



Heimlich Heroes™ for Kids

A Case Study on Training Retention

Full Case Study

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Executive Summary

Heimlich Heroes' mission is to end preventable choking deaths by training people to save lives with the Heimlich Maneuver®. Our organization is digging deeper into providing data to support our program's success and retention of program material.

About: The Start of Heimlich Heroes

Heimlich Heroes, a Deaconess Associations, Inc. initiative, was created in 2013 to teach people how to recognize, respond to and prevent a choking emergency. Heimlich Heroes for kids is available for ages 7-14 in English and Spanish*. Heimlich Heroes for teens and adults is available for ages 15 and older in English**.

Our training program is an interactive, educational program designed to train participants how to correctly and successfully perform the Heimlich Maneuver.

The program consists of a training DVD accompanied by age appropriate note-taking tools. Additional training materials, including our specially engineered training dolls for hands on practice, are available in the Heimlich Heroes online [store](#).

Challenge No. 1: Finding Training Resources

First-aid training like the Heimlich Maneuver is not a curriculum requirement in all schools, or even a majority of schools across the country. Heimlich Heroes for kids is a great resource for schools, clubs, and other youth organizations.

** Since the completion of this study, Heimlich Heroes has changed to a grade based system rather than ages. Our kids program is available for grades 1-3 and 4-7 in both English and Spanish.*

*** [Heimlich Heroes: for Teens and Adults](#) was launched August 2017 for grade 8 - adult, and is currently available in English.*

Before using the Heimlich Heroes program, teachers, nurses, and youth organization leaders did not have access to age-appropriate training materials or training dolls. Instead, program users were doing their own research on how to teach the maneuver—and typically without hands-on training materials.

Potential users were challenged to find age-appropriate materials for their students, scout members, and organization members before they found Heimlich Heroes. What our users didn't realize is how important the hands-on experience is for their participants. Not only did leaders want to teach proper hand placement to perform the maneuver, they wanted to provide a way for their participants to practice that hand placement.

Challenge No. 2: When to Train Kids in the Heimlich Maneuver

Heimlich Heroes for kids is available for children as young as seven years old. We wondered: is that too young? Our organization maintains the belief that kids are able and capable if equipped with the right knowledge and training.

Will children so young remember how to perform the maneuver months, or even years later? We have heard story after story about people learning the maneuver in a scouting organization or in school at a young age. And those same people go on to save a life years later. To support our beliefs in training kids we designed a case study to bring you real data from our program participants.

The Setup

Six schools across the nation participated in our first case study on retention. With more than 400 students ranging from 3rd-8th grade we were able to test their retention of the information presented during the training. At each school the nurse administered a pretest, 1-week posttest, and 3-month posttest to all the participants. The same five questions appeared on each test.

Project Goals:

- Collect data on student participants over a three month period

- Provide evidence to users and medical experts on retention success
- Analyze strengths and weaknesses of program information based on retention

Project Challenges:

- Not having the same number of students take each test
- Time limitations during the school year prohibited a longer study

The Results

Summary

Overall, we saw significant improvement from each grade from the pretest to the 1-week posttest. We saw only slight variations of improvement or non-improvement based on grade level from the one-week posttest to the three-month posttest.

What We Learned

From our study we found that in each grade level the percentage of correct answers from the one-week posttest to the three-month posttest was varied only slightly. The number of students taking the test at any given stage was inconsistent, which affected our percentage outcomes.

For example: The percentage of fifth graders who could identify the correct hand placement to perform the Heimlich Maneuver...

- Before the training: 68% (17 of 25)
- One week after the training: 96% (25 of 26)
- Three months after the training: 83% (25 of 30)

While the percentage of correct answers declined from the one-week posttest to the three-month posttest, the number of correct answers did not change—only the number of students changed.

Points of Interest

What can our users and medical experts take away from our case study? This case study data supports our belief that kids are able and capable. We provide the materials and students as young as third and fourth graders are retain-

ing the program information.

Kids are retaining important information from our program that is used to save lives in a choking emergency. Not only are kids retaining information, but also this indicates to us that we are presenting information effectively.

We also offer a solution to the areas we saw non-improvement from the one-week posttest to the three-month posttest.

Our solution is this: Train an elementary grade level (3rd, 4th, or 5th) each year at your school using Heimlich Heroes for kids. Then, train a high school grade level each year using Heimlich Heroes for teens and adults.

By the time a student graduates high school they will have received Heimlich Maneuver training twice, and are more likely to save a life than someone who has never received proper training.

Data by Grade

In this case study a test was administered before the Heimlich Heroes training, one week after the Heimlich Heroes training and three months after the training. The same five questions appeared on each test.

Below, you will find the data by grade from each test. Refer to Appendix A for the test questions and answers.

Third and Fourth Grade

- The percentage of students who could identify the correct hand placement to perform the Heimlich Maneuver...
 - Before the training: 50% (57 of 114)
 - One week after the training: 82% (89 of 109)
 - Three months after the training: 85% (98 of 115)
- The percentage of students who could identify three signs of choking...
 - Before the training: 47% (54 of 114)
 - One week after the training: 84% (92 of 109)
 - Three months after the training: 82% (98 of 115)

- The percentage of students who could identify that back slaps are not recommended...
 - Before the training: 69% (79 of 114)
 - One week after the training: 83% (91 of 109)
 - Three months after the training: 87% (100 of 115)
- The percentage of students who could identify the correct first action when there is a choking victim...
 - Before the training: 16% (18 of 114)
 - One week after the training: 88% (96 of 109)
 - Three months after the training: 89% (101 of 115)
- The percentage of students who could identify two ways to prevent choking...
 - Before the training: 39% (44 of 114)
 - One week after the training: 71% (77 of 109)
 - Three months after the training: 67% (77 of 115)

Fifth Grade

- The percentage of students who could identify the correct hand placement to perform the Heimlich Maneuver...
 - Before the training: 68% (17 of 25)
 - One week after the training: 96% (25 of 26)
 - Three months after the training: 83% (25 of 30)
- The percentage of students who could identify three signs of choking...
 - Before the training: 76% (19 of 25)
 - One week after the training: 85% (22 of 26)
 - Three months after the training: 73% (22 of 30)
- The percentage of students who could identify that back slaps are not recommended...
 - Before the training: 68% (17 of 25)
 - One week after the training: 81% (21 of 26)
 - Three months after the training: 80% (24 of 30)

- The percentage of students who could identify the correct first action when there is a choking victim...
 - Before the training: 16% (4 of 25)
 - One week after the training: 96% (25 of 26)
 - Three months after the training: 90% (27 of 30)
- The percentage of students who could identify two ways to prevent choking...
 - Before the training: 44% (11 of 25)
 - One week after the training: 73% (19 of 26)
 - Three months after the training: 63% (19 of 30)

Sixth Grade

- The percentage of students who could identify the correct hand placement to perform the Heimlich Maneuver...
 - Before the training: 78% (80 of 111)
 - One week after the training: 92% (99 of 108)
 - Three months after the training: 90% (105 of 116)
- The percentage of students who could identify three signs of choking...
 - Before the training: 86% (96 of 111)
 - One week after the training: 86% (93 of 108)
 - Three months after the training: 86% (100 of 116)
- The percentage of students who could identify that back slaps are not recommended...
 - Before the training: 80% (89 of 111)
 - One week after the training: 97% (105 of 108)
 - Three months after the training: 97% (113 of 116)
- The percentage of students who could identify the correct first actions when there is a choking victim...
 - Before the training: 17% (19 of 111)
 - One week after the training: 94% (102 of 108)
 - Three months after the training: 91% (106 of 116)

- The percentage of students who could identify two ways to prevent choking...
 - Before the training: 68% (76 of 111)
 - One week after the training: 88% (95 of 108)
 - Three months after the training: 81% (94 of 116)

Seventh Grade

- The percentage of students who could identify the correct hand placement to perform the Heimlich Maneuver...
 - Before the training: 78% (66 of 85)
 - One week after the training: 99% (84 of 85)
 - Three months after the training: 91% (58 of 64)
- The percentage of students who could identify three signs of choking...
 - Before the training: 81% (69 of 85)
 - One week after the training: 100% (85 of 85)
 - Three months after the training: 95% (61 of 64)
- The percentage of students who could identify that back slaps are not recommended...
 - Before the training: 73% (62 of 85)
 - One week after the training: 99% (84 of 85)
 - Three months after the training: 91% (58 of 64)
- The percentage of students who could identify the correct first action when there is a choking victim...
 - Before the training: 34% (29 of 85)
 - One week after the training: 99% (84 of 85)
 - Three months after the training: 89% (57 of 64)
- The percentage of students who could identify two ways to prevent choking...
 - Before the training: 80% (68 of 85)
 - One week after the training: 98% (83 of 85)

- Three months after the training: 84% (54 of 64)

Eighth Grade

- The percentage of students who could identify the correct hand placement to perform the Heimlich Maneuver...
 - Before the training: 88% (74 of 84)
 - One week after the training: 96% (83 of 86)
 - Three months after the training: 93% (79 of 85)
- The percentage of students who could identify three signs of choking...
 - Before the training: 86% (72 of 84)
 - One week after the training: 91% (78 of 86)
 - Three months after the training: 88% (75 of 85)
- The percentage of students who could identify that back slaps are not recommended...
 - Before the training: 74% (62 of 84)
 - One week after the training: 87% (75 of 86)
 - Three months after the training: 88% (75 of 85)
- The percentage of students who could identify the correct first action when there is a choking victim...
 - Before the training: 26% (22 of 84)
 - One week after the training: 98% (84 of 86)
 - Three months after the training: 98% (83 of 85)
- The percentage of students who could identify two ways to prevent choking...
 - Before the training: 81% (68 of 84)
 - One week after the training: 91% (78 of 86)
 - Three months after the training: 68% (58 of 85)

Thank You

Thank you to the schools that participated in the first Heimlich Heroes case study. The nurses at the participating schools went beyond a regular Heimlich Heroes training to help us collect data. The data collected was critical for a successful case study, and will help us in crafting future case studies. Thank you!

What the Nurses Had to Say...

The nurses who lead the training program at their school and participated in our case study had some great feedback. Here's what they had to say:

Kathleen: *“This program was very easy to implement, since all the supplies and program are so well organized. Our 4th graders caught on to the movement easily and understood the information. I would definitely do it again. There was much interest in learning [the Heimlich Maneuver] when they saw the materials. The dolls really help students catch on.”*

Tommie Lou: *“I loved the program. It was easy to carry out. The instructional materials were very easy to follow. I liked the balance between getting the information and getting to practice it. Having the early elementary booklets made [the students] worry less about note taking and more about learning the material.”*

Sandy: *“This is an excellent program!”*





Heimlich Heroes™

Post Test Survey for Students

- Answer KEY-

For #1-4 please **read all** choices and circle the letter of the best answer.

1. How can you tell if someone is choking?

- A.They will be grabbing or clutching their throat
- B.They cannot cough or speak or breathe very well
- C.They may start to turn blue
- D.All of the above (A, B, and C are signs of choking)**
- E.None of the above

2. In doing the Heimlich Maneuver®, are back slaps recommended?

- A.Yes, if you want to
- B.No, it could cause the object to get stuck deeper**

3. Where do you place your hands on a choking victim to do the Heimlich Maneuver® on them?

- A.Below the ribcage but above the belly button**
- B.Below the belly button
- C.In the middle of the chest

4. If you see someone choking, what is the first thing you should do?

- A.Tell them to go to the doctor
- B.Ask them if they are choking**
- C.Begin the Heimlich Maneuver

5. Describe two things you can do to prevent choking:

Any two of these (or the like):

Cut food into small pieces...take smaller bites...sit down or stand still when eating...don't talk when you have food in your mouth...don't laugh or goof around while eating...don't lay down while eating...don't chew on things that are not food (like balloons, pen caps, ice cubes, etc.)...don't run with food in mouth...chew food really well before swallowing...don't bet people how big of a bite you can take...

Two correct _____

One correct _____

Zero correct _____