

Evaluate the use of school-based asthma and allergy screening questionnaires in lower Manhattan public primary schools

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The newly validated School-based asthma and allergy questionnaires provide a sensitive approach to identify children at risk for asthma. Using both student's and parent's questionnaires, a positive screen based on 3 out of 7 affirmative item responses, has a sensitivity of 80% and specificity of 70%. Immigrant children with English as second language are very common in New York City. In our screening program, the questionnaires were translated into Chinese, and given to students and their families in addition to the original questionnaires, in hope to increase the reply rate as well as minimize screening errors due to language barrier. About 95% of participants are ethnic Chinese.

From January 2005 to June 2006, we screened a total of 476 second grade students from four public schools in lower Manhattan, with 88 (18.5%) of respondents previously diagnosis with asthma. Two hundred twenty nine children had no reported history of prior asthma diagnosis, but positive response to the questionnaires (48.1%). Of the 476 students, 305 were screened in spring of 2005, and 171 were screened in spring of 2006 in two of the four public schools from previous year.

While our screening results fall within the expected range comparing to the 4 inner-city schools from the original validation study, which ranged from 35% to 49% in children with no previous diagnosis of asthma but positive response to the questionnaires (Table 1). Our screening showed a possible increase in asthma prevalence, both in forms of known diagnosis of asthma, as well as positive response to the questionnaires with no prior history of asthma diagnosis in two of the four schools from 2005 to 2006 (Table 2).

Table 1

	Known asthma Diagnosis at screening	Positive Response with No Hx of asthma	Total Positive Response	Negative Response	Total Number questionnaire screened
PS A 2005	15	17	32	11	43
PS B 2005	10	35	45	30	75
PS C 2005	11	22	33	17	50
PS D 2005	15	66	81	56	137
PS A 2006	14	36	50	12	62
PS D 2006	23	53	76	33	109
Total	88 (18.5%)	229 (48.1%)	317 (66.6%)	156	476

Table 2

	Known asthma Diagnosis at screening	Positive Response with No Hx of asthma	Total Positive Response	Negative Response	Total Number questionnaire screened
PSA&D 2005	30 (16.7%)	83 (46.1%)	113 (63.8%)	67	180
PSA&D 2006	37 (21.6%)	89 (52.0%)	126 (73.4%)	45	171

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