Are there guidelines for reporting clinical research findings in oral lectures and seminars in dental meetings?

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IN BRIEF

- Stresses major dental meetings have no specific guidelines for reporting scientific data in oral lectures and seminars.
- Suggests clear recommendations are needed for presenting scientific data in oral lectures and seminars in a systematic and unbiased way to allow the audience to make proper conclusions about the efficacy/effectiveness of therapies.

OPINION

Dental meetings are one of the most important resources for disseminating knowledge to dental practitioners. Therefore, the information provided in such meetings should be as unbiased as possible. This paper assessed whether major general dentistry and periodontology/implant dentistry meetings have guidelines for reporting scientific evidence in oral lectures and seminars. The homepages of seven dental meetings (EUROPERIO, AAP, EAO, AO, IADR, ADA, and FDI) were assessed to check for guidelines for presenting scientific data in oral lectures and seminars, according to defined criteria. Only three of these dental meetings reported information for presentations on their homepages, although these guidelines were related to technical issues rather than recommendations for the presentation of scientific data. The present paper suggests guidelines for reporting scientific evidence in oral lectures and seminars in dental meetings to improve the current standards of reporting. High standards of reporting may provide less biased information, which is necessary for dental practitioners and clinicians to make accurate judgements on the efficacy/effectiveness of therapies.

INTRODUCTION

Dental meetings and conferences are regularly promoted to develop specialties and to disseminate new knowledge to dental practitioners. Normally these meetings are organised by dental societies without the objective of profits. To make these meetings feasible they may be supported in whole or in part by private companies, who often promote keynote speakers (that is, clinicians and researchers prominent in their fields) or purchase physical space to demonstrate their products.

Some data suggest that studies supported by industry might be more associated with positive findings than studies that are not supported by industry.[1,2] To allow a reasonable judgment by readers, high standards should be used in the reporting of research findings, which are typically presented as written papers.[3] Oral lectures and seminars are very common in dental meetings. Therefore, it is vital that all scientific data presented in oral lectures and seminars be reported with the highest standards possible, similar to papers published in scientific journals. In this way, the audience will be more prepared to judge the strengths and limitations of the presented data.

The objectives of this paper were two-fold:

1. To assess whether major dental meetings in general dentistry, periodontology and implant dentistry make guidelines available for reporting research findings in oral lectures and seminars
2. To propose guidelines for reporting and presenting research findings in oral lectures and seminars at dental meetings.

MATERIALS AND METHODS

Guidelines search and rationale

Dental meeting webpages were searched directly to check guidelines concerning the presentation of oral lectures and seminars in general dentistry, periodontology and implant dentistry meetings. The following specialist dental meetings were searched on 14 and 15 September 2012: Europerio, American Academy of Periodontology (AAP), European Association for Osseointegration (EAO), and Academy of Osseointegration (AO). The following major general dental meetings that present oral lectures and seminars in periodontology and implant dentistry were also searched: Annual IADR Meeting, Annual American Dental Association (ADA) Meeting, and Annual World Dental Federation (FDI) Meeting.

Criteria for assessment

Any information that could provide guidelines for presenting oral lectures and seminars was retrieved. Special attention was given to information related to the reporting of scientific data, such as information on the types of studies, supporting findings, levels of evidence, limitations of data, etc. If the webpage provided no information on guidelines for ongoing meetings then data on past dental meetings were searched and assessed.

Information regarding the following key points was searched:

- Information on the disclosure of conflict of interests (COIs) of presenters
- Information on the clear definition of the research question or the question to be answered through the oral presentation

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- Systematic presentation of information to answer the research question
- Information on the level of evidence to support the presentation of research findings
- Unbiased interpretation of research findings.

RESULTS

From the homepages of the seven dental meetings assessed, only three (Europerio, EAO and IADR) provided recommendations for presenting oral lectures or seminars. Nevertheless, only general recommendations were provided. The Europerio webpage contained a document entitled *Guidelines for research communication presenters*,[4] which recommended the disclosure of COIs, prohibited the advertisement of products and cited the need for protecting the identity of patient data. The EAO webpage contained a document entitled *Code of conduct for presenters at the European Association for Osseointegration (EAO) annual meeting*,[5] which referred to similar issues as those reported in the guidelines of Europerio. The EAO document also recommended that presentations focus on evidence-based data rather than solely on personal convictions, but did not provide detailed recommendations for how to present scientific data. Finally, the IADR website provided a document entitled *Policy on full disclosure*,[6] which asked for information on the potential interests of the presenter and the presented data.

Table 1 Proposed guidelines for authors presenting oral lectures and seminars in dental meetings

Topic	Rationale
Disclosure of conflict of interest (COI)	Presenters should disclose any COI regarding the presentation, including sponsorship or any kind of relationship between the presenter and companies supporting the research or having some kind of interest in the presented findings. The potential interest of dental companies and presenters on studies supporting the standard or new therapeutic approaches should also be clearly reported.
Objective of presentation	Specific objectives or hypotheses should be stated clearly at the beginning of presentation. Presenters should clearly provide the outcome measures that were used to report the efficacy/effectiveness of the standard therapies and new proposed therapeutic interventions. Their clinical importance should be categorised. Presenters should clearly indicate whether the findings are based on surrogate endpoints (for example, clinical attachment level changes) or true endpoints (for example, tooth survival/loss).
Background/level of evidence	Presenters should report scientific background to support the need for a new therapeutic approach and the current levels of evidence supporting both the standard and new therapeutic approaches. This information includes the following key points: Evidence at basic levels (biologic plausibility, *in vitro* and animal experiments), compared to evidence at higher levels (for example, clinical studies) to confirm whether the results on efficacy/ effectiveness are replicated in the clinical setting Evidence from RCTs explaining, in detail, whether a risk of bias in individual studies exists Evidence from other study designs explaining, in detail, the limitations in individual studies Limitations on statistical issues (for example, inadequate sample size or statistical method).
Body of evidence	Presenters should provide an overall view of the evidence from RCTs and other levels of evidence, such as cohort, case-control and case-series studies, if necessary. If feasible, an overall score for this body of evidence should be presented in a format such as GRADE,[16] which allows the determination of the risk of bias and limitations across studies (for example, publication bias, inconsistency, indirectness of evidence, etc.).
Recommendations	After carefully weighing the quality of evidence with other important issues (for example, balance between harms and benefits of therapies, balance between costs and efficacy/effectiveness of therapies, patient preferences and values[15]), presenters should report clinical recommendations, which should be solely based on the information presented, rather than on facts or information selected in a non-systematic or narrative way.
Future directions	Future directions regarding research on the presented topic should be clearly and extensively discussed, especially in cases in which evidence supporting the proposed therapy is weak or non-existent.

DISCUSSION

The present work shows that major dental meetings reporting data on periodontology and implant dentistry do not provide specific guidelines for the reporting of research findings in oral lectures and seminars. The reporting of scientific data in oral conferences should observe rigid standards because, as in written research, oral presentations may influence the decision-making of clinicians.[7] Biased data reporting could influence the understanding of clinicians on the efficacy or effectiveness of the presented data. The need for unbiased presentations in dentistry has already been emphasised.[8]

The influence of the health industry on medical and dental meetings is very pronounced[9] and easily explained: many meetings are only feasible because of private company sponsorship. A simple glance at some recent dental meetings suggests a strong relationship between private dental companies and oral conferences. In one meeting specialised in periodontology and implant dentistry (Europerio 7),[10] a full third of all oral lectures were supported by the dental industry. Another meeting specialised in implant dentistry (EAO) reported the support of the dental industry in providing the oral lectures at its last meeting. A major meeting focused on several areas of dentistry (ADA) had more than 9,000 exhibitors at its 2010[11] meeting. Thus without the partnership of the dental industry these scientific meetings would probably not be feasible.

No connection should exist between industry and the scientific programme in a dental conference. Clear and standard guidelines for presenting research findings in oral lectures should be made available to all parties involved, especially the clinicians attending these meetings. To improve the quality of reporting in oral lectures and seminars in dental meetings, some guidelines are proposed (Table 1). These guidelines are intended to help presenters report evidence in a systematic and unbiased way, allowing the audience to make their own conclusions regarding the efficacy/effectiveness of presented therapies.

Presenters should initially and clearly report any potential COIs regarding their presentations. Such COIs could include support from dental companies for the research, the presenter (for example, support of logistics, payment of fees, etc), or the study as a whole (even if not performed by the presenter), in which the company has a vested interest in the efficacy/effectiveness of the proposed therapy.

Next, the research question should be very clearly stated, such that it may be answered objectively. The PICO format[12] is an established way of constructing well-focused questions. This format may be adjusted to non-interventional (for example, diagnostic) studies. The presenter should clearly state whether the efficacy/effectiveness was based on surrogate or true endpoints. This information is important, because surrogate endpoints may sometimes lead to false positive or false negative conclusions.[13] Evidence to answer the research question(s) should be presented in a systematic and logical way: for example, by first reporting data on the biological plausibility[14] and then reporting higher levels of evidence, such as animal experiments and clinical studies. Data reported at different levels of evidence should be compared, to assess whether data from more basic levels of evidence (for example, *in vitro* or animal experiments) are replicated in clinical studies with different designs (for example, case reports, case series, controlled trials and randomised clinical trials [RCTs]).

The presenter should describe the quality of the body of evidence supporting both the new proposed therapy and the 'gold standard,' (that is, the therapy currently considered as the standard to treat the condition). The evidence should be weighed with other important variables, such as the cost-effectiveness, balance between benefits and harms and patient preferences of the proposed therapies.[15] Considering all of these variables, presenters should propose clinical recommendations, clearly stating the limitations of the data supporting both the 'gold standard' and the new therapy. If feasible, an overall score for this body of evidence should be presented in a format such as GRADE.[16] Finally, presenters should report additional research approaches to overcome the present limitations of the data (if they exist).

Scientific meetings normally provide purely technical guidelines for presenting oral lectures and seminars, such as recommendations for the types of media to be used, time of presentation, etc. The current proposal goes one step further, focusing on the reporting of scientific data. The proposed recommendations may help to improve the quality of scientific data reporting in oral lectures and seminars in dental meetings.

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