Provision of IoDT in Children and Individuals with Special Health Care Needs in Future

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World Health Organization (WHO) defines the Internet of Things (IoT) as - A system of interconnected computing devices, machines and digital machineries, objects, animals, or people over a network with unique identifiers and capable of transferring data without the need for human-to-human or human-to-computer communication.[1] With worldwide linking of internet service, cloud technology, advanced science incorporation into new generations of smart-phones, tablets with sensors, software, integrated apps IoT can be used in dentistry too in future with purpose of connecting and exchanging data to help patients to track and monitor their diseases continuously on daily basis.

Internet of Dental Things (IoDT) can assist with the early detection, risk assessment, diagnosis, prevention, monitoring, and management of a myriad of oral health problems like caries, oral cancers, and periodontal diseases which are essential for preserving and protecting the health of populations.[2] It's an opportunity to use smart technology to capture behavioral data and use it to improve oral health outcomes.[3]

IoDT in pediatric dentistry can act as a potential futuristic advanced clinical tool incorporating modern technology based models to collect and monitor patients' data and assist in improving oral health behavior, oral hygiene for achieving early detection, prevention and management of oral health problems in children.[4]

In children and individuals with special health care needs (SHCN) IoDT presents a promising avenue to transfer and improve the dental care as they need constant supervision. It can help to increase patient and caregiver's knowledge and awareness for improving oral hygiene. It can be used between parents/caregivers and the pediatric dentist in collecting the data needed, tracking, monitoring, identifying dental issues, treatment progression and compliance making it more convenient and less time consuming where time and accessibility plays a vital role in care system for them.[5]

In future, IoDT may play an essential role in collection and monitoring of data in oral health care system and aid the dentists with developing novel risk assessment

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methods. Researches have been done and IoDT has been used in: Diagnosis—As a Smart Diagnostic Aid, Microbiological Evaluation/Bacterial Detection, Bite Force Measurements, Mouthguard Invaded Biosensors, Smart Toothbrushes, Tooth-Mounted Diet Sensors, smart dental implantology, wearable biosensor systems, teledentistry and artificial intelligence.[6]

Though IoDT has promising future yet there maybe challenges too regarding data security, privacy concerns, standardization with interoperability and even training to professionals for its adaptation and use.[2,7] IoDT with proficient technology, social, and economical prospects can become a boon giving new shape to modern dentalcare system in future.

Conflict of Interest: None

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