

EVALUATION OF ONTARIO'S DENTAL SCREENING PROGRAM FOR SCHOOLCHILDREN

Report No. 2: Health Unit/Department Analyses

Program Evaluation Report No. 5

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**Community Dental Health Services Research Unit
Faculty of Dentistry
University of Toronto**

Investigator team:

Community Dental Health Services Research Unit, Faculty of Dentistry:

Dr David Locker, Dr David Matear

Ontario Health Units/Departments:

Dr Aaron Burry, Ms Carolyn Frosina, Dr Patricia Main, Ms Heather Murray, Dr David Wiebe, Dr Peter Wiebe

Participating Health Units/Departments:

Ottawa-Carleton; City of Hamilton; Durham Region; York Region; Thunder Bay; Simcoe County

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INTRODUCTION

Prior to the 1997-8 school year, all Ontario Public Health Units/Departments provided dental screening to children in Junior and Senior Kindergarten and grades 2, 4, 6 and 8 in every school on an annual basis. During 1997-8 this 'universal' program was replaced by a 'targeted' approach. The main objectives of the program are to identify children with urgent dental care needs who are, therefore, eligible for dental care under the province of Ontario's Children in Need of Dental Treatment program, and to identify children who meet eligibility criteria for mandatory preventive dental services.

Under the terms of the targeted program, schools are designated as high, medium and low risk with respect to dental care needs based on rates of dental decay among students in Junior and Senior Kindergarten. A school's risk level determines whether or not screening of children in grades 2, 4, 6 and 8 is undertaken. A study carried out in 1996/7 prior to the change from a universal to a targeted screening approach suggested that the latter would not identify many children with dental care needs. This study replicates and extends this research.

The main aims of the study were to: 1) estimate the proportion of children in Junior and Senior Kindergarten and grades 2, 4, 6 and 8 with restorative and preventive dental care needs, and 2) to determine what proportion of those children are identified by the targeted screening program. Additional aims were to: 3) compare the clinical and personal/family characteristics of children who are and are not identified by the targeted program, 4) to determine whether more of these children would be identified, using the same resources, by modifying the targeting criteria, and 5) to assess whether the decay rate among students in JK and SK is an appropriate indicator of a school's risk status.

The study was carried out in stratified random sample of 55 schools located in six Health Unit/Department areas (Durham Region, York Region, City of Hamilton, Ottawa-Carleton, Thunder Bay and Simcoe County). In these schools, all students in JK, SK and grades 2, 4, 6 and 8 were screened. The parents of all children identified with preventive or restorative dental care needs were sent a questionnaire to obtain information on the personal and family characteristics of each of these children. Overall, 11,814 children were screened and 2,734 found to have dental care needs. Parental questionnaires were obtained for 1491 of these children.

An initial report (Report No. 1) described the methodology and preliminary findings from the study with data from all six Health Units/ Departments pooled for analysis. This report describes the results of analyses that were undertaken for each of the Health Units/Departments separately. The aim is to determine whether or not findings based on pooled data apply to individual participating Units/Departments.

Because of the stratified sampling design, aims 1, 2 and 4 require that the data are weighted to take account of differential probabilities of selection of schools and children. These weights cannot be calculated until the end of the 2000-2001 school year when

participating Health Units/Departments have completed their screening cycles. Consequently, these aims will be addressed in subsequent reports. Since aims 3 and 5 do not require weighted data they were addressed in Report No. 1 and are addressed in this report.

Details of the study population and sampling design, screening procedures, parental questionnaires and approaches to data analysis are to be found in Report No. 1 and will not be repeated here.

RESULTS

Number of schools in the study

Within each Health Unit/Department three schools were randomly selected from high, medium and low risk strata. The total number of schools selected was 55. The risk designation of these schools at the time of screening is shown in Table 1.

Table 1. Number of schools by Health Unit/Department and risk stratum

Health Unit/Department:	High risk	Medium risk	Low risk
Durham Region	2	2	5
York Region	2	2	5
City of Hamilton	3	5	6
Ottawa-Carleton	4	2	3
Thunder Bay	2	3	1
Simcoe County	1	0	7

Number of students screened

Overall, 11, 814 students were screened (Table 2). Of these, 2734 were identified as having dental care needs.

Table 2: Number of students in the study by Health Unit area

Health Unit:	Screened	Number and percent with needs	Parental questionnaires
Durham Region	2441	664 (27.2%)	441
York Region	2721	495 (18.2%)	225
City of Hamilton	2190	259 (11.8%)	191
Ottawa-Carleton	1562	275 (17.6%)	123
Thunder Bay	1262	670 (53.1%)	262
Simcoe County	1638	371 (22.6%)	249
TOTAL	11814	2734 (23.1%)	1491

The percent of children with needs varied from 11.8% in the City of Hamilton to 53.1% in Thunder Bay. These are not prevalence estimates. In order to derive such estimates the data need to be weighted to take account of differential probabilities of selection of schools and children. These estimates will be provided in a later report.

Parental questionnaires returned

Parental questionnaires were obtained for 1491 or 54.5% of students with dental care needs. The mean Dd/Mm/Ff tooth scores of children for whom parental questionnaire data were and were not obtained were 2.91 and 3.35 respectively ($p < 0.001$). Consequently, parental questionnaire data were weighted to take account of differences in response rates for children with high and low Dd/Mm/Ff tooth scores.

Characteristics of children with dental care needs

The clinical and personal characteristics of the children with dental care needs are shown in Tables 3a and 3b and Tables 4a and 4b.

Table 3a: Clinical characteristics/treatment needs

	Durham Region (n=664) %	York Region (n=495) %	City of Hamilton (n=259) %
% with urgent need	14.5	60.7	65.4
% with non urgent need	32.0	14.2	24.1
% with one or more decayed teeth	47.3	72.5	87.5
% with dmft ≥ 3	34.2	49.8	44.4
% needing sealant	50.6	16.0	15.2
% needing topical fluoride	35.4	61.5	82.5
% needing scaling	13.3	13.0	3.5
% needing any preventive treatment	84.9	81.6	93.8
% needing restorative and preventive treatment	32.3	55.1	81.3

Table 3a: Clinical characteristics/treatment needs

	Ottawa-Carleton (n=275)	Thunder Bay (n=670)	Simcoe County (371)
% with urgent need	46.9	24.4	27.3
% with non urgent need	29.5	10.6	44.9
% with one or more decayed teeth	81.1	35.4	72.2
% with dmft \geq 3	49.5	45.1	58.1
% needing sealant	26.2	34.4	46.8
% needing topical fluoride	65.1	30.8	54.9
% needing scaling	5.1	72.2	1.4
% needing any preventive treatment	84.4	96.4	88.4
% needing restorative and preventive treatment	66.9	33.9	60.5

Table 4a: Personal/family characteristics

	Durham Region (n=441) %	York Region (n=225) %	City of Hamilton (n=191) %
% with no usual dentist	15.0	43.7	22.1
% not making dental visit in last year	18.8	40.9	39.3
% with pain from cavity in last 6mnths	8.8	24.5	17.6
% with fair/poor oral health	26.1	50.1	48.6
% born outside Canada	4.0	22.4	10.0
% without dental insurance	22.0	53.3	28.3
% receiving Ontario works	10.9	11.3	18.6
% mothers < high school education	10.5	20.7	23.8
% low income household (<\$20,000 per annum)	15.6	27.6	24.0
% disadvantaged group (low income/no insurance)	10.1	24.9	10.4
% from single parent family	14.9	7.3	19.4
% disadvantaged and urgent needs	1.0	14.7	7.2
% disadvantaged with 1+ decayed teeth	3.6	16.3	9.7

Note: n's are unweighted numbers; percentages are weighted estimates

Table 4b: Personal/family characteristics

	Ottawa-Carleton (n=123) %	Thunder Bay (n=262) %	Simcoe County (n=249) %
% with no usual dentist	44.8	13.3	13.8
% not making dental visit in last year	37.1	12.2	20.7
% with pain from cavity in last 6mnths	24.2	5.2	12.2
% with fair/poor oral health	31.1	21.5	23.8
% born outside Canada	22.5	5.2	12.2
% without dental insurance	60.6	27.4	35.2
% receiving Ontario works	37.7	6.1	2.0
% mothers < high school education	23.2	11.5	6.6
% low income household (<\$20,000 per annum)	45.6	13.0	6.4
% disadvantaged group (low income/no insurance)	38.4	9.0	4.8
% from single parent family	29.1	19.6	7.5
% disadvantaged and urgent needs	26.2	4.4	1.1
% disadvantaged with 1+ decayed teeth	34.0	5.4	4.2

Note: n's are unweighted numbers; percentages are weighted estimates

The percent of children with needs who had one or more decayed teeth varied from 35.4% in Thunder Bay to 87.5% in the City of Hamilton. The percent with urgent needs varied from 14.5% in Durham Region to 65.4% in the City of Hamilton. In all Health Unit/Department areas more than 80% need some form of preventive care.

The percentage of children living in low-income households varied from 15.6% in Durham Region to 45.6% in Ottawa-Carleton. In Durham Region only 22.0% came from households without dental insurance compared with 60.6% in Ottawa-Carleton.

These data indicate that the clinical and sociodemographic characteristics of children identified as having dental care needs differed considerably across participating Health Units/Departments.

Characteristics of children who would and would not be identified by the targeted screening approach

Using the risk level of the school and the grade they attended, children were divided into two groups; those who would have been identified by the targeted screening approach and those who would not. Table 5 shows the percentage that would and would not be identified by Health Unit/Department. Again, these data are not prevalence estimates. Derivation of such estimates requires weighting of data to take account of different probabilities of selection of children in different risk strata. For example, the small proportion identified in Simcoe is due to the fact that all but one of the schools in the study was low risk.

Table 5: Percent of children with needs who would and would not be identified by Health Unit/Department

Unit/Department:	Not identified %	Identified %
Durham	49.2	50.8
York	41.0	59.0
Hamilton	37.1	62.9
Ottawa	24.4	75.6
Thunder Bay	42.8	57.2
Simcoe County	67.7	32.3

In order to answer question 3 (page 3), the clinical, treatment needs and personal/family characteristics of these two groups were compared. This comparison does not require that data are weighted to take account of differential probabilities of selection of schools or children.

However, the analysis does need to account for the clustering of children within schools. Children within schools are likely to be similar, thus violating the assumption of independence of observations. Consequently, the data were analyzed using the logistic regression procedure from STATA, a statistical package for the analysis of data from studies using complex sampling designs. In order to address the problem of the ‘design effect’ of the study STATA’s robust estimator of variance and cluster options were used in the logistic regressions. By using school as a cluster variable in the analysis, the estimator produces the correct standard errors even though observations within a cluster are correlated. As well as accounting for the clustering of students within schools, the logistic regressions also controlled for grade.

Tables 6a to 11b compare the clinical and personal/family characteristics of those that would and would not be identified by the targeted screening approach for each participating Health Unit/Department.

Table 6a: DURHAM REGION – Clinical characteristics and needs

	Not Identified Group N=327	Identified Group N=337	Odds Ratio	Logistic Regression p-value
% with Urgent Need	7.8	21.9*	2.33	.01
% with Non-Urgent Need	33.1	30.8	0.78	.47
% with 1+ Decayed Teeth	40.6	53.7*	1.33	.47
% with DMFT ≥ 3	30.2	38.2*	1.34	.29
% Need Sealant	55.6	45.8*	0.83	.63
% Need Topical Fluoride	28.0	42.5*	1.33	.43
% Need Scaling	16.1	10.5	0.74	.42
% Need Any Preventive Treatment	85.7	84.1	0.95	.91
% Need Restorative and Preventive Treatment	26.4	38.0*	1.29	.50

*p<.05: chi-square test

Table 6b: DURHAM REGION – Personal and family characteristics

	Not Identified Group N** = 224	Identified Group N** = 217	Odds Ratio	Logistic Regression p-value
% with no usual dentist	12.5	17.6*	1.51	.29
% not making dental visit in last year	16.3	21.4	1.39	.35
% with pain from cavity in last 6 months	6.9	10.7	1.57	.12
% with fair/poor oral health	22.2	30.2*	1.42	.29
% born outside Canada	5.7	2.3*	0.37	.08
% without dental insurance	20.3	23.7	1.18	.66
% receiving Ontario Works	7.2	14.8*	2.08	.34
% mothers < high school education	8.0	13.3*	2.04	.06
% low income	12.2	19.1*	1.86	.41
% disadvantaged group	9.4	10.8	1.16	.84
% single parent family	13.7	16.3	1.29	.43
% disadvantaged and urgent need	0.6	1.4	2.10	.23
% disadvantaged with decay	2.2	5.1	1.62	.53

Percentages are data weighted for non-response. **=unweighted N.

*p<.05: chi-square test

Table 7a: YORK REGION – Clinical characteristics and needs

	Not Identified Group N=203	Identified Group N=292	Odds Ratio	Logistic Regression p-value
% with Urgent Need	54.0	65.4*	1.04	.82
% with Non-Urgent Need	11.4	16.1	1.39	.40
% with 1+ Decayed Teeth	62.9	79.1*	1.39	.09
% with DMFT ≥ 3	45.0	53.1	1.08	.80
% Need Sealant	20.3	13.0*	0.77	.66
% Need Topical Fluoride	59.9	62.7	0.66	.18
% Need Scaling	17.8	9.6*	0.83	.65
% Need Any Preventive Treatment	87.6	77.4*	0.52	.06
% Need Restorative and Preventive Treatment	52.0	57.2	0.82	.30

* $p < 0.05$: Chi-square test

Table 7b: YORK REGION – Personal and family characteristics

	Not Identified Group N** = 90	Identified Group N** = 135	Odds Ratio	Logistic Regression p-value
% with no usual dentist	39.2	46.5	1.42	.44
% not making dental visit in last year	35.8	44.1	1.54	.22
% with pain from cavity in last 6 months	28.9	21.5	0.70	.42
% with fair/poor oral health	51.3	49.4	1.07	.88
% born outside Canada	27.0	19.8	0.88	.79
% without dental insurance	55.1	52.2	0.90	.76
% receiving Ontario Works	12.6	10.5	0.92	.85
% mothers < high school education	20.5	21.2	1.04	.89
% low income	31.1	25.5	0.82	.72
% disadvantaged group	28.2	23.0	0.84	.73
% single parent family	9.0	6.3	0.62	.40
% disadvantaged and urgent need	12.0	16.3	1.18	.81
% disadvantaged with decay	11.7	19.0	1.60	.39

Percentages are data weighted for non-response. **=unweighted N.

* p<0.05: Chi-square test

Table 8a: CITY OF HAMILTON – Clinical characteristics and needs

	Not Identified Group N=96	Identified Group N=163	Odds Ratio	Logistic Regression p-value
% with Urgent Need	44.8	77.6*	1.80	.05
% with Non-Urgent Need	35.4	17.4*	0.41	.04
% with 1+ Decayed Teeth	78.1	93.2*	1.08	.87
% with DMFT ≥ 3	40.6	46.6	1.50	.04
% Need Sealant	21.9	11.2*	0.72	.68
% Need Topical Fluoride	67.7	91.3*	1.72	.26
% Need Scaling	7.3	1.2*	1.17	.71
% Need Any Preventive Treatment	89.6	96.3*	3.36	.07
% Need Restorative and Preventive Treatment	67.7	89.4*	1.56	.32

*p<.05: chi-square test

Table 8b: CITY OF HAMILTON – Personal and family characteristics

	Not Identified Group N** = 71	Identified Group N** = 120	Odds Ratio	Logistic Regression p-value
% with no usual dentist	19.8	23.4	1.52	.30
% not making dental visit in last year	36.5	41.2	1.44	.27
% with pain from cavity in last 6 months	10.3	22.0*	3.56	.02
% with fair/poor oral health	54.4	45.8	0.83	.68
% born outside Canada	11.9	9.0	0.60	.41
% without dental insurance	31.5	26.3	0.86	.64
% receiving Ontario Works	11.9	23.0*	2.19	.15
% mothers < high school education	19.8	26.5	2.56	.18
% low income	14.6	30.1*	2.54	.07
% disadvantaged group	5.2	13.1*	4.51	.04
% single parent family	12.0	23.9*	3.07	.01
% disadvantaged and urgent need	1.9	10.2*	6.12	.04
% disadvantaged with decay	5.2	12.2*	4.39	.05

Percentages are data weighted for non-response. **=unweighted N.

*p<.05: chi-square test

Table 9a: OTTAWA/CARLETON – Clinical characteristics and needs

	Not Identified Group N=67	Identified Group N=208	Odds Ratio	Logistic Regression p-value
% with Urgent Need	38.8	49.5	1.12	.72
% with Non-Urgent Need	40.3	26.0*	0.64	.31
% with 1+ Decayed Teeth	79.1	81.7	1.00	.99
% with DMFT ≥ 3	59.7	46.2	0.57	.24
% Need Sealant	20.9	27.9	1.82	.19
% Need Topical Fluoride	71.6	63.0	0.50	.02
% Need Scaling	7.5	4.3	0.59	.35
% Need Any Preventive Treatment	86.6	83.7	0.68	.15
% Need Restorative and Preventive Treatment	68.7	66.3	0.69	.27

*p<.05: chi-square test

Table 9b: OTTAWA/CARLETON – Personal and family characteristics

	Not Identified Group N** = 23	Identified Group N** = 100	Odds Ratio	Logistic Regression p-value
% with no usual dentist	39.5	46.1	1.30	.67
% not making dental visit in last year	43.7	35.4	0.75	.34
% with pain from cavity in last 6 months	21.6	24.9	1.29	.58
% with fair/poor oral health	22.1	33.0	1.41	.47
% born outside Canada	13.1	24.6	2.89	.04
% without dental insurance	43.2	64.8*	2.91	.16
% receiving Ontario Works	34.9	38.4	1.31	.70
% mothers < high school education	22.7	23.2	1.15	.81
% low income	37.1	47.3	1.81	.45
% disadvantaged group	31.4	39.8	1.76	.53
% single parent family	22.1	31.1	1.48	.37
% disadvantaged and urgent need	22.2	27.1	1.25	.84
% disadvantaged with decay	31.4	34.7	1.20	.85

Percentages are data weighted for non-response. **=unweighted N.

*p<.05: chi-square test

Table 10a: THUNDER BAY – Clinical characteristics and needs

	Not Identified Group N=287	Identified Group N=383	Odds Ratio	Logistic Regression p-value
% with Urgent Need	9.8	35.2*	2.60	.01
% with Non-Urgent Need	10.5	10.7	0.72	<.001
% with 1+ Decayed Teeth	22.0	45.4*	1.63	.04
% with DMFT \geq 3	33.9	53.5*	1.59	.31
% Need Sealant	26.2	40.5*	2.73	<.001
% Need Topical Fluoride	18.5	39.9*	1.58	.08
% Need Scaling	84.6	62.9*	0.54	.18
% Need Any Preventive Treatment	98.3	95.0*	0.91	.89
% Need Restorative and Preventive Treatment	21.7	43.1*	1.60	.05

*p<.05: chi-square test

Table 10b: THUNDER BAY – Personal and family characteristics

	Not Identified Group N** = 135	Identified Group N** = 127	Odds Ratio	Logistic Regression p-value
% with no usual dentist	5.9	20.6*	4.04	.09
% not making dental visit in last year	7.6	17.3*	2.58	.14
% with pain from cavity in last 6 months	3.0	7.5*	2.50	.12
% with fair/poor oral health	17.5	25.5*	1.52	.44
% born outside Canada	0	0.9	n/a	
% without dental insurance	18.0	37.2*	2.76	.12
% receiving Ontario Works	1.7	10.6*	8.65	.01
% mothers < high school education	7.8	15.3*	2.35	.26
% low income	3.2	22.1*	9.15	.04
% disadvantaged group	2.1	16.2*	10.2	.03
% single parent family	13.6	25.7*	2.33	.003
% disadvantaged and urgent need	0	8.6*	n/a	
% disadvantaged with decay	0	10.6*	n/a	

Percentages are data weighted for non-response. **=unweighted N.

*p<.05: chi-square test

Table 11a: SIMCOE COUNTY – Clinical characteristics and needs

	Not Identified Group N=251	Identified Group N=120	Odds Ratio	Logistic Regression p-value
% with Urgent Need	18.3	46.2*	3.63	<.001
% with Non-Urgent Need	46.6	41.2	.044	.02
% with 1+ Decayed Teeth	64.9	87.4*	1.80	.43
% with DMFT ≥ 3	57.8	58.8	0.94	.89
% Need Sealant	59.0	21.0*	0.20	.01
% Need Topical Fluoride	50.6	63.9*	0.93	.83
% Need Scaling	2.0	0	n/a	
% Need Any Preventive Treatment	92.8	79.0*	0.32	.01
% Need Restorative and Preventive Treatment	57.8	66.4	0.76	.39

*p<.05: chi-square test

Table 11b: SIMCOE COUNTY – Personal and family characteristics

	Not Identified Group N** = 164	Identified Group N** = 85	Odds Ratio	Logistic Regression p-value
% with no usual dentist	10.3	19.9*	1.72	.32
% not making dental visit in last year	16.6	29.3*	1.49	.41
% with pain from cavity in last 6 months	12.3	12.1	0.74	.52
% with fair/poor oral health	24.3	22.7	0.67	.35
% born outside Canada	2.3	2.6	0.85	.90
% without dental insurance	37.7	30.5	0.61	.07
% receiving Ontario Works	1.3	3.8	2.31	.52
% mothers < high school education	6.9	6.1	1.52	.68
% low income	3.3	12.5*	5.70	.08
% disadvantaged group	3.4	7.7	3.31	.27
% single parent family	8.0	5.8	0.47	.20
% disadvantaged and urgent need	0.8	1.7	3.70	.04
% disadvantaged with decay	2.5	7.7*	7.37	.14

Percentages are data weighted for non-response. **=unweighted N.

*p<.05: chi-square test

From a policy perspective, the most important aspect of these data is the characteristics of children with needs who would not be identified by the targeted program, in particular the percentage in this group with urgent needs. The tables indicate that this varies from 7.8% in Durham and 9.8% in Thunder Bay to 54.0% in York Region and 44.8% in the City of Hamilton. This suggests that the screening program is more successful at identifying children with urgent needs in some Health Units/Departments than others.

One factor that will influence the extent to which children with urgent needs are identified by a targeted program is their distribution across the risk strata on which the program is based. A targeted program based on schools will be more successful in areas where schools are homogeneous in terms of their clinical and social characteristics and less successful in areas where schools are more heterogeneous. For example, the tables presented below indicate that in Durham region the percentage of children with urgent needs was 3.4 times as high in high risk than in low risk schools. In York Region the percentage in high risk schools was only 1.6 times that of low risk schools.

Should a school's risk level be based on decay rates in JK and SK students?

The way in which schools are allocated to risk strata assumes that decay rates in JK and SK students accurately reflects the restorative and preventive needs of children in the school as a whole. This assumption was examined using data for all children who were screened during the study. Table 12 shows caries data and associated treatment needs among children in high, medium and low risk schools for each of the six participating Health Unit/Departments and Table 13 shows the percentage with preventive needs by school risk level.

Table 12: Caries indicators/needs by risk level of school attended

DURHAM REGION

	Mean Dd/Mm/Ff teeth	Mean Dd teeth	% with 1+ decayed teeth	% with 2+ decayed teeth	% with urgent need	% non-urgent need
High	1.76	0.35	16.8	9.2	6.5	9.0
Medium	1.57	0.41	19.8	9.9	7.4	12.0
Low	0.95	0.17	9.6	4.0	1.9	7.2
p	<.001	<.001	<.0001	<.0001	<.0001	<0.01

YORK REGION

	Mean Dd/Mm/Ff teeth	Mean Dd teeth	% with 1+ decayed teeth	% with 2+ decayed teeth	% with urgent need	% non-urgent need
High	1.36	0.41	18.0	11.5	13.8	5.4
Medium	1.23	0.38	16.5	8.1	14.0	2.7
Low	1.07	0.21	9.4	5.9	8.3	1.4
p	<.05	<.001	<.0001	<.001	<.0001	<0.0001

CITY OF HAMILTON

	Mean Dd/Mm/Ff teeth	Mean Dd teeth	% with 1+ decayed teeth	% with 2+ decayed teeth	% with urgent need	% non-urgent need
High	1.45	0.26	10.1	7.1	7.5	2.7
Medium	1.47	0.39	16.5	8.9	12.6	4.2
Low	1.08	0.14	7.1	3.0	5.0	2.1
p	<.001	<.001	<.0001	<.0001	<.0001	<0.05

OTTAWA-CARLETON

	Mean Dd/Mm/Ff teeth	Mean Dd teeth	% with 1+ decayed teeth	% with 2+ decayed teeth	% with urgent need	% non-urgent need
High	1.49	0.45	21.0	11.6	11.9	6.9
Medium	1.57	0.28	14.2	7.4	9.2	6.3
Low	0.81	0.16	7.8	5.4	3.5	2.4
p	<.001	<.001	<.0001	<.001	<.0001	<0.01

THUNDER BAY

	Mean Dd/Mm/Ff teeth	Mean Dd teeth	% with 1+ decayed teeth	% with 2+ decayed teeth	% with urgent need	% non-urgent need
High	4.21	1.01	33.3	21.8	26.9	6.8
Medium	1.97	0.37	15.3	8.2	9.7	4.9
Low	1.89	0.28	17.2	6.4	10.2	7.6
p	<.001	<.001	<.0001	<.0001	<.0001	NS

SIMCOE COUNTY

	Mean Dd/Mm/Ff teeth	Mean Dd teeth	% with 1+ decayed teeth	% with 2+ decayed teeth	% with urgent need	% non-urgent need
High	2.06	0.65	22.1	16.9	13.6	8.4
Medium	-	-	-	-	-	-
Low	1.58	0.33	15.8	7.8	5.4	10.3
p	<.05	<.001	<.05	<.001	<.0001	NS

Table 13: Preventive needs by risk level of school attended

DURHAM REGION

	% needing sealants	% needing topical fluoride	% needing sealants or topical fluoride	% needing scaling	% with any preventive need	% with any need (rest or prev)
High	20.2	15.7	31.7	5.1	33.4	35.8
Medium	20.3	12.5	30.4	5.3	33.3	39.8
Low	9.5	6.9	15.3	2.5	16.3	20.2
p	<.001	<.001	<.001	<.01	<.001	<.001

YORK REGION

	% needing sealants	% needing topical fluoride	% needing sealants or topical fluoride	% needing scaling	% with any preventive need	% with any need (rest or prev)
High	3.6	14.2	16.3	4.2	19.0	24.4
Medium	2.4	13.2	14.9	1.1	15.7	20.7
Low	2.9	8.9	10.7	2.4	12.7	14.4
p	NS	<.001	<.01	<.01	<.001	<.001

CITY OF HAMILTON

	% needing sealants	% needing topical fluoride	% needing sealants or topical fluoride	% needing scaling	% with any preventive need	% with any need (rest or prev)
High	0.7	10.2	10.8	0.4	11.2	11.3
Medium	2.4	16.2	16.7	0.0	16.7	17.3
Low	2.0	5.7	7.1	0.7	7.7	9.0
p	NS	<.001	<.001	NS	<.001	<.001

OTTAWA-CARLETON

	% needing sealants	% needing topical fluoride	% needing sealants or topical fluoride	% needing scaling	% with any preventive need	% with any need (rest or prev)
High	8.8	14.5	20.9	1.2	20.9	25.8
Medium	2.5	12.1	13.5	0.9	14.2	16.4
Low	1.9	7.6	8.3	0.6	8.9	9.8
p	<.001	<.01	<.001	NS	<.001	<.001

THUNDER BAY

	% needing sealants	% needing topical fluoride	% needing sealants or topical fluoride	% needing scaling	% with any preventive need	% with any need (rest or prev)
High	26.9	29.9	46.6	43.2	62.4	65.4
Medium	16.0	13.1	25.4	36.6	47.5	49.3
Low	17.8	14.0	26.8	40.8	54.8	56.1
p	<.01	<.001	<.001	NS	<.001	<.001

SIMCOE COUNTY

	% needing sealants	% needing topical fluoride	% needing sealants or topical fluoride	% needing scaling	% with any preventive need	% with any need (rest or prev)
High	11.0	16.9	25.3	0.0	25.3	29.2
Medium	-	-	-	-	-	-
Low	10.5	11.9	19.2	0.3	19.4	22.0
p	NS	NS	NS	NS	NS	<.05

Tables 12 suggests that for three Health Unit/Departments (Durham, York and Ottawa) the proportion of children with urgent needs was the same in schools designated medium and high risk and for one Health Unit (Hamilton) it was higher in medium than high risk schools. The proportions were significantly different for Thunder Bay only. However, in Thunder Bay medium and low risk schools were the same in terms of the proportions with urgent needs. Simcoe County could not be included in this comparison of medium and high risk schools since no medium risk schools were included in the study.

Similarly, for three Health Units/Departments (Durham, York, Hamilton) the proportion of children with one or more decayed teeth was the same or higher in schools designated medium than in schools designated high risk. In Thunder Bay the proportions with one or more decayed teeth was the same in medium and low risk schools.

Table 13 suggests that for three Health Unit/Departments (Durham, York, and Hamilton) medium and high risk schools are also similar in terms of the proportion of children needing preventive care. In Thunder Bay, medium and low risk schools contained the same proportion of children with preventive needs.

Taken together, these data suggest that for most participating Health Units/Departments the current system of allocating schools to risk strata does not clearly discriminate between schools in terms of their overall needs for restorative and preventive care.