

Why Do Those Who Need an Epinephrine Autoinjector Not Carry It?: A Customer Discovery Approach

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BACKGROUND

- Epinephrine autoinjector (EAI) should be always carried by those at risk for anaphylaxis, but only 40% of the highest-risk patients carry their EAI.
- Previously identified reasons for lack of carriage include inconvenience, forgetfulness, cost, availability, expiration, and complacency of diagnosis.
- Customer Discover (CD) is a method to determine if there are actual customers for a product/service and what they would want before it is developed.
- While CD has been applied in business, it is relatively new to health care.

OBJECTIVE

- Employ a CD methodology to identify barriers for EAI and understand the diverse needs related to EAI carriage

METHODS

- Investigators participated in a 6-week National Science Foundation Innovation Corps (I-Corps) program designed to move academic research to commercialization utilizing CD
- 30 customers were identified and interviewed within 4 customer groups (Table 1)
- Interviews focused on real life barriers to EAI carriage
- Secondary IRB approval was obtained and verbal consent was obtained by interviewees

Customer Discovery

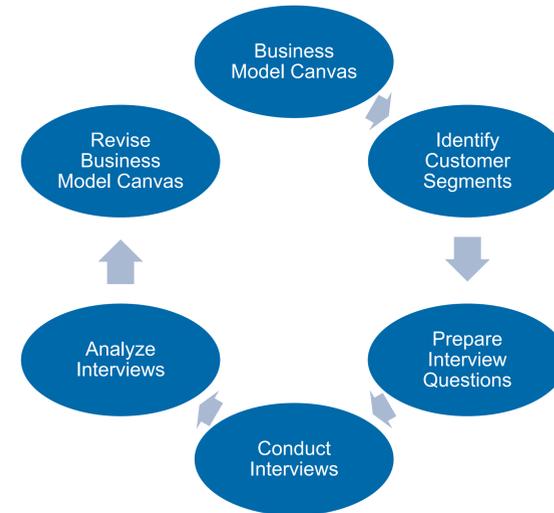


Figure 1: Customer discovery process
 Business model canvas includes a hypothesis, value proposition and identification of customer segments. Hypothesis and value proposition were revised with the information gained through interviews.

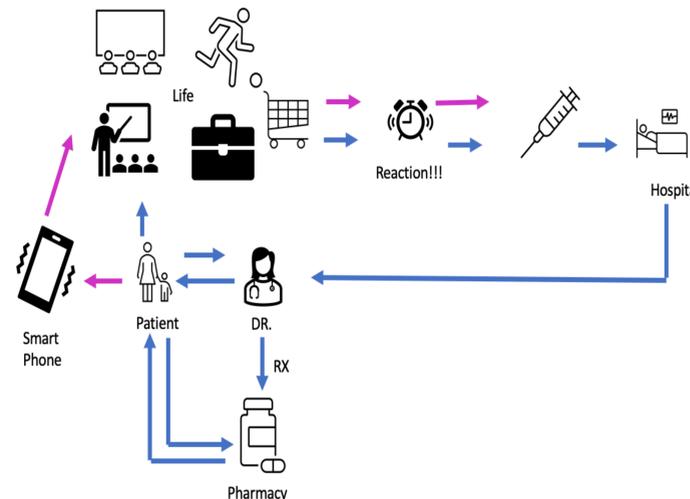


Figure 2: Customer Workflow Diagram
 Diagram defines the different groups of people or organization EAI carriage reaches.

Customer Segments & Insights

Table 1: Customer Groups identified via I-Corps Methodology

Customer Group	Customers Identified	n
Group 1: Patients & Caregivers	Patients, parents, significant others, babysitters, teachers, and coaches	17
Group 2: Medical Providers	Allergists, Pediatricians, RNs, Pharmacists, School RNs	10
Group 3: Community	Airport Security	1
Group 4: Product Manufacturers	Current interventions (Etsy)	2

Figure 3: Customer Insights offered by Customer Discovery

Who carries EAI?

- Young children rely on caregivers
- Caregivers modify carriage method by developmental age
- Caregivers have NOT considered how to carry for the next stage or when not with child 100% of the time

Why not carry EAI?

- Inconvenience
- Perceived ability to avoid allergen
- Forgetfulness
- Complacency

Who educates?

- Primary care providers defer to pharmacists
- Pharmacists report not having time to provide education
- Allergists provide some education but defer to nurses

How to carry EAI?

- Diaper bags – 30%
- Lunch boxes – 11%
- Fanny packs – 20%
- Backpacks – 20%
- 100% do NOT return home if forgotten

DISCUSSION

- Patients, families, and caregivers will not routinely return home if they have forgotten their EAI as they feel they have strategies/reasons to justify why they may not need it.
- Parents of young children have identified methods to improve EAI carriage when they are with the child, but not necessarily if they are not the ones with their child.
- Current carry method (if carried) include pocket, diaper bag, lunch box, fanny pack, or backpack. However, parents are not sure what their alternatives would be once they no longer need their current method (e.g. diaper bag).
- Food allergy and the thought of anaphylaxis is distressing to parents, is something teenagers are bullied about, and impacts everyday life.
- Generalization may be limited by small number of interviewees.

CONCLUSIONS

- Utilizing CD to investigate barriers to EAI carriage is a novel approach.
- CD allowed real-world insights into barriers to carriage in key stakeholders who are responsible for administration and associated potential solutions.

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