MAGAZINE INCAING
ISSN 2448 9131

# The New Normal: Return and Procedures of Stomatologist Students in INTEGRAL CLINICS of BUAP CRS

Mtro. Martin Salas Paniagua, Mtra. María del Pilar Gutiérrez Vázquez, Mtra. María Deysi Tapia Álvarez.

Martin.salas@correo.buap.mx

Pilar.gutierrez@correo.buap.mx

Deysi.tapia@correo.buap. mx

**Summary -** We **are currently facing a complex situation in terms of** public **health, since to break the chain of transmission of COVID-19,** a **disease caused by the new coronavirus called SARS-CoV-2, there are no single or** isolated **measures. This requires preventive and protective measures to counteract the spread of the disease. The objective of this article is** to generate a general reflection of the new normal **in the return to school and the procedure of Stomatologist students** in Integral **Clinics of BUAP CRS. Regarding the methodology used, a review of** different **literature** was carried **out, consulting the existing databases, it is a documentary research that** allows **to collect information and emphasize** the **procedures necessary for the return**or **activities academics of the students of the degree in Stomatology. Knowing your** academic **model, you should not undergo changes in your** curricular **map, but** include new **protocols in your** practical **activity. As** a **result, it was obtained that teachers must be** the **first** to **receive the preparation to transmit it to students, because they face to a new challenge. Regulations on supply and costs of** Personal Preparation **Teams, encourage a better adherence to established protocols and recommendations, as well as the** creation of **information, manuals or practical formats and objectives based on scientific evidence that help teachers, students, work** team to prepare **with the new protocols and dental action plan for the post-pandemic COVID-19 period to the return to school**

**Index of Terms – stomatology, normality, prevention, procedures.**

## *I. INTRODUCTION*

El término "nueva normalidad" fue introducido en 2008 to refer to the economic conditions which arose in the face of the financial crisis and great global recession that had its origin in the United States. Today, in the face of the great pandemic and long confinement due to the new coronavirus, a New Normal has been resumed. [1]

The new return has brought new protocols and an update in health guidelines and strategies for safe reopening, adding sustainable health measures, "sanitized and not demonized" with stigmas of biological risk. The new reality also requires reflecting on a new morality that invites us to be less selfish, more supportive, less indifferent, moreempathetic, less unconscious, more temperate, more resilient, more just and, prudently, to be more ethical and more ethical professionals. humans.

In Mexico and in the state of Puebla, the educational authorities have mentioned that the return to school will take place in the coming months waiting for the traffic light to change to green, in this way some schools of all levels have already begun to prepare in different ways, some have done it with butacas protected with acrylic especially schools

private, for the return to academic activities under the new normal in the different cities of the country. Using materials that do not put the student at risk, to avoid the spread of saline particles.

However, for the students of the degree in Stomatology of the Benemérita Universidad Autónoma de Puebla (BUAP) South Regional Complex (CRS), the situation is completely different, because it is required to have appropriate infrastructure for the development and compliance with the guidelines of the model educational and the curriculum of the bachelor's degree.

In the particular case of the Bachelor's Degree in Stomatology from the sixth semester, students begin with the practical part of this study program, studying the subject of clinics. To do this, they deliver the evidence contained in the clique history of their patients and treatment plans that were attended during the semester, payment policies from the clinical history and treatment to be carried out, in order to be evaluated in these practical matters. That is, to be in direct contact with patients, working directly with the organ of main contagion. Without generating an activity that replaces practice since, with this, it generates complete knowledge, as proposed by the Curriculum.

General Objective

Generate a general reflection of the new normal in the return to school and the procedure that must be carried out for the safety of the Stomatologist students in Integral Clinics of BUAP CRS.

## *II. METODOLOGÍA*

It is a research with a different literature review methodology, consulting the existing databases, which allows to collect information and emphasize the necessary procedures for the return to academic activities of the students of the degree in Stomatology. It consists of three phases: the first was conducted a literature review, consulted existing databases, and generated a search through a review in the databases of Google Scholar, Scopus,Scielo, among others. For this purpose, key words were used, the terms of which were: "stomatology", "new normal", "back to school", "prevention" and "procedures".

## *III. DEVELOPMENT*

### *A. Teaching-learning methods of the bachelor's degree in stomatology*

The teaching-learning methods used, responds to the objectives of the curriculum for the integral training of students, the different methodsand techniques that the teachingstaff uses guarantee the achievement of the objectives set.

Students develop various skills by working with different teaching methods. Among the multiple methodologies we can briefly mention the analysis of readings previously assigned in class, teamwork, development of essays on innovative topics of the subjects, analysis of case studies, concept maps, among others. The methodology used by the teacher focuses on learning, taking into account that the teachers comply with the content of the program of the subject, this being the basis for the student to acquire the knowledge, skills and abilities of the studies they carry out.

In this sense, the subject programs encourage the development of research habits, encourage teamwork, supported all this with the use of new technologies applied to education. [2]

For this reason, the Bachelor's Degree in Stomatology of the Complejor Regional South, establishes the application of a methodology for the achievement of the learning objectives according to the type of subject that is taught, locating as a basis the participation of students in activities that promote practical learning and that these are significant for the disciplinary theoretical knowledge, where through the strategy and flexibility of the curriculum can resort to horizontality and vertiquality of it, to be able to carry out high-level projects. [3]

To comply with the provisions of the plan of Studies herself Performed of way timed y scheduled, University Academic Days that allows students to provide coverage in a way preventive to reduce the prevalence of caries dental and periodontal disease, contributing to the conservation and improvement of the oral health of thes Different communities of the environment social y solve health problems of the stomatognathic apparatus of the agreed populations of the cultural social environment y economic for apply the Skills Skills

values and attitudes necessary for the integral solution of health problems, through activities such as talks on toothbrushing techniques, application of fluoride, extractions and prophylaxis [2]

These activities are based on the Curriculum of the Minerva University Model focused on the Bachelor's Degree in Stomatology, in which it mentions that within the training level of the students is contemplated as point number two the critical professional practice, which is formed by two non-cursative activities, one of them is the Professional Practice (PPRO) which corresponds to 250 hours and 5 credits, these are carried out parallel to the integrative subjects (clinics), with activities of linkage in the communities, through the Extramural Program of Extension of Coverage (Oral Health Days). [2]

The student to accredit it, must cover two days per clinical subject, as established by the accreditation requirements of the same. The credits corresponding to the PPRO, is obtained by covering 90% of the subjects established in the curriculum. [4]

The PPRO, is supervised by professors who teach advanced courses of the career in the Area of Disciplinary Integration with field experience, who will guide the student so that their work contributes to solving health-disease problems of the disease oral sectors of marginalized, vulnerable sectors, regions and / or communities of the State and at the same time be a significant experience in learning their profession. [5]

The realization of the service social inside of the Mexican Political Constitution itself that manifests in its First Title, Chapter I, On Guarantees Individuals, Art. 5, Fourth paragraph, that services Professional of nature social Be Mandatory y Paid in the Terms of the law y with the Exceptions What this Point. This herself Find Referred how one retribution of education superior with the society it by it What for the obtaining of the title in Graduate in Stomatology it the performance of the social service is indispensable, which is considered as the final stage of the process of formation of the Resources Human for the Bless you and must contribute to the fulfillment and operation of the policies and purposes of the sector Bless you a through of the operation of programmes specific to this institution in collaboration agreements with institutions in the health sector.

These programs must guarantee the development of professional activities in scenarios that reflect the social and health reality of the population.

The Social Service of interns of this degree, consists of a set of practical activities, of a temporary and mandatory nature that are carried out at the end of the career, through the provision of professional services for the benefit of the health of the communities of the country.

The social service is carried out in medical units or pre-established headquarters, in support of the protection and improvement of the health of the population and in marginalized rural and urban areas of the country.

The social service program for Stomatology interns is designed so that the student, in his last year of training, participates in the applicationand development of medical-preventive health programs and performs his activities with efficiency, quality, humanism, vocation of service and with a high degree of social commitment.

The Ministry of Health is the body to promote, regulate, exercise, supervise, evaluate, and investigate everything related to the health of the population.

The Social Service of the Bachelor's Degree in Stomatology is the extracurricular continuation of the formal education act that favors the personal and professional development of the graduate of the career of this Bachelor's degree, through participation in problem solving in which you apply the knowledge, skills and abilities acquired.

The Stomatology Social Service Program reinforces the contact, commitment and responsibility of the professional in the solution of health problems of individuals, the family and the community in general, allowing him to apply and acquire older people. knowledge, security and criteria to apply them.

The social service intern is considered part of the health team, as it is trained to act professionally of agreement to the area of his competence and level of training, in addition to being able of effectuate Activities What the Allow generate actions that contribute to the improvement of health and of life of the population to the that provides the service.

With regard to oral health, oral diseases are a public health problem in the country, so specific actions have been established to support the National Health Policy, reinforcing disease prevention actions aimed at promoting a Culture of Health that allows improve the living standards of the Mexican population, so that oral health cannot be visualized in isolation only as a dental problem but as an integral part of overall health of the individual.

The social service interns of the Bachelor's Degree in Stomatology are potential and important human resources to participate and contribute to the solution of oral health problems of the Mexican population, through the implementation and operation of academic service programs. social, oriented to primary care and thereby contribute to increasing the coverage of care at the national level and increasing the coverage of social service in a 1st and 2nd level of care.

Social service is the eacademic cover in which the pupil has the opportunity to establish contact direct with the national reality in terms of health Public y Community Offering one service full-time comprehensive professional and in which the intern has the opportunity to participate in groups Multidisciplinary for offer attention integral of Bless you a the population reason by the Which one this program Proposes What the service Membersto the in Stomatology look for similarity and propose to unify the basic criteria for preparation and operation, directing them to strengthen scientific training, technique Humanistic e integral of the Interns in service social, a through of his participation in the operation of the priority programmes of Bless you.

The coordination of the teaching activities of the Faculty with the service activities of the health institutions has been intended to be the result of the linking of the theory with practice, the harmonization of knowledge with skills, attitudes and skills, the balance between basic, clinical and social sciences, to meet the health care needs of the population

The regulations provide that in order for the social service to be released and obtain the corresponding certificate, one year of social service must be completed in any of the following dendencias of the Health Sector SSEP, IMSS, DIF, ISSSTE, ISSTEP, SEDENA, CECAUCI,

The Faculty of Stomatology has a Mission and Vision of the area of social service that allows to know the fundamental axis and purpose of the Social Service of that degree

Therefore, the practice and the direct contact of the patient, substantiated. It is of great relevance for the integral development of students.

However, given the circumstances generated by the pandemic, activity must change.

*B. Pandemic Covid-19*

In December 2019 in Wuhan, China, coronavirus disease (COVID-19), caused by a highly contagious beta-coronavirus, was recorded for the first time. In a short period of time COVID-19 spread from Asia, Europe, America and finally around the world [6].

On March 11, 2020, the World Health Organization (WHO) declared Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) as a pandemic causing the novel Coronavirus disease 2019 (COVID-19). By April 14, 2020, about 1,844,683 confirmed cases were reported with 117,021 deaths from at least 213 countries. [7]

*1. Viraletology of covid-19 sars-cov-2.* It is zoonotic, comes from the bat of the region of China Rhinolophus sinicus, being the pangolin the main intermediary. [8]

*2. Transmission routes.*

The contamination route begins from a single animal-human contact, followed from human to human by means of droplets derived from the respiratory tract, through the oral, nasal and ocular mucous membranes, in addition to fecal gold transmission. Vertical transmission is also known. Studies suggest that the SARS-CoV-2 virus can be air-carried through aerosols in logical dental environments, by high- and low-speed handpieces, ultrasounds, syringe, water/air, suction, water or cough of an infected patient, and even by taking intraoral X-rays. [8]

*3. Transmission sources*

In addition to symptomatic patients with COVID-19, which are the main source of infections, it has recently been suggested that asymptomatic patients and patients in the incubation period are carriers of SARS-CoV-2. This has caused the difficulty in identifying infected patients, resulting in accumulation of them in infected communities. [8]

*4. Incubation* period

The incubation period of COVID-19 has been estimated to be between five to six days on average; however, there is evidence that it can last up to 14 days in incubation after the person's first exposure to the virus. [8]

*5. Population at higher risk of infection*

All population ages are at risk of contagion, however, doctors and health professionals have a greater potential to be infected by SARS-CoV-2 infection since the virus can remain on surfaces for a few hours to days, depending on the type of surface, temperature and humidity. [8]

*6. Clinical Manifestations*

According to recent studies, most COVID-19 cases are relatively moderately symptomatical; fever, dry cough, shortness of breath, fatigue and some other atypical symptom such as muscle pain, confusion, headache, sore throat, diarrhea and vomiting. [8]

*7. Diagnosis and treatment plan*

The diagnosis of COVID-19 can be based on epidemiological information, clinical signs and symptoms; laboratory tests positive CPR test, chest CT scan. It is worth mentioning that a single negative CPR test does not excludeinfection. Currently there is no specific treatment for this disease, only the specific management of symptoms. [8]

*C. Biosafety Protocol in Clinics.*

SARS-CoV-2 is more stable in plastic; stainless steel that, in copper, and cardboard; the virus is detectable up to 72 hours later. Transmission of the virus is plausible through aerosols in the surfaces emitted by infected people, or even up to days later depending on the humidity of the room. [8]

In a state of pandemic, it is important to implement effective protocols in order to protect patients and the health team. [6]

Due to the global health emergency and in accordance with oral care guidelines in second-level care clinics, the following recommendations are established: [8]

Identify emergency and emergency procedures in dental practice. Dental emergencies are considered: [8]

• Active or uncontrolled bleeding.

• Cellulitis or diffuse bacterial infection of the soft tissues with extra oral edema involving the patient's airways.

• Trauma involving facial bones and airways. These emergencies are referred to the hospital level for comprehensive management.

Dental emergencies are considered:

• Dental pain due to reversible or irreversible pulpitis.

• Pericoronitis.

• Postoperative osteitis.

• Alveolitis.

• Abscess or localized infection from a dental organ

• Dental trauma with avulsion and/or dislocation.

• Temporary restoration cementation causing gingival irritation.

• Fractura of a restoration that causes intense pain.

It should be noted that any dental care treatment not mentioned falls into a category of routine dental treatment and is postponed. [8]

The American Dental Association (ADA) highlighted some extraordinary biosecurity recommendations, in addition to standard universal precautions to avoid cross-contagion in dental practice. [9]

The latest studies indicate an increase in the contagiousness of asymptomatic patients in the early stages of the disease. It is therefore advisable to consider any patient as a carrier of the virus. [9]

## *IV. EXTRAORDINARY RECOMMENDATIONS FOR PATIENT CARE DENTAL CONSULTATION*

Exhaustive control of appointments avoiding crowds in the waiting room, it is recommended to maintain a healthy distance between each patient. [9]

Assess by telephone the type of treatment to be carried out.

Treatments involving the generation of aerosols should be cited at the end of the day or restricted as far as possible.

Telephone triage essential to detect patients who may manifest initial symptoms of the disease.

The patient must wear a face mask or face mask during their stay at the reception and in the waiting room.

It is recommended to place a transparent barrier between the reception desk while maintaining a healthy distance.

Prevent the patient from brushing their teeth in the toilet.

### *A. Dental* Triage

An electronic survey focused on the risk of the disease is completed with the following questions: [8]

A flowchart is used to determine whether the patient can be operated on or not:

Once evaluated, the urgency and that the patient is in the clinic, the body temperature of each patient is taken by means of a thermometer

infrared, thus keeping a record of each of them. Care will only be provided to one person per hour, to avoid cross-contamination by flugge.

In addition to this, there is a delimitation of 60 cm. At the reception.

Before entering the clinic, the patient is asked to go and wash their hands for 20 seconds with the technique exemplified in the area of capilleros and is offered antibacterial gel alcoholized to 70%.

### *B. Waiting* room

The activities in the room of espera will have a complete change, following the following protocols [9]

The patient must attend alone, except in the cases of minors, the elderly and disabled patients.

Patients must respect the healthy distance.

Remove objects, brochures, magazines and water dispensers from the waiting room. Reinforce cleaning of any element that can be handled frequently (handles, railings, etc.)

Now, the patient can be accompanied in case he requires assistance or is a minor. The chairs should be distributed strategically two meters apart to maintain the appropriate distance to avoid contagion by flugge.

The patient cannot be wandering in the waiting room while waiting for their turn. An area should be adapted for the placement of shoe covering, disposable cap and mouth covering for the patient.

### *C. Work* team

For the administrative and operational staff of the clinic, partial working times were established: four hours per day for the assistants, four hours for the clinic coordinators and three five-hour days for the teacher under the plant contracting scheme. [8]

### *D. Radiological Equipment*

To avoid continuous exposure to the nasopharyngeal exudate of patients on intraoral radiography, extraoral x-rays or cone beam are suggested to resolve dental emergencies and emergencies to the extent possible. [8]

### *E. Dental Care and Personal Protective Equipment*

All dental personnel are provided with personal protective measures (PPE), including: [8]

- Disposable cap.
- Disposable robe with fist.
- KN95 face masks.

• Nitrile gloves.

• Special anti-skid surgical pajamas.

• Protective mask.

• Protective lenses or magnifying lenses in their absence.

• Cubrezapatos.

The main characteristics that body protection devices should have are: waterproofness and extension of coverage.

The contaminated disposable material must be placed in the organic waste tank for proper processing.

*F. Protocol for placing*personal*protective equipment*

Before putting on PPE, personal attachments (earrings, chains, rings, bracelets, watch, etc.) should be removed and clothes and work shoes should be worn. [9]

1. Place shoe covering... Hand washing.

2. Place long-sleeved gown... Hand disinfection.

3. Place mask KN95 FFP2... Hand disinfection.

4. Place closed goggles... Hand disinfection. 5. Place face mask... Hand disinfection.

6. Place disposable surgical cap... Hand disinfection. 7. Place nitrile or latex gloves... Hand disinfection

8. Place 2nd pair of nitrile or latex gloves... Hand disinfection. 9. Complete Personal Protective Equipment (PPE).

Moments of hand washing in dental practice

Hand hygiene should be performed before examining the patient, before starting dental procedures, after exposure to body fluids, when interrumpir or end of the consultation and after have contact with unse disinfected surfaces and equipment in the patient's environment. It is important to avoid touching eyes, nose and mouth.

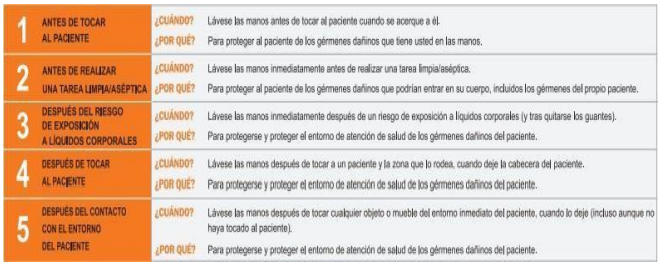


Fig. 1 Five moments to touch patients World Health Organization

*G. Pbroken who hand washing.*

*1. Admission of the patient to the clinic.*

Once the patient enters the clinic for dental care, it is requested to rinse with 5% hydrogen peroxide for 30 seconds without spitting, only dropping the liquid at the end of time.5,6 Any treatment that generates aerosol from a rotating piece will be avoided at all costs, being treatments with ART technique or from menima in vassion using dentin spoon to remove infected tissue, ideal in this pandemic. [10]

In case of using high-speed handpiece, absolute isolation is implemented from the opening of the cavity, if required by the patient, reducing by 70% the amount of aerosols generated.2,5 Four hands are worked with an assistant that holds the same number of barriers. [10]

*2. Surface disinfection*

At the end of dental care, asepsis will be performed on surfaces and common areas with sodium hypochlorite ≥ 0.21%;5 suction lines are treated with a multienzymeformula, which eliminates detricough, saliva and blood residues, avoiding an accumulation of solids [1]

Any disinfectant attached to the U.S. Environmental Protection Agency's N list. The U.S. Food and Drug Use (EPA) is effective against SARS-CoV-216. • The use of 0.05% diluted (1:100) Sodium Hypochlorite is recommended to disinfect surfaces.

It is recommended to plasticize keyboards and pushbuttons of computer equipment, autoclave or any other machinery to avoid contamination and facilitate cleaning through disinfectant solutions. Non-disposable components of PPE should be considered as just one more surface and are therefore disinfected as such. [9]

*3. Disinfection of the environment*

The main factor to consider is whether any dental procedures have been performed that have generated aerosols. [9]

In case aerosols have not been generated with a strict disinfection of surfaces and adequate natural ventilation, it can be used again after conventional disinfection.

In case aerosols have been generated, the following should be taken as consideration: Ambient temperature, time of the dental procedure performed, if the patient coughed or sneezed, size of the space and the degree of r air ovation per hour.

Given the difficulty of knowing the degree of air renewal per hour that our work area has, it is proposed to ensure proper ventilation or filtering of natural or artificial air by staggering the use of the dental unit between patient and patient for a period of 3 hours18.

At the end of the working day, all staff will be asked to put on their conventional clothes so as not to contaminate the means of transport, as well as hand washing and body temperature taking.

## IV. CONCLUSION

The pandemic we face globally has significantly impacted the practice of dentists, it is a profession at high risk of COVID-19 transmission. Therefore, knowledge ofgeneral prevention and preventionmeasures for cross-infections in the dentist is necessary. This pandemic will undoubtedly affect the education of dental students across the country. Since dentists are included in the occupational group with the highest risk of contagion, especially by the aerosol generated during dental procedures, which can directly contaminate the operator and adjacent surfaces, on which it has been shown that the virus can survive for several hours without proper cleaning. On the other hand, the service provided by the dentist is essential for the health of the human being, since thediseases of the oral cavity affect physically and psychologically, and the most serious complications can threaten the life of patients.

The information of this documentary research allowed to point out the panorama of dentistry during the global pandemic, so the dissemination of protocols

Care and infection protection measures are of vital importance to the practice. Therefore, prior to the incorporation of students into practical academic activities, they must include and reinforce the knowledge of these actions to avoid future contagion and take responsibility for avoiding contagion by the SARS CoV 2

So, teachers must be the first to receive the preparation to transmit it as they face a new challenge. Regulations on supply and costs of personal preparation equipment will encourage a better adherence to established protocols and recommendations, as well as the creation of information, manuals or practical formats and objectives based on scientific evidence that help teachers, students, work team to prepare with the new protocols and dental action plan for the post-pandemic period COVID-19 back to school

In this sense, complying with the protocols indicated by international organizations and sharing experiences between different dental schools and faculties around the world is imperative. This new normal provides us with opportunities to evolve in dental education. The use of strategies that were very little developed before, such as dental medical tele-consultation, as well as the intensive use of all kinds of platforms andtechnological coursesto ensure the continuity of learning, is the boldest experiment in educational technology, although unexpected and unplanned. Results need to be assessed, better learned what works and why, and lessons learned need to be used to strengthen inclusion, innovation and cooperation in higher education.

### *H. REFERENCIAS*

[1] Z. Agustín, New normality, new reality., 2020.
[2] Code of values of the faculty of stomatology//http://www.estomatologia.buap.mx//
[3] Components of the minerva university model (MUM) for the curricular design http://148.228.165.6/pes/concep1.htm
[4] www.buap.mx
[5] faculty of stomatology//http://www.estomatologia.buap.mx
[6] B.C. Boin and A. Melián Rivas, "Dental Care for COVID-19 Positive Patients," J. Odontostomat, pp. 14(3):321-324, 2020.
[7] Pan American Health Organization, "WHO characterizes COVID-19 as a pandemic," World Health Organization, 11 March 2020. [Online]. Available: https://www.paho.org/es/noticias/11-3-2020-oms-caracteriza-covid-19-como-pandemic. [Accessed 25 03 2021].

[8] M. A. S. J and A. Salinas Noyola, «Guidelines of biosecurity used in the,» ADM Magazine, pp. 77 (3): 146-152, 2020.
[9] Subdirectorate of Diagnostic Assistants, BIOSAFETY MANUAL, 2020.
[10] A. S. J. Medina, Biosecurity guidelines used in the peripheral dental clinics of the University of Monterrey during the COVID-19 pandemic, 2020.