

FACTORS INFLUENCING PREFERENCES FOR GLUCAGON DELIVERY DEVICES AMONG PATIENTS WITH DIABETES, CAREGIVERS, AND ACQUAINTANCES

Bajpai SK¹, Cambron-Mellott MJ², Peck E², Poon JL¹, Wang Q¹, Mitchell BD¹, Babrowicz J², Child CJ³, Raibulet NK¹, Beusterien K²

¹ Eli Lilly and Company, Indianapolis, IN, US, ² Kantar Health, New York, NY, US, ³ Lilly Diabetes, Surrey, UK

BACKGROUND

- People with diabetes on insulin are at risk of severe hypoglycemia, an unpredictable, life-threatening event that requires assistance from others for recovery.
- There is significant unmet medical need to improve successful administration of glucagon as rescue therapy for severe hypoglycemia among lay people

OBJECTIVE

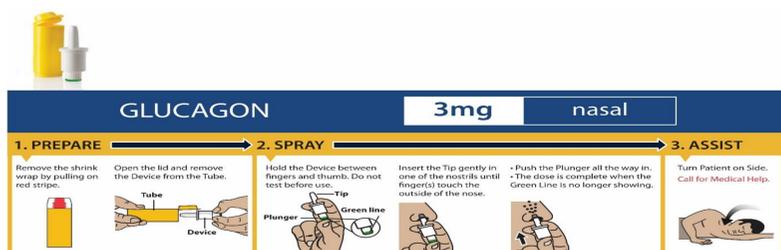
- To understand perceptions about glucagon delivery and potential impacts of two glucagon delivery devices in development for severe hypoglycemia
 - Capture the perspective of patients with diabetes, caregivers, and acquaintances

METHODOLOGY

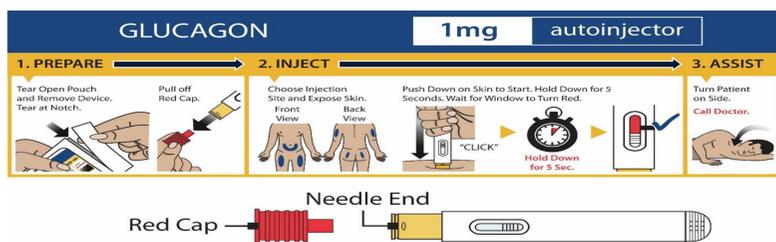
One-on-one telephone interviews conducted using semi-structured discussion guide

- 45 participants
 - 15 adult patients with diabetes (both T1DM and T2DM) on insulin (PTs)
 - 15 caregivers of patients with diabetes (live with patient or provide care on regular basis) (CGs)
 - 15 acquaintances of patients with diabetes (know a person with diabetes) (AQs)
- Recruited via a general population panel in USA
- Key discussion topics around:
 - aspirational features of a potential new glucagon delivery device,
 - perceptions of nasal glucagon (NG) and autoinjector glucagon (AI) (visuals of draft instructions for use for each were shown in random order – Figure 1)

Figure 1: Instructions for Use: Nasal Glucagon¹



Autoinjector Glucagon^{2,3}



CONCLUSIONS

- People with diabetes and their caregivers and acquaintances want a simple and ready to use rescue device for a severe hypoglycemia emergency
- A device with nasal delivery of glucagon is preferred over an autoinjector for several reasons, including being less complicated and avoiding a needle injection
 - Nasal glucagon may also lead to less hesitation and greater comfort socially compared to the autoinjector
- Having such a device would help individuals feel more prepared for a severe hypoglycemia emergency

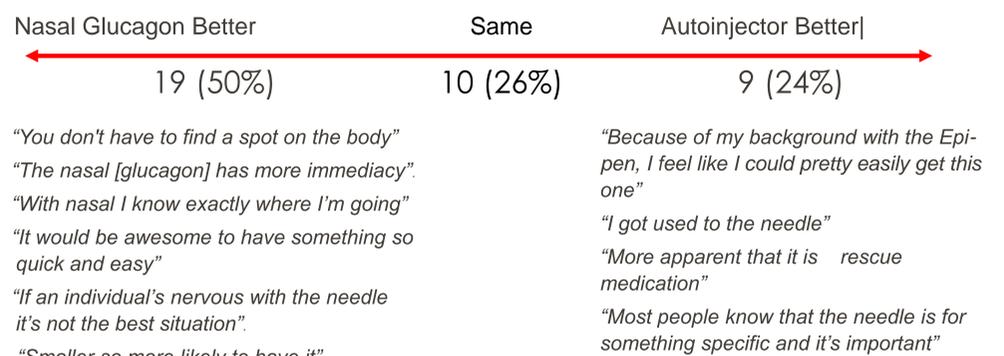
KEY RESULTS

More than 3/4th preferred Nasal Glucagon (NG) over Autoinjector Glucagon (AI): 33 (77%) vs. 12 (23%)

Comment ^a	Preferred NG over AI (N=33)			Preferred AI over NG (N=12)		
	PTs (n=10)	CGs (n=13)	AQs (n=10)	PTs (n=5)	CGs (n=2)	AQs (n=5)
Easier to use	8	9	9	1		4
No need to remove clothes/find site	6	8	5			
No needle/less invasive	3	6	8			
Other people more comfortable with it	6	4	5			
Faster to use/faster glucagon delivery	2	7	3		1	2
Easy to carry/small	5	3	3			
Intuitive/familiar	3	4		3	1	2
Easier for child to use	2	4	1	1		
Less embarrassed by device	3	1				
Feel secure/reassured			3	2		
Difficulty making mistake with it	2	1				4
Everything gets to where it needs to		2		2	1	4
Can use on multiple bodily sites				3		3
Larger size/more manageable				1	1	3

^a Numbers reflect frequency of comment about device
PT=patient; CG=caregiver; AQ=acquaintance

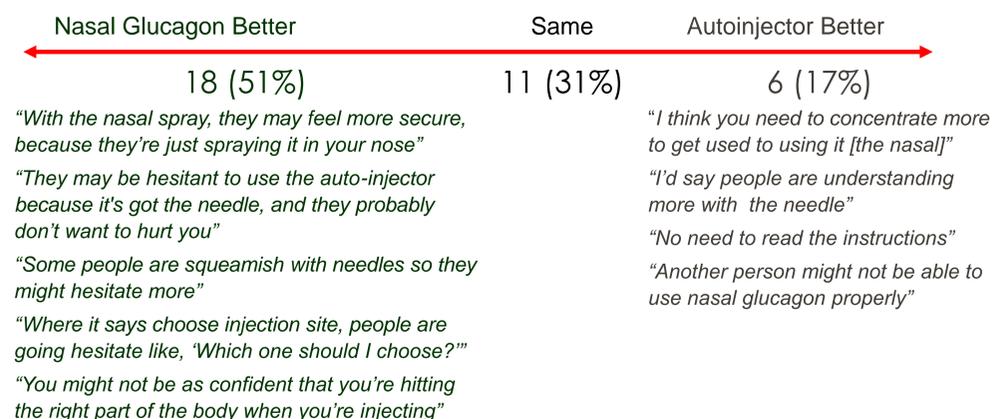
More felt prepared with NG versus AI^a



^a 38 participants provided responses

- Many participants indicated that feeling protected was similar to feeling prepared
 - "Feeling protected" meant: being able to trust that the medication would work, trusting that a random stranger could assist them, being safer or more secure, not getting hurt, and being able to make it through an emergency.

More would hesitate with AI versus NG^a



^a 35 participants provided responses

More socially comfortable with nasal glucagon

- Nasal glucagon was perceived to:
 - Be less conspicuous and less embarrassing
 - Be less likely to cause anxiety among others compared to the autoinjector
- Of 35 participants asked, more participants indicated that they would be less embarrassed with the use of nasal glucagon versus autoinjector glucagon [n=16 (46%) vs. 4 (11%); 15 (43%) expressed no difference]

1. BAQSIMI Device. Draft instructions for use. Lilly USA, LLC, Indianapolis, IN.

2. Newswanger B, Prestrelski S, Garibaldi M, Andre A. Summative human factors study of a glucagon auto-injector in a simulated severe hypoglycemia rescue situation. In: 11th International Conference on Advanced Technologies and Treatments for Diabetes. Vienna, Austria; 2018.

3. Gvoke HypoPen IND Filing Application, Securities and Exchange Commission, Feb 11, 2019, by Xeris Pharmaceuticals, Inc.; Washington DC, USA

Acknowledgments: The authors would like to thank the interviewers on this study: Colleen Welsh-Allen, Lori Wenman, and Donna Rafferty.



ISPOR 2019

Disclosures: SB, JP, BM, CC, NKR: employees of Eli Lilly Inc.; MCM, EP, JB, KB: employees of Kantar Health, providing consulting services to Eli Lilly

Privacy Notice Regarding the Collection of Personal Information
By scanning this QR code, you are consenting to have your IP address and, if you choose, email address temporarily retained in a secured computer system and used only for counting purposes, performing file download, and sending you an email. Your information will not be shared for any other purpose, unless required by law. You will not receive any future communications from Eli Lilly and Company based on the system-retained information. Contact information at: <http://www.lilly.com/Pages/Contact.aspx>