Executive Summary

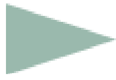
This report on the outcomes and activities of the Alberta Health Services (AHS) Infection Prevention and Control (IPC) program and its partners is submitted as required by the Alberta Health *Standards for Infection Prevention and Control – Accountability and Reporting (2011)*. The term "AHS IPC" is inclusive of Covenant Health IPC. Where there are differences between the programs the two are mentioned separately.

The IPC annual report reflects the commitment of AHS to prevent and control healthcare-associated infections. In 2022/2023, with guidance and direction from the AHS Official Administrator, AHS identified and focused on four key priorities for the organization: Improving Emergency Medical Services response times, decreasing emergency department wait times, reducing wait times for surgeries, and improving patient flow throughout the healthcare continuum. AHS IPC contributes directly to improving patient flow and local decision-making throughout the healthcare continuum. This is accomplished by working with local stakeholders such as site operations and programs when overcapacity management protocols and surge spaces are required as it relates to bed management, cohorting, and placement of patients on additional precautions.

In 2022/2023, all mandatory public health restrictions were lifted as the latest wave of COVID-19 subsided and COVID-19 hospitalizations continued to decline. As part of supporting the transition from pandemic to endemic for COVID-19 AHS planned for a surge in demand for health services and worked to meet the need for expanded support for the fall and winter viral respiratory season.

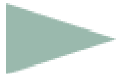
> *While COVID-19 is still circulating we will continue to apply the lessons we learned in responding to COVID-19 and build on three years of unprecedented innovation and collaboration in the way we care for Albertans as we work towards meeting the complex health needs of our province tomorrow, next year, and beyond… Your work to protect the health of Albertans has been essential throughout the pandemic and continues to be essential today...* – Dr. Laura McDougall, Senior Medical Officer of Health/Senior Medical Director, Provincial Population and Public Health

Major drivers of AHS IPC workload in all care settings included outbreaks of COVID-19, influenza, respiratory syncytial virus, mpox, *Shigella flexneri*, and preparation for viral hemorrhagic fever. Supporting these outbreaks required adapting to new situations, finding balance between supporting outbreaks and other work, collaborating with others, applying lessons learned from the COVID-19 pandemic, focusing on IPC principles such as the IPC Risk Assessment, and leveraging the skill sets of people and programs.



Connect Care

AHS successfully implemented Launch 4 and Launch 5, with Launch 5 being the largest launch to date. AHS IPC continued to participate in the planning and implementing of Connect Care, which has many implications for communicable disease screening, patient management, and surveillance.

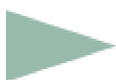


Accountability and Monitoring

In 2022/2023, as part of the *AHS IPC Strategic Plan*, IPC conducted stakeholder engagement sessions with zone executive leadership. Four main themes emerged on the positive aspects of the AHS IPC response to the COVID-19 pandemic and highlighted potential future improvements.

Cycle 4 of medical device reprocessing reviews was completed. In total, for Cycle 4, 100 areas in 68 facilities were reviewed. The overall compliance, as shown on the day of the review for each area, was 95.8 per cent. After the follow-up process for corrective actions the overall compliance increased to 99.0 per cent as of the end of the fiscal year. Reviews at select chartered surgical facilities were also completed. Starting in 2022/2023, an annual report for chartered surgical facilities was generated to align with the College of Physicians and Surgeons of Alberta reporting schedule.

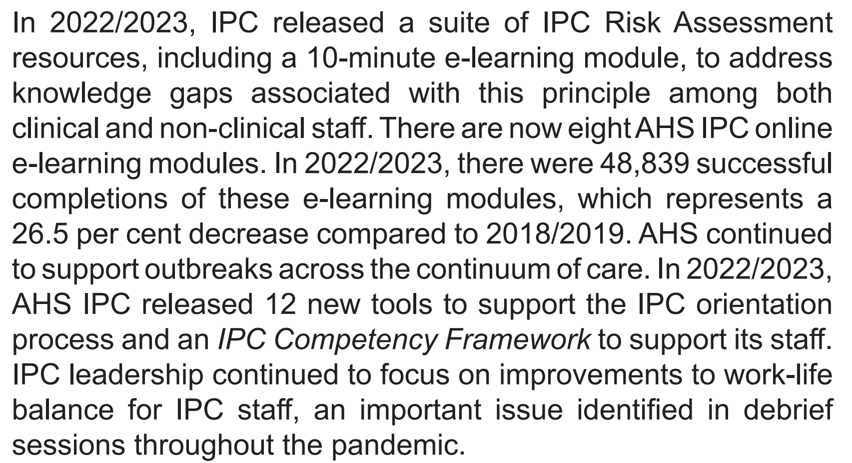
AHS IPC continued to support the 2019-2023 cycle of accreditation, which was delayed due to the pandemic. In 2022/2023, the Accreditation Canada surveyors assessed 20 Central and North zone rural hospitals and six programs including Cancer Care Alberta, Cardiovascular Health, Critical Care, Continuing Care, Maternal-Child Health, and Urban Programs for the *Infection Prevention and Control* standard. For both the spring and fall surveys, most sites met the required organizational practices for the *Infection Prevention and Control* standard. However, a theme emerged related to hand hygiene compliance and hand hygiene education for those that did not.



Province Wide Surveillance

AHS IPC performed province wide surveillance on a variety of healthcare-associated infections and antimicrobial-resistant organisms. In 2022/2023, AHS IPC reported hospital-acquired COVID-19 rate of 10.8 per cent. Work is underway to replace hospital-acquired COVID-19 surveillance with hospital-acquired viral respiratory infection surveillance. In 2022/2023, active surveillance for surgical site infections following cardiovascular, orthopedic, and vascular procedures resumed.

Human Resource Capacity



In 2022/2023, IPC released a suite of IPC Risk Assessment resources, including a 10-minute e-learning module, to address knowledge gaps associated with this principle among both clinical and non-clinical staff. There are now eight AHS IPC online e-learning modules. In 2022/2023, there were 48,839 successful completions of these e-learning modules, which represents a 26.5 per cent decrease compared to 2018/2019. AHS continued to support outbreaks across the continuum of care. In 2022/2023, AHS IPC released 12 new tools to support the IPC orientation process and an *IPC Competency Framework* to support its staff. IPC leadership continued to focus on improvements to work-life balance for IPC staff, an important issue identified in debrief sessions throughout the pandemic.

Physical Environment and Infrastructure

IPC worked with local stakeholders such as operations and programs to select areas not traditionally used for inpatient care to be repurposed and expanded for the safe delivery of healthcare services in overcapacity and surge spaces. AHS IPC continued to support new facility construction and ongoing renovations at existing facilities, and continued to support vulnerable populations in the community, most notably through the *Shigella flexneri* outbreak in Edmonton Zone in 2022/2023.

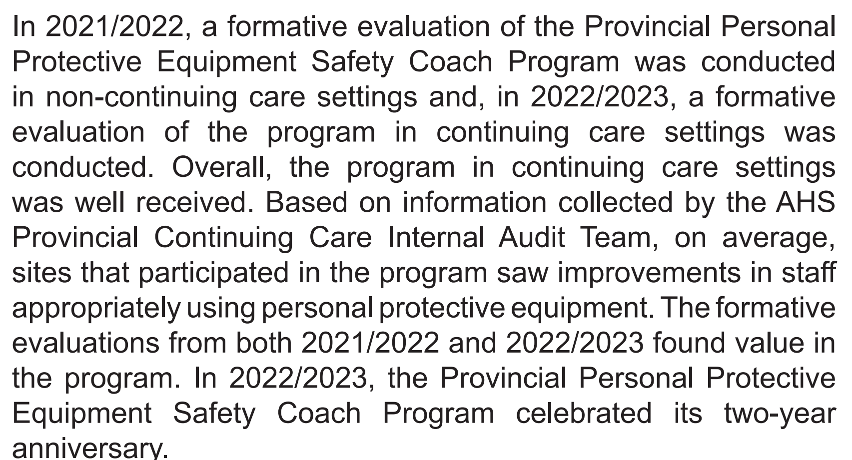
Public Awareness and Education

Currently, there are 13 AHS IPC-authored patient care handouts on *MyHealth.Alberta.ca*. In 2022/2023, *MRSA and You: What You Need to Know* continued to be the most visited handout followed by *Childbirth: Group A Streptococcus Infections*.

Hand Hygiene

AHS continues to achieve its target hand hygiene compliance of 90.0 per cent. In 2022/2023, AHS hand hygiene compliance was 91.2 per cent and Covenant Health hand hygiene compliance was 94.2 per cent.

Personal Protective Equipment



In 2021/2022, a formative evaluation of the Provincial Personal Protective Equipment Safety Coach Program was conducted in non-continuing care settings and, in 2022/2023, a formative evaluation of the program in continuing care settings was conducted. Overall, the program in continuing care settings was well received. Based on information collected by the AHS Provincial Continuing Care Internal Audit Team, on average, sites that participated in the program saw improvements in staff appropriately using personal protective equipment. The formative evaluations from both 2021/2022 and 2022/2023 found value in the program. In 2022/2023, the Provincial Personal Protective Equipment Safety Coach Program celebrated its two-year anniversary.

Message

Message from the Senior Medical Officer of Health and the Senior Medical Director of Infection Prevention and Control

A close collaboration with Population, Public and Indigenous Health is found within the integrated and comprehensive provincial AHS IPC program that provides service across the continum of care in Alberta. Physician leadership is provided by Dr. Laura McDougall, Senior Medical Officer of Health/Senior Medical Director, Provincial Population and Public Health, and Dr. Oscar Larios, Interim Senior Medical Director, IPC.

Many will recall that AHS implemented its Incident Command Structure in response to the pandemic. As part of lifting public health restrictions and the transition from pandemic to endemic, AHS transitioned from the Emergency Coordination Centre to the Readiness and Recovery Centre and then resumed normal operations. The various taskforces such as Personal Protective Equipment Taskforce, Visitors Taskforce, and others that supported these centres throughout the pandemic will be merged as the need for separate taskforces diminishes but the need for a group overseeing emerging infectious threats remains.

The return of human travel has reminded us that what affects one part of the world, can ultimately affect anyone globally. IPC's mpox and viral hemorrhagic fever rapid preparation in response to outbreaks occurring in other parts of the world has demonstrated that as a team, we have emerged stronger, more efficient and resilient. The return of regular human interactions has also shown us that disease transmission does not end with COVID-19 as we have seen the resurgence of common respiratory viruses such of respiratory syncytial virus and influenza during their usual winter-fall peaks. An outbreak of *S. flexneri* in a sector of our vulnerable population was a reminder that outbreaks of other organisms can occur outside of our acute care facilities. These examples serve to highlight that infection prevention is just as important as infection control.

We have also come to the realization that COVID-19 is likely here to stay in some form or another, though we are still learning what form that will be. As such, COVID-19 documentation is being converted to be more like other respiratory viruses, to simplify protocols and procedures for our healthcare providers. Having learned much about this virus over the last three years and having a workforce that is mostly immunized, has allowed us to make these changes in an informed and evidence-based manner.

While this full report outlines the details, we will highlight some of the incredible achievements our teams have made over the year.

Information Technology

Connect Care Launches 4 (May 2022) and 5 (November 2022) continued to bring us one step closer to having a completely connected provincial electronic medical record, allowing for care that occurs anywhere in an AHS or Covenant Health facility to be seamlessly continued at another facility. Launch 5 was the largest to date and, in 2022/2023, IPC-related notifications and workflows continued to be optimized to improve communicable diseases and antibiotic-resistant organism screening, patient management, and surveillance activities. At sites where Connect Care has been implemented, communication of care between rural and urban sites has been greatly facilitated ensuring improved patient care quality regardless of location.

Human Resource and Health System Capacity

COVID-19 has proven the importance of IPC activities and as a result there continues to be great demand for our human resources across the organization. This has led to the 19.0 full-time staff equivalent positions that were previously temporary, now becoming permanent, allowing for continued AHS IPC demands to be met and new initiatives to be pursued. We continue to have 14 physicians with AHS IPC duties in their portfolios. These physicians provide guidance and evidence-based recommendations when available to complement the 197.5 full-time equivalent positions assigned to AHS IPC.

Our team members continue to be recognized for their achievements including Dr. Uma Chandran and Dr. Vivien Suttorp both receiving the distinguished honour of being awarded the Queen Elizabeth II Platinum Jubilee Medals, Dr. Gwyneth Myers the Champion of Infection Prevention and Control Award presented by IPAC Canada and Dr. John Conly the F.N.G. Award for lifetime achievement presented by the Canadian Medical Association.

Our physicians are also nationally and internationally sought-after for their work and contributions to the IPC community. We continue to have members in renowned organizations such as the World Health Organization, Public Health Agency of Canada and the Canadian Nosocomial Infection Surveillance Program.

The IPC Risk Assessment continues to be the foundation upon which all IPC practices then follow, and in 2022/2023 a suite of resources on the topic was released, including a 10-minute e-learning module, to address knowledge gaps associated with this principle among both clinical and non-clinical staff. Similar to looking both ways before crossing the street, these principles allow healthcare providers the ability to assess the risk appropriately prior to any patient or client encounter and to choose the appropriate personal protective equipment adequate to the situation.

Physical Environment and Infrastructure

Health system capacity continued to be challenged particularly during the traditional busiest time of respiratory virus season. IPC worked with site operations and programs to select areas not traditionally used for inpatient care to be repurposed for inpatient care. These spaces were in existing areas of healthcare facilities and involved adapting spaces for delivery of safe healthcare services. In 2021/2022, AHS IPC developed the *IPC Patient Risk Assessment Checklist for Use of Overcapacity Spaces* and *IPC Space Risk Assessment for Potential Acute Care Overcapacity Space during Pandemic*. In 2022/2023, these resources were revised to support the ongoing bed pressure and overcapacity needs.

Three new facilities are currently in progress: Arthur J.E. Child Comprehensive Cancer Centre in Calgary, South Edmonton Hospital, and Covenant Wellness Community. IPC is instrumental in all stages of construction, starting from the planning/design phases throughout the construction phases and ultimately helping choose appropriate furnishings and fixtures that can be adequately cleaned and disinfected. IPC performs similar functions with renovations and retrofit projects to ensure national IPC standards are followed from beginning to end. Many of these projects were started and will continue for some time.

Capital was requested for a total of 26 AHS and Covenant Health sites with medical device

reprocessing areas, and, to date, 18 sites have received funding. Funding was announced for three sites in 2019/2020, eight sites in 2020/2021, two sites in 2021/2022, and five sites in 2022/2023. Sites in the most recent announcement include Foothills Medical Center, Northern Light Regional Hospital, Westlock Healthcare Center, Royal Alexandra Hospital, and Sturgeon Community Hospital.

Surveillance and Reporting

From 2018/2019 to 2022/2023, the hospital-acquired *Clostridioides difficile* infection rate in AHS and Covenant Health facilities decreased by 20 per cent. In 2022/2023, the rate was 2.4 per 10,000 patient-days, which was below the Canadian Nosocomial Infection Surveillance Program benchmark of 3.4 per 10,000 patient-days.

Hospital-acquired methicillin-resistant *Staphylococcus aureus* colonization and infections remained stable throughout 2022/2023.

It is worth mentioning that the overall rate of colonization and infection with a carbapenemase producing organism almost doubled in 2022/2023. While this phenomenon has been seen in almost all jurisdictions throughout the world, this will be reviewed further to see if interventions can be instituted to deescalate this rate.

Central line-associated bloodstream infections have continued to rise in the urban intensive care units over the past several years and have remained elevated in the paediatric and tertiary intensive care units. While intesive care units faced capacity pressures never experienced until COVID-19 and redeployed staff were a part of the ICU team for some time, further work will be done to curb the rise in these rates in the coming year along with the Critical Care Strategic Clinical Network.

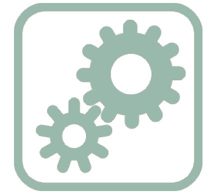
Learning Research and Innovation

The IPC Research Priority Setting Planning Committee was established to oversee the design, execution, and analysis of the research priority setting project in accordance with established Delphi and consensus methods. In 2022/2023, a survey was distributed throughout AHS and national associations, and 21 research questions were identified as being important. The final phase of the priority setting activity included a facilitated virtual consensus meeting with AHS IPC staff and physicians, healthcare providers, researchers, and patients from Alberta to select the top 10 research questions. Results from the consensus meeting are being analyzed and the top 10 research questions finalized. Once finalized, IPC will create a Research Advisory Council to develop infrastructure and build partnerships locally and nationally to propel the IPC research priorities forward.

Looking to the Future

As we move on from the pandemic and have an opportunity to continue improving our IPC practices in this province, we see ourselves well-situated to ensure we remain national and international leaders. We will strive to be not only adopters of best practices, but also the developers of these best practices. We realize that we are only as strong as our team members, which includes everyone in our organization having an appropriate work-life balance. The pandemic has provided us with a demonstration of what we can do when we work as a team with all our stakeholders, and we will continue to leverage these relationships to ensure Albertans are prepared and protected from whatever emerging infections come our way using evidence-based practices. Tools such as Connect Care, improved infrastructure meeting or exceeding IPC standards, timely surveillance and ongoing research will allow us to continuously learn and adapt appropriately.

Alberta Health *Infection Prevention and Control Strategy (2015)*



The Alberta Health *Infection Prevention and Control Strategy (2015)* defines accountabilities that key partners have for implementing identified actions. Alberta Health provides IPC policy direction, oversight, and assurance to the public that Albertans are receiving care in a safe and effective manner. AHS is responsible for assessing Albertans' health needs, promoting and protecting the health of Albertans, preventing disease and injury, promoting IPC, and delivering safe, quality healthcare services. The health professions regulatory colleges also partner in IPC by governing their respective professions in a manner that protects and serves the public interest.

This annual report is organized in alignment with the five directions outlined in the strategy:

- Accountability and Monitoring,
- Province Wide Surveillance,
- Human Resource Capacity,
- Physical Environment and Infrastructure, and
- Public Awareness and Education.

To highlight the significant work towards Connect Care and improving hand hygiene and personal protective equipment practices in healthcare settings, each is designated its own section in this annual report.

This year's annual report includes hyperlinks to resources that are profiled. Hyperlinks are included only for resources that are posted on the external *Government of Alberta* website or on the external *AHS IPC* website.

Priorities and Future Direction

As always, the AHS IPC program will continue to act in a leadership role by participating nationally and internationally on IPC issues as well as supporting quality improvement and research through publication in academic literature. Priority actions and future plans are aligned with the *AHS IPC Operations Plan* and *AHS IPC Strategic Plan.*

Connect Care

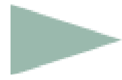
AHS IPC will continue to participate in Connect Care planning to integrate IPC patient management principles into the system. AHS IPC will continue to support implementation of future launches of Connect Care.

Accountability and Monitoring

AHS IPC will continue to support provincial- and zone-level committees and working groups. AHS IPC will plan for Cycle 5 Medical Device Reprocessing Reviews and continue to complete joint reviews in chartered surgical facilities. AHS IPC will continue to support current and future cycles of accreditation.

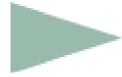
Province Wide Surveillance

AHS IPC will focus on expanding the use of the provincial surveillance platform and the Connect Care system to increase availability, accessibility, and usability of data on surveillance activities to inform action to improve patient safety. With the AHS IPC research priority setting activity, AHS IPC will leverage existing IPC networks nationally and internationally to develop strategic, long-term efforts to create research capacity and infrastructure in IPC.



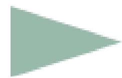
Human Resource Capacity

AHS IPC will develop and revise best practice recommendations, e-learning modules, and resource manuals for specific care delivery areas.



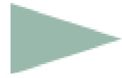
Physical Environment and Infrastructure

AHS IPC will support the integration of best practices into construction, maintenance, and renovation activities for new and existing facilities.



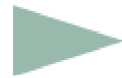
Public Awareness and Education

AHS IPC will develop and update patient care handouts, while exploring ways to increase patient and public engagement with a focus on emerging issues. AHS IPC will support and participate in antimicrobial stewardship activities.



Hand Hygiene

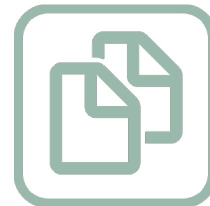
AHS IPC will increase awareness about the importance of hand hygiene and encourage accountability and ownership of hand hygiene at the local level through site-based reviewers. AHS IPC will support appropriate placement of alcohol-based hand rub to promote hand hygiene.



Personal Protective Equipment

AHS IPC will increase awareness about the importance of selecting and using personal protective equipment appropriately based on an IPC Risk Assessment. AHS IPC will also encourage accountability and ownership at the local level using personal protective equipment safety coaches and designates.

Appendix: 2022/2023 AHS IPC-related Publications



Acosta, N., Bautista, M. A., Waddell, B. J., Du, K., McCalder, J., Pradhan, P., Sedaghat, N., Papparis, C., Buchner Beaudet, A., Chen, J., Van Doorn, J., Xiang, K., Chan, L., Vivas, L., Low, K., Lu, X., Lee, J., Westlund, P., Chekouo, T…, Parkins, M.D. (2022). Surveillance for SARS-CoV-2 and its variants in wastewater of tertiary care hospitals correlates with increasing case burden and outbreaks. *J Med Virol*, 95:e28442. https://doi.org/10.1002/jmv.28442

Note: Pearce, C., Leal, J., Ellison, J., Missaghi, B., Kanji, J. N., Larios, O., Kim, J. Lee, B., Conly, J.

Bush, K., Leal, J., Acorn, L., Cordoviz, M., Cundict, F., Devine, A., Edwards, C.-L., Fletcher, P., Gable, Y., Gagnon, H., Gallinger, S., Gill, V., Heinrichs, B., McFerran, B., Pearce, C., Pfister, T., & Meyers, G. (2022). Developing a competency framework for all staff roles in an infection prevention and control program. C*an J Infect Control*, 37(4), 184–188.

Canadian Nosocomial Infection Surveillance Program. (2022). Device and surgical procedure-related infections in Canadian acute care hospitals from 2011 to 2022. *Can Commun Dis Rep*, 48-7/8:325–39. https://doi.org/10.14745/ccdr.v48i78a04

Note: Alberta Children's Hospital, Calgary, Alberta (AB); Foothills Medical Centre, Calgary, AB; Peter Lougheed Centre, Calgary, AB; Rockyview General Hospital, Calgary, AB; South Health Campus, Calgary, AB; Stollery Children's Hospital, Edmonton, AB; University of Alberta Hospital, Edmonton, AB

Canadian Nosocomial Infection Surveillance Program. (2022). Healthcare-associated infections and antimicrobial resistance in Canadian acute care hospitals, 2016-2020. *Can Commun Dis Rep*, 48-7/8:308–24. https://doi.org/10.14745/ccdr.v48i78a03

Note: Alberta Children's Hospital, Calgary, Alberta (AB); Foothills Medical Centre, Calgary, AB; Peter Lougheed Centre, Calgary, AB; Rockyview General Hospital, Calgary, AB; South Health Campus, Calgary, AB; Stollery Children's Hospital, Edmonton, AB; University of Alberta Hospital, Edmonton, AB

Chen, J.Z., **Hoang, H.L**., Yaskina, M., Kabbani, D., Doucette, K.E., **Smith, S**., Lau, C., Stewart, J., Remtulla, S., Zurek, K., Schultz, M., Koriyama-McKenzie, H., Cervera, C. (2023). Efficacy and safety of antimicrobial stewardship prospective audit and feedback in patients hospitalised with COVID-19 (COVASP): a pragmatic, cluster-randomised, non-inferiority trial. *Lancet Infect Dis*, S1473-3099(22)00832-5. https://doi.org/10.1016/S1473-3099(22)00832-5

Choi, K.B., Du, T., Silva, A., Golding, G.R., Pelude, L., Mitchell, R., Rudnick, W., Hizon, R., Al-Rawahi, G.N., **Chow, B.**, Davis, I., Evans, G.A., Frenette, C., Johnstone, J., Kibsey, P., Katz, K.C., Langley, J.M., **Lee, B.**, Longtin, Y., … Hota, S.S. (2022). Trends in *Clostridioides difficile* infection rates in Canadian hospitals during the coronavirus disease 2019 (COVID-19) pandemic. *Infect Control Hosp Epidemiol*, 1-4. https://doi.org/10.1017/ice.2022.210

Choi, K. B., Steele, V., **Conly, J.**, **Chow, B.**, Comeau, J. L., Embree, J., **Lee, B. E.**, Lefebvre, M.-A., Mitchell, R., Pelude, L., Shephard, A. L., & Langley, J. M. (2022). Cerebrospinal fluid shunt–associated surgical site infection with three-month versus twelve-month surveillance periods in Canadian hospitals. *Infect Control Hosp Epidemiol*, 1–4. https://doi.org/10.1017/ice.2022.119

Du, T., Choi, K. B., Silva, A., Golding, G. R., Pelude, L., Hizon, R., Al-Rawahi, G. N., Brooks, J., **Chow, B.**, Collet, J. C., Comeau, J. L., Davis, I., Evans, G. A., Frenette, C., Han, G., Johnston, J., Kibsey, P., Katz, K. C., Langley, J. M., ...Hota, S. S. (2022). Characterization of Healthcare-Associated and Community-Associated *Clostridioides difficile* Infections among Adults, Canada, 2015–2019. *Emerging Infectious Diseases*, 28(6), 1128-1136. https://doi.org/10.3201/eid2806.212262.

Ellison, J., Cayen, J., Pelude, L., Mitchell, R., & **Bush, K.** (2023). Evaluation of the accuracy in the application of the Canadian Nosocomial Infection Surveillance Proram (CNISP) bloodstream infection surveillance definitions. *Can J Infect Control*, 38(41)19-22.

Haverkate, M.R., Macfadden, D.R., Daneman N., **Leal, J.**, Otterstatter, M., Mahgavi, R., D'Souza, A.G., Rennery-May, E., Silverman, M., Schwartz, K.L., Morris, A.M., Saatchi, A., Patrick, D.M., & Fawziah, M. (2022). A Time Series Analysis Evaluating Antibiotic Prescripton Rates in Long-Term Care during the COVID-19 Pandemic in Alberta and Ontario, Canada. *Antibiotics*. 11,1001. https://doi.org/10.3390/antibiotics11081001

Ismail, A., **Leal, J.**, Au, F., Puloski, S., Mponponsuo, K., **Smith, S.**, & Rennert-May, E. (2022). Retrospective analysis of the management strategies for surgical site infection post total hip or knee arthroplasty from tertiary care centres in Edmonton, Alberta. *J Hosp Infect*. 129, 1-7. https://doi.org/10.1016/j.jhin.2022.07.015

Jeon, D., Chavda, S., Rennert-May, E., & **Leal, J.** (2023). Clinical prediction tools for identifying antimicrobial-reistant organism (ARO) carriage on hospital admissions: a systematic review. *J Hosp Infec,* 134: 11-26. https://doi.org/10.1016/j.jhin.2023.01.003

Johnson, T.J., Nishida, R.T., Sonpar, A.P., Lin, Y.J., Watson, K.A., **Smith, S.**, **Conly, J.,** Evans, D.H., & Olfert J.S. (2022). Viral load of SARS-CoV-2 in droplets and bioaerosols directly captured during breathing, speaking and coughing. *Nature Portfolio*, 12:3484. https://doi.org/10.1038/s41598-022-07301-5

Leal, J., **O'Grady, H.M.**, **Armstrong, L.**, Dixit, D., Khawaja, Z., Snedeker, K., **Ellison, J.**, **Erebor, J.**, Jamieson, Weiss, A., Salcedo, D., Roberts, K., Wiens, K., Croxen, M.A., Berenger, B.M., Pabbaraju, K., Lin, Y., Evans, D., & C**only, J.M.** (2023). Patient and ward related risk factors in a multi-ward nosocomial outbreak of COVID-19: Outbreak investigation and matched case–control study. *Antimicrob Resist Infect Control,* 12, 21. https://doi.org/10.1186/s13756-023-01215-1

Leal, J., Farkas, B., Mastikhina, L., Flanagan, J., Skidmore, B., Salmon, C., Dixit, D., **Smith, S.**, Tsekrekos, S., **Lee, B.**, **Vayalumkal, J.**, Dunn, J., Harrison, R., **Cordoviz, M.,** Dubois, R., **Chandran, U**., Clement, F., **Bush, K.**, **Conly, J.** & **Larios, O.** (2022). Risk of transmission of respiratory viruses during aerosol-generating medical procedures (AGMPs) revisited in the COVID-19 pandemic: a systematic review. *Antimicrob Resist Infect Control*, 11(1):102. https://doi.org/10.1186/s13756-022-01133-8

Leal, J., Jefferson, T., & **Conly, J.** (2022). Sars-CoV-2 exposures of healthcare workers and acquisition of COVID-19. *Clin Microbiol Infect*, Nov;28(11):1403-1405. https://doi.org/10.1016/j.cmi.2022.07.012

Liang, J. J., Rudnick, W., Mitchell, R., Brooks, J., **Bush, K.**, **Conly, J.**, **Ellison, J.**, Frenette, C., Johnston, L., Lavallée, C., McGeer, A., Mertz, D., Pelude, L., Science, M., Simor, A., **Smith, S.**, Stagg, P., Suh, K. N., Thampi, N., … **Taylor, G.** (2022). Antimicrobial use in Canadian acute-care hospitals: Findings from three national point-prevalence surveys between 2002 and 2017. *Infect Control Hosp Epidemiol*, 43(11), 1558–1564. https://doi.org/10.1017/ice.2021.519

Lin, Y.J., Malott, R.J., **Ward, L.**, Kiplagat, L., Pabbaraju, K., Gill, K., Berenger, B.M., HU, J., Fonseca, K., Noyce, R.S., Louie, T., Evans, D.H., & **Conly, J.** (2022). Detection and quantification of infectious severe acute respiratory coronavirus-2 in diverse clinical and environmental samples. *Nature Portfolio*, 12:5418. https://doi.org/10.1038/s41598-022-09218-5

Mitchell, R., Cayen, J., Thampi, N., Frenette, C., Bartoskzo, J., Choi, K. B., Comeau, J. L., **Conly, J.**, Ellis, C., **Ellison, J.**, Embil, J., Evans, G., Johnston, L., Johnstone, J., Katz, K. C., Kibsey, P., **Lee, B.**, Lefebvre, M.-A., Longtin, Y., … Pelude, L. (2023). Trends in severe outcomes among adult and pediatric patients hospitalized with COVID-19 in the Canadian nosocomial infection surveillance program, March 2020 to May 2022. *JAMA Network Open*, 6(4). https://doi.org/10.1001/jamanetworkopen.2023.9050

Mponponsuo, K., *Leal, J.*, Puloski, S., Chew, D., Chavda, S., Au, F., & Rennert-May, E. (2022). Economic burden of surgical management of surgical site infections following hip and knee replacements in Calgary, Alberta, Canada. *Infect Control Hosp Epidemiol*, 43(6), 728–735. https://doi.org/10.1017/ice.2021.217

O'Grady, H.M., Dixit, D., Khawaja, Z., Snedeker, K., **Ellison, J.**, **Erebor, J.**, Jamieson, P., Weiss, A., Salcedo, D., Roberts, K., Wiens, K., Etches, N., **Leal, J.**, & **Conly, J.** (2022). Asymptomatic severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection in adults is uncommon using rigorous symptom characterization and follow-up in an acute care adult hospital outbreak. *Infect Control Hosp Epidemiol*, 1-3. https://doi.org/10.1017/ice.2022.168

Onakpya, I.J., Heneghan, C.J., Spencer, E.A., Brassey, J., Rosca, E.C., Maltoni, S., Pluddemann, A., Evans, D.H., **Conly, J**, & Jefferson T. Viral cultures for assessing fomite transmission of SARS-CoV-2: a systematic review and meta-analysis. *J Hosp Infect*, 130: 63-94. https://doi.org/10.1016/j.jhin.2022.09.007

Pfister, T.R., **Chow, B.**, **Shen, Y.**, **Ellison, J.**, & **Bush, K.** (2022). The associated impact of standardized admission screening on vancomycin-resistant *Enterococci* bloodstream infections. *Infect Control Hosp Epidemiol*, 1-5. https://doi.org/10.1017/ice.2022.239

Rennert-May, E., **Leal, J.**, MacDonald, M.K., **Cannon, K.**, **Smith, S.**, Exner, D., **Larios, O.E.**, **Bush, K.**, & Chew, D. (2022). Validating administrative data to identify complex surgical site infections following cardiac implantable electronic device implantation: a comparison of traditional methods and machine learning. *Antimicrob Resist Infect Control*, 11, 138. https://doi.org/10.1186/s13756-022-01174-z

Silva, A., Du, T., Choi, K B., Pelude, L., Golding, G. R., Hizon, R., **Lee, B. E.**, **Chow, B.**, Srigley, J. A., Hota, S. S., Comeau, J. L., Thampi, N., & CNISP C.difficile working group. (2022). Epidemiology of primary and recurrent healthcare-associated and community-associated pediatric *Clostridioides difficile* infection in Canada, 2015-2020. *J Pediatric Infect Dis Soc*, 2023;, piad003, https://doi.org/10.1093/jpids/piad003

Tsang, C.C., Holroyd-Leduc, J.M., Ewa, V., **Conly, J.**, Leslie, M.M., & **Leal, J.** (2023). Barriers and Facilitators to the Use of Personal Protective Equipment in Long-Term Care: A Scoping Review. *J Am Med Dir Assoc*, Volume 24, Issue 1, Pages 82-89.e2. https://doi.org/10.1016/j.jamda.2022.11.012

Versluys, K., **Pfister T.**, **Ellison, J.**, **Bush, K.** (2022). Hospital-acquired antibiotic-resistant organisms among patients with COVID-19. *Can J Infect Control*, 37(2), 74-76.

Bold lettering denotes IPC physician or staff.

©2023 Alberta Health Services, IPC

BY-NC-SA

https://creativecommons.org/licenses/by-nc-sa/4.0/