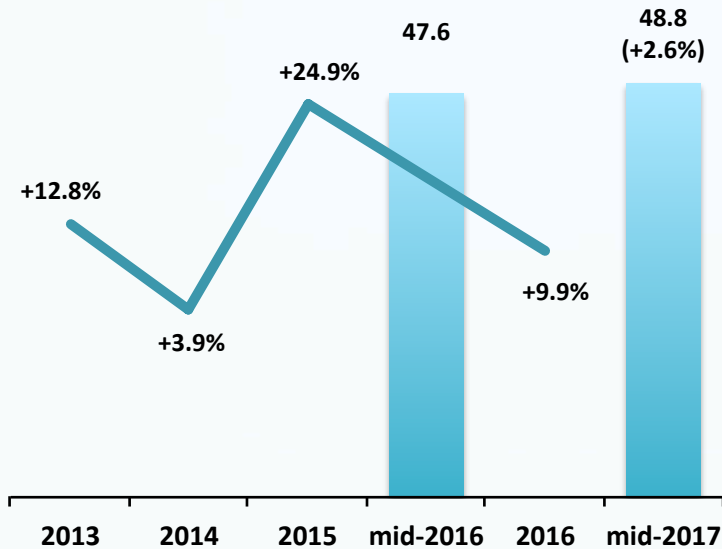


Brazil – Overview

Brazil allergy sales mid-2016 & mid-2017
(MSP, \$mn)



3 key allergy trends in Brazil

- **Hypera Pharma generates over half of market topline**

Hypera Pharma (previously Hypermarcas) generates 58% of allergy sales largely via allergy remedies Histamin and Polaramine, also available as topical versions in anti-itch

- **Brands struggle to compete with low-cost *similar*s and generics**

Despite promotion for branded options in allergy remedies, strong growth for *similar*s and generics suggests a cost-conscious attitude amid consumers

- **Majority of allergy ingredients are Rx, but switch coming**

ANVISA was updated in 2016, making way for more liberal switch procedures; fexofenadine and epinastine switched to OTC in 2017, with other allergy ingredients awaiting review

Category overview

- Brazil's allergy market grew modestly, with topline sales largely dependent on allergy remedies
- **Allergy remedies** growth was primarily driven by lower-cost *similar*s and generics
- Hypera Pharma (previously Hypermarcas) garners over 60% of category sales; its allergy portfolio encompasses branded, *similar* and generic products

Brazil allergy sales by category mid-2017 (MSP, \$mn)

Category	mid-2017 \$mn	mid-17 / mid-16	CAGR 16/12	% share
Allergy remedies	42.6	+2%	+13%	87
Anti-itch	6.2	+4%	+10%	13
Total	48.8	+3%	+13%	100

China – Allergy remedies

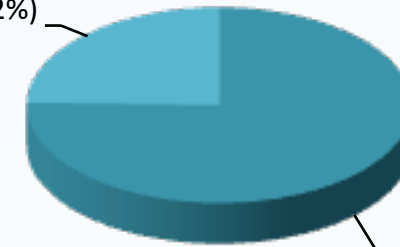
- **Flixonase** (fluticasone proprionate) nasal spray is supported by a dedicated brand website and ads which stress its 24-hour relief
- GSK increased online promotion in 2015-16, creating brand accounts on WeChat and Weibo which feature educational information about allergies



Flixonase

China allergy remedies sales by segment mid-2017 (MSP, \$mn)

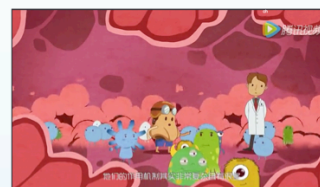
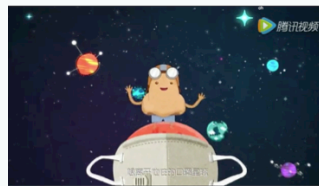
Nasal formats 25%
(+3%, CAGR +2%)



Solid formats 75%
(+6%, CAGR +2%)

- 2017 TV ads featured a couple both playing with their dog and taking a bike ride in the park, able to breathe freely and enjoy the outdoors because of Flixonase

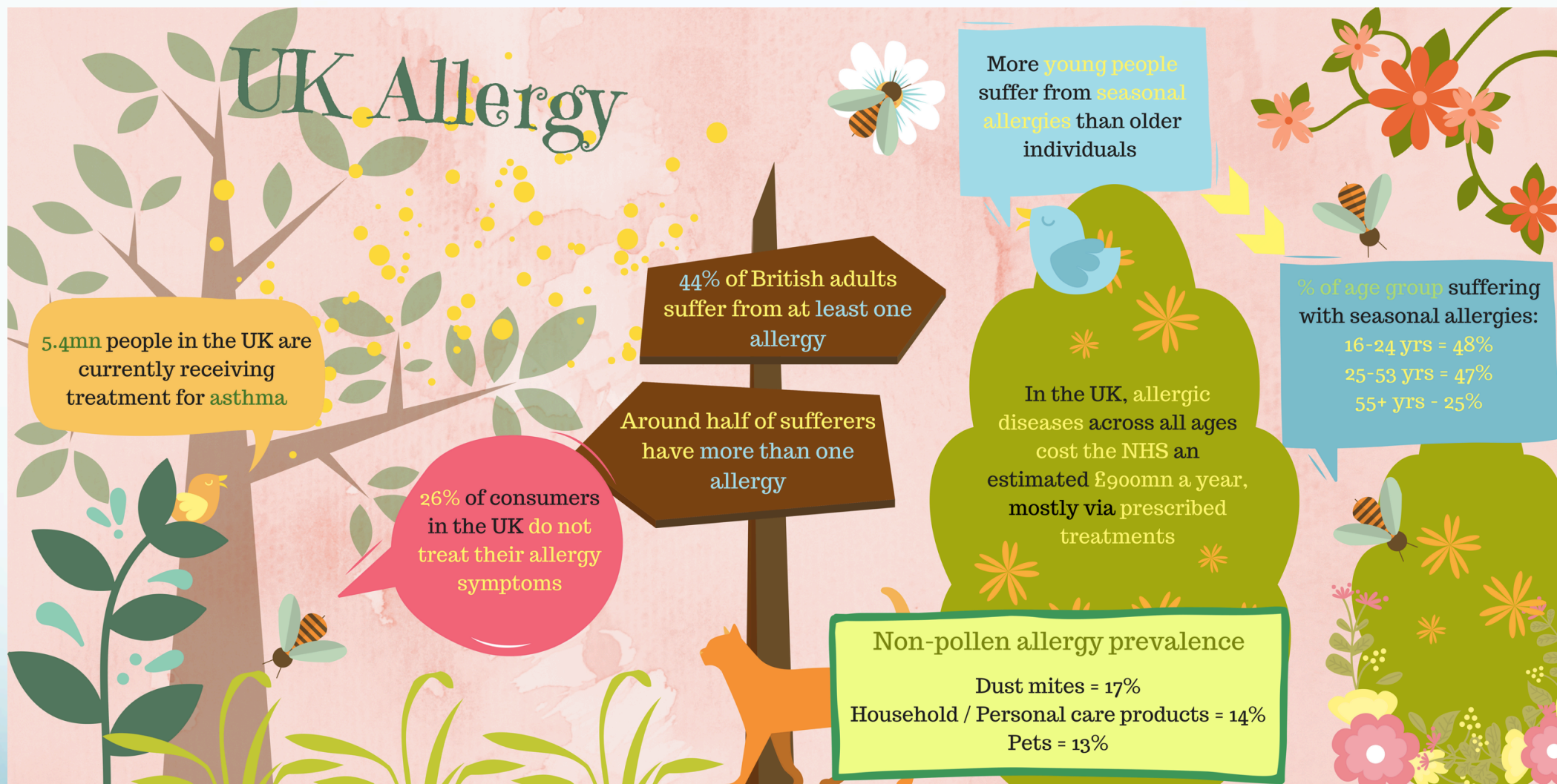
- As part of the the “National Nose Healthcare Day” in April 2015, GSK launched a media event in Beijing
- The event included the publication of a report on how allergy and rhinitis can affect consumers’ work, emotions and personal communication with others



- A science comic, Little Nose Planet Adventure (co-produced with Guokr; *see above*), was released at the event, explaining the pathogenesis of rhinitis in an entertaining way

UK – Overview

Key allergy statistics in the UK



Sources: Mintel.com; AllergyUK.org

Scientific Studies

- **Allergy affects between 20-30% of the general population**, while an estimated 10-30% of people worldwide suffer with allergic rhinitis
- **Rapidly rising allergy rates** over the last two decades have been **linked to climate change** and **urbanisation**
- Warmer spring and summer months contribute to **lengthened pollen seasons**, while studies point to an association between **high levels of air pollution** and the **development of respiratory allergic disease**
- Allergic rhinitis is the most common form of non-infectious rhinitis and a known risk factor for asthma; epidemiological studies have estimated that over 70% of people with asthma have concomitant rhinitis
- **Chronic allergic rhinitis can give rise to a number of other health issues**, including sinusitis, conjunctivitis, ear infections and sleep disorders
- Most systemic antihistamines (e.g. loratadine, cetirizine, fexofenadine) are positioned to treat allergic rhinitis and skin allergies (e.g. hives), symptoms of which are usually non-fatal
- Asthma is usually managed via Rx medication yet the **heavy socioeconomic burden of growing asthma rates** may drive governments to explore safe and effective OTC options
- **Herbal & natural remedies may be a source of innovation**, with studies showing vitamin D, fatty acids and probiotics may reduce allergy rates when taken in pregnancy or neonatally
- Recent research also supports the OTC use of **novel antihistamine bilastine** for treating allergic rhinoconjunctivitis and urticaria; developed in 2010, research indicates it **is safe, well-tolerated and as efficacious** as antihistamines cetirizine, fexofenadine and desloratadine

