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DICOM Awareness of Oral and Maxillofacial Radiologists in India

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- ◆ **Digital image communication is unlikely if two practitioners use different proprietary imaging software not using a compatible format, principally DICOM. The same problem can be encountered within a single office using digital image acquisition systems from different vendors or even just different generations of detectors or software from a single vendor**
- ◆ **Progress in this direction is less advanced in India. There remains misunderstandings on the benefits of DICOM.**

- ◆ **To determine the use, awareness, and knowledge of DICOM by Oral and Maxillofacial Radiologists in India.**
- ◆ **This survey instrument was approved by the institutional review board of The Nair Dental Hospital, Mumbai, India**

Inclusion criteria:

- ◆ **OMR faculty member or resident, or a private practitioner with a master's degree in OMR and currently practicing OMR.**
- ◆ **Tool validated for reproducibility before using it for collecting study data.**

- ◆ **The participants were recruited during CDE programs, a residents' meeting, and the annual Indian OMR congress.**
- ◆ **500 survey instruments were circulated and 318 responses were received. 16 of these were rejected due to being incomplete.**
- ◆ **Final participant number: 302**
- ◆ **Response rate: 60.4%**

◆ **Sex:**

50.4 %.....Men

49.6 %.....Women

◆ **Age:**

Less than 39 year..... 78.8 %

40 to 49 years..... 18.8 %

50 to 59 years1.9 %

60 years plus.....0.3%

◆ **Of the 302 respondents:**

86.1 % were DICOM users

13.9 % were not DICOM users

◆ **For the 260 DICOM users:**

56.1 % used DICOM for less than 2 years

40.8 % used DICOM for 2 to 5 years,

3.1 % used DICOM for for 6 to 10 years

Modes for receiving DICOM images (Total exceeds 260 DICOM users as some used DICOM in multiple different modes)

Mode of receiving images	Number of respondents
CD, DVD, flash	156
LAN, WAN	89
Internet	38
Web services	1

- ◆ **219 wished to use a different or additional modes for DICOM image interchange.**
- ◆ **71 wished to shift to, or add, LAN/WAN.**
- ◆ **149 wished to shift to, or add internet.**
- ◆ **3 wanted to either add, or change to, CD/DVD/flash removable memory for DICOM transfer.**
- ◆ **None indicated a wish to use web services.**

Imaging modalities used with DICOM:

Imaging modality	Respondent number
MSCT	73
CBCT	26
MRI	49
Ultrasonography	0
Periapicals	51
Panoramic	105

- ◆ **65.4 % stored images in DICOM format.**
- ◆ **DICOM compatible software was used internally by 90.8 % of DICOM users.**
- ◆ **8.5 % used non-DICOM compatible software**
- ◆ **0.8 % used both DICOM compatible and non-DICOM internally**

- ◆ **The reason for 13.9 % of the respondents not using DICOM was given as either not being aware of DICOM or being inadequately trained to use DICOM.**

- ◆ **The reason stated for CD, DVD, or flash being more popular was that other modes like the internet or web services were not readily available at most of these practices.**

- ◆ **Panoramic and periapicals were the most common modalities in which DICOM was used, perhaps simply because they were the most common modalities employed.**
- ◆ **Panoramic and periapicals have been available in digital form in India for some time now, while CBCT has only recently made inroads in India.**
- ◆ **USG as a modality could be viewed in DICOM format....awareness needed.**

- ◆ **In spite of good awareness, still much work needs to be done to ensure optimal use of DICOM by Indian OMRs.**
- ◆ **The Indian oral and maxillofacial radiologists need to be educated on the use of different features of DICOM and the value of DICOM in aiding portability of image information.**

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Thank you for your attention !