

### Changing treatment needs – implications for oral health care and education -children and adolescents

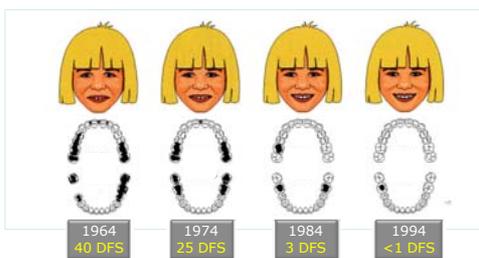
Ivar Espelid  
 Dept. of Paediatric Dentistry and Behavioural Science  
 Faculty of Dentistry, University of Oslo, Norway



### Caries and treatment needs

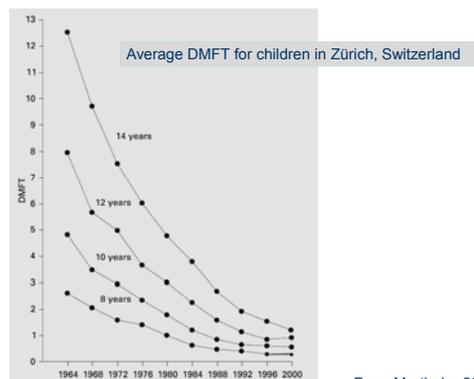
- Normative needs defined by the service itself, have traditionally been indications for dental treatment.
- To understand the changes in caries prevalence and treatment needs over time these “normative needs” have to be explored.
- Overtreatment and/or undertreatment will follow any treatment strategy.

### Change in DFS during 30 years, Värmland, Sweden. 12 year olds



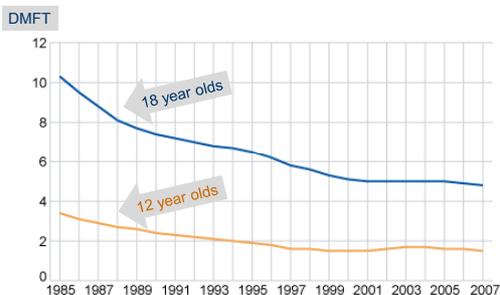
Axelsson, 1998

### The caries decline



From Marthaler 2004

### Caries experience (DMFT), Norway



Source: Statistics Norway

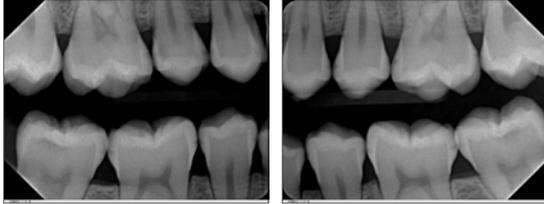
### Decayed teeth in 18 year olds



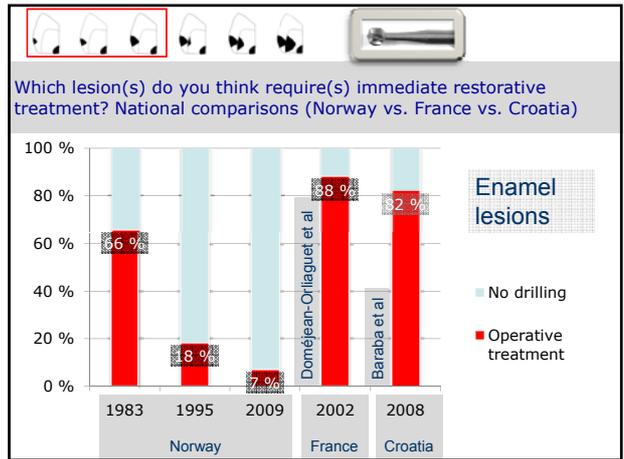
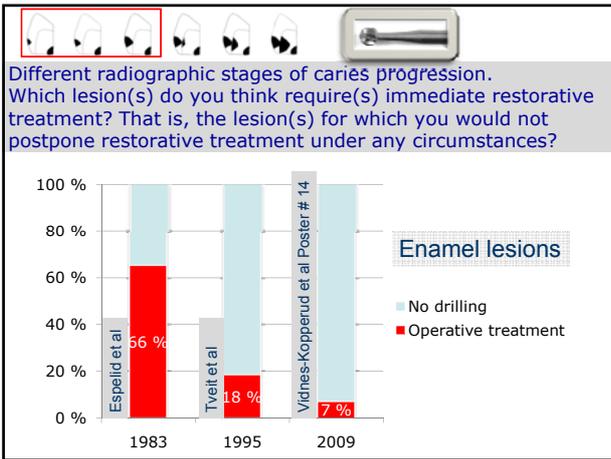
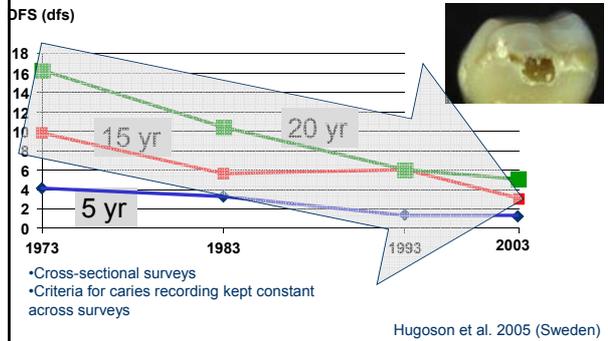
The national health authority has instructed clinicians to report all caries which they intend to treat operatively.

However, for each dentine lesion there are more than 5 enamel lesions (Amarante et al. 1995).

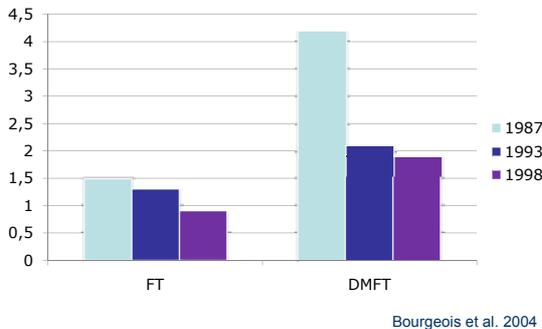
Caries free or not?



Reduction in prevalence of approximal caries during a 30 years time period

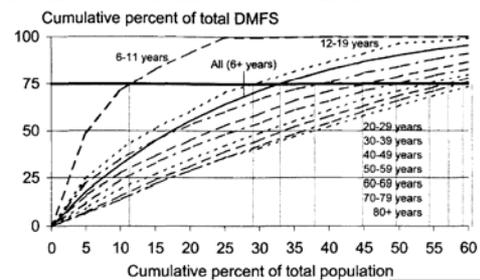


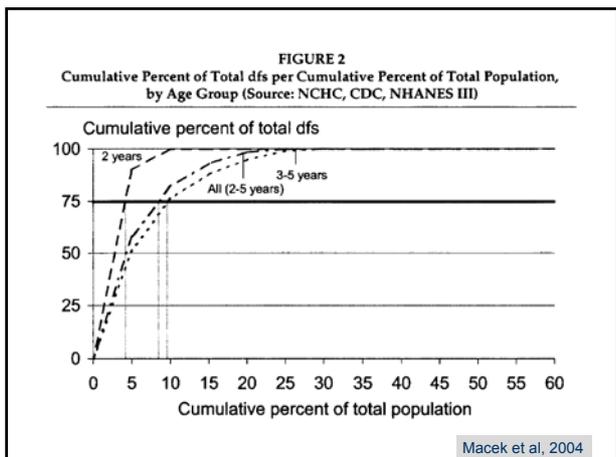
Caries experience in 12-year-olds in France



Cummulative frequency distribution (Lorenz curves)

FIGURE 3 Cumulative Percent of Total DMFS per Cumulative Percent of Total Population, by Age Group (Source: NCHC, CDC, NHANES III)





**Skewed distribution of caries among pre-school children (3-5 yr) in Norway**

10 % of children experience 60 % of decayed teeth  
30 % of children experience 95 % of decayed teeth

Skeie et al, 2005

**Immigrants vs western-native -equal opportunities to oral health?**

Among Norwegian 3-year olds one out of six has caries.

I am three year old. Every second of us has caries even though we live in Norway.

Skeie et al 2005

**Dependent variable: Dentine caries after 2-years**

Risk factor (logistic regression - bivariate relationships)	OR
Parental indulgence	7.4
Non-western immigrant	6.2
Negative attitude to diet	4.7

Skeie et al, 2008

**The vulnerable child and adolescent**

Chronic health conditions  
Disability  
Exposed to abuse and neglect  
Dental fear

- Early professional intervention from one year of age
  - Examination
  - Risk assessment
  - Information and guidance to parents

Early Childhood Caries (ECC) is five times more common than asthma and seven times more common than hay fever.  
US Public Health Service 2000

3 ½ yr

ECC is a common indication for general anesthesia among pre-school children.

## Short versus long term goals in restorative dentistry

"How much of a benefit is to the child and parent to complete a restoration or extraction in an efficient manner if the child do not return to care?"

P. Weinstein 2008

**Abused children** are eight times more likely to have untreated, decayed permanent teeth than nonabused children (Greene et al. 1994)

Convention on the Rights of the Child  
Adopted and opened for signature, ratification and accession by  
General Assembly resolution 44/25  
of 20 November 1989



193 countries have ratified CRC, including every member of the United Nations except the United States and Somalia

### Article 3

1. In all actions concerning children, ....**the best interests of the child** shall be a primary consideration.

Convention on the Rights of the Child  
Adopted and opened for signature, ratification and accession by  
General Assembly resolution 44/25  
of 20 November 1989



### Article 24

1. States Parties recognize the right of the child to the enjoyment of **the highest attainable standard of health** and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.

### *No success like failure*

16 year old boy with Amelogenesis Imperfecta. He received dental treatment from 7 different clinicians during the last couple of years. He developed dental fear.

*The lesson to be learned: Time and efforts are not enough. Competency is one prerequisite for success*



## Changing treatment needs - final remarks

- Less caries and less restorations among the majority of individuals
  - Appropriate indications for restorations
  - Calibrated clinicians (including students)
  - Evidence based methods when possible
  - Good technical quality

Caries treatment = extraction in the 16th century.



## Changing treatment needs - final remarks

- Vulnerable groups: Is dental care an unmet health need?
  - Standardized surveys in selected groups could be a common task in European countries
  - Does the dental care system provide quality care for the complex cases?
  - Provision of care in vulnerable groups need probably to be more focused in education

**Thank you for your  
attention**