

# My Special AFLAC DUCK



## Why: Every Child Deserves Comfort

Cancer is difficult, and it can be lonely. My Special Aflac Duck is a "smart" comforting companion, available via participating hospitals, free of charge to every child, ages three and up, who has cancer. With four patents pending, lifelike movement and emotions, and a mixed-reality app, this innovative social robot uses interactive play to help distract children coping with cancer.

My Special Aflac Duck is designed to help provide comforting and entertaining experiences during cancer treatment. My Special Aflac Duck's core functions include: medical play, feeding and bathing; music and dancing; emotional expression and soothing heartbeats and nuzzling.

In partnership with Sproutel and the Aflac Cancer and Blood Disorders Center at Children's Healthcare of Atlanta, Aflac pursued an 18-month user-centered, empathy-driven design process. The design team worked with more than 85 child cancer patients, parents, medical professionals, and other experts to identify functions that provide the greatest value to children.

This rigorous process resulted in My Special Aflac Duck, an innovative and "smart" comforting companion for children who have cancer.

## CORE FUNCTIONALITY

My Special Aflac Duck is an innovative social robot that helps comfort and entertain childhood cancer patients. It blends the best of the toy industry, robotics, apps & gaming, and medical technology.

## Medical Play

Children undergoing medical procedures often mirror those experiences with their toys, and My Special Aflac Duck helps facilitate medical play. It features a port-a-cath accessory that kids can attach to their "smart" companion, triggering a calming mode. With this accessory, kids can imagine drawing blood, giving IV fluids, and even administering chemotherapy, caring for their friend the way they are cared for.<sup>1</sup> The mixed-reality app enables more immersive medical play.

<sup>1</sup> Maria Björk, RN, RSCN, Berit Nordström, PhD, Inger Hallström, DMSc, RN, RSCN. "Needs of Young Children With Cancer During Their Initial Hospitalization: An Observational Study" (2016) *Journal of Pediatric Oncology Nursing* Vol 23, Issue 4, pp. 210 – 219

## Nurturing Play: Feeding + Bathing

Chemotherapy and radiation can make it hard to eat because of side effects. Yet, children with cancer typically need to eat more than the average child so their small bodies have the critical energy to deal with cancer and heal damaged tissue.<sup>2</sup>

My Special Aflac Duck not only keeps patients company during mealtimes, it allows children to feed their social robot friend. We hope the duck's response also may help children associate eating with moments of joy.

Most children with cancer need a bath every day to help prevent infection. For several reasons, bathing can be difficult for sick kids. Building on this insight, My Special Aflac Duck has a mixed-reality app that allows kids to bathe their companion. Virtually, they can travel to

the duck's special pond, soap up their friend, and even blow-dry its feathers to recapture the spirit of bath-time fun.

<sup>2</sup> American Childhood Cancer Organization: "The Critical Importance of Good Nutrition for Children Fighting Childhood Cancer" (2018) <http://www.acco.org/blog/why-is-good-nutrition-so-important-for-your-child-during-cancer-treatment/>

## Expressing Emotions

Some children who have cancer may experience difficult emotions.<sup>3 4 5</sup> My Special Aflac Duck comes with seven RFID-enabled emoji cards for the feelings kids told our developers they experience most often: happy, silly, scared, nauseous, angry, calm, sad. When users select a card and tap it to the duck's chest, the smart companion acts out that emotion, helping patients express their feelings with caregivers.

<sup>3</sup> Bracken, J. M. (1986). *Children with cancer: A comprehensive reference guide for parents*. New York: Oxford University Press.

<sup>4</sup> "Coping with pediatric cancer: the importance of family member coping on the outcomes of other members," Kenneth L. Dodge, Iowa State University, 1997

<sup>5</sup> "How Stress Affects Cancer's Spread," *The Scientist*, March 1, 2016 and Dr. Erica Sloan, Sloan Laboratory and Semel Institute for Neuroscience and Human Behavior, UCLA

## Soundscapes™: Music and Calming

### Sounds

Leading hospitals such as the Aflac Cancer Center use music to engage childhood cancer patients. Music and calming sounds are important features of My Special Aflac Duck, too. By using the app's Soundscapes feature, childhood cancer

patients can blast off on a virtual rocket, traveling to their choice of the places kids said they most want to visit: a forest, ocean, farm, or amusement park. Soundscapes Creator lets kids design and control their own ambient sounds, helping to minimize the noise and distraction of the hospital.

### **Lifelike Motion: Dancing, Nuzzling, Heartbeats and Breathing**

Childhood cancer patients told us that they miss their favorite pet. My Special Aflac Duck brings the spirit of that bond to the hospital with lifelike interactions. Hidden sensors ensure the duck reacts intuitively and realistically to touch—for example, nuzzling a child's hand when she pets the duck's face.

With our current design, the plush companion features the vibration of calming heartbeats.<sup>6</sup>

My Special Aflac Duck also is designed to inspire moments of joy. As a constant companion, it is there during the long hours of treatment, listening to a child's favorite music and shows. When the duck hears music, it responds by dancing along just like a human friend.

<sup>66</sup> <https://www.nature.com/articles/s41598-017-02274-2> (April 18, 2017). Accessed February 5, 2018.

### **Promoting Connection: Recognizing Friends**

My Special Aflac Duck recognizes other members of the Aflac flock. When they come within five feet of one another, the two ducks have a brief quacking conversation, giving the two patients another reason to interact—and potentially helping to counteract some of the social isolation of child cancer patients too often feel.

### **FAQs**

How can I order My Special Aflac Duck?

When My Special Aflac Duck becomes available in winter 2018-19, childhood cancer patients, ages three and up, or their caregivers can ask for My Special Aflac Duck at no cost to them through their doctor, hospital or child-life specialist at participating medical centers. We look forward to providing additional detail in the months ahead.

### **When will My Special Aflac Duck be available?**

In early 2018, we will begin delivering the My Special Aflac Duck to children at the Aflac Cancer Center of Children's Healthcare of Atlanta for further testing. The smart companion is expected to be available to children with cancer nationwide in winter 2018-2019.

### **Does Aflac charge for My Special Aflac Duck?**

No. My Special Aflac Duck will be available free of charge via participating hospitals, for children, ages three and up, who have cancer. We invite everyone to join the Aflac Childhood Cancer Campaign to help raise awareness of this cause.

Can children with other illnesses or adults with cancer order My Special Aflac Duck?

Not at this time. Our priority is children who have cancer, as My Special Aflac Duck is grounded in deep research on how best to address their specific needs.

### **What is the recommended age range for My Special Aflac Duck?**

Since the average child cancer patient is first diagnosed at age six, we focused on patients ages 3-9. Early feedback suggests older childhood cancer patients also may be interested.

### **Is there a warranty?**

There will be a limited warranty. Details will be made available as the first units fly into the arms of children in the months ahead.