

# Drug shortages in health care institutions: perspectives in 2014-2015

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## INTRODUCTION

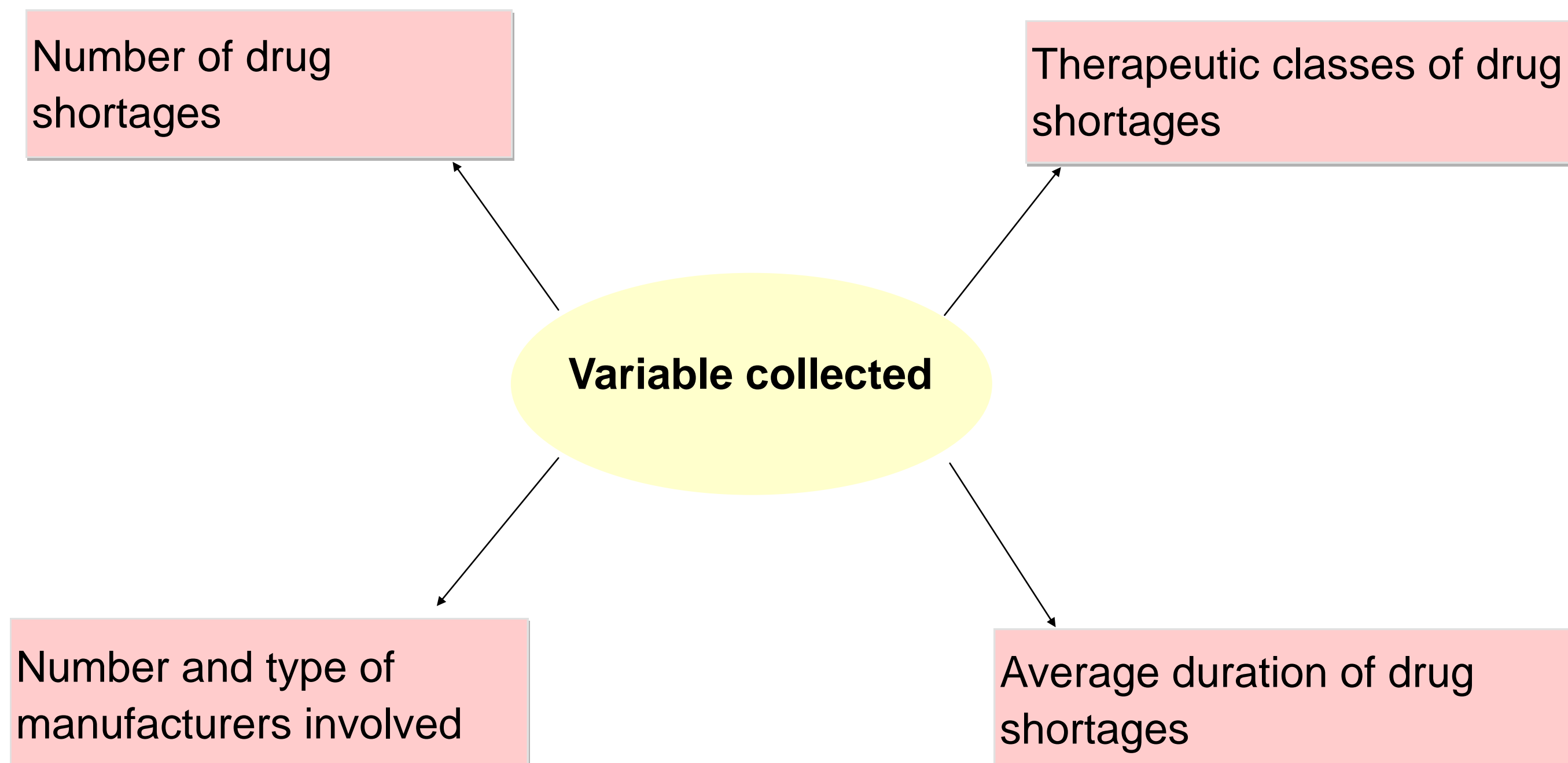
- Health Canada and many stakeholders recognize the importance and the negative impacts of drug shortage on patients, healthcare professionals and the healthcare system.
- While many actions have been undertaken to reduce drug shortages, clinicians continue to be exposed to recurrent drug shortages on a day to day basis
- Periodical monitoring of current drug shortages in Canada is relevant to decision makers.
- Our research unit has been monitoring drug shortages in Canada since 2006

## OBJECTIVES

The aim of this study was to describe Canadian drug shortages

## METHODS

- Retrospective descriptive study
- All drug shortages related to hospital practice identified on the list provided by a Canadian wholesaler/distributor (Mckesson Canada, Region of Montreal - SigmaSanté contract) between August 1st, 2014 and August 17th, 2015 were included.
- These data were compared to previous annual data starting in 2006-2007.



- Were also analyzed:
  - ⇒ Percentage of drug shortages associated with generic drug manufacturers
  - ⇒ Percentage of drug shortages associated with injectable drugs

## RESULTS

### Results: August 4<sup>st</sup>, 2014 and August 17<sup>th</sup>, 2015

- 51 manufacturers were involved in drug shortages

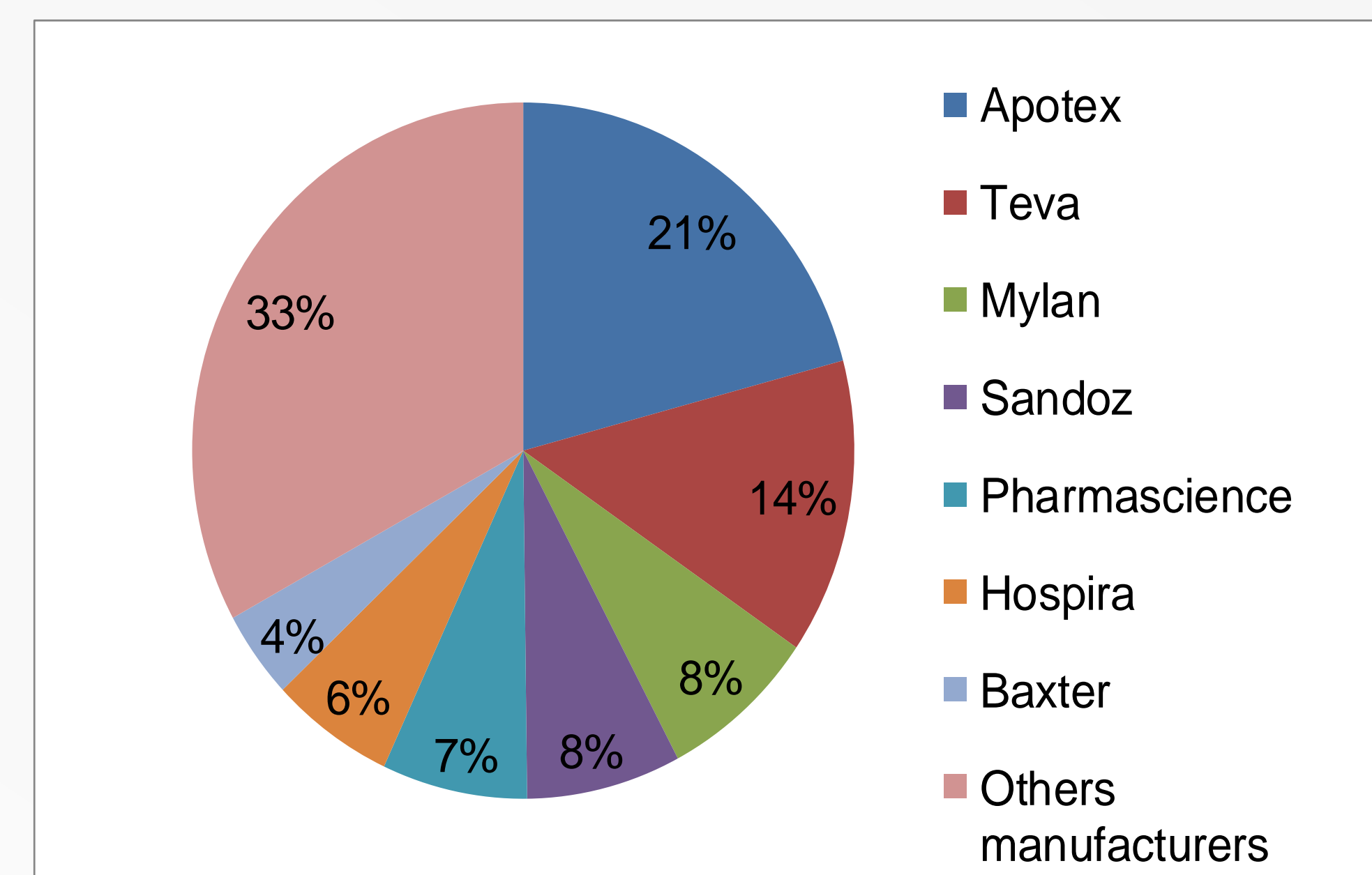


Figure 1. Manufacturers involved in drug shortages

- Most therapeutic classes were represented

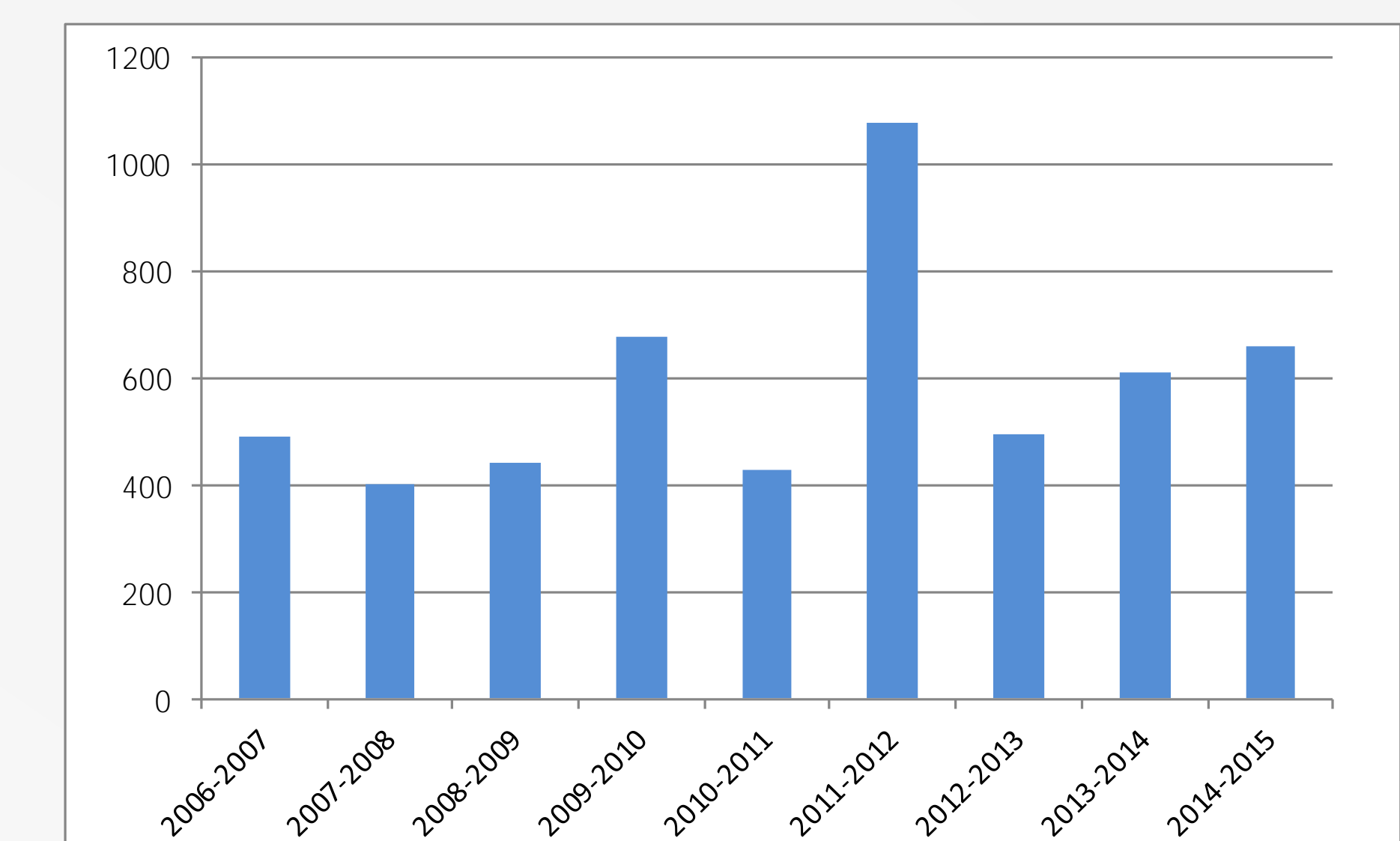
Table 1. Therapeutic classes associated with drug shortages

Therapeutics classes	Proportion of products in drug shortage
28:00 Central Nervous System Agents	22%
24:00 Cardiovascular Drugs	16%
8:00 Anti-infective agents	13%
40:00 Electrolytic, Caloric, and Water Balance	9%
12:00 Autonomic drugs	6%
56:00 Gastrointestinal Drugs	6%
10:00 Antineoplastic agents	5%
68:00 Hormones and Synthetic Substitutes	5%
20:00 Blood Formation, Coagulation, and Thrombosis Agents	5%
Other classes	13%

### Results: Historical perspectives

- From 2006-2007 to 2014-2015, the annual number of drug shortages for the nine consecutive years were respectively, 493, 400, 441, 679, 429, 1081, 497, 611 and 662.

Table 2. Number of drug shortages per year



- The average duration of drug shortages increased from 108±130 days in 2006-2010 to 197±166 in 2014-2015
- The number of drug manufacturers involved was reduced from 70 in 2006-2007 to 51 in 2014-2015; this reduction could be associated to the numerous mergers.

Table 3. Historical perspectives of drug shortages per year

	2006-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Total number of manufacturers involved with at least one break	70	41	58	38	47	51
Proportion associated with generic drug manufacturers	NA	ND	67%	85%	87%	86%
Proportion of injectable drugs	NA	ND	33%	36%	42%	36%
Length of drug shortages (days) (mean±standard deviation)	108±130	103±85	141±116	168±153	176±137	197±166

Legend: NA: Not available

## CONCLUSION

- Drug shortages remain a daily issue for pharmacists and other stakeholders.
- The periodical monitoring of the current portrait of drug shortages should contribute to the debate and the identification of viable solutions.