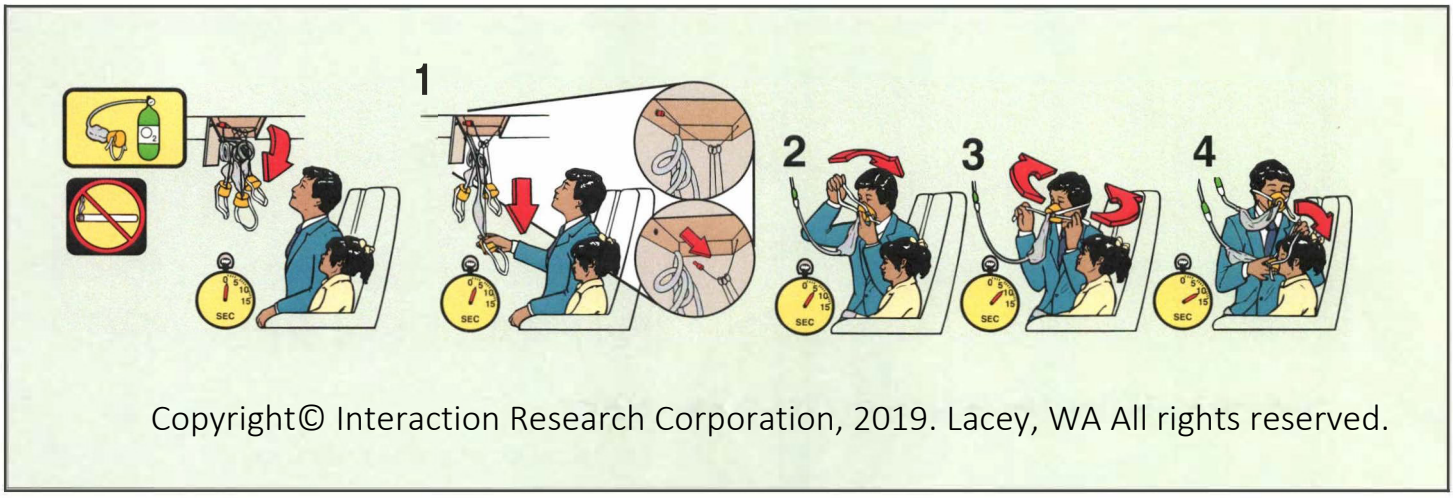
Oxygen Mask Donning Research Report

The Interaction Group (TIG) Research Reports discuss some of the interesting findings and work that we have either conducted ourselves or have read about which apply to passenger safety.

2018 brought a worldwide increase of in-flight oxygen mask deployment on commercial aircraft. The result of media capture, via photographs and video, identified the need to clearly communicate to passengers the correct placement of oxygen masks as over the "nose and mouth" completely.

Beginning in 2018 we began comprehension testing for images that would identify clearly the correct placement of the oxygen mask. The focused goal is people understand it to be placed "over the nose and mouth". The comprehension testing standard set at TIG is a result of 90% or higher on all of our illustrations and sequences.

We began the process by looking at the results of our current oxygen sequence (see below), and established we would need an additional illustration with the "over the nose and mouth" symbol.



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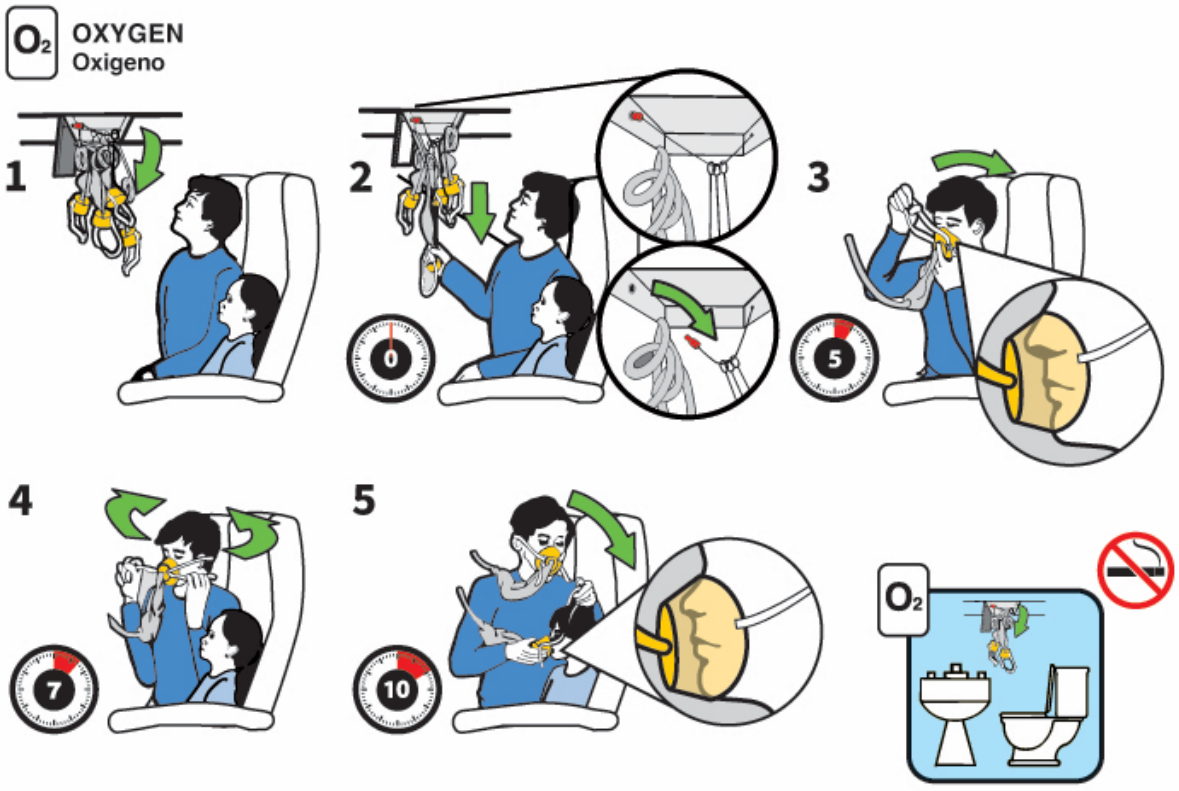
Reference: "OXYGEN MASK RESEARCH REPORT" (Interaction Research Corporation, 1986, rev. 2000, rev. 2018) Copyright© Interaction Research Corporation, 2019. Olympia, WA All rights reserved.

After three (3) rounds of creating, testing and editing we met our goal of 95% comprehension with the below image. A total of 150 individuals (3 rounds of 50 individuals each) throughout the USA and CANADA were tested. The final round of testing, 50 people of varied flight experience, race, gender and age clearly understood and communicated to the tester that the mask needs to be placed over both the nose and mouth. Some individuals tested did not use the industry standard phraseology. Below is a list of the statements we identified as acceptable.

"Over your nose and mouth"
"Completely covers your nose and mouth"
"Everything below your eyes needs to be covered"
"You are breathing the oxygen from both areas. Through your nose and through your mouth"

As a result, Interaction Research Corporation (IRC) will now standardize this illustration on all our passenger safety briefing cards. This will improve the safety of the flying public in unforeseen oxygen mask deployment.