HEALTH CARE | OMS

Health Care Digital Strategy: Designing the New Norm

Evangelos G. Kilipiris[a,*]

ABSTRACT

The time has arrived when oral and maxillofacial surgery (OMS) teams must redesign patient care by offering high-quality, easy, and cost-effective virtual care services through digital tools and telemedicine. Only a few pilot programs have been established to date, but now, the new norm requests large-scale routine services. The healthcare institutions should build this strategy based on their long-term goals. A prime example of its successful implementation is our unit at the National Institute of Children's Diseases (Bratislava, Slovak Republic), where a reliable telemedicine program was implemented for the outpatient follow-up visits of patients operated on for craniosynostosis. This program was instrumental in maintaining the long-lasting and high-impact character of craniosynostosis care during the coronavirus disease 2019 (COVID-19) crisis. The parents of the children were surveyed to evaluate the new program's effectiveness. The results were overwhelmingly positive, with an overall parental satisfaction rate of 72.3% and a 67.2% convenience rate for the services. The returned questionnaires revealed that 79.3% of parents were satisfied with physicians' communication, and 88.7% agreed that the virtual meetings adequately addressed their clinical needs. Moving forward, healthcare centers and physicians should organize their time and resources to experiment with the rapidly growing list of digital tools. The organizations should prioritize adapting their clinical information technology (IT) systems for optimal telemedicine practices. With the rapid technological advancements, new digital clinical systems should incorporate the capabilities of generative artificial intelligence (AI) in sophisticated virtual systems. This will require an even closer collaboration between clinicians, scholars, allied healthcare providers, healthcare leaders, and digital system designers. It is clear that in today´s complex healthcare ecosystem, the present and future of care delivery is digital. Will modern OMS teams adopt these strategies? It is something that all of us anticipate with huge interest.

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Healthcare; oral and maxillofacial surgery (OMS); coronavirus disease 2019 (COVID-19); telemedicine; artificial intelligence (AI); clinical information technology (IT) systems; digital clinical systems; healthcare providers

The time has arrived when oral and maxillofacial surgery (OMS) teams must redesign patient care by offering high-quality, easy, and cost-effective virtual care services through digital tools and telemedicine. Only a few pilot programs have been established to date, but now, the new norm requests large-scale routine services [1].

However, this change is very challenging. It requires a mind shift of trained healthcare professionals and hospitals organized to offer in-person activities. Beyond that, this will happen with little formal training, imperfect technology tools, and insufficient data [1].

For this reason, healthcare institutions should build this strategy based on their long-term goals. A prime example of its successful implementation is our unit at the National Institute of Children's Diseases (Bratislava, Slovakia), where a reliable telemedicine program was implemented for the outpatient follow-up visits of patients operated on for craniosynostosis. This program was instrumental in maintaining the long-lasting and high-impact character of craniosynostosis care during the coronavirus disease 2019 (COVID-19) crisis. The parents of the children were surveyed to evaluate the new program's effectiveness. The results were overwhelmingly positive, with an overall parental satisfaction rate of 72.3% and a 67.2% convenience rate for the services [2]. The returned questionnaires revealed that 79.3% of parents were satisfied with physicians' communication, and 88.7% agreed that the virtual meetings adequately addressed their clinical needs.

Another potential benefit is improved access to healthcare for patients, as telemedicine programs can create exact schedules and timetables for outpatient examinations. It can also improve access for healthcare professionals to reach outpatient interactions because it can free up time for physicians to see new and more complex cases in person and move routine postoperative visits out of the hospital.

Digital strategies go beyond OMS. In a large randomized remote blood pressure monitoring study conducted by Brigham Health and Massachusetts General Hospital (Somerville, Massachusetts, United States of America), the team enrolled 3,658 patients with hypertension from diverse populations. Analysis of their results revealed that a standardized remote blood pressure management program may help optimize guideline-directed therapy at scale, reduce cardiovascular risk, and minimize the need for in-person visits [3]. Such data are essential for the future deployment of virtual programs because they provide tangible evidence of benefits and will act as the primary driving force to convince more clinicians and institutions to evaluate patients virtually with digital health tools.

By implementing virtual care programs, healthcare institutions should establish performance studies to measure the success of their virtual programs. To achieve this goal, physicians and hospitals should partner with academic medical centers and peer-reviewed journals with extensive online experience to conduct randomized trials of their efforts and publish the results. We need better and longer-scale data to understand the actual effectiveness of virtual healthcare technologies. During its evolution, the *Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology* has heavily invested in new digital scientific technological solutions [4]. A notable transition to a printable digital journal was a sound confirmation of the journal's online comprehensive strategy [5].

Moving forward, healthcare centers and physicians should organize their time and resources to experiment with the rapidly growing list of digital tools. Based on the novel environment these devices and applications have created for many clinicians and health providers, the added work looks challenging if we count the limited time that healthcare providers have. For this reason, a valuable option for the departments and institutions will be to incorporate non-clinician providers in building new telemedicine programs to deliver comprehensive virtual care. By expanding the virtual care team, physicians will be able to focus solely on the clinical work of the digital care system.

Targeted education and carefully designed training programs for digital health specifically implemented for clinicians and allied digital care providers are crucial elements of the whole process. In constructing

telemedicine programs, institutions should clearly determine each stakeholder's role in meeting the increasing patient needs by offering convenient and efficient online healthcare services.

Finally, organizations should prioritize adapting their clinical information technology (IT) systems for optimal telemedicine practices. These changes should be implemented carefully and effectively to avoid new errors, especially at the beginning of their implementation. The outcomes of these new systems should be closely monitored. The new capabilities these IT systems will provide should be incorporated as part of the broader digital strategy, establishing effective online work processes that ensure patient safety and improve service quality and outcomes [6]. With the rapid technological advancements, new digital clinical systems should incorporate the capabilities of generative artificial intelligence (AI) in sophisticated virtual systems. This will require an even closer collaboration between clinicians, scholars, allied healthcare providers, healthcare leaders, and digital system designers.

It is clear that in today´s complex healthcare ecosystem, the present and future of care delivery is digital. Will modern oral and maxillofacial surgery teams adopt these strategies? It is something that all of us anticipate with huge interest.

CONFLICT OF INTEREST

The author declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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UKRAINIAN LANGUAGE

Цифрова стратегія охорони здоров'я: розробка нової норми

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АНОТАЦІЯ

Настав час, коли бригади оральної та щелепно-лицевої хірургії (ОЩЛХ) повинні переосмислити допомогу пацієнтам, пропонуючи високоякісні, прості та економічно ефективні послуги віртуальної допомоги за допомогою цифрових інструментів і телемедицини. На сьогоднішній день було створено лише кілька пілотних програм, але тепер нова сучасна норма вимагає широкомасштабних регулярних послуг. Заклади охорони здоров'я повинні будувати цю стратегію, виходячи зі своїх довгострокових цілей. Яскравим прикладом успішного впровадження такої стратегії є наше відділення в Національному інституті дитячих хвороб (Братислава, Словацька Республіка), де впроваджено надійну телемедичну програму для амбулаторного спостереження пацієнтів, оперованих з приводу краніосиностозу. Ця програма відіграла важливу роль у збереженні тривалого та високоефективного характеру лікування краніосиностозів під час кризи, викликаної коронавірусом 2019 року (COVID-19). Для оцінки ефективності нової програми було проведено опитування батьків дітей. Результати були надзвичайно позитивними, із загальним рівнем задоволеності батьків 72,3% і 67,2% рівнем зручності послуг. Повернені анкети показали, що 79,3% батьків були задоволені спілкуванням з лікарями, а 88,7% погодилися, що віртуальні зустрічі адекватно задовольняли їхні клінічні потреби. Надалі медичні центри та лікарі повинні організовувати свій час і ресурси таким чином, щоб експериментувати зі списком цифрових інструментів, який швидко зростає. Організаціям слід приділити пріоритет адаптації своїх систем клінічних інформаційних технологій (IT) для оптимальної телемедичної практики. Завдяки швидкому розвитку технологій нові цифрові клінічні системи повинні включати в себе можливості генеративного штучного інтелекту (ШІ) у складних віртуальних системах. Це вимагатиме ще тіснішої співпраці між клініцистами, науковцями, суміжними постачальниками медичних послуг, лідерами охорони здоров'я та розробниками цифрових систем. Зрозуміло, що в сучасній складній екосистемі охорони здоров'я сучасність і майбутнє надання медичної допомоги є цифровими. Але чи приймуть ці стратегії сучасні

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команди ОЩЛХ? Це те, чого всі ми очікуємо з величезним інтересом.

КЛЮЧОВІ СЛОВА

Охорона здоров'я; оральна та щелепно-лицева хірургія (ОЩЛХ); коронавірусна хвороба 2019 (COVID-19); телемедицина; штучний інтелект (ШІ); системи клінічних інформаційних технологій (ІТ); цифрові клінічні системи; постачальники медичних послуг