

health
technology
assessment



**EXECUTIVE
SUMMARY**

**ROUTINE CHEST
RADIOGRAPHS IN
ROUTINE MEDICAL
EXAMINATIONS**

**HEALTH TECHNOLOGY ASSESSMENT UNIT
MEDICAL DEVELOPMENT DIVISION
MINISTRY OF HEALTH
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EXECUTIVE SUMMARY

INTRODUCTION

Routine medical examinations are carried out before employment in the public or private sector, entry into tertiary educational institutions or admittance to residential schools and routinely, every 4 years, for armed forces personnel. These are carried out to ensure that the individual is free from any serious physical disability or disease that may compromise work performance, necessitate high medical costs or pose a health threat to others at the work place or institution. Chest radiographs are an integral part of this routine medical examination and are utilised as a screening tool to detect any intra-thoracic abnormality.

OBJECTIVE

To determine the effectiveness and cost implications of chest radiographs in routine medical examinations.

SCOPE

This assessment excludes routine chest radiographs in routine medical examinations of specific groups of people like foreign workers, immigrants and the like.

RESULTS

From an analysis of the literature, there was no evidence of benefit of routine chest X-rays in routine medical examinations in clinical practice. With respect to local data, a three-year study on chest radiographs in routine medical examinations at Hospital Melaka, showed that of 11 024 chest radiograph examinations carried out for routine medical examinations only 217 (1.97 %) had positive findings. The most significant finding was cardiomegaly. It was also found that 0.34% of the total chest radiograph examinations are carried out for routine medical examinations. If chest radiographs were omitted from routine medical examinations, the average annual savings on cost of X-ray films alone would range from RM 258 865.80 (Hospital Kuala Lumpur) to RM 79 156.60 (HTAA Kuantan).

RECOMMENDATION

Chest radiographs should not be **routinely** carried out for all routine medical examinations. The need for chest radiographs should be determined by the history, signs and symptoms as well as clinical examination of the person. This recommendation does not apply to special groups of people like immigrant workers and the like.