

## Do Flashing Red Lights Help Improve Hand Hygiene Compliance at the Front Entrance of a Large Hospital?

Gianni D'Egidio\*

Department of Medicine, University of Ottawa, Ottawa, ON, Canada

\*Corresponding author: Gianni D'Egidio, Department of Medicine, University of Ottawa, Ottawa, ON, Canada, Tel: 613-854-1531; E-mail: [degidio.gianni@gmail.com](mailto:degidio.gianni@gmail.com)

Received date: August 11, 2014; Accepted date: September 16, 2014; Published date: September 23, 2014

Copyright: © 2014 Egidio G. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

### Mini Review

Hand hygiene is one of the most effective measures against the spread of infectious diseases. Compliance with hand hygiene among healthcare workers and visitors to the hospital varies but can be quite poor in some instances [1]. Hand hygiene upon first entering a health care institution has not been studied in detail and the few studies addressing it have indicated that compliance is quite poor [1,2].

Baseline hand hygiene compliance at our main entrance in our study was 12.4% [3]. We believe one of the main reasons for such an appalling low compliance was that individuals were distracted. Visitors entering are often preoccupied with acquiring information to help them navigate a large and confusing environment given the multitude of signs, lights, announcements and other people. Also, the majority of individuals entering have objects occupying their hands; keys, hand-held devices, coffee mugs, and during cold weather, gloves. All this together contributes to poor compliance at our front entrance.

We hypothesized that a conspicuous flashing red light at 3 Hz (3 flashed per second) attached to alcohol hand dispensers located at our front entrance would attract an individual's attention and hopefully increase compliance [3]. We measured hand hygiene compliance for 1-week periods from 07:30-08:30 before and after the implementation of our flashing lights. We found that compliance increased by more than double to 25.3% ( $p < 0.0001$ ) [3]. Interestingly, compliance was worse during cold weather months (23.5%) compared to warm weather months (27.1%) [3].

We believe that flashing red lights draw attention to the alcohol dispensers and, by doing so, remind individuals to wash their hands.

We suspect that compliance during cold weather months was decreased due to individuals wearing gloves. We believe this can be overcome by placing signs 10-15 meters before the dispensers asking for gloves to be removed and hands washed. This will be one of the interventions in our next study.

The use of highly conspicuous flashing red lights does not require education or training. These lights can be rapidly and easily deployed and replaced, are inexpensive, and are immediately effective. We are uncertain if the increase in compliance observed in our study would last over a longer time period (i.e. months). The possibility exists that individuals may become accustomed to the lights and some may resent or find them annoying. We plan on conducting a second study addressing this issue and, as mentioned, determining whether we can increase compliance during cold weather months.

### References

1. Birnbach D, Nevo I, Barnes S, Fitzpatrick M, Rosen LF, et al. (2012) Do hospital visitors wash their hands? Assessing the use of alcohol-based hand sanitizer in a hospital lobby. *Am J Infect Control* 40: 340-343.
2. Murray R, Chandler C, Clarkson Y, Wilson N, Baker M, et al. (2009) Sub-optimal hand sanitiser usage in a hospital entrance during an influenza pandemic, New Zealand, August 2009. *Euro Surveill* 14.
3. D'Egidio G, Patel R2, Rashidi B2, Mansour M2, Sabri E3, et al. (2014) A study of the efficacy of flashing lights to increase the salience of alcohol-gel dispensers for improving hand hygiene compliance. *Am J Infect Control* 42: 852-855.