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Regulations Amending the Food and Drug Regulations (Shortages and Discontinuation of Sale of Drugs)

Statutory authority

Food and Drugs Act

Sponsoring department

Department of Health

REGULATORY IMPACT ANALYSIS STATEMENT

(*This statement is not part of the Regulations.*)

Executive summary

Issues: Drug shortages and discontinuations are an immediate, pressing challenge to patient safety in Canada. Under the present voluntary reporting system, Canadians and those responsible for the provision of their health care are not being adequately informed of drug shortages and discontinuations, and thus are not able to make well-informed, timely mitigation decisions. The *Food and Drug Regulations* (the Regulations) currently have no provisions addressing drug shortages. They do contain a provision that requires companies with a market-approved drug, which has been assigned a drug identification number (DIN), to notify Health Canada within 30 days of discontinuation of the sale of that drug. However, that provision does not specify the information to be provided as part of a notification.

Description: In order to address these issues, the Government of Canada is proposing a mandatory drug shortage and discontinuation reporting system which would provide patients, practitioners, and other health care stakeholders with reliable and trustworthy information in a timely fashion, as well as a more accurate picture of which drugs are actively being sold on the Canadian market.

The proposed amendments would mandate reporting of drug shortages and discontinuations by authorization holders to a third-party Web site for certain categories of drugs that have the potential, in a shortage or discontinuation situation, to adversely affect the health of Canadians and the health system. These are drugs in the following categories: drugs included in Schedules I to V of the *Controlled Drugs and Substances Act*; drugs listed on the Prescription Drug List; biologic drugs listed on Schedule D to the Act; radiopharmaceutical drugs listed on Schedule C to the Act; and drugs that are permitted to be sold without a prescription, but administered only under the supervision of a practitioner. The proposed amendments would specify all mandatory information to be reported to the Web site, the timelines for providing it, a requirement that the information must be kept up to date, and a requirement that the resolution of a drug shortage also be reported.

The aforementioned provision that requires DIN holders to notify Health Canada within 30 days of the discontinuation of the sale of a drug would be amended to specify the information that must be reported to Health Canada as part of this notification.

A new provision would also be added to require authorization holders to notify Health Canada if a drug has not been sold on the Canadian market for a period of 12 consecutive months. This requirement would apply to all drugs. It would not affect the licence status of the drug, but would provide an accurate picture of drugs that are available on the Canadian market.

Cost-benefit statement: The proposed amendments would provide an estimated benefit to Canadians of $51.9 million net present value over 10 years. The quantified benefits relate to the saving of one life per annum, estimated at $7.4 million per year. The proposed amendments, through the use of the mandatory drug shortage and discontinuation reporting system, would mitigate dosage and prescribing errors associated with the use of substituted medications and therefore reduce fatal events due to adverse drug incidents. Costs to industry include the compliance costs associated with the implementation of a reporting system and the administrative costs related to the resources required to report a shortage or discontinuation; total costs to industry are anticipated to be approximately $833,840 annually. There would also be costs to Government of approximately $2.6 million per year for the management costs associated with the third-party Web site. Total costs are estimated to be $25.0 million net present value over 10 years; the net benefit of the proposed amendments is anticipated to be $27.0 million over 10 years.

"One-for-One" Rule and small business lens: The "One-for-One" Rule applies to the proposed amendments, and the anticipated administrative burden is estimated to be $369,126 (2012 dollars) annually. The small business lens would not apply to the proposed amendments as none of the businesses affected by these proposed amendments fall within the definition of "small business."

Domestic and international coordination and cooperation: Both the United States and the European Union have mandatory reporting of drug shortages and discontinuations.

Background

Drug shortages are an immediate, pressing challenge to patient safety in Canada. A shortage occurs when a drug manufacturer or importer cannot meet the demand for a drug in Canada. Shortage situations can also be created when a drug manufacturer decides to discontinue the supply of a drug for business reasons.

Reports of shortages have increased globally and domestically over the past decade. Some shortages can pose risks to the health and safety of Canadians as a result of compromised or delayed medical procedures, medication errors, and substitutions with alternative treatments that are not as safe or that are less effective. Several Canadian health care associations surveyed 1 070 of their members in October 2012 on the subject of their experiences with drug shortages. According to physicians and pharmacists surveyed, 94% reported that they had difficulty sourcing a medication within a week of the survey date, 64% of physicians reported that drug shortages had consequences for their patients, while 41% of pharmacists reported that their patients' health had been compromised. Physicians and pharmacists both reported that drug shortages compromised care in up to 20% of patients, with consequences such as delayed access to medication, use of less effective medication, or increased risk of adverse events. Twenty percent of physicians also reported that a patient in their care had clinically deteriorated as a result of a drug shortage. A survey of Canadian anesthesiologists in the same year reported that drug shortages may have contributed to the death of as many as four Canadians in 2012. Recent drug shortages include the 2014 shortage of the frequently prescribed antibiotic penicillin, used in the treatment of common infections. Often kept in hospital emergency rooms, the penicillin shortage caused delays in treatment, as physicians had to take time to research the side effects that may be caused by unfamiliar medications as well as any possible

interactions with medications the patient is currently receiving.

Discontinuations of drugs without proper notice can also pose a risk to the health and safety of Canadians. For example, the 2012 market removal of a medically necessary epilepsy drug posed health and safety concerns for Canadians who were well stabilized on this medication. Cases were reported of children who, despite trying several other medications, were still experiencing epileptic episodes up to 100 times a day, before finally becoming stable on this drug. After over 10 years of symptom stability, these children lost access to this drug without warning, and had to find suitable alternatives to prevent life-threatening seizures.

In order for patients and health care practitioners to properly mitigate these risks, the communication of timely, comprehensive, and reliable shortage information is essential. This information not only informs the coordination of mitigation measures by government regulators and the supply/distribution chain, but also enables health care practitioners and their patients to make timely, informed decisions about the medications they use.

Issues

Drug shortages adversely affect the health and safety of Canadians, and under the current voluntary reporting system, Canadians are not being adequately informed of drug shortages and discontinuations.

In 2011, the Minister of Health (the Minister) called on industry to voluntarily provide public notification of drug shortages. In response, the industry created a Web-based voluntary notification system (**www.drugshortages.ca**) in 2012 and continues to operate it. While the voluntary online drug shortage reporting system has been receiving shortage and discontinuation notifications since its inception, and some companies have publicly agreed to post shortage and discontinuation information to the Web site, not all companies have made this commitment. This has created an information imbalance between those who post and those who do not. Still, other drug companies, while posting, are not doing so in a timely fashion. The lack of timely, complete and accurate information poses potential health and safety risks for patients. It also creates additional labour for health care professionals who rely on it to properly manage their patients' health.

This conclusion was supported in consultations undertaken in 2014, when stakeholders noted that some of the information reported to the Web site is not timely, comprehensive or reliable. Stakeholders also indicated that incomplete drug shortage information creates the impression that if a product is not reported, it is available.

The Minister has publicly stated that, should voluntary reporting prove ineffective, alternative measures would be put in place. The first step to fulfilling this commitment was taken with the Minister's February 2015 announcement that regulations requiring public reporting of drug shortages and discontinuations would be advanced. The consequence of not advancing these proposed amendments would be the continuation of an ineffective reporting system that puts Canadian patient safety at risk.

In addition, drug manufacturers are not currently required to notify Health Canada (the Department) when a drug is not being sold onto the Canadian market, but a DIN is still active (in other words, when a drug has an authorization to be marketed in Canada, but is not being marketed). This information is necessary for patients and health care professionals to know in advance in order to select an appropriate course of treatment. Notification to Health Canada of any change in market availability of a drug would ensure that all information available to the public on the Department's Web site is kept updated in a timely and accurate fashion.

Objectives

The objective of the proposed amendments is to amend the *Food and Drug Regulations* (the Regulations) in order to introduce a mandatory reporting scheme for drug manufacturers to report shortages and discontinuations of drugs. Because drug shortages have a strong adverse effect on the health and safety of Canadians, an improvement to the present voluntary system is required. The proposed amendments would address the information gaps in the current voluntary drug shortage reporting system created by drug supply disruptions and ensure the accuracy, timeliness and reliability of publicly available drug shortage and discontinuation information for Canadian patients and health care practitioners.

Description

Consistent with the objectives, the proposed amendments would create an obligation for drug manufacturers to report drug shortages and drug discontinuations. The reporting system for drug shortages and discontinuations would be a stand-alone Web site, maintained by a third party, that would allow the user to have access to comprehensive, timely and reliable information. Drug discontinuations would also be reported directly to Health Canada, and the status of the drug would be indicated as discontinued on the Department's Web site.

The following new provisions would be introduced to Part C, Division 1, of the Regulations:

Notification of discontinuation to Health Canada

Section C.01.014.7: This section would replace the current section C.01.014.7 in the Regulations that sets out an obligation for the DIN holder to inform the Minister of the discontinuation of a drug within 30 days. The requirement to notify the Minister of a discontinuation would be amended to include the information to be submitted as part of the notification. DIN holders would submit the DIN, the day on which the sale of the drug was discontinued, and the latest expiration date and corresponding lot number(s) of the drug sold on the Canadian market. This section would allow Health Canada to ensure that drug information provided on the Department's Web site is accurate and up to date, while maintaining regulatory oversight of drugs available on the Canadian market until their expiry dates.

Definition of terms

Section C.01.014.8: This section would define the terms "authorization holder," "drug," and "shortage."

"Authorization holder" would be defined as the holder of a DIN as defined in Part C, Division 1, of the Regulations, or, in the case of a radiopharmaceutical, the holder of a notice of compliance as defined in Part C, Division 3, of the Regulations. This section would specify to whom the requirement to report would apply (i.e. DIN holders of drugs for which an authorization for sale was issued in Canada).

"Drug" would be defined as any drugs for human use included in Schedules I to V of the *Controlled Drugs and Substances Act*, drugs listed on the Prescription Drug List, biologic drugs listed on Schedule D to the Act, radiopharmaceutical drugs listed on Schedule C to the Act, and drugs that are permitted to be sold without a prescription, but are administered only under the supervision of a practitioner. The reporting requirement would thus focus on drugs for which a drug shortage or discontinuation would have the highest impact on patient health and safety.

"Shortage" would be defined as a situation in which an authorization holder is unable to meet demand for a drug in Canada.

Mandatory reporting of drug shortages and drug discontinuations

Sections C.01.014.9 and C.01.014.10: These sections would set obligations for authorization holders to post information on drug shortages, or situations that are likely to result in drug shortages, and drug discontinuations on a Web site operated by a third party under contract to Health Canada. Mandatory information would include the name and contact information of the authorization holder; the brand name and proper name of the drug, as well as its DIN (if assigned); the medicinal ingredients contained in the drug; the therapeutic classification of the drug; the strength, dosage form and package size; the drug's route of administration; in the case of a drug shortage, the actual or anticipated start date of the shortage, the anticipated end date of the shortage, and the actual or anticipated cause of the drug shortage; and in the case of drug discontinuation, the date on which the sale of the drug would be discontinued, and the reason for discontinuation. This information would be required to be posted six months prior to the anticipated drug shortage or discontinuation, or, if known less than six months in advance, within two days of the authorization holder becoming aware of the anticipated or actual drug shortage and within two days of the authorization holder making the decision to discontinue the drug. These sections would ensure that complete information about drug shortages and discontinuations is posted on the contracted Web site in a timely manner to allow

patients, health care practitioners, and other health care stakeholders to be properly informed in order to mitigate potential health risks or find suitable alternatives quickly. These sections would also require authorization holders to keep information up to date once it has been posted to the contracted Web site and to provide an update to signal the end of a shortage.

Link to Web site

Section C.01.014.11: This section would require Health Canada to maintain a link to the contracted Web site referred to in section C.01.014.9.

Notification of zero sales to Health Canada

Section C.01.014.12: This section would set out an obligation for an authorization holder to notify the Minister when a drug that has received market authorization has not been sold on the Canadian market for a period of 12 consecutive months, and to notify the Minister once the sale of the drug has recommenced. This new obligation would not affect the licensed status of a drug, but it would allow Health Canada to clearly and easily distinguish between products that have been granted a licence to be sold in Canada but are not actively being sold, and those that are presently available for sale on the Canadian market. Including this distinction on the Department's Web site will allow patients, health care practitioners, and other health care stakeholders to have a clear and current picture of which drugs are available on the Canadian market.

Coming into force

These proposed regulatory amendments would come into force six months after the day on which the Regulations are registered. This delay is necessary in order for Canada to meet its obligations under the World Trade Organization's Technical Barriers to Trade Agreement, and to allow drug manufacturers to bring their operations into compliance with the new requirements.

Regulatory and non-regulatory options considered

Voluntary reporting

Prior to 2012, no reporting system for drug shortages or discontinuations existed in Canada. With the establishment of www. drugshortages.ca in 2012, industry created a repository where manufacturers could post information about shortages they were experiencing and products that were being discontinued. Despite some improvements in industry notification, there have been persistent challenges with the voluntary approach. Stakeholders, including patient advocacy organizations, have indicated that many companies are not posting to www.drugshortages.ca, and when they do, the information provided is not timely, comprehensive, or reliable. Recent cases highlight the challenges of companies that, despite being aware of potential shortages, are not posting on www.drugshortages.ca. Health Canada has issued public letters to companies noting the lack of timely notification and reiterating Health Canada's expectation that they provide timely notification of all drug shortages.

The option of improving the current system was considered. However, during recent consultations, Canadians and drug supply system stakeholders, including provinces/territories (P/Ts), indicated that drug manufacturers and importers are failing to provide adequate drug shortage information under the current voluntary notification approach. This option would provide limited improvement to the current system, and does not address transparency and reliability issues that are a major stakeholder concern. Stakeholders indicated that mandatory reporting is necessary to reduce potential risks to the health and safety of Canadians and that failure to provide timely, comprehensive, and reliable information may result in unnecessary risks to patient safety. In order to mandate such a reporting system, regulatory amendments are required.

Mandatory reporting to Health Canada Web site

The option to have manufacturers and importers publicly report drug shortages and discontinuations on Health Canada's Web site was considered. Health Canada would be responsible for the administration of the reporting system, monitoring postings, compliance and enforcement, and shortage management efforts. This

option does not reflect the fact that the prevention and mitigation of drug shortages, as well as the management of discontinuations, are multi-stakeholder responsibilities requiring coordination between P/Ts, industry, and Health Canada. It is important to note that P/Ts, industry, and health care organizations have the most effective tools available to mitigate and prevent shortages and manage discontinuations. If accurate information on shortages and discontinuations is publicly and readily available, regulation of the mitigation measures themselves is not necessary.

Mandatory reporting to www.drugshortages.ca

The option of having mandatory reporting on the existing industry Web site was also considered. This option would mandate manufacturers and importers to publicly report drug shortages and discontinuations on the already established www.drugshortages.ca. Health Canada would monitor postings, and all drug supply chain stakeholders would be able to access the Web site in order to implement shortage management efforts. The costs of this option are slightly lower than the proposed approach, given that the drug industry owns and funds of the reporting system. However, there is lower departmental oversight with this option, as Web site management and maintenance would be solely controlled by industry. Concern with this option was expressed by health care stakeholders, including provincial governments, as they saw this option as being too close to a system that has been shown to be insufficient for stakeholders. Consultations indicated that health care stakeholders have significant concerns with industry ownership and administration of the reporting system.

Alignment with the U.S. approach

The U.S. Food and Drug Administration (U.S. FDA) reporting system differs from the proposed amendments in two aspects: the types of drugs to be reported and the timing of postings to the shortage Web site. The U.S. system requires notification only of medically necessary drugs. Health Canada's proposed amendments encompass a broader list of drugs that include drugs which may adversely affect the health and safety of Canadian patients if unavailable, even if they haven't been designated as "medically necessary." Under the U.S. system, while manufacturers report anticipated shortages to the FDA six months in advance of the commencement of the shortage, the information is only posted to the Web site once a shortage occurs. As the P/Ts, industry, and health care organizations have the most effective tools to mitigate and prevent shortages and manage discontinuations, this option was rejected in favour of the proposed approach.

Proposed regulatory approach (recommended option)

The proposed amendments would make shortage and discontinuation information available as soon as it is known, so that mitigation and management measures can commence without delay. They would also implement mandatory drug shortage reporting to a Web site, a reporting method with which stakeholders are familiar. The Web site would be under contract to Health Canada to ensure that a high level of service to the public is maintained. This proposed approach is informed by two years of experience with the voluntary system, consultation feedback, the position of P/Ts and health care stakeholders, and aligns with international regulatory counterparts insofar as it requires mandatory shortage and discontinuation reporting.

Benefits and costs

The proposed amendments would require the mandatory reporting of drug shortages and discontinuations as a replacement to the existing voluntary reporting system, which does not have the full compliance of industry. The cost-benefit analysis focuses on the administrative requirements of industry and the costs to the Canadian government to ensure compliance with the new mandatory reporting initiative.

The design of the proposed amendments is intended to ensure the pharmaceutical industry reports shortages and discontinuations in a consistent and standardized manner. Similar initiatives have been undertaken in the U.S. and the European Union; the proposed amendments would bring Canada into alignment with international jurisdictions in mandating such reporting and in keeping the administrative burden as low as possible. As key elements of the proposed amendments are already in place under the current voluntary drug shortages

reporting system at www.drugshortages.ca, industry is already familiar with the majority of the proposed reporting requirements.

Costs to industry and Health Canada are anticipated to be approximately $25 million over 10 years. Total benefits associated with saving one life per year due to the implementation of a mandatory drug shortages and discontinuation notification system is estimated to be $52 million over 10 years. The total net present value (NPV) benefit of the proposed amendments would be approximately $27 million over 10 years, from 2015 to 2024. The complete cost-benefit analysis is available upon request.

Cost-benefit statement

Quantified impacts *(CAN$, 2015 price level / constant dollars)*				
	Base Year (Year 1)	**Final Year (Year 10)**	**Total (NPV)**	**Annualized Average**
Benefits				
Health care system — One life saved (7% discount rate)	$7,400,000	$7,400,000	$51,970,000	$5,197,000
Costs				
Industry				
• Compliance costs	$350,000	$350,000	$2,458,000	$245,800
• Administrative burden	$483,840	$483,840	$3,392,000	$339,200
Costs to Government — Management of third-party Web site	$3,100,000	$2,600,000	$19,100,000	$1,910,000
Total costs			$24,950,000	$2,495,000
Net benefits (NPV)			**$27,020,000**	**$2,020,000**

Qualitative impacts

— Reduction in time required of health professionals to manage a shortage.

— Hospitals would have time to make alternative arrangements (with the six-month mandatory notification); therefore, the potential incremental cost of a drug alternative could be significantly reduced or negligible.

— Reduction in patient confusion and adverse events with drug alternatives.

— Increased opportunities to locate drug alternatives and implement mitigation plans.

— Minimized disruptions in patient care.

— Savings to the health system due to fewer acute care incidents.

— Additional pressures on manufacturers to report and respond to drug shortages.

— Potential for wholesalers and distributors to hoard drug inventories once a shortage is posted.

— Improvement in drug shortage information available to Canadian patients and health professionals.

Costs

A voluntary drug shortage reporting framework already exists and is funded entirely by the Canadian drug industry. However, the cost estimate assumes that this is a new burden on industry, since the proposed amendments would now make reporting mandatory. It should be noted that field headings and information required to be reported under the proposed amendments are similar to items currently being reported in the voluntary system.

Industry

Industry costs include two components. The first component is related to industry reporting to the third-party Web site and Health Canada (in the instance of discontinuation); it was determined that the administrative cost associated with this activity would be approximately $112 per hour for two hours, or $224 total per shortage. The second component is the compliance cost related to the cost of companies having to update their reporting systems to the new requirements. While this second component has already been undertaken by manufacturers that report voluntarily, there would be a number of new manufacturers that would now have to report. It is worth noting that many manufacturers already have these reporting systems in place due to similar reporting obligations in other international jurisdictions.

Total compliance costs, based upon estimates from the U.S. Food and Drug Administration (U.S. FDA), are estimated to be $350,000 annually or $2.5 million in net present value over 10 years. These costs would primarily be for the updating of reporting systems to comply with the proposed amendments, as well as any certification (i.e. ISO 9001) that may be needed to meet safety standards.

The administrative burden was calculated to be the cost of reporting a shortage or discontinuation to the third-party Web site and Health Canada, based on the U.S. FDA estimate of $224 per shortage for all administrative requirements of reporting. During the stakeholder consultation process, it was estimated that there could be approximately 2 160 shortages and discontinuations reported annually in Canada, for a total annual cost of $483,840.

Government (third-party Web site)

Costs to Government include funds allocated to cover the cost of the contracted Web site and associated staffing requirements at Health Canada. The base year (2015–16) and second year (2016– 17) are anticipated to cost $3.1 million and $3.0 million, respectively, due to the anticipated start-up costs of setting up the Web site reporting platform. From the third year onwards, it is anticipated that costs to Government would be solely for the upkeep and running of the third-party Web site; these costs are anticipated to be approximately $2.6 million per year.

The total cost to Health Canada is anticipated to be $25 million in net present value over 10 years.

Benefits

Using adjusted input from the U.S. FDA, it was determined that a mandatory reporting system for drug shortages could prevent one death per year. This is a conservative average estimate, as the number and severity of drug shortages can change from year to year. The value of a life is estimated at $7.4 million, based on the inflation-adjusted value of $6.1 million used by the Treasury Board in 2004. It is anticipated that deaths due to drug shortages could be avoided if patients and health care providers are given advance notice of disruptions to the supply of essential medications. Advance notification would minimize the disruption of patient care and increase the ability of patients and health care providers to identify and familiarize themselves with possible alternative drug options, thereby reducing the incidence of medication errors and near-fatal events.

Qualitative benefits include the following.

Time savings for health care professionals

A survey of health care professionals found that pharmacy technicians and pharmacists spent up to eight and nine hours per week, respectively, managing drug shortages. The additional resources required to manage and plan for alternative drugs is particularly concerning given that the average hourly wage in 2012 was $40 for pharmacists and $27 for pharmacy technicians. Further, the time spent managing drug shortages detracts from other important and high-value activities such as patient care.

The implementation of regulatory amendments that stipulate when drug shortages and discontinuations are to be reported will allow health care professionals to better prepare for changes in drug supply and implement mitigation strategies sooner. Additional costs of $11,232 to $18,720 per pharmacy technician and pharmacist could be avoided annually with the implementation of the proposed amendments.

Fewer adverse drug reactions and medical dosing errors

Adverse drug reactions have been calculated to have a direct cost of over $3 billion annually, and this represents only an estimated 80% of the true cost to the economy. Conservative estimates link 3%–8% of all hospital admissions to adverse drug reactions.

Dosage errors from using new and unfamiliar medications frequently occur as a consequence of drug shortages, as physicians and pharmacists prescribe drugs that they are less likely to prescribe or dispense. Even when appropriate substitutions exist, dosage conversion factors may be unknown.

The proposed amendments would lead to a reduction in the number of adverse drug events, since health care professionals would be better prepared for drug shortages and discontinuations. Improved knowledge of pharmaceutical alternatives could mean that standardized protocols and appropriate dosage adjustments could be made without health care professionals being challenged by tight time constraints. If this knowledge about differences in efficacy, allergic

reactions, and side effects between drugs is taken into account at the time of prescription, there would also be reduced patient confusion as a result of changes in medication.

Improved continuity of care and better patient outcomes

In the U.S., 82% of surveyed hospitals have delayed patient treatment as a result of drug shortages, which ultimately decreases the quality of patient care and increases the risk of costlier procedures. An estimated 20% of physicians have reported that the health of a patient in their care had deteriorated due to drug shortages.

Better awareness of which drugs are unavailable would reduce the likelihood that those drugs would be prescribed or used unless sufficient supply were available. Drug alternatives could be procured in a timely manner, which would reduce the likelihood of patients seeing their health deteriorate.

Consistent reporting requirements for pharmaceutical manufacturers

Although a Web site with a voluntary reporting system was in place prior to the amendments being proposed, health care associations and patient advocacy groups have indicated that it is insufficient. Complaints have been made that many manufacturers are not posting to the Web site, and when they do, the post is late or lacking important information. The proposed amendments would require that all manufacturers standardize their reporting information when drug shortages or discontinuations occur.

The proposed amendments would therefore allow for reporting consistency within the pharmaceutical industry by implementing standardized and predictable rules, in turn allowing industry to better forecast all applicable drug shortage and discontinuation costs.

It is estimated that one life would be saved per year following the coming into force of the proposed amendments, at a value of $7.4 million per year. The net present benefit is anticipated to be $51.97 million over 10 years. Qualitative benefits are not included in this estimate but are anticipated to improve the quality and timeliness of patient care, reduce what additional resources are required to mitigate shortages for health care professionals, and allow for standardization and consistency of reporting rules for the whole pharmaceutical industry.

“One-for-One” Rule

The proposed amendments would create new provisions within existing sections of the Regulations. These new rules would create a new incremental administrative burden on the pharmaceutical industry in Canada which already bears the cost of the voluntary reporting system.

Consultations with the Canadian pharmaceutical industry indicated that an estimated 2 160 potential shortages and discontinuations are reported annually, based on current patterns within the voluntary reporting system and adjusted for companies that currently do not report.

The total estimated burden of reporting to the third-party Web site was calculated to be approximately $369,126 (2012 dollars) per year. This calculation includes the estimated $224 ($112 per hour for an estimated two hours) it would cost to report a drug shortage per drug indication, as well as costs associated with the updating of reporting processes within each company’s regulatory compliance structure. As a way to partially reduce the administrative burden on industry, a form with prepopulated fields and drop-down menus is being considered.

The cost estimates associated with the “One-for-One” Rule are reported in constant 2012 dollars.

The current initiative is an	*“IN” (“One-for-One” Rule)*
Total annualized average administrative costs (constant 2012 $)	$369,126
Annualized average administrative costs (constant 2012 $)	$4,557

Small business lens

The small business lens applies to any regulatory proposals that impact small business and that have a nationwide cost impact of over $1 million annually. The

Treasury Board Secretariat defines a small business as any business, including its affiliates, that has fewer than 100 employees or between $30,000 and $5 million in annual gross revenues.

In this case, only DIN and market authorization holders would be affected by the proposed amendments. Due to their revenue generation and capital-intense characteristics, few of these businesses, if any, would meet the small business definition. Many Canadian small and medium enterprises (SMEs) within the pharmaceutical industry are typically in the development phase of research and often lack the capital necessary to bring their research to market (i.e. costs for the regulatory expertise to bring a product through the extensive clinical trial process, obtain drug approvals and establish manufacturing infrastructure); therefore, they often partner with or sell their intellectual property to multinational enterprises (MNEs). These MNEs are the market authorization holders responsible for the manufacturing and distribution of the drug; it would therefore be the MNEs that would be responsible for the reporting of drug shortages and discontinuations.

Data compiled by Industry Canada did not detect any Canadian SME marketing their products; therefore, the small business lens would not apply.

Consultation

In May 2014, Health Canada launched an extensive three-month, extensive consultation on the voluntary notification system and whether a voluntary or mandatory notification system would be more appropriate and effective for Canadian patients and those who care for them. The majority of comments received showed that, with the exception of manufacturers, stakeholders felt that the current voluntary approach is not providing drug shortage notifications that are timely, comprehensive, or reliable. Comments also showed that among stakeholders, there is a general lack of trust in the industry-run system, and that mandatory reporting of shortages and discontinuations, supported by adequate compliance and enforcement measures, is needed. Stakeholders also called for increased mitigation and management efforts to address national shortages, including increased transparency regarding the status of multi-stakeholder mitigation efforts (e.g. assessing and validating shortage risks and severity, timely communication and coordination of information, identifying causes of shortages and alternate sources of supply, shortage monitoring and reassessment).

In March 2015, prior to prepublication, Health Canada met with key stakeholders to discuss the details of these proposed amendments. Consultation participants included human innovative and generic drug manufacturers; retail pharmacy associations and their regulatory authorities; federal, provincial and territorial payers; and health care providers and their associations.

Industry stakeholders expressed support for the implementation of a system similar to the U.S. FDA reporting system, but were concerned that the proposed list of drugs to be reported on would lead to over-reporting on the part of manufacturers. Conversely, health care stakeholders felt that the proposed list addressed all the products that would be of the highest concern to patients and health care practitioners. A detailed description of the different categories of drugs that fall under the proposed amendments would be provided in guidance documents. Both industry and health care stakeholders expressed concern with some of the proposed fields for reporting, such as impact of shortage and regional impact. As these aspects are typically beyond the control of authorization holders, and would be challenging to determine, they were subsequently removed from the proposed amendments. In general, both industry and health care stakeholders expressed support for the proposed amendments and requested continued updates and consultations during the process of the Web site development, to which Health Canada agreed.

Regulatory cooperation

In 2012, Health Canada and the Province of Alberta launched the Multi-Stakeholder Steering Committee on Drug Shortages (MSSC). The MSSC brings together stakeholders from industry, government, and health care associations to advance work on the prevention, notification, and mitigation of shortages. With respect to vaccines, the Vaccine Supply Working Group (VSWG) oversees supply coordination across Canada for publicly funded vaccines. The VSWG is supported administratively by the Public Health Agency of Canada and includes all provincial and territorial jurisdictions. The proposed amendments would ensure that the

MSSC, the VSWG, P/Ts, patients, health care practitioners, and all other drug supply stakeholders have advance notice of and access to publicly available information that can be used in the mitigation of shortages and management of discontinuations.

The proposed amendments would bring Canada into alignment with the U.S. FDA and the European Medicines Agency (EMA) in establishing a mandatory requirement to report drug shortages and discontinuations. As there is no international repository for drug shortage and discontinuation reporting, each jurisdiction has its own reporting system. The U.S. FDA and the EMA administer their own systems, while the proposed Canadian system would be administered by a third party contracted by Health Canada. This difference is due to the dedicated drug shortage offices in the U.S. and in Europe. In these jurisdictions, manufacturers notify the respective agencies when situations arise that may lead to a drug shortage arise. The agencies' dedicated offices work with the manufacturer to mitigate the severity of, and perhaps prevent, the shortage before it affects supply on the market. While the U.S. FDA and the EMA require reporting on medically necessary products and medicinal products, respectively, the proposed Canadian amendments would outline the specific types of products that would be subject to the Regulations.

Rationale

While the establishment of www.drugshortages.ca put in place a system for the voluntary reporting of drug shortages and discontinuations in Canada, comments received during consultations indicate that this system is not meeting the needs of patients, health care practitioners, and other drug supply stakeholders. Even though progress has been made, many concerns still exist regarding the quality and timeliness of information posted to the Web site. The false perception that all Canadian drug shortages and discontinuations are reported to www.drugshortages.ca creates confusion for those looking for accurate shortage and discontinuation information.

The proposed amendments to the Regulations are necessary to implement much needed improvements to the current voluntary reporting system for drug shortages and discontinuations. The information reported to the contracted Web site would be publicly available, so as to be readily available for patients, health care practitioners, and other stakeholders making decisions that may affect the health and safety of Canadians. Third-party administration of the new drug shortage reporting system reflects an understanding that addressing drug shortages and discontinuations is a multi-stakeholder responsibility, independent of any one party. Regulation is necessary to ensure that the proper level of authority is in place to mandate the reporting of this critical information.

The provisions concerning information reported to Health Canada would bring clarity to existing regulatory requirements for the notification of drug discontinuations to Health Canada. The information reported would be used to provide a more accurate picture of drugs presently on the Canadian market and, when necessary, enable Health Canada and other drug shortage mitigation partners to undertake additional mitigation measures, such as expediting drug reviews and sourcing alternative drug supplies. The information reported would help ensure that the drug information that Health Canada makes public in its Drug Product Database is accurate and up to date, so that Canadian patients, health care providers, and industry can have an accurate picture of which drugs are available on the Canadian market. This information would also help patients, health care practitioners, and stakeholders throughout the supply chain to identify potential alternative drugs available when shortages occur.

Implementation, enforcement and service standards

Implementation

In order to implement the reporting system for drug shortages and discontinuations, the following activities were undertaken:

- identifying and obtaining an independent, third-party organization to develop and administer the Web site;
- identifying resources within Health Canada for compliance and enforcement; and
- identifying resources to enable Health Canada to partake in mitigation

measures with industry, health care stakeholder, and other levels of government, as well as assess and prioritize appropriate mitigation efforts within Health Canada, when required.

Prior to publication of the regulatory amendments in the *Canada Gazette*, Part II, Health Canada would hold consultations and would prepare a guidance document that would describe to authorization holders the details and procedures for posting drug shortage and discontinuation information to the contracted Web site. This document would be readily available to regulated parties and would describe their obligations to report drug shortages and discontinuations. It would also include additional information to help regulated parties understand how to comply with the requirements.

Enforcement

Drug manufacturers and importers are responsible for ensuring that they comply with the applicable requirements of the *Food and Drugs Act* and its Regulations. The shortage and discontinuation reporting requirements would be similar in nature to the reporting presently required for adverse drug reactions in the Regulations. Compliance would be assessed and enforced in accordance with Health Canada's Compliance and Enforcement Policy (POL-0001), which outlines a graduated, risk-based approach. A number of regulatory measures are available to Health Canada, through the Inspectorate, to achieve compliance. These measures are generally exercised under the powers of the *Food and Drugs Act* and its associated regulations and other relevant legislation, including the *Criminal Code*. If a regulated party does not respond voluntarily to requests from the Inspectorate to comply with regulations, a range of measures can be considered, including public warnings or advisories, letters to trade and regulated parties, inspections, administrative seizures, injunctions, investigation and potentially a referral for prosecution. In the event of a successful prosecution, a drug manufacturer or importer found to have contravened a provision of the *Food and Drugs Act* or its Regulations is guilty of an offence and is liable to the applicable fines and/or penalties set out in the Act.

Performance measurement and evaluation

Health Canada is currently developing a Performance Measurement and Evaluation Plan (PMEP) to measure the performance and to conduct an evaluation of these proposed amendments to the Regulations. This plan specifies the methods selected for the ongoing monitoring of these proposed amendments, performance targets, indicators and data sources. These would be comprehensively tracked as part of the performance measurement strategy outlined in the PMEP. This PMEP would be available upon final publication in the *Canada Gazette*, Part II.

Contact

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PROPOSED REGULATORY TEXT

Notice is given that the Governor in Council, pursuant to subsection 30(1) **(see footnote a)** of the *Food and Drugs Act* **(see footnote b)**, proposes to make the annexed *Regulations Amending the Food and Drug Regulations (Shortages and Discontinuation of Sale of Drugs)*.

Interested persons may make representations concerning the proposed Regulations within 75 days after the date of publication of this notice. All such representations must cite the *Canada Gazette*, Part I, and the date of publication of this notice, and be addressed to Linda Rheaume, Office of Legislative and Regulatory Modernization, Policy, Planning and International Affairs Directorate,

Health Products and Food Branch, Department of Health, Address Locator: 3105A, Holland Cross, Tower B, 5th Floor, 1600 Scott Street, Ottawa, Ontario K1A 0K9 (fax: 613-941-7104; email: LRM_MLR_consultations@hc-sc.gc.ca).

Ottawa, June 11, 2015

JURICA ČAPKUN
Assistant Clerk of the Privy Council

REGULATIONS AMENDING THE FOOD AND DRUG REGULATIONS (SHORTAGES AND DISCONTINUATION OF SALE OF DRUGS)

AMENDMENTS

1. Section C.01.014.7 of the *Food and Drug Regulations* (see footnote 1) is replaced by the following:

C.01.014.7. The holder of a drug identification number that has been assigned under subsection C.01.014.2(1) for a drug shall, within 30 days after the day on which they discontinue sale of the drug in Canada, submit the following information to the Minister:

(*a*) the drug identification number assigned for the drug under that subsection;

(*b*) the date on which the holder discontinued sale of the drug; and

(*c*) the latest expiration date of the drug that the holder sold and the lot number of that drug.

Shortages and Discontinuation of Sale of Drugs

C.01.014.8. The following definitions apply in sections C.01.014.8 to C.01.014.12.

"authorization holder" means, in respect of a drug,

(*a*) the holder of the drug identification number that has been assigned under subsection C.01.014.2(1) for the drug; and

(*b*) in the case of a drug that is listed in Schedule C to the Act, the manufacturer to whom the notice of compliance for the drug has been issued under section C.08.004 or C.08.004.01. (*titulaire d'autorisation*)

"drug" means

(*a*) any of the following drugs for human use in respect of which a drug identification number has been assigned under subsection C.01.014.2(1):

(i) drugs included in Schedule I, II, III, IV or V to the *Controlled Drugs and Substances Act*,

(ii) prescription drugs,

(iii) drugs that are listed in Schedule D to the Act, and

(iv) drugs that are permitted to be sold without a prescription but that are administered only under the supervision of a practitioner; or

(*b*) a drug that is listed in Schedule C to the Act. (*drogue*)

"shortage" means a situation in which an authorization holder is unable to meet demand in Canada for a drug. (*pénurie*)

C.01.014.9. (1) If a shortage of a drug exists or is likely to occur, the authorization holder for the drug shall post the following information in English and French on a website that is operated by a party for that purpose with whom Her Majesty in right of Canada has entered into a contract to make that information available to the public:

(*a*) the authorization holder's name and their telephone number, email address, website address, postal address or any other information that enables communication with them;

(*b*) the drug identification number assigned for the drug under subsection C.01.014.2(1), if applicable;

(*c*) the drug's brand name and proper name or, if it does not have a proper name, its common name;

(*d*) the proper names of the drug's medicinal ingredients or, if they do not

have proper names, their common names;

(*e*) the drug's therapeutic classification according to the *Anatomical Therapeutic Chemical Classification System (ATC)*, established by the World Health Organization Collaborating Centre for Drug Statistics Methodology — namely the level 3 description of, and level 4 code for, the drug;

(*f*) the drug's strength;

(*g*) the drug's dosage form;

(*h*) the quantity of the drug contained in its package;

(*i*) the drug's route of administration;

(*j*) the date when the shortage commenced or is anticipated to commence;

(*k*) the anticipated date when the authorization holder will be able to meet demand for the drug; and

(*l*) the actual or anticipated reasons for the shortage.

(2) The authorization holder shall post the information

(*a*) if the authorization holder anticipates that a shortage will begin in more than six months, at least six months before the day on which they anticipate the shortage to begin;

(*b*) if the authorization holder anticipates that a shortage will begin in six months or less, within two days after the day on which they anticipate the shortage; or

(*c*) if the authorization holder did not anticipate the shortage, within two days after the day on which the authorization holder becomes aware of it.

(3) If any of the information that was posted by an authorization holder changes, the authorization holder shall post the updated information on the website within two days after the day on which they become aware of the change.

(4) Within two days after the day on which a shortage of a drug ends, the authorization holder for the drug shall post information on the website to that effect.

C.01.014.10. (1) If an authorization holder decides to discontinue sale of a drug in Canada, the authorization holder shall post the following information in English and French on the website referred to in subsection C.01.014.9(1):

(*a*) the authorization holder's name and their telephone number, email address, website address, postal address or any other information that enables communication with them;

(*b*) the drug identification number assigned for that drug under subsection C.01.014.2(1), if applicable;

(*c*) the drug's brand name and proper name, or if it does not have a proper name its common name;

(*d*) the proper names of the drug's medicinal ingredients or, if they do not have proper names, their common names;

(*e*) the drug's therapeutic classification according to the *Anatomical Therapeutic Chemical Classification System (ATC)*, established by the World Health Organization Collaborating Centre for Drug Statistics Methodology — namely the level 3 description of, and level 4 code for, the drug;

(*f*) the drug's strength;

(*g*) the drug's dosage form;

(*h*) the quantity of the drug contained in its package;

(*i*) the drug's route of administration;

(*j*) the date on which the authorization holder will discontinue sale of the drug; and

(*k*) the reason for the discontinuation of sale.

(2) The authorization holder shall post the information

(*a*) if the authorization holder decides to discontinue sale of the drug in more than six months, at least six months before the day on which they will discontinue its sale; and

(*b*) if the authorization holder decides to discontinue sale of the drug in six months or less, within two days after the day on which that decision is made.

(3) If any of the information that was posted by an authorization holder changes, the authorization holder shall post the updated information on the website within two days after the day on which they become aware of the change.

C.01.014.11. The Minister shall maintain a hyperlink to the website referred to in subsection C.01.014.9(1) on the Department of Health website.

C.01.014.12. (1) An authorization holder shall, if a period of 12 months has elapsed since they last sold a drug in Canada, notify the Minister of that fact within 30 days after the day on which that period ends.

(2) The authorization holder shall, within 30 days after the day on which they recommence sale of the drug in Canada, notify the Minister of that fact.

COMING INTO FORCE

2. These Regulations come into force six months after the day on which they are registered.

[25-1-o]

Footnote a
S.C. 2012, c. 19, s. 414

Footnote b
R.S., c. F-27

Footnote 1
C.R.C., c. 870

Date modified: 2015-06-20