

# Using “Oral Health Related Quality of Life” Measures to Assess Treatment Needs

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## Overview...

- ✓ Why bother with QoL in Needs Assessment?
- ✓ Needs Assessment - theory and practice
- ✓ Quality of life in needs assessment
- ✓ Sociodental Approach for Assessing Treatment Needs
- ✓ Challenges for using QoL in Needs Assessment

# Why bother with QoL measures in needs assessment?

## Who can possibly care about needs assessment?

- ✓ Dentists
- ✓ People / (patients)
- ✓ Commissioners / planners
  
- ✓ QoL is about “giving the patient a voice” ..., and using it for needs assessment is a useful practical application with a public health importance



# Uses of Health-Related Quality of Life Measures

*Ware et al., 1981*

- measuring efficiency or effectiveness of medical interventions
- assessing quality of care
- **estimating health needs of a population**
- improving clinical decisions
- understanding causes and consequences of differences in health

# Why use QoL in Needs Assessment?

- ✓ Subjective perceptions and "Quality of Life" are underlying constructs in the provision of services
- ✓ Intended outcomes of health care are primarily changes in patients' health status and quality of life (McCallion et al, 1993)
- ✓ Treatment provision determined by "an objective medical assessment of the patient's medical condition, the history and probable course of her illness, **the degree of pain she is in and/or the nature of her disability at the time**".

Luxembourg, European Court of Justice ruling (2006)

# Needs Assessment: Why is it important?

- ✓ Health needs assessment is a systematic approach attempting to ensure that the health service uses its **resources** to improve the health of the **population** in the most **efficient** way.
- ✓ Not just a method of measuring ill health.
- ✓ Need as **capacity to benefit** (Stevens and Raftery, 1994).
- ✓ Focus on **effectiveness of interventions** that will bring about **health gain**.
- ✓ Disease → Treatment Needs → Treatment  
→ QoL improvement? **Not always**

## How is health status and need usually assessed?

- The most commonly used type of health status and need assessment in oral health care is through **clinical indices** and **normative** or professionally defined **need**.
- Normative need identifies diseases and impairments **without considering the subjective perceptions of the subject**.
- Despite its usefulness and extensive use, normative need is not free from **limitations**.

# Shortcomings of Normative Measures



1. Lack of objectivity and reliability.
2. Neglect psychosocial aspects
3. No consideration for health behaviours.
4. Unrealistic; ignores limited resources.
5. Serious conceptual limitations

“Clinical measures tell us nothing about the functioning of the oral cavity or the person as a whole” (Locker, 1989).

“...essential for measuring disease...but not for health and treatment need” (Sheiham et al., 1982).

Some people with oral impacts are denied treatment and some of those without oral impacts are treated.

# OHRQoL measures have been used in:

- ✓ **Cross-sectional epidemiological studies, presenting the profile of functional, psychological and social impacts of oral disorders**
- ✓ **Studies assessing the relationship between clinical and OHRQoL domains**
- ✓ **Intervention (Evaluation) studies assessing the effect of treatment, where quality of life is used as an outcome measure**
- ✓ **Studies for the assessment of treatment need, further facilitating planning of health services**



## So, where do we go from here?

“New approaches to patient assessment are needed to extend the traditional model” (Mechanic, 1995)

An appropriate measure of dental treatment need should go beyond the simple use of a normative measure... and achieve the necessary balance between clinical assessments and subjective perceptions, while considering factors that are important for the outcome of treatment (Sheiham and Tsakos, 2007)

## The socio-dental approach to assess needs

**Multi-factorial** approach for oral health care needs assessment, influenced by concept of needs as **capacity to benefit**

### *Socio-dental Approach to Needs Assessment*

#### *Key factors*

1. Clinical dental measures
2. Subjective Perceptions  
(*OHRQoL indicators - Perceived Treatment Need*)
3. Behavioural propensity
4. Evidence-based interventions

(Gherunpong et al, 2006; Sheiham and Tsakos, 2007)

# OHRQoL and Needs Assessment

- A key consideration when using OHRQoL measures in needs assessment is **attributing impacts to specific oral conditions**:
  - How do we know that the impact on smiling is caused by a specific condition (e.g. malocclusion) and reflects a requirement for a specific type of need (e.g. orthodontic unmet need)?

# An “OHRQoL” measure for Needs Assessment

## *The Child - Oral Impacts on Daily Performance (Child-OIDP)*

Gherunpong *et al.*, 2004

- ✓ **both generic and condition-specific**

- ✦ Eating food
- ✦ Speaking clearly
- ✦ Cleaning mouth
- ✦ Sleeping
- ✦ Smiling, laughing, showing teeth without embarrassment
- ✦ Maintain usual emotional state without being irritable
- ✦ Carrying out school work
- ✦ Enjoying contact with other people

# OHRQoL and Needs Assessment

- A major factor relates to the **applicability of OHRQoL measures for needs assessment**. Are they appropriate and relevant for assessing needs for all oral conditions or only for some?
  - How about caries? How about orthodontics?
- OHRQoL measures in needs assessment: **NOT** appropriate for progressive or life-threatening conditions. But appropriate for most oral conditions that are non-progressive.

## *From the Components to the Whole Approach*

### Normative Treatment Need

- ▶ Clinical impairments

### Impact-Related Treatment Need

- ▶ Clinical impairments
- ▶ "OHRQoL" and Perceived needs

### Propensity-Related Treatment Need

- ▶ Clinical impairments
- ▶ "OHRQoL" and Perceived needs
- ▶ Propensity of health promoting behaviours

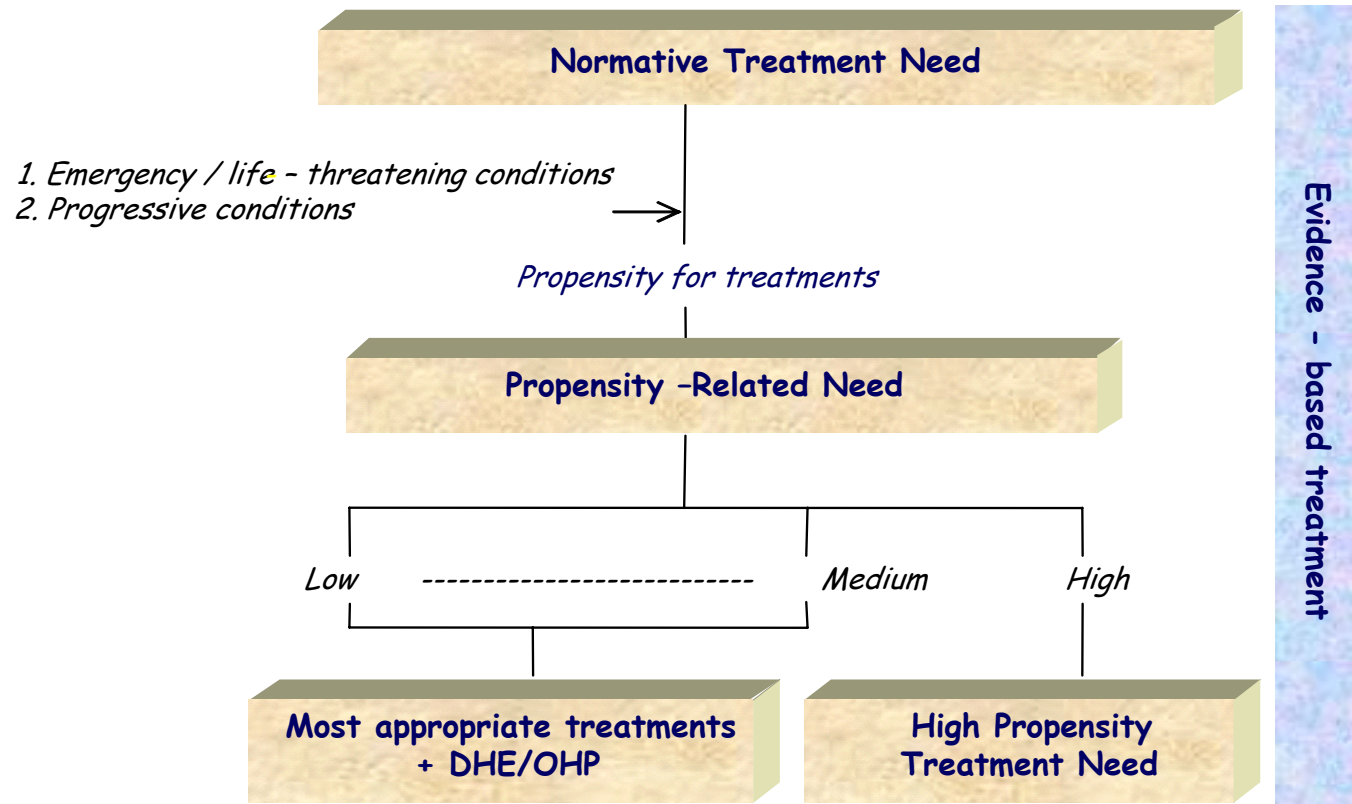
**Evidence-based care** is underlying all levels of the treatment needs assessment system.

# Choosing Needs Assessment Pathway

The type of oral condition determines the choice of needs assessment pathway:

- **life-threatening conditions** (oral cancer, precancerous lesions, fractures of jaw, severe infections)
- **chronic progressive oral conditions** (active dentinal caries)
- **conditions neither progressing nor life threatening** (malocclusion, enamel defects)

# Model for Life-threatening and Chronic Progressive Conditions

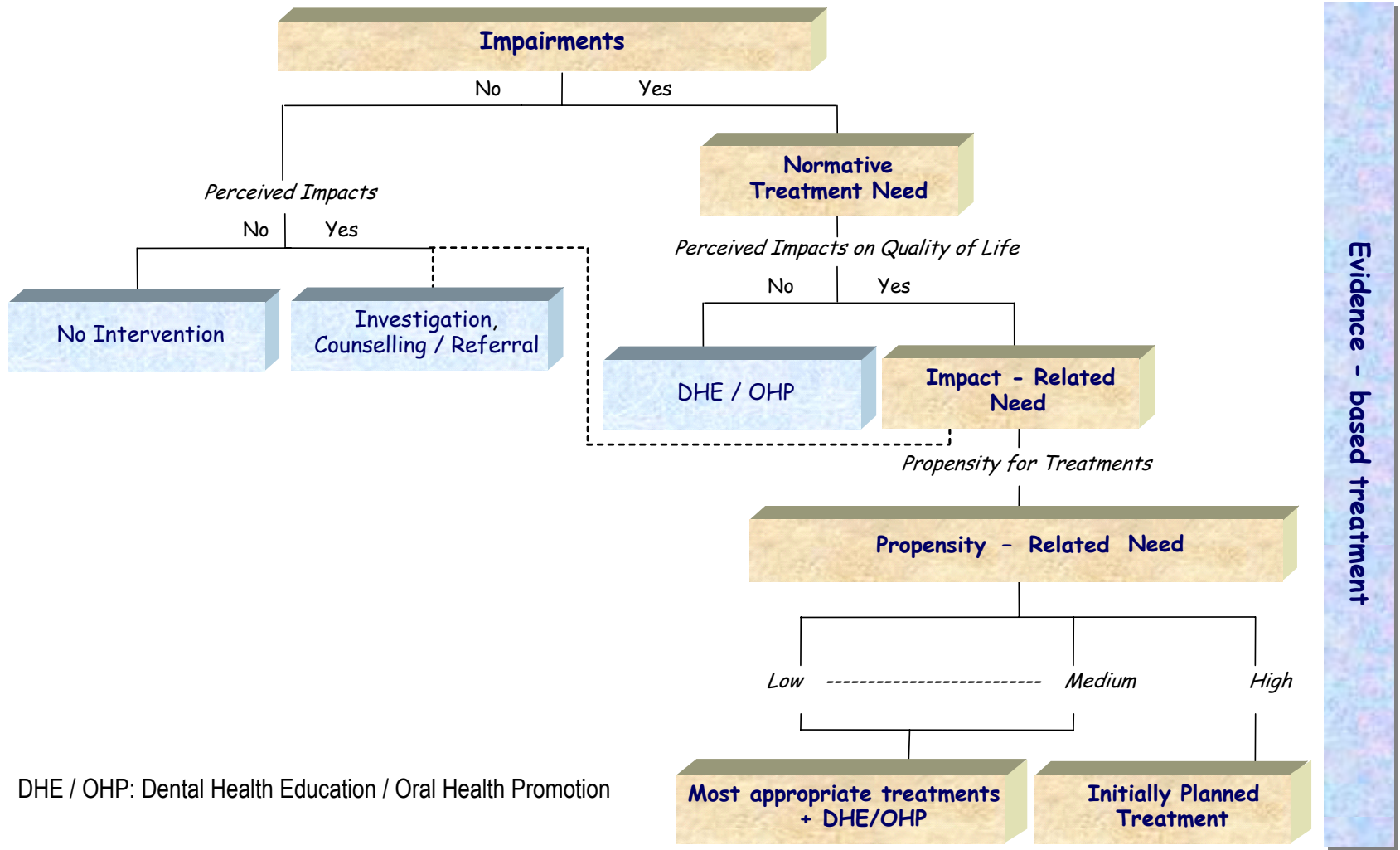


DHE / OHP: Dental Health Education / Oral Health Promotion

(Sheiham and Tsakos, 2007)

Using "OHRQoL" in Needs Assessment

# Basic Model for Needs Assessment



(Sheiham and Tsakos, 2007)

## Orthodontic Treatment Needs

<b>Normative Need (NN)</b>	<b>100 children</b>
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<b>Impact-Related Need (IRN)</b>	<b>30.2</b> <b>(<math>p &lt; 0.001</math>; McNemar test)</b>
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<b>Propensity-Related Need (PRN)</b>	<b>Low</b>	<b>Med-low</b>	<b>Med-high</b>	<b>High</b>
	<b>1.5</b>	<b>8.9</b>	<b>18.9</b>	<b>0.9</b>

*(Gherunpong et al., 2006)*

# Comparison of Normative Needs (NN) and Impact-related Needs (IRN) for prosthetic treatment: Korean national dental survey

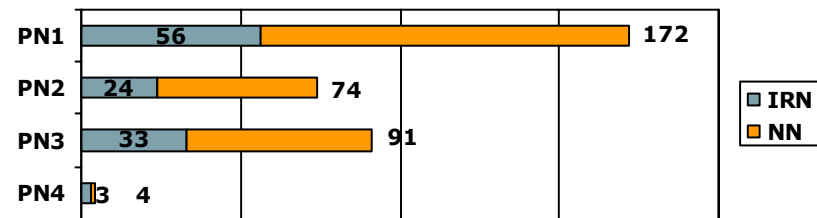
✓ Decrease % in number with prosthetic need

1. PN1: 67.4% ( $p < 0.001$ )
2. PN2: 67.6% ( $p < 0.001$ )
3. PN3: 63.7% ( $p < 0.001$ )
4. PN4: 25.0%

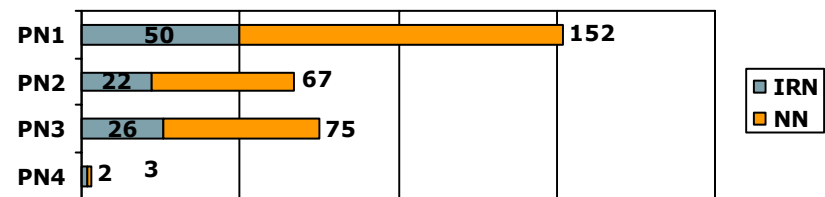
✓ Decrease in % of people

1. PN1: 67.1% ( $p < 0.001$ )
2. PN2: 67.2% ( $p < 0.001$ )
3. PN3: 65.3% ( $p < 0.001$ )
4. PN4: 33.3%

Comparison of NN and IRN for prosthetic treatment by number of prosthetic need



Comparison of NN and IRN for prosthetic treatment need by individual

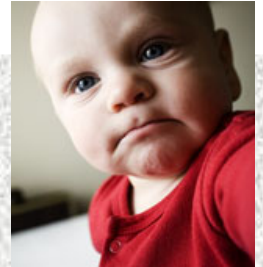


Ryu et al (in press)

# “OHRQoL” in Needs Assessment: Challenges

## *Key challenges ...*

- **Age** considerations: how low can you go?
- **Face and Content Validity** - **conceptual** clarity
- **Methodological** issues
  - ✓ Meaningless scores? Meaningless change? (MID)
  - ✓ QoL thresholds to indicate needs: who decides?
  - ✓ Floor/ceiling effects: how important for needs assessment?
  - ✓ Scoring : different impact patterns - same scores
- **Objective** assessments and **subjective ratings**



# “OHRQoL” in Needs Assessment: Challenges

## *Key challenges ...*

- Generic or condition-specific measure?
- Clinical vs. community setting
- QoL is a dynamic construct - change over time
  - ✓ Will treatment cover unmet need and improve QoL?
- Expanding on applications (away from validation only into research and clinical applications)
  - ✓ Practicality
  - ✓ Length
  - ✓ Content



# Conclusions

- ✓ Challenge “historical guidance” on assessing needs
- ✓ Subjective perceptions (“OHRQoL”) to be included - subject-centred approach
- ✓ Measures available (...“all measures have some limitations; we have to live with it”)
- ✓ Expand on application (Public Health relevance), but also better understanding (conceptual clarity)
- ✓ Socio-dental approach for needs assessment: replicates good clinical practice into a structured, rational and coherent system