

Patient Experience With Pharmaceutical Medical Information Centers To Identify Animal-Free Medications

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Abstract

Introduction

Many consumers do not consume medications that contain animal-derived ingredients. Nearly 6% of U.S. consumers claim to be vegan, a six fold increase compared to the 1% reported in 2014. In addition to vegans, those with certain religious beliefs, allergies (e.g. alpha-gal allergy), animal lovers and climate change activists also contribute to the increasing demand for animal-free products. This was a process improvement and discovery pilot project evaluating the accuracy of information and the patient experience around identifying the presence of animal-derived ingredients in medications.

Methods

Phone call inquiries were made to medical information (MI) departments at the top 20 pharmaceutical companies. The patient experience was then measured by the accuracy of responses received from the MI departments, the number of interactions needed to obtain an answer and the average duration for each interaction.

Results

Overall, 60% of the companies were able to provide an accurate response, and 45% of the companies provided an accurate response without any prompting. Pharmacists were not able to determine the animal-free status for 33% of the medications. Overall, 50% of the companies required more than one interaction to receive a final response with the average time for all the interactions being 13 minutes \pm 5 minutes.

Conclusion

A high percentage of companies were unable to provide accurate information regarding the source of animal-derived ingredients in medications. MI departments are encouraged to train in-house representatives on this topic or seek external independent certification to optimize the patient experience, provide accurate information and increase satisfaction.

Introduction

Many consumers do not consume medications that contain animal-derived ingredients. Nearly 6% of U.S. consumers claim to be vegan, a six-fold increase compared to the 1% reported in 2014.¹ In addition to vegans, those with certain religious beliefs, allergies (e.g. alpha-gal allergy), animal lovers, and climate change activists also contribute to the increasing demand for animal-free products.

Accurate information regarding the animal-free status of medications is currently not readily accessible through

manufacturers' websites and package inserts. Ingredients such as gelatin, lactose, and honey are easily identified as animal-derived while ingredients that could be of animal or plant origin, such as magnesium stearate, amino acids, and oleic acid, pose identification challenges. It is estimated that 75% of oral medications contain animal-derived ingredients (ADIs) and patients must contact each drug manufacturer directly to accurately determine if a product is suitable for their dietary, religious, or ethical practices. The objective of this project was to determine the patient experience around identifying ADIs in medications.

Methods

This was a process improvement and discovery project evaluating the patient experience around identifying the presence of ADIs in medications. The project was designed as making phone inquiries to the top 20 pharmaceutical companies' medical information (MI) departments identified using reports from Fierce Pharma about their top revenue-generating medication using reports published by Statista and Drug Discovery & Development.²⁻⁴ The ingredients of each medication and relevant manufacturing practices were extracted from DailyMed.⁵ Phone numbers for the MI departments were identified via Google searches.

The patient experience was defined as:

- The accuracy of responses received from the MI departments.
- The number of interactions needed to obtain an answer.
- The average duration for each interaction.

The company's response was considered accurate unless it definitively contradicted the pharmacists' assessments.

Three pharmacists independently reviewed the ingredients based on their general knowledge and publicly available information to determine whether a product contained potential ADIs. Discrepancies were resolved upon discussion.

The same individual called each MI department and asked, "I'm calling to see if [product name] contains any ADIs or animal by-products? I want to know, if [product name] is animal-free?". If asked about the specific strengths or forms of the medication, the caller responded, "I am not taking the medication yet, my doctor wants to prescribe it to me". If representatives were unable to directly answer the question, the caller prompted the representative with one of the following questions:

- "Is [previously identified ingredient] animal free?"
- "Is [product name] made using animal cells?"
- "Would you be able to tell me what the ingredients are?"

All calls were made over a three day period during business hours. A written confirmation email was requested at the end of each call. Total call durations were recorded. If multiple calls were made, the total duration for each call was summed. All data were reported using descriptive statistics.

Results

Overall, 60% of the companies were able to provide an accurate response (Table 1). Companies that provided an accurate response without any prompting were 45%.

Pharmacists were not able to determine the animal-free status for 33% of the medications.

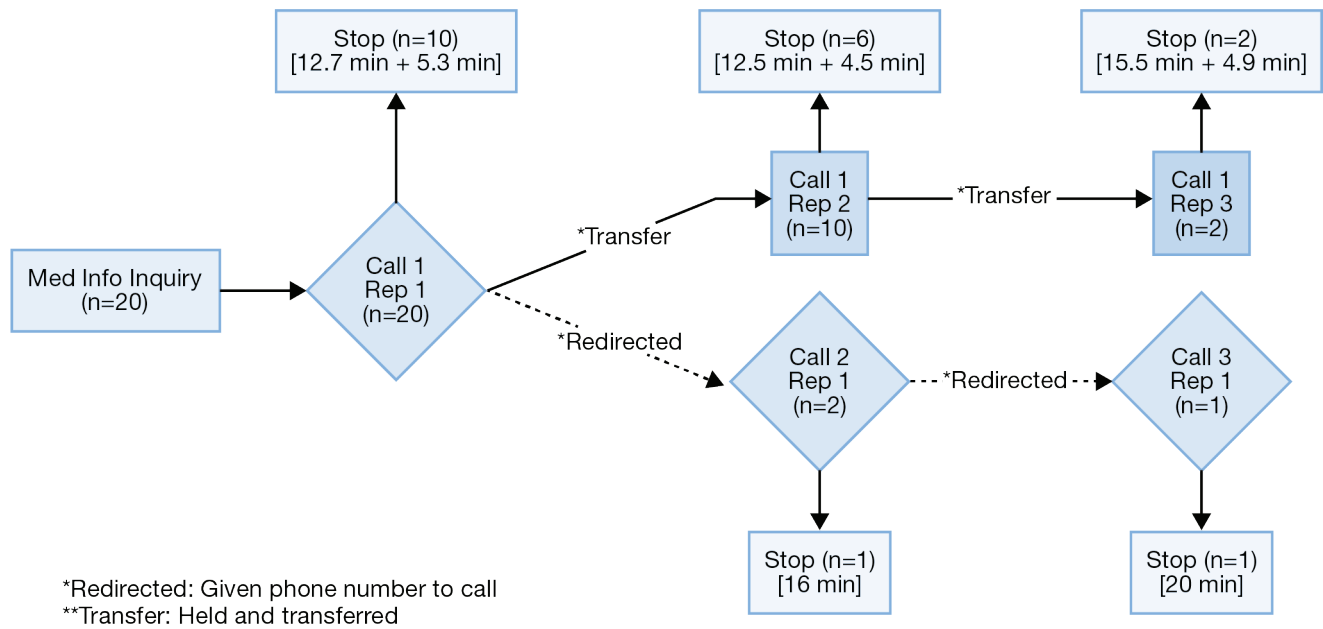
Overall, 50% of the companies required more than one interaction to receive a final response (Figure 1). A second or third interaction was needed for 35% and 15% of the calls respectively. Companies decided not to send a written response 65% of the time. The average time for all the interactions was 13 minutes \pm 5 minutes.

Table 1: Response Accuracy of Animal-Free Inquiry From Top 20 Pharmaceutical Companies

Company	Top Branded Product	Pharmacist Assessment	Suspected Animal-Derived Ingredient(s)	Company Response	Provided Accurate Response	Total Inquiry Time (min)
Johnson & Johnson	Remicade	Unknown	Polysorbate 80	Unable to answer	N*	14
Roche	Avastin	Not AF	Produced in Chinese hamster ovary (CHO) cells	Not AF	Y	20
Novartis	Cosentyx	Not AF	Produced in Chinese hamster ovary (CHO) cells	Unable to answer	N	16
Merck	Keytruda	Not AF	Produced in Chinese hamster ovary (CHO) cells	Not AF	Y	8
AbbVie	Humira	Not AF	Produced in Chinese hamster ovary (CHO) cells	Not AF	Y	12
GlaxoSmith-Kline	Triumeq	Unknown	Magnesium stearate, polyethylene glycol	Unable to answer	N	12
Bristol Myers Squibb	Revlimid	Not AF	Lactose, Gelatin	Unable to answer	N*	14
Pfizer	Pprevnar 13	Unknown	Polysorbate 80	AF	Y	12
Sanofi	Lantus	Unknown	Polysorbate 20	AF	Y*	26
Takeda	Entyvio	Not AF	Produced in Chinese hamster ovary (CHO) cells	Not AF	Y	9
AstraZeneca	Tagrisso	AF	None	Unable to answer	N	20
Bayer/Janssen	Xarelto	Not AF	Lactose monohydrate	Not AF	Y	19
Amgen	Enbrel	Not AF	Produced in Chinese hamster ovary (CHO) cells	Not AF	Y*	10
Gilead	Biktarvy	Unknown	Magnesium stearate, polyethylene glycol	AF	Y	10
Eli Lilly	Trulicity	Not AF	Produced in Chinese hamster ovary (CHO) cells	AF	N*	14
Boehringer Ingelheim	Jardiance	Not AF	Lactose monohydrate, Polyethylene glycol	Not AF	Y*	10
Novo Nordisk	Ozempic	AF	None	AF	Y	7
Teva	Copaxone	Unknown	Glatiramer acetate	Unable to answer	N	10
Biogen	Tysabri	Not AF	Produced in Chinese hamster ovary (CHO) cells	Unable to answer	N*	10
Astellas	Xtandi	Capsule: Not AF // Tablet: Unknown	Capsule: Gelatin/Tablet: hypromellose acetate succinate, magnesium stearate, polyethylene glycol	Capsule: Not AF /Tablet: AF	Y	16

* = Required prompting

Figure 1: Graphical Representation of the Number of Interactions and Average Interaction Time



Discussion

The accuracy of responses from a MI department is expected to be 100%. Based on our pilot project this was not the case with 40% of the companies. The number of interactions needed to get a final response ranged from one to three and the average call time was 13 minutes. Because none of the companies sent a written response indicating the animal-free status of their medication, it can be inferred that MI departments have this information classified as verbal-only responses. Although we prompted MI representatives when appropriate, not all patients have the knowledge or foresight to do the same for clarity. Due to the average duration for each interaction being measured, for the purposes of this study, the caller did not deviate from the scripted questions when speaking with MI representatives.

Training is recommended for representatives from respective companies to increase response accuracy. If companies have not created standard responses for the animal-free status of their medications, this is encouraged. The American Medical Association passed a policy in 2019 “[urging] manufacturers to include all ingredients and components present in medical products on the product label, including both active and inactive ingredients, and denote any derived from an animal source.”

Drug manufacturers may also get medications independently certified as animal-free to enhance the patient experience and eliminate the need for patients to call them.⁶ While such certification is common for dietary supplements and cosmetics from companies such as VeganMed, The Vegan Society, or Vegan Action, it is uncommon for prescription and OTC medications. As regulatory agencies such as the US Food and Drug Administration (FDA) require animal testing for certain products and procedures before they can be approved for human use, VeganMed’s Animal-Free Certification remains the most accurate content without the use of the words “vegan” or “vegetarian” following similar

industry labels of gluten-free and cruelty-free. This study is important because it is the first study of its kind, warranting further investigation.

Conclusion

There is an increasing demand for animal-free medications with the potential for the pharmaceutical industry to be inclusive of the needs of diverse patient populations.⁶ A high percentage of companies were unable to provide accurate information regarding the source of ADIs in medications verbally and in writing. MI departments are encouraged to train in-house representatives on this topic or seek external independent certification to optimize the patient experience, provide accurate information, and increase satisfaction.

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Conflicts of Interest: The authors are all employed or volunteers at VeganMed, Inc.

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