More than Just Brushing

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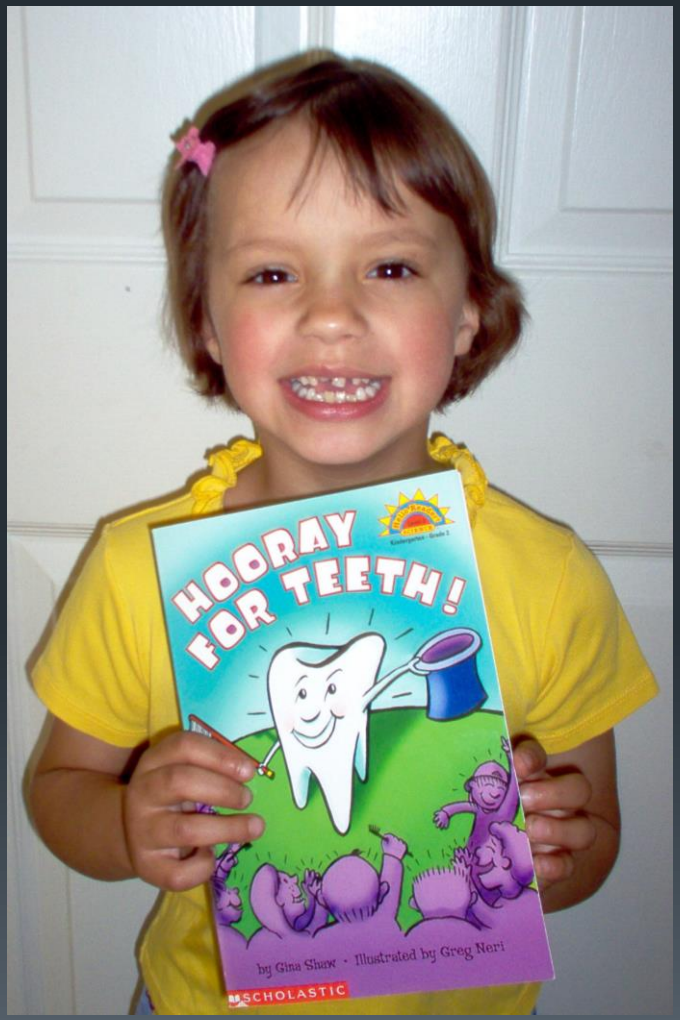
Civil Engineering 2016

Overview

- “Teeth don’t decay in a vacuum” –Dr. Sinton
- Social determinants of oral heath
- Improving the oral health of the community



Background

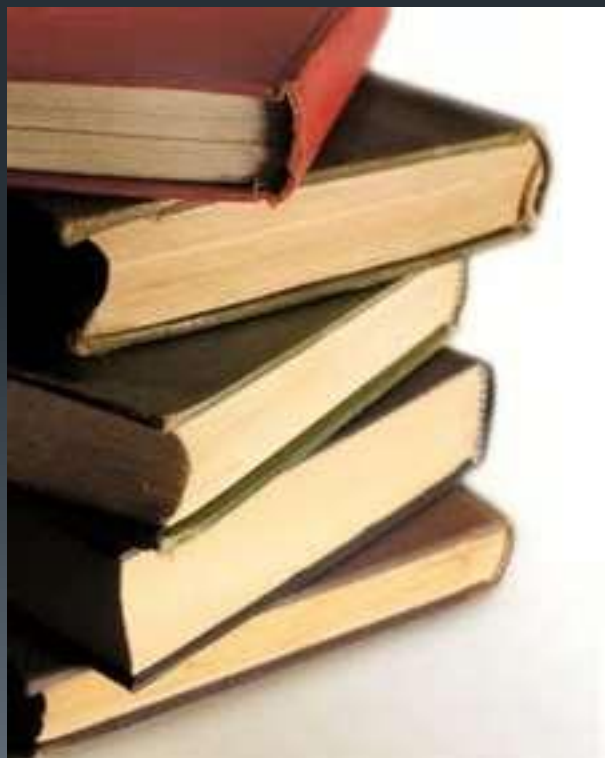
- Social Determinants of health
  - Looking into indirect causes of disease

Background

- Oral Health
  - General proxy for overall health
  - Not covered my OHIP

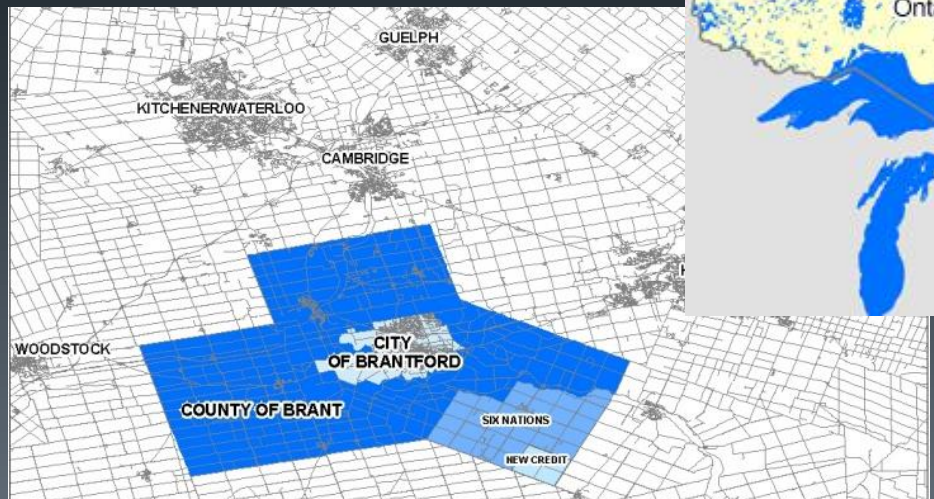
Background

- Existing Literature
  - Generally suggests a link between income and oral health
  - Identified more reactive based care
  - Different jurisdictions



Sample

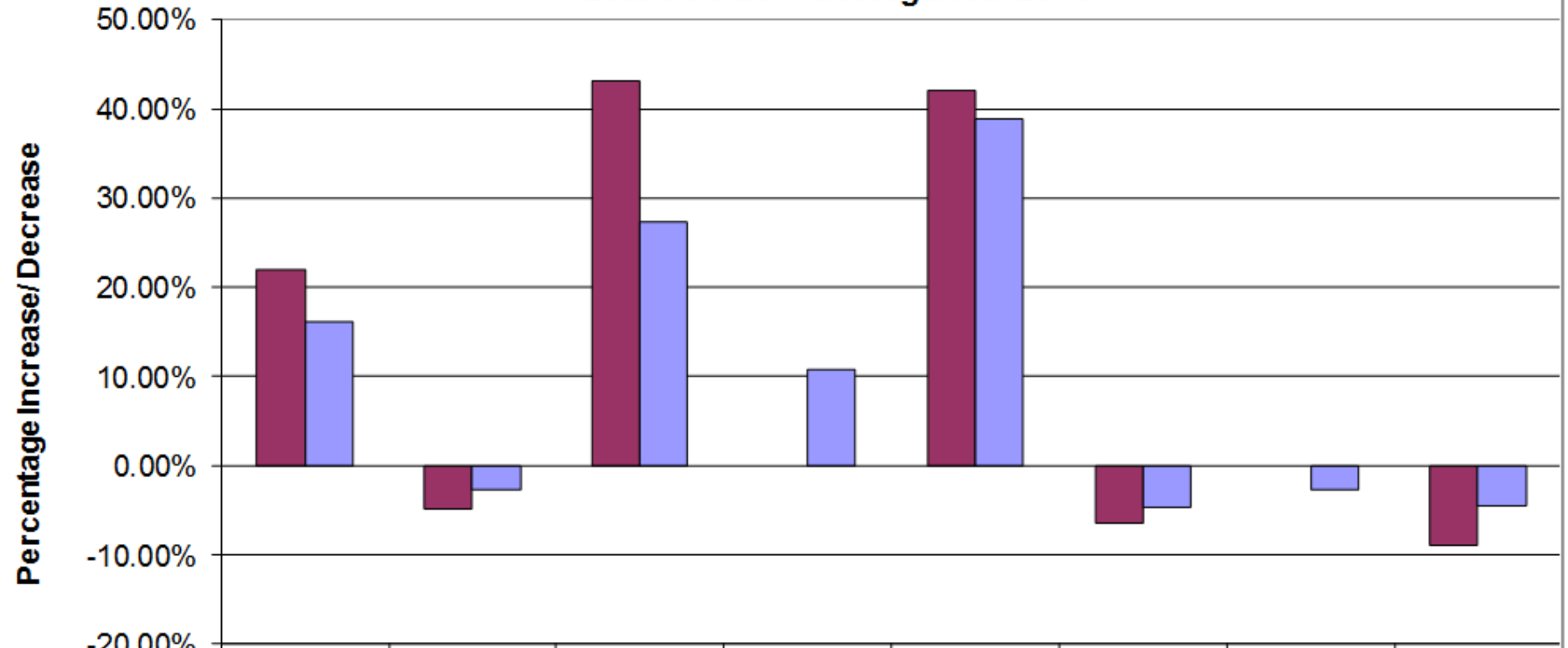
- 1213 valid students
  - January 1 2011- January 1 2012
  - Kindergarten students in Brant County schools
  - Data collected by Brant County Health Unit Staff
  - Demographic data was obtained from the 2006 Canadian Census



Methodology

- Analysis with the Brant County Health Unit Epidemiologist, Adam Stevens
- Records were combined with the 2006 census at the postal code level
- Results analysed using an ANOVA test at the $\alpha=0.05$, followed by a Tukey post-hoc test

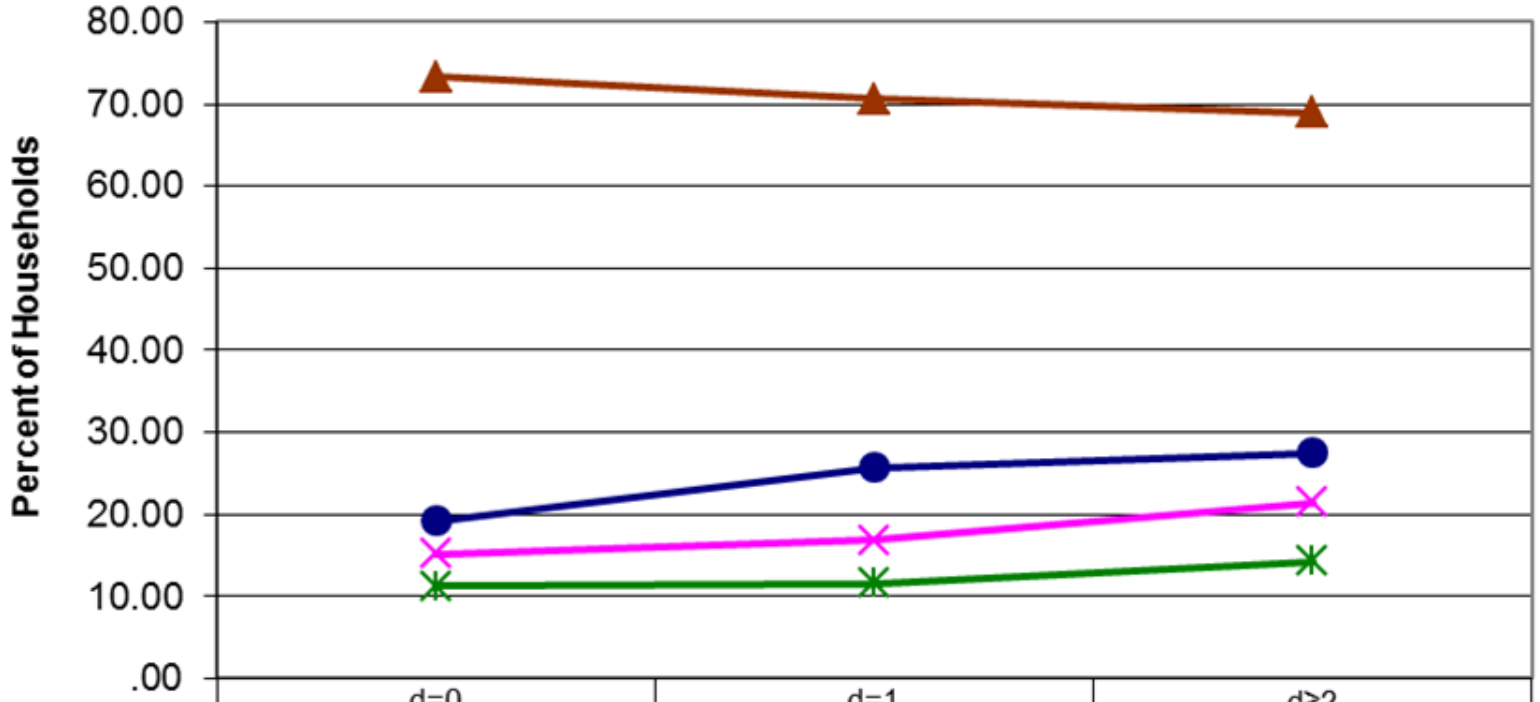
Figure 1 **Percentage Increase/ Decease in rate from Lowest risk to Highest risk groups by Decay Type Brant Senior Kindergarten 2011**



	Lone Parent Families	Number of rooms per dwelling	Rent home	Receiving government transfers	>30% of income on housing	Certificate, diploma, degree	Post Secondary Education	Household Income
Untreated Decay	22.04%	-4.83%	43.21%	Not Sig.	42.10%	-6.37%	Not Sig.	-8.86%
Treated Decay	16.19%	-2.74%	27.37%	10.87%	38.94%	-4.75%	-2.68%	-4.55%

Figure 2

Social Determinants by Categories of Smooth Surface Decay
Brant Senior Kindergarten 2011

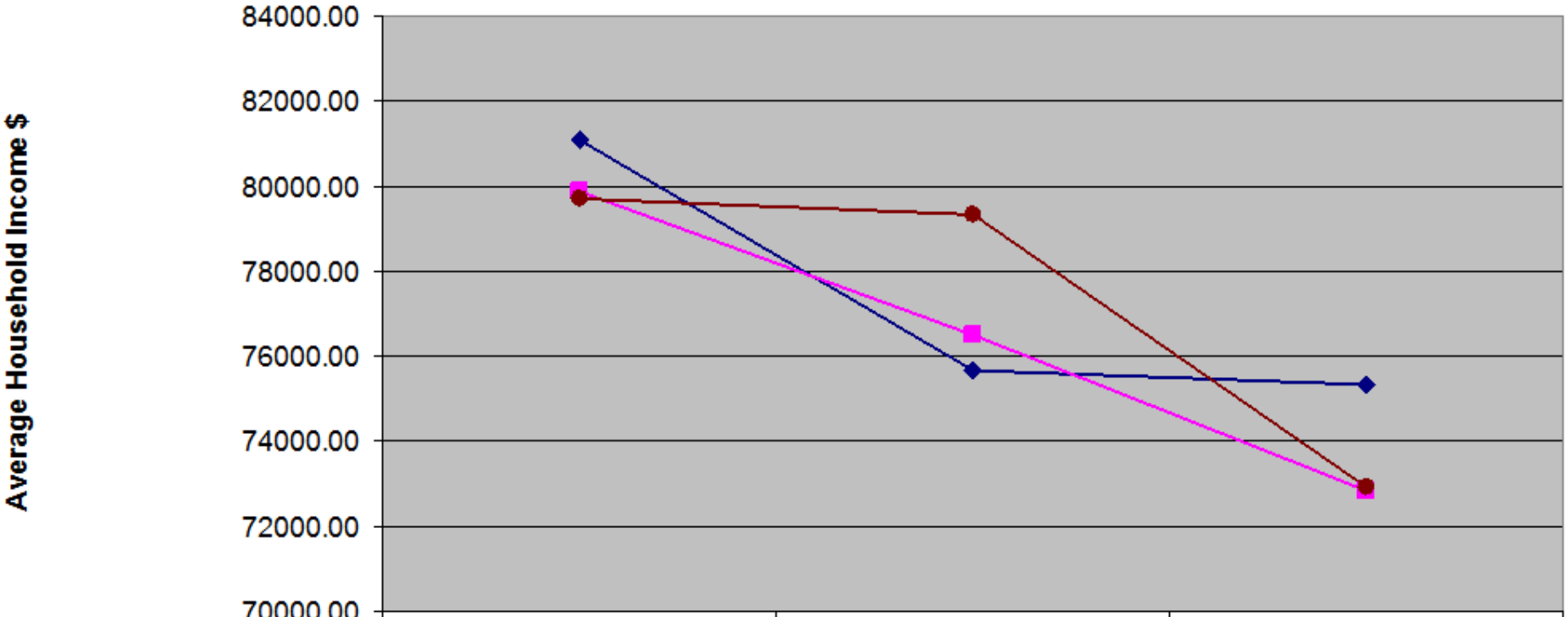


	d=0	d=1	d≥2
Certificate, diploma, degree	73.31	70.63	68.90
Rent home	19.18	25.71	27.48
Lone Parent Families	15.16	16.89	21.41
Receiving government transfer payments	11.25	11.53	14.23

Smooth Surface Decay Category (Numbver of Teeth)

Figure 3

Dental Indices Categories by Average Household Income
Brant Senior Kindergarten 2011



	1	2	3
DEFT	81082.11	75679.46	75351.23
Untreated Decay	79893.75	76511.41	72819.09
Gingivitis and Debris	79727.91	79315.64	72922.02

Indices group (number of teeth/ Gingivities+ Debris score)

Figure 4

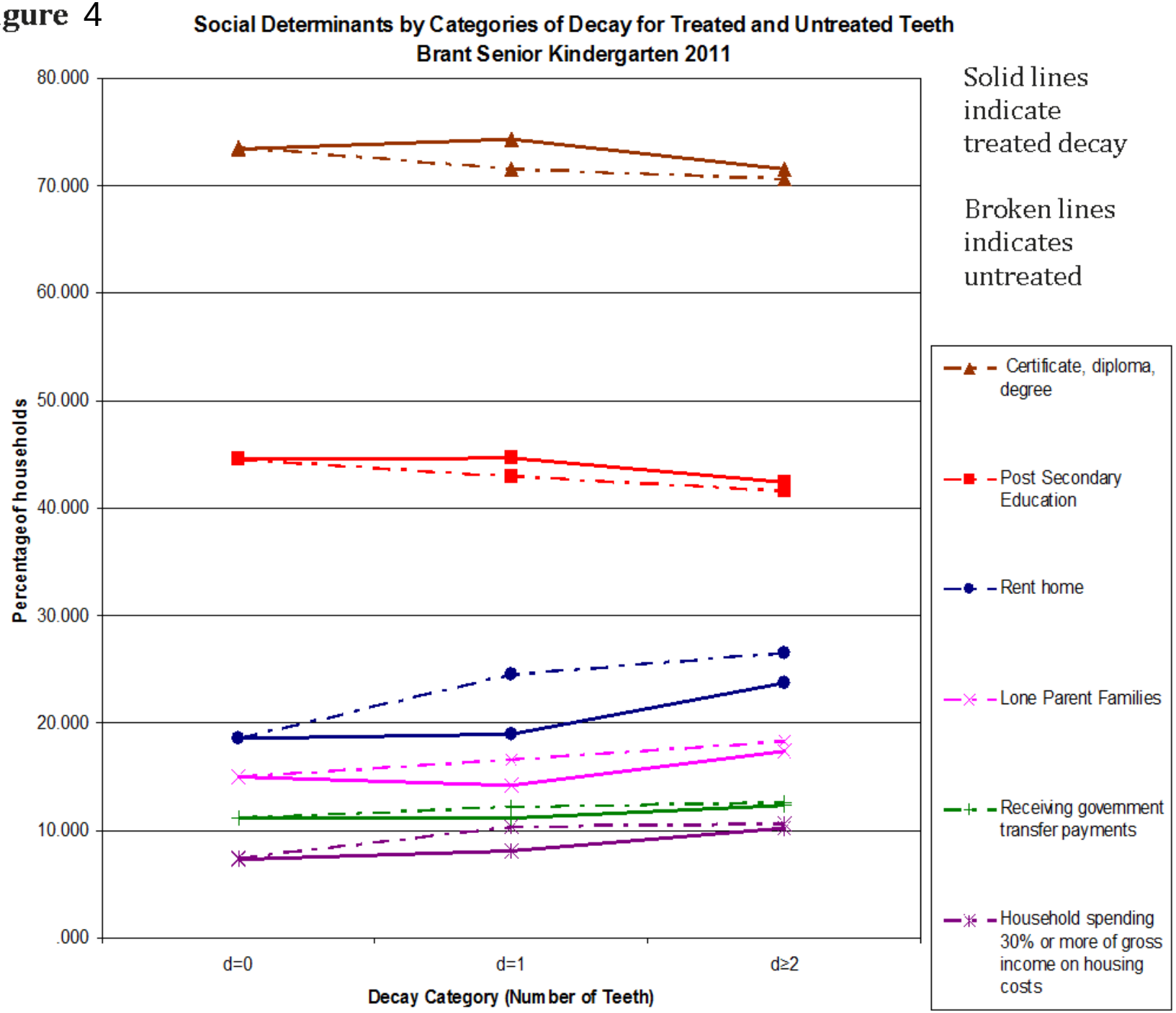
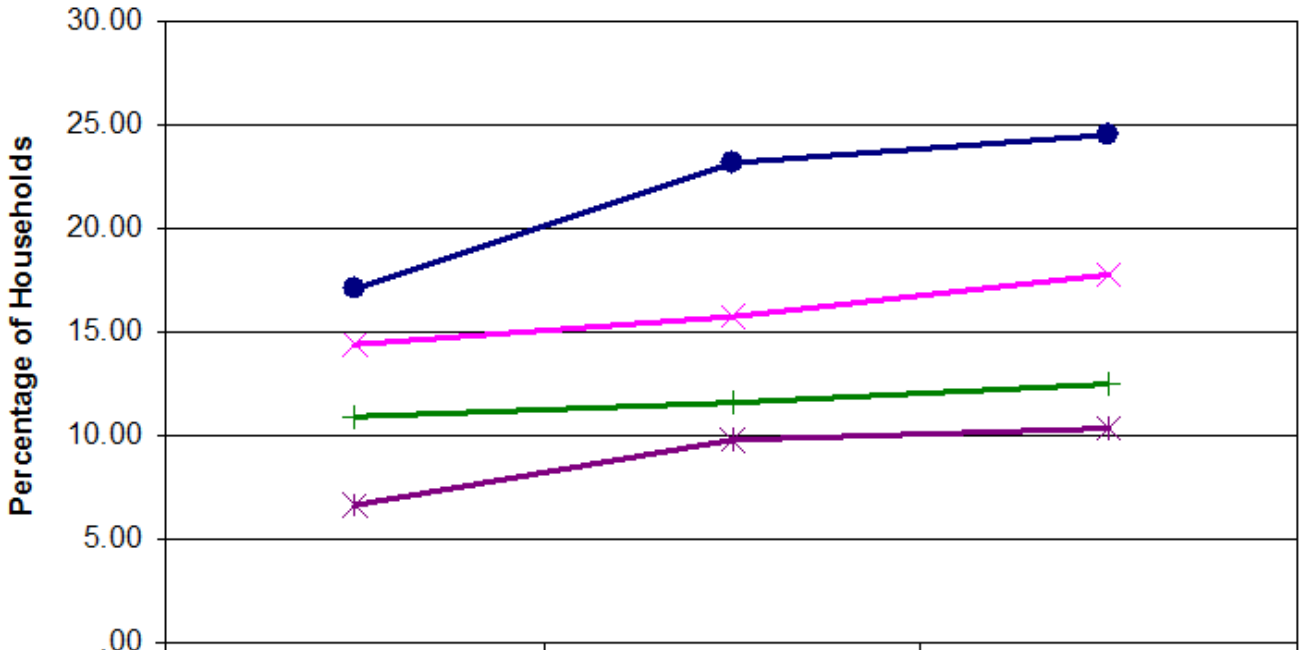

Social Determinants by Categories of Decay for Treated and Untreated Teeth
Brant Senior Kindergarten 2011
80.000
70.000
60.000
50.000
40.000
30.000
20.000
10.000
.000
Percentage of households
d=0
d=1
d≥2
Decay Category (Number of Teeth)
Solid lines indicate treated decay
Broken lines indicates untreated
Certificate, diploma, degree
Post Secondary Education
Rent home
Lone Parent Families
Receiving government transfer payments
Household spending 30% or more of gross income on housing costs

Figure 5

Social Determinants by categories of deft
Brant Senior Kindergarten 2011



	d=0	d=1	d≥2
Rent home	17.08	23.20	24.47
Lone Parent Families	14.41	15.69	17.71
Receiving government transfer payments	10.88	11.54	12.43
Household spending 30% or more of gross income on housing costs	6.66	9.78	10.31

deft Category (Number of Teeth)

Conclusions

- Generally agreed with the hypothesis

- Insurance
- Smooth surface decay
- Housing

Applications

- Identifying and addressing social causes can be a very effective way of improving the heath of a population

- Continue to study the relationship between insurance access and utilisation
- Focus resources on educating target populations on the importance of preventative care
- Focus on areas of the city where housing makes up a significant proportion of household expenses
  - As opposed to simply lower income areas