

E-BOOK

TREATMENT IN THE TIME OF THE CORONA PANDEMIC

#TOGETHERSTRONG

Professor Knut A. Grötz MD, DDS, PhD (GER)
Priv.-Doz. Eik Schiegnitz MD, DDS, PhD (GER)

straumanngroup

#TOGETHERSTRONG

The pandemic is currently the greatest challenge our society is facing. The political and economic consequences are multifaceted, in some cases unpredictable, and will affect almost everyone, particularly those of us working in dentistry. The protection and health of our staff, customers and patients is our common objective, and one that has the highest priority. In these times, we would like to help by providing you with some useful information. As a global company, we bring you a compilation of opinions by dental experts and their experience. These include China in particular: internal market data shows that a proactive, clear and open communication strategy with patients, together with information transparency are the critical levers for restoring the trust of patients in dental treatments and quickly resuming practice operations. We have produced this e-book to help you deal with this important subject. We have attached the utmost importance to giving you reliable information from trustworthy sources. We were delighted to have obtained the input of two leading experts in implantology in this educational initiative: **Professor Knut A. Grötz MD, DDS, PhD (GER) and Priv.-Doz. Eik Schiegnitz MD, DDS, PhD (GER)**. They have provided important recommendations for action in coping with the pandemic for:

- dentists
- the practice team
- patients

This measure is just one of many associated with our #TogetherStrong initiative. As a world-leading supplier of solutions in esthetic dentistry, we are focusing all our attention on the successful resumption of your practice.

Please stay healthy!



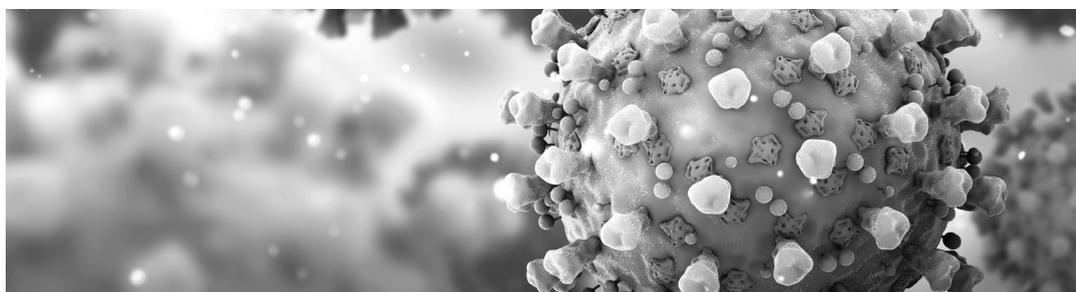
Holger Haderer
EVP, Head of Marketing & Education
Straumann Group

Dear Colleagues,

In these complex, occasionally confusing, and even apparently contradictory times of pandemic, the following tips are designed to help you make the right decisions for your personal treatment routine.

Firstly: Based on the infection figures issued by official bodies I believe that, the vast majority of treatments could (currently) continue as before. However, the fact that we do not know, in the individual case, whether an asymptomatic patient is actually a virus carrier. This uncertainty is reflected in the number of unreported cases, which even scientists and high-ranking medical representatives suspect to be very high. So "business as usual" is not the right recommendation!

On the other hand, one can conceive of the strictest possible infection avoidance strategy (as a counterpart to the quarantine at home of an infected individual: absolute contact avoidance!), i.e. demanding the total cessation of all treatments in the mouth. This demand might even appear more legitimate due to the consistent avoidance of many procedures in hospitals. But the point here is to consider the objectives carefully. Hospitals throughout Germany and in other countries have substantially increased, and in some cases even multiplied, their intensive care capacities. To this end, anesthesia teams have been withdrawn from the central operating rooms in large numbers and been assigned to other teams or to refresher training courses. When shutting down the central ORs, the primary aim was not to avoid infections! Consequently, the approach adopted in hospitals certainly cannot be applied to the dental outpatient sector, since the latter does not create resources for treating COVID-19 patients! On the other hand, the collateral damage caused by refraining from, or postponing, hospital procedures, and the associated delay in treatment, very quickly became clear. A general avoidance of treatment in dentistry can therefore be considered only for "medically unnecessary" treatments, for example attaching gemstones to teeth. In the context of medically necessary dentistry, by contrast, the advantages and disadvantages have to be weighed in each case, and "we are closing all practices" is not the right recommendation!



Returning to infection avoidance: Our daily routine was already addressing this requirement well before the pandemic, although there are some important differences. A policy of "strict" avoidance has usually been employed to date in cases of e.g. hepatitis C, HIV, Ebola etc., in other words those infectious diseases that must not be transmitted under any circumstances if possible! Even at a very early stage, the virologist at the Charité hospital in Berlin, Professor Drosten (GER), had stated that an infection rate of 70 % for SARS-CoV-2 (over 55 million people in Germany) would be required to achieve herd immunity. All scientific and political efforts since then have focused solely on slowing this scenario, because otherwise our hospitals would be hopelessly overwhelmed by the rapidly growing number of serious cases. The most effective way of achieving this is to avoid the droplet infections that occur during human interactions. For dental practice, this means that the aim is not to avoid infection without exception, but rather to curb this process with a sense of proportion, taking into account the numerous advantages and disadvantages.

In this context, the following table provides a proposed decision process that can be quickly implemented in the daily routine, one that is designed to be easy to use and communicate to the patients.



Proposal for an everyday clinical algorithm:

	Healthy patients & unreported cases	Virus carriers & suspected cases
Emergency (acute pulpitis, abscess, trauma, etc.) & acutely symptomatic patient	Treatment under intensified hygiene conditions	Treatment with strict infection avoidance (if nec. in specialized centers)
Urgent treatment that cannot be postponed (chronic infection in surgery, periodontal preparation, root canal, restoration, etc.) & subacutely symptomatic patient	Treatment under intensified hygiene conditions	Treatment with strict infection avoidance (if nec. in specialized centers)
Delayed treatment with probable drawbacks (loss of filling/crown, treatment in progress (orthodontic, implant, tooth replacement) etc.) & chronically symptomatic patient	Identify patients at risk of COVID-19 & weigh up each case; then if nec.: Treatment under intensified hygiene conditions	Arrange for suspected cases to be tested - neg. test = healthy patients - pos. test: postpone treatment until the patient is healthy again
Delayed treatment with no relevant drawbacks (supportive periodontal treatment, CMD treatment, etc.) & asymptomatic patient	Postpone treatment in the medium term	Postpone treatment in the long term
Medically unnecessary treatment	Postpone treatment in the long term or omit	Postpone treatment in the very long term or omit

This table considers three aspects:

1. Urgency of the individual treatment
2. Virus status of the specific patient
3. Patient's risk, after a SARS-CoV-2 contact, of experiencing a serious progression of COVID-19

This COVID-19 risk group includes:

- older patients (particularly those aged 80 or over)

as well as (independently of age) patients with:

- a history of smoking
- pre-existing lung disease (e.g. COPD, asthma, chronic bronchitis)
- pre-existing heart disease (e.g. CHD)
- chronic liver disease
- diabetes mellitus
- cancer and
- immunodeficiency/immunosuppression (long-term steroid treatment, after organ transplant, etc.)

Two important aspects are not mentioned in the table:

1. **The treatment methods:** These include all measures for avoiding aerosols, generated for example by turbines during tooth preparation or ultrasound during professional teeth cleaning, but also the use of dental dams to reduce the transmission of infection by droplets.
2. **The treatment times:** Since the intensified hygiene measures are expected to require around 10 to 15% more time for each patient, the schedule for the whole treatment day will need to be adapted. Bottlenecks involve the risk that hygiene regulations will be violated and the waiting area fill up, contrary to the actual intention.

This last aspect affects the choice of treatment options that can be provided by the expert hands of the practice team. This issue is therefore addressed in a separate information leaflet.

Dear practice team,

The following tips are designed to help you in these complex pandemic times create the right environment for dental treatment for you and your patients.

Firstly: Even though the statistical risk of encountering a patient infected with the virus is very low (currently under 0.2 %, considering Germany on of the date the document was prepared), there is still a need for action since many virus carriers do not show any symptoms of the disease and some cases remain unreported. An important point to bear in mind in this situation is that your dentist acquired expertise in avoiding the transmission of infections well before this pandemic arrived. Such expertise is designed to protect the whole practice team as well as the patients. On the other hand, since this dental expertise only takes effect in the treatment room, your own expertise as the treatment team is also vital at this time.

The first patient contact always takes place in the **reception area**, where the staff are ultimately responsible for efficiently scheduling the treatments and thus directly responsible for the situation in the waiting area. So this is the first key area for appropriate patient management. You should therefore talk to your dentist to establish whether confirmed virus carriers and justified suspected cases are being treated in your practice, or whether these patients should be referred to specially designated centers. You should also consult your dentist to determine how much extra time will be needed for the planned treatments for all patients so that sufficient time is available for any intensified preparatory and follow-up measures.

Key points for reception personnel:

- At every patient contact, convey an air of confidence in dealing with the pandemic problem!
- During phone calls identify virus carriers and justified suspected cases and, if necessary, refer these to a specially designated treatment center.
- It is also helpful to place a corresponding sign on the outside of the practice door: Virus carriers and suspected cases should not enter the practice, but call us (e.g. by mobile phone).
- Advise all patients generally to avoid infections on the trip to and from the practice (e.g. wear a face mask on public transport, etc.)
- Prepare the reception area so as to avoid droplet infection (special protective measures e.g. plexiglass screen; distancing, including between patients, etc.)
- Ensure sufficient distancing in the waiting area (e.g. leave every other chair empty)
- Arrange appointments so that sufficient places are available in the waiting area.
- Encourage relatives/companions to go for a walk during the treatment.

If you are not sure about the virus-carrying situation, urgency of treatment and subsequent procedure, discuss the individual situation with your dentist. It may be advisable in such cases to interrupt your phone call with the patient and arrange to call back shortly.

A more in-depth and highly detailed explanation of procedures is only required if confirmed virus carriers and actual suspected cases are being treated in your practice!

The second patient contact in the practice then takes place during the **examination and/or treatment**. The dental assistant invites the patient in the waiting area to come into the treatment room. The only innovation in the current situation is the need to refrain from courtesies such as greeting the patient with a handshake. Rather, it is advisable for the assistant already to be wearing the practice's basic personal protective equipment (face mask, protective glasses, gloves) when the patient is called. Since this PPE at least partly hides the polite welcoming smile, it is important to make up for this by addressing the patient emphatically.





Key points for the whole treatment team:

- **Basic hygiene already when the patient is called and welcomed!**
 - » Face mask (well fitted over the bridge of the nose)
 - » Protective glasses (with side shields)
 - » Gloves (sterile or non-sterile depending on the treatment)
- This basic hygiene also applies during oral history-taking, recording findings, x-rays, giving advice, etc.
- Intensify hand hygiene (hygienic or surgical depending on the treatment), including particularly after taking off gloves before touching the PC keyboard, etc.
- **Avoid aerosol generation**
 - » No ultrasound during professional teeth cleaning, but use manual instruments
 - » Multifunction syringe only with air or water (no air-water spray)
 - » No turbine, but low-speed operation
- Optional: oral antisepsis (e.g. hydrogen peroxide for 30 sec. particularly for measures in the mouth)
- Optional: Use dental dam

Recalling patients for professional teeth cleaning and/or supportive periodontal treatment (including, and in particular, for implant patients; PBI) is an integral part of maintaining oral and dental health or detecting infections at an early stage. Such measures play a very important and crucial role particularly in compromised patients, regardless of the corona pandemic (e.g. bisphosphonate patients). However, very strict criteria must be satisfied here, since the dental practitioner is not present and therefore the responsibility rests solely with the hygienist. It is advisable therefore, to discuss and determine the respective course of action to be followed in each individual practice.

In addition to these tips for the practice team, an information leaflet is also available for your dentist that also deals with the subject of treatment urgency.

Discuss the tips in this information leaflet and any other recommendations with your team.

One important point to conclude: All these recommendations are constantly changing and will need to be updated in line with the prevailing circumstances. We shall make every effort to keep you up to date.

Thank you for your commitment to what is best for your patients and stay healthy!

Dear patient,

The following information is designed to enable you to assess, more effectively and reliably, the general situation regarding imminent treatments with your dentist, specialist or surgeon in the time of the corona pandemic. This is important because the wealth of complicated, occasionally confusing, and even apparently contradictory information has caused, and still causes, uncertainty and anxiety.

At a very early stage, the virologist Professor Christian Drosten MD, Charité Berlin (GER), highlighted the three key points in dealing with this pandemic:

- a. Around 70 % of the population (i.e. well over 55 million virus carriers in German!) would need to be infected before herd immunity occurs.
- b. The rate of spread of this infection must be slowed down because otherwise our hospitals will be hopelessly overloaded with the rapidly growing number of severe progressions.
- c. The most effective way of achieving this is to avoid the droplet infections that occur during human interactions.

In light of these facts, it is understandable that hospitals throughout Germany and in other countries have significantly increased, and in some cases even multiplied, their intensive care capacities. To this end, anesthesia teams have been withdrawn from the central operating rooms in large numbers and been assigned to intensive care units. When shutting down the central ORs, the primary aim was not to avoid infections but to create intensive care capacities. On the other hand, the disadvantages as a result of refraining from, or postponing, hospital procedures very quickly became clear in hospitals, since treatment delays are often associated with health risks for the patients concerned.

Since some have even talked about closing down all dental practices completely in the pandemic situation, the following questions arise for you as the affected patient:

1. Is it advisable to create capacities for seriously ill patients by refraining from dental treatments?

Certainly not, since the staff and equipment available in a dental practice cannot be used for treating COVID-19 patients.

2. What is your risk, as a patient, of contracting the virus during a visit to the dentist?

The risk is manageable since the following rules have already been observed for a long time and new ones added:

- The basic hygiene regimen that has been established in the treatment room for many years serves as a highly effective infection barrier! For many years there have been no reports of infections with other known serious viral illnesses (hepatitis C, HIV, Ebola etc.) – either in patients or among treatment teams!
- This basic hygiene during visits to the dentist has now been extended to other areas: From dispensing with a welcoming handshake to wearing a face mask during consultations.
- Besides, general distancing rules on entering the dental practice and in the reception and waiting area are highly recommended and are generally implemented.
- Virus-positive patients and actual suspected cases are identified over the phone before the patients visit the practice and referred to specialist facilities that are equipped to deal with them. They are not treated together with healthy patients!



3. Can drawbacks arise for you as a result of refraining from or delaying treatment?

Yes, in fact considerable harm to your health can even result from an ill-advised delay in treatment. The range of indications cannot simply be divided into "emergencies" and "things that can wait".

- It is universally agreed that emergencies (acute inflammation, accidents, injuries, etc.) need to be treated promptly, and centers for dealing with suspected corona cases are available for this purpose.
- Aside from the easily identifiable emergencies, there is a spectrum ranging from "urgent", via "unpostponable" to "postponable" treatments.
- "Urgent" indications exist if you, as the patient, experience chronic infections, which can then lead to a deteriorating situation locally (spread of the infection, damage to adjacent teeth, involvement of the maxillary sinus, etc.). If you have systemic underlying illnesses (diabetes, heart disease, etc.), serious harm can even result if the bacteria enter the circulation.
- "Unpostponable" indications exist if e.g. multi-stage and time-consuming procedures for restoring chewing function are in progress, and the success of the whole treatment is linked to the timely completion of the respective measure. In such cases, simply waiting or delaying treatment can result in damage to the rest of the teeth and disadvantages in healed jaw sections.
- While "postponable" indications also exist of course, these assume that you are not currently experiencing symptoms and that your dentist has performed a detailed analysis.

Your dentist is specialized in weighing up the advantages and disadvantages in these turbulent times. The ever present pandemic issue naturally leads to fears, but these understandable fears should not prompt us to make the wrong decisions. With all the restrictions on public life (contact ban, etc.), it is important for very close intervals of time to be stipulated. But for all dental and medical outpatient treatments, the pandemic issue will certainly be with us for many months before spontaneous (herd) immunity occurs or the public are vaccinated. Refraining from all medically necessary dental treatments cannot be recommended at this time.

4. What can you do yourself to avoid infection?

Managing the general infection risks has been the topic of an unprecedented public information campaign and thus become common knowledge almost everywhere. Please continue to follow these recommendations to the letter – including during visits to your dental practice:

- Wear a face mask when using public transport to travel to and from the practice.
- Phone your dental office sufficiently in advance to let them know of any existing symptoms of illness. The subsequent course of action can then be decided jointly.
- Always cough and sneeze into a disposable tissue or your elbow. And remember: Not every cough or sneeze is grounds for suspecting that you have the virus; it could also be the result of allergies or swallowing.

Separate information leaflets summarizing the most important aspects for ideal treatment in these pandemic times have been produced for your dentist and the whole practice team. Talk about this subject calmly with your trusted dental team and seek their advice in all matters relating to your oral health.

Stay healthy!



Professor Knut A. Grötz MD, DDS, PhD (GER)

Oral and maxillofacial outpatient clinic Burgstraße & Director of the OMF surgical dept. of HELIOS HSK Wiesbaden

From 1981	Studied human medicine and dentistry, as well as philosophy (basic course) at the Johannes Gutenberg University, Mainz.
1986	Doctorate in dentistry and, in 1992, doctorate in medicine
1991	Dentist specialized in oral surgery
1995	Specialist in oral and maxillofacial surgery Additional titles and certified specialist activities (SAs): <ul style="list-style-type: none">• Homeopathy (1997)• Plastic surgeries (1999)• SA Implantology (2001)• Ultrasound seminar leader, head-neck section, DEGUM Stage III (2001)• Speaker at the consensus conference in implantology of the associations BDZI, DGMKG, BDO, DGI, DGZI (2002)• SA Functional diagnosis/treatment (2004)• Specialist subject "Digital volume tomography" (2007)
1999	Habilitation, Venia legendi and lecturer at the University of Mainz; extracurricular professor
2000 - 2005	Research associate and senior physician at the Univ. Hospital for OMF Surgery, Mainz (Prof. Wagner)
2000	Miller Prize of the DGZMK
2001	Siebert Prize of the Childhood Cancer Research Foundation
1999 - 2013	Editor of the International Poster Journal for Dentistry and Oral Medicine (IPJ)
from 2002	Scientific advisory board of the journal <i>Deutsche Zahnärztliche Zeitschrift</i> (DZZ)
2004 - 2016	Secretary of the Hessen branch of DGI e.V.
from 2012	Fellow of the International Team for Implantology (ITI)
2015 - 2018	Vice-President of the German Association of Oral Implantology (DGI e.V.)
from 2018	President of the German Association of Oral Implantology (DGI e.V.)



Priv.-Doz. Eik Schiegnitz MD, DDS, PhD (GER)

2003 - 2009	Studied human medicine at the Justus-Liebig University Giessen and the University of Lausanne, Switzerland
2005 - 2008	Studied health economics at the SRH Mobile University Riedlingen, Qualifications: Graduate in health economics (FH/HB)
2010 - 2013	Studied dentistry at the Johannes Gutenberg University, Mainz.
since 2012	Research associate at the Clinic for Oral and Maxillofacial Surgery Mainz
2013 - 2015	Lead author on the updating of the S3 Guideline "Implant provision for oral rehabilitation in connection with head-neck radiotherapy"
2015 – 2019	Speaker at the Youth Forum of the German Association for Oral and Maxillofacial Surgery (DGMKG) and board member of the Science Working Group of the DGMKG
since 2015	Lead author on the updating of the S3 Guideline "Antiresorptive-associated necrosis of the jaw"
since 2018	Guideline representative of the German Association of Oral Implantology (DGI e.V.)
since 2017	Lead author of the consensus conference of the International Team for Implantology (ITI) on the use of reduced-diameter (narrow) dental implants
since 11/2018	Specialist activity: Implantology at the consensus conference on implantology
since 02/2019	Elected member of the International Team for Implantology (ITI Fellow)
06/2019	Science Prize (formerly Martin-Waßmund Prize) of the German Association for Oral and Maxillofacial Surgery (DGMKG)
since 09/2019	Board member of the DGI (German Association of Oral Implantology) Rhineland-Palatinate branch
11/2019	Habilitation and Venia legendi in Oral and Maxillofacial Surgery



Please note that governmental directives prevail over these recommendations. Please also note that these recommendations may evolve over time. Make sure to always use the most recent version and to keep yourself updated on any news, updates etc. These recommendations are based on the guidance given by governmental agencies aiming at protecting you, your employees and your patients. However, these recommendations do not give any guarantee that infection or transmission of the Coronavirus is in each and every case avoided. No entity of the Straumann Group shall be liable for any damages, costs, expenses etc. related to or arising from any guidance or recommendation given in this document.

International Headquarters

Institut Straumann AG

Peter Merian-Weg 12

CH-4002 Basel, Switzerland

Phone +41 (0)61 965 11 11

Fax +41 (0)61 965 11 01

www.straumann.com

© Institut Straumann AG, 2020. All rights reserved.

Straumann® and/or other trademarks and logos from Straumann® mentioned herein are the trademarks or registered trademarks of Straumann Holding AG and/or its affiliates.

straumanngroup