

Background

- There are 125 millions contact lens wearers worldwide and many requires the use of contact lens cases to store their contact lenses overnight.
- Currently, no standard guidelines are available to advise people on how to effectively clean contact lens cases.

Why is this a problem?

- If a contact lens case is not cleaned properly, it can harbour bacteria.
- A contaminated contact lens case may cause microbial keratitis, a sight-threatening eye infection.

Therefore,

- We aimed to find out how to effectively clean contact lens storage cases to eliminate bacteria

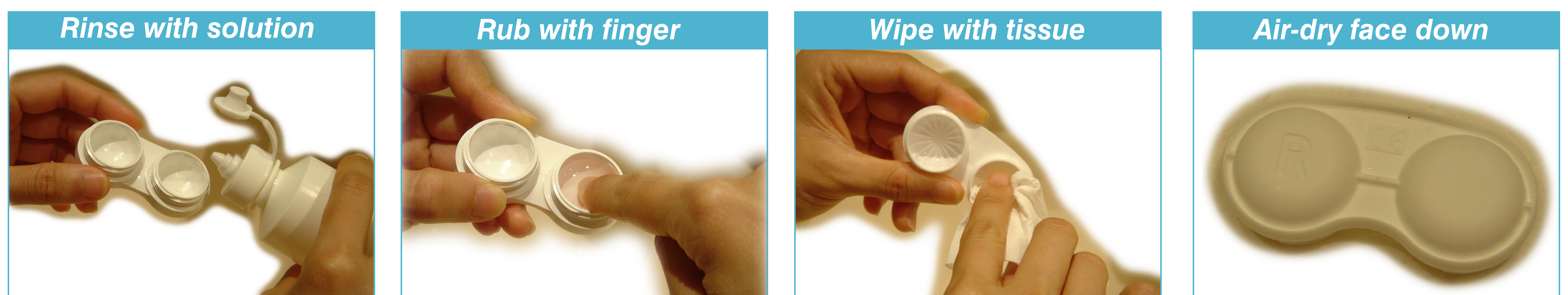
How did we do this?

- We intentionally grew bacteria on the surface of contact lens cases.
- We tried the following cleaning methods to see which was more effective at removing bacteria
 - soaking in contact lens disinfecting solution
 - rubbing
 - rinsing
 - recapping lids
 - tissue-wiping
 - air-drying lens cases face up and face down
- We then combined the most effective cleaning methods sequentially to achieve the optimum cleaning methods.

The levels of residual bacteria after each cleaning method were quantified and compared.

What have we established?

We have found a 4 step procedure for contact lens case cleaning:



These methods are proven effective at reducing bacteria in lab testing and clinical trials.

We can now recommend to contact lens wearers an improved, and evidence based cleaning procedure.

The implication of our finding



- This research will be followed up by media campaigns, and presented at conferences and ultimately developed into a best-practice lens case cleaning method.
- This information is valuable for lens care product manufacturers and optometrists who provide recommendations to contact lens wearers.
- This may reduce the rate of infections during lens wear and promote safer lens wear.