

Evidence-
based
Compendium

Foreword by Martin Tyas

Minimum Intervention (MI)

A new approach in Dentistry - Preview

S Mickenautsch
V Yengopal
M Bönecker
SC Leal
ACB Bezerra
LB Oliveira



1st Edition



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For more information, please visit:
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Midentistry corp.

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P O Box 2779, Houghton, 2041, South Africa
Telephone (011) 646 7614; 082 336 3214
Facsimile 082 131 336 3214
Email: midentistry@global.co.za
Website: www.midentistry.com

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Foreword

It is with considerable pleasure that I write the Foreword to this new e-book 'Minimum Intervention (MI); a New Approach in Dentistry'.

'Minimum Intervention' (MI) is a relatively new concept which is gaining international recognition, and consists of five basic elements in the management of caries: identification of risk factors at the individual level; implementation of individualised preventive strategies; remineralisation of non-cavitated lesions; minimal surgical intervention of cavitated lesions; and repair of defective restorations.

Although these separate elements are theoretically attractive, they will not have clinical credibility unless there is evidence of their effectiveness. This is the subject of another relatively new concept, extended from medicine, of 'Evidence-based Dentistry' (EBD). Several international organizations are now dedicated to examining evidence for particular diagnostic and treatment regimens using the principles of EBD.

This unique book brings together for the first time MI and EBD. It provided a comprehensive dictionary-style reference, analysing the evidence for the clinical elements of MI, using established EBD principles. Although the book is primarily aimed at academics, general practitioners will find much of interest. Of special significance is that it is an e-book: in order to accommodate the ever-increasing number of publications on MI, the authors have made a commitment to regular Updates. They are to be commended on this exciting initiative.

Martin J Tyas
Professor
The University of Melbourne
Australia
m.tyas@unimelb.edu.au

February 2006

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Introduction

This MI Compendium presents the results of a comprehensive systematic literature review of the current evidence base of MI. It is primarily written for dental academia as an aid in the preparation of evidence-based undergraduate MI teaching. The compendium will also highlight a current lack of evidence for certain MI aspects. This will provide an agenda for further MI research. However, it may also be of interest to the dental practitioner, since it provides insights into evidence of clinical MI applications in daily dental practice. A condensed, 'dictionary' style was chosen, with a focus on tables, graphics and listings. This will ease its use as a quick-guide and reference. Its aim is to provide guidance through the ever-increasing volume of MI-related publications and to address the need for evidence-based MI tuition and – patient care. Because its focus is on a generalized overview, giving in-depth details is beyond its scope. Aspects concerning more detailed review data relating to single MI topics will be published elsewhere and be referred to in future compendium updates and editions.

The compendium is written in four Sections: Section I provides an overview of common aspects associated with minimum intervention in dentistry; Section II describes the scope and importance of Evidence-based Dentistry (EBD) principles, particularly for MI as an emerging new philosophy of oral health care; Section III presents the methodology of evidence appraisal used in this review and Section IV deals with the evidence base of individual MI concepts. The concepts are presented under the headings below.

- *Disease concept*
- *Disease assessment and early detection*
- *Minimally invasive treatment*



The first of these deals with well-known and accepted facts about cariology and caries prevention, which form the basis of MI understanding. The second reviews traditional methods and new technologies in caries assessment and diagnostics. The third covers various treatment measures commonly accepted as being minimally invasive.

A chapter called **Limitations** deals with MI aspects for which this review could not find conclusive evidence.

Finally, a 'Review Register' is added, with listing of all reviewed articles.

How to use the Compendium

1. How to retrieve information

Since the MI Compendium aims to be a quick guide and reference for MI Evidence, its main content can be easily found in the **blue/green text** of the **Conclusions** marked with a green arrow:



The Conclusions are limited to (and answer) the particular **Review objective** related to the MI concepts presented in this edition.

All Conclusions are based on the summary shown in the table of **Article results**:

Article results	Value of evidence		
	Strong	Good	Reasonable
Significant reduction of caries experience	1	7	1
No effect on caries experience	-	-	2

These Article results can be further explored in parts of the table **Accepted articles**

Using the **1st part** of these tables as an 'Essential Reading List' and obtaining the included articles in full version from a dental library, nearest to you is recommended.

Accepted articles - Part 1

Author	Title	Journal	Year	
---------------	--------------	----------------	-------------	--

Should that not be possible, the **subsequent parts** of the tables provide some further details, including information on the evidence strength of each accepted article.

Please Note: The symbol “-” in these tables is set for data not reported in the articles.

Some of the text (particularly in the tables) is written in small font. In that case please use a higher Zoom resolution on your Adobe Reader. The MI Compendium is best read with Adobe Reader 5.0 or higher.

Accepted articles form only a part of the reviewed literature, which is listed in the [Review Register](#) at the end.

The MI Compendium is not a final result but a work in progress. Since MI research is ongoing, new developments and articles will be the focus of continued [Compendium updates](#) (see page 11).

2. How to verify COMPENDIUM information

The compendium has been developed with a focus on the repeatability of its results. Hence, it will be possible to verify all or selected compendium results by adopting the same methodology.

Chapter III, **Compendium methodology**, provides information on:

- Searched databases;
- Included publication languages;
- Inclusion - and Exclusion criteria for published articles;
- Justification for article exclusion.

For each MI topic and Review objectives, search keywords are listed:

Search keywords	
<i>English</i>	<i>Portuguese</i>
Saliva flow AND (caries OR tooth decay)	Fluxo AND saliva\$ AND cári\$

All compendium searches can be repeated by searching the listed Databases using the same Keywords, under consideration of the same inclusion and exclusion criteria, publication languages and **“Review date”**.

The articles so obtained can be compared with those listed in the **“Review register”**. Based on the listed exclusion criteria, own decisions on article rejections can be compared with the number and reasons related to excluded reviews and trials in the compendium.

Number of excluded reviews = 17

Reasons for exclusion: No clear exclusion and/or inclusion criteria stated; Lack of information on clear search strategy, key words and databases used; study-by-study critique table missing.

Number of excluded trials = 41

Reasons for exclusion: Not randomly controlled (23); Drop out rate >33% (2); Patients and/or clinicians not blinded (1); No in vivo or in situ study design (15)

For further information on how to use the compendium or for comments on compendium results, please email to:

midentistry@global.co.za

Compendium updates

This first compendium edition can only provide a first entry into the wider evidence base of MI. It provides a starting point and will be followed by continued **Updates**.

Updates will be concerned with the inclusion of:

New Review objectives relevant to the already included MI topics

More MI topics

More Search databases

Revised Search keywords relevant to the already used review objectives

MI evidence base will be extended over time with **Updates**.

Updates will be made available in PDF – format and will be downloadable online at: <http://www.midentistry.com/academia.html>
Notifications of forthcoming **Updates** will be sent via email and received by those joining the dedicated emailing list at the same web address.

Since one Review objective cannot cover all aspects of a particular MI topic, readers are invited to suggest new review objectives for further article search and -review to: midentistry@global.co.za

Collaborating academic institutions

Universidade Católica de Brasília

Curso de Odontologia
Águas Claras – Taguatinda - DF
Brazil

Universidade de Brasília

Departamento de Odontologia
Faculdade de Ciências da Saúde
Asa Norte, Brasília – DF
Brazil

Universidade de São Paulo

Departamento de Ortodontia e Odontopediatria
Faculdade de Odontologia
Av Prof Lineu Prestes
2227 São Paulo
Brazil

University of the Witwatersrand

Division of Public Oral Health
Faculty of Health Sciences
7 York Rd, Parktown 2193
Johannesburg
South Africa

Authors

Bezerra, A.C.B. MSc, PhD, Post Doc
Assistant Professor in Paediatric Dentistry
Universidade Católica de Brasília
Brasília, Brazil

Bönecker, M. MSc, PhD, Post Doc
Associate Professor in Paediatric Dentistry
Universidade de São Paulo
São Paulo, Brazil

Leal, S.C. MSc, PhD
Assistant Professor in Paediatric Dentistry
Universidade de Brasília
Brasília, Brazil

Oliveira, L.B. MSc
PhD student in Paediatric Dentistry
Universidade de São Paulo
São Paulo, Brazil

Mickenausch, S. BDS (Germany)
Visiting Research Fellow
University of the Witwatersrand
Johannesburg, South Africa /
PhD student in Public Oral Health
University of Nijmegen, The Netherlands

Yengopal, V. BChD, BSc (hons.), MSHD
Specialist in Public Oral Health
University of the Witwatersrand
Johannesburg, South Africa

Co-authors

Bhayat, A. BDS
MPH student in Public Oral Health
University of the Witwatersrand
Johannesburg, South Africa

Braga, M.M.
MSc student in Paediatric Dentistry
Universidade de São Paulo
São Paulo, Brazil

Cruvinel, V. MSc
PhD student in Health Science
Universidade de Brasília
Brasília, Brazil

Imparato, J.C. MSc, PhD
Assistant Professor in Paediatric Dentistry
Universidade de São Paulo
São Paulo, Brazil

Malele, Y. BDS
MPH student in Public Oral Health
University of the Witwatersrand
Johannesburg, South Africa

Mendes, F.M. MSc, PhD
Assistant Professor in Paediatric Dentistry
Universidade de São Paulo
São Paulo, Brazil

Mtetwa, R. BDS, MPH
MPH student in Public Oral Health
University of the Witwatersrand
Johannesburg, South Africa

Nemutandani, M.S. BDS, MPH
MPH student in Public Oral Health
University of the Witwatersrand
Johannesburg, South Africa

Peruchi, C. MSc, PhD
Assistant Professor in Paediatric Dentistry
Universidade Católica de Brasília
Brasília, Brazil

Politano, G.T. MSc
Assistant Professor in Paediatric Dentistry
C.E.O. São Leopoldo Mandic
Brazil

Raggio, D.P. MSc, PhD
Assistant Professor in Paediatric Dentistry
C.E.O. São Leopoldo Mandic
Brazil

The full version of this 'MI Compendium' is available as eBook (format: PDF) and can be downloaded online:

<http://www.midentistry.com/academia.html>

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Authors: S. Mickenautsch, V. Yengopal, M. Bönecker, S.C. Leal, A.C.B. Bezerra and L.B. Oliveira.

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