#### **FOREWORD**

## Dear esteemed colleagues,

It is a great honor for us to have an opportunity to publish the very first and foremost journal. Thousands of miles are usually started with first step for very long journey. We hope this is just beginning which will remain as historical milestone and it also makes a history. As UDM-Yangon is a unique place where opportunities await for students, we have a great passion to create opportunity for them and we would like to also share the knowledge to all dental professionals which way we are heading and what we are doing. Myanmar has tremendously changed since 2015 November and although it is striving like a candle in the wind, we can see some smooth transition especially in dental health sector in compared with last one to two decades. Fortunately, Ministry of Health and Sports allowed more and more implementation grants for doing basic, clinical and public health researches so that our Faculty staff can conduct advanced clinical researches in collaboration with Department of Medical Research. Hopefully, this journal can provide some comprehensive dental education concepts and research works based on digital dentistry to our professional colleagues. My heartfelt thanks and sincere warmest appreciation are extended to all who put their sustainable effort and who were also the parts of brick and grains of the sand to develop this journal without which our dream could not be materialized.

Professor Shwe Toe Rector University of Dental Medicine, Yangon

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# JDS Editorial Towards Gorgeous Future by Digital Dentistry

Evolution towards digital dentistry is a dynamic process, which updates the dental profession in this modern world. The digital technology in today dentistry is beneficial for an efficient processes, as well as accurate high-strength materials for overall patients' needs by replacing outdated management. A variety of digital devices such as intraoral and face scanners, cone beam computed tomography (CBCT), software for computer-assisted design/computer-assisted manufacturing (CAD/CAM), and 3D printing give best evidence for the new and superior technologies to replace the manual tasks.

Digital dentistry has several benefits, including accurate measurements, data storage, information sharing and time-saving. In addition, online consultation and presentation collectively known as teledentistry, provides information exchange with local and international institutions for planning and appraising management according to the feedback or opinion from a specialist. Teaching institution and research centers are greatly benefited from digital innovations, with software for teaching dentistry (such as 3D software for learning anatomy or 3D simulation programs for surgical procedures), digital archiving of patient records and instance sharing of digital files over the internet, digital bibliographic assistance in dental research, or other utilities.

An intraoral scanning (IOS) is a chair-side probe/wand, which introduced into a patient's oral cavity and taking copious amounts of pictures and compiling those pictures together to create three dimensional images. When the scanner is used to collect the data from conventional cast model and that hybrid technique is known as an extraoral scanning (EOS). Advantages of IOS are faster and efficient to create the details of patients' oral cavity, help to reduce the errors caused by discomfort. And less in chair side time makes the patients happier and it gains the trust of patients to the dentist thus obtaining better patient dentist relationship. Now in Myanmar, both IOS and EOS are popular among dental practitioners.

Besides, scanners are not restricted to intraoral probes; they could be used with cone beam computed tomography (CBCT), which can produce undistorted three-dimensional information of the maxillofacial skeleton with a lower radiation dose. For instance, CBCT and IOS with implant planning software possible to makes the surgical procedures in replacement of missing teeth. More than that, use of CBCT is able to prove accurate documentation of oral characteristics, such as odontogenic cysts and tumors.

CAD/CAM in dental technology is currently used as a synonym for prostheses produced by 'milling technology'. All CAD/CAM systems consist of three components: a digitalization tool/scanner that transforms geometry into digital data that can be processed by the computer, software that processes data;

### **Editorial**

depending on the application, produces a data set for the product to be fabricated and the last, production technology that transforms the data set into the desired product. Moreover, CAD and 3D printing technology are also useful for fabrication of orthodontic appliances and clear aligners.

In coming years, there will be a further improvement with newly introduced materials and devices. Especially, the digital era has begun to change the world of dentistry, changing patients' expectations towards dental treatments. Therefore, dental professionals need to change the way of thinking, communicate, and work to adapt to a new challenging scenario for patient care, dental research and education.

Editorial Board Journal of Dental Science - UDMY