Conventional *vz.* implant-supported prosthesis - don’t all our patients want dental implants?

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

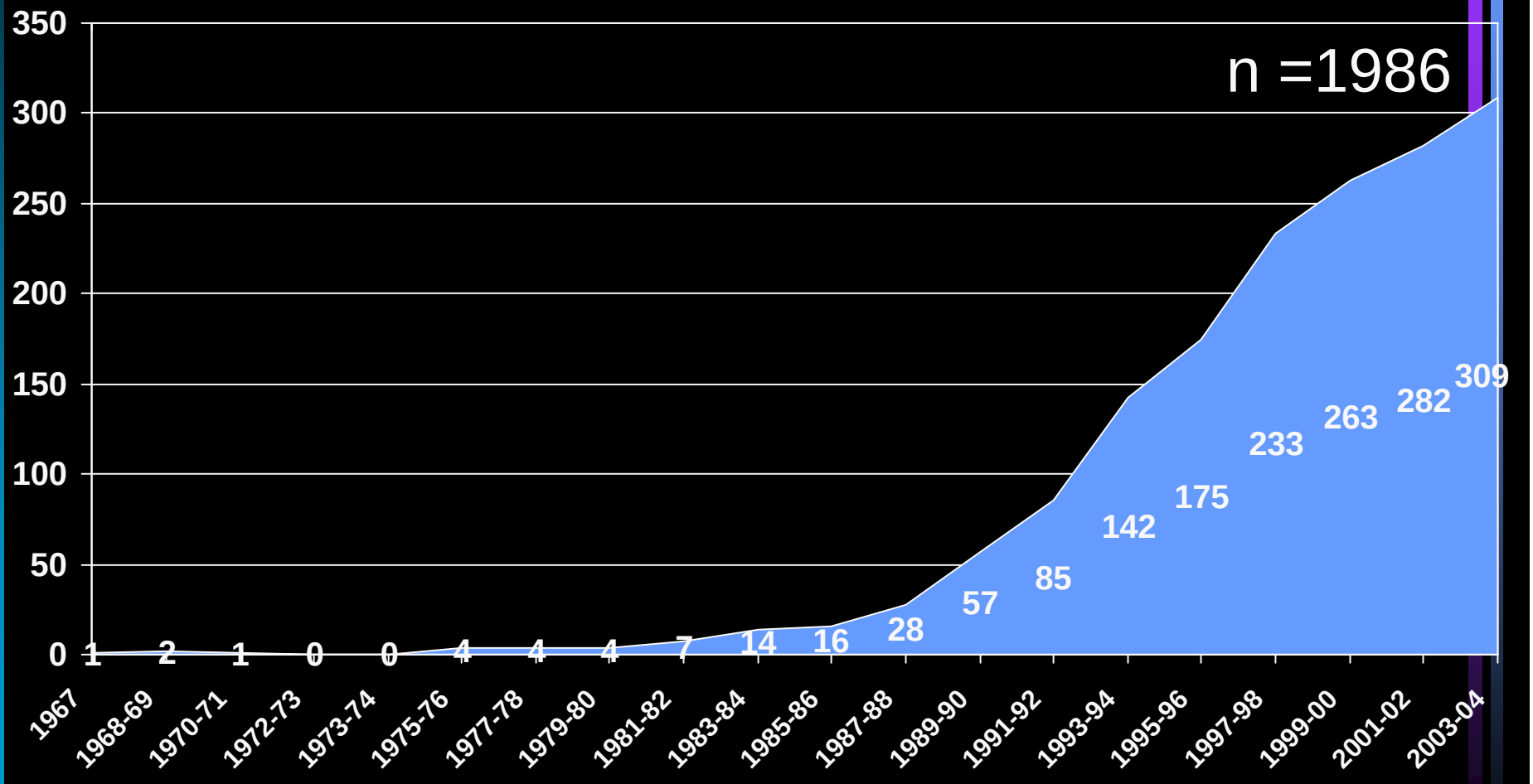
FPDs/RPDs vs Implant prosthesis:

1. Guidance in the scientific literature?

FPDs/RPDs vs Implant prosthesis:

1. Guidance in the scientific literature?
2. How should we proceed when treatment planning our patients?

Clinical trials on implant-supported prosthetics



Volume on implant – supported prostheses (n=1986)

How many have compared an implant-prosthesis *versus* conventional dentures?

Comparison of conventional dentures vs implant-supported overdentures (4 RCTs)

	P	I	C	O
1992-2003 Groningen/ Nijmegen (Geertman, Boerrigter, Meijer, Raghoebar, etc.)	Edent. mandible	2i-bar-over-denture (91)	Conv. Denture (60)	2i-OD > CD

Comparison of conventional dentures vs implant-supported overdentures (4 RCTs)

	P	I	C	O
1992-2003 Groningen/Nijmegen (Geertman, Boerrigter, Meijer, Raghoebar, etc.)	Edent. mandible	2i- bar-overdenture (91)	Convent. Denture (60)	2i-OD > CD
1995-2005 V.A. California, (Kapur, Garrett, Hamada, Roumanas, Kimoto etc.)	Edent. mandible	2-i-bar-over-denture (52)	Conv. Denture (37)	2i-OD > CD

Comparison of conventional dentures vs implant-supported overdentures (4 RCTs)

	P	I	C	O
1992-2003 Groningen/Nijmegen (Geertman, Boerrigter, Meijer, Raghoebar, etc.)	Edent. mandible	2-imp.-overdenture (91)	Convent. Denture (60)	2i-OD > CD
1995-2005 V.A. California, (Kapur, Garrett, Hamada, Kimoto, Roumanas, etc.)	Edent. mandible	2-imp.-bar-overdenture (52)	Convent. Denture (37)	2i-OD > CD
2003-2006 Montreal (Awad, Feine, Heydecke, Lund, Thomason, etc.)	Edent .man dible	2-imp.-over-denture (54)	Conv. Denture (48)	2i-OD > CD

Volume on implant-supported prostheses (n=1986)

How many have compared implant-prosth vs. FPDs?

O!

Volume on implant-supported prostheses (n=1986)

How many have compared implant-prosth vs. RPDs?

O!

Zero trials comparing FPDs/RPDs vs implant-supported prostheses – reasons?

A. It’s so obvious that an implant-based prosthesis is superior to a conventional prosthesis.

Zero trials comparing FPDs/RPDs vs implant-supported prostheses – reasons?

A. It's so obvious that an implant-based prosthesis is superior to a conventional prosthesis?

B. No research funding since the medical condition and its treatment seems trivial?

Zero trials comparing FPDs/RPDs vs implant-supported prostheses – reasons?

A. It's so obvious that an implant-based prosthesis is superior to a conventional prosthesis?
B. No research funding since the medical condition and its treatment seems trivial?
C. Patients have clear treatment preferences?

Zero trials comparing FPDs/RPDs vs implant-supported prostheses – reasons?

A. It's so obvious that an implant-based prosthesis is superior to a conventional prosthesis?
B. No research funding since the medical condition and its treatment seems trivial?
C. Patients have clear treatment preferences?
D. Patient recruitment to trials is difficult due to inclusion and exclusion criteria?

Zero trials comparing FPDs/RPDs vs implant-supported prostheses – reasons?

A. It's so obvious that an implant-based prosthesis is superior to a conventional prosthesis?

B. No research funding since the medical condition and its treatment seems trivial?

C. Patients have clear treatment preferences?

D. Patient recruitment to trials is difficult due to inclusion and exclusion criteria?

The prosthesis as a …	Conventiona	Implant-prosth.
Risk factor for causing		
Caries	**(+)**	**-**
Periodontitis	**(+)**	**-**
Mucosal damage, allergy, stomatitis, hyperplasia	**(+)**	**-**
Temporomandibular dysfunction	**-**	**-**
Prognostic factor for achieving:		
Occlusal stability vz. “tooth malpositions”	**+**	**+**
Bone remodeling vz. “alveolar bone loss”	**--**	**++**
“Oral comfort” (esthetics, mastication, speech, etc.)	**+**	**++**
Optimized food selection	**?**	**+**
Quality of life	**?**	**+**

A. It’s so obvious that an implant-based is superior to a conventional prosthesis

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

A. It’s so obvious that an implant-based is superior to a conventional prosthesis

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

Hypothesis:

Patients will prefer implant solutions if they are properly and adequately informed

Gabor Tepper
Robert Haas
Georg Mailath
Christoph Teller
Werner Zechner
Georg Watzak
Georg Watzek

Representative marketing-oriented study on implants in the Austrian population. I. Level of information, sources of information and need for patient information

Gabor Tepper
Robert Haas
Georg Mailath
Christoph Teller
Thomas Bernhart
Gabriel Monov
Georg Watzek

Representative marketing-oriented study on implants in the Austrian population. II. Implant acceptance, patient-perceived cost and patient satisfaction

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

Gabor Tepper
Robert Haas
Georg Mailath
Christoph Teller
Werner Zechner
Georg Watzak
Georg Watzek

Representative marketing-oriented study on implants in the Austrian population. I. Level of information, sources of information and need for patient information

Gabor Tepper
Robert Haas
Georg Mailath
Christoph Teller
Thomas Bernhart
Gabriel Monov
Georg Watzek

Representative marketing-oriented study on implants in the Austrian population. II. Implant acceptance, patient-perceived cost and patient satisfaction

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

But even *too much* information will also confound patients.

e.g. when recruiting patients for trials

Explaining possible Risks and Discomforts

(excerpt from a study protocol approved by Ethics Committee)

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

Including, but not limited to, bleeding and bruising

- Post-surgical pain
- Delayed healing
- Bone fracture
- Osteomyelitis
- Chronic pain
- Abscess
- Sequestrum
- Gingivitis
- Temporary speech problems
- Post-surgical infection
- Loss of alveolar ridge
- Damage to opposing dentition
- Local or systemic infection
- Oroantral or oronasal fistula
- Haematoma
- Transient or permanent damage to the nerves in the jaw

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 domains to be addressed:

- 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.*

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]

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

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

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]

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.*

Zero trials comparing FPDs/RPDs vs implant-supported prostheses – reasons?

A. It's so obvious that an implant-based prosthesis is superior to a conventional prosthesis?

B. No research funding since the medical condition and its treatment seems trivial?

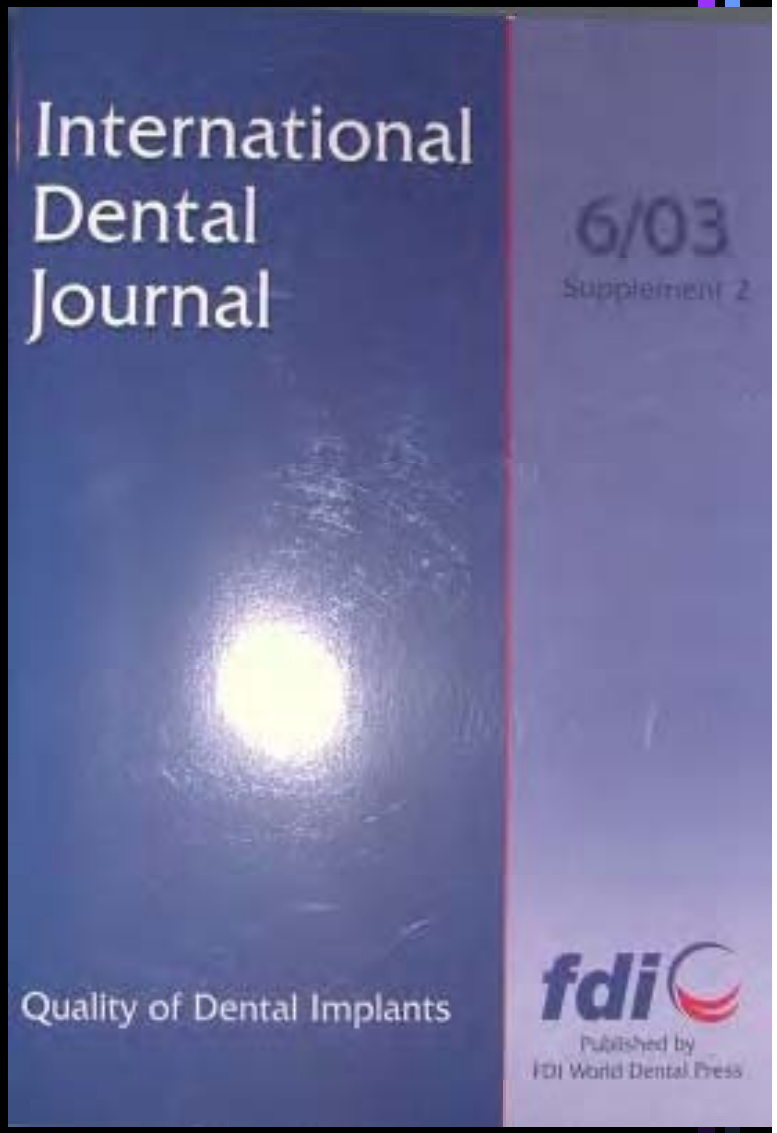
C. Patients have clear treatment preferences?

D. Patient recruitment to trials is difficult due to inclusion and exclusion criteria?

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



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:

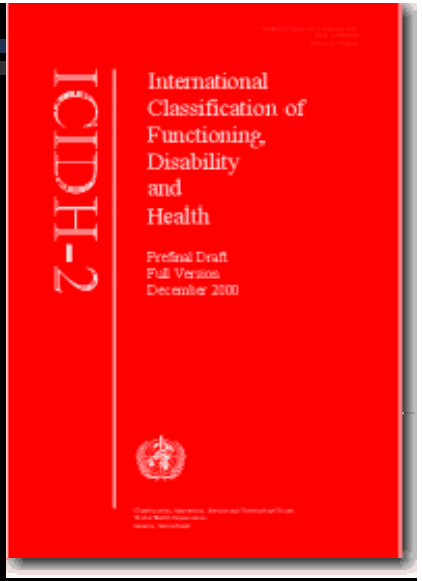
- Implants made from titanium and titanium alloys appear to perform well clinically in properly surgically prepared bone, regardless of small variations in design.
- The scientific evidence of the influence of dental implant material, geometry and surface topography on their clinical performance is limited 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

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



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

No /Mild /Moderate /Severe /Complete difficulty to: Speak – Eat - Drink - Basic interpersonal interactions- Complex interpersonal interactions - Recreation and leisure

Zero trials comparing FPDs/RPDs vs implant-supported prostheses – reasons?

A. It's so obvious that an implant-based prosthesis is superior to a conventional prosthesis?

B. No research funding since the medical condition and its treatment seems trivial?

C. Patients have clear treatment preferences?

D. Patient recruitment to trials is difficult due to inclusion and exclusion criteria?

Don’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 Palmqvist[1], Björn Söderfeldt[2,3] and Dorte Arnbjerg[2]

[1]Department of Prosthetics, Postgraduate Dental Education Center, Örebro, Sweden; [2]Department of Health Policy and Management, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, MD, USA; [3]Department of social medicine, Kronan Health Center, Karolinska Institute, Stockholm

Key words: dental implants – treatment need – public health

Sigvard Palmqvist, Department of Prosthetics, Postgraduate Dental Education Center, P.O. Box 1126, S-70111 Örebro, Sweden

Accepted for publication 5 September 1991

Palmqvist et al., COIR 1991	N=3000, Rand.pop. questionnaire (45-69 yrs)	Need: Edentate: 8% Edentate one jaw:17% RPD users: 23% Dentate: 51%

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

Berge, COIR 2000	N=3500, Rand.pop. questionnaire (15-85 yrs)	23% would not consider implant treatment
Salonen, CDOEpi 1994	N=150 Interview (55yrs, new dentures)	Only 15% would consider implant treatment
Palmqvist et al., COIR 1991	N=3000, rand.pop. questionnaire (45-69 yrs)	Need: Edentate: 8% Edentate one jaw: 17% RPD users : 23% Dentate: 51%

Kronström et al., Clin Imp Dent Rel Res 2002	N=2276, pop. questionnaire (55-69 yrs)	Need: DK S Edentate 20% 30% Few teeth miss.: 10 17 RPD users: 30 20
Berge, COIR 2000	N=3500, rand.pop. questionnaire (15-85 yrs)	23% would not consider implant treatment
Salonen, CDOEpi 1994	N=150 Interview (55yrs, new dentures)	Only 15% would consider implant treatment
Palmqvist et al., COIR 1991	N=3000, rand.pop. questionnaire (45-69 yrs)	Need: Edentate: 8% Edentate one jaw: 17% RPD users: 23% Dentate: 51%

?

how then can we conduct RCTs?

Use RCT study designs that take patient preferences into consideration

Trials taking patient preferences into account provide, in theory, more reliable indicators of patient-centered outcomes than ordinary RCTs

RCT study designs that take patient preferences into consideration

1979: Zelen “single consent”

1985: Olschewski/Scheuren
“comprehensive cohort design”

1989: Brewin and Bradley
“partially rand. pat.-pref. design”

1989: Rücker
“two stage trial design”

1990 Zelen “double consent”

1991: Korn & Baumrind

1993: Wennberg (design)

2005 : Millat ea. Surgical eval. design

…but what if we provide the implants 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

RESEARCH REPORTS
Clinical

P.F. Allen[1]*, J.M. Thomason[2], N.J.A. Jepson[2], F. Nohl[2], D.G. Smith[2], and J. Ellis[2]

[1]National University of Ireland, Cork, Ireland; and [2]University of Newcastle upon Tyne, UK; *corresponding author, University Dental School & Hospital, Wilton, Cork, Ireland; f.allen@ucc.ie

J Dent Res 85(6):547-551, 2006

A Randomized Controlled Trial of Implant-retained Mandibular Overdentures

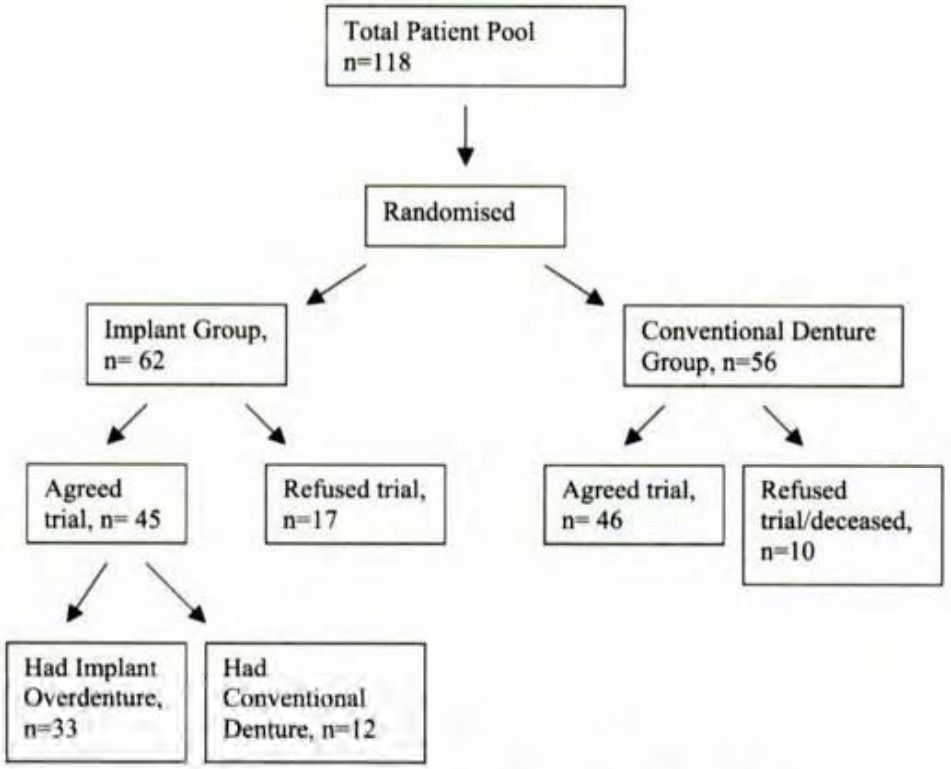


Figure 1. Trial profile, indicating allocation of study patients.

Zero trials comparing FPDs/RPDs vs implant-supported prostheses – reasons?

A. It's so obvious that an implant-based prosthesis is superior to a conventional prosthesis?

B. No research funding since the medical condition and its treatment seems trivial?

C. Patients have clear treatment preferences?

D. Patient recruitment to trials is difficult due to inclusion and exclusion criteria?

E.g. RPD: contraindications

Contraindications (*more harm than benefit likely)*:

- Oral health care compromised
- Active oral infection & -inflammation

RPD: 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 structures
Active infection & inflammation
Systemic diseases likely to compromise implant surgery
Active skeletal growth
Serious mental illness

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

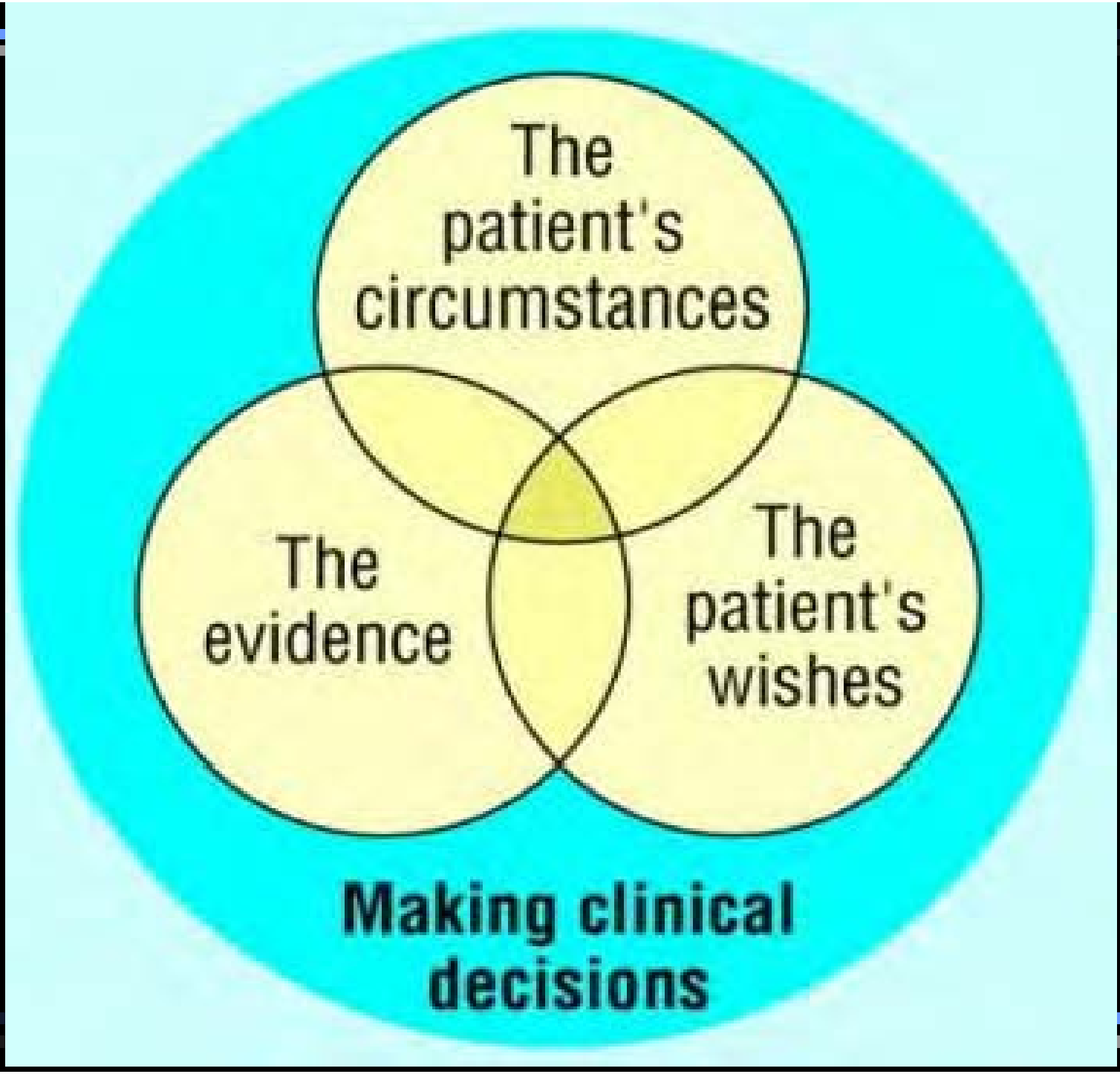
Conclusion – why no RCTs?

We can conduct comparative studies in theory, but

1. who are the *patients that would be indifferent* to receiving a conventional prosthesis instead of an implant based prosthesis? ...and
2. would they be *representative* for the population?... and
3. are there any dental researchers today who have genuine *equipoise*?

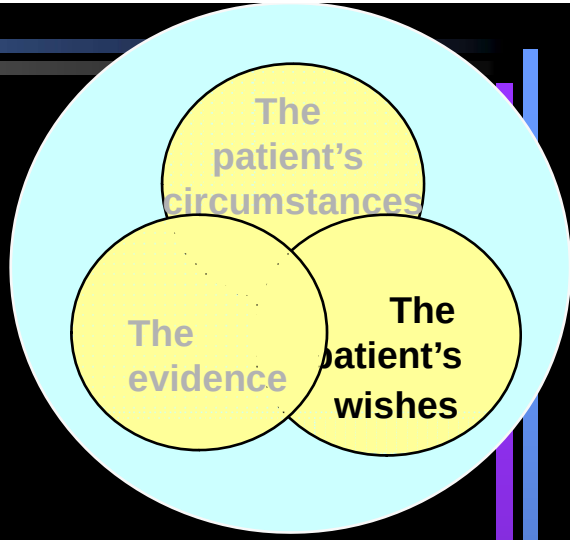
1. What do we know?

2. How should we proceed when planning treatment for our patient?


The patient's circumstances
The evidence
The patient's wishes
Making clinical decisions

Treatment planning

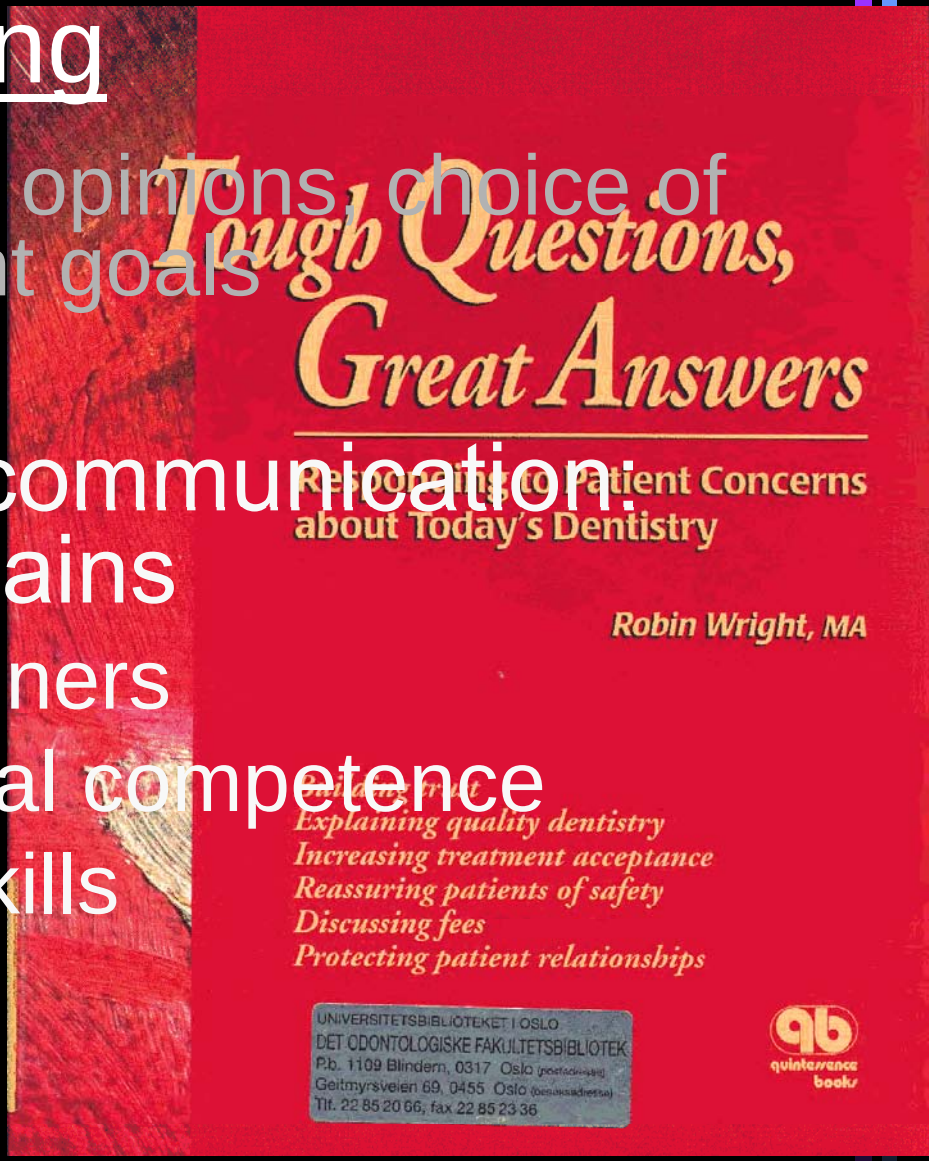
1. Identify the patient's opinions, choice of values and treatment goals



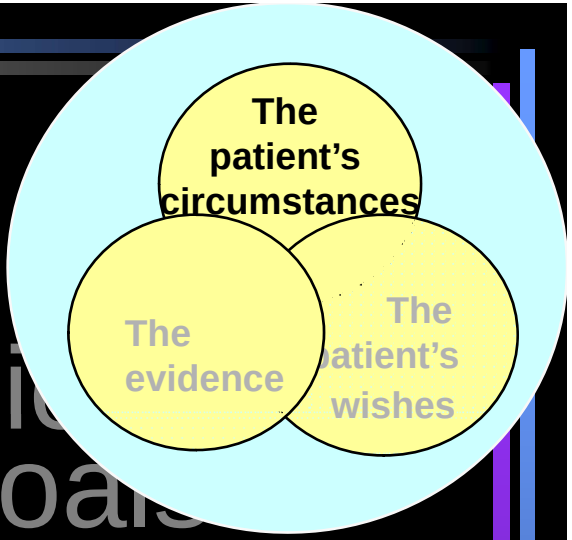
Treatment planning

1. Identify the patient's opinions, choice of values and treatment goals

2. Adequate patient communication: Three critical domains
   - Interpersonal manners
   - Perceived technical competence
   - Communication skills



Treatment planning



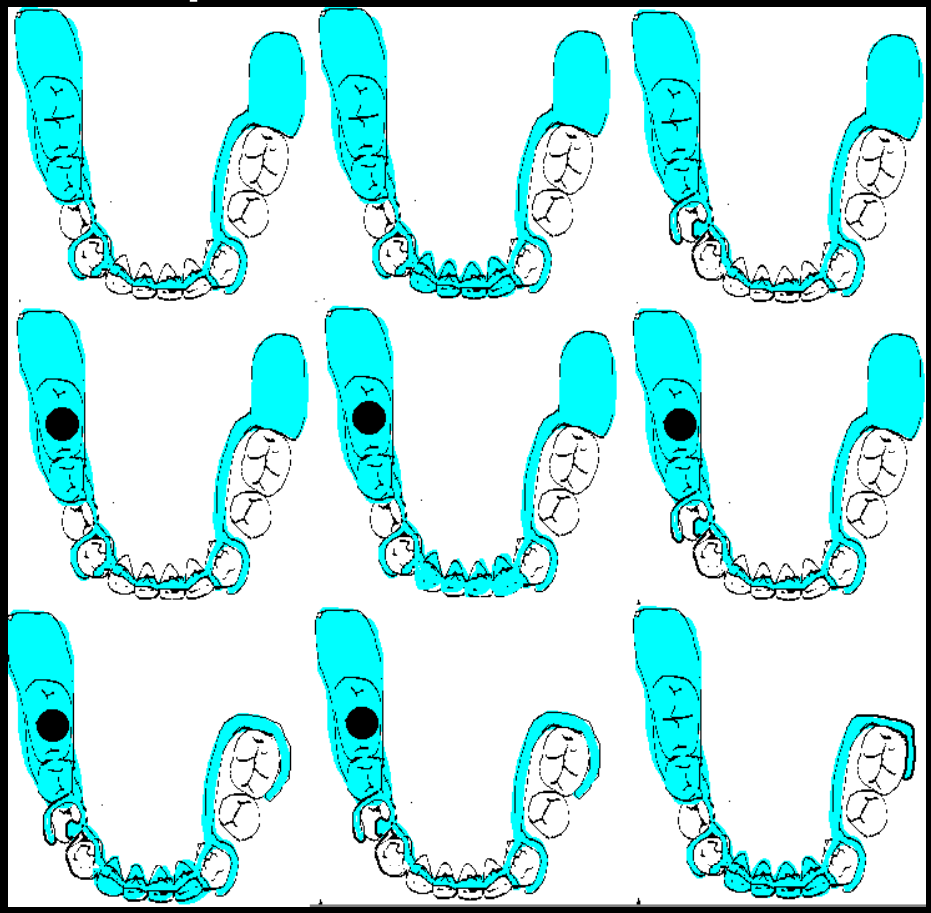
1. Patient's opinions, choi
values and treatment goals
2. Patient communication

3. Consideration of possible technical solutions

Choice of technical solution?

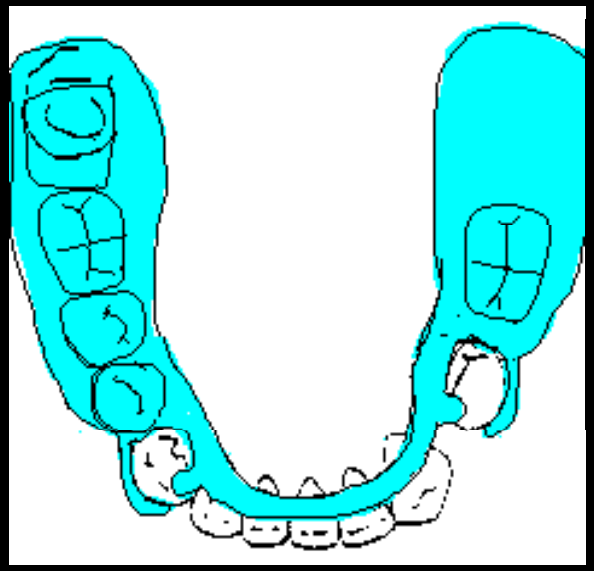

Choice of technical solution ?

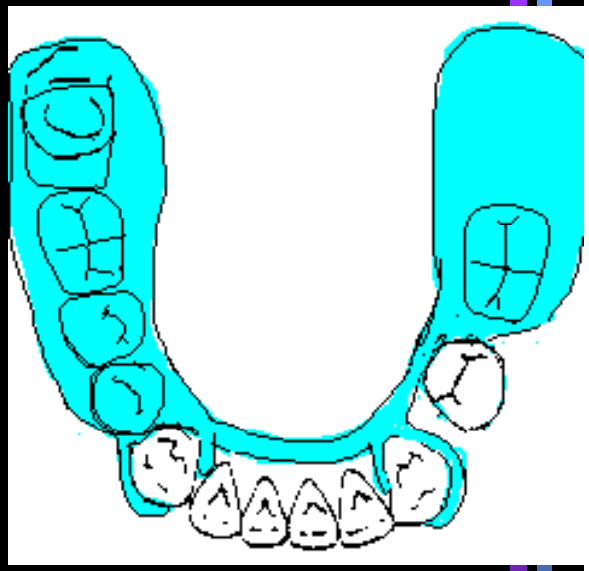
Cast partial denture



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

Acrylic partial denture

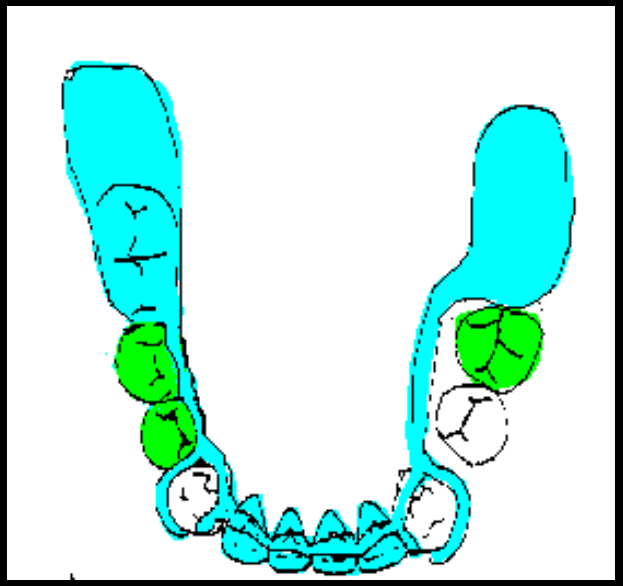


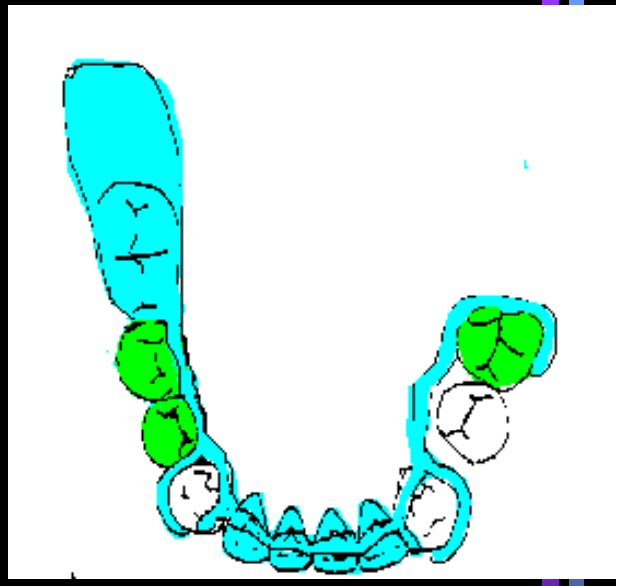


Clinical knowledge

- Prosthesis design
- Prognosis

Crowns + cast partial denture





<u>Additional clinical knowledge</u>

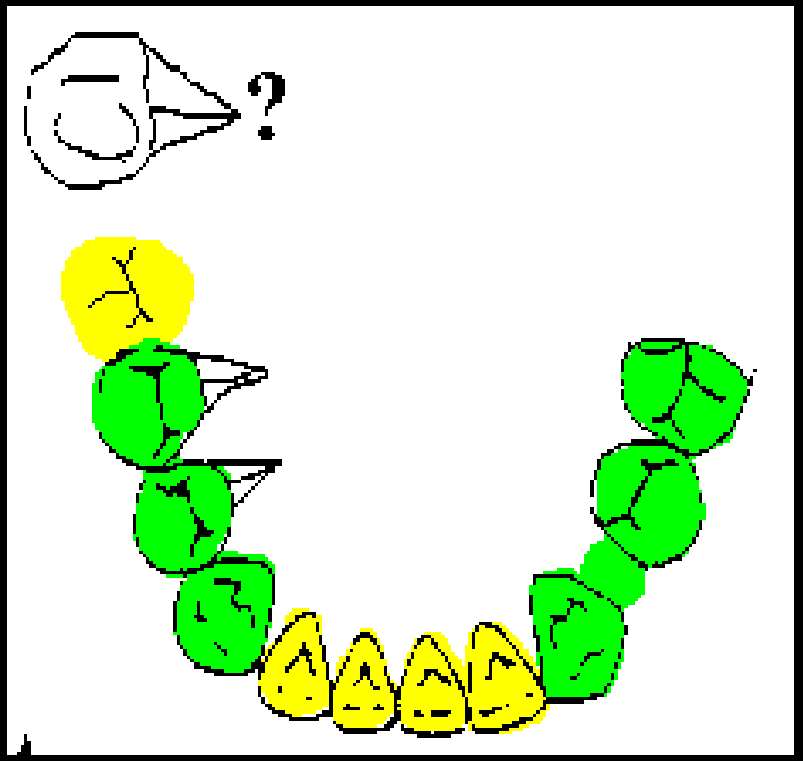
36 extraction or crown?

Soldered 44 + 45?

Milled crowns?

Intra- or extracoronal attachments?

Fixed bridge



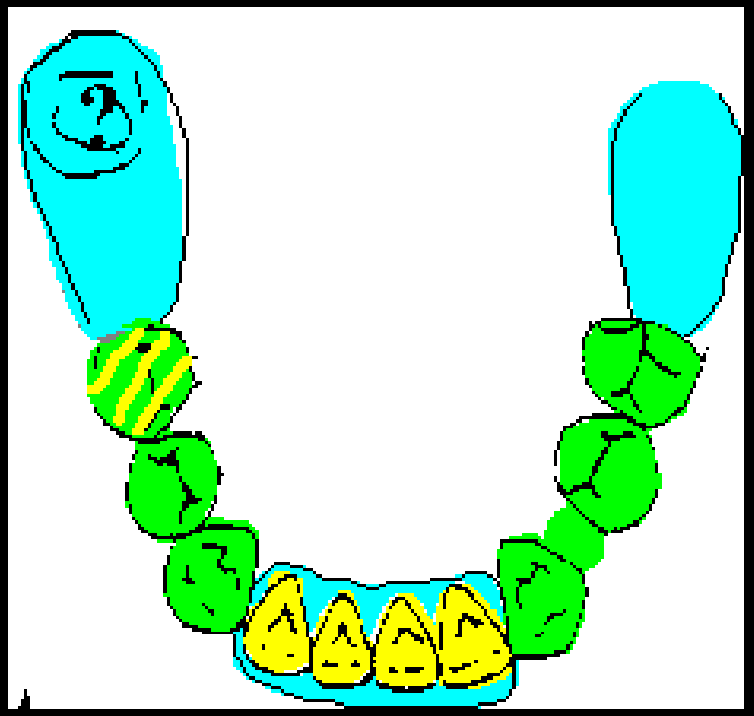
<u>Clinical knowledge</u>

Conventional alloy, titanium-ceramic or gold acrylic?

Zn-phosphate, GIC or resin cement?

Bridge extension 46? 46+47 ?

Conus bridge

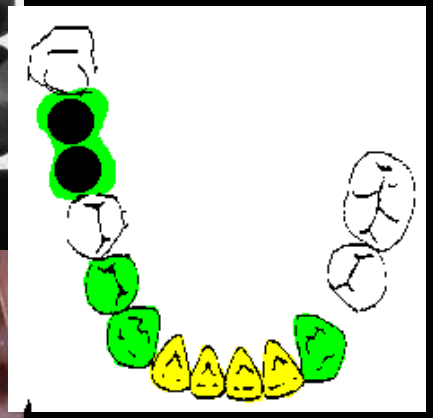


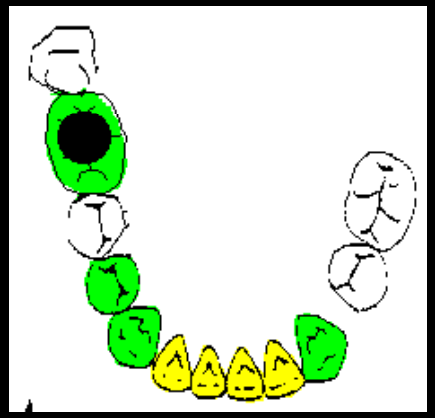
<u>Clinical knowledge:</u>

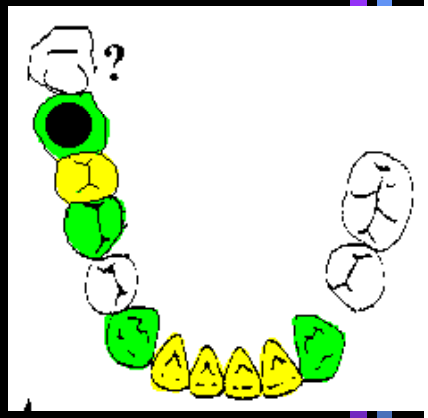
47, 36, 45: extraction … gold coping … attachment?

43/44/45: separation?

Implant retained prosthesis







<u>Clinical knowledge</u>

One / two implants?

Wide collar - standard diameter?

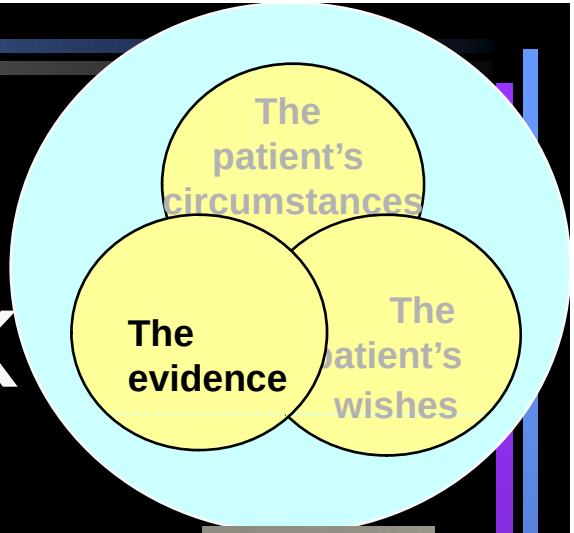
Splintet - non-splintet FPD?

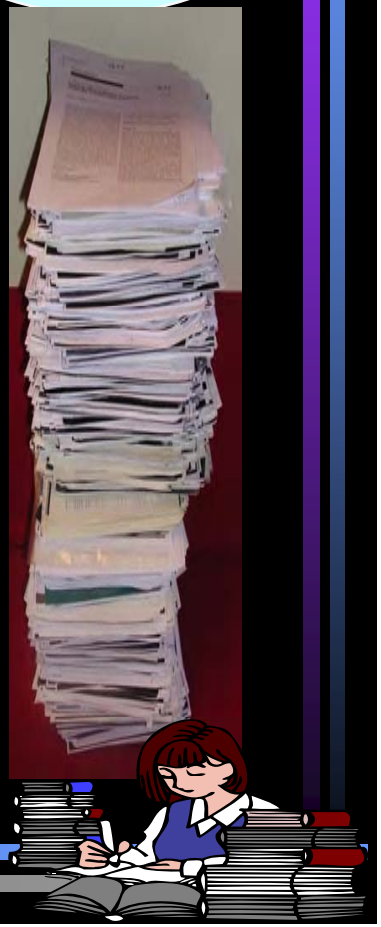
Cement / screw-retained ?

Nobelbiocare, AstraTech, 3i, Endopore, Straumann, Friadent…?

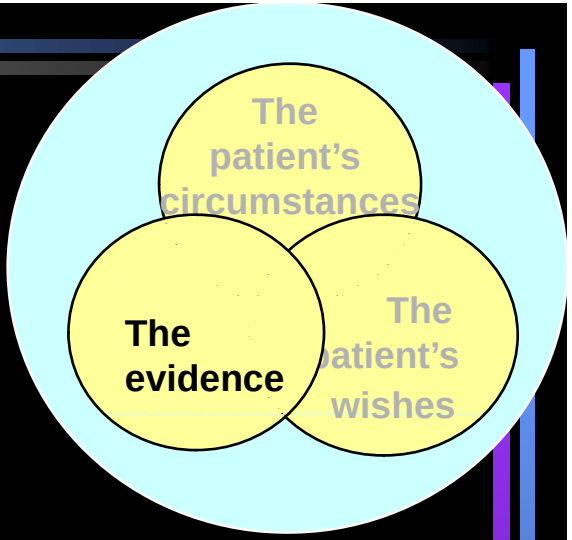
Treatment planning

Overwhelming task to appraise and present evidence without first communicating with the patient!





Treatment planning



1. Patient's opinions, choice of values and treatment goals
2. Patient communication
3. Consider possible technical solutions
4. Present realistic outcomes with different technical solutions

Treatment planning

1. Patient's opinions, choice of values and treatment goals
2. Patient communication
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

Reality can occasionally be

Perfect result %?

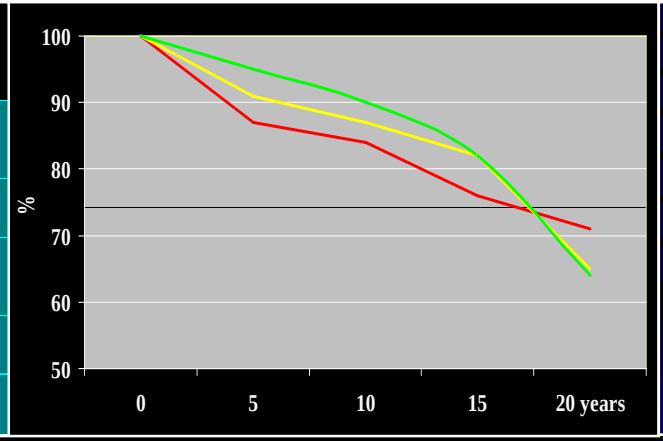
Opacity due to misalignment %?

Gingival-retraction %?

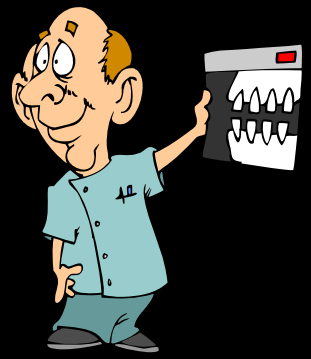
Exposed fixture %?

Adjacent necrosis %?

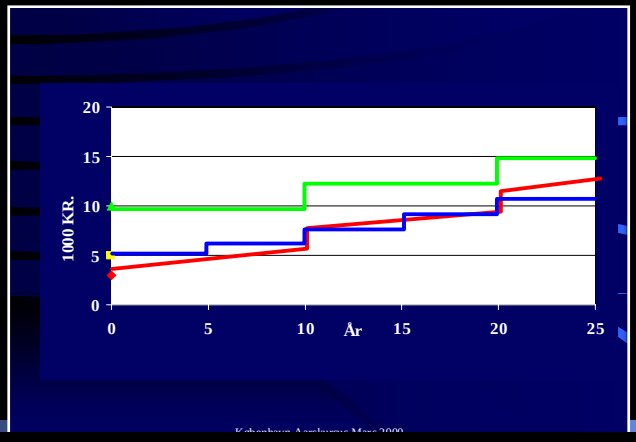
Independent variables	*Bi-variate odds ratios*	*Bivariate significance*	*95% Confidence intervals bivariate odds ratios*	*Multi-variate odds ratios*	*Multivariate significance*	*95% Confidence intervals for multivariate odds ratios*
Age group						
20-30	-	-	-	-	-	-
30-40	2.32	**	1.15 - 3.13	2.52	**	1.35 - 3.33
+40	2.63	***	1.43 - 3.08	2.63	***	1.83 - 3.8
Gender						
Male	-	-	-	-	-	-
Female	2.42	**	1.61 - 2.79	2.12	**	1.91 - 2.9
Material						
Amalgam	-	-	-	-	-	-
Composites	1.12	NS	0.13 - 1.56	1.42	NS	1.13 - 1.96
Glass ionom.	3.12	***	2.52 - 4.34	5.65	**	4.67 - 7.23
Dentists						
#1	-	-	-	-	-	-
#2	1.34	NS	0.35 - 1.61	1.04	NS	1.35 - 2.01
Location						
Mandible	-	-	-	-	-	-
Maxilla	1.55	*	1.17 - 2.04	1.15	*	1.57 - 2.14



Risk factors **Longevity** **Outcomes probabilities**



5. Reach consent amongst the alternative technical solutions



QOL **Cost (Fee+Incremental)** **Worst Case Scenario**

Treatment planning - take-home messages

1. Two-way communication is critical in the treatment planning phase.

   Be cognizant of importance of:

   - Interpersonal manners
   - Perceived technical competence
   - Communication skills

Treatment planning - take-home messages

1. Two-way communication is critical in the treatment planning phase. Be cognizant of: Interpersonal manners, Perceived technical competence & Communication skills
2. Dentists and patients diverge about
   - evaluation of therapy success
   - appraisal of, and attitude towards risk

Treatment planning - take-home messages

1. Two-way communication is critical in the treatment planning phase. Be cognizant of: Interpersonal manners, Perceived technical competence & Communication skills
2. 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

Thank you for your kind attention


UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY
The Toronto Osseointegration Conference Revisited
25 Years since the 1982 Toronto Conference on Osseointegration in Clinical Dentistry
May 8-10, 2008
METRO TORONTO CONVENTION CENTRE
www.torontoimplantconference.ca