Health Canada Santé Canada

Regulatory Operations and Regions Branch
Medical Devices and Clinical Compliance Directorate
Biological Product Compliance Program
200 Eglantine Driveway
Ottawa ON K1A 0K9

March 7, 2017

To: Licensed blood establishments, registered blood establishments and provincial contacts

Common deficiencies cited during inspections of registered hospitals under the Blood Regulations

The Blood Regulations, under the *Food and Drugs Act,* came into force on October 23, 2014. The Blood Regulations apply to all persons or establishments that process, label, store, distribute or transform human blood for transfusion or for further manufacture into a drug for human use. Health Canada conducts inspections to assess the compliance of establishments with the Blood Regulations.

Between July 1, 2015 and December 31, 2016, Health Canada has inspected 19 of the 45 hospitals that have registered in Canada. As these hospitals were not previously regulated under the *Food and Drugs Act,* they are being inspected by Health Canada for the first time. Health Canada has reviewed and analysed the inspection findings to date and is now sharing the common deficiencies found during those inspections, for the purposes of education, transparency, and compliance promotion. While the findings are specific to registered hospitals, they may be of interest to other parties subject to the Blood Regulations.

Health Canada encourages establishments to verify that they are conducting their activities in accordance with the requirements set out in the Blood Regulations, which apply to all establishments that handle blood, even if they do not require a Licence or a Registration. These include requirements for aliquoting, storage, distribution, pooling of cryoprecipitate, operating procedures, personnel, storage equipment, error and accident investigation and reporting, adverse reaction investigation and reporting and records.

Table 1 illustrates all of the inspection observations cited under the various the sections of the Blood Regulations. Specific examples of the most common observations are provided in the sections following.

Table 1: Summary of inspection observations for registered hospital blood banks inspected since July 2015

Title of Section	Section of Regulations	Number of Observations Made during Inspections to Date
45-51 – Collection	51 Autologous donations	1
59-68 – Labelling	64 Contents of label	1
	68 Label verification	1
69-72 – Storage	70 Storage location	2
77-80 – Transformation	77 Transformation methods	1
	78 Washing	1
	79 Pooling	5
	80 Irradiation	2
93-94 – Quality Management System	93 Organizational structure	2
	94 Requirements	35
95-97 – Operating Procedures	95 Operating procedures	23
	96 Requirements	23
	97 Documented evidence	5
98-102 – Personnel, Facilities, Equipment and Supplies	98 Personnel	10
	100 Equipment	17
	101 Storage equipment	8
	102 Supplies	9
103-104 Errors and Accidents	103 Of another establishment	1
	104 Of own establishment	1
105-108 Investigation and Reporting	107 Reports to Minister	1
	108 Annual report	1
117-123 – Records	117 Record quality	19
	121 Retention periods - transformation	1
	122 Retention periods - transfusion	1
TOTAL		**171**

20 hospital inspections conducted from July 1, 2015 to December 31, 2016 (19 hospitals were inspected and 1 was inspected twice)

Section 94 - Quality Management System

Section 94 identifies the elements of a quality system that registered and licensed establishments must have in place. The quality management system integrates all these elements to collectively maximize the safety of the blood. This is the section most cited during the inspections of registered hospitals. The internal audit system is the element of the quality management system that is most often lacking. To date, every registered hospital that was inspected has had one observation related to the internal audit system which represents 19 observations out of a total of 35 for section 94.

Section 94	Deficiency Examples
Quality control program	The establishment has not conducted any quality control testing for washed red blood cells.
Document control and records management system	There is no formal process for issuance of new documents.
	Modified draft versions of operating procedures or controlled forms were used or available for staff to use for performing activities.
	Outdated versions of forms were used.
Internal Audit System	The establishment's internal audits did not assess all activities performed under the Blood Regulations (eg. transformation activities).
	There is no process in place for performing internal audits.
System that uniquely identifies all critical equipment and supplies	The establishment did not have a system in place whereby critical equipment had been identified.
	There was no process for the receipt, verification of specifications and tracking of critical supplies.

Section 95 and 96 - Operating Procedures

Section 95 requires all blood establishments to develop, maintain and follow written operating procedures describing the significant steps for each regulated activity that it conducts.
Written operating procedures are composed of instructions that set out the processes for personnel to perform and document activities consistently and in compliance with regulatory requirements.
A total of 23 observations were cited against section 95 for not having a procedure in place or for not following the operating procedures.

Section 95	Deficiency Examples
The establishment must have operating procedures for all of the activities it conducts related to human safety and the safety of blood	There were no written procedures documenting the frequency and process for conducting preventative maintenance on critical equipment.
	The requirements of sections 103 to 108 for Error/Accident identification, investigation, and reporting are not part of a documented operating procedure.
	There was no documented procedure for the packaging of platelets.
	There was no documented procedure for pooling plasma.
	An operating procedure was not in place for Adverse Reactions, even though the establishment had process and policies in place.
	There was no documented system in place to address exceptional distribution of blood under sections 81-85.
Operating Procedures must be followed	Procedures were not always reviewed at the required frequency as defined in the establishment's quality management system.
	Quality Control results were not always reviewed weekly as required by the establishment's procedures.

Section 96 states specific requirements for the operating procedures, including that they must be in a standardized format and kept up to date. A total of 23 observations were cited against this section. Almost all of them were due to the fact that the operating procedures were not updated to reflect all

the requirements of the Blood Regulations, important steps were missing or they did not reflect what was actually being done at the establishment.

Section 96	Deficiency Examples
The operating procedures must be kept up to date.	The procedure on errors and accidents had not been updated to include the specific requirements outlined in the relevant sections of the Blood Regulations, including sections 103 to 108, pertaining to the identification, receipt, investigation, reporting and preparation of the annual report of errors and accidents.
	An operating procedure references a form which is no longer in use and has been superseded by a new form.
	The operating procedure outlining the steps to Request for Emergency Release of Blood Products from the blood provider does not include the requirements of section 82 (3) and (4) of the Blood Regulations.
	The operating procedure on Investigation of Transfusion Related Infections does not include an investigation to determine if the root cause of the infection was due to the establishment's own activities or those of another establishment. In addition, the operating procedure does not include directions for reporting to Health Canada, as required.
	The establishment's procedures for issuing blood did not require that blood containers be examined for all criteria listed in section 74 of the Blood Regulations. For example, verification that the integrity of the containers is intact and there are no signs of deterioration or contamination of the blood prior to distribution are not included in the procedures.
	The establishment's operating procedure for record retention did not include the requirement for retention of the following records: - Lot # and name of manufacturer of critical supplies-1 year - Maintenance, validation, qualification, and calibration of critical equipment - 3 years - Exceptional Distribution records- 50 years

Sections 100 and 101 - Equipment

Licensed and registered establishments must ensure that the critical equipment that it uses is cleaned and maintained and, as appropriate, validated for its intended purpose and calibrated. The establishments must have schedules for the cleaning, maintenance and calibration of equipment.

Section 100	Deficiency Examples
The critical equipment must be cleaned, maintained and as appropriate, validated for its intended purpose and calibrated.	The latest annual preventative maintenance that was conducted on the centrifuge was done 6 months past the due date of when it should have been performed.
	The establishment did not ensure that the preventive maintenance services were conducted properly, since the service provider did not leave completed checklists at the establishment to review.

	The preventative maintenance alarm checks performed on the satellite fridge were out of specification and there was no documentation to indicate what action, if any, was taken.

Section 101 applies to all establishments that store blood. The temperature in the equipment used to store blood (such as fridges, freezers and incubators) must be continuously monitored.

Section 101	Deficiency Examples
The equipment used to store blood must maintain the appropriate temperature.	There was no record of daily temperature readings for the platelet incubator for 6 months in 2015.
	There was no documentation of the environmental temperature of the operating room refrigerator.

Section 117 - Records

Records are a critical component of any quality management system as they provide the required information during an investigation should an issue arise, and ensure the traceability of a blood unit is maintained. Records also provide documented evidence of compliance. As stated in section 117, the records kept by an establishment must be accurate, complete, legible, indelible and readily retrievable.

Documents being inaccurate or incomplete is the most common observation cited against section 117. These are often found in records related to training, equipment maintenance or temperature monitoring.

Section 117	Deficiency Examples
Records must be accurate, complete, legible, indelible and/or readily retrievable.	The Equipment Log form used to document equipment maintenance and repairs was not consistently completed for numerous pieces of equipment.
	The staff signoff sheet for the training of new or revised operating procedures did not always include the date the employee completed the training or the specific revision number of the procedure.
	Initial training records are not always complete, for example missing initials of trainee and/or trainer, “Discussion” and “Performed” areas not complete, “Reviewed by” and “Date” not completed.
	There were a number of temperature and humidity monitoring records that were not documented between October 2015 and May 2016.
	Corrections on a form were not clearly crossed out, initialed or signed and dated to confirm the changes. Liquid paper was used on some records to make corrections.
	The daily temperature records for the plasma thawing baths had occasional missed temperature recordings with no notes to explain the missed readings.

Finally, Health Canada would like to share with you that as part of our commitment to regulatory transparency, information on all inspections conducted under the Blood Regulations are published on Health Canada's *Drug and Health Product Inspections Database*.

I hope you find this communication useful. If you would like to provide feedback on the usefulness of this letter, the *Drug and Health Product Inspections Database* or if you require any clarification or further information, please do not hesitate to contact us at: bpcp-pcpb@hc-sc.gc.ca.

Sincerely,

Chad Sheehy
National Manager
Clinical Trial and Biological Product Compliance

References:

Blood Regulations
http://laws-lois.justice.gc.ca/eng/regulations/SOR-2013-178/page-1.html

Guidance Document: Blood Regulations
http://www.hc-sc.gc.ca/dhp-mps/brgtherap/applic-demande/guides/blood-reg-sang/blood-guid-sang-ligne-eng.php

POL-0039 Inspection Strategy for Blood Establishments
http://www.hc-sc.gc.ca/dhp-mps/compli-conform/info-prod/don/pol-0039-eng.php

Drug and Health Product Inspections Database
http://healthycanadians.gc.ca/drugs-products-medicaments-produits/inspecting-monitoring-inspection-controle/inspections/index-eng.php