

Written Report: Vitamin U



✦ THE PROBLEM

Allergies affect up to 35% of children world-wide, and many feel shame to talk about them, as they feel that others don't share the same knowledge and understanding about allergies and anaphylaxis. Also, many parents, teachers and adults aren't experienced in what to do in an allergic reaction; only about 16% to 24% of parents can accurately distinguish between a mild reaction and life-threatening anaphylaxis. This puts the child's life at risk because the people they trust and have been taught to look to for help, can't give it. We wanted to change this by raising awareness and providing information so everyone can support friends, family and other children with allergies. If everyone had training in using EpiPens and looking for signs of allergic reactions, many lives could be saved and children could feel safe with their allergies.

✦ OUR SOLUTION

We decided that to support children with severe allergies, we would create a product that would hold the child's EpiPen and other medication in a safe, easily accessible way to avoid accidents where the EpiPen is out of date or missing. It would contain clear illustrated instructions of how to use an EpiPen so if the child had an allergic reaction, someone who didn't have training or experience could safely and responsibly administer their medication. The box would have clear labels explaining which end of the EpiPen is orange and which end is blue to support people who are colour blind as the colours are important when using the EpiPen. Our acronym for recognising signs of an allergic reaction would be displayed on top, so even if you have never seen an allergic reaction happen before, you can quickly recognise what is happening and administer the medication faster. It would be easy to carry around, include the child's medical details and emergency contacts, and is designed to be used both at school and when the child goes to a public place, especially without their close family, such as birthday parties and restaurants. For example, if a child with a serious nut allergy went to a birthday party without informing the parent of their allergy and how to access their EpiPen, if they consumed nuts the parent would not know what had happened or how to react, putting the child's life in danger. However, if the child had one of our boxes, they could give the box to the parent at the beginning of the party, and the parent would know what symptoms to look for, read the instructions for using an EpiPen and know exactly what to do in an emergency, potentially saving the child's life.

OUR SUSTAINABLE DEVELOPMENT GOALS



Children can feel they are at a disadvantage as they cannot consume certain foods or try new things when they have a serious allergy. They could be excluded from social events with other kids their age such as birthday parties or eating out at restaurants, especially when people around them don't have full training or experience with their child's needs. One in three children with food allergies has been bullied, teased, or even threatened with their allergen, and this causes stress, anxiety and concern in a situation that should be safe for the child.



Severe allergies can be life-threatening, and are often not spoken about and treated with the seriousness needed. Children need support and teaching so they can understand others' allergies and look out for their symptoms, as well as looking after their own health by understanding their allergies. By making schools and public places allergy-aware, we are trying to reduce the risk of death from allergic reactions and educate adults, children, and teachers in what to do in an emergency.

WHY THIS IS A PROBLEM

✦ **67%**

of teachers have no allergy awareness training - this could save a child's life during an anaphylactic reaction and it's the teacher's responsibility to help.

✦ **60%**

of teachers do not know or are unsure if their school has an allergy policy - these are extremely important in stopping contamination and allergic reactions.

✦ **40%**

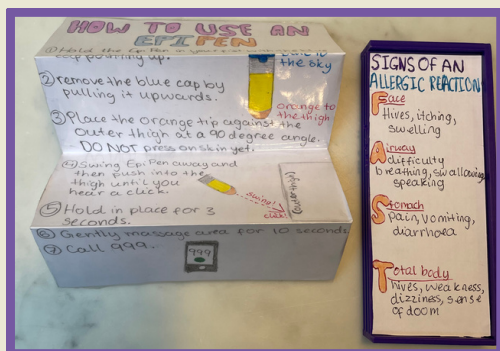
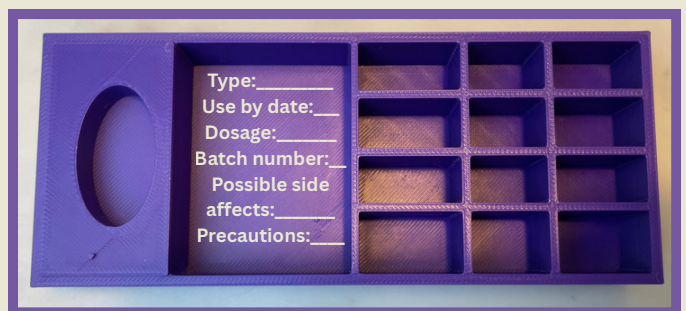
of people with a history of anaphylaxis are not prescribed an adrenaline auto-injector pen - these pens could save their lives and without them they are put at risk.

Project Overview

We created a 3D prototype of the layered box that would be used to store the child's medication, equipment and medical details. We 3D printed each layer to get a physical idea of what it could look like. The first layer stores different papers, like the child's medical details, emergency numbers, and clear, illustrated EpiPen instructions, and displays our acronym for noticing signs of an allergic reaction on top. The second layer is used to store the EpiPens in personalised slots that stop the EpiPen falling out, moving or becoming damaged, and has a clear space to write the use by date to avoid it being out of date in an emergency. The third layer is for allergy wipes and antihistamine tablets for milder reactions and has space to write the medicine's details. These sections include the most important items the child needs, in a safe, organised system that is easy to access, use, and store. For our social actions, we've created and distributed educational posters around the school that include information for children and teachers to educate them about allergies, signs of a reaction, and EpiPen guidance. These posters not only provide our school with information, they could help save lives in a real emergency.

In January, we shared our project and the progress we made with younger years and teachers as well as the co-founder of GSL, at a school expo, which helped us gain valuable feedback and develop our ideas.

Throughout allergy awareness week, we also shared daily facts and information with the school to raise awareness and help our peers support their family and friends with allergies.



Skills we gained

- We learned how to grow and develop as team; trusting each other with responsibilities and dealing with challenges together
- We also learnt product designing skills especially with our developed 3D prototype.
- We learned how to make appealing, attractive posters that caught people's attention around the school
- We also gained valuable knowledge and insight into severe allergies that affect children worldwide

Evaluation

We believe our project is helpful, supportive and useful for children with severe allergies, and we believe it could become a potential life-saving tool for children having an allergic reaction. One of our main challenges was finding a way to help these children effectively in a wide scale. Nevertheless, everyone in our team found this project really fun, and our favourite bit was definitely the prototype that we created.

Next steps

For our next steps we plan on connecting with a fellow student doing GSL in Dubai who shares the same common goal as us: supporting children with allergies and helping to raise awareness about anaphylaxis. This will help us learn more about allergies and how way of life for children with allergies is different in other countries, and get important feedback and reflect on our project.

The team

The team at the GSL expo in our school

