Background and aims Appropriate hand hygiene among healthcare workers is the most important infection prevention measure; however, compliance is generally low. Gain-framed messages (i.e. messages that emphasise the benefits of hand hygiene rather than the risks of noncompliance) may be most effective. The aim of this study was to test the impact of gain-framed messages on the frequency of hand disinfection events and compliance with the hand hygiene protocol.

Methods The study was conducted in a 27-bed neonatal intensive care unit. We performed an interrupted time series analysis of objectively measured hand disinfection events. We used electronic devices in hand alcohol dispensers, which continuously documented the frequency of hand disinfection events. In addition, hand hygiene compliance before and after the intervention period were directly observed.

Results The negative trend in hand hygiene events per patient-day before the intervention (decrease by 2.3 [standard error, 0.5] per week) changed to a significant positive trend (increase of 1.5 [0.5] per week) after the intervention (p < 0.001). The direct observations confirmed these results, showing a significant improved in hand hygiene compliance from 193 of 303 (63.6%) observed hand hygiene events at pretest to 201 of 281 (71.5%) at posttest (p = 0.05).

Conclusions We conclude that gain-framed messages concerning hand hygiene presented on screen savers may improve hand hygiene compliance.