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1.0 Purpose

Biological hazards exist at the University of Calgary in research labs, clinical settings and in daily operations of facilities and buildings. Immunizations are recognized as an engineering control for biological hazards. Employers have an obligation to control hazards in the workplace to protect the health and safety of their Employees.

The University of Calgary provides an immunization program, developed in accordance with legislated requirements and recommendations, as outlined the Alberta Occupational Health & Safety (OH&S) Code (2009) and Canadian Biosafety Standards and Guidelines (2013), and offers Employees vaccines when biological hazards have been identified and vaccines exist to control those hazards (See Appendix A).

2.0 Scope

This program applies to University of Calgary Employees potentially exposed to biological hazards in the workplace.

This Operating Standard and Practice does not replace any provisions set out in the applicable collective agreements.

3.0 Definitions

- **Biological Hazards**: Biological substances that pose a threat to the health of living organisms, primarily that of humans. This can include medical waste or samples of a microorganism, virus or toxin (from a biological source) that can affect human health.

- **Employee**: An individual who is engaged to work for the University of Calgary under an employment contract.

- **Hazard Assessment**: An assessment of a work site to identify existing and potential hazards before work begins.

- **Health Surveillance**: Health surveillance is the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of health practice.

- **Immunization**: The process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine.

- **Manager**: An Employee who has management responsibility. For clarity, this term includes an academic staff member or a management and professional staff member who has management responsibility. All members of Senior Leadership Team are Managers.

- **Serology**: The scientific study of plasma serum and other bodily fluids. In practice, the term usually refers to the diagnostic identification of antibodies in the serum.

- **Vaccine**: Vaccine is a biological preparation that improves immunity to a particular disease.
4.0 Standard/Practice

4.1 The University of Calgary

- Has an obligation to control hazards identified in the workplace under the Alberta Occupational Health and Safety Act, Regulation and Code (2009);
- Recognizes immunization as an engineering control for biological hazards in the workplace;
- Is subject to the Canadian Biosafety Standards and Guidelines (2013) which define federal standards required for work involving biohazards and include a health surveillance program;
- Relies on industry best practice in several occupations where federal and provincial guidelines have not been formally adopted;
- Maintains records of and monitors the immunization status of Employees as set out in this immunization program
- Offers an immunization program onsite, providing opportunities for Employees to protect themselves.

4.2 Hazard Assessments

Managers will ensure hazard assessments are completed for all job positions as per the Hazard Assessment and Control Procedure. Hazard assessments will document the identification, assessment and control of biological hazards and other hazards that exist in the workplace. Environment, Health and Safety will provide support to individual areas in identifying potential biological hazards. When a biological hazard is identified in a hazard assessment, Staff Wellness will be consulted to complete an immunization risk assessment.

Risk assessments will be completed by Staff Wellness and the Manager using the University of Calgary Hazard Ranking Matrix, as outlined in the Hazard Assessment and Control Procedure. Staff Wellness will communicate any immunization and serology recommendation to the Manager based on the hazard assessment and immunization risk matrix.

4.3 Immunizations and Serology Required for a Job

A Manager, with the approval of their Dean or Associate Vice President, will consult Staff Wellness in the event they would like to have any immunizations and related serology testing deemed a job requirement. Staff Wellness will then consult with Human Resources, Legal Services and other key stakeholders as necessary. Following consultation with the appropriate stakeholders, Staff Wellness will make a decision on job requirements.

4.3.1 New Employees

When an immunization is a job requirement, the hiring Manager is responsible for including this requirement in the job profile and job posting. The job offer will be conditional upon the candidate completing the required vaccination(s) within the timeframe decided by Staff Wellness. A candidate who accepts the job offer will complete an immunization assessment with Staff Wellness and must agree to complete the required vaccinations prior to commencing employment. Employees may access vaccination services through Staff Wellness or their family physician. If the Employee receives a vaccine from their family physician, they will provide documentation to Staff Wellness, indicating compliance with the requirement of the job.

4.3.2 Existing Employees

If an immunization becomes a job requirement after an Employee is active in a position, the Employee will be notified of the immunization requirement and will complete an immunization assessment with
Staff Wellness. The Employee must agree to receive the required vaccination within the timeframe decided by Staff Wellness. Employees may access vaccination services through Staff Wellness or their family physician. If the Employee receives vaccine from their family physician, they will provide documentation to Staff Wellness, indicating compliance with the requirement of the job.

4.3.3 Duty to Accommodate
The University of Calgary recognizes that it has a duty to accommodate under human rights law. An Employee who is unable to comply with a job requirement established pursuant to this Operating Standard and Practice based on a protected ground established under the Alberta Human Rights Act is required to notify their manager and follow up with Staff Wellness forthwith.

4.4 Immunizations and Serology Recommended for a Job
Immunizations and serology may be recommended for a job position, however may not be a requirement of the job. Recommendations for a job will be outlined based on the Alberta Immunization policy, standards and best practice. Managers will be made aware of the recommendation for jobs in their areas. Employees will have the option to receive or decline recommended immunizations.

4.4.1 New Employees
During the hiring process, Managers will liaise with Human Resources to ensure immunization and serology recommendations are captured in the job posting, the job profile and any offer letter. The Employee will complete an assessment at Staff Wellness. Recommendations will be discussed and the Employee may access vaccination services through Staff Wellness or their family physician. In the event that an Employee does not wish to receive recommended immunizations, Staff Wellness will have that Employee sign an acknowledgement of understanding (see appendix c). Employees may maintain up to date documentation in the Staff Wellness data base. Participation or lack of participation in a recommended immunization program will not be communicated outside Staff Wellness.

4.4.2 Existing Employees
If immunization and serology recommendations are determined or revised after an Employee is active in a position, the Employee will be notified. Employees will undergo an initial immunization assessment with Staff Wellness. Recommendations will be discussed and the Employee may access vaccination services through Staff Wellness or their family physician. In the event that an Employee does not wish to receive recommended immunizations, Staff Wellness will have that Employee sign an acknowledgement of understanding. Employees may maintain up to date documentation in the Staff Wellness data base. Participation or lack of participation in a recommended immunization program will not be communicated outside Staff Wellness.

4.5 Immunizations and Serology Managed by Staff Wellness
Employees may choose to have immunization which is required or recommended for their jobs managed by Staff Wellness. Immunizations managed by Staff Wellness will be administered under the medical direction of an Occupational Health Physician at the main campus of the University of Calgary and any follow up dates relating to such immunizations will be communicated by Staff Wellness to the Employee.

4.5.1 Serology for Employees
Employees may choose to have serology testing which is required or recommended for their jobs managed by Staff Wellness. Employees will be required to travel to a laboratory which will conduct serology testing. The Occupational Health Physician will provide Employees with requisitions for any
such serology testing and results will be monitored and maintained by Staff Wellness. Necessity and frequency of such serology testing will be determined by the Occupational Health Physician based on best practices. Any follow up dates relating to serology testing managed by Staff Wellness will be communicated by Staff Wellness to the Employee.

4.6 Post-Exposure Protocol
All exposures to biological hazards will be dealt with as set out in the University of Calgary’s Post-exposure Protocol for Biological Hazards. This protocol includes immediate first aid, assessment requirements and follow up instructions. All biological hazard exposures will be reported as a Level 2 incident through the Online Accident Reporting System (OARS) and the Employee will be contacted for follow up by Staff Wellness.

5.0 Responsibilities

5.1 Manager:
- Conduct hazard assessments in their area of responsibility to identify biological hazards and ensure updating as required;
- Implement control measures in the workplace to address identified hazards;
- Identify biological hazards in the workplace where immunizations may be available; (See Appendix A & B);
- Consult with Staff Wellness, Human Resources and other key stakeholders, as required to identify possible job requirements;
- At the beginning of the hiring process notify Human Resources of the need for any immunizations that are required for the job;
- Follow the University of Calgary’s Post-exposure Protocol for Biological Hazards the event of an exposure to a biological hazard;
- Ensure appropriate reporting of an exposure to a biological hazard.

5.2 Staff Wellness:
- Manage the immunization program through ordering, scheduling and resourcing for both provincially funded immunizations and University of Calgary purchased immunizations;
- Act as a resource on immunization information for Managers;
- Determine eligibility for provincially funded immunizations, based on the Alberta Immunization Policy;
- Liaise with Managers and Human Resources during the pre-employment screening process, as required;
- Perform individual immunization assessments for Employees, based on hazard assessments and Alberta Immunization Policy;
- Make recommendations for immunizations based on assessment of Employee status;
- Coordinate and administer vaccinations recommended or required for a job to an Employee in that job, as required;
- Facilitate follow up for series vaccinations, as required;
- Coordinate serology testing as per defined standards as required;
- Follow up and monitor exposure incidents;
- Conduct accountability reporting for Provincially funded vaccines to Alberta Health Services;
- Maintain confidential medical records relating to immunizations and serology testing;
- Report costs and uptake of vaccines on an annual basis;
- Conduct program evaluation and review on an annual basis.
5.3 Human Resources:
- Provide support to hiring Managers for pre-employment screening processes related to biological hazards;
- Collaborate in decision making related to job requirements
- Ensure job profiles and offer letters include a list of any recommended or required immunizations and serology testing;

5.4 Environment, Health and Safety:
- Provide support to individual Faculties/Departments in completing Hazard Assessment and Control Forms that document the identification, assessment and control of hazards, including the use of vaccines as an engineering control for biological hazards;
- Provide support to Employees and Managers in the event of an exposure to a biological hazard, as required.

5.5 Employees:
- Ensure they have all immunizations and serology testing required for their job;
- Follow the University of Calgary’s Post-exposure Protocol for Biological Hazards in the event of an exposure to a biological hazard;
- Report an exposure to a biological hazard;
- Notify their direct Manager of changes in the workplace related to biological hazards if they become aware of such changes.
- Employees who fail to comply with this Operating Standard may be subject to discipline up to and including dismissal in accordance with procedures in any applicable collective or employment agreement.

6.0 Related Information
- World Health Organization http://www.who.int/topics/
## 7.0 Appendices

### Appendix A – Vaccines Available in Canada

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Recommended Immunization</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bordetella pertussis</td>
<td>All adults every 10 years</td>
<td>1,2</td>
</tr>
<tr>
<td>Clostridium tetani</td>
<td>All adults every 10 years</td>
<td>1,2</td>
</tr>
<tr>
<td>Corynebacterium diphtheriae</td>
<td>All adults every 10 years</td>
<td>1,2</td>
</tr>
<tr>
<td>Hepatitis A virus</td>
<td>Workers at risk of exposure to feces, blood or body fluids (not funded in Alberta); researchers working with organism developing vaccine; international travel to countries with endemic hepatitis A</td>
<td>1,2,3,4</td>
</tr>
<tr>
<td>Hepatitis B virus</td>
<td>Workers at risk of exposure to blood or body fluids; at increased risk of sharps injury, bites or penetrating injuries; with first aid responsibilities; international travel to countries with endemic hepatitis A</td>
<td>1,2,3,4</td>
</tr>
<tr>
<td>Influenza A/B virus</td>
<td>Workers at risk of exposure to material through parenteral inoculation and infectious aerosols</td>
<td>2,3</td>
</tr>
<tr>
<td>Mycobacterium tuberculosis (BCG vaccine)</td>
<td>Workers at high risk e.g. veterinarians, animal workers; international travel to areas with high TB incidence. **BCG no longer recommended. Special permission required</td>
<td>3,4</td>
</tr>
<tr>
<td>Neisseria meningitidis (Meningococcal vaccine)</td>
<td>Child care workers, researchers working with organism or developing vaccine; international travel to epidemic areas</td>
<td>1,2,3,4</td>
</tr>
<tr>
<td>Polio virus</td>
<td>Researchers working with virus; health care workers; international travel to areas with high polio incidence</td>
<td>1,4</td>
</tr>
<tr>
<td>Rabies virus (incl. diagnostic cases)</td>
<td>Workers at high risk e.g. veterinarians, animal workers</td>
<td>1,4</td>
</tr>
<tr>
<td>Rotavirus</td>
<td>Not covered under Provincially Funded Program; children only</td>
<td>2</td>
</tr>
<tr>
<td>Rubella virus (MMR vaccine)</td>
<td>Avoid work by women who are, or may become, pregnant</td>
<td>3</td>
</tr>
<tr>
<td>Streptococcus pneumoniae (Pneumococcal vaccine)</td>
<td>Workers at risk of exposure to material through parenteral inoculation and infectious aerosols; workers at high risk e.g. workers handling infected animals</td>
<td>2,3,4</td>
</tr>
<tr>
<td>Salmonella typhi (typhoid)</td>
<td>Researchers working with organism; international travel to endemic areas</td>
<td>1,2,3,4</td>
</tr>
<tr>
<td>Vaccinia virus (smallpox) or other orthopoxviruses (Restricted)</td>
<td>Workers at risk of exposure to material through parenteral inoculation and infectious aerosols; every 10 years. (Special Request)</td>
<td>2,3,4</td>
</tr>
<tr>
<td>Varicella-zoster virus (chicken pox)</td>
<td>Workers at risk of exposure to material through parenteral inoculation and infectious aerosols; child care workers</td>
<td>2,3,4</td>
</tr>
<tr>
<td>Vibrio cholera (Cholera vaccine)</td>
<td>Not covered under Provincially Funded Program</td>
<td>2,3</td>
</tr>
</tbody>
</table>

2. Biohazard currently registered at U of C under the Biosafety Program.
Appendix B – Job Requirement Workflow

**Job Requirement**

Manager identifies biological hazard may be a Job Requirement

Manager contacts Staff Wellness to discuss eligibility

Should vaccine be recommended or required

Yes

Staff Wellness contacts Key Stakeholders for consideration

Stakeholder approval?

No

Stop

Yes

Staff Wellness communicates requirements to manager

New employee?

No

Yes

Manager notifies Human Resources Talent Management of Job Requirement

Manager notifies employee of new job requirement

Manager notifies employee of new job requirement

Referred to family physician for vaccination

Scheduled to receive vaccination at Staff Wellness

No

Yes

Job requirement clause added to Job Profile, Job Posting and Offer Letter

Candidate arranges assessment with OHN at Staff Wellness

Vaccination at Staff Wellness?
Appendix C – Vaccination Acknowledgement and Waiver Form

University of Calgary
Immunization Program

Acknowledgment and Waiver Form for Recommended Vaccines/Immunizations

Employees will not be required to participate in the immunization program unless receipt of vaccine has been deemed a job requirement. Employees deciding not to receive recommended immunizations are required to sign this acknowledgment that they were offered recommended vaccination(s) but have declined.

I understand and acknowledge that:

☐ A hazard assessment for my job position has determined that there are potential biological hazards in the workplace.

☐ I have participated in an immunization risk assessment with Staff Wellness.

☐ Staff Wellness has determined and explained to me that there are vaccination(s) available for the potential biological hazards in the workplace for my job position.

☐ I have considered the advantages and disadvantages of the vaccination(s) that are available to me and I have decided not to receive the vaccination(s).

☐ I accept complete responsibility for my health and I hereby release and hold harmless the University of Calgary and its representatives from any liability that may result from opting out of the vaccination(s).

☐ Although I am declining vaccination(s) now, I can receive vaccination(s) at a later date.

Employee: ___________________________ ___________________________ Date: ____________

(Print Name)   (Sign Name)

Witness: ___________________________ ___________________________ Date: ____________

(Print Name)   (Sign Name)