

# Drug shortages and antimicrobial agents: a cross sectional France-Canada comparison and perspective

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## INTRODUCTION

- Increase of drug shortages in Canada in the last decade with an average of 500 products on shortage per year, for an average duration of 108 days
- No similar data available for France
- Antimicrobial agents shortages: complexity of treating infections with underlying reported hospital-acquired infections and increasing drug resistances to these agents

## OBJECTIVE

- To compare the current situation of drug shortages for antimicrobial agents in France and Canada

## METHOD

- Cross-sectional study
- Data extracted from 3 online databases: AFSSAPS and OCP Office Commercial Pharmaceutique in France and Vendredipm in Canada
- Measure of total number of antimicrobial agents (defined as a product for a specific common name, strength and format) on shortage on March 8<sup>th</sup>, 2012

## RESULTS

Table 1. Comparison of total number of antimicrobial agents on shortage in Canada and France on March 8<sup>th</sup>, 2012

CANADA				FRANCE			
Manufacturers	Drugs	Dosages	Sizes	Manufacturers	Drugs	Dosages	Sizes
Teva	Amoxicilline /ac.clavulanique	25 mg/ml, 50 mg/ml 875 /125 mg	Suspension (100 ml, 250 ml) Tablets	Sanofi Aventis	Colimycin	1 500 000 UI	Tablets
Pharmascience		900 mg, 600 mg, 300 mg	Powder for suspension (22.5 ml, 15 ml, 15 ml)	Alkopharm	Ethambutol	400 mg	Tablets
		40 mg/ml		Sanofi-Aventis	Fosfomycin	4 g	Powder for injectable preparation
Teva	Azithromycin	20 mg/ml	Injectable solutions (15 ml)	MSD (merck sharp & dohme ag)	Gentallin	40 mg/ml, 160 mg/ml	Injectable solution (2 ml)
		250 mg	Tablets	MSD (merck sharp & dohme ag)	Netromicin	25 mg/ml, 100 mg/ml	Injectable solutions
Sandoz		40 mg/ml	Injectable solution (15 ml)	Laboratoires Lafran	Quinin	224,75 mg & 449,50 mg	Tablets
		20 mg/ml		Panpharma	Streptomycin	1 g	Powder for injectable preparation
Sandoz	Cefprozil	50 mg/ml	Injectable solutions (75 ml, 100 ml)				
McKesson Logistics solutions	Chloromycetin	1 g	Powder for injectable preparation				
Sandoz	Clindamycin	150 mg	Powder for injectable preparation (120 ml)				
		125 mg/ml	Injectable solution (5 ml)				
Teva	Coxacillin	250 mg 500 mg	Tablets				
Teva		400 mg/ml, 250 mg/ml	Injectable solutions (5 ml)				
AA Pharma	Erythromycin	250 mg, 250 mg, 500 mg, 333 mg	Capsules, Tablets				
Teva		2 mg/ml	Solution injectable (100 ml)				
Pharmascience	Fluconazole	150 mg	Tablets				
Hospira healthcare	Gentamicin	0.8 mg/ml 10 mg/ml	Injectable solution (100 ml) Injectable solution (2 ml)				
McKesson Logistics solutions	Humatin	250 mg	Capsules				
Apotex	Levofloxacin	250 mg	Tablets				
Janssen		5 mg/ml	Bags (50 ml, 100 ml, 150 ml)				
Pfizer	Linezolid	600 mg	Tablets				
McKesson Logistics solutions	Mandelamin	500 mg	Tablets				
Abbot laboratories	Norvir	80 mg/ml	Oral solution (240 ml)				
Teva	Nystatin	500 000 UI	Tablets				
Apotex	Penicillin V Potassium	60 mg/ml, 25 mg/ml	Injectable solutions				
Teva	G sodique	5 MUI					
Apotex	Quinin	300 mg	Capsules				
Valeant	Ribavirin	6 g	Powder for injectable preparation				
		400/80 mg 800/160 mg					
Teva	Sulfamethoxazole /trimethoprim	400/80 mg	Tablets				
		400/80 mg					
Sandoz	Tobramycin	40 mg/ml 10 mg/ml	Solution injectable (30 ml) Solution injectable (2 ml)				

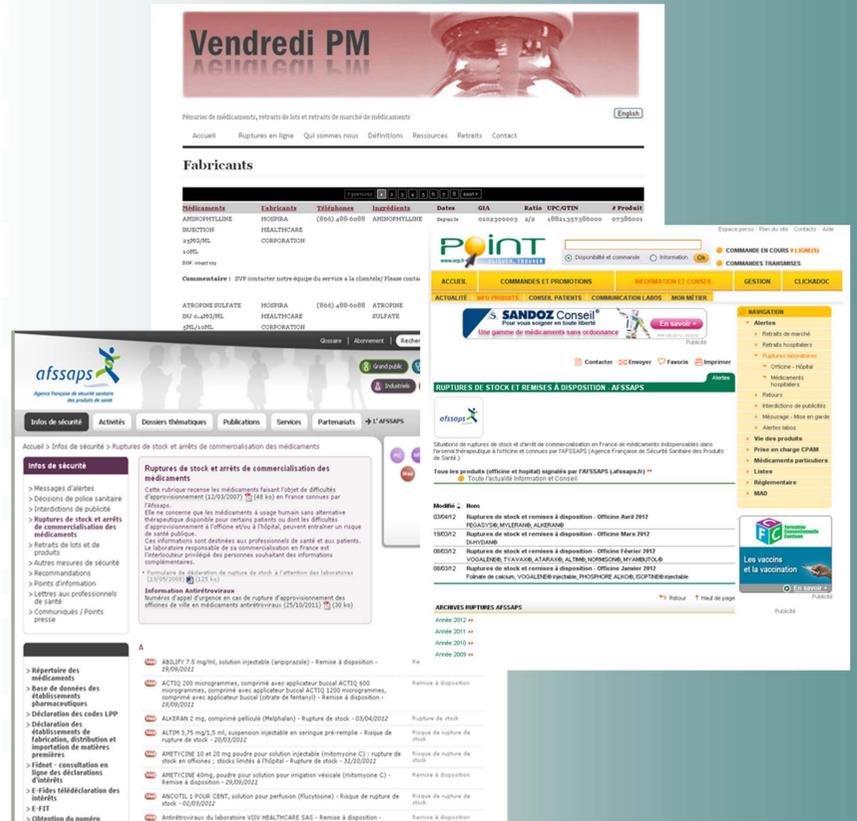


Figure 1. Online databases

- 11 antimicrobial products and 7 common denominations reported to be on shortage in France involving 5 manufacturers
- 47 antimicrobial products and 20 common denominations reported to be on shortage in Canada involving 11 manufacturers
- There are numerous causes for drug shortages
- The significant discrepancy in the number of drug shortages between France and Canada is not explained by this cross-sectional study

## DISCUSSION

- We hypothesize that legally enforced mandatory reporting of potential or planned drug shortages in France might contribute to a lower number of drug shortages; however numerous factors should be explored (e.g. national and hospital contractual practices, number of different manufacturers per common denomination, etc.)

## CONCLUSION

- Significantly larger number of antimicrobial agents in drug shortages in Canada than in France in 2012
- A better understanding of the current situation of drug shortages in different countries is relevant to the actual Canadian crisis
- Further studies are required to explore the reasons for such discrepancy