised tooth brushing was conducted at every clinical appointment. Initial procedures for improving the oral environment consisted of provisional restorations and extractions, followed by definitive restorations with composite resin. Oral rehabilitation included indirect composite resin restorations, which consisted of clinical (cavities preparations and impressions), laboratorial (plaster models and indirect restorations preparations using an incremental technique) and bonding/finishing procedures. After 4 months, the long-term success of the treatment was confirmed by the retention of the restorations and the absence of teeth pain, abscess and mobility. The full management, including preventive and curative measures, of a young child with ECC was found successful after 4 months of follow up. This result can encourage the clinicians to use indirect composite resin restorations to reestablish the oral functions and improve the child's psycho-social development.

065 Effect of cigarette smoke and pH cycling in dental structure

THEOBALDO, JD*; CATELAN, A; JÚNIOR, WVF; MAINARDI, MCAJ; YSNAGA, OAE; FILHO, UPR; LIMA, DANL; AGUIAR, FHB.

Background: It was not found in literature any study that linked the changes in tooth structure caused by smoking with the carious challenge. **Aim:** The aim of this study is to evaluate the influence of exposure to smoke and pH cycling in dental structure. **Methods:** 40 bovine dental fragments were allocated into 4 groups (n10): Control (without treatment), CS (exposure to cigarette smoke), PC (pH cycling) and CS-PC (exposure to smoke and pH cycling). The specimens for groups CS and CS-PC were subjected to smoke from 20 cigarettes per day, for 5 days. The pH cycle consisted of specimens immersion in demineralizing solution for 4 h followed by immersion in remineralizing solution for 20 h at 8 days. Surface microhardness (SMH) was analyzed before and after treatments. Cross-sectional microhardness (CSMH) and Rx-Microfluorescence (μ -XRF) were performed after treatments. Data were analyzed using ANOVA (SMH), split-plot ANOVA (CSMH), Fisher's exact test (μ -XRF) and Tukey test post-hoc (α 0.05). **Results:** μ -XRF: increase of Cd and Pb and a low amount of Ni and As in dental structure. SMH and CSMH means of CS was statistically higher than the control group. The samples exposed to pH cycling (PC and CS-PC) showed lower surface microhardness means than the groups not exposed to the cycling (CS and Control), did not differ them. **Conclusions:** The exposure to cigarette smoke increased the enamel microhardness without promoting a protective effect on the development of caries in vitro.

062 Sequelae of upper alveolar ridge trauma in permanent teeth by fall with baby walker

KIMURA, JS*; ALENCAR, CJF; YANIKIAN, CV; ROSA, PCF; FONOFF, RN; SUGA, SS; WANDERLEY, MT.

Baby walkers are commonly related to injuries associated with falls downstairs. In Canada, baby walker is prohibited since 2007 however, it is still being used in Brazil even with pediatricians' contraindications. To describe a case report of dental trauma in an infant due to the use of baby walker, and its sequelae in the permanent successors. An 8 months-old male patient fell downstairs in a baby walker and had a laceration on the upper alveolar ridge. At that moment he did not present any erupted tooth. At the age of 9 years old, the patient was referred to the Clinic and Centre of Research of Dental Trauma in Primary Teeth of the University of Sao Paulo due to trauma sequelae observed in the upper permanent incisors on the radiographic exam. After clinical exam, we observed enamel hypoplasia on teeth 22/12 and 53/63 and upper labial frenum. On radiographic exam, tooth 21 was intra-osseo and malformed, and tooth 11 presented an image similar to an odontoma. It was performed ulectomy to facilitate the eruption of tooth 21 and upper labial frenectomy in the same appointment after this, orthodontic treatment was performed and with tooth in position it was performed gingivoplasty and restorative treatment with resin composite. An aesthetic functional space maintainer was performed until extraction of tooth 11. Baby walkers should not be used by infants due to the possibility of occurrence of dental trauma and sequelae in their permanent teeth. This sequelae lead long term problems on patient's treatment.

064 Prevalence of dental trauma associated with risk factors in 6-17 years old schoolchildren in Piracicaba - SP and region

NETO, ACC*; PEREIRA, A; LIMA, T; LINS, F; MONTEIRO, MR; ALMEIDA, JF; ZAIA, AA; SOARES, AJ.

Background: Dental Trauma exhibit significant prevalence worldwide and children and young people are the most affected. **Aim:** The aim of this study was to evaluate the prevalence of traumatic injuries to the permanent teeth of children from public schools in Piracicaba and region (SP) and its relationship with the presence of risk factors such as overjet and lip seal. **Methods:** A cross-sectional study among students aged 6 to 17 years was conducted in thirteen public schools in the elementary and high school in Piracicaba -SP and region (Americana, Limeira e Campinas) from June 2007 to June 2014. The evaluation was conducted in a school environment and used the diagnostic classification modified O'Brien. Through clinical examination and completion of a standardized case report form, was analysed the incisal overjet and the lip seal (adequate and inadequate). **Results:** Was evaluated 610 male children (51.91%) and 565 female (48.09%), totaling 1.175 students. The prevalence of dental trauma found was 13.36% (n 157). Were affected by traumatic injuries 92 school males (15.08%) and 65 females (11.05%) ($p > 0,05$). The students who had higher than 3 mm overjet and inadequate lip sealing were more susceptible to dental trauma ($p < 0,01$). **Conclusions:** It was concluded that the presence of higher than 3 mm overjet and inadequate lip sealing are risk factors to dental trauma recommending the implementation of preventive and health programs through information to parents, teachers and schoolchildren.

066 A biofilm model to evaluate the cariogenic potential of Candida albicans - pilot study

SAMPAIO, AA*; SOUZA, SE; CURY, AADB; SILVA, WJ; CURY, JA.

Background: Streptococcus mutans are considered the most cariogenic bacteria and it has been suggested that Candida albicans could enhance the cariogenicity of this bacteria, but this has not been clearly showed. In addition, there is not validated biofilm model to evaluate the cariogenicity of this fungus or its ability to increase the cariogenic property of S. mutans. **Aim:** The aim of this pilot study was to validate a biofilm model for to evaluate the cariogenic potential of C.albicans. **Methods:** S.mutans UA159, C.albicans ATCC 90028 and S.mutans + C.albicans (n4) were formed on bovine root-dentin slabs of known surface hardness (SH), which were suspended in culture medium. The biofilms were formed for 96 h and they were exposed 8x/day to 10% sucrose. The pH of the culture medium was measured twice/day to assess the biofilm's acidogenicity. After 96 h, dentin surface hardness was again determined and the percentage of loss (%SHL) was calculated. Data were analyzed by one-way ANOVA, followed by Tukey's test ($\alpha 0.05$). **Results:** The %SHL (means \pm SD n4) for the groups C. albicans, S. mutans and S. mutans + C.albicans biofilms were respectively: 8.7 \pm 3.7 36.2 \pm 4.0 and 51.4 \pm 16.6, but the groups S.mutans + C.albicans and S.mutans did not differ statistically ($p > 0.05$). **Conclusions:** Considering the size sampling of this study (n4), the findings suggest that C. albicans may increase the cariogenic potential of S. mutans.

067 Gain autonomy and efficiency on careful of oral health maintenance during basic educational background, Águas de São Pedro-SP

ROCHELLE, IMF*; FERRAZ, GC; BRISOLLA, MJF; ROCHELLE, ABFA.

The Civil Organization of Public Interest (PAIS), in partnership with City Office of Education, lead a pilot project with, by applying a didactic material, – appropriate to improve teachers' knowledge and enable students – integrates on municipal schools in Águas de São Pedro-SP the oral health plan. Despite the City has a high human development index HDI (0,854) presents alarming groups of caries disease in schoolchildren. The childhood is the step of life which allows with more facility the learning by changing habits, making this step the most favorable to introduce the health concept as quality of life. The presence of teacher on daily educational background of students is very strong and it facilitates the incorporation of care oral habit. The project consists on assess the results provided by the application of the didactic material. THE TEACHER'S BOOK provides background to enable the mainstreaming of Oral Health content in the school curriculum, being possible to avoid oral diseases as well as controlling it. THE STUDENT'S NOTEBOOK is a partner in the teaching-learning process, giving to the students specific knowledge about Oral Health for each school year, level to that, at the end of course, acquire autonomy and efficiency in care with teeth. The data collection will involve the whole school community in gathering information for qualitative analysis and epidemiology. The student, in its passage through elementary school, has the right to be able to keep your teeth in health status and gain autonomy until the end of the course.

068 Permanent molar restoration using occlusal replica technique: Case report

SCUDINE, KGO*; SOARES, AL.

The occlusal surface of posterior teeth have complex anatomical characteristics, making it difficult to reproduce in direct resin composite restorations. The occlusal replica is a technique that allows the anatomical and functional reconstruction by prior molding the occlusal surface with autopolymerizing acrylic resin. This technique is well-indicated in cases of hidden caries, characterized as a dentin lesion covered by enamel, demanding better accuracy in the clinical examination associated with radiographic examination. This clinic case presents the restorative technique using occlusal replica to restore the first permanent molar of a 9 year old. After clinical and radiographic examination, associated with transillumination, the tooth 36 was diagnosed with hidden caries. The main advantages of the occlusal replica are the technical ease of use, including its simplicity and its high accuracy in reconstructing occlusal morphology and the reduced clinical time by eliminating the restoration sculpture phase and simplifying the finishing procedure, being well indicated in patients in this age group. However, it is worth noting that for the realization of this technique is required specific material to construct the replica.

069 Changes in dental arch dimensions in patients with Class II, Division 1 malocclusion treated with headgear

SCUDINE, KGO*; SIQUEIRA, VCV; MAGNANI, MBBA; ARBEX, A.

Aim: The aim of this study was to evaluate possible changes in the intermolar distance, intercanine distance and arch length, through dental casts, of patients undergoing orthodontic treatment with headgear. **Methods:** To that end, we selected 12 pairs of dental casts of patients with Class II, Division 1 before and after treatment with headgear, totaling 24 pairs of dental casts. The measures of intermolar and intercanine distances were performed on casts with digital calipers accurate to 0.000 mm. **Results:** The results showed a statistically significant increase in the upper intermolar distances. There were no statistically significant differences in the intercanine distances and dental arch lengths. **Conclusions:** It was concluded that orthodontic treatment with headgear in Class II, Division 1 patients, in mixed dentition we can expect a significant increase in the upper intermolar distances.

070 Historical series of caries experience among children in Jundiaí, SP (Brazil)

SILVA, ES*; SCIAMARELLI, MC; MIYASHIRO, LC; TONETTI, J; PEREIRA, C; BATISTA, MJ; ARMITT, D; MEIRELLES, MP.

Background: Epidemiological surveys of oral health contributes with construction and consolidation of a theoretical framework that enables the municipal management planning actions directed to population. **Aim:** This study have monitored caries experience among children aged 12 through surveys conducted in 1975, 1998, 2003, 2008 and 2014 and its relation to collective actions of prevention and control of dental caries. **Methods:** Original reports were analyzed, assigned by the Oral Health management of municipality of Jundiaí, located 50 km from the capital of São Paulo, with a population of approximately 398,000 inhabitants. Epidemiological exams were carried out among 12 years-old children in the school, following World Health Organization criteria for caries experience, using DMFT index. **Results:** The In 1975, the first study showed a high prevalence of dental caries, with a mean DMFT of 10.05. After 1980, when started the water fluoridation in the city, it was observed a marked decrease in the caries index being: 2.33 in 1998, 1.69 in 2003, 1.22 in 2008 and 0.94 (CI95% 0.76-1.12) in 2014. In the last (2014), mean of untreated caries was 0.24. **Conclusions:** The data of this study showed reduction in caries experience that may highlight the effectiveness oral health prevention, developed in this municipality over the 39 years since the first epidemiological survey.

071 Pilot Project: ART as a tool for expanding access to dental treatment in Jundiaí, SP

MARSÍ, CL; KOGA, LY; SOUZA, AP; MIYASHIRO, LC; SANTOS, P; ZAGO, C; AMARAL, RCGPA; SILVA, ES*.

The challenge of increasing access to dental treatment in the National Health System has led municipalities to resort to strategies like the Atraumatic Restorative Treatment (ART) in school spaces in search of cost reduction, query time and organization of demand. Through oral diseases for risk classification held at the School Health Program in Jundiaí, it was found that 38% of students surveyed in Américo Mendes School caries lesions. This school, located in a rural area, was chosen to host the ART application pilot project, in order to assess the feasibility of their use to expand access to dental treatment and reduce the risk for dental caries of students in the most vulnerable areas. The team consisted of four dentists and three assistants. The total number of school students is 150, aged between 6 and 9 years, 132 examined, with 12% loss for absences. 51 children at high risk for tooth caries, 5 forwarded directly to treatment in the reference Basic Health Unit for presenting pain of dental origin. 46 students passed through ART, and 93 treated teeth of a total of 132 teeth with treatment needs related to dental caries in 10hrs of team care. Of treaties, 19 children were referred for treatment in office. Even in progress, the project was favorable for increasing access for fast service, low absenteeism and good use of professional hours.

072 Dental agenesis with genetic heritage: a case report

REBOUÇAS, PD*; RODRIGUES, LP; ARAÚJO, DS; MARTINS, L; RONTANI, RMP; JÚNIOR, FHN; KANTOVITZ, KR.

Tooth agenesis, the congenital absence of one or more teeth, is one of the most relevant abnormalities of human dentition. The prevalence of permanent tooth agenesis, excluding third molars, varies from 2.2% to 10.1%, depending on racial and ethnic backgrounds. Molecular studies have shown that more than 300 genes regulate tooth morphogenesis, and that mutations in AXIN2 (axis inhibition protein 2), MSX1 (muscle segment homeobox 1), PAX9 (paired box gene 9) and WNT10A (Wingless-type MMTV integration site family, member 10A) and complete or partial disruption of the EDA (Ectodysplasin A) signaling pathway may lead to teeth agenesis. The aim of the present study is to report a case of dental agenesis with potential genetic heritage affecting 4 consanguineous individuals (3 female/1 male). A 10-year-old boy was referred to the Piracicaba Dental School due to the absence of a number of permanent teeth. Intraoral and radiographic examinations indicated the absence of all mandibular incisors and maxillary lateral incisors and pre-molars. Family pedigree was analyzed and the affected individuals were clinically and radiographically documented. Data analysis strongly suggested that the inheritance might be associated with X-chromosome and family clinical findings, and therefore, EDA was chosen as the candidate gene to be sequenced.

073 Integral approach in pediatric dentistry: A case report

CARDOSO, AA*; MOREIRA, KMS; IWAMOTO, AS; PASCON, FM; KANTOVITZ, KR; RONTANI, RMP.

The pediatric dentistry is a special area in the dentistry, since it includes the integral care of the baby, child and adolescent, aiming rehabilitation and maintaining oral health in the growing people. The aim of this study was to report the integral approach developed in a pediatric dentistry case. MEMO, a high caries risk/activity child patient aged 6y and 8mo, was referred to the Pediatric Dentistry Clinic, at FOP/Unicamp presenting visible biofilm in free smooth surfaces, active carious lesions, early loss of the 85 tooth, fistula related with the 75 tooth region, color change of the 61 tooth and significant loss of posterior vertical dimension. Treatment Plan consisted in integral approach focused as primary outcome on health promotion, behavior change in relation to oral health, and as secondary outcome, the surgical/restorative approach. The oral hygiene instruction was conducted in all sessions. The conditioning behavior has been driven to dental biofilm (evidence and control of visible dental plaque), prophylaxis and oral environment adequation extraction of 75 tooth, pit and fissure sealing of the 36, 46, 16 teeth, and restorations in the 55 and 65. A lower removable appliance (space maintainer) was made. After 6 months it could be noticed that there was no visible biofilm, the IP was controlled and there was no evidence of new caries lesions. It could be concluded that the success obtained on this clinical case stand out the importance of the integral performance focused on healthy promotion in pediatric dentist clinic.

075 Oral health status of families of pickers of recyclable material of Passo Fundo-RS

CORRALO, DJ*; CARDOSO, AC; PALMA, DR; COMIM, LD; TESSARO, T.

Background: The public health system has not supplied the basic health needs of individuals. Socially excluded populations are more affected by system weaknesses. **Aim:** This study aimed to perform an epidemiological survey on the DMFT index of pickers of recyclable material of Valinhos and Bom Jesus neighborhoods (Passo Fundo - RS). **Methods:** Individuals were selected from families of pickers of recyclable material of Valinhos and Bom Jesus neighborhoods (Passo Fundo, RS) (15-74 years). The epidemiological survey was conducted following the criteria of the World Health Organization. It wasn't held prior oral hygiene and no auxiliary apparatus for lighting the oral cavity. The tests were performed at home with the help of woonder spatula and gauze. The study was approved by the Ethics Committee (University of Passo Fundo). The participants agreed to participate (Informed Consent Term). Data were analyzed descriptively. **Results:** Were included 59 individuals (38, Valinhos, 21, Bom Jesus). The mean DMFT was 18.64 (Valinhos) and 19.04 (Bom Jesus). In the age groups analyzed, the DMFT observed in Valinhos and Bom Jesus were 8.42 and 7.66 (15-19 years) 11.54 and 10.40 (20-34 years) 18 and 16.4 (35-44) 29.46 and 25.25 (45-64 years) and 31 and 26 (65-74), respectively. The decayed and lost components contributed more than 50% of the DMFT observed in the two communities. **Conclusions:** The oral health status of the families of pickers of recyclable material in the city of Passo Fundo is precarious and reflects the need dental care for these communities.

077 Assessment of psychological factors, sleep and oral health-related quality of life in children with sleep bruxism

ARAUJO, DS*; SOUSA, BS; BARBOSA, TS.

Background: The literature suggests an association between psychological factors, such as anxiety and depression, and the presence of sleep bruxism (SB). SB may be associated with negative impacts on the quality and duration of sleep, which may compromise the quality of life. **Aim:** This study aimed to evaluate 36 eight- to ten-year-old children (12 σ , 24 ρ), with mixed dentition, divided in two groups (bruxists, n12 controls, n24) matched for gender and age. **Methods:** SB was confirmed by parental report of grinding sounds and the presence of shiny and polish facets on incisors and/or first permanent molars. The index of orthodontic treatment need was used for occlusion evaluation. Self applied questionnaires were used to evaluate the quality and duration of sleep, symptoms of anxiety and depression and oral health-related quality of life. Data were analyzed using Shapiro-Wilk, Chi-squared and unpaired t tests. **Results:** Approximately half of the children had slight need of orthodontic treatment (58.3% bruxists 45.8% controls) (p>0.05). Controls reported more functional limitations and negative impacts on social well-being than bruxists (p<0.05). The groups did not differed in relation to quality and duration of sleep and symptoms of anxiety and depression. **Conclusions:** In the evaluated sample, while SB was not associated with psychological factors and quality of sleep, children with this parafunction reported better OHRQoL than healthy children.

074 Condition observed versus self-perception of oral health of families of pickers of recyclable material of Passo Fundo-RS

CARDOSO, AC*; CORRALO, DJ; PALMA, DR; COMIM, LD; TESSARO, T.

Background: Pickers of recyclable material get income from an informal labor market, which reflects the living conditions of these families. **Aim:** This study examined whether the oral health perception of pickers of recyclable material corresponds to the oral health status observed by the oral health professional. **Methods:** Individuals were selected from families of pickers of recyclable material (Valinhos neighborhood, Passo Fundo, RS) (15-90 years). Data on self-perceived oral health were obtained by interview (questionnaire SBBrazil 2010). Clinical data were obtained by dental examination (the World Health Organization criteria). The study was approved by the Ethics Committee (University of Passo Fundo) and the participants agreed to participate in the study. Data were analyzed descriptively. **Results:** Of the women surveyed (n 20), 95% needed some type of dental treatment of these, 65% reported feeling the need for treatment and 30%, not (a case of no perceived need and observed coincident). Of men (n 18), 100% requiring dental treatment 55.6% reported feeling the need for treatment and 38.9% did not. Among the interference conditions in the daily activities of individuals who reported treatment need was highlighted the difficulty of eating associated with irritability and difficulty sleeping (75%). **Conclusions:** The oral health perception of pickers of recyclable material differed from that observed by the oral health professional, reported less need for treatment than that observed, indicating that the social environment in which individuals live can influence the oral health status perceived.

076 Effect of sucrose on Streptococcus mutans adhesion to enamel

OLIVEIRA, BEC*; CURY, JÁ; FILHO, APR.

Background: Sucrose is the only dietary carbohydrate that is substrate for extracellular polysaccharides (EPS) synthesis and insoluble glucans formed could facilitated the adhesion of cariogenic microorganisms to enamel surface, forming biofilms. **Aim:** Therefore, this study evaluated the adhesion of Streptococcus mutans to enamel in the presence of sucrose or its constituent monosaccharides, glucose and fructose. **Methods:** Cultures of S. mutans UA159 were grown overnight in LMW medium supplemented with 1% glucose. The bacterial inoculum was washed in PBS and bacterial density was adjusted (OD 1.6 660 nm). The adhesion was made on bovine enamel slabs (n12) of known surface hardness (SH). After salivary pellicle formation on the slabs, these were immersed in LMW medium containing the bacterial inoculum and 0.525% Glucose + 0.525% Fructose or 1% sucrose. After incubation for 8 h at 37 oC and 10% of CO₂, the following analyses were made: percentage of SH loss (%SHL, as indicator of demineralization), medium pH (indicator of acidogenicity) and CFU adhered to enamel. EPS formation was assessed by confocal laser microscopy. Data were analyzed by Student's t-test (α 5%). **Results:** The groups did not differ neither for acidogenicity (5.1 \pm 0.5 and 5.3 \pm 0.3) nor %SHL (14.0 \pm 5.9 and 10.9 \pm 5.0) (p> 0.05). Higher bacteria adhesion (difference of 2 log CFU) was found for sucrose group (p<0.05), which also showed EPS formation. **Conclusions:** It was concluded that the adhesion of S. mutans to enamel depends on the metabolization of dietary sugars in EPS rather than their fermentation to acids.

078 Work-Related musculoskeletal disorders: dentists need to get up

SOARES, ACB*; CASTILHO, AVS; ORENHA, ES; KAIEDA, AK; MARQUES, TCN; SARRACINI, KLM; MENEGHIM, MC.

Background: Ergonomics non-compliance of dental equipment is recurrent which contribute for impairs the performance of dental procedures and obliges the dentist and staff to adopt inadequate working postures, producing injuries that can lead to Work-Related Musculoskeletal Disorder (WRMSD). **Methods:** This study aimed to evaluate the ergonomic compliance of dental equipment through two methodologies: M1 - a proposal of criteria which are consistent with the philosophy currently practiced in the Brazilian market and M2, which considers ergonomic criteria proposed by the European Society of Dental Ergonomics (ESDE), whose adoption has been increasing in the European dental market. **Results:** Dental equipment from 39 workplaces was assessed and findings shown that there was great differences of the conformity achieved between Method 1 and Method 2. On average, by using M1 resulted in 80% of compliance and by using M2 resulted in 57% of ergonomic compliance and it was founded that there was a regular level of ergonomic compliance regarding to newest requirements recommended by ESDE. **Conclusions:** Corrective procedures are necessary once the high prevalence of non-conformity causes injury, reduced efficiency and comfort as well as leads to loss of quality of service.

079 Assessment of salivary composition, flow and pH, halitosis and taste in asthmatic children

FREITAS, CN*, ZANON, AN; AMATO, JN; MARQUEZIN, MCS; CASTELO, PM; BARBOSA, TS.

Background: The influence of salivary characteristics, taste perception and halitosis on the physiopathology of asthma is still scarce in the literature. **Aim:** This study aimed to evaluate the salivary composition, flow and pH, halitosis and taste of 59 seven- to ten-yr-old children, both genders, selected from Policlínica Santa Teresinha Doutor Antonio Haddad Dib (asthmatics, n28 ♂18, ♀10) and from public schools (controls, n29 ♂10, ♀19), Piracicaba, SP, Brazil. **Methods:** The concentration of volatile sulfur compounds was measured using a gas chromatograph. Stimulated and unstimulated saliva were collected to determine salivary flow and pH. The drop test with four different flavors in three different concentrations was used to evaluate the taste perception. Salivary concentrations of total protein, amylase, calcium and phosphate were determined by spectrophotometry. The results were analyzed using descriptive statistics, Shapiro-Wilk, Mann-Whitney and Wilcoxon tests (α 0.05). **Results:** Halitosis, salivary composition, flow and pH were similar between groups. Asthmatics had lower scores of taste perception than controls (8.93±2.16 vs. 10.21±2.35 p <0.01), and the sweet solution (0.05g/mL of sucrose) was the less perceptive (60.71% of asthmatics). When comparing stimulated and unstimulated saliva, both groups had higher phosphate concentrations and total protein for the latter than the former (p <0.01). Asthmatics also presented higher concentration of calcium in unstimulated saliva (1.36±1.79 vs. 0.64±0.67 p <0.001). **Conclusions:** Asthma in children was associated with worse perception of taste and higher concentrations of calcium, phosphate and total protein in unstimulated saliva.

080 Oral manifestation caused by acid vapors

CAMPOS, RMMS*; QUELUZ, DP.

Background: Prevention is a health branch and occupational activity that has as main purpose the protection of workers from risks to their health when exposed in their activities. **Aim:** To report that the Dentistry Occupational Health has an important role in preventing occupational poisoning linked to acid vapors. **Methods:** It was to conduct a literature review of key articles related to the topic. **Results:** Health damage often begins in the mouth and when diagnosed early by occupational dentist, allowed the worker is protected from disastrous consequences. In the group of chemical agents of occupational diseases, the acid vapors play a role of great importance, under the dental point of view. The occupational dentist recognizes and prevents risks that are causative of oral manifestations of diseases arising from work as well as the correction of these lesions. All of these acids, from a certain concentration in the atmosphere of the workplace (form of vapor) cause intense irritation of the upper airways, which causes employees to breathe through the mouth also. As a result, the incisors are exposed to the action of air and quickly lose their protective cover of saliva, making it so easily attacked by acids. In gold handling, a systemic poisoning occurring initially an oral manifestation known as a reddish tinge on the gums, in more extensive cases it is noted presence of ulcers in the oral mucosa. **Conclusions:** Preventive measures should be implemented collectively. In work environments with physical possibility, the ideal is exhaust ventilation where there is no such possibility the use of personal protective equipment being accompanied by occupational dentist.

081 Evaluation of burnout syndrome in dentists the city of Cuiabá-MT, Brazil

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Aim: To evaluate the prevalence of burnout syndrome in Dental Surgeons in the city of Cuiabá-MT and analyze its association with sociodemographic and economic variables. **Methods:** This was an observational study, cross-sectional, analytical, quantitative in nature. - Human Services Survey (MBI-HSS) sociodemographic, economic, and the Maslach Burnout Inventory: The sample consisted of 253 volunteers Dentists two autoaplicativos questionnaires were used. We applied two methods of data collection. The first, by delivering the questionnaire personally for later pickup. The second, by invitation via e-mail attachment containing the link to access and complete the survey and forward the answer to a database. Initially, data were analyzed using frequency tables and chi-square or Fisher exact tests. The following associations of each variable individually were studied, and the syndrome (yes or no) by crude analyzes. Variables with $p \leq 0.20$ in the crude analysis were tested in a multiple logistic regression model remained in the model with $p \leq 0.10$. **Results:** In the associations between sociodemographic characteristics and Burnout Syndrome, considering each variable individually, without adjusting for other characteristics, it is observed that Dentists females (p 0.0552), age ≤ 40 years (p 0.0409), family income up to R \$ 5,000.00 (p 0.0133), without masters or doctorate (p 0.0523) have more chance to express Syndrome. Still considering the individual variables (crude analysis), behavioral characteristics, professionals serving more than 10 patients per day (p 0.0266) and non-teaching staff (0.0641) has more chance of presenting syndrome. Volunteers who reported no sleep usually have more chance of having the syndrome (p <0.0001). In the adjusted analysis it was observed that those who stated they did not sleep normally, those with family income up to R \$ 5,000.00 and serving more than 10 patients per day is 4.88 (IC95%: 2.22 - 10.73), 2.06 (IC95%: 1.12- 3.80), 1.66 (IC95%: 0.95 - 2.92) times more likely, respectively, to introduce Burnout Syndrome. **Conclusions:** The survey showed that 51.4% (95% CI: 45.2% -57.5%) of Dental Surgeons of Cuiabá-MT have high prevalence for developing burnout syndrome.