

DTT Project



Annual Report



Compiled by the TB Program Evaluation & Research Unit, University of Alberta



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DTT Project Annual Report
Year 5: 2010-2011
Compiled by TB PE&RU, University of Alberta



UNIVERSITY OF
ALBERTA



UNIVERSITY OF
SASKATCHEWAN



UNIVERSITY
OF **MANITOBA**

Introduction

The CIHR/Health Canada-funded “Determinants of TB Transmission” (DTT) project has recently completed its fifth of seven years. The prospective quantitative and qualitative phases of the project are over and the DNA fingerprint ‘windows’ of the potential TB transmitters identified in 2007 and 2008 are now closed, as of December 3, 2010. Consolidation of the DNA fingerprint database is ongoing. These prospective data will be complemented by data abstractions of retrospective data from the provincial TB registries in each of the Prairie Provinces. These abstractions are currently underway.

Approvals from each the appropriate ethics board at each participating university have been renewed annually and institutional approvals are in place across all participating provinces.

New staff and trainees have been welcomed in the last year. Network Committees provided feedback and support to the team. Study coordinators have continued to invoke awareness of and support for the project. There has been an increased interest in the DTT project in all of the provinces, and each Provincial Network Committee has grown in size to reflect this interest. Preliminary findings are available for Objective 1 of the project, and meetings have helped to develop further lines of inquiry for Objective 2:

DTT Project Objectives

Objective 1:

To characterize the occurrence and spread of particularly virulent strains of TB in order to understand the potential role of clinical and environmental determinants of TB transmission through the retrospective analysis of all culture-positive TB cases in Alberta from 1990-2007

Objective 2:

To prospectively identify determinants of TB transmission on the prairies, with emphasis on Aboriginal people, through the use of structured and semi-structured interviews and DNA fingerprinting of TB case isolates to capture all transmission events leading to early disease

Summary to Date

STUDY OVERVIEW

Year 5 of the project has extended the fundamental goals that were planned for years 1-4 and demonstrates the shift from recruitment and data collection to the next phase which seeks to address our primary objectives, through coding, analysis and dissemination. Some manuscripts have been completed and many others are in various stages of completion. They reflect findings from both the quantitative questionnaire, and the qualitative interview; two tools of data collection used in the early stages of the DTT project. The table below provides an overview of the participants in each category (participation in quantitative questionnaire, and qualitative interview) by province:

RECRUITMENT

Province	Instrument		
	Questionnaire		Interview
	Eligible	Completed	Completed (Aboriginal)
MB	125	79	18
SK	90	76	23
AB	37	32	14
Total	252	187	55

TB REGISTRY DATA ABSTRACTION AGREEMENTS

Agreements between provincial governments, universities and study investigators have been settled in Manitoba, Saskatchewan and Alberta. TB Registry data abstractions are underway in Alberta, which will act as the test-site for trouble-shooting similar data abstractions in Saskatchewan and Manitoba. These data will complement the quantitative data, fleshing out a more complete picture of transmission in the Prairies.

RESEARCH AGREEMENTS

Agreements regarding registry access between the University of Alberta and Manitoba Health and Healthy Living (MHHL), as well as sub-contracts between the UofA with the UofM and the UofS as outlined in the agreement have been signed and are now underway. Discussions with the Health Information and Privacy Committee (HIPC), part of MHHL, have been successful and a positive working relationship established.

STUDY TEAM

The study team, consisting of eight investigators, four full time research staff, and numerous collaborators, continues to coalesce and is more dedicated than ever. Martha Ainslie has recently joined the DTT project. She is an Associate Professor in the Division of Respiriology, Faculty of Medicine at the University of Manitoba.

With one year behind her, the DTT Project Manager and Alberta Study Co-ordinator, **Courtney Heffernan**, has proven to be an excellent fit with the goals of the Unit and the progress of the DTT project itself. Courtney studied Health Policy at the University of Alberta. Further to this, she has a Master's degree in Philosophy from the University of Waterloo and a Bachelor of Arts degree in Philosophy and Fine Arts from the University of Windsor. She has a special interest in Health Policy and Harm Reduction, particularly as they pertain to marginalized populations. Courtney's background is in decision-making, rationality and the study of health policy. Her plans are to one day complete her PhD in Health Science, focusing on addiction and on expanding the role of harm reduction interventions in determining health and quality of life. In the interim, she has played a strong role in expanding the DTT project and engaging the Provincial Network Committees in Alberta and Manitoba.

Kathleen McMullin has been the DTT Project Coordinator in Saskatchewan for four years and currently manages a satellite project "Tuberculosis Education in Canadian Aboriginal and Non-Aboriginal Youth: An Historical, Socio-Cultural and Public Health Promotion Curriculum". She holds a Master's Degree in Indian and Northern Education from the University of Saskatchewan. As a member of the Lac La Ronge Indian Band from northern Saskatchewan, Kathy has a special interest in conducting research which aims to bring health and enrichment into the lives of Aboriginal Peoples. Her previous work as Assistant Professor in the Faculty of Indian Education for the First Nations University of Canada has transferred seamlessly into the DTT Project. Her extensive experience in working closely with representatives of Bands, Tribal Councils, Education Committees and Authorities, and postsecondary organizations in determining the post-secondary university interests of First Nations and the needs of the communities, has been of special benefit to the DTT project and the above mentioned satellite project. She plans to complete a PhD, combining her experience in this project with Elders perspectives on TB, integrating traditional knowledge and pedagogy into educational curricula.



Andrea Still, Dr. Long
and Kathleen McMullin

Bill Chroniaris recently joined TB PE & RU and is the Data Manager of the DTT Project at the University of Alberta. He is responsible for data management, database development, data

abstraction, reporting and server maintenance. He has 16 years of experience in software development, system design and client/server database development. Bill obtained his B.Sc. in Computer Engineering from University of Alberta in 1995 and has an Honours Diploma in Electronics Engineering Technology from NAIT in 1991.

Norah Landry has returned to her former position as Dr. Long's Administrative Assistant after travelling abroad for the past ten months. Norah has a Bachelor of Commerce degree from the University of Alberta, majoring in marketing with a minor in international business. She has been with the unit for the past two and a half years, working from a distance when necessary.

Kaelyn Boyes is working part-time as a Research Assistant for the TB PE&RU while pursuing an after-degree in Human Ecology at the University of Alberta. Kaelyn has a Bachelor of Arts degree in Sociology with a minor in Native Studies, as well as a Management Development certificate and a Human Resource Management Certificate from the University of Alberta. Kaelyn has worked in various administrative roles for the Human Resource group in the Department of Medicine, *University of Alberta*, the legal department at *Enbridge Pipelines Inc.*, and in Training and Development at *ATCO Electric*.



Dr. Long, Courtney Heffernan and Kaelyn Boyes at the Prairie-wide PNC meeting

Jody Boffa, the former TB PE&RU Manager and Alberta Study Coordinator for the DTT project, has now moved to Calgary and is working on her PhD in Community Health Sciences at the University of Calgary. She will be travelling to Africa in the summer of 2011 to collect data for her research project.

Trainees

The project benefits from the accomplishments and contribution of its many outstanding trainees.

Deanne Langlois-Klassen is currently a PhD Candidate in the Department of Public Health Sciences, University of Alberta and plans to complete her degree this fall. Deanne's research focuses on foreign-born tuberculosis in Canada as well as the importation of the *M. tuberculosis* Beijing/W family of strains in Alberta. In 2010, Deanne shared the preliminary results of her Beijing/W research at the 41st Union World Conference on Lung Health; the European Respiratory Symposium 2010 Congress; the 14th International Congress on Infectious Diseases; the Annual Meeting of the North American Region of the International Union Against Tuberculosis and Lung Disease; and the Alberta Respiratory Disease Symposium. She was also involved in several related publications, most notably a publication entitled *Piecing the puzzle*

together: foreign-born tuberculosis in an immigrant-receiving country which is in press with the *European Respiratory Journal*. This work was recently recognized with 2nd Prize Department of Medicine Translational Research Fellowship (13 competitors), Faculty of Medicine and Dentistry, University of Alberta. Deanne has recently submitted for publication in *JAMA*, another major work: “*Mycobacterium tuberculosis Beijing/W strain in a major immigrant-receiving country: an emerging public health threat?*”



Deanne Langlois-Klassen presenting her poster at the 2011 IUATLD conference in Vancouver, BC

Jessica Moffatt is currently a PhD Candidate in the Department of Medicine and the Faculty of Extension, University of Alberta. Jessica comes to us from McMaster University where she completed her undergraduate degree in Health Studies. She recently transferred from an MSc in Public Health to a PhD in Medicine and Community-Based Research. She was a recipient of a Western Regional Training Centre for Health Studies award for Master's students, and currently holds a Health Quality Council of Alberta studentship. She is undertaking a Community Based Research project that arose out of the DTT project. Community Based Research can be generally defined as research that strives to be community situated, collaborative and action-oriented; as such her work will identify existing community strengths and foster an exchange of ideas to arrive at TB prevention and control strategies and recommendations that are of mutual benefit to the community and the program. This project involves five University of Alberta Faculty members, one Elder, one First Nations & Inuit Health Branch staff member and a coordinator to guide the project. Two community co-investigators have been recruited into the project to work alongside Jessica to ensure the project remains culturally congruent. Operational funding for this project has been secured through AHFMR, the Public Health Agency of Canada, First Nations and Inuit Health Alberta Region and the Network Environments for Aboriginal Health Research.

Jessica Grant was a Master's Student from the University of Saskatchewan, working on a mixed-method study examining tuberculosis transmission on the Canadian Prairies. She received funding from CIHR for the 2009-2010 year and has received funding from the Indigenous Peoples' Health Research Centre for 2010-2011. In addition she received a CIHR Michael Smith Foreign Travel Supplement. This award allowed her to New Zealand in the Fall of 2010 to compare the experience of tuberculosis transmission in the Indigenous Peoples of New Zealand and Canada.

Maria Varughese (Betsy) is a second year PhD student (Applied Mathematics/Public Health) at the University of Alberta. Her research includes applying mathematical models in Epidemiology, Aboriginal health, Tuberculosis, food- and waterborne diseases, and qualitative and quantitative methodology. She will be working on constructing mathematical models to understand Tuberculosis transmission in the Prairie Provinces using information gathered from the DTT

project. Betsy has completed her Master's degree in Epidemiology at the University of Guelph in 2009, which involved describing food and water consumption patterns, and the occurrence of acute gastrointestinal illness in a Northwestern Ontario First Nations community. Her employment, first as a co-op student and then as a part-time research assistant, for nine years by the Antimicrobial Resistance Surveillance Unit (AMRSU), Public Health Agency of Canada has allowed her to gain knowledge and experience in the Epidemiology field. Betsy hopes to gain an in-depth understanding of Applied Mathematics and Public Health. This will allow her to describe the dynamics of TB transmission and to determine the efficacy of current intervention strategies (and/or develop innovative intervention strategies) that can reduce the incidence of TB in Canada. Student support has been provided by the Pacific Institute for the Mathematical Sciences IGTC Fellowship, Canadian Institutes of Health Research (CIHR) Frederick Banting and Charles Best Canada Graduate Scholarship – Doctoral Award, and the President's Doctoral Prize of Distinction.

Angela Lau is a first-year medical student at the University of Calgary, concurrently completing a Master of Science (Experimental Medicine) at the University of Alberta. She has been working at the TB PE & RU since 2008 through three AHFMR/Alberta Innovates-funded summer studentships. Her research is focused on determining the public health consequences of smear-positive pulmonary tuberculosis in patients with typical and atypical chest radiographs. She hopes that her research findings will support the development of a computer-aided system technology to diagnose infectious pulmonary TB. Angela aims to gain a greater understanding of tuberculosis transmission, and is looking forward to being involved in more projects at the TB PE & RU. Angela's research is supported by an Alberta Health Services and Faculty of Medicine and Dentistry Graduate Studentship. In 2010 she was awarded 1st prize in the Rising Stars of Research Competition – see Poster Presentation #8 below.

Lisa Eisenbeis, BSCN who works in the TB PE&RU as a clinical trials nurse (4R/9H treatment of latent TB infection trial) has begun a Master in Sciences program at the UofA. Her Masters' project will examine the experience of respiratory isolation and tuberculosis outcomes in patients placed under warrant.

In addition, two summer students have been hired; (1) **Derrick Kao** who is funded by an AHFMR Summer Studentship and Canada Summer Jobs and (2) **Lisa World**, also funded by AHFMR Summer Studentship and Canada Summer Jobs. Derrick Kao has his Bachelors of Science in Immunology and Infection and will be starting his Doctor of Dental Medicine (DMD) at Boston University this summer. Derrick has been with the unit since May 2010 working on a study that will investigate whether the epidemiology and disease characteristics of TB in Métis peoples are sufficiently unique or distinctive to merit unique or distinct TB-elimination programs. The study will draw upon a 20 year (1997-2010) historical database of TB cases in the province of Alberta in four population groups: Métis, Status Indian, Canadian-born 'other' and foreign-born. The results of this study are anticipated to impact TB prevention and control, not just in Alberta but in other provinces and territories across Canada. Lisa World is entering into her second year of Medicine at the University of Alberta. Lisa has been with the Unit since May 2011 working on DTT related project: "Wellness, Social Determinants of Health, and Tuberculosis in First Nations Communities on the Prairies". The study will entail superimposing community wellness data on Reserve communities in the Prairies, including ones home to TB-transmitters to see if there are statistically relevant differences in community wellness/public

health access between the communities where transmitters live in comparison with those where there are no transmitters. The data collected from this study might shed light on the socio-cultural and economic disparities that impact TB transmission in the Prairies.

PROVINCIAL NETWORK COMMITTEES

In this fifth Annual Report, it is important to reiterate the significant role that the Provincial Network Committees (PNCs) play in the DTT project. The Committees' role, although less in the data-gathering phase of the study, is essential to ensuring that the study continues to honour the principles of consultation with the Aboriginal community at large. As stated in the first annual report, the role of the Network Committees is to ensure ongoing feedback and appropriate conduct throughout the study. As the analysis begins to unfold, and implications for policy development and amendment become obvious, the committees will play a more significant role.

The development of the PNCs was recently described in the following peer reviewed publication: "*A process for the inclusion of Aboriginal people in health research: Lessons from the Determinants of TB Transmission Project*" *Soc Sci Med* 2011; 72:733-738. Meetings with the PNCs in all participating provinces were held over the past year. As the recruitment period ended in December of 2008, these meetings provided an opportunity to review preliminary quantitative and qualitative findings. Updated information on the status and the work to date with was shared with all members. These updates allowed the committee members to ask questions or clarify information. Further, it allowed for an open discussion regarding all aspects of the project. Finally, these meetings continue to provide an opportunity for the study coordinators to bring forward any concerns they may have encountered. The first face-to-face meeting of the PNC in Manitoba in two years was held (with the last meeting being a teleconference), and there were many new participants. Former members were re-engaged, and Manitoba now has the highest membership of all the PNCs. There are plans to schedule PNC meetings in each of Alberta, Saskatchewan and Manitoba in the winter of 2011/12. A Prairie-Wide Provincial Network Committee meeting that brought together all PNC members was held on May 5th and 6th, 2011. This meeting was a huge success with approximately 50 members from across the Prairies traveling to Edmonton for a two day meeting. Given the success of this meeting, we are planning another for the Fall of 2012.



Manitoba Provincial Network Committee Meeting, 2010

With the support of the PNCs, the unit has taken on a satellite project - to develop a TB-specific curriculum. This project is being managed by Kathleen McMullin in Saskatchewan, and involves participation from three schools – two in Northern Saskatchewan, and one in Southern Alberta. Two of the schools are band-controlled, while the other falls under the provincial scope. To assist Kathy a Research Assistant Andrea Still, was hired. Andrea Still is completing the Health Information Management Program at the Saskatchewan Institute of Applied Science and Technology in Regina. As a Métis woman, Andrea has a keen interest in working with Aboriginal peoples and communities. Andrea's focus is researching the determinants of health with special emphasis on prevention through education.

STUDY AWARENESS

Study awareness continues to be an important aspect of the project to ensure that community stakeholders and associated health staff are conscious of and supportive of the project. Study awareness activities and relationship building continued throughout the year. Study Coordinators work diligently to stay in touch with service providers, Aboriginal organizations and leadership, funding agencies and federal and provincial prevention and control programs. In addition, our prairie-wide PNC meeting provided an opportunity to pursue our project objectives in a unified fashion, and with collective goals in mind.

There are two coordinators across the three Prairie Provinces – the manager and coordinator in Alberta, who also acts as a liaison to Manitoba, and the Saskatchewan coordinator.

Here are some other recent updates:

Manitoba:

In connection with recent meetings/conferences in Manitoba (PNC meeting, November, 2010 and presentations 10, 12, 13 below) we are exploring the possibility of undertaking a satellite project – one aimed at explaining the relationship between TB in Winnipeg and TB in reserve communities. Hopefully this might involve a local graduate student under the supervision of Pam Orr and Martha Ainslie.

Saskatchewan:

Saskatchewan benefits from the existence of mobile clinics in First Nations and Métis communities. Their presence allows the study coordinator an opportunity to visit and speak with service providers, TB clients and community leaders directly.

Alberta:

The ongoing connection with stakeholders remains strong with the Principal Investigator's involvement at the Edmonton TB Clinic, his clinical commitments with Alberta Health and Wellness/First Nations and Inuit Health and his presence in the pulmonary division, Department of Medicine. An update on the project was presented to the Community Health Nurses in Alberta on June 16, 2011; *DTT and Satellite Projects at the TB PE & RU*.

POSTER PRESENTATIONS 2010-2011

1. Langlois-Klassen D, Kunimoto D, Saunders D, Boffa J, Long R. Beijing/W family *Mycobacterium tuberculosis* in a major immigrant-receiving country: an emerging public health threat? **14th International Congress on Infectious Disease**. March 9-12, 2010, Miami, Florida, USA
2. Langlois-Klassen D, Kunimoto D, Saunders D, Boffa J, Long R. Beijing/W family *Mycobacterium tuberculosis* in a major immigrant-receiving country: an emerging public health threat? **7th Alberta Respiratory Disease Symposium (ARDS)** April 8-11, Banff, Alberta.
3. Abdel-Halim Elamy, Mrinal Mandal, Behrouz Far, Anup Basu, Irene Cheng, and Richard Long. An Intelligent CAD System for Automated Detection of Pulmonary Tuberculosis on Chest Radiograph and CT Thorax: A Road Map. Paper 1569877319 **23rd IEEE Canadian Conference on Electrical and Computer Engineering (CCECE-10)** May 2, 2010 Calgary, Alberta
4. Abdel-Halim Elamy, Behrouz Far, and Richard Long. A Multiagent System for Automated Detection and Diagnosis of Active Tuberculosis on Chest Radiograph and CT Thorax. Paper 285 **22nd International Conference on Software Engineering and Knowledge Engineering (SEKE2010)**. July 2010, San Francisco, California, USA
5. Boffa J, Mayan M, McMullin K, Lopes-Hille C, Long R, Abonyi S. Restoring balance: Perspectives on health and disease amongst Aboriginal TB Patients on the Canadian Prairies. **20th IUHPE World Conference on Health Promotion**, July 11–15, Geneva, Switzerland
6. Langlois-Klassen D, Kunimoto D, Saunders D, Chui L, Boffa J, Long R. Beijing/W family of *Mycobacterium tuberculosis* in a major immigrant receiving country: an emerging health threat? **European Respiratory Society Annual Congress**, September 18-22, 2010 Barcelona, Spain
7. Langlois-Klassen D, Kunimoto D, Saunders D, Chui L, Boffa J, Long R. Are Beijing/W strains an emerging public health threat in a major immigrant recruiting country? **41st Union World Conference on Lung Health**, November 11-15, 2010 Berlin, Germany
8. Lau A, Jacobs S, Warman A, Richardson R, Yacoub W, Whittaker D, Cockburn S, Verma G, Boffa J, Tyrrell G, Kunimoto D, Manfreda J, Long R. The Tuberculosis skin test is unreliable in low risks bacille Calmette-Guérin (BCG) - vaccinated school children. **2010 Rising Star of Research Competition at UBC**, August 18-22nd, 2010 Vancouver, BC
9. Jensen, M, Lau A, Langlois-Klassen D, Boffa J, Manfreda J, Long R. Tuberculosis in Alberta: Implication of Epidemiological Trends for Disease Elimination. **Faculty of Medicine and Dentistry 43rd Annual Summer Student Research Day**, October 16, 2010, Edmonton, AB
10. Lau A, Jacobs S, Warman A, Richardson R, Yacoub W, Whittaker D, Cockburn S, Verma G, Boffa J, Tyrrell G, Kunimoto D, Manfreda J, Long R. The Tuberculosis skin test is unreliable in low risks bacille Calmette-Guérin (BCG) - vaccinated school children. **Faculty of Medicine and Dentistry 43rd Annual Summer Student Research Day**, October 16, 2010, Edmonton, AB
11. Varughese, M, Li M, Langlois-Klassen D, Long R. Latent Tuberculosis (TB) in Canada 1986-2002 and Beyond. **MITACS/CORS Annual Conference 2010**, May 25-27, 2010, Edmonton, AB.
12. Varughese, M, Li M, Langlois-Klassen D, Long R. Latent Tuberculosis (TB) in Canada 1986-2002 and Beyond. **IGTC Research Summit**, October 1 -3, 2010, Kelowna, BC.
13. Boffa J, Rollins G, McMullin K, Abonyi S, Long R. Canada's Global Health Crisis: TB Knowledge, Attitudes, and Practices Amongst First Nations Youth. **Canadian Conference on Global Health**. October 31- November 3, 2010. Ottawa, Ontario.

14. Langlois-Klassen D, Kunimoto D, Saunders D, Chui L, Boffa J, Long R. *Mycobacterium tuberculosis* Beijing/W strain family: an emerging public health threat in a major immigrant-receiving country? **International Union Against Tuberculosis and Lung Disease North American Region Meeting**, February 24 – 26, 2011, Vancouver, BC.
15. Grant J, Abonyi S, Park J, Long R The Determinants of TB Transmission among Indigenous Peoples in Canada **International Union Against Tuberculosis and Lung Disease North American Region Meeting**, February 24 – 26, 2011, Vancouver, BC.
16. Lau A, Barrie J, Winter C, Kunimoto D, Elamy H, Tyrrell G, Long R. The Public Health consequences of smear positive pulmonary tuberculosis in patients with typical vs. atypical chest radiographs. **International Union Against Tuberculosis and Lung Disease North American Region Meeting**, February 24 – 26, 2011, Vancouver, BC.
17. Heffernan C, McMullin K, Abonyi S, Mayan M, King M, Boffa J, Long R. Baseline needs assessment of TB education in Aboriginal Youth. **International Union Against Tuberculosis and Lung Disease North American Region Meeting**, February 24 – 26, 2011, Vancouver, BC.
18. McMullin K, Abonyi S, Mayan M, Long R. Evoking 'Old Keyam': TB transmission and over-representation of Prairie indigenous people. **International Union Against Tuberculosis and Lung Disease North American Region Meeting**, February 24 – 26, 2011, Vancouver, BC.
19. Fontaine J, Ramsing R, Junker A, Yacoub W, Langley JM, Embree J, Schultz K, Grenier D, Long R. Severe combined immunodeficiency syndrome (SCID) in First Nations and Inuit in Canada – implications for BCG vaccination. **International Union Against Tuberculosis and Lung Disease North American Region Meeting**, February 24 – 26, 2011, Vancouver, BC.
20. Abonyi S, Mayan, M, McMullin K, Long R. Sick Enough to Seek Medical Attention: Tipping Points in the Tuberculosis Experience of Aboriginal Peoples of the Canadian Prairies. **Society for Applied Anthropology – 71st Annual Meeting**, March 29 – April 2, 2011, Seattle, Washington.

INVITED TALKS AND PRESENTATIONS

1. **7th Tuberculosis Conference – Stop TB Yes We Can**, FNIH School Screening Program Review. Edmonton, Alberta, March 25-26, 2010
2. **7th Tuberculosis Conference – Stop TB Yes We Can**. Determinants of TB Transmission. Edmonton, Alberta, March 25-26, 2010
3. **7th Tuberculosis Conference – Stop TB Yes We Can**. TB Prevention and Control: A Public Health, Community, University Collaboration. Edmonton, Alberta, March 25-26, 2010
4. **First Nations and Inuit Health Branch – 2nd Biennial First Nations, Inuit and Métis Health Research Meeting**. Disparity in the Incidence Rates of Tuberculosis, in Particular Infectious Tuberculosis between Aboriginal and non-Aboriginal Groups on the Prairies; Ottawa, Ontario, May 13-14, 2010
5. **First Nations and Inuit health Branch. Tuberculosis National Strategy Working Group**. "Determinants of TB Transmission: National Strategy Recommendations", Calgary, Alberta, May 21, 2010
6. **CHICA – CANADA**. "Community Infection Prevention and Control Issues: Lessons from the Determinants of Transmission (DTT) and other Projects on the Prairies. Vancouver, British Columbia, May 29- June 3, 2010
7. **First Nations and Inuit Health Branch**. "Discussion on the Renewal of the Tuberculosis Strategy: "The Epidemiology of TB on the Prairies". Ottawa, Ontario, September 16 and 17, 2010

8. **First Nations and Inuit Health, Alberta Region School Screening Review Teleconference**. "The Tuberculosis Skin Test is unreliable in low risk Bacille Calmette-Guérin (BCG) – vaccinated School Children". Canada Place, Edmonton, Alberta, September 20, 2010
9. **TB: What we know and what lies below. The Ontario Lung Association.**"HIV Screening in TB Care: HIV Opt-out the Alberta Experience. Toronto, Ontario, November 16, 2010.
10. **Southern First Nations Tuberculosis Conference. West Region Tribunal Council Health Department.** "TB Past, Present and Future". Brandon, Manitoba, November 17, 2010.
11. **Continuous Professional Learning's URBAN Physicians Learning Program.** "CSI Alberta". Telus Centre, University of Alberta, January 26, 2011.
12. **"On the move against tuberculosis: educate to accelerate action"**. "TB in children; transmission, and the withdrawal of BCG vaccine". World TB Day, University of Manitoba, Winnipeg, Manitoba, March 24, 2011.
13. **"On the move against tuberculosis: educate to accelerate action"**. "Determinants of TB Transmission on the prairies" .World TB Day, University of Manitoba, Winnipeg, Manitoba, March 24, 2011.
14. **Manitoba Respiratory Health Professional Group, Manitoba Lung Association.** "TB 101". Winnipeg, Manitoba, March 24, 2011

LABORATORY DATA

During the past year, the laboratory component of the Beijing/W study was completed, with 1,897 of 1,925 *M. tuberculosis* isolates being successfully genotyped. In order to verify the accuracy of the genotyping results, a subset of 136 isolates were also subjected to secondary genotyping at an external laboratory, with an excellent correlation in Beijing/W status. Only 20 Beijing/W cases during the study period (1990 to mid-2007) were identified within the Canadian-born population (5 of which involved Status Indians). Apart from an increased risk of polydrug resistance in patients with Beijing /W strains, initial analysis suggests no significant difference in the epidemiology or clinical characteristics of patients with and without Beijing/W strains. More comprehensive data analysis will be completed within the next year to confirm these results and to determine the transmission indices associated with Beijing/W strains within and between Alberta's subpopulations. In the past year, Deanne Langlois-Klassen presented the preliminary study findings at the 14th International Congress on Infectious Diseases (Miami, USA) and at the Alberta Respiratory Disease Symposium (Banff, Canada), poster titled: *Beijing/W family Mycobacterium tuberculosis in a major immigrant-receiving country: an emerging public health threat*. A related study is in press at the *European Respiratory Journal*, and the principal author, Deanne Langlois-Klassen has won an award through the Faculty and Dentistry for this work in the area of translational research. Only 2 prizes were awarded out of 15 applicants for this newly developed research prize. Deanne is planning to continue this work into her post-doc with the TB PE & RU following the defence of her dissertation scheduled for the end of this calendar year.

UPCOMING PLANS

The fourth year of the DTT project met expectations thanks to the hard work of the research team and the guidance of the Provincial Network Committees and collaborators. Year five has similarly met our expectations of continuing our data analysis phase, and maintaining our cross-provincial relationships.

Our prairie-wide PNC meeting in May 2011 was a huge success. This meeting provided a valuable opportunity for interaction across the participating provinces' stakeholders and research staff. Building on the momentum from this first-ever prairie-wide meeting, we're working through plans for a potential Project Conference in 2012 that would bring together a larger group of service providers, funding agencies, PNC members and national/provincial prevention and control programs. This would coincide with the final stages of dissemination and study completion.

Longer term goals include working on the development of a Prairie-wide lay organization for the control of TB among the Aboriginal population and in developing a set of knowledge sharing workshops with Indigenous peoples in New Zealand along with collaborators at the University of Auckland. We anticipate the involvement of additional trainees down the road.



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