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Author(s)	Fong, DYT; Lee, CF; Wan, YY; Cheung, KMC; Cheng, JCY; Lam, TP; Ng, BKW; Mak, KH; Luk, KDK
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COST OF SCHOOL SCOLIOSIS SCREENING: A COHORT ANALYSIS OF 306,144 STUDENTS FOLLOWED UNTIL SKELETAL MATURITY

D.Y.T. Fong, C.F. Lee, Y.Y. Wan, K.M.C. Cheung, J.C.Y. Cheng, T.P. Lam, B.K.W. Ng, K.H. Mak, K.D.K. Luk

¹School of Nursing, The University of Hong Kong, Hong Kong;

²Dept Biostatistics, Singapore Clinical Research Institute, Singapore;

³Dept. Orthopaedics and Traumatology, The University of Hong Kong, Hong Kong;

⁴Dept. Orthopaedics and Traumatology, The Chinese University of Hong Kong, Hong Kong;

⁵Dept. Orthopaedics and Traumatology, Prince of Wales Hospital, Hong Kong;

⁶Dept. Health, Hong Kong

INTRODUCTION/AIM: The cost of school scoliosis screening in a new cohort of students each year may be changed because of change in epidemiology or screening performance. Current cost evaluations were based on a combined cohort of students with limited generalizability to prospective students. Therefore, we aimed to examine the cost of school scoliosis screening over five cohort years of students who were followed until they were skeletal matured.

MATERIALS AND METHODS: We included 306,144 students who participated in the Hong Kong scoliosis screening program and studied Grade 5 between 1995/96 and 1999/2000. For each cohort of students studying in the same academic year, we calculated the costs of screening, diagnosis and medical care spent on the students until they were 19 years old.

RESULTS: The average number of students in a yearly cohort was 61,229. The total cost per student screened was US\$50 for the 1995/96 cohort which increased to US\$81 for the 1999/2000 cohort at a rate of US\$9 per year. The increase was mainly due to an increased treatment cost on brace and/or surgery per student screened, from US\$25 for the 1995/96 cohort to US\$46 for the 1999/2000 cohort at a rate of US\$7 per year. The increase in diagnostic and screening costs was small.

CONCLUSION: For the first time we demonstrated the change of cost of school scoliosis screening for every new cohort of students joining the program, which was mainly due to the increased prevalence of students in need of treatment rather than screening performance. Cost evaluation or healthcare planning should also consider any potential epidemiological differences.