STRUCTURE AND UTILISATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES FOR CONTINUING EDUCATION IN TELEDENTISTRY IN BRAZIL

Marcia Rendeiro PhD1, Renata Morais B Nur2

1 Department of Preventive and Community Dentistry (PRECOM), University of the State of Rio de Janeiro, Rio de Janeiro, Brazil
2 Telehealth’s Laboratory- Post-Graduation program in Telemedicine and Telehealth, University of the State of Rio de Janeiro, Rio de Janeiro, Brazil

Abstract
The strengthening of Primary Care and the expansion of the Family Health Strategy have led to the need to offer quality services for health promotion. In this context of reformulation and need for qualification through effective actions of Continuing Education in Health, Teledentistry emerges from Telemedicine, which can be defined as the use of Information and Communication Technologies (ICTs) for the exchange of data and information in health and provision of health services in situations where it is necessary to overcome geographical, temporal, social and cultural barriers. The objective of this study was to identify the existence of equipment in the health units and to verify the use of Telehealth by oral health teams in Brazil. This is an exploratory descriptive study with a quantitative approach, in which secondary data from the 1st Cycle of the Program for Improving Access and Quality in Primary Care for the year 2011/2012 were used. The results indicate that 19,889 (51%) of the health units evaluated have computers and 13,748 (35%) had Internet access. Among the professional dental surgeons evaluated, 254 (76%) noted that there are continuing education activities in their municipality, and they attended, in increasing order, on-site courses 213 (84%), exchange of experience 150 (59%), tutoring and preceptorship 56 (22%), Telehealth 54 (21%), distance learning / Open University of the Unified Health System 51 (20%) and Telemedicine University Network 9 (3.5%). It is concluded that the deficiency in the Brazilian regions in relation to the acquisition of computer equipment and connectivity capable of guaranteeing the use of information technologies becomes an obstacle to the digital inclusion of health professionals and the continuing education actions related to Telehealth.

Keywords: telehealth; teledentistry; continuing education in health

Introduction
The implementation of the Brazilian Health System has led to the need for requalification of health professionals to work in Primary Health Care (PHC). Continuing Education in Health (EPS), using Telehealth as an important tool to address the challenges of decentralisation and diffusion of health in a country with continental dimensions such as Brazil, have been shown to be effective.1 Information and communication technologies (ICT) together with the practice of health professionals, transforms the construction, production and diffusion of knowledge. In the field of Dentistry, Tele-odontology has been growing in recent years, especially with emphasis on interactive tele-education and the production of multicentre research.2 In education, information and communication technologies add a new dimension, influenced by the perception that today's society is globally interconnected, and that our knowledge and world view are always incomplete and changing. We can continually and permanently access any and all information.3

Among the challenges for the expansion and consolidation of tele-odontology is digital inclusion, as health professionals still have difficulties in dealing with information and communication technologies, which may limit access to these tools and, consequently reduce the impact of tele-odontology on health indicators.4 Although much is said about the use of Telemedicine and Telehealth to improve the efficiency
of a health system, and all the benefits they can generate, it should be remembered that the new technologies only obtain their maximum potential when there is a commitment of the human resources in its use and an effective integration between participating institutions, in order to add the efforts to multiply the results. The objectives of this study were to identify the structure of ICTs in health units and to verify the use of telehealth by oral health teams in Brazil.

Methods

This is an exploratory descriptive study with a quantitative approach. Secondary data from the 1st cycle of the Program for Improving Access and Quality in Primary Care (PMAQ-AB) for the year 2011/2012, organised in Excel® Software (Microsoft Office 2010) were used. The observed variables were information related to Module I - Observation in UBS - which delimits the existence of Information Technology Equipment in the country, accessibility and telehealth in health units.

Results

Of the 5,570 municipalities in Brazil, 5,547 municipalities and 38,812 health units joined the first cycle of the PMAQ-AB for the year 2011/2012, that is, 99.5% and 94% respectively. The results of the micro-data from the external evaluation of the 1st cycle of the PMAQ-AB indicate that 51% of the evaluated health units had computers (Figure 1).

In the Southeast and Midwest, the computer stabiliser is the second most common piece of equipment, while in the North and Northeast Regions it is television. In all regions, there was a deficiency in the quantity of speakers, cameras and microphones, a shortcoming in the acquisition of computer equipment capable of guaranteeing the use of information technology. Of the Health Units 13,748 had Internet access, accounting for 35% of health units with Internet access in Brazil.

In Brazil there are 24,631 Oral Health Teams distributed in the health units of which 23,907 Oral Health Teams adhered to the PMAQ-AB, constituting a membership of 97%. Of the 17,202 professionals in the basic care teams evaluated, 333 (1.9%) health professionals were dentists, of whom 254 (76%) emphasised that there is continuing education in their municipality for primary care professionals. Among the actions that the team participates or participated in the last year (2012), 254 professional dentists interviewed attended on-site courses (213), exchange of experience (150), tutoring (56), Telehealth (54), EaD / UnaSus (51), RUTE (9) and another (26).

Of the 333 dentists surveyed, 54 (16.2%) said that the team participates or participated in telehealth during the past year, with 24 of these professionals using Telehealth for second formative opinion, 15 for telediagnostics, 22 for Teleconsulting 15 use it for other reasons.

Conclusions

Information and Communication Technologies have not yet been sufficiently and equally incorporated in the Brazilian regions of the Unified Health System, causing little integration between digital technology and health professionals. Only 51% of the health units had computers and 35% access to the Internet, limiting dental surgeons access Telehealth. It is not possible to see the contributions of telehealth to the qualification of human resources for the SUS. However, in this scenario, the very form of Primary Healthcare organisation is highlighted, which did not define the operationalisation of teleodontology in the practical work process of the family health teams.

Teleodontology, as a new technology, requires computerisation in health services and the institution
of technological culture in a way that provokes cultural changes / paradigms of health professionals in relation to the use of distance education tools in everyday work. For this, it is important to note the development of projects for the informatisation component of Telehealth Brazil Networks in Primary Care by the health managers in order to provide the physical, technological and organisational conditions for the work process of the primary care teams.

The results of this study revealed a deficiency in the provision of information technology equipment in the health units of the North, Midwest and Northeast Regions. Only 35% of health units had access to the Internet which is an obstacle to the digital inclusion of health professionals. To enable and facilitate telehealth actions in health units, it is strongly recommended that good internet connectivity is provided.

Corresponding author:
Marcia Rendeiro
Department of Preventive and Community Dentistry (PRECOM)
University of the State of Rio de Janeiro
Rio de Janeiro
Brazil
Email: mmrendeiro@yahoo.com

Conflict of interest. The authors declare no conflicts of interest.

References