

VOLLKERAMIK · IMPLANTOLOGIE · TEILPROTHETIK

KONGRESSPROGRAMM



Gemeinschaftsjahrestagung

der Die APAN und der SSRD

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Recommending a Removable Partial Denture instead of an Implant-based Prosthesis – why and when?

Asbjørn Jokstad Professor and Head, Prosthodontics Faculty of Dentistry, University of Toronto

Considerations ?

- Are RPDs <u>still</u> an acceptable option today?
- If so, <u>when</u> are RPDs an acceptable option?
- <u>Who</u> would want a RPD instead of an implant-retained prosthesis?
- Should RPDs be regarded just as a poor man's alternative?

RPD vs Implant prosthesis:

1. Which directions do the scientific literature give?

RPD vs Implant prosthesis:

1. Which directions do the scientific literature give? 2. How should we proceed when treatment planning our patients?

Volume of <u>clinical</u> <u>trials</u> on implantsupported prosthetics

n = 1741



Volume on implant – supported prostheses (n=1741)

How many have compared implantprosthod. *versus* conventional dentures?



Comparison of conventional dentures vs implant-supported overdentures (3 RCTs)

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etc.)				

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2003-2005 Montreal (Awad, Feine, Lund, Heydecke, etc.)	Edent .man dible	2-imp over- denture (54)	Conv. Denture (48)	2i-OD > CD

Volume on implantsupported prostheses (n=1741)

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The prosthesis as a		Implant -prosth.
Risk factor for new disease		
Caries	(+)	-
Periodontitis	(+)	-
Mucosal damage, allergy, stomatitis, hyperplasia	(+)	-
Temporomandibular dysfunction	-	-
Prognostic factor for:		
Occlusal stability ("tooth malpositions")	+	+
Bone remodeling ("Alveolar bone loss")		++
"Oral discomfort" (esthetics, mastication, speech, etc.)	+	++
Nutritional aspects	?	+
Quality of life	?	+

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Therefore unethical to conduct comparative trials – a question of investigators' equipoise

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Hypothesis:

Patients will prefer implant solutions if properly and adequately informed

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Clin Oral Implants Res 2003; 14: 621-33 & 634-42.

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But even too much information will also confound patients. e.g. recruiting patients for trials

Explaining possible Risks and Discomforts

(excerpt from a study protocol approved by Ethics Comm.)

1. Risks associated with surgery and placement of dental implants:

Including, but not limited to, bleeding and bruising

- Delayed healing
- Bone fracture
- Osteomyelitis
- Chronic pain
- Abscess
- Sequestrum
- Gingivitis

Post-surgical pain Temporary speech problems Post-surgical infection Loss of aveolar ridge Damage to opposing dentition Local or systemic infection Oroantral or oronasal fistula Haematoma

> Transient or permanent damage to the nerves in the jaw

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- Transient or permanent damage to the nerves in the jaw

2. Failure of the implant or attached restorative work

This might require removal of an implant(s), remaking part of the dental restoration, or constructing an alternative prosthetic appliance to replace the missing teeth. If an implant has to be removed ("explanted"), a local anaesthetic is administered. The implant is subsequently removed with the aid of a drill which fits over the implant₂₃

So what then is the best approach to present, and discuss complex treatment that includes an element of risk?

Best approach to present and discuss complex treatment? :

Look in the communication sciences, i.e. in the social sciences, - literature

Abstract Health Communication

1994, Vol. 6, No. 2, Pages 137-158 (doi:10.1207/s15327027hc0602_4)

Dentist Communication and Patient Utilization of Dental Services: Anxiety Inhibition and Competence Enhancement Effects

Mark A. Hamilton, Ruby A. Rouse, Jeffrey Rouse

Research on the relationship between dentists and their patients indicates that communication plays a central role. In two studies, communication increased patient utilization of dental services by inhibiting patient treatment anxiety and by enhancing the perceived technical competence of the dentist, as predicted by Corah, O'Shea, and Bissell(1985). Information sharing enhanced competence and inhibited treatment anxiety. Information contained in comforting messages had an overall effect of reducing anxiety, although the mere mention of pain may heighten anxiety somewhat. Comforting messages also indirectly enhanced patient perceptions of the dentist's competence through information sharing. The knowledge displayed during information sharing enhanced competence directly. Information sharing also had an indirect effect on competence, mediated by the interpersonal attractiveness of the dentist. The second study replicated these findings, but also found that utilization depended on the subjective norm of the patient, and the patient's intention to support the dentist (i.e., by returning for future appointments and recommendations). Intent to support mediated the link between dentist competence and utilization. A possible link between dentist orientations toward their patients and information sharing is discussed.

Best approach to present and discuss complex treatment? :

Answers to be found in the social sciences

- 3 essential components required:
- Perceived technical competence
- Interpersonal manners
- Communication skills

Dentist-Patient Communication and Patient Satisfaction in Prosthetic Dentistry

Katarina Sondell, DDS^a Björn Söderfeldt, PhD, DrMedSc^b Sigvard Palmqvist, DDS, Odont Dr/PhD^c

Purpose: Dentist-patient verbal communication dimensions on patient satisfaction were investigated in a prosthodontic context, controlling for the age and gender of patients and dentists and the amount of delivered prosthodontic treatment. Two concepts of satisfaction were defined, one for the single visit (satisfaction with care), and one for the overall result (satisfaction with treatment outcome). Materials and Methods: Audio recordings of 61 patients meeting 15 dentists were made in three specialist clinics of prosthetic dentistry. The prosthodontic treatment periods with fixed tooth- or implant-supported prostheses, on average 20 months, were monitored by questionnaires. One visit near the end of each treatment period was audio recorded. The recorded verbal communication was analyzed with the Roter Interaction Analysis System-Dental. Results: Bivariate analysis showed that patients of female dentists were more satisfied in the long-term perspective than patients of male dentists. In logistic multivariate regression models, the verbal communication dimensions "information-dentist horizon" and "information-patient horizon," together with the mouth involvement of the prosthodontics, influenced patient satisfaction with treatment outcome. Conclusion: Patients undergoing extensive prosthodontic rehabilitation should be given the opportunity to ask and talk about their dental health, and dentists should minimize their question-asking and orientating behavior during the encounters to help improve patient satisfaction with treatment outcome. Int J Prosthodont 2002;15:28-37.

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The Dentist's Communicative Role in Prosthodontic Treatment

Katarina Sondell, LDS, Odont Dr/PhD^a/Sigvard Palmqvist, LDS, Odont Dr/PhD^b/ Björn Söderfeldt, PhD, Dr Med Sc^c

> Purpose: Dentist-patient verbal communication is important for patient satisfaction. The aim of this study was to investigate the dentist's role in the provider-patient relationship as to verbal communication and patient satisfaction with the treatment outcome in prosthetic dentistry. The dentist-specific properties were analyzed in random coefficient modeling. Materials and Methods: Sixty-one dentist-patient pairs were followed through 61 prosthodontic treatment periods. The treatment performed was fixed prosthodontic restorations on teeth or implants. One encounter at the end of each treatment period was tape recorded. The verbal communication on the recordings was analyzed using an interaction analysis instrument. Various measures of communication were used, summarizing the variational pattern of verbal interaction. Two different aspects of the patient satisfaction concept were used as dependent variables: cure (overall patient satisfaction with prosthodontic treatment), and care (patient satisfaction with a particular dental encounter during the prosthodontic treatment period). Results: In the multilevel model for care, the dentist variance was mostly explained by the communication variables. In the cure model, there was no dentist variance. The communication patterns used by the dentists thus influenced patient satisfaction in a short-term perspective but not in an intermediate perspective. Conclusion: Patient evaluation of the care during an encounter is dependent on the dentist's verbal communication activity during the encounter, but this communication has no impact on the patient evaluation of overall prosthetic treatment outcome in the intermediate time perspective. Int J Prosthodont 2004;17:666-671.

Dentist-Patient Communication and Patient Satisfaction in Prosthetic Dentistry

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Prosthodontics and the Patient: What Is Oral Rehabilitation Need? Conceptual Analysis of Need and Demand for Prosthodontic Treatment. Part 1: A Conceptual Analysis

Birger Narby, DDS^a/Mats Kronström, DDS, PhD/Odont Dr^b/Björn Söderfeldt, PhD, DrMedSc^c/ Sigvard Palmqvist, DDS, PhD/Odont Dr^d

> Purpose: The concepts of need and demand are central in studies on dental care. In the literature, a normative definition is often used, but it pays little attention to the individual's personal comfort and quality of life. Need and demand for prosthodontic services are difficult to measure, as prosthodontic treatment is highly individual and not closely related to edentulousness. Need, however defined, does not always lead to demand for treatment, depending on a variety of factors. Materials and Methods: The present article is part of a larger study in which the intention is to evaluate need and demand for prosthodontic treatment among the participants in a 1989 and 1999 longitudinal study of a population sample. As the first step, this article reports a conceptual analysis of the need concept from the literature. Results: Need is stated as socially established in the interaction between patient and clinician. It makes demand dependent on available treatment options from the care provider and society. In the prosthetic treatment decision-making process, the emancipatory perspective with the patient-clinician dialogue is of utmost importance to achieve an optimal treatment result. Conclusion: The professional attitude toward need must be that there is no true objective or subjective need. Need is established only in a communicative dialogue with mutual respect between the professional and the patient. Int J Prosthodont 2005;18:75-79.

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Jokstad A, Brägger U, Brunski JB, Carr AB, Naert I, Wennerberg A

Quality of Dental Implants

Int Dent J, 2003; 53 Sup 2: 409-33 & Int J Prosthodontics 2004; 17: 607-641 International Dental Journal

Quality of Dental Implants

The outcomes focused on:

Plaque

- Marginal bleeding
- Probing pocket depth
- Probing attachment level
- Radiographic marginal bone level changes on standardised intra-oral radiographs

Outcomes of higher relevance Perceived/self reported:

- Adaptation to prosthesis (satisfaction)
- Appearance
- Function (chewing, speech)
- Dietary significance (intake, selection)
- Health
- Health related Quality of life (psyche, wellbeing, self esteem)
- Social activity

Quality of Dental Implants

Background

More than 220 implant brands produced by about 80 manufacturers are commercially available worldwide. These are made from different materials, undergo different surface treatments and manifest in different shapes, lengths, widths and forms. The clinician can in theory choose among more than 2000 implants.

FDI recognizes that:

- Implants made from titanium and titanium alloys appear to perform well clinically in properly surgically prepared bone, regardless of small variations in design.
- The scientific evidence of the influence of dental implant material, geometry and surface topography on their clinical performance is limited and the study methodology is not strong. Hence there is inconclusive evidence for promoting specific implants or implant systems over others.
- Implants are manufactured and sold in some parts of the world without compliance to international standards.

It would seem prudent to only use dental implants supported by sound clinical research documentation and which conform to the general principles of good manufacturing practice in compliance with the ISO Standards or FDA (Food and Drug Administration) and other regulatory bodies.

 Most clinical trials on dental implants focus on criteria relative to peri-implant aspects over relatively short observation periods. Such criteria are only surrogate measures for treatment outcome from the patient and general public perspectives.

Submitted by: FDI Science Committee

Reference: FDI Science Committee Project 5-98: Jokstad A, Brägger U, Brunski JB, Carr AB, Naert I, Wennerberg A. Quality of Dental Implants. *International Dental Journal*, 2003; 53: Suppl 3:409-443.

> Adopted by the FDI General Assembly 12th September 2004 – New Delhi

Journal of the Canadian Dental Association

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Outcomes of prosthodontic therapy

a) Surrogate

- b) Clinical
- c) Patient relevant
- e) Societal

Outcomes of prosthodontic therapy

a) Surrogate
b) Clinical
c) Patient relevant
e) Societal

We must begin to apply the WHO ICIDH-2 terminology when reporting outcomes in dentistry/prosthodontics

<u>No /Mild /Moderate /Severe /Complete</u> <u>impairment of functions</u>: Taste - Proprioceptive – Touch - Articulation - Ingestion - Mobility of joint - Muscle power

International Classification of Functioning

Disability

<u>No /Mild /Moderate /Severe /Complete difficulty</u> <u>to</u>: Speak – Eat - Drink - Basic interpersonal interactions- Complex interpersonal interactions

- Recreation and leisure

Zero trials comparing RPDs vs implantsupported prostheses – reasons?

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Doesn't all patients want to be treated with dental implants?

Subjective need for implant dentistry in a Swedish population aged 45–69 years

Palmqvist S, Söderfeldt B, Arnbjerg D. Subjective need for implant dentistry in a Swedish population aged 45–69 years. Clin Oral Impl Res 1991: 2: 99–102.

Abstract: The present paper is part of a comprehensive study of dental conditions and attitudes in a Swedish county population aged 45-69 years. A questionnaire was mailed to 3000 randomly-sampled individuals. The response rate was 79.4%. Part of the questionnaire contained questions about subjective need for implant treatment. The subjects were informed of the clinical procedures as well as of the fees for implant treatment in the Swedish insurance system. The subjects wearing removable dentures were asked if, instead of their removable denture(s), they wanted dental implants if such treatment was possible. Of those wearing removable partial dentures, 23% answered "yes". The corresponding figure for subjects totally edentulous in one jaw was 17%; for subjects totally edentulous in both jaws 8%. The individuals who had reported missing teeth not replaced were asked if they wanted their missing teeth replaced by dental implants if such treatment were possible. The % answering "yes" was 21%. The subjects with all teeth remaining were hypothetically asked what kind of treatment they wanted if they would lose 1 or 2 of their teeth. The answer "dental implant" was given by 51%. Thus, subjective need for dental implants tended to decrease with poorer dental conditions. The major reason for not wanting dental implants was satisfaction with present dental conditions. Cost for treatment had some importance, while environmental and psychological factors showed only very limited influence.

Sigvard Palmqvist¹, Björn Söderfeldt^{2.3} and Dorte Arnbjerg²

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Key words: dental implants - treatment need public health

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Accepted for publication 5 September 1991

PalmqvistN=3000,Need:Edentate: 8%et al.,pop.Edentate one jaw:17%COIRquestionnEdentate one jaw:17%1991aire (45-69RPD users: 23%yrs)Dentate: 51%

Salonen, CDOEp 1994	N=150 Interview (55yrs, new dentures)	Only 15% would consider implant treatment	
Palmqvist et al., COIR 1991	N=3000, pop. questionnaire (45-69 yrs)	Need: Edentate: 8% Edentate one jaw: 17% RPD: 23% Dentate: 51%	42

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		43

Kronstrom	N=2276, pop. questionnaire (55-69 yrs)	Need	DK	S
et al.,		Edentate	20%	630%
2002		Few teeth miss.:	10	17
2002		RPD users:	30	20
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Use a RCT study design that take patient preferences into consideration

Comprehensive cohort design Zelen design Zelen double randomised consent design Wennberg design Feine & Awad. (Comm Dent Oral Epidemiol 1998)



...but what if we provide treatments for free?

Choosing or Refusing Oral Implants: A Prospective Study of Edentulous Volunteers for a Clinical Trial

Joanne N. Walton, DDS, Cert Pros, FRCD(C)^a/Michael I. MacEntee, LDS (I), Dip Pros, PhD, FRCD(C)^a

Purpose: Little is known about why people accept or refuse oral implant treatment. The purpose of this study was to assess edentulous subjects' acceptance or refusal of free implants to retain mandibular dentures, and to evaluate factors that might predict those who are more likely to choose implants. Materials and Methods: One hundred one volunteers completed questionnaires about their background, satisfaction with conventional dentures, oral health-related quality of life, and preference for implants. Results were analyzed using Pearson chi-square tests and logistic regression. Results: While 79% of volunteers accepted and 21% refused an initial offer of free implants, a number of them changed their minds, leaving 64% who wanted implants and 36% who did not want them. The most common reason for choosing implants was anticipation of improved mandibular denture stability or security (73%), while the most common reason for refusal was concern about surgical risks (43%). A logistic regression model identifying those who complained of poor chewing function, poor speech, pain, and dissatisfaction with appearance improved the prediction of those who wanted implants from 64% to 80%. Conclusion: When cost was removed as a factor, more than one third (36%) of the older, edentulous participants in this study ultimately refused an offer of free implants to retain their mandibular dentures. Poor chewing function, poor speech, pain, and dissatisfaction with appearance were the most important factors in predicting who would choose implants. Int J Prosthodont 2005;18:483-488.

36% still refused

So what do we know about patient characters?

= 5 behavioral profile of patients. (MM House, 1950)			
Patient type	Engagement	Willingness to submit (trust)	
Ideal	"I see you as a professional who is in a position to help me, and willingly, I accept you in that capacity."	"What you say makes sense, but there are some questions I'd appreciate being answered."	

Engagement	Willingness to submit (trust)
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"You are the best dentist I've ever had. No, you are the best dentist around. I admire you, idealize you, and think of you in the most glowing terms."	"You know everything and will never make an error. Therefore I will submit to whatever you suggest without question."
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Submitter	"You are the best dentist I've ever had. No, you are the best dentist around. I admire you, idealize you, and think of you in the most glowing terms."	"You know everything and will never make an error. Therefore I will submit to whatever you suggest without question."
Reluct ant	"Please don't take this personally, but I just don't think you, or any other dentist, is going to be able to help me.	 "It isn't you I distrust, but my destiny. Nothing ever works out in my life. Therefore I will reluctantly follow your instructions, but I doubt this will work."

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Indiffe rent	"I wouldn't even give you a second thought."	"You are a dentist like any dentist, what does it matter whom I see. I will listen and follow instructions, I guess, for NOW.

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Indifferent	"I wouldn't even give you a second thought."	"You are a dentist like any dentist, what does it matter whom I see. I will listen and follow instructions, I guess, for now.
Resista nt	"You authority-types are all the same. You expect us patients to just accept what you say. If you think I'm one of those types of patients, you are sadly mistaken. Prepare to be challenged!"	"You've got to be crazy if you think I'm going to do just what you say. I need to grill you to determine that you are not a charlatan!"

Zero trials comparing RPDs vs implantsupported prostheses – reasons?

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D. Patient recruitment to trials is difficult due to inclusion and exclusion criteria? **RPD: contraindications**

<u>Contraindications</u> (more harm than benefit likely):

Oral health care compromised

Active oral infection & -inflammation

RPD: contraindications & poor prognosis

Contraindications: Oral health care compromised, infection/inflammation

Poor prognosis

General factors

Not able to adapt to prior prosthesis; length of time since extraction >5 years; patient attitude to treatment; etc.

Stomatognathic factors

Inadequate vertical space; oral hygiene, etc.

Intra-oral factors

Narrow, low or flat residual ridge; low tuberosity, hyperplastic tissue, bony spikes, tori, etc.

Individual tooth factors

> 1mm mobility, no vitality, > 5mm pocket depth; short, conical roots; incisors, isolated teeth; etc

Implant prosthetics: contraindications

Contraindications:

- Vital anatomical structures
- Active skeletal growth
- Active infection & inflammation
- General surgical contraindications
- Serious mental illness
- Systemic diseases likely to compromise implant surgery

Implant prosthetics: contraindications & poor prognosis

Contraindications:Vital anatomical structuresActive skeletal growthActive infection & inflammationSerious mental illnessSystemic diseases likely to compromise implant surgery

Poor prognosis : unless special amendments

- Insufficient bone
- Insufficient vertical space
- Previous radiation therapy of head & neck
- Skeletal discrepancies
- Type IV bone

Poor prognosis :uncertain impact?

- Current or past history of drug/alcohol abuse
- Extensive tobacco use
- Poor oral hygiene
- Severe bruxism or clenching

Conclusion – why no RCTs?

- We can conduct comparative studies in theory, <u>but</u>
- who are the <u>patients that would be</u> <u>indifferent</u> to receiving a RPD instead of an implant based prosthesis? ...and
- 2. would they be <u>representative</u> for the population?... and
- 3. are there any dental researchers today who have genuine <u>equipoise</u>? 60

1. What do we know? 2. How should we proceed when planning treatment for our patient?

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Treatment planning

1. Identify the patient's views and choice of values → Individualized treatment of the strength the strength of the strength

2. Cognizance of: - Interpersonal manners - Perceived technical competence - Communication skills



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Treatment planning

 Patient views and choice of values
 Patient communication The

patient's circumstances

The

evidence

The

atient's

wishes

3. Consideration of possible technical solutions

Choice of technical solution?





Implant retained prosthesis







<u>Clinical knowledge</u> One / two implants? Wide collar - standard diameter? Splintet - non-splintet FPD? Cement / screw-retained ? Nobelbiocare, AstraTech, 3i, Endopore, Straumann, Friadent...?



Acrylic partial denture





Clinical knowledge

- Prosthesis design
- Prognosis



Cast partial denture



<u>Clinical knowledge</u> Prosthesis design Prognosis Retention



Crowns + cast partial denture



Additional clinical knowledge 36 extraction or crown? Soldered 44 + 45? Milled crowns? Intra- or extracoronal attachments
Overwhelming task to appraise and present evidence without first communicating with the patient!



Address the patients' preferences

- Total rehabilitation or minimal solution?
- Demand for longevity, 1 y. 30 yrs.?
- Risk attitude to iatrogenic damage, i.e. future prognosis of tooth?
- Demand for fixed (or removable) prosthetic solution?
- Expectance of treatment?
- Patient economy (?)

Harm-benefit-cost evaluations must be individualized

- 1. Patient views and choice of values
- 2. Patient communication
- 3. Consider possible technical solutions
- Present realistic outcomes with different technical solutions



Some dentists tend to offer :



A MARINE A PARAMENT

e.g.Single tooth implant





e.g. conventional bridge



Reality can occasionally be



Perfect result %?



Opacity due to misalignment %?

Gingivalretraction %?



Exposed fixture %? Adjacent necrosis %?





- 1. Technical solutions
- 2. Patient views and choice of values Individually aimed cost-benefit evaluations
- 3. Consider possible technical solutions
- 4. Present realistic outcomes in respect to treatment aim with different technical solutions
 Restore function?
 Change appearance?
 Prevent future problems?
 + Level of, or risk for, iatrogenic damage

- 1. Patient views and choice of values
- 2. Patient communication
- 3. Consider possible technical solutions
- 4. Present realistic outcomes relative to aims with different technical solutions

5. Obtain informed consent among the alternative technical solutions

Integration of:

- expected esthetics and function
- costs
- probabilities of survival
- maintenance need
 - "worst-case-scenarios"

Do not offer patients glossy pictures

- 1. Do not offer patients glossy pictures
- Two-way communication is critical in the treatment planning phase.
 Be cognizant of:
 - Interpersonal manners
 - Perceived technical competence
 - Communication skills

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3. Dentists and patients diverge about

- evaluation of therapy success
- appraisal of, and attitude towards
 risk

- 1. Do not offer patients glossy pictures
- 2. Two-way communication is critical in the treatment planning phase. Be cognizant of: Interpersonal manners, Perceived technical competence & Communication skills
- 3. Dentists and patients diverge about evaluation of therapy success & appraisal of, and attitude towards risk

All treatment suggestions must therefore be individualized and based on the patient's wishes and values

...coming back to first considerations

- Are RPDs still an acceptable option today?
- When are RPDs an acceptable option?
- Who would want a RPD instead of an implant-retained prosthesis?
- Should RPDs be regarded just as a poor man's alternative?

Indications for Removable Partial Dentures: A Literature Review

Bernd Wöstmann, Dr Med Dent^a/Ejvind Budtz-Jørgensen, DDS, Dr Odont^b/Nick Jepson, BDS, PhD, Eiko Mushimoto, DDS, Dr Med Dent, PhD^d/Sigvard Palmqvist, LDS, Odont Dr/PhD^e/ Afrodite Sofou, DDS, Dr Dent^f/Bengt Öwall, LDS, Odont Dr, Dr Med HC/PhD^g

> **Purpose:** The purpose of this report was to evaluate indications for the use of removable partial dentures based on a comprehensive literature review. Materials and Methods: Using a model similar to a Delphi process, the literature relating to the indications and contraindications for the prescription of removable partial dentures was discussed by seven experienced educators in a 2.5-day workshop. Results: Evidence for indications and contraindications for the prescription of removable partial dentures is not clearly stated in the literature; however, some basic principles are defined. There appears to be a trend in favor of the use of the shortened dental arch concept or implant-supported restorations instead of conventional removable partial dentures, given the evidence that the long-term use of removable dentures is associated with increased risks of caries and periodontitis and low patient acceptance. The presence of sound abutment teeth appears to encourage the use of removable partial dentures, as the fixed partial denture alternative requires sacrifice of healthy hard tissues. When economic factors influence the decision-making process, removable partial dentures are often chosen. Conclusion: While evidence-based indications and contraindications for prescribing removable partial dentures are still lacking, major underlying principles for clinical

decision making are identified. Int J Prosthodont 2005;18:139-145.



...coming back to first considerations

- Are RPDs still an acceptable option today? ABSOLUTELY!
- When are RPDs an acceptable option? WHEN THE PATIENT CONSENT
- Who would want a RPD instead of an implant-retained prosthesis?
 SURPRISINGLY (?) MANY
- Should RPDs be regarded just as a poor man's alternative?

NOT NECESSARILY



Thank you for kind attention

