

The Effect of Hand Hygiene Zones on Riyadh Region Emergency Department Healthcare Workers

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Introduction

Hand hygiene is the easiest way to prevent healthcare-associated infections, patient morbidity, and hospital length-of-stay. There are no studies in Saudi Arabia testing the effect of low-cost *nudges* on hand hygiene compliance.

Our aim is to measure the impact of yellow stickers on healthcare workers' hand hygiene compliance.

Research Methods

We randomized 14 eligible hospitals into treatment and control groups at a 1:1 ratio stratified by location.

Compliance rates were measured by covert observers recruited from outside the hospitals before and after implementing hand hygiene zones.

Observers were trained to only record hand hygiene opportunities before touching the patient.

Intervention

Visual hand hygiene zones were created with red and yellow checked tape around every bed in the treatment emergency departments. 1-3 yellow A4 stickers were placed on the floor stating "HAND HYGIENE ZONE. CLEAN YOUR HANDS."

Reflective yellow triangles were placed above each bed stating "YOU are an infection risk. Please clean your hands BEFORE EACH PATIENT."



Results

Difference in compliance in control hospitals: 9 percentage points
($p < 0.001$ using McNemar's Test)

Difference in compliance in treatment hospitals: 27 percentage points
($p < 0.001$ using McNemar's Test)

Difference in the difference between improvement in the control and treatment hospitals after intervention: **18 percentage points**
($p < 0.001$ using Chi-Square Test)

