

# digital

international magazine of digital dentistry



## study

Digital workflow for colour verification

## case report

Magical All-on-4

## interview

“The future is certainly looking bright”



Dentsply Sirona does not waive any right to its trademarks by not using the symbols " or "™. 32671944-USX-2106 © 2021 Dentsply Sirona. All rights reserved

## Digital Implant Workflow

# Streamlined collaboration for your treatment team

From data capturing, planning and guided surgery to the final restorative solutions, with the Digital Implant Workflow from Dentsply Sirona you have all the support you need to save time, deliver predictable results and provide your patients with the best possible care.

[www.dentsplysirona.com](http://www.dentsplysirona.com)

Follow Dentsply Sirona



[dentsplysirona.com](http://dentsplysirona.com)



**Dr Scott D. Ganz**

Editor-in-Chief



# The **awakening**

**There are indications** that the COVID-19 pandemic has started to retreat, allowing many countries around the globe to awaken from the restrictions that have bound us to our homes, forced us to social distance and hindered the normal human experience. Thanks to the administration of tens of millions of doses of vaccines, great numbers of people can enjoy some level of protection from this deadly virus. Many countries have either opened their borders or plan to soon while lifting many of the limitations that have prevented us from travel, separated families and curtailed live in-person educational meetings around the globe. Fortunately, continuing education programmes have restarted, and many courses and symposia have sold out owing to huge pent-up demand by clinicians, who need this especially important personal interaction to enhance their knowledge and skill set, a need that online Zoom sessions were not able to fulfil.

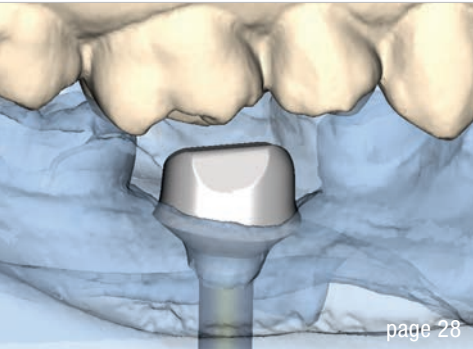
During the pandemic, social media became a major focus of our attention to keep track of friends, relatives and colleagues around the globe. Many lecturers, educators and authors were able to utilise the forced time constraints of everyday practice to continue to develop excellent content to eventually share in the form of webinars, articles, textbooks, videos, etc. So, despite the shutdowns of our clinical practices and constraints on our ability to lead normal lives, people have been productive and communicative throughout the past year and a half. Hopefully, clinicians have also had the time to sit in front of their

computers, smartphones or tablets to learn about different concepts, techniques and treatment modalities that were presented online via a variety of platforms.

Currently, we are awakening from the depths of the pandemic and are anxious to get back to work, exploring all the opportunities to deliver improved care for our patients. Whether for a single-tooth restoration or a full-arch guided solution, a simple sinus bump procedure or a lateral sinus augmentation, a socket shield or a socket preservation, a particulate bone graft or harvesting cortical bone from the ramus, there are both analogue and digital solutions available for successful treatment outcomes. As in-person courses and larger symposia are becoming a reality once again, practitioners will have the opportunity to expand their knowledge base and interact with peers for meaningful discussion and debate. Education will always be the foundation for success.

This most recent edition of **digital** presents excellent content delivered from some of the finest practitioners and educators, who have documented clinical case presentations, research and important treatment modalities in our continued efforts to serve as a global platform and resource for our readership. Enjoy and be safe.

Dr Scott D. Ganz  
Editor-in-Chief



Cover image courtesy of Chesky/Shutterstock.com



<b>editorial</b>	
The <b>awakening</b>	03
Dr Scott D. Ganz	
<b>practice management</b>	
The COVID-19 practice manager 2021: <b>Four steps to confidence—Part 2</b>	06
Chris Barrow	
<b>opinion</b>	
“You cannot push <b>people into digital dentistry</b> ”	08
An interview with Prof. Markus Blatz	
<b>trends &amp; applications</b>	
<b>Slow(er) dentistry</b> in times of extra-fast <b>digital technologies</b>	12
Dr Gertrud Fabel	
<b>study</b>	
<b>Digital workflow</b> for colour verification of indirect anterior <b>restorations</b>	16
Dr Les Kalman	
<b>case report</b>	
<b>Magical All-on-4</b>	22
Dr Stanko Miletic, Dr Ivan Miletic & Pavel Metelka	
<b>Achieving anatomical shape, support and colour with an Atlantis patient-specific</b> abutment in gold-shaded titanium: A case report	28
Dr Fernando Rojas-Vizcaya	
<b>industry report</b>	
<b>Individual PEEK healing abutments</b> and impression copings	30
By Camlog	
<b>KATANA Zirconia—the science behind</b> superior product properties	34
Mathias Fernandez y Lombardi	
<b>feature</b>	
“ <b>I would love to inspire</b> more women to get involved <b>in digital dentistry</b> ”	38
An interview with Dr Alison Simpson	
<b>news</b>	
<b>New report</b> addresses <b>equality, diversity and inclusion in dentistry</b>	41
“ <b>There must be academic proof that (...)</b> digital dental tools are really reliable”	42
<b>interview</b>	
“ <b>The future is</b> certainly looking <b>bright</b> ”	44
An interview with Heikki Kyöstiä	
<b>industry news</b>	
<b>EU wakes up to</b> new medical device <b>regulations</b>	47
<b>Dentsply Sirona and 3Shape</b> announce strategic <b>partnership</b>	48
<b>3Shape Automate: Redefine your approach</b> to digital design	50
<b>manufacturer news</b>	52
<b>meetings</b>	
MIS announces <b>new dates</b> for its <b>fifth global conference</b>	54
<b>International</b> events	56
<b>about the publisher</b>	
submission guidelines	57
international imprint	58

A NEW ERA OF IN-HOUSE PRODUCTION

**ceramill® CAD/CAM**



**zi**

Low translucent zirconia  
**INDIVIDUAL ESTHETICS**



**zolid gen-x**

High translucent zirconia  
**UNIVERSAL ESTHETICS**



**zolid fx**

Super-high translucent zirconia  
**MAXIMUM ESTHETICS**

THE PERFECT COMBINATION FOR HIGHEST PERFORMANCE,  
ENDLESS INDICATION VARIETY AND MAXIMUM COMFORT.

**ceramill® matik**

**zolid**  
DNA GENERATION

Online lecture:

TIME IS ON YOUR SIDE - HOW THE CERAMILL MATIK  
CAN IMPROVE YOUR DAILY DENTAL ROUTINE



Hansgeorg Kaul  
AG Product Management



Thomas Gienger  
AG Trainer



Watch now for free.

<http://bit.ly/MatikAGLiveCON>

Online lecture:

ZOLID DNA GENERATION – ONE CAD/CAM  
MATERIAL PORTFOLIO FOR EVERYTHING



Markus Bröder  
Amann Girschbach



Benjamin Votteler  
Dentaltechnik Votteler



Watch now for free.

<https://bit.ly/3v6zMF>



[show.aglivecon.digital](http://show.aglivecon.digital)

Amann Girschbach AG  
Tel +43 5523 62333-105  
[www.amanngirschbach.com](http://www.amanngirschbach.com)

# The COVID-19 practice manager 2021: Four steps to confidence—Part 2

Chris Barrow, UK



Business author Michael Gerber expanded on this in his award-winning 1995 book, *The E-Myth Revisited*. By sharing with his readers a parable—the story of Sarah’s pie shop—Gerber was able to demonstrate that every business employs five basic management systems (with my dentistry examples):

- marketing systems—the way you get new patients in the door;
- patient journey systems—the way you care for and sell treatment to your patients;
- financial systems—the way you measure and analyse the money that flows through your business;
- operational systems—the way you make sure that things work and are compliant; and
- team systems—the way you hire, train, appraise, pay, promote, discipline and remove your people.

The role of the practice manager as head of systems is to ensure that all of these systems are in place and are followed to the letter—because if you do that, success follows.

## Introduction

I promised you a series of articles specifically for practice managers as we move into the post-pandemic environment, to cover:

- leadership;
- management;
- teamwork; and
- extreme self-care.

In the first part of this series, we looked at the characteristics of great leadership and how this applies to the role of the practice manager. We discussed the communities who look to you for guidance; answers to some common FAQs from practice managers; your personal manifesto; the Karpman Drama Triangle; the Courtesy System; and *The Chimp Paradox*—overall, what it takes to be a leader, even when you do not feel like one (most of the time—as great leaders will tell you).

## Management

The economic pundits suggest that franchises are the most successful business model in history, measured by financial return on investment. Franchises make more money because they are designed to create simple and repeatable systems which, if followed, will ensure success.

Would it not be great if I could say so off you go then and finish this article now? Sadly, it is rarely that simple. What gets in the way? If a system is the wrong system, you will soon find out. That is why it is essential to have your systems constantly under review.

Think about how many systems became defunct after lockdown 1.0 and had to be adapted to our new working environment. The ability to change course quickly when external factors change is called “pivoting”, and it is a sign of an agile business when it can pivot quickly. Many of us have learned all about pivoting and agility in the last 15 months. Those who have not are in trouble. As a manager, you have to equally be aware of internal changes in your business, whether systemic or the people you hire, and exercise the same degree of agility in changing course (or crew) should it be necessary.

For many years now I have shared a monthly management meeting agenda with my clients as a template for the questions they should be able to answer on a regular basis. Imagine this as a sea vessel taking a positional reading in order to determine whether it is on course. As you work through this agenda, ask yourself whether you have this information to hand and/or how quickly

you could lay your hands on it and whether you review this information with the practice owners at least monthly.

### Marketing

1. Overall progress of annual marketing plan
2. Website review and analytics
3. Online reviews
4. Social media connection and engagement
5. Word-of-mouth patient referrals
6. Testimonials collected
7. Review of any advertising
8. General dental practitioner referral development (where relevant)
9. Return on investment from marketing spend
10. Treatment Co-ordinator (TCO) conversion statistics

### The patient journey

1. Efficiency of online booking systems
2. Front of House (FOH) and telephony review of FAQs
3. Treatment Co-ordinator (TCO) analysis:
  1. Treatment delivered
  2. Pipeline management
  3. Patient referrals
4. End-of-treatment reviews
5. Membership plan sign-ups

### Financial

1. Review of profit and loss statement for previous month and year to date
2. Twelve-month cash flow—comparison of budget versus actual
3. Analysis of key performance indicators against industry benchmarks
4. Average daily production of all fee earners
5. Profitability of fee earners

### Operational

1. Clinical issues
2. Non-clinical issues
3. Operational issues
4. Governance and compliance
5. Clinical mentoring

### Team

1. Review of overall team performance
2. Review of individual team members
3. Review of compensation systems
4. Review of daily huddles
5. Schedule of team meetings ahead
6. Training issues
7. Personal progress interviews

### Strategy

For the sake of completeness (although not directly rated to this article), I would also add that practice managers should be invited to share their opinions on the overall

strategic direction of the business—matters such as tactics for growth and market positioning moving forward.

As Gerber suggests in *The E-Myth Revisited*, even if you only ever trade from one location, you should build systems that are so robust and automated that you could safely open other practices, drop the systems into place and be rest assured that things would get done effectively and efficiently. Over the years, I have invested many hours in helping clients to build these systems and then train the team to operate them. Once my initial work is done, it becomes the remit of the practice manager to ensure their continuity.

### The post-pandemic landscape

I am the first to admit that adherence to systems during the pandemic has been an order of magnitude more difficult than at any time previous. COVID-19 threw all of our systems in the shredder for a good while; we became the ultimate Zen businesses, living in the now and reacting on a daily basis to whatever was thrown at us.

My admiration for those who have survived this period knows no bounds. I have had many a conversation with long-suffering practice managers who have burned their candle at both ends and in the middle. But as I write this article at the very end of April 2021, I have a real sense that the world is slowly coming back to life and that, as lockdown eases, we shall see a return to that much quoted “new normal”. It will never be the same as the world we left behind in 2019, but I do believe that we have learned many valuable lessons, both personally and professionally, along the way. Perhaps personally, we have learned to appreciate family, friends and fresh air. Perhaps professionally, we have learned that we are capable of much more than we imagine.

We must take the opportunity now to return to a systematic approach to business delivery, leaving little to chance and making sure that we are on course. The practice manager is the principle navigator in this.

In Part 3, I would like to visit the subject of teamwork: what makes an ideal team player and an ideal team, and how does the practice manager find and keep the right people?

### about



**Chris Barrow** has been active as a consultant, trainer and coach to the UK dental profession for over 24 years. His main professional focus now is through his Extreme Business company, providing coaching and mentorship to independent dentistry around the world via face-to-face meetings, a workshop programme and an online learning platform.

# “You cannot push people into digital dentistry”

An interview with Prof. Markus Blatz, chair of the Department of Preventive and Restorative Sciences

By Iveta Ramonaite, Dental Tribune International



Prof. Markus Blatz has always been excited about technological advancements in dentistry. However, he only uses dental technology when it is evidence-based and provides a true benefit for the patient.

**It is safe to say** that Prof. Markus Blatz has dedicated his life to the furthering of clinical and theoretical knowledge in order to advance dentistry. His passion for the dental profession is unmistakable and can be seen in his numerous degrees, professional awards and academic publications, among other achievements. In his current role, Blatz serves as chair of the Department of Preventive and Restorative Sciences and assistant dean for digital innovation and professional development at the University of Pennsylvania School of Dental Medicine in Philadelphia, US, where he founded the Penn Dental Medicine CAD/CAM Ceramic Center and is leading the Digital Innovation Initiative. In this interview, he discusses all things digital dentistry, including the CAD/CAM workflow, 3D printing and the use of artificial intelligence (AI).

**Prof. Blatz, you’ve dedicated a large part of your life to dentistry and have received numerous teaching and research awards. What inspired you to start using digital technology in your clinics, and how happy are you with the results?**

Innovative clinical protocols, new technologies and advanced treatment concepts that have a positive impact on patient care have always been at the center of my work, going back to my time at the University of Freiburg in Germany. A strong quest for clinical excellence and an excitement about new technological developments and materials, paired with a deep passion for teaching and research, motivated me to engage in digital dentistry and material research early on. However, I am not someone who always has to have the “latest and greatest” tools out there. For me, these tools need to provide





Dental students at the university are required to gain an in-depth experience with CAD/CAM technologies, and they happily embrace digital tools.

a true benefit for our patients and have at least some scientific support.

Current digital workflows, including intra- and extra-oral scanners and chairside and laboratory-based CAD/CAM systems, have reached a level of quality as good as or even better than conventional ones. Quality, accuracy and precision of fit achieved with digital tools are excellent and undergo constant improvements. Another key argument is the enhanced patient experience, for example, through intra-oral scanning, digital smile design or in-office restoration fabrication. Just ask patients which impression technique they prefer: digital or conventional rubber impressions. Also, using a scanner allows the rescanning of irregularities without having to remake the entire impression.

**You are leading the Digital Innovation Initiative at the University of Pennsylvania’s School of Dental Medicine. Could you tell us a bit about the initiative and your role in it?**

As chair of the Department of Preventive and Restorative Sciences, I am responsible for the entire preclinical, clinical and postgraduate education in operative dentistry and prosthodontics. We are teaching a comprehensive care model that embraces all aspects of modern restorative dentistry, from caries control to complete dentures and implant-supported reconstructions. In my role as assistant dean for digital innovation, I developed and implemented a school-wide strategic plan for integrating new technologies

in clinics, preclinical education, dental laboratory technology and research.

I believe that having experts in some central leadership positions is key to success. Soon after I had joined Penn Dental Medicine (PDM) in 2006, we hired a master dental technician from Germany who had extensive experience in CAD/CAM technologies. Together, we founded

“The COVID-19 pandemic has given digital dentistry, especially chairside restoration fabrication, a great boost.”

the Penn Dental Medicine CAD/CAM Ceramic Center, which is a unique industry-supported venture that focuses on digital planning, workflows and materials in dental laboratory technology. The appointment of a clinical CAD/CAM director to lead the training of students, residents and faculty with chairside CAD/CAM technologies has ensued more recently.