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# A structural equation modelling approach to predicting adoption of a patient-handling intervention developed for EMS providers

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## Abstract

Patient-handling tasks are integral to Emergency Medical Service (EMS) work as are the musculoskeletal injuries associated with these tasks. The aim of this study was to develop and test a structural equation model that describes the interactions between previously identified factors that contribute to the adoption of a specific ergonomics intervention designed for EMS work. EMS responders ( $n = 187$ ), from six different organisations, participated in a 2-month longitudinal study following the introduction of a foldable patient transfer-board (slide-board) designed to assist with lateral patient transfers. Surveys administered at baseline, after 1 month and after 2 months sampled factors potentially influencing EMS responders' adoption decisions. Perceived ergonomics advantage, which was influenced by access and storage concerns and prior tool experience, contributed most strongly to intention to use at the end of the first month and to the emergence of champions, which contributed to the intention to

use at the end of the second month.

Practitioner Summary: Emergency Medical Service (EMS) responders' intention to use and actual use of a foldable transfer-board was strongly influenced by perceived 'ergonomics advantage'. Perceived ergonomics advantage was influenced by access/storage issues and previous tool experience. Perceived 'ergonomics advantage' also affects the emergence of champions which, in turn, impacts the EMS responders' intention to use.

Keywords: [intervention adoption](#) [ergonomics intervention](#) [injury prevention](#)  
[Emergency Medical Service](#) [firefighter](#)

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Figure 2 The structural equation model with the path weights indicating the strength of the relationship between model factors. All relationships shown were statistically significant at  $\alpha = 0.1$ .



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