



# Canadian Drug Shortages Survey

## FINAL REPORT



CANADIAN  
PHARMACISTS  
ASSOCIATION

ASSOCIATION DES  
PHARMACIENS  
DU CANADA

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# Introduction

Throughout the past several months, the Canadian Pharmacists Association (CPhA) has received an increasing number of reports regarding drug shortages across Canada, affecting pharmacists in all areas of the country. However, in the absence of any reliable national-level data or reporting, there was no clear understanding of the scope or extent of drug shortages, nor the specific impact of shortages on pharmacists and their patients.

In September 2010, CPhA decided to conduct an online survey of its membership in order to obtain a clearer understanding of the extent of drug shortages across Canada. Questions were developed, based partially on a similar survey that CPhA conducted in 2004, and based on additional questions developed by CPhA staff. L'Association Québécoise des pharmaciens propriétaires and the Association des pharmaciens des établissements de santé du Québec agreed to forward a copy of the survey to their members. A request for practicing pharmacists to participate in the survey was emailed to all CPhA members on October 1, and responses were collected over a 2 week period, ending on October 15.

In total, 427 pharmacists submitted responses to the survey. Given the participation of the two Quebec associations, the number of Quebec respondents – 140, or 33% of total respondents - was higher than their national share of population. In addition, Quebec hospital pharmacists accounted for a high proportion of Quebec respondents – accounting for 86% of responses from that province. The following results include national level data, as well as regional breakdowns for Ontario, Quebec, and the rest of Canada.

Two additional sets of data were extrapolated – pharmacists working in independent pharmacies, and those working in banner and chain pharmacies. There were no significant differences in responses between the two subsets. A summary of these responses is contained in Appendix A.



# Respondent Characteristics

A breakdown of the provincial response rate can be found in Figure 1.

**Figure 1: Where is your pharmacy located?**

Province	% by Province (n=427)
Quebec	32.9
Ontario	21.4
Alberta	11.7
Manitoba	8.2
British Columbia	7.5
Nova Scotia	7.3
Saskatchewan	5.6
New Brunswick	1.9
Newfoundland	1.2
Prince Edward Island	1.2
Territories	1.2

CPHA asked about the pharmacy setting of the respondent. Pharmacists working in independent pharmacies and hospitals provided the greatest number of responses. The breakdown is found in Figure 2.

**Figure 2: This pharmacy is (% by response):**

Pharmacy Setting	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada <sup>1</sup> (n=196)
Independent	24.9	36.2	0.8	36.2
Hospital (non-teaching)	15.2	3.3	41.4	2.0
Hospital (teaching)	14.8	3.3	45	0.5
Banner	14.3	17.6	6.4	17.9
Chain	13.4	23.1	1.4	18.4
Franchise	9.9	8.8	2.1	14.8
Grocery	4.2	3.3	--	7.7
Mass merchandiser	1.2	2.2	--	1.5
Other (specify)	2.1	2.2	0.8	1.0
- CHSLD				
- Primary care/clinic				
- Community hospital				
- Military				
- Unknown				

<sup>1</sup> Refers to all provinces and territories other than Ontario and Quebec.

CPhA asked about the breakdown of respondent by community size. As seen in Figure 3, participation was almost equally split nationally between large, medium, and smaller municipalities.

**Figure 3: In which type of community do you work (% by response)?**

<b>Population Size</b>	<b>National (n=427)</b>	<b>Ontario (n=91)</b>	<b>Quebec (n=140)</b>	<b>Rest of Canada (n=196)</b>
City with one million or more people	21.8	21.9	34.3	10.7
City with more than 100 000 but fewer than 1 million people	26.5	26.4	30.8	25.5
City or town with more than 10 000 but fewer than 100 000 people	25.8	27.5	27.1	23.5
Town or rural area with fewer than 10 000 people	25.6	24.2	7.1	39.8
Unknown	0.2	-	0.7	0.5



## Prevalence of Drug Shortages

The survey asked respondents about their recent experiences with drug supply. The first question asked respondents about whether they had trouble locating medications to fill a prescription during their last shift. The next question asked how many prescriptions they had trouble filling. [Note that Quebec data is derived largely from hospital data].

**Figure 4: During your last shift, did you have trouble locating medications to fill a prescription? (% by response)**

Last shift	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Yes	81.2	97.8	57.2	89.3
No	18.3	2.2	40.7	10.7
Unknown	0.5	--	2.1	--

**Figure 5: If yes, how many prescriptions? (number of prescriptions)**

Last shift	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Median response	3	3	2	3

The survey also asked whether pharmacists had trouble locating medications to fill a prescription in the last week. Nationally, 93.7% of respondents indicated yes, while only 5.6% said no. Some respondents indicated having trouble locating products for well over 200 prescriptions.

**Figure 6: In the last week, did you have trouble locating medications to fill a prescription? (% by response)**

Last week	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Yes	93.7	97.8	86.4	96.4
No	5.6	2.2	11.5	3.1
Unknown	0.7	--	2.1	0.5

**Figure 7: If yes, how many prescriptions? (number of prescriptions)**

Last week	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Median response	10	14	5	12

Respondents were next asked how much time on average during a recent shift they spent dealing with drug shortages.

**Figure 8: During one shift, how much time (in minutes) do you spend dealing with drug shortages?**

Minutes spent	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Median response	30	30	30	30

The survey was interested in notification procedures and occurrences. The survey asked how frequently respondents received advance notice of shortages.

**Figure 9: Do you receive advance notices of shortages (% of responses):**

Notice	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Never	29.8	46.1	11.4	34.7
Infrequently	33.1	36.3	17.9	41.3
Sometimes	23	14.3	32.1	20.5
Frequently	10.6	2.2	30.8	1.5
Always	2.6	--	6.4	1
Unknown	0.9	1.1	1.4	1

When asked who informed the pharmacist of shortages, the most frequently provided response was the wholesaler. Figure 10 summarizes the list of responses.

**Figure 10: Who notifies you of drug shortages (note: respondents were allowed to indicate all that applied)**

Source of Notification	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Wholesaler	28.9	22.8	37.4	21.7
I track down the information myself	16.6	21.5	--	21.7
Manufacturer	15.9	6	28	10
No one notifies me	14.2	16.1	7	15.2
Other pharmacies	11.5	9.4	8.9	12.3
Head office	7.4	12.8	0.9	7.6
Distribution center	4.6	10.1	15	11.2
Unknown	0.9	1.3	2.8	0.3

When asked whether in their opinion drug shortages were better or worse over the past 12 months, a vast majority of respondents in all areas of the country felt shortages were worse.

**Figure 11: In your experience, over the past 12 months, have drug shortages: (% by response)**

<b>Drug shortages over the past year</b>	<b>National (n=427)</b>	<b>Ontario (n=91)</b>	<b>Quebec (n=140)</b>	<b>Rest of Canada (n=196)</b>
Greatly increased	89	95.6	87.2	87.2
Somewhat increased	8.2	1.1	10.7	9.8
Not changed	1.2	1.1	--	2
Decreased	--	--	--	--
Unknown	1.6	2.2	2.1	1





## Impact on Patients

The survey asked whether respondents felt that patients' health outcomes had been adversely affected as a result of shortages. The national and regional responses are as follows:

**Figure 12: Do you think your patients' health outcomes have been adversely affected? (% by response)**

Health outcomes	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Yes	69.8	84.6	50	87.2
No	28.6	12.1	47.9	9.8
Unknown	1.6	3.3	2.1	1

Of those that indicated that health outcomes had suffered, the most frequently reported ways in which health outcomes had suffered included the following:

- Patients are stressed, confused, angry, frustrated, and experience a loss of trust in medication and the pharmacist
- Disruption in the continuity of care
- The alternative drugs have been less effective, especially as 3<sup>rd</sup> or 4<sup>th</sup> line alternatives are used
- Antibiotics have been in short supply
- There has been no alternative medications available
- Alternatives cause side effects, allergies, and/or adverse events
- Patients have stopped taking the medications

The survey next asked whether patients have been inconvenienced in any way.

**Figure 13: Have your patients been inconvenienced in any way as a result of shortages? (% by response)**

Inconvenienced?	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Yes	91.3	96.7	91.3	96.9
No	6.8	1.1	6.8	2.6
Unknown	1.9	2.2	1.9	0.5

Reasons for inconvenience included:

- More waiting, calling, and physician visits required
- More travelling to the pharmacy required
- Frequent changes to medication, causing confusion
- Added stress and loss of trust
- Increased cost to the patient, especially when alternatives are not covered by drug plans
- Patients who have switched pharmacies

Given the extent of shortages, respondents were asked whether the drug shortage situation provided an opportunity to do a medication review to determine appropriateness of drug therapy. Of those who indicated they did not do a medication review, the most frequent reason cited for not conducting a review was they had no time, due in large measure to the time required to address shortages.

**Figure 14: Has a drug shortage provided you an opportunity to do a medication review? (% by response)**

Conducted medication review?	National (n=427)	Ontario (n=91)	Quebec (n=140)	Rest of Canada (n=196)
Yes	21.8	18.7	23.6	21.4
No	73.7	78	67.9	75
Unknown	4.5	3.3	8.6	3.6

Respondents were asked to list the top 2 most difficult drugs to obtain over the past several months. In total, 81 drugs were identified. Figure 15 lists the top 10 most reported drugs that were in short supply.

## TOP 10 DRUG SHORTAGE LISTS: NATIONAL & REGIONAL

**Figure 15: Top 10 Drugs in Short Supply Over the Past Several Months – NATIONAL AND REGIONAL**

<b>Top 10 Drug Shortages 2010 - National: (n=825)</b>	<b>Top 10 Drug Shortages 2010 - Quebec: (n=290)</b>
1. Amitriptyline (n=164)	1. Methotrimeprazine (n=26)
2. Cephalexin (n=109)	2. Clonidine (n=26)
3. Metoclopramide (n=54)	3. Hydralazine (n=18)
4. Clonidine (n=45)	4. Thiopental (n=17)
5. Methotrimeprazine (n=43)	5. Cytarabine (n=17)
6. Diltiazem (n=32)	6. Prednisone (n=15)
7. Tetracycline (n=30)	7. Metoclopramide (n=13)
8. Amoxicillin + Clavulanate (n=28)	8. Heparin (n=13)
9. Hydralazine (n=26)	9. Cephalexin (n=12)
10. Metronidazole (n=19)	10. Amitriptyline (n=12)

  

<b>Top 10 Drug Shortages 2010 - Ontario: (n=178)</b>	<b>Top 10 Drug Shortages 2010 - Rest of Canada: (n=374)</b>
1. Amitriptyline (n=42)	1. Amitriptyline (n=108)
2. Cephalexin (n=32)	2. Cephalexin (n=65)
3. Diltiazem (n=15)	3. Metoclopramide (n=33)
4. Tetracycline (n=15)	4. Amoxicillin + Clavulanate (n=19)
5. Methotrimeprazine (n=9)	5. Diltiazem (n=13)
6. Metoclopramide (n=8)	6. Triazolam (n=13)
7. Clonidine (n=8)	7. Clonidine (n=9)
8. Triazolam (n=6)	8. Methotrimeprazine (n=9)
9. Penicillin (n=6)	9. Tetracycline (n=9)
10. Carbamazepine (n=6)	10. Penicillin (n=9)



## Causes

The question many pharmacists, physicians, and Canadians are asking is what is causing the current round of drug shortages? In meetings held throughout the fall of 2010, CPhA posed this question to manufacturers, distributors, and government. No one single response was provided; rather, due to the nature of the drug supply chain and pharmaceutical regulatory regime, a number of causes for the current drug shortage situation were identified. Supply is primarily a market-based function that relies on a fragile supply chain of raw material suppliers, manufacturers, wholesalers, distributors, pharmacy corporations, other pharmacies, and individual pharmacists. If there are disruptions in any part of that supply chain, shortages will occur.

What is missing in the drug supply chain is any organization or party that holds accountability for the supply chain from a system-wide perspective. Neither government nor any third party has an oversight function for the drug distribution system, and therefore drug supply is dictated in large measure by the market. Due to the reluctance of individual manufacturers to share information on supply and manufacturing problems, it is difficult to predict when shortages will occur, for how long, and affecting which drugs. Canada does not possess any system or mechanism that provides information about which drugs are facing supply constraints. The Center for Drug Evaluation and Research's Drug Shortage Program within the Food and Drug Administration in the United States does have such a web-based information system in place which could potentially serve as a model for Canada.

It should also be mentioned that CPhA is aware that drug shortages are not a Canadian phenomenon – they are occurring in countries around the world, and particularly in the United States, at apparently similar levels of frequency and duration. This would suggest that globalization of the drug market may be a contributing factor. A more comprehensive dialogue on the global supply chain is beyond the scope of this report, but would provide a useful perspective.

Among the more commonly suggested reasons for the current round of drug shortages includes:

- Shortages of raw materials used in drug manufacturing
- More stringent regulatory requirements that delay production
- Problems with manufacturing processes in specific plants that have delayed delivery of supply
- The introduction of new pricing regimes in provinces that act as a disincentive to production of particular drugs
- An increase in product recalls in Canada or elsewhere, possibly as a result of more stringent enforcement efforts or new regulatory requirements
- Monopolization of production of a particular drug by 1-2 manufacturers; when production problems occur, shortages are the immediate result
- Shortage of proper container materials

Given the absence of reliable data from all the parties involved in the drug supply chain, it is difficult to pinpoint more exact causes of the current round of shortages.



## Discussion

Although this survey was a poll and not based on a randomly selected sample, it provides a clear indication of the extent and nature of the challenges that Canadian pharmacists are experiencing with drug shortages. Patients are the ones experiencing the greatest suffering as a result of drug shortages, principally from the standpoint of health outcomes, but also from the perspective of convenience. As the poll revealed, patients having to shift to third or fourth line alternatives are not receiving the same level of treatment as they require, or in the worst cases, are not receiving necessary medications at all. Patients are losing faith and trust in the health care system, and are having to spend inordinate amounts of time tracking down alternative pharmacies in the hope of receiving their necessary drugs. They may also be financially impacted, if alternative medications are not covered by public or private drug plans, which may require out of pocket payments. The survey also revealed that in some cases, hospitalization of the patient was required.

Shortages are also an extremely serious concern for pharmacists directly, and are causing widespread frustration. Shortages are proving to be a time consuming problem, adding on average a half an hour worth of effort to every pharmacist's shift – however, respondents reported having to spend upwards of 3 hours every shift addressing shortages. This burden is made worse by the fact that pharmacists do not have the full regulatory scope of abilities at their disposal to properly assist patients in dealing with shortages, even though they have the skills. The other source of frustration appears to be a lack of communication by responsible parties to pharmacists indicating issues regarding drug supply.

What is also clear is that the current shortages situation is more widespread and prolonged than in 2004, the last time that CPhA conducted a similar survey. For instance, in 2004, 63% of respondents indicated they had experienced a drug shortage during one shift, compared to 81% in 2010. In 2004, 80% of pharmacists stated they had experienced a shortage in the past week, compared to 94% in 2010. In 2004, pharmacists reported having to spend approximately 17 minutes per shift dealing with shortages, compared to 30 minutes, or almost twice as much time, in 2010.

Although regional variations are minor, Ontario appears to be suffering from shortages slightly more than other provinces. Ontario pharmacists reported higher rates of having trouble locating a medication than in other provinces, and with a greater number of prescriptions. It is also worth noting that drug shortages are not unique to one particular category of pharmacy over another. As evidenced in the Appendix to this report, where responses were collated for independent pharmacies and chain and banner pharmacies, there were no significant differences in responses between the two. This suggests that the causes of supply problems are not germane to one particular category of pharmacy, but instead, are more system wide. It also contrasts with findings in 2004, when chain and banner pharmacies experienced more shortages than independent pharmacies.

In order to assist pharmacists in addressing the short term challenges caused by drug shortages, in the summer of 2010 CPhA updated its key document, “Drug Shortages: A Guide for Assessment and Patient Management”. This Guide offers practical information, advice, and tips to pharmacists on how to address patient needs and care when particular drugs are in short supply, and how to ensure proper communication between the various parties involved.



## Recommendations

There is no one “silver bullet” solution to alleviate drug shortages. Addressing and responding to shortages, both in the short and long term, will take a concerted joint effort on the part of governments, regulatory agencies, manufacturers, distributors, pharmacy corporations, and pharmacists. These partners will need to work more closely together in order to ensure that drug supply is properly maintained, information is shared properly, and that most importantly, patients receive the care they deserve.

Recommendations on how to address drug shortages:

1. **Put the patient first.** In developing business plans and strategies, drug manufacturers and all stakeholders in the supply chain need to put the needs of patients first and foremost. All stakeholders need to maintain a relationship of trust with their ultimate consumer, the patients – this implies ensuring adequate, long term supply of necessary drugs, regardless of profit motivation.
2. **Pharmacists need to be provided with expanded scopes of responsibility.** In order for a pharmacist to effectively manage care for a patient facing a shortage of a prescribed drug, pharmacists must be provided with additional legislative and/or regulatory authority in order to implement an alternative care plan. For instance, pharmacists should be able to adapt prescriptions for both new prescriptions and refills. Pharmacists should also be given the ability to substitute equivalent drugs in collaboration with physicians.

Furthermore, governments must ensure that expanded responsibilities are properly compensated.

3. **Ensure patients receive appropriate care once a shortage is resolved.** When supply returns to normal, pharmacists must make sure patients are appropriately managed to reduce any risks or safety concerns that might result from substitution of therapy, such as duplication. Extending scope of practice for pharmacists, and providing proper compensation for those services, will

play a key role in ensuring that pharmacists can resume proper therapies once shortages are resolved.

4. **Manufacturers need to better collaborate to ensure adequate supply.** If the needs of patients are to be the first priority, drug manufacturers and other stakeholders need to collaborate more effectively to ensure that if a particular drug is in short supply, other manufacturers can be made aware in order to ensure that adequate supplies of alternatives are available. This will involve a greater level of collaboration than currently exists – however, greater collaboration to ensure supplies of equivalent or therapeutically similar drug products is essential to better patient care.
5. **Supply contracts need to be enforced.** Various provinces, hospitals, and other providers may already have stipulations in their contracts with drug manufacturers regarding supply conditions. However, CPhA has been told that not all agencies enforce supply requirements of their contracts. Greater enforcement of contract conditions regarding supply needs to be made a priority. In addition, where contracts do not explicitly refer to supply, organizations should insert guaranteed supply clauses in their contracts, and ensure that those clauses are properly enforced.
6. **Greater communication between manufacturers, distributors, wholesalers, and pharmacists is required.** It is extremely difficult for pharmacists to assist patients in dealing with a shortage of a particular drug when they do not know the extent of a shortage problem. As the survey revealed, approximately 63% of respondents stated that they never or infrequently received advance notice of a shortage. This is unacceptable. Manufacturers, distributors, and wholesalers need to do a better job at communicating to pharmacists when a drug is in short supply, that alternative brands are still available, and when adequate supplies will become available. Knowing the reason why the drug is unavailable would also aid pharmacists while speaking to their patients about their drug therapy. This communication needs to be provided in a timely and easily accessible format.

When there is communication of a shortage, pharmacies and other providers must avoid the temptation to stockpile. Stockpiling compounds system-wide shortages – other solutions, including alternative therapies and rationing of existing supply, must be examined.

7. **Government policy needs to promote adequate supply, not hinder it.** Federal and provincial governments have a range of policy tools at their disposal that can either serve to support maintenance of timely drug supply, or serve as a production disincentive. For instance, pricing policy needs to promote enhanced production, not stifle production. Drugs that are delisted off federal and/or provincial formularies may result in shortages of that drug. Backlogs in approving suppliers or distributors will result in less capacity in the supply chain. In short, governments need to put in place policies that will encourage drug supply in a timely manner, and not inappropriately hinder the production or distribution of drugs.

8. **Limit the practice of arbitrage.** Several stakeholders spoke of arbitrage, or the practice of purchasing drugs in one jurisdiction and selling to another, as a concern with respect to supply. Market participants need to ensure adequate supply to customers in their own jurisdiction, even if prices are higher in another jurisdiction.
  
9. **For pharmacists, use tools such as the CPhA Drug Shortages Guide to help cope with shortages until supply is brought to necessary levels.** Despite a more concerted effort to address the root causes of shortages, pharmacists must equip themselves with the information and skills they need to address them. The CPhA Drug Shortages Guide is one tool that can help pharmacists address drug shortages when they occur. As already stated, governments must also enhance scope of practice for pharmacists to ensure that they can respond effectively to shortages, both independently and in collaboration with physicians.



## Conclusion

The findings of this poll confirm what many pharmacists in Canada have experienced first hand for several months – drug shortages are real, and are having negative impacts on the health and well being of patients. In order for shortages to be properly addressed in the short and long term, all the key players in the drug supply and distribution chain – manufacturers, wholesalers, distributors, pharmacy corporations, governments, and pharmacists – will need to work much more closely together to better plan and inform each other to ensure that Canadian drug supply needs are met. Patients deserve nothing less.



# Appendix 1: Independent, Banner & Chain Pharmacies

## 1. Number of responses:

Type of Pharmacy Setting	# Responses (n=224)
Independent pharmacies	106
Banner and chain pharmacies	118

## 2. During your LAST SHIFT, did you have trouble locating medications to fill a prescription for a patient? (% by response)

Last Shift	Independent (n=106)	Banner and Chains (n=118)
Yes	88.7	94.1
No	11.3	5.9

### 2a) If yes, how many prescriptions did you have trouble with? (number of prescriptions)

Last Shift	Independent (n=106)	Banner and Chains (n=118)
Median response	3	3

## 3. In the LAST WEEK, did you have trouble locating medications to fill a prescription for a patient? (% by response)

Last Week	Independent (n=106)	Banner and Chains (n=118)
Yes	96.2	97.5
No	3.8	2.5

### 3a) If yes, how many prescriptions did you have trouble with? (number of prescriptions)

Last Week	Independent (n=106)	Banner and Chains (n=118)
Median response	12	12



**4. During one shift, on average, how much time (in minutes) do you spend dealing with drug shortages?**

Minutes Spent	Independent (n=106)	Banner and Chains (n=118)
Median response	30	30

**5. Do you receive advance notice of shortages? (% of response)**

Notice	Independent (n=106)	Banner and Chains (n=118)
Never	43.4	33.9
Infrequently	42.4	40.7
Sometimes	12.3	22.9
Frequently	0	1.7
Always	0	0
Unknown	1.9	0.8

**5a) Who notifies you of drug shortages? (check all that apply) (% of response)**

Source of Notification	Independent (n=106)	Banner and Chains (n=118)
I track the information down myself	27.6	19.2
Wholesaler	24.7	21.7
No one notifies me	19.5	13.8
Manufacturer	10.9	8.9
Other pharmacies	9.8	10.3
Distribution centre	5.3	12.3
Head office	1.1	13.8
Unknown	1.1	0

**6. In your experiences, over the past 12 months, have drug shortages: (% of response)**

Drug shortages over the past year	Independent (n=106)	Banner and Chains (n=118)
Greatly increased	88.7	91.5
Somewhat increased	7.6	6.8
Not changed	2.8	0
Decreased	0	0
Unknown	0.9	0.7

**7. Do you think your patients' health outcomes have been adversely affected as a result of drug shortages? (% of response)**

Health Outcomes	Independent (n=106)	Banner and Chains (n=118)
Yes	81.2	82.2
No	17.9	17
Unknown	0.9	0.8

**8. Have your patients been inconvenienced in any way as a result of drug shortages? (% of response)**

Inconvenienced?	Independent (n=106)	Banner and Chains (n=118)
Yes	94.3	99.1
No	3.8	0.9
Unknown	1.9	0

**9. Has a drug shortage situation provided you an opportunity to do a medication review to determine appropriateness of drug therapy? (% of response)**

Conducted medication review?	Independent (n=106)	Banner and Chains (n=118)
Yes	22.6	16.9
No	71.7	81.4
Unknown	5.7	1.7

**10. Top 10 Drug Shortages - Breakdown**

<b>Top 10 Drug Shortages 2010 – Independents (n=206)</b>		<b>Top 10 Drug Shortages 2010 - Chains/Banners: (n=242)</b>	
1.	Amitriptyline (n=54)	1.	Amitriptyline (n=70)
2.	Cephalexin (n=32)	2.	Cephalexin (n=41)
3.	Metoclopramide (n=14)	3.	Diltiazem (n=16)
4.	Tetracycline (n=11)	4.	Metoclopramide (n=14)
5.	Amoxicillin + Clavulanate (n=9)	5.	Clonidine (n=14)
6.	Clonidine (n=8)	6.	Triazolam (n=11)
7.	Penicillin (n=8)	7.	Tetracycline (n=9)
8.	Methotrimeprazine (n=8)	8.	Amoxicillin + Clavulanate (n=7)
9.	Diltiazem (n=8)	9.	Methotrimeprazine (n=6)
10.	Triazolam (n=7)	10.	Penicillin (n=6)

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