ANOTHER IMPORTANT ACKNOWLEDGEMENT THAT I WOULD LIKE TO ADD IS SIMPLY A THANKS TO ALL OF OUR PARTICIPANTS.

CANPATH IT IS WHAT IT IS ONLY BECAUSE OF YOU AND WE ARE DELIGHTED TO SHARE THE JOURNEY OF THIS VERY DISTINCTIVE AND IMPORTANT JOURNEY ABOUT ADVANCING EVIDENCE.

ABOUT THE NOVEL THINGS THAT MODERN SCIENCES CONTINUE TO FIND TO BE DIFFICULT TO INVEST ALL OF WHICH IS NOW MORE POSSIBLE BECAUSE OF YOUR PARTICIPATION THAN EVER BEFORE.

THERE ARE MANY THOUSANDS OF PARTICIPANTS ON THIS CALL, FROM ACROSS CANADA.

WE ARE VERY GRATEFUL FOR EACH AND EVERY ONE OF YOU.

ALSO, YOU KNOW, IT'S IMPORTANT TO KNOW THAT WE ARE ON THE SAME JOURNEY.

SHARING A VISION AND MISSION AND COMMITMENT TO IMPROVING THE HEALTH OF CANADIANS NOW AND IN FUTURE GENERATIONS.

NEXT SLIDE PLEASE.

I SEE IN THE CHAT THAT SOME OF YOU, THE NEXT SLIDE PLEASE ARE ABLE TO SEE THE SLIDES NOW.

THIS WILL CONTINUE ON, IN THE CHAT PLEASE CONTINUE TO INFORM US IF THERE IS ANY, ANY FURTHER TECHNICAL DIFFICULTIES.

THE OUTLINE FOR TODAY, YOU WILL SEE WE HAVE SIX OF THE LEADERS FROM THE REGIONAL COHORTS FROM ACROSS CANADA.

WE COULDN'T INCLUDE ALL OF THEM ON THE PROGRAM TODAY.

EVERYONE WHO IS INTERESTED IN SPEAKING WITH YOU BUT YOU WILL SEE THE OUTLINE OF WHO WILL BE SPEAKING.

I WILL INTRODUCE THEM AS WE COME ALONG, ALSO THE RANGE OF TOPICS THAT WE WILL BE ABLE TO PROVIDE A HIGH-LEVEL SUMMARY FOR YOU ON TODAY.

AGAIN, WITH THE RESEARCH LEADERS AND SCIENTIFIC DIRECTORS FROM ACROSS CANADA.

THE NEXT SLIDE PLEASE.

THE FIRST SPEAKER THAT I WOULD LIKE TO INTRODUCE IS DR. PHILIP AWADALLA.

HE IS A NATIONAL SCIENTIFIC DIRECTOR FOR ALL OF CANPATH.

IN ADDITION IS THE LEADER RESPONSIBLE FOR THE ONTARIO COMPONENT, OR THE ONTARIO HEALTH STUDY.

HE JOINED CANPATH AS ONE OF THE PRINCIPAL INVESTIGATORS, BACK IN 2010, WHERE HE WAS THE DIRECTOR OF CARTaGENE IN QUÉBEC AT THAT TIME.

UNTIL 2015 WHEN HE CAME TO ONTARIO TO CONTINUE TO BE INVOLVED IN CANPATH BUT TAKING ON LEADERSHIP FOR THE ONTARIO HEALTH STUDY.

HE IS ALSO THE DIRECTOR OF COMPUTATIONAL BIOLOGY, AT THE ONTARIO INSTITUTE FOR CANCER RESEARCH.

AND A FULL PROFESSOR OF MOLECULAR GENETICS AND OF EPIDEMIOLOGY AT THE UNIVERSITY OF TORONTO.

THE NEXT SLIDE PLEASE, I WILL TURN IT OVER TO PHILIP

>> OH GREAT, THANK YOU JOHN FOR THAT INTRODUCTION.

I HOPE EVERYBODY CAN HEAR ME OKAY.

FIRST, WANT TO THANK YOU ALL FOR ATTENDING TODAY.

THERE IS A LOT HAPPENING IN THE WORLD TODAY AND OVER THE LAST COUPLE OF YEARS.

WE CERTAINLY APPRECIATE YOU ATTENDING THE SEMINAR SO THAT WE CAN PRESENT TO YOU CANPATH.

I HAVE THE ROLE TODAY OF GIVING SORT OF THE OVERVIEW OF CANPATH.

THIS IS EFFECTIVELY A PRESENTATION THAT WILL LEAD TO SOME OF OUR OTHER LEADERS TODAY PRESENTING SOME OF THE MORE SPECIFIC APPLICATIONS OF HOW CANPATH IS BEING USED.

I'M SETTING THE STAGE FOR THEM AND GIVING THE OVERVIEW OF WHAT WE'VE BEEN DOING.

ONE OF THE THINGS THAT WE'VE BEEN DOING IS TALKING TO YOU ABOUT WHAT IS AT STAKE AND WHAT ARE THE ISSUES?

RISING LEVELS OF CHRONIC DISEASE ARE ONE OF CANADA'S LARGEST PUBLIC HEALTH CHALLENGES.

MANY PEOPLE WILL BE DIAGNOSED WITH CANCER, MANY PEOPLE WILL DIE FROM CANCER.

MANY PEOPLE DIE FROM OTHER COMMON CHRONIC DISEASES.

SO WE AIM, WE HAVE MANY CHALLENGES IN FRONT OF US.

SOME OF THE QUESTIONS THAT WE WANT TO ANSWER, HOW DO WE ADDRESS THE CAUSES --

HOW DO WE IMPROVE OUR HEALTH?

ARE THEIR POPULATIONS, COMMUNITIES THAT WE NEED TO TARGET MORE DIRECTLY?

HOW DO WE POTENTIALLY BUILD HEALTH SYSTEMS THAT INCLUDE THESE OUTCOMES?

NEXT SLIDE PLEASE.

SO, THIS IS WHERE POPULATION COHORTS ARE CRITICAL.

POPULATION COHORTS LIKE CANPATH ARE LONG TERM HEALTH STUDIES THAT CAN OFFER US A CHANCE TO UNDERSTAND HEALTH AND DISEASE.

WE ARE INTERESTED IN NOT JUST IDENTIFYING WHO DEVELOPS DISEASE, WE ARE ALSO TRYING TO IDENTIFY WITH THESE POPULATION COHORTS, OVERTIME WHO MIGHT BE COMING INTO THE COHORT AND DEVELOP THE DISEASE?

THAT MIGHT HELP US IDENTIFY THE FACTORS ASSOCIATED WITH THE DEVELOPMENT OF DISEASE.

THAT IS WHERE THE POPULATION COHORT LIKE CANPATH DIFFERS FROM A CLINICAL STUDY.

OR A CLINICAL POPULATION, CLINICAL STUDY IN A HOSPITAL FOR EXAMPLE.

WE ARE ALSO INTERESTED AND WHO MIGHT REMAIN DISEASE FREE.

WE WANT CANADIANS TO HELP AGE HEALTHIER.

WE WANT TO IDENTIFY THOSE FACTORS THAT HELP CANADIANS AGE BETTER.

SO THE NEXT SLIDE PLEASE.

SO, WE BUILT CANPATH TO HELP ADDRESS THOSE TYPE OF QUESTIONS.

TODAY, YOU ARE GOING TO BE HEARING ABOUT THIS FROM BOTH MYSELF AND THE REST OF THE LEADERSHIP TEAM.

THEY WILL BE ABLE TO PRESENT TODAY.

WE BUILT THE POPULATION HEALTH RESEARCH PLATFORM THAT IN PRINCIPLE, IT'S TRYING TO ADDRESS MANY OF THE QUESTIONS THAT I ALREADY OUTLINED.

I UNDERSTAND HOW, SAY, GENETICS, BEHAVIOUR, FAMILY, HEALTH AND HISTORY, YOUR ENVIRONMENT IMPACTS WHO DEVELOPS DISEASE AND WHO DOESN'T DEVELOP DISEASE.

ALMOST ONE IN EVERY HUNDRED CANADIANS AS ALREADY SIGNED UP TO THE COHORT.

WE ARE REALLY APPRECIATIVE OF YOUR CONTRIBUTIONS AND TIME.

IT IS GOING TO BE CRITICAL GOING FORWARD, IN TERMS OF UNDERSTANDING AND IMPROVING HEALTH IN CANADA.

NEXT SLIDE PLEASE.

CANPATH IS A PARTNERSHIP.

IF YOU ARE PART OF THE STUDY, YOU HAVE BEEN INVITED THROUGH ONE OF OUR REGIONAL QUOTES.

AS JOHN MENTIONED, I LEAD THE ONTARIO ACTIVITY HERE.

YOU MIGHT HAVE SEEN AN INVITATION TO JOIN, AND SEEN UPDATES FROM THE ONTARIO HEALTH STUDY.

WE ARE PARTNERSHIP WITH SEVEN COHORTS FROM WEST COAST TO EAST COAST.

HERE ARE THEIR NAMES, WE'LL BE HEARING FROM A LOT OF THESE OF THESE LEADERS TODAY.

THE NEXT SLIDE PLEASE.

AND YOU KNOW, THIS IS WHAT MAKES UP THE OVER 300,000 CANADIANS THAT ARE PART OF THIS PROJECT.

AS I MENTIONED, IN ALMOST 100 CANADIANS ARE ALREADY PART OF THIS PROJECT.

WE HAVE IN MANY CASES, THE CONSENT TO FOLLOW THE HEALTH OF THESE CANADIANS FOR 50 YEARS OR MORE.

WE ARE STILL GROWING.

YOU SEE HERE, HERE ARE THE NUMBERS FROM BC, WE HAVE 30,000 PARTICIPANTS.

ATLANTIC PATH HAS GOTTEN TO 36,000 PARTICIPANTS, QUÉBEC 45,000.

OVER 200,000 PARTICIPANTS IN ONTARIO HEALTH STUDY.

IN ALBERTA WE HAVE RECRUITED 41,000 PARTICIPANTS.

WE ARE STILL RECRUITING, AND MANITOBA WE ARE STILL IN THAT RECRUITMENT PHASE.

YOU WILL BE HEARING FROM THE LEADER OF THE MANITOBA ACTIVITY TODAY.

AND SASKATCHEWAN, WE ARE INITIATING THOSE ACTIVITIES AS WELL.

ALL PROVINCES WILL EFFECTIVELY BE COVERED AND WILL HAVE REPRESENTATION ACROSS ALL THE PROVINCES IN CANADA.

NEXT SLIDE PLEASE.

AS IT WAS MENTIONED, WE HAVE STARTED THIS ACTIVITY BACK IN 2008.

WE STARTED UNDER A DIFFERENT NAME.

WE STARTED AS A CANADIAN PARTNERSHIP FOR TOMORROW PROJECT.

LAUNCHED AT THE CANADIAN PARTNERSHIP AGAINST CANCER.

2008 IS WHEN WE BEGAN ACTIVITIES IN TERMS OF BASELINE, RECRUITMENTS, STARTED WITH SOME PILOT ACTIVITIES AND JUST TO SEE HOW THE OPERATIONS WILL BE ABLE TO MANAGE COLLECTING OVER 300,00 PARTICIPANTS.

WE MOVED FROM OUR NATIONAL COORDINATING CENTER, BEING AT THE CANADIAN PARTNERSHIP AGAINST CANCER TO THE UNIVERSITY OF TORONTO.

IN 2018, WHERE THE NATIONAL COORDINATING CENTER IS FOR ALL OF THE PROVINCIAL ACTIVITIES.

AND AS OF TODAY, OVER 230 APPROVED PROJECTS ACCESSING YOUR DATA.

WE HAVE ALREADY BEEN APPROVED, WE'VE ALREADY SEEN OVER 180 PUBLICATIONS.

NEXT SLIDE PLEASE.

OKAY, THIS IS A QUICK SNAPSHOT OF THE KIND OF INFORMATION THAT WE'VE CAPTURED FROM THE PARTICIPANTS.

AND THE PARTICIPANT IS INVITED, PEOPLE ARE INVITED TO FILL OUT THE QUESTIONNAIRE.

THAT QUESTIONNAIRE CAPTURES INFORMATION.

WE WOULDN'T NECESSARILY BE ABLE TO CAPTURE THROUGH OTHER MEANS, SO THAT CAPTURES INFORMATION AND BEHAVIOURS.

LIFESTYLE, THAT MIGHT BE IMPACTING HEALTH.

WE ALSO INVITE PARTICIPANTS TO PROVIDE A BLOOD SAMPLE.

AND SO ACROSS CANADA, THE BLOOD SAMPLES THAT YOU PROVIDED ARE IN PRINCIPLE, THE LARGEST BIOBANK IF YOU LIKE IN CANADA AS WELL.

THOSE BIOLOGICS CAPTURE GENETIC INFORMATION AND SOME PARTICIPANTS ACROSS CANADA WERE ALSO INVITED COME TO A CLINICAL SITE.

WHERE WE ARE ABLE TO GET PHYSICAL MEASURES.

AND THEIR CONSENT, WE ARE ABLE TO LINK TO OTHER EXTERNAL DATA, FURTHER ENRICH THE INFORMATION THAT WAS CAPTURED.

THE KINDS OF INFORMATION THAT WE CAPTURE FOR QUESTIONNAIRES, THERE ARE FOLLOW UP QUESTIONNAIRES AS WELL.

WE FOCUS ON DEMOGRAPHICS.

WE GET INFORMATION ABOUT CHANGES IN HEALTH STATUS.

WE LOOK AT MEDICAL HISTORIES.

WE LOOKED AT MEDICATIONS.

WE LOOK AT METRIC MEASUREMENTS.

THINGS LIKE BEHAVIOUR, SLEEP, ALCOHOL USE.

WE CAPTURED THIS AT WHAT WE CALL BASELINE.

MANY OF YOU HAVE YOU'VE BEEN INVITED TO FOLLOW UP QUESTIONNAIRES AS WELL.

YOU CAN SEE IT HERE ON THIS SLIDE.

NEXT SLIDE PLEASE.

ALL OF THIS INFORMATION ALLOWS US TO PERFORM WHAT WE CALL RETROSPECTIVE AND PROSPECTIVE SCIENCE.

THE RETROSPECTIVE STUDIES ALLOW US TO TAKE THAT INFORMATION THAT WE HAVE COLLECTED FROM OUR PARTICIPANTS AND ASK QUESTIONS LIKE, ARE THERE FACTORS IN YOUR LIFE HISTORY THAT MIGHT HAVE LED TO THE DEVELOPMENT OR NO DEVELOPMENT OF DISEASE?

THE PROSPECTIVE COHORT, WE CAN GO FORWARD IN TIME.

WE ARE ALSO ABLE TO ENRICH THIS DATA.

WE CAN DETERMINE WHO MIGHT DEVELOP THESE CONDITIONS OVER TIME.

THIS HELP THE DATA THAT WE ARE ABLE TO CAPTURE.

NEXT SLIDE.

AS I MENTIONED, WE HAVE ONE OF THE LARGEST BIO BANKS IN THE WORLD.

NOT IN THE WORLD, IN CANADA.

SORRY.

THAT MATERIAL IS STORED FROM OLD BLOOD.

IT ALLOWS US TO DO THINGS LIKE EXTRACT DNA AND PERFORM GENOMICS.

THESE ARE ALL STORED IN BIO BANKS ACROSS CANADA.

FOR SOME PARTICIPANTS, WE CAPTURE THINGS LIKE SALIVA AND URINE.

MANY OF YOU, IN FACT THIS SLIDE IS A LITTLE OUTDATED, YOU HAVE PROVIDED BLOOD SPOTS AS PART OF OUR COVID-19 STUDY.

WE HAVE CAPTURED 27,000 IN BLOOD SPOT CARDS FROM OUR INDIVIDUAL PARTICIPANTS.

THANK YOU TO ALL OF YOU FOR DOING THAT.

THAT IS GIVING US INFORMATION ABOUT ANTIBODY RESPONSES.

WE DISCUSS PREEMPTS ESTATE VACCINATIONS AND PRE AND POST COVID-19 INFECTION.

NEXT SLIDE.

ONE OF THE GREAT THINGS ABOUT HAVING 330,000 PARTICIPANTS IS THAT WE ARE EFFECTIVELY A NATIONAL DATA INFRASTRUCTURE.

WE ARE MORE THAN JUST ACTIVITIES HAPPENING IN EACH OF THE DIFFERENT PROVINCES.

CANPATH PROVIDES A CANADIAN PICTURE OF HEALTH DATA.

WITH THE INFORMATION THAT YOU HAVE PROVIDED, PARTICULARLY FOR THOSE IN PARTICIPANTS WHO PROVIDED A HEALTH CARD NUMBER, WE WERE ABLE TO LINK IT TO CANCER REGISTRIES.

WE WERE LOOKING AT OTHER POTENTIAL ADMINISTRATIVE DATA AND INFORMATION.

IT ALLOWS US TO IDENTIFY POTENTIAL DISEASES THAT HAVE DEVELOPED AND OUR CAPTURED IN THESE DIFFERENT DATABASES.

ALSO, WITH SOME OF THIS INFORMATION THAT YOU PROVIDED WITH US, WE WERE ABLE TO CAPTURE INFORMATION BASED ON PHYSICAL LOCATIONS ASSOCIATED WITH THINGS LIKE THE BUILT IN ENVIRONMENT.

DO YOU LIVE IN A PLACE CONSIDERED WALKABLE?

WE LOOK AT HOW THAT MIGHT IMPACT HEALTH.

NEXT SLIDE.

WITH THOSE DATA LINKAGES, WHERE ABLE TO DO SOME INTERESTING KINDS OF SCIENCE.

WE ARE ABLE TO IDENTIFY, FOR EXAMPLE, INDIVIDUALS WHO HAVE COME INTO OUR COHORT AND MAY HAVE DEVELOPED A DISEASE OR CANCER.

YOU'LL BE HEARING ABOUT THIS LATER ON TODAY.

WE DO CERTAIN TYPES OF SCIENTIFIC ACTIVITIES WHERE WE POTENTIALLY LOOK AT OUR DATA, MAYBE EVEN IN THOSE BLOOD SAMPLES, WE WANT TO BE ABLE TO IDENTIFY SIGNATURES.

THEY MIGHT ALLOW US TO PREDICT THAT THAT INDIVIDUAL MIGHT HAVE DEVELOPED THAT DISEASE BEFORE THEY ACTUALLY DEVELOPED THAT DISEASE

THIS IS WHERE WE THINK WE HAVE A LOT OF STRENGTH IN CANPATH.

WE ARE ABLE TO IDENTIFY POTENTIAL FEATURES THAT MIGHT BE PREDICTIVE.

WE CAN THEREFORE HELP PREVENT A DISEASE BEFORE SOMEBODY ACTUALLY DOES DEVELOP THE CANCER OR ANOTHER CHRONIC CONDITION.

NEXT SLIDE.

WE HAVE THIS ABILITY TO LINK TO OTHER DATA SETS.

IT ALLOWS US TO DO THINGS LIKE LINKED TO MAJOR PROGRAMS LIKE THE CANUE PROGRAM.

THIS IS A MAJOR ACTIVITY FUNDED BY THE CANADIAN INSTITUTE FOR HEALTH RESEARCH.

CANUE STANDS FOR THE CANADIAN URBAN ENVIRONMENTAL HEALTH RESEARCH CONSORTIUM

WE ARE ABLE TO IDENTIFY ENVIRONMENTAL FEATURES ASSOCIATED WITH THE CANPATH PARTICIPANTS.

IT MIGHT BE IMPORTANT WITH RESPECT TO HEALTH.

IT INCLUDEs THINGS LIKE AIR POLLUTION, NOISE LEVELS.

AS I MENTIONED, GREEN-NESS AND WALK ABILITY.

WE LOOK AT HOW ALL OF THIS IMPACTS CANADIAN HEALTH.

NEXT SLIDE.

BECAUSE OF THE SIZE OF CANPATH, IT IS 330,000 PARTICIPANTS, THIS MAKES US CANADA'S LARGEST POPULATION COHORT.

IT HAS ALLOWED US TO BE INVITED TO OTHER INTERNATIONAL ACTIVITIES.

IT PUTS CANPATH ON THE WORLD STAGE.

ONE ACTIVITY IN PARTICULAR THAT WE ARE HIGHLIGHTING HERE, THE COHORT CONSORTIUM.

IT IS TRYING TO TAKE INTERNATIONAL DATA.

THEY WANT TO IDENTIFY THE COMMON THINGS THAT WE HAVE ALL BEEN CAPTURING ACROSS THESE POPULATIONS IN A GLOBAL SCALE.

WE WANT TO BE LARGER THAN THE SUM OF OUR PARTS.

THIS IS EXCITING.

I AM PART OF THE COMMITTEE FOR THIS ACTIVITY.

ARGUABLY, THERE COULD BE MILLIONS OF INDIVIDUALS WHO HAVE DONE THINGS LIKE WHAT CANPATH PARTICIPANTS HAVE DONE.

THEY HAVE DONE THIS ACROSS THE GLOBE.

THIS IS AN EXCITING ACTIVITY THAT WE ARE PROUD TO BE A PART OF.

NEXT SLIDE PLEASE.

CANPATH IT IS A PARTNERSHIP AMONG LEADING HEALTH INSTITUTES FROM COAST TO COAST.

WE ARE HOSTED AT THE SCHOOL OF PUBLIC HEALTH.

THIS IS THE UNIVERSITY OF TORONTO.

THIS IS IN PARTNERSHIP WITH THE INSTITUTION THAT I'M SITTING AT TODAY.

WE WORK WITH THE CANADIAN PARTNERSHIP AGAINST CANCER.

YOU CAN SEE THEM HERE, I WON'T HAVE TIME TO REALLY TODAY TO READ OUT ALL OF THESE IMPORTANT CONTRIBUTORS.

THEY ARE ALL LISTED HERE.

WE GREATLY APPRECIATE THEIR INVOLVEMENT IN THE PROGRAM.

NEXT SLIDE PLEASE.

I WON'T HAVE TIME TO READ OUT EVERYBODY'S NAME HERE.

THE LEADERSHIP TEAM OF CAN PATH INCLUDES CANADIAN HEALTH LEADERS ACROSS CANADA.

YOU WILL HEAR FROM MANY OF THEM TODAY.

THEY WILL BE INTRODUCING THEMSELVES.

AS MENTIONED, JOHN AND ARE COLLEAGUES AT THE NATIONAL COORDINATING CENTER.

THESE ARE THE LEADERS WHO ARE PART OF THE TEAM ACROSS CANADA.

NEXT SLIDE.

OF COURSE, WE HAVE THE NATIONAL COORDINATING CENTER HERE AT THE UNIVERSITY OF TORONTO.

OF COURSE, A BIG THANKS TO MEGAN FLEMING.

WE HEARD FROM HER THIS MORNING.

TED KONYA, HE SET UP THIS TOWN HALL FOR TODAY.

THEY ARE THE OPERATIONS MANAGER.

GREAT APPRECIATION FOR KIM SKEAD, THEY DEVELOPED MUCH OF THE CONTENT FOR WHAT YOU ARE SEEING TODAY.

I ALSO WANT TO HIGHLIGHT ASHA MOHAMED, THEY ARE THE DATA MANAGER.

THEY SUPPORT OUR ACCESS TO THE PROJECTS.

THIS IS A GOOD SEGUE TO OUR NEXT SLIDE.

ONE OF THE THINGS THAT WE ARE DOING WITH ALL OF THIS DATA, WE ARE TRYING TO ENABLE ALL OF THIS RESEARCH.

THIS IS NOT JUST AMONG CANADIAN RESEARCHERS, BUT THE INTERNATIONAL COMMUNITY AS WELL.

THIS IS NOT JUST BEING USED BY RESEARCH SCIENTISTS WHO ARE A PART OF CANPATH, THIS IS BEING USED BY THE BROADER RESEARCH COMMUNITY.

A RESEARCHER WILL COME IN.

THEY MIGHT ASK US HOW THEY CAN USE OUR DATA.

THEY REACH OUT TO ASHA MOHAMED AND THE TEAM.

ALL OF THE RESEARCHERS SEEKING TO USE CANPATH DATA, THEY MUST SUBMIT A REQUEST TO THE OFFICE.

THIS WILL BE FOLLOWED BY AN ETHICS REVIEW.

IT WILL BE REVIEWED BY THE ACCESS COMMITTEE.

THEY ENSURE YOUR DATA IS SAFE.

IT SUPPORTS HIGH QUALITY RESEARCH.

THAT IS OUR TOP PRIORITY.

NEXT SLIDE.

WHAT WE ARE ALSO COMMITTED TO, AND THIS IS SOMETHING WE HAVE DONE OVER THE PAST COUPLE OF YEARS, WE WANT TO TRAIN OUR NEXT GENERATION OF RESEARCHERS.

MOST OF THE SCIENCE, MOST RESEARCH DONE IN MOST ACADEMIC SETTINGS IS DONE BY OUR GRADUATE STUDENTS AT THE UNIVERSITIES.

IT IS DONE BY POST DOCTORATE RESEARCH SCIENTISTS AT UNIVERSITIES.

WHAT WE HAVE DEVELOPED AT CANPATH IS A TRAINING SET FOR THE NEXT GENERATION OF SCIENTISTS.

THEY WANT ACCESS TO POPULATION HEALTH DATA.

THIS IS SOMETHING THAT WE ARE VERY EXCITED ABOUT.

IT IS CALLED THE CANPATH STUDENT DATA SET.

IT IS CRITICAL FOR SOME OF THE WORK WE ARE DOING WITH HELPING TRAINING INSTRUCTORS AT CANADIAN UNIVERSITIES.

NEXT SLIDE PLEASE.

AS MENTIONED ALREADY, WE ARE SEEING EXPONENTIAL GROWTH IN ACCESS.

WE ARE APPROVING PROJECTS AT AN INCREASING RATE.

THIS IS GREAT.

WE WANT ALL OF THAT INVESTMENT IN TERMS OF PARTICIPANTS AND FUNDING.

IT CAN BE UTILIZED FOR THE RESEARCH COMMUNITY.

IT SUPPORTS HEALTH, RESEARCH, AND BASIC BIOLOGICAL RESEARCH.

THIS IS GETTING OUT THERE THROUGH PEER REVIEW PUBLICATIONS.

WE ARE EXCITED ABOUT THAT GROWTH.

NEXT SLIDE.

NOT ONLY IS THIS GETTING OUT THERE IN PUBLICATIONS, IT IS ALSO GETTING PICKED UP BY OUR MEDIA HERE IN CANADA AS WELL.

PARTICULARLY, THE COVID-19 PANDEMIC.

AGAIN, GREAT APPRECIATION TO THOSE PARTICIPANTS WHO HAVE CONTRIBUTED BLOOD SAMPLES AND DATA TO SUPPORT OUR STUDIES.

WE HAVE BEEN STUDYING THE RESPONSE TO VACCINES.

WHO IS GETTING VACCINATED, WHO IS NOT GETTING VACCINATED.

WHO IS GETTING INFECTED, WHO IS NOT GETTING INFECTED.

THIS HAS BEEN CRITICAL FOR INFORMING DECISION MAKERS AT THE PROVINCIAL AND NATIONAL LEVEL ABOUT THE NEXT STEPS AND ACTIONS.

WE ARE SEEING SIGNIFICANT MEDIA COVERAGE AS WELL.

WE ARE PLEASED TO SEE THAT THE ORGANIZATION CAN BE USED IN THIS WAY.

NEXT SLIDE.

>> I THINK THAT IS THE END.

I THINK I WILL TURN THIS OVER.

I WILL INTRODUCE DONNA.

DR. DONNA TURNER IS THE SCIENTIFIC DIRECTOR OF THE MANITOBA PROJECT.

WE ARE HAPPY TO HAVE HER --

SHE IS AT CANCER CARE MANITOBA.

WE ARE NOW ENGAGING IN MANITOBA IN TERMS OF RECRUITMENT.

JOHN, SORRY, I JUMPED IN THERE WITH MY INTRODUCTION.

>> I WELCOME YOUR WORDS AT ANY TIME.

OVER TO DONNA.

THANK YOU.

>> ALL RIGHT, THANK YOU BOTH.

WELCOME TO EVERYBODY WHO IS PARTICIPATING HERE.

IT IS MY PLEASURE TO BE HERE SPEAKING TO YOU AS PART OF THIS GREAT PROJECT THAT GOES FROM COAST TO COAST.

I AM THE LEADER OF THE MANITOBA TOMORROW PROJECT.

WE ARE A PROJECT WHICH IS THE SECOND YOUNGEST CHILD.

YOU WILL SEE THAT THE HEALTHY FUTURE SASKATCHEWAN COHORT IS JUST ABOUT TO START RECRUITMENT.

MANITOBA IS JUST STARTING TO ACTIVELY RECRUIT.

I CAN SEE THE QUESTION AND ANSWERS.

TO THOSE OF YOU FROM MANITOBA, ESPECIALLY HELLO TO YOU.

THANK YOU VERY MUCH FOR YOUR PARTICIPATION SO FAR.

WE ARE IN THE PROCESS OF SIGNIING PEOPLE UP.

BECAUSE OF COVID, WE HAVE NOT BEEN ABLE TO SEE PEOPLE IN PERSON.

WE HAVE NOT BEEN ABLE TO GET THOSE BLOOD SPECIMENS OR BODY MEASUREMENTS.

STAY TUNED.

WE ARE OPTIMISTIC THAT THIS SUMMER WE WILL BE IN A GOOD PLACE TO OPEN UP OUR STUDY CENTER.

YOU WILL BE RECEIVING AN INVITATION TO COME AND SEE US.

THAT IS EXCITING.

I AM REALLY GLAD TO SEE SUCH ENTHUSIASM.

THERE ARE SO MANY PEOPLE LISTENING TO WHAT IS HAPPENING IN OTHER PARTS OF CANADA.

THEY'RE WANTING TO JOIN IN AS WELL.

I AM LEADING THE MANITOBA TOMORROW PROJECT.

THE FOCUS OF MY TALK TODAY IS TO SHARE THE WORK THAT HAS BEEN DONE BY THE CANPATH NETWORK.

I WILL BE TALKING ON BEHALF OF ALL OF US, NOT JUST WHAT IS HAPPENING IN MANITOBA.

IF WE COULD HAVE THE NEXT SLIDE.

THE REASON, THOUGH, THAT THERE IS SO MUCH FOCUS ON CANCER, FOR SOME COHORTS OF THE NETWORK, THEY STARTED OUT AT IT AS A CANCER COHORT.

WE KNOW THAT MANY OF THE THINGS THAT AFFECT CANCER ALSO AFFECT OTHER DISEASES.

JUST A FOCUS ON CANCER, I AM AN EPIDEMIOLOGIST BY TRAINING.

I AM LOOKING AT THINGS THROUGH MY LENS IN THAT SEAT.

YOU CAN SEE THAT CANCER POSES A HUGE HEALTH BURDEN ON THE HEALTH OF CANADIANS AND HEALTH CARE SYSTEM.

THIS SLIDE HERE GIVES YOU SOME FAST FACTS.

THIS INCLUDES THE FACT THAT ALMOST 230,000 CANADIANS WILL BE DIAGNOSED WITH CANCER THIS YEAR.

WE KNOW THAT CANCER IS THE NUMBER ONE LEADING CAUSE OF DEATH IN CANADA.

WE ALSO KNOW THAT TWO IN FIVE CANADIANS WILL DEVELOP CANCER IN THEIR LIFETIME.

THIS IS JUST ONE THING TO NOTE, I ALSO NOTED THAT SOMEONE WAS ASKING, DOES THIS INCLUDE ALL OF THOSE MINOR SKIN CANCERS?

THIS DOES NOT INCLUDE NON-MELANOMA SKIN CANCERS.

THAT TWO IN FIVE IS THE MAJOR CANCERS THAT WE SEE.

THE MOST COMMON ARE LUNG, BREAST, AND PROSTATE CANCER.

WE SEE MANY OTHER KINDS OF CANCERS AS WELL.

THERE ARE OVER 200 DIFFERENT TYPES OF CANCERS THAT WE WILL BE ABLE TO STUDY WITH A PLATFORM LIKE THE ONE CANPATH OFFERS US.

YOU CAN SEE THAT WE HAVE A LOT OF STATISTICS IN OUR BACK POCKET.

WE KNOW THAT THIS MOTIVATES US TO REALLY TALK ABOUT THE IMPORTANCE OF FINDING OUT MORE ABOUT CANCER.

THE PARTICIPANTS IN CANPATH PROVIDE INFORMATION ABOUT LIFESTYLE, ENVIRONMENT, AND MEDICAL HISTORY.

THIS HELPS RESEARCHERS UNDERSTAND THE FACTORS THAT CAN INCREASE THE RISK OF CANCER.

ONE OF THE FAST FACTS THAT IS NOT ON THIS SLIDE, BUT YOU MIGHT LIKE TO NOTE ANYWAY, BASED ON WHAT WE KNOW TODAY, ABOUT 40% OF CANCERS COULD BE PREVENTED.

WE THINK THERE COULD BE MORE.

IF WE FOUND OUT MORE, WE COULD BE ABLE TO RAISE THAT 40% NUMBER.

WE COULD UNDERSTAND HOW WE CAN PREVENT EVEN MORE KINDS OF CANCER.

THAT IS ONE OF THE THINGS THAT WE ARE REALLY HOPING TO DO HERE IN CANPATH.

ONE OF THE GREAT THINGS ABOUT THE CANPATH DESIGN IS THAT IT IS A STUDY THAT IS LONG TERM.

YOU SIGNED UP FOR 50 YEARS OF FOLLOW-UP.

THIS ENABLES US TO FOCUS ON WHAT --

WE CAN FOCUS ON WHAT WILL PREVENT CANCER ENTIRELY.

WE CAN FOCUS ON WHAT MIGHT PREVENTED EARLY.

SO, HERE YOU SEE SOME BASIC STATISTICS FROM THE CANPATH COHORT TO DATE AS WAS SAID.

THERE'S OVER 330,000 CANADIANS THAT ARE PART OF THIS.

PART OF THIS COHORT.

AT THE TIME THAT PEOPLE WERE RECRUITED, YOU CAN SEE THAT ALMOST 15% OF THE COHORT ALMOST HAD A DIAGNOSIS OF CANCER AT SOME POINT.

THAT MEANS 85% DID NOT HAVE CANCER, SO WE ARE CERTAINLY INTERESTED IN FOLLOWING PEOPLE WOULDN'T HAVE CAPTURE WHAT MIGHT BE CAUSING IT.

AND THE KINDS OF QUESTIONS THAT WE HAVE ASKED IN THE INITIAL OR BASELINE QUESTIONNAIRE INCLUDES 350 VARIABLES RELATED TO CANCER OUTCOMES.

THIS INCLUDES HOW WE LIVE, WELL WE EAT, HOW MUCH WE SLEEP, HOW MUCH WE EXERCISE.

WHERE WE LIVE AND WHERE WE WORK.

AS WELL AS THINGS LIKE BODY SIZE AND YOUR HEALTH HISTORY.

ALL OF THOSE THINGS RELATE TO CANCER OUTCOMES, FOR THE LIKELIHOOD OF DEVELOPING CANCER AND THE LIKELIHOOD OF BEING TREATED EFFECTIVELY.

NEXT SLIDE PLEASE.

SO JUST TO REITERATE THE POINT ABOUT BEING COAST TO COAST, HERE IS 70 --

IT IS HAPPENING ON THE EAST COAST.

EACH COAST, ON THE WEST COAST, LED BY DR. RACHEL MURPHY AT UBC.

YOU CAN SEE THERE WAS A STUDY THAT HAS BEEN UNDERWAY TO USING CANPATH DATA TO LOOK AT LIFESTYLE AND BEHAVIOUR CHANGES TO PREVENT LUNG CANCER IN NEVER SMOKERS.

THIS IS SOMETHING THAT WE IN THE CANCER WORLD ARE VERY CONCERNED ABOUT RIGHT NOW.

ALTHOUGH TOBACCO SMOKING IS STILL VERY MUCH A PLAYER IN THAT LONG CANCER RISK.

WE ARE SEEING INCREASINGLY, LUNG CANCER DEVELOPMENT IN PEOPLE WHO DIDN'T SMOKE.

SO WHAT IS LEADING TO THAT?

THIS IS ONE OF THE THINGS THAT WE WILL BE ABLE TO LEARN IN CAN PATH WITH THIS PLATFORM.

ON THE OTHER COAST, ON THE EAST COAST, LOOKING AT ARSENIC AND DRINKING WATER.

BEING A MAJOR PUBLIC HEALTH ISSUE.

IT'S ACTUALLY HELD ISSUE FOR CANCER AS WELL, AS SOME RECTAL CANCERS INCREASE RISK FOR PEOPLE WHO HAVE BEEN EXPOSED TO ARSENIC.

SO WE ARE REALLY USING THE WHOLE COUNTRY IN ORDER TO BE ABLE TO ANSWER SOME OF THESE QUESTIONS.

ALL RIGHT, NEXT SLIDE PLEASE.

THE DOCTOR WAS TALKING A BIT ABOUT, THIS IF WE JUST FOCUS IN ON THE PUBLICATION FOCUSED ON CANCER, THERE HAVE BEEN ALMOST 80 OF THEM PUBLISHED TO DATE.

YOU CAN SEE THAT THING STARTED OFF SLOWLY AROUND 2005, REALLY PICKED UP STEAM IN THE LAST DECADE.

NOT REALLY REFLECTS THE FACT THAT FIRST OF ALL, MORE CO-HOST WERE DEVELOPED IN EACH ONE OF THE REGIONS.

SECONDLY, MORE PARTICIPANTS ENROLLED.

AS WE HAVE MORE PEOPLE, WE WERE ABLE TO ASK FOR MORE QUESTIONS AND HAVE WHAT THEY CALL, STATISTICAL POWER TO BE ABLE TO ANSWER THOSE QUESTIONS.

THE THIRD THING THOUGH OVER TIME, IS THAT WE HAVE HAD DATA MATURING.

PEOPLE WHO PROVIDE US DATA A LONG TIME AGO AND THE ALBERTA TOMORROW PROJECT BEING THE EARLIEST ONE OF ALL OF THE COHORTS, STARTED RECRUITING IN THE EARLY 2000S.

SO WE WERE ACTUALLY HAVE ENOUGH FOLLOW-UP TO BE ABLE TO REALLY STUDY PEOPLE OVER TIME.

ONE ANSWER THAT WAS A THIRD THING AND THE LAST THING, IS WE HAVE REALLY BEEN PROMOTING THE AVAILABILITY OF THE CANPATH PLATFORM TO MANY SCIENTISTS.

THAT IS ALSO CONTRIBUTED TO THE PUBLICATION RECORD.

ALL, RIGHT DOWN TO THE NEXT SLIDE PLEASE.

JUST TO GIVE YOU A FLAVOUR OF THE SORT OF APPLICATIONS THAT WE HAVE.

JUST THE TOP SIX.

LOOKING HERE, THINGS LIKE HAVING LOW BODY MASS INDEX.

HIGH WAIST CIRCUMFERENCE.

AT LOWER PARITY, THAT IS LOWER NUMBER OF CHILDREN AND FAMILY HISTORY OF BREAST CANCER WERE ASSOCIATED ALL OF THOSE THINGS WITH INCREASED RISK OF BREAST CANCER DIAGNOSED BEFORE 50.

WHICH IS CONSIDERED EARLY.

NOTE WORK WAS DONE USING DATA FROM COHORTS IN ALBERTA ONTARIO, AND BC.

YOU CAN SEE, HEAR MORE WORK BY DOCTOR MURPHY AT UBC, TALKING ABOUT LOW FRUIT AND VEGETABLE INTAKE.

WHETHER YOU HAD TOO SHORT SLEEP OR TOO LONG SLEEP ARE RELATIVELY SPEAKING TO AN AVERAGE.

BEING ASSOCIATED WITH INCREASED LUNG CANCER AMONG NONSMOKERS.

AND THEN LOOKING AT THE GENETICS, WHICH DOCTOR DR. PHILIP AWADALLA MENTIONED.

BEING ABLE TO STUDY FOR THOSE COHORTS WHERE WE HAVE BLOOD SPECIMENS TO LOOK AT GENETICS AND FINDING THAT WE'RE WAY WITH ACTUALLY MINED THIS AND FIND OUT SOME NEW CLUSTERS OF GENES THAT WERE BEING PREDICTIVE OF BREAST CANCER ONSET.

FOR COLORECTAL CANCER IN PARTICULAR, WE HAVE BEEN LOOKING AT FIBRE INTAKE IN CANCER DEVELOPMENT.

SO THIS WORK BY DR. GRANBY AND COMPANY, AND ALBERTA'S TOMORROW PROJECT REALLY SHOWED ABOUT 6% OF ALL COLORECTAL CANCERS WERE ASSOCIATED WITH INSUFFICIENT FIBRE UPTAKE.

AGAIN, QUESTIONS THAT WERE ANSWERED BY THE CANPATH PARTICIPANTS, AND LEADING US TO ANSWER QUESTIONS TODAY.

WELL LOOKING AT LIFESTYLE RELATED PREVENTION RECOMMENDATIONS, SEEING HOW WELL PEOPLE WILL ADHERE TO THEM.

THE STUDY BY WILL END AND COMPANY HAS FOUND THAT ACTUALLY, CANADIANS ARE NOT NECESSARILY VERY GOOD AT ADHERING TO THE SORTS OF RECOMMENDATIONS WHICH WE MAY BE SOMEWHAT TIRED OF HEARING.

THINGS LIKE HAVING A HEALTHY WEIGHT, NOT USING TOBACCO AND EATING FRUITS AND VEGETABLES, MAINTAINING PHYSICAL ACTIVITY.

ALL OF THESE THINGS ARE OUT THERE.

WHAT IS REALLY INTERESTING TO KNOW HOW PEOPLE ARE DOING IT WITHOUT ADHERING TO THEM.

MAYBE WE NEED A BETTER WAY OF MESSAGING, IS PART OF THE FINDING OF THAT STUDY.

AND THEN FINALLY, SOME MORE WORK BY --- CARDIGAN IN QUÉBEC.

NOW LOOKING AT GENETIC SEQUENCING FOR PEOPLE WITHOUT THE HIGH RISK, BREAST CANCER GENES OF B.R.C.A. ONE AND B.R.C.A. TWO.

LOOKING AT OTHER GENES THAT ARE A RISK FOR HEREDITARY BREAST CANCER.

JUST A TASTE OF THE SORTS OF THINGS THAT WE HAVE AS YOU SAY, ALMOST 80 ARTICLES JUST ON CANCER ALONE.

SO WE ARE MOVING ON TO THE NEXT SLIDE, IT IS A VERY SIMILAR ONE TO THE ONE YOU SAW DR. PHILIP AWADALLA PRESENTING.

JUST TO PROVIDE A VERY SHORT SNAPSHOT ON THE SORT OF WORK THAT CAN BE DONE HERE.

THIS PROJECT WAS BEING CHAMPIONED IN ONTARIO.

WELL YOU CAN SEE THAT USING THE CANPATH COHORT, WE HAVE BEEN ABLE TO LINK INFORMATION TO FIND OUT IF WE CAN ACTUALLY FIND OUT IF PEOPLE ARE AT INCREASED RISK OR DISEASE, DESPITE THE FACT BEFORE.

WE HAVE PEOPLE THAT ARE NOT DIAGNOSED WITH CANCER AND WE CAN FOLLOW FORWARD TO SEE.

THEY DEVELOP CANCER, FIND OUT IF WE COULD'VE ACTUALLY FOUND THAT EARLIER, WITH NEW TECHNIQUES.

SO, WHAT YOU SEE ON THIS SLIDE IS THAT WE HAVE THIS PARTICIPANTS JOINED, THEN A BLOOD SAMPLE COLLECTION, AND DEVELOPMENT OF CANCER.

BEING ACTUALLY ABLE TO ANALYZE THIS INFORMATION ON PEOPLE WHO HAD CANCER VERSUS THOSE THAT DON'T.

ARE THERE ACTUALLY MOLECULAR MARKERS IN THE BLOOD THAT WOULD HAVE GIVEN US A HINT EARLIER ON?

THE NEXT SLIDE, REALLY SUMMARIZE US SOME REALLY EXCITING NEW FINDINGS FROM THIS STUDY.

SO YOU CAN SEE HERE, DR. PHILIP AWADALLA AND HIS PH.D. STUDENT, NICK CHANG ARE LOOKING AT PATTERNS OF DNA IN THE BLOOD.

SO, ONE OF THE THINGS THAT HAPPENS IS THAT CELLS ROUTINELY, EVEN NOW THE CELLS GO THROUGH A CELL PROCESS WHERE THEY DIE.

BUT CANCER CELLS, WHEN THEY DIE, THEY ACTUALLY LEAVE A FINGERPRINT THAT LOOKS DIFFERENT THAN NORMAL CELLS THAT ARE DYING.

AND THIS RESEARCH TEAM USE THAT WITH INFORMATION THAT WAS COLLECTED FROM CAN PATH.

AND SO LOOKING AT PEOPLE WHO ULTIMATELY DEVELOPED BREAST CANCER.

IN THIS STUDY, ALTHOUGH MAMMOGRAPHY RIGHT NOW IS OUR BEST BET FOR SCREENING AND PEOPLE AGED 50 TO 74, AND THIS STUDY THEY LOOKED AT PEOPLE WHO DEVELOPED BREAST CANCER WITHIN 7 YEARS OF ENROLLMENT.

DID AN ANALYSIS TO SEE IF THEY HAD THESE DIFFERENT FINGERPRINTS OF LOOKING AT ABNORMAL CELL DEATH BACK EARLIER WHEN THEY WERE ENROLLED.

COMPARE THAT TO THE SAME KINDS OF FINGERPRINTS THAT WE WOULD SEE IN PEOPLE WHO DIDN'T DEVELOP BREAST CANCER.

AND WHAT THESE RESEARCHERS FOUND WAS THAT WE ACTUALLY HAD SOME SIGNALS, VERY EARLY ON THAT PEOPLE WHO ARE GOING TO DEVELOP BREAST CANCER MIGHT BE GOING TO DEVELOP IT BY LOOKING AT THIS ABNORMAL CELL DEATH.

THIS IS A VERY EARLY STUDY.

SCIENTISTS AS NEVER BASED ON ONE STUDY.

WE WILL BE DOING LOTS OF WORK TO FOLLOW THIS UP AND REPEAT THE STUDY AND EXPLORE WHAT THIS MEANS.

AND IT'S CERTAINLY WE ARE GOING TO BE DOING MAMMOGRAMS FOR A LONG TIME BECAUSE WE HAVE TO ACTUALLY GET ALL OF THE EVIDENCE IN PLACE.

THIS REALLY IS EXCITING, IT SPEAKS ABOUT THE FUTURE AND WHERE WE MIGHT ACTUALLY ABLE TO GO WITH HEALTH SERVICES DELIVERY IN THE FUTURE, IN ORDER FOR USING WORK BASED ON THE CAN PATH --

INSTEAD OF A MAMMOGRAM, WE MIGHT ACTUALLY DOING A BLOOD TEST TO SEE IF YOU ARE AT INCREASED RISK FOR BREAST CANCER.

SO THAT'S THE SORT OF THING THAT IS NEW WE WILL BE, WE WILL BE PROCEEDING.

ON TO THE NEXT SLIDE.

THAT WAS MY LAST ONE.

JOHN, OVER TO YOU TO INTRODUCE BUT NEXT GUEST.

>> THANK YOU.

ALSO, TO ALL OF THE PARTICIPANTS, SOME OF YOU MIGHT FIND THAT OUR WEBSITE IS DOWN.

WE HAVE NEVER BEEN IN A POSITION LIKE THIS.

WE HAVE 5000 PEOPLE ON A WEBINAR.

MANY OF YOU, WITH YOUR INTEREST --

FOR EXAMPLE, I COULDN'T EVEN GET ON TO OUR OWN WEBSITE TO TRY AND SHARE A COUPLE OF LINKS IN THE CHAT.

I WILL COME BACK TO DISCUSS THAT.

PLEASE BEAR WITH US.

I THINK THAT THE IMPLICATION IS PARTLY THAT THE DIALOGUE THAT WE ARE STARTING TODAY WILL CONTINUE OVER TIME.

WE LOOK FORWARD TO THAT IF WE CAN'T PROVIDE ALL OF THE EVIDENCE OR ANSWERS TO YOUR SPECIFIC QUESTIONS TODAY.

I WILL NOW INTRODUCE DR. TREVOR DUMMER.

HE JOINED CANPATH AS A RESEARCH DIRECTOR.

HE WAS ONE OF THE LEADS FOR THE ATLANTIC PATH PROGRAM IN 2008.

HE SERVED AS CO-SCIENTIFIC DIRECTOR FOR THE BC GENERATIONS PROJECT FROM 2015 TO 2021.

HE IS NOW THE NATIONAL SCIENTIFIC CO DIRECTOR.

ALSO, HE IS A CANADIAN CANCER SOCIETY CHAIR IN PRIMARY PREVENTION.

HE IS AN ASSOCIATE PROFESSOR AT UBC.

TREVOR, OVER TO YOU.

>> LET'S GO STRAIGHT TO MY NEXT SLIDE.

WHAT I WANT TO TALK ABOUT HERE, AND THIS IS SORT OF BUILDING ON WHAT DONNA AND PHILIP HAVE ALREADY MENTIONED, WE NEED TO DISCUSS HOW WE ARE USING SOME OF THIS INFORMATION THAT YOU HAVE PROVIDED TO ACTUALLY UNDERSTAND CANCER PREVENTION.

WE NEED TO UNDERSTAND HOW WE CAN PREVENT CHRONIC DISEASE AND CANCER.

THIS IS IN RELATION TO THINGS LIKE OCCUPATIONAL AND ENVIRONMENTAL EXPOSURES.

MY BACKGROUND, MY TRAINING IS ACTUALLY IN GEOGRAPHY.

I AM INTERESTED IN FEATURES OF THE ENVIRONMENT.

I'M INTERESTED IN WHERE WE LIVE, WORK, AND PLAY.

I LOOK AT HOW THAT IMPACTS OUR DISEASE RISK.

I'M COMING TO YOU TODAY FROM A VERY SUNNY BUT UNUSUALLY SNOWY VANCOUVER.

WE ARE TRYING TO LOOK AT THE FEATURES OF THE ENVIRONMENT AROUND US.

WE ARE LOOKING AT HOW THIS ACTUALLY IMPACTS CANCER AND CHRONIC DISEASE.

I DON'T SEE MY NEXT SLIDE.

I'M GONNA KEEP TALKING.

I AM HOPING THAT OTHERS CAN SEE MY SLIDE.

IT IS NOT ADVANCING YET.

THERE WE GO, THANK YOU.

MAYBE THERE IS A DELAY, SORRY ABOUT THAT.

I WANT TO TALK ABOUT EXPOSURE ASSESSMENTS.

THE INFORMATION THAT YOU ARE PROVIDING US, AND THE INFORMATION THAT WE ARE THEN ABLE TO GAIN FROM THAT INFORMATION, WE WANT TO BE ABLE TO ASSESS YOUR EXPOSURE TO MANY DIFFERENT THINGS.

THIS IS RELATED TO YOUR OCCUPATION, WHERE YOU WORK.

IT IS ALSO RELATED TO WHERE YOU LIVE, YOUR HOME ADDRESS.

IN SOME CASES, WE CONSIDER YOUR RESIDENTIAL HISTORY.

MANY OF YOU HAVE FILLED IN ALL OF THESE QUESTIONNAIRES.

WE HAVE A LOT OF QUESTIONS ABOUT BEHAVIOURS.

SOME OF THAT INFORMATION WAS ALSO RELATED TO EXPOSURE.

YOU MIGHT REMEMBER REPORTING SUN EXPOSURE IN A BASELINE QUESTIONNAIRE.

YOU MAY REMEMBER REPORTING SECONDHAND SMOKE EXPOSURE.

PASSIVE SMOKING CAN BE A MAJOR HAZARD FOR THINGS LIKE LUNG CANCER.

YOU ALSO WOULD HAVE REPORTED YOUR OCCUPATION.

WE ARE GOING BACK TO A RECENT FALL OF QUESTIONNAIRE.

MANY OF YOU COMPLETED THE OCCUPATIONAL HISTORY QUESTIONNAIRES.

FROM THAT, WE CAN GET INFORMATION ABOUT EXPOSURES RELATED TO OCCUPATION.

FOR EXAMPLE, DO YOU WORK IN SHIFTS?

MANY SCIENTISTS WANT TO LOOK AT WHETHER OR NOT SHIFT WORK AND DIFFERENT SHIFT PATTERNS, FROM A 9 TO 5 TO A NIGHT SHIFT, THEY WANT TO STUDY HOW THAT AFFECTS YOUR HEALTH RISKS.

THAT CAN BE USEFUL.

WE CAN ENHANCE THAT INFORMATION.

WE WOULD MAYBE USE COMPUTER SYSTEMS AND SOPHISTICATED COMPUTER PROCESSING TO ACTUALLY RICOTTA OR MAKE SENSE OF SOME OF THAT INFORMATION.

IF YOU FILLED IN OCCUPATIONAL HISTORY QUESTIONNAIRE, YOU WOULD HAVE FILLED IT IN TELLING US WHAT YOU DID.

YOU MAY HAVE BEEN VERY SPECIFIC.

YOU MAY HAVE BEEN ACCURATE.

YOU MIGHT HAVE PUT YOUR JOB TITLE DOWN.

MAKE USE OF THAT TO IDENTIFY WHAT OCCUPATIONS PEOPLE ARE INVOLVED IN.

CONSIDER HOW THAT MIGHT BE ASSOCIATED WITH CERTAIN CHRONIC DISEASES.

WE RICOTTA DIET INFORMATION INTO A JOB CLASSIFICATION.

YOU MAY BE ROUTINELY EXPOSED TO THIS.

WE ARE MAKING SENSE OF THAT SIMPLE DATA THAT YOU PROVIDED.

PHILIP TOUCHED ON THE CANUE STUDY.

THEY HAVE BEEN BUILDING ENVIRONMENTAL DATA SETS ACROSS CANADA.

THIS IS SOMETHING THAT INTERESTED ME AS A HEALTH GEOGRAPHER.

WE CAN USE THE INFORMATION THAT YOU PROVIDED US.

YOU PROVIDED US WITH YOUR ADDRESS.

WE HAVE A POSTAL CODE.

FOR EVERY POSTAL CODE IN CANADA, THEY PROVIDED A WHOLE RANGE OF DATA SETS.

I WILL TALK ABOUT THOSE ON THE NEXT SLIDE IN A MOMENT.

BASICALLY, THEY USED YOUR POSTAL CODE TO CONNECT YOU TO THINGS LIKE URBAN GREEN SPACE.

FINE PARTICULATE MATTER, THAT IS AIR POLLUTION.

WE KNOW THAT THIS MATTER CAN GET LODGED INTO THE LUNGS.

IT CAN CAUSE LUNG CANCER AND OTHER CHRONIC DISEASES.

WE WERE ABLE TO USE THE CANUE DATA.

AS YOU SAW ON THE PREVIOUS SLIDE, MAINTAINING YOUR PRIVACY IS ESSENTIAL TO WHAT WE DO.

THIS IS RELEASED TO SCIENCE --

WE ASSURED YOU THAT WE WOULD PROTECT YOUR PRIVACY AND MAINTAIN YOUR PRIVACY OF YOUR DATA.

WE DO THAT BY NOT RELEASING YOUR NAME.

WE DON'T RELEASE YOUR ADDRESS.

WE DON'T PROVIDE YOUR PERSONAL INFORMATION.

ONCE THE LINKAGE HAS BEEN DONE, YOUR POSTAL CODE IS ATTACHED TO THIS ENVIRONMENTAL DATA.

ONCE THAT IS DONE BY OUR TEAM, THE POSTAL CODE IS REMOVED FROM THE DATA THAT IS PROVIDED TO THE INVESTIGATOR.

THE INVESTIGATOR GETS INFORMATION ABOUT YOU.

THEY MIGHT GET INFORMATION ABOUT YOUR CHRONIC DISEASE.

LOOK AT INFORMATION ABOUT WHERE YOU WORK AND YOUR OCCUPATION.

FOR EXAMPLE, THEY MIGHT TALK ABOUT WHAT KIND OF LIGHT WAS EXPOSED IN YOUR NEIGHBOURHOOD.

WHAT KIND OF LIGHT ARE YOU EXPOSED TO AT NIGHT?

WE WANT TO THINK ABOUT HOW SLEEP MIGHT IMPACT A WHOLE RANGE OF DIFFERENT CHRONIC DISEASES.

IT COULD POTENTIALLY HAVE AN IMPACT ON CANCER.

MAINTAINING PRIVACY, THIS IS IMPORTANT.

WE DO THAT BY REMOVING THE INFORMATION BEFORE IT IS PROVIDED TO THE INVESTIGATORS.

>> OKAY, THAT IS TWO WAYS THAT WE CAN GET THIS.

>> LET'S GO TO THE NEXT SLIDE.

AS PHILIP MENTIONED, WE HAVE BEEN COLLECTING SAMPLES FROM THEM.

WHEN WE COLLECT A BLOOD SAMPLE, WE CAN STORE IT IN A BANK.

WE CAN USE THAT BLOOD SAMPLE.

WE WILL TALK IN A MOMENT ABOUT GENOMICS.

WE CAN TALK ABOUT DNA.

WE WILL LOOK AT GENETIC ASSOCIATIONS WITH CHRONIC DISEASES.

WE CAN ALSO LOOK AT LAND AND OTHER ENVIRONMENTAL EXPOSURES.

WE CAN USE YOUR SAMPLES TO GET A REALLY GOOD ESTIMATE FOR THE EXPOSURE RANGE.

THIS WAS ACTUALLY LIMITED TO THE ATLANTIC, THIS IS SOMETHING THAT WAS VERY CLOSE.

ICE --

WE WERE INTERESTED IN ENVIRONMENTAL EXPOSURES.

WE DECIDED TO COLLECT TOENAILS IN THE ATLANTIC REGION.

THESE ARE REALLY IMPORTANT FOR SEVERAL REASONS.

ONE, WHEN WILL YOU CLIP YOUR TOENAILS, THEY'RE 8 TO 12 MONTHS OLD.

THEY GET DEPOSIT WITH HEAVY METALS THAT YOU ARE EXPOSED TO.

THEY ARE A GOOD WINDOW.

WE CALL THIS A BIO MARKER OF A PARTICULAR ENVIRONMENT.

TOENAILS ARE VERY GOOD WAY OF MEASURING.

BUT WE ARE MEASURING THE QUANTITY OF THINGS LIKE ARSENIC OR OTHER HEAVY METALS.

A RESEARCH TECHNICIAN HAVE TO GO THROUGH A WHOLE RANGE OF PROCESSES IN THE LAB.

IT IS NOT THAT SIMPLE.

THIS IS A NICE WAY OF GATHERING THE INFORMATION.

I THINK ANOTHER REASON THAT THIS IS SO IMPORTANT, IT GAVE ONE OF OUR PARTNERS A WORLD RECORD FOR THE LARGEST TOENAIL COLLECTION.

FOR SOMEONE WHO WOULD GET THIS RECORD BOOK AT CHRISTMAS ROUTINELY, THIS WAS A BIG ACHIEVEMENT FOR ME.

AS YOU CAN SEE FROM THIS SLIDE WE HAVE USED THIS INFORMATION TO DO SOME REALLY EXCITING RESEARCH.

WE HAVE BEEN UNDERSTANDING THE IMPACTS OF ARSENIC.

THAT IS A PROBLEM ACROSS ATLANTIC CANADA, PARTICULARLY IN NOVA SCOTIA.

THERE IS THE IMPACT OF ARSENIC IN DRINKING WATER.

WE ARE LOOKING AT THE CANCER RISKS.

WE WANT TO UNDERSTAND WHY SOME PEOPLE ARE MORE LIKELY TO ACCUMULATE ARSENIC IN THEIR TOENAILS THAN OTHER PEOPLE.

WE HAVE ESTABLISHED A RELATIONSHIP BETWEEN BODY FAT AND HOW WELL YOU MIGHT EXCRETE ARSENIC RATHER THAN ABSORB IT.

SOME OF WHAT WE NOW ARE UNDERSTANDING ABOUT ARSENIC AND HOW IT ACTS IN OUR BODY, WE CANNOT THINK ABOUT THE CANCER RISK THAT MAY BE ASSOCIATED WITH THAT ARSENIC LEVEL.

THIS IS REALLY BEING EXPLAINED BY THE DATA.

AND SO, REALLY OUR INFORMATION IS BEING PUT IN PHILIP MENTIONED THEM.

DONNA FOCUSED ON SOME OTHER KINDS OF STUDIES.

FOR A YOUNG COHORT IN TEN YEARS FOLLOW-UP OR WHATEVER IT IS, IT'S NOT ACTUALLY THAT LONG FOR A LONG TOO.

WE ARE CONSIDERED A VERY YOUNG.

WE ALREADY STARTING TO UNCOVER SOME EXCITING THINGS AS A SLIDE SUGGEST, HOW THE BUILT ENVIRONMENT.

HOW THE NATURAL ENVIRONMENT MAY ACTUALLY IMPACT ON YOUR HEALTH.

YOU WILL SEE THERE IS A SLIDE HERE FROM VANCOUVER.

IT'S A SLIDE WE CONDUCTED WHERE WE ARE LOOKING AT WALK ABILITY ACCUMULATING.

HOW IT IMPACTS ON PHYSICAL ACTIVITY AND OBESITY.

WALK ABILITY, DO YOU LIVE IN A NEIGHBOURHOOD WE DON'T NECESSARILY NEED TO OWN A CAR?

YOU CAN ACTUALLY WALK TO WORK, WALK TO SHOPS AND STUFF LIKE THAT.

SOME OF YOU MAY BE FAMILIAR WITH THE WALK SCORE.

THIS SLIDE SHOWS THAT IN THE MOST WALKABLE COMMUNITIES IN VANCOUVER, THERE'S 117 --

INCREASE AND WALKING, WHICH IS GREAT BECAUSE WE KNOW THAT JUST SIMPLE WALKING IS REALLY GOOD FOR OUR LONG TERM HEALTH.

THAT TRANSLATES INTO LOTS OF MODERATE TO VIGOROUSLY ACTIVITY.

MORE THAN INCREASE IN, THAT MOST IMPORTANTLY IT ACTUALLY REDUCES OBESITY BY NEARLY 40%.

WE KNOW OBESITY IS A MAJOR RISK FACTOR OF CANCER AND OTHER DISEASES.

JUST BY CREATING MORE WALKABLE COMMUNITIES, THE OBESITY GENERATION AND THIS INSTANCE, IS SHOW THAT THERE'S BEEN A HUGE REDUCTION AND THEY OBESITY.

OKAY, I THINK THAT'S ALL I WANTED TO SAY REALLY.

SOME OF THAT INFORMATION AND ACTION.

I WILL NOT HUNDRED BACK TO GUILLAUME LETTRE, HE WILL INTRODUCE --

>> THANK YOU TREVOR, WE ARE MOVING QUITE PROMPTLY ON TO THE NEXT PRESENTATION BY DOCTOR GUILLAUME LETTRE.

FROM THE UNIVERSITY OF MONTRÉAL.

AND MONTRÉAL HEART INSTITUTE.

WHO IS AN ASSOCIATE, ONE OF THE CO-DIRECTORS OF CARDIGAN IN QUÉBEC.

OVER TO YOU GUILLAUME LETTRE.

>> THANK YOU, JOHN HELLO EVERYONE.

EUROPE, TODAY THEY'VE GIVEN ME THE TASK OF PRESENTING WITH CANPATH GENOMICS.

IT STARTED AND SHOWING, I WANT TO START WITH AN IMAGE TO DEMONSTRATE MY VIEW OF HUMAN DISEASES.

THERE ARE PEOPLE WHO ARE LOCATED AT A GOOD DISTANCE FROM THE PRECIPICE.

THE RISK THAT WE ALL HAVE TO DEVELOP.

WE ALSO HAVE PEOPLE THAT ARE HIGHER RISK FOR GENETIC REASONS.

THERE ARE CLOSER, THEY LOOK AT IT CLOSER TO THE PRECIPICE.

THERE ARE PEOPLE WHO ARE FOLLOW AND BE OFF THE PRECIPICE AND WILL DEVELOP THE ILLNESS.

LIKE YOU CAN IMAGINE FROM THIS IMAGE, WE ALL OF A DIFFERENT LEVEL OF RISK WITH CHRONIC THIS EASES.

THIS WILL BE DETERMINED BY AN ENVIRONMENTAL FACTOR.

AS WELL AS GENETIC FACTORS.

SO THESE RISKS ARE NOT ONLY FIXED BUT THEY ALSO, THEY CHANGE OVERTIME.

FOR EXAMPLE, AND GETTING OLDER, NEXT SLIDE.

INAUDIBLE, NEXT SLIDE.

SO, THE DIFFERENCE BETWEEN INDIVIDUALS.

THE FACT THAT WE DO NOT HAVE THE SAME GENETIC RISK, IT COMES FROM THE FACT THAT OF COURSE, THERE ARE DIFFERENCES IN OUR DNA.

WHEN WE WATCH THAT, WE ARE RESPONSIBLE FOR FEATURES THAT ARE PROPER TO THE FAMILY.

FOR EXAMPLE, NOT COLOUR OR COLOUR BLIND IN THIS.

BEING LACERATED, OR RIGHT HANDED.

ON RIGHT, FOR EXAMPLE I CANNOT SEE ANYTHING.

YOU CAN SEE ON NUMBER EIGHT.

THESE ARE FACTORS THAT ARE UNDER THE INFLUENCE AND ARE CONTROLLED BY GENETICS AND DNA.

THERE ARE ALSO CHARACTERISTICS, FOR EXAMPLE INFLUENCED BY THE N A LIKE THE COLOUR OF YOUR HAIR, SKIN.

IT IS ALSO INCREASES THE RISK OF DEVELOPING CERTAIN ILLNESSES LIKE CANCER AND DIABETES.

THE DIFFERENCE IN DNA BETWEEN INDIVIDUALS, ALLOWS US TO UNDERSTAND BETTER THE DIFFERENCES THAT THERE ARE GENES THAT ARE RESPONSIBLE FOR DIFFERENT CHRONIC, CHRONIC ILLNESSES.

NEXT SLIDE.

AND, SO TO BE ABLE TO UNDERSTAND THE CODE GENETICS, WE HAVE TO BE ABLE TO MEASURE THEM.

TO DIFFERENTIATE BETWEEN WHAT DEVELOPS CANCER FROM SOMEBODY WHO DOESN'T.

SO WE DEVELOPED IN THE LAST DECADE.

SCIENCE, WE TALKED ABOUT A DNA THAT CAN TOWARDS THE GENETIC CODE.

THAT IS THE DIFFERENCE BETWEEN YOU AND I, WHICH DICTATES THE RISKS THAT WE HAVE OF DEVELOPING CERTAIN ILLNESSES.

IN COMBINATION WITH ENVIRONMENTAL FACTORS.

THESE DIFFERENCES IN THE DNA, LIKE I HAVE WITH OTHER MOLECULES.

LIKE RNA, PROTEINS.

NEXT SLIDE.

SO, WITH THIS LINES, WE DEVELOPED A GENOMIC SCIENCE.

THAT IS MY FOCUS POINT OF THE PRESENTATION.

THE VARIATION IN DNA.

WITH CANPATH, THESE ARE ALL IMPORTANT OVER THE LAST YEARS.

WE CREATED AN IMMENSE DATABASE, GENETIC DATABASE.

AND PROTEIN AT OUR AND A, IN ORDER TO BETTER UNDERSTAND AND EXPLORE THE CAUSES OF CERTAIN DISEASES.

WHAT WE WILL DO IN THE NEXT TWO SLIDES WILL BE THE UTILITY OF GENOMICS, TO EXPLORE THE GENETIC CAUSES OF CHRONIC DISEASES.

NEXT SLIDE.

AND, SO I WANT TO ABSOLUTELY SHOW YOU THIS IMAGE.

WHICH IS A REALLY SUPERB IMAGE.

WHAT WE SEE HERE, IS THAT TWO DIMENSION OF QUÉBÉCOIS --

IN CARTER JIM.

AND THE ANALYSIS THAT THOSE ON HERE, --

BETWEEN PARTICIPANTS IN CARDIGAN.

WE PROJECTED THE SIMILARITY, IN THIS GRAPH.

EACH ONE OF THE POINTS HERE, COLOURS ARE NOT IMPORTANT.

THEY REPRESENT ONE INDIVIDUAL IN CARCINOGEN.

WHAT YOU CAN OBSERVE IS THAT THERE IS ESSENTIAL, MAJOR CENTRAL GROUPS THAT REPRESENTS THE MAJORITY POPULATION OF QUÉBEC.

THERE ARE OTHER GROUPS ON THE NEXT SLIDE.

AND WHEN WE LOOK AT THESE OTHER GROUPS.

WHAT WE REALIZE IS THAT WE HAVE PEOPLE WITH DIFFERENT THIS ORIGINS FOR EXAMPLE.

ASIAN, LATINO, ARAB, AFRICAN.

FOR EXAMPLE.

.

SO THE HISTORY OF QUÉBEC, THAT'S ALSO INTERESTING TO SEE THE FOUNDING OF WHERE PEOPLE ARE ORIGINATING FROM, THEY ARE FOUND ON THE GRAPH.

WE YOUSHAN AT X TO IDENTIFY ORIGIN BUT ALSO THE IMPORTANCE THAT CAN PAT GIFT TO THE MINORITY GROUPS.

WE WANT TO BE SURE THAT GENOMICS APPLIES NOT ONLY TO THE EUROPEAN MAJORITY, POPULATION BUT ALSO TO ALL THE OTHER POPULATIONS.

AND THE CANADIAN POPULATION.

SO THERE IS A QUESTION IN THE Q&A ABOUT THE FIRST NATIONS PEOPLE.

YES, THERE IS AN UNDER REPRESENTATION AND FACT OF THESE INDIVIDUAL CYCLES AND CAN'T PATH.

IT IS SOMETHING THAT WE ARE INVOLVED, ENGAGED AND WHICH WE WISH TO CHANGE IN THE YEARS TO COME.

NEXT SLIDE.

IN FACT, THE INFORMATION I'M GOING TO SHOW YOU IS THE LABORATORY RESEARCH.

I AM INTERESTED IN THE RISK OF DEVELOPING CARDIOVASCULAR DISEASES AND HEART ATTACK.

WELL YOU WILL SEE ON THE LEFT GRAPH IS THAT THE ILLNESSES --

SMOKING, OBESITY, DIABETES, HIGH BLOOD PRESSURE.

WE UNDERSTAND THAT THESE HAVE AN EFFECT ON THE MYOCARDIUM SYSTEM.

THERE IS A CATEGORY --

[SPEAKING FRENCH]

[SPEAKING FRENCH]

>> WHAT WE CAN SEE HERE ARE CERTAIN FACTORS.

IT IS A CONVENTIONAL RISK FACTOR.

THERE ARE OTHER FACTORS.

IF WE LOOK AT THE LAST POINTS THAT IS ON THE RIGHT, IT IS SHOWING THE CONVENTIONAL RISK FACTORS.

WE CAN ASK, CAN THIS WORK AMONGST THE QUÉBEC POPULATION IN THE CARTAGENE STUDY?

THE ANSWER IS YES.

THE ANSWER IS THE DISTRIBUTION OF GENETICS WITHIN INDIVIDUAL --

CARTAGENE --

IN GREEN, THOSE ARE THOSE THAT DID NOT HAVE A HEART ATTACK.

THE OTHER ONES THAT DID.

YOU CAN SEE THAT THERE IS A SEPARATION.

IT IS NOT PERFECT.

THEY WANT IT SUPER IMPOSED UPON THE OTHER.

HOWEVER, THE INDIVIDUALS THAT SUFFERED A HEART ATTACK HAVE APOLOGETIC SCORE THAT IS HIGHER.

THAT SHOWS US THAT GENETICS TO PLAY A ROLE IN THIS.

WHAT IS ENCOURAGING FROM THE FUTURE IS TO SEE HOW THIS COMBINES WITH OTHER COHORTS ON A WORLDWIDE LEVEL IN ORDER TO DEVELOP BIO MARKERS AND PREDICTORS BASED ON OTHER MOLECULES.

NEXT SLIDE.

TO CONCLUDE, GENOMICS IS A TOOL THAT CAN DEFINE THE CAUSE OF HUMAN ILLNESS.

IT CAN UNDERSTAND THE BIOLOGICAL MECHANISMS INVOLVED.

IT CAN ALSO EXPLORE NEW STRATEGIES.

THIS IS REALLY IMPORTANT FOR WHAT WE ARE DOING.

IT IS REALLY AND SENSUAL FOR CARRYING OUT OR REALIZING THE POTENTIAL.

>> THANK YOU.

I WILL QUICKLY INTRODUCE DR. ROBIN URQUHART.

THEY CAME IN 2021 TO SERVE AS THE SCIENTIFIC DIRECTOR FOR THE ATLANTIC PARTNERSHIP FOR TOMORROW'S HEALTH.

SHE IS AN ASSOCIATE PROFESSOR AND CANADIAN CANCER SOCIETY CHAIR.

SHE WORKS WITH DALHOUSIE UNIVERSITY.

ROBIN, OVER TO YOU.

>> HELLO, THANK YOU.

THANK YOU TO EVERYBODY FOR BEING HERE TODAY.

I HAVE THE PLEASURE OF PRESENTING SOME OF THE FINDINGS FROM THE COVID-19 WORK THAT WE HAVE BEEN DOING OVER THE PAST TWO YEARS.

NEXT SLIDE PLEASE.

LET'S BEGIN WITH SOME HIGHLIGHTS.

CANPATH AND THE INFRASTRUCTURE OR PARTNERSHIPS THAT WE HAVE BUILT OVER THE LAST DECADE OR LONGER, WE HAVE REALLY ENABLED CANADA TO RESPOND PROACTIVELY TO THE COVID-19 PANDEMIC.

IN FACT, WE WERE IN THE FIELD AS IT WERE.

WE WERE IN THE FIELD COLLECTING DATA WITHIN FOUR WEEKS OF COVID-19 BEING DECLARED A PANDEMIC.

WE WERE THE FIRST NATIONAL STUDY.

WE WERE THE FIRST STUDY IN CANADA TO REALLY CONFIRM EVIDENCE FROM CLINICAL TRIALS.

THEY LOOKED AT THE EFFICACY OF THE VACCINE.

WE WERE USING REAL WORLD DATA FROM CANADIANS.

THAT MEANS MANY OF YOU.

WE ARE CERTAINLY ONE OF THE LAST ANTIBODY STUDIES IN THE WORLD AROUND COVID-19.

NEXT SLIDE.

OKAY, THANK YOU.

AS MANY OF YOU KNOW, WE CARRIED OUT A NATIONAL COVID-19 ANTIBODY STUDY.

IT WAS FUNDED BY THE CANADIAN INSTITUTE OF HEALTH RESEARCH.

IT WAS FUNDED BY THE PUBLIC AGENCY OF CANADA AND THE COVID-19 IMMUNITY TASK FORCE.

THIS STUDY INVOLVED COLLECTING COVID-19 RELATED DATA.

WE LOOK AT OUTCOMES FROM MORE THAN 100,000 CANADIANS.

WE STARTED THIS VERY EARLY ON IN THE PANDEMIC.

THE STUDY ALSO INVOLVES PROFILING OF COVID-19 ANTIBODIES.

PEOPLE WHO HAVE BEEN DIAGNOSED WITH COVID-19.

WE ALSO LOOK AT SYMPTOMATIC, ASYMPTOMATIC, AND SUSCEPTIBLE CANADIANS.

FINALLY, THIS INVOLVES SUPPORTING PRE AND POST VACCINE IMMUNE PROFILING.

NEXT SLIDE.

MORE THAN 100,000 CANADIANS COMPETED THEIR COVID-19 QUESTIONNAIRE.

IN THIS QUESTIONNAIRE, WE ASKED INFORMATION AROUND TEST RESULTS.

WE ASKED FOR COVID-19 TEST RESULTS, SUSPECTED INFECTIONS, INFORMATION AROUND SYSTEMS SYMPTOMS THAT PEOPLE EXPERIENCED.

WE WANTED TO KNOW IF PEOPLE WERE HOSPITALIZED OR RECEIVED MEDICAL CARE DUE TO COVID-19.

WE LEARN ABOUT THEIR CURRENT MEDICAL STATUS, RISK FACTOR, SOURCES OF EXPOSURE.

WE LEARN ABOUT THE IMPACT THAT THE PANDEMIC HAS HAD ON PEOPLES JOBS.

WE ALSO LOOKED AT THEIR MENTAL WELL-BEING, THEIR EMOTIONAL, SOCIAL, AND FINANCIAL HEALTH.

EXCELLENT.

ALSO, AS MANY OF YOU PROBABLY KNOW, WE ALSO INVITED 20,000 PARTICIPANTS TO PROVIDE A BLOOD SAMPLE.

THAT WAS TO SUPPORT ANTIBODY PROFILING.

I WILL SHOW YOU SOME OF THE FINDINGS IN A MINUTE.

WE ALSO TARGETED SOME HIGH-RISK POPULATIONS FOR THE STUDY.

THESE WERE RESIDENTS OF LONG TERM CARE HOMES.

THERE ARE AREAS IN THE COUNTRY WITH A HIGH PREVALENCE OF COVID-19.

WE LOOKED AT PEOPLE WHO WERE LIVING IN UNDERSERVED COMMUNITIES.

AS MANY OF YOU KNOW, WE MAILED OUT BLOOD SPOT CARDS FOR PARTICIPANTS TO COLLECT THEIR SAMPLES.

NEXT SLIDE.

WHO PARTICIPATED IN THIS WORK?

WE CAN SEE HERE THAT THE AVERAGE AGE OF PARTICIPANTS WAS 62.7 YEARS.

WE HAD A REAL RANGE.

WE HAD SOMEONE WHO WAS 22 YEARS OLD, WE HAD SOMEBODY WHO WAS AS OLD AS 93.

WE SEE THAT MOST PARTICIPANTS, MORE THAN TWO THIRDS OF THEM WERE WOMEN.

THESE WERE IN THE EARLY DAYS.

WE DO SEE A HIGH VARIABILITY IN A TYPE OF VACCINE THAT WAS RECEIVED.

WE ALSO SEE VACCINATION STATUS VARYING ACROSS THE ANTIBODY STUDY.

AGAIN, THESE WERE THE EARLY DAYS.

RIGHT HERE ON THE LEFT-HAND SIDE, I AM GOING TO TALK ABOUT SOME OF THESE FINDINGS LATER.

MANY OF OUR PARTICIPANTS IN A COVID-19 STUDY DAYDREAM PORT A CURRENT OR PAST CANCER DIAGNOSIS.

THE GREY AND THE ORANGE BAR ON THE BOTTOM LEFT, YOU CAN SEE THE NUMBER OF PEOPLE ARE CURRENTLY IN CANCER TREATMENT.

THEY MAY HAVE BEEN DIAGNOSED SINCE THE START OF THE PANDEMIC.

ABOUT 23% OR SO HAD BEEN DIAGNOSED AT SOME POINT WITH CANCER.

NEXT SLIDE.

WE CAN SEE HERE THAT THERE WERE PUBLIC HEALTH PRECAUTIONS TAKEN BY PARTICIPANTS AFTER THE PANDEMIC WAS DECLARED.

THERE WAS A REALLY HIGH PROPORTION OF PARTICIPANTS THAT ADHERED TO PUBLIC HEALTH GUIDELINES.

THEY WENT OUT IN PUBLIC, THEY WASH THEIR HANDS, THEY AVOID CROWDS AND LARGE GATHERINGS, THEY ALSO STAYED IN THE HOUSE.

WE FOUND THAT SOME OF THE PRECAUTIONS WERE TAKEN BY A GROUP.

FOR EXAMPLE, WOMEN REPORTED BEING MORE LIKELY TO WEAR A MASK, THEY'RE MORE LIKELY TO STAY HOME, THEY ARE MORE LIKELY TO STOCK UP ON ESSENTIALS, THEY'RE ALSO MORE LIKELY TO AVOID VISITING PEOPLE OUTSIDE OF THEIR HOME.

NEXT SLIDE.

>> ONE INTO PARTICIPANTS REPORTED COVID-19 SYMPTOMS IN THE FIRST WAVE OF THE PANDEMIC.

THIS DATA IS FROM THE FIRST WAVE.

WE CAN SEE A SMALL PROPORTION HERE THAT TESTED POSITIVE FOR COVID-19.

THESE ARE ON TOP.

THEY WERE HOSPITALIZED FROM COVID-19.

ABOUT 12% WERE TESTED FOR COVID-19 DURING THE FIRST WAVE.

NEXT SLIDE.

OKAY.

WE USED THE BLOOD SAMPLES THAT WE GAINED --

WE LOOK AT COVID-19 IN THE POPULATION.

BASICALLY, THIS IS IMMUNE RESPONSE AFTER COVID VACCINATION OR INFECTION.

THAT MEANS GETTING COVID-19.

WE CAN SEE THE TOP TWO BARS.

WILL YOU CAN REALLY SEE HERE IS THAT THE HIGHEST ANTIBODY LEVELS THAT WE SEE IN FOLKS ARE OBSERVED IN INDIVIDUALS WHO ARE FULLY VACCINATED WITH MRNA VACCINES.

WE ALSO SAW THAT THE HIGHEST LEVELS, YOU CAN LOOK AT THE BOTTOM TWO BARS RIGHT HERE, WE SAW THAT THEY WERE IN THOSE WHO GOT DOUBLE VACCINATION --

SORRY, YOU CAN SEE THE DOUBLE VACCINATION AND ONE VACCINE.

YOU CAN ALSO SEE THE PEOPLE THAT HAD A PRIOR INFECTION OF COVID-19.

NEXT SLIDE.

COVID-19, WE FOUND THAT IT HAD A LARGE IMPACT ON PARTICIPANTS ABILITY TO ACCESS CANCER CARE.

IN OUR COVID QUESTIONNAIRE WE ASKED PEOPLE IF THEIR HEALTH CARE ACCESS DURING THE PANDEMIC HAD CHANGED.

WE SAW DISRUPTIONS.

IF YOU LOOK HERE AT THE FIRST SET OF BARS, WE CERTAINLY SAW THAT CERTAINLY GO UP WITH EVERYONE ACROSS THE BOARD.

THE GREEN LINE HERE BUT INDICATES PARTICIPANTS.

THESE ARE PEOPLE WHO HAD RESPONDED TO OUR COVID WORK.

THEY ARE CURRENTLY UNDERGOING CANCER TREATMENT.

THERE WAS A SUBSTANTIAL PORTION OF INDIVIDUALS THAT HAD THEIR TREATMENT COUNSELLED OR DEFERRED.

THEY HAD TREATMENTS DEFERRED BECAUSE THE PANDEMIC.

WE CAN ALSO SEE THAT A SUBSTANTIAL PERCENTAGE OF PEOPLE ALSO DELAYED SEEING A HEALTH CARE PROFESSIONAL ABOUT AN EXISTING PROBLEM OR CONCERN BECAUSE OF THE PANDEMIC.

NEXT SLIDE.

I THINK THIS IS PRETTY MUCH MY FINAL ONE.

WHEN WE LOOK AT THE EFFECTIVENESS --

WE LOOK AT THE VACCINE IN INDIVIDUALS WHO HAD A HISTORY OF CANCER, WE CAN SEE THE VERY DARK BLUE ON THE LEFT SIDE, THOSE ARE PEOPLE WHO DID NOT HAVE CANCER.

WHAT WE FOUND IS THAT PARTICIPANTS WHO HAD CANCER OR HAVE A HISTORY OF CANCER, THEY HAVE JUST SLIGHTLY LOWER ANTIBODY LEVELS AFTER TWO DOSES OF THE VACCINE.

THIS IS COMPARED TO THOSE WHO HAD NO HISTORY OF CANCER AT ALL.

YOU CAN SEE THIS HERE IN THE SLIDE.

YOU CAN SEE THESE IN THE BARS.

THEY STILL HAVE A HIGH LEVEL OF PROTECTION.

THAT IS A GOOD THING.

NEXT SLIDE.

THIS IS MY FINAL SLIDE.

ALL I REALLY WANT TO SAY HERE IS THAT OUR COVID-19 RESEARCH HAS REALLY PROVIDED EVIDENCE THAT I WOULD SAY, YOU KNOW, HAS BEEN RELEVANT TO ALL CANADIANS DURING THIS PANDEMIC.

YOU KNOW, I WANT TO EMPHASIZE THAT A LOT OF THE WORK THAT WE HAVE BEEN DOING, A LOT OF THE WORK THAT YOU HAVE BEEN DOING, ALL OF THAT DATA THAT WE HAVE BEEN PROVIDING, IT HAS PROVIDED NATIONAL GUIDANCE AROUND PLANNING FOR THE PANDEMIC.

IT HAS HELP WITH THE DECISIONS THAT HAVE BEEN MADE HERE IN CANADA DURING THE PANDEMIC.

I WILL STOP THERE.

THANK YOU.

THANK YOU.

LAST BUT CERTAINLY NOT LEAST, WE WILL TURN IT OVER TO DR. JENNIFER VENA FROM THE ALBERTAS TOMORROW PROJECT.

SHE WILL SPEAK ABOUT SOME OF THE WORK THAT SHE IS LEADING IN ALBERTA AND ACROSS CANADA.

JENNIFER?

>> THANK YOU.

I'M GOING TO GO RIGHT INTO MY NEXT SLIDE.

I DON'T THINK I HAVE TO CONVINCE YOU THAT DIET AND PHYSICAL ACTIVITY ARE REALLY IMPORTANT FOR CANCER AND DISEASE PREVENTION.

I HAVE SEEN A LOT OF YOU ASKED ABOUT IT IN THE CHAT.

THAT IS WONDERFUL.

I HAVE TO SAY THAT THERE ARE A LOT OF COMPONENTS AROUND DIET AND PHYSICAL ACTIVITY.

THEY ARE INDEPENDENT AND COLLECTIVE.

THEY ARE IMPORTANT TO HEALTH.

NEXT SLIDE.

THE POINT THAT I WANTED TO MAKE HERE WITH THIS ONE IS THAT IT IS NOT JUST ABOUT PREVENTING A DISEASE.

IF YOU THINK ABOUT IT, WE ARE ALWAYS TRYING TO PREVENT SOMETHING.

THAT MIGHT BE PREVENTING A DISEASE IN THE FIRST PLACE.

WE MIGHT BE PREVENTING PROGRESSION OF THAT DISEASE.

WE MIGHT BE PROVOKED PROMOTING A RETURN TO HEALTH.

WE ALSO MIGHT BE PREVENTING UNNECESSARY PAIN AND SUFFERING.

WHY I AM SO PASSIONATE ABOUT DIET AND PHYSICAL ACTIVITY IS BECAUSE THERE IS NO POINT ALONG THE TRAJECTORY IS WHERE WHAT YOU EAT AND DO IS NOT GONNA PLAY A ROLE OF SOME KIND.

NEXT SLIDE.

CANPATH HAS COLLECTED FRUIT AND VEGETABLE INTAKE.

THEY HAVE LOOKED AT INDICATORS OF PHYSICAL ACTIVITY.

THEY LOOK AT WHEN YOU JOINED AND WHEN THE STUDY STARTED.

IT IS VERY IMPORTANT TO HAVE THIS DATA.

WE ONLY COLLECTED SELECT MARKERS AT THAT TIME.

HOWEVER, SOME OF THE COHORTS --

THEY HAVE COLLECTED MORE DETAILED DIETARY DATA AND PHYSICAL ACTIVITY AT DIFFERENT TIMES.

I'M GOING TO GO THROUGH A COUPLE OF EXAMPLES TO SHOW HOW WE USE THIS ACROSS THE COHORTS IN CANPATH ANY INDIVIDUAL STUDIES.

NEXT SLIDE.

THIS IS A STUDY THAT DONNA MENTIONED WITH DR. DARREN BRENNER.

IT IS LOOKING AT REASONS FOR EARLY ONSET BREAST CANCER.

BUT THIS IS BREAST CANCER IN WOMEN UNDER 50.

LIKE SHE MENTIONED, THERE IS A GREATER BODY SIZE THAT HAS BEEN ASSOCIATED WITH LOWER RISK.

GREATER WASTE SIZE WAS ASSOCIATED WITH GREATER RISK.

THAT CAN BE CONFUSING.

THE STUDY WAS UNFORTUNATELY ABLE TO SHOW WHETHER OR NOT THERE WAS A ROLE FOR CONSUMPTION AND ACTIVITY.

THIS MIGHT BE BECAUSE THERE WAS NOT ENOUGH DIFFERENCES BETWEEN PEOPLE.

IT MIGHT BE BECAUSE ONLY THOSE LIMITED INDICATORS WERE LOOKED AT.

NEXT SLIDE.

>> EXCUSE ME.

I'M GOING TO SHOW YOU ONE THAT GOES INTO MORE DETAIL.

THIS IS FROM DR. KATERINA MAXIMOVA.

SHE USED DATA FROM ALBERTAS TOMORROW PROJECT.

PARTICIPANTS JOINED IN 2000 UNTIL 2008.

WE ASKED ABOUT A WIDE VARIETY OF FRUITS THAT THESE PEOPLE HAVE EATEN OVER THE LAST YEAR.

SHE USED THIS DATA TO LOOK AT THE ROLE FOR RED AND PROCESSED MEAT.

IT GETS A BAD RAP WHEN IT COMES FOR CANCER, IT GETS DISCUSSED AS A CANCER RISK.

YOU WOULD TYPICALLY NOT SIT DOWN TO JUST A STAKE.

HOPEFULLY YOU ARE NOT DOING THAT.

WE DO NOT EAT FOODS IN ISOLATION.

WE EAT THEM IN COMBINATION.

YOU HAVE TO LOOK AT WHAT YOU ARE EATING.

YOU HAVE TO LOOK AT THE TOTALITY OF THE DIET IN ORDER TO ASSESS WHAT THE RISK IS.

SHE LOOKED AT PEOPLE WHO ATE HIGH AMOUNTS OF RED OR PROCESSED MEATS.

THIS IS THINGS LIKE DELHI MEETS.

FOR EXAMPLE, HOT DOGS.

SHE ALSO LOOKED AT HIGH OR LOW AMOUNTS OF FRUITS, THAT'S DOUBLES, WHOLE GRAINS, AND FIBRES.

SHE FOUND THAT IT IS THE COMBINATION OF HIGH PROCESSED MEAT AND LOW FRUIT AND VEGETABLE THAT IS ONE OF THE WORST PATTERNS.

THAT IS COMPARED TO HIGH FRUIT AND VEGETABLE AND LOW PROCESSED MEATS.

IF YOU HAVE HIGH INTAKES OF BOTH, IT IS SOMEWHERE IN THE MIDDLE.

IT IS NOT NECESSARILY THAT IT IS JUST RED MEAT THAT IS BAD FOR YOU.

IT REALLY DEPENDS ON WHAT ELSE YOU ARE EATING IN A DIET.

YOU NEED TO HAVE THAT HOLISTIC VIEW OF THE DIET IN ORDER TO ESTIMATE RISK.

NEXT SLIDE PLEASE.

>> THIS IS JUST ANOTHER STUDY THAT I WANTED TO HIGHLIGHT.

IT IS RELATED TO PHYSICAL ACTIVITY.

THIS DOCTOR IS LOOKING AT WORK RELATED PHYSICAL ACTIVITY AND THE RISK OF LUNG CANCER.

FISCAL ACTIVITY IS ALSO WELL RECOGNIZED FOR REDUCING CANCER RISK.

THERE'S DIFFERENT TYPES OF PHYSICAL ACTIVITY.

THE TYPE OF PHYSICAL ACTIVITY THAT YOU ENGAGE IN DURING RECREATIONAL TIME MAY BE DIFFERENT THAN THE ACTIVITY YOU ENGAGE IN AT WORK.

ALSO THERE IS THE DIFFERENT TYPES OF EXPOSURES THAT YOU MIGHT HAVE IN JOBS THAT ARE MORE PHYSICALLY DEMANDING.

THEY MAY BE DIFFERENT THAN WHAT YOU WOULD SEE IF YOU ARE JUST GOING FOR A JOB IN THE PARK FOR EXAMPLE.

UNDERSTANDING THESE DIFFERENCES IS VERY IMPORTANT TO TAKE INTO CONTEXT.

WHAT'S SHE IS DOING IS LOOKING AT HOW THE PHYSICAL ACTIVITY PERFORMED OUTWORK MAY RELATE TO CANCER.

THIS IS COMPARED TO DIFFERENT TYPES OF PHYSICAL ACTIVITY.

THAT STUDY IS STILL IN PROGRESS.

NEXT SLIDE.

>> I JUST GAVE YOU A LITTLE BIT OF A FLAVOUR.

THAT IS NOT THE EXTENT OF THESE STUDIES.

I THOUGHT IT MIGHT BE IMPORTANT TO HIGHLIGHT WHAT THERE STILL IS TO UNDERSTAND.

WE KNOW IT IS IMPORTANT.

WE REALLY DON'T KNOW ALL OF THE FACTORS OR HOW THEY ARE INVOLVED.

WE NEED TO THINK ABOUT HOW YOUR BEHAVIOURS CHANGE OVERTIME.

THAT WILL IMPACT YOUR RISK FOR PROTECTION AND DEVELOPMENT OF DISEASE.

IT IS THE IMPACT OF THE PARTS AND THE SUM OF THE PARTS.

WE NEED TO THINK ABOUT THE COMPONENTS THEMSELVES AND HOW THEY INTERACT WITH YOUR GENETIC BACKGROUND, ENVIRONMENT, AND OTHER LIFESTYLE FACTORS.

FINALLY, THERE IS THE CONTEXT UNDER WHICH PEOPLE MAKE THEIR --

YOUR ENVIRONMENT, YOUR ECONOMIC AND SOCIAL FACTORS CAN REALLY INFLUENCE YOUR DIET OR FISCAL ACTIVITY CHOICES AND BEHAVIOURS.

WE THERE ARE THINGS OUT OF PEOPLES CONTROL.

YOU THINK ABOUT TRYING TO MAKE A HEALTHY CHOICE.

YOU ARE GOING TO BE LIMITED BY TIME, MONEY, AND AVAILABILITY.

THIS MIGHT NOT BE THE CHOICE THAT YOU MAKE UNDER DIFFERENT CIRCUMSTANCES.

NEXT SLIDE.

>> HOW DO WE UNDERSTAND MORE ABOUT DIET AND PHYSICAL ACTIVITY?

WE NEED TO COLLECT MORE AND BETTER DATA.

WHAT GOES IN DETERMINES WHAT YOU CAN GET OUT OF IT.

THIS IS SOMETHING THAT WE ARE TALKING ABOUT AT CANPATH.

I SEE MANY OF YOU ASKING WHY WE ARE NOT ASK MORE ABOUT THIS.

WE ARE TALKING ABOUT THIS.

THE PROBLEM, TO DO IT WELL IS A LITTLE BIT MORE COMPLICATED AND OTHER FACTORS.

IT IS NOT ABOUT SMOKING OR NOT SMOKING.

WHEN WE ASK ABOUT DIET, WE THINK ABOUT HOW MANY FOOD RELATED DECISIONS YOU MAKE IN ONE DAY.

IT IS A LOT.

IT IS VERY COMPLICATED BEHAVIOUR TO COLLECT.

WE ARE TRYING TO FIGURE OUT HOW WE CAN DO THIS WELL.

WE ARE ALSO TRYING TO RESPECT YOUR TIME AND EFFORT.

WE WANT TO BE ABLE TO BALANCE THOSE TWO.

I THINK THAT IS MY LAST SLIDE.

I KNOW THAT WAS QUICK.

THANK YOU.

>> THANK YOU VERY MUCH.

I WILL JUST WRAP UP WITH A FEW FINAL COMMENTS.

NEXT SLIDE.

IN PARTICULAR, ON THE SLIDE, I JUST WANTED TO SUMMARIZE THINGS.

YOU'VE HEARD WHERE WE ARE NOW IN REGARD TO THE TYPES OF WORK BEING DONE.

I HAVE SOME COMMENTS ABOUT WHERE WE PLAN TO BE IN THE NEXT FIVE YEARS.

WE CONTINUE TO GROW THE DATA RESOURCES.

WE WANT TO HAVE THIS DATA BE USED EVEN MORE BY RESEARCHERS ACROSS CANADA AND INTERNATIONALLY.

MANY OF THE QUESTIONS THAT HAVE COME UP INCLUDE TOPICS RELATED TO HOW THE KNOWLEDGE IS USED.

THERE ARE MANY EXAMPLES THAT WE COULD GO INTO.

BASICALLY, THAT ONGOING KNOWLEDGE IS TRANSFERRED TO IMPROVE HEALTH CARE AND HEALTH SYSTEMS.

IT HELPS IMPROVE OUR COMMUNITIES.

THIS IS ALL PART OF THE KNOWLEDGE TRANSFER ACTIVITY THAT WE WILL CONTINUE TO SUPPORT.

THE CONTINUED ENHANCEMENT OF THE DATA AND BIOS SPECIALISTS THEMSELVES, THEY WILL CONTINUE TO EVOLVE.

SUCH AS THE SPECIMENS THAT HAVE BEEN KEPT IN BY THE BIO BANKS IN EACH PROVINCE.

THEY CAN BE TURNED INTO RESEARCH READY DATA.

THERE IS SUSTAINED GROWTH AND STRENGTHENING CAN PAT.

THIS IS WHAT WE ARE NOW.

WE ARE CANADA'S PREMIER HEALTH RESEARCH PLATFORM.

THERE IS NOTHING ELSE LIKE CANPATH IN CANADA.

IT HAS NEVER BEEN TRIED BEFORE.

THERE HAVE BEEN OTHER LARGE STUDIES, BUT THEY HAVE NEVER HAD ALL OF THE FEATURES OF PEOPLE ACROSS THE LIFE SPAN.

PEOPLE ARE VOLUNTEERING TO PROVIDE AS MUCH AS THEY CAN.

THEY'RE PARTICIPATING OVERTIME IN ORDER TO ADVANCE THE KNOWLEDGE ACROSS SO MANY DIFFERENT DIMENSIONS.

THAT PROFILE AS CANADA'S PREMIER HEALTH PLATFORM WILL CONTINUE.

IT IS IMPORTANT FOR US TO CONTINUE TO BE RECOGNIZED AS A DATA PLATFORM WHERE WE APPLY THE TOP TIER STANDARDS AROUND DATA SECURITY, ETHICS, INTEGRITY.

WE ARE DRIVING SCIENTIFIC MERIT.

UNIQUELY, WE NEED TO BE ABLE TO DO THINGS LOCALLY WITHIN EACH PROVINCE.

WE ALSO NEED TO BE ABLE TO WRAP THINGS UP AT A NATIONAL LEVEL INTO A FEDERAL DATA SYSTEM.

I SEE THAT ONE OF THE QUESTIONS THAT CAME UP JUST A MOMENT AGO WAS ABOUT SUCH THINGS AS DATA SECURITY.

IT IS TRUE THAT OVER THE COURSE OF THE TIME THAT WE HAVE BEEN WORKING WITH YOU THAT OUR DATA SECURITY BACKUP SYSTEMS, PASSWORD PROTECTION, ENCRYPTION, ALL OF THAT STUFF HAS BEEN TOP TIER.

WE HAVE NEVER HAD A BREACH.

THERE ARE MANY LAYERS OF PROTECTION THAT SECURE THAT.

FOR EXAMPLE, AT OUR NATIONAL DATA SYSTEMS, WE DO NOT KNOW YOUR NAME OR ADDRESS.

THAT IS THE TYPE OF INFORMATION THAT IS KEPT AT THE PROVINCIAL LEVEL.

THEY ARE BEING RECOGNIZED AS A PREMIER PLATFORM.

WE ARE AIMING TO DELIVER IMPROVED DISEASE PREVENTION TREATMENT.

WANT TO IMPROVE THE PERFORMANCE OF THE HEALTH CARE SYSTEM ACROSS THE POPULATION.

AS A RESULT OF TODAY, I WILL ADD ONE MORE PRIORITY FOR THE NEXT YEAR OR TWO.

WITH YOUR INTEREST, I THINK THAT WE NEED TO DO THIS MORE.

OBVIOUSLY, WE TRIED TO PACK A LOT IN FOR ONE HOUR.

ONE AND A HALF HOURS.

IT SEEMS LIKE THERE IS ENOUGH INTEREST.

THERE HAS BEEN TREMENDOUS INPUT FROM YOU AS PARTICIPANTS.

WE COULD ACTUALLY REPEAT THIS WITH A BIT MORE OF A FOCUS ON DIFFERENT THEMES.

WE WOULD THEN BE ABLE TO ANSWER YOUR QUESTIONS.

WE COULD HAVE DIALOGUE WITH YOU MORE DIRECTLY.

NEXT SLIDE.

ONE OF THE FINAL STATEMENTS IS THAT YOU HAVE HEARD FROM DONNA TURN OFF OF MANITOBA.

THEY ARE LEADING THE MANITOBA PROGRAM.

THERE IS ALSO SASKATCHEWAN, THEY WERE NOT ABLE TO BE HERE TODAY.

WE HAVE TWO PROVINCES WHERE THERE ARE STILL ONGOING RECRUITMENT.

QUESTIONS HAVE COME UP.

WHAT ABOUT THE TERRITORIES?

THE TERRITORIES ARE OF INTEREST TO US.

WE HAVE OFFERED TO SHARE OUR EXPERTISE, TOOLS, SYSTEMS, AND SUPPORT SHOULD THERE BE ANY INTEREST IN THE ABILITY TO EXPAND TO COVER ALL OF CANADA.

NEXT SLIDE.

THERE ARE MANY SPONSORS AND HOSTS.

THESE ARE SHOWING THE LOGOS OF THE MANY GROUPS.

EACH REGIONAL COHORT IS HOSTED BY ORGANIZATIONS THAT PROVIDE A LOT OF SUPPORT.

THERE ARE SEVERAL FUNDING AGENCIES AS WELL.

THIS REALLY IS QUITE AN IMPORTANT MULTI INSTITUTIONAL COLLABORATION.

NEXT SLIDE.

MOST IMPORTANTLY, THANK YOU AGAIN TO THE PARTICIPANTS ACROSS ALL REGIONAL COHORTS.

YOU HAVE GENEROUSLY DONATED YOUR TIME, INFORMATION, SPECIMENS.

CANPATH IT IS WHERE IT IS NOW BECAUSE OF YOUR CONTRIBUTIONS.

WE ARE VERY GRATEFUL.

CANADA IS GRATEFUL.

YOUR ONGOING COMMITMENT IS TREMENDOUSLY APPRECIATED.

I THINK THAT WE CAN TURN OFF THE SLIDES AND COME BACK TO HAVE SOME MORE OF THE Q AND A WITH THE ACTUAL SPEAKERS.

THERE ARE SO MANY QUESTIONS THAT HAVE COME UP TODAY.

I THINK THAT WE CAN DO IS PREPARE A SUMMARY OF THE QUESTIONS.

WE WILL PREPARE A FREQUENTLY ASKED QUESTIONS KIND OF SUMMARY.

WE CAN PROVIDE SOME THEMES TO COVER ALL OF YOUR QUESTIONS.

THIS CAN BE POSTED AT THE CANPATH WEBSITE.

WE WILL ALSO ENSURE THAT THERE IS A LINK THROUGH TO THE REGIONAL COHORTS.

AGAIN, WITH REGARD TO PRIVACY FOR U.S. PARTICIPANTS, WE WANT YOU TO KNOW THAT WE ARE AT THE CORE DATING CENTRE IN TORONTO DO NOT HAVE YOUR IDENTIFICATION.

WE DO NOT KNOW HOW TO CONTACT YOU.

THAT IS ONE REASON THAT WE CANNOT JUST SEND IT OUT TO YOU.

THAT IS DONE TO ENSURE PRIVACY.

THERE ARE SOME QUESTIONS THAT I COULD ASK SOME OF OUR PANELISTS TO REFER TO.

MAYBE I WILL START WITH PHILIPPE.

ONE OF THE QUESTIONS WAS, IT IS SAID THAT THE DATA IS BEING USED INTERNATIONALLY, CAN YOU ELABORATE ON THAT?

>> OKAY.

YOU VERY SPECIFICALLY, WE HAVE A VERY RIGOROUS ACCESS REQUESTS.

WE HAVE RIGOROUS ACCESS PROTOCOLS FOR THE USE OF OUR DATA.

WHILE WE ARE OPEN TO INTERNATIONAL RESEARCH, MOST OF THE ACCESS REQUESTS ARE COMING FROM CANADIAN SCIENTISTS.

WHEN I DESCRIBED IN OUR SLIDES TODAY WAS LARGELY AROUND HOW WE ARE SHARING THE DATA VARIABLES, NOT A DATA ITSELF.

THIS IS THE KINDS OF DATA THAT WE ARE CAPTURING, NOT NECESSARILY THE INDIVIDUAL DATA THAT HAS BEEN PROVIDED.

WE ARE EFFECTIVELY JUST TRYING TO SHARE WITH OTHER RESEARCH PROGRAMS ACROSS THE WORLD.

THESE ARE THE KINDS OF QUESTIONS THAT WE ARE ASKING OF OUR PARTICIPANTS.

RIGHT?

THIS IS THE KIND OF DATA THAT WE ARE CAPTURING.

WE ARE NOT ACTUALLY SHARING THE ACTUAL DATA AT THIS POINT.

>> THANK YOU.

I WILL TURN OVER TO DONNA.

ONE OF THE QUESTIONS WAS, HOW CAN I HELP NEW PARTICIPATION IN THESE STUDIES?

MANITOBA IS A PRIME EXAMPLE OF THAT.

>> THAT WAS A GREAT QUESTION.

BASICALLY, MANITOBA, WE ARE ACTUALLY RECRUITING OTHER COHORTS.

THEY ARE NOT ACTIVELY RECRUITING FOR THE MAIN PART OF THE STUDY.

IF YOU ARE IN MANITOBA, IF YOU ARE INTERESTED, WE ARE TAKING ALL COMERS.

YOU CAN GO TO OUR WEBSITE.

YOU CAN ACTUALLY JUST GOOGLE THE MANITOBA PREMORAL PROJECT IF YOU WOULD LIKE.

YOU CAN GO TO W W DOT --

THIS WILL TAKE YOU TO THE MANITOBA TOMORROW PROJECT.

YOU CAN CALL US OR EMAIL US.

YOU WOULD LOVE TO HEAR FROM YOU.

TELL THE FOLKS THIS CAPTURE THAT THEY CAN CONTACT THE HEALTHY FUTURE SASKATCHEWAN WEBSITE.

THEY WILL BE HAPPY TO HAVE THOSE PEOPLE REGISTER.

WE HAVE BEEN PUTTING THE WORD OUT.

I AM NOTICING THE QUESTIONS AND ANSWERS.

THERE WERE SOME SUGGESTIONS ABOUT FAMILY PHYSICIANS BEING INVOLVED.

THAT IS A GREAT IDEA.

WE HAVE ALSO BEEN WORKING WITH SOME COMMUNITIES.

WE HAVE BEEN TRYING TO, IN TERMS OF GETTING LESS REPRESENTED GROUPS, WE WANT THEM TO BE JOINING US.

WE HAVE BEEN WORKING WITH COMMUNITIES TO GET OUT AND TALK ABOUT THE STUDY.

WE DISCUSS WHAT IT IS ABOUT.

CONTACT OUR WEBSITE.

CONTACT US BY PHONE.

WE WOULD BE VERY HAPPY TO HEAR FROM YOU.

>> IN OTHER PROVINCES WHEN FUNDING AND CAPACITY PERMITS, THERE COULD BE OTHER OPPORTUNITIES TO EXPAND PARTICIPATION IN THE SAME --

THE SAME IS TRUE FOR THE TERRITORIES AS WELL.

THERE IS A QUESTION THAT HAS COME UP ABOUT MIGRATION AND MOVING.

ROBIN, THE QUESTION, I RECENTLY MOVED TO A DIFFERENT PROVINCE, DOES THIS MEAN THAT I HAVE TO JOIN A DIFFERENT COHORT?

>> NO.

THAT IS A SIMPLE QUESTION.

NO, IT DOESN'T.

I AM IN NOVA SCOTIA HERE.

YOU WOULD STAY IN YOUR HOME COHORT.

FOR US, WE HAVE A PARTICIPANT FROM PEI OR NEW BRUNSWICK.

THEY MOVED TO ONTARIO.

THEY WOULD REMAIN AN ATLANTA PAT PARTICIPANT.

WE WOULD GET THE NEW MAIL ADDRESS AND SEND FOLLOWUPS EVENTUALLY.

>> THANK YOU.

TREVOR, WE HAVE ANOTHER QUESTION, I HAVE BEEN A PARTICIPANT FOR YEARS, HAS MY PARTICIPATION HELPED?

>> I THINK THE SHORT ANSWER IS YES.

IF YOU LOOK AT, YOU KNOW, SOME OF THE PRESENTATIONS TODAY, THERE WERE 220 SCIENTIFIC PAPERS ALREADY.

THE NUMBERS ARE INCREASING IN A HUGE WAY.

AS I HAVE MENTIONED, THIS IS A VERY YOUNG COHORT.

THE THING ABOUT COHORTS, THEY GET BETTER OVERTIME.

WHAT WE KNOW ABOUT HEART DISEASE COMES FROM THE HEART COHORTS THAT STARTED YEARS AND YEARS AGO.

THIS WAS STARTED DECADES AND DECADES AGO.

MUCH OF WHAT WE KNOW ABOUT BREAST CANCER COMES FROM RESEARCH THAT IS YEARS OLD.

WE ARE ALREADY STARTING TO UNDERSTAND LOTS OF DIFFERENT THINGS ABOUT CANCER.

WE ARE UNDERSTANDING ABOUT THE ENVIRONMENTAL EXPOSURES AND HOW IT IMPACTS OUR HEALTH.

I HOPE THAT WHAT WE HAVE PRESENTED EVERYONE TODAY HELPS EXPLAIN THAT.

THERE IS A HUGE NUMBER OF FUNDED PROJECTS THAT HAVE ALREADY GONE THROUGH OUR ACCESS PROCESS.

I SUPERVISED A COUPLE OF PH.D. STUDENTS WHO HAVE COMPLETED THEIR PHDS USING OUR DATA.

THERE ARE MANY OTHER STUDENTS NOW JOINING US.

WE ARE TURNING THE NEXT GENERATIONS AS WELL AS PROVIDING SCIENTISTS WITH USEFUL DATA.

THE DATA THAT YOU PROVIDE A TEN OR 12 YEARS AGO, THERE COULD BE SOME FOLLOW-UP DATA.

YOU COULD LINK TO CATCH A REGISTRIES.

THIS IS SOMETHING THAT YOU WON'T BE AWARE OF.

THIS PROVIDES FOLLOW-UP INFORMATION.

I THINK THAT IS MY SHORT ANSWER.

THAT IS MY SHORT-ISH ANSWER.

JENNIFER, HOW CAN PARTICIPANTS USE THE INFORMATION FROM RESEARCH FINDINGS?

>> FOR EXAMPLE, WE ARE TALKING ABOUT COVID-19.

THE CAN USED TO PROTECT THEIR PERSONAL HEALTH.

>> THIS IS A GREAT QUESTION.

TO BE HONEST, EVEN A SCIENTIST, THIS IS SOMETHING THAT I THINK ABOUT PERSONALLY AS WELL WHEN TRYING TO SORT THROUGH THE INFORMATION THAT IS OUT THERE.

I DO ENCOURAGE A CRITICAL I.

THAT WOULD PROBABLY BE MY FIRST RESPONSE --

YOU WANT TO MAKE SURE THAT YOU ARE NOT LOOKING AT A ONE-OFF.

NO ONE STUDY CAN TELL US WHAT WE NEED TO KNOW.

IF THERE ARE PATTERNS THERE, YOU NEED TO SEE IF THE MESSAGES RECURRING OVERTIME.

THE OTHER THING I LOOK FOR IS WHEN THEY DID A STUDY, WHERE THE PEOPLE SIMILAR TO ME?

IF IT IS A TOTALLY DIFFERENT AGE GROUP, IF IT IS A DIFFERENT MODEL, THIS COULD ALL CONTRIBUTE TO THE BIGGER PICTURE, BUT ONE OF THE ELEMENTS THAT ARE SIMILAR TO ME?

WITH THE SUPPLY TO ME?

WHAT CAN I TAKE FROM THIS THAT WOULD BE, I THINK, REASONABLE?

THE REASON I SAY THAT IS BECAUSE --

I WANT TO PICK ON --

IF WE ARE TALKING ABOUT WHOLE FOODS, IF WE ARE LOOKING AT RED MEAT AND RED STUBBLE INTAKE, YOU MIGHT DECIDE THAT YOU SHOULD BE EATING LAST READ ME.

WHEN YOU DO, YOU MIGHT WANT TO SOLID ON THE SIDE.

WHEN YOU ARE TALKING ABOUT OTHER THINGS, WHEN WE ARE LOOKING AT THOSE SPECIFIC MARKERS THAT MAY --

WE MAY NOT HAVE ENOUGH INFORMATION TO KNOW WHAT TO DO WITH THAT RIGHT NOW.

WE NEED TO BUILD OUT WHAT THAT LOOKS LIKE MORE BROADLY.

THE FINAL THING THAT I WOULD SAY, TAKE EVERYTHING WITH A GRAIN OF SALT.

MOORE IS NOT NECESSARILY BETTER.

I SEE THIS A LOT.

EATING CARROTS CAN BE BENEFICIAL TO YOU.

THAT DOES NOT MEAN THAT YOU NEED TO EAT THREE POUNDS OF CARROTS A DAY.

YOU KNOW YOU WILL NOT GET MORE BENEFITS.

TAKE THE BROAD VIEW.

TAKE THE CRITICAL VIEW.

SEE HOW THAT CAN APPLY TO YOU.

I HOPE THAT HELPS.

>> THANK YOU.

GUILLAUME LETTRE, A QUESTION FOR YOU, WELL A BIOLOGICAL COLLECTION SAMPLE BE AVAILABLE?

>> I THINK WE HAVE LEARNED A LOT THROUGH THE PANDEMIC.

WE HAVE APPROACHED SOME OF THESE ISSUES.

I CERTAINLY HOPE THAT WE WILL BE ABLE TO RESUME THOSE COLLECTIONS.

LIKE I SAID, WE HAVE LEARNED A LOT.

I HAVE LEARNED THAT WE CAN DO VERY STANDARD SCIENCE, EVEN WITHOUT HAVING TO SAMPLE IT IN PERSON.

>> THANK YOU.

WE ARE OUT OF TIME.

WITH RESPECT TO ALL OF THE PARTICIPANTS WHO HAVE JOINED US TODAY, I WANT TO THANK ALL OF THE SPEAKERS.

ME APPLAUD ALL OF THE PARTICIPANTS AS WELL.

THANK YOU FOR YOUR TREMENDOUS SUPPORT AND YOUR GREAT INTEREST.

AS I MENTIONED, WE WILL SUMMARIZE THE DIALOGUE TODAY.

WE WILL BE MAKING IT AVAILABLE THROUGH THE WEBSITE.

I THINK THAT THIS CAN MOTIVATE FURTHER CROSS CANADA DIALOGUE LIKE THIS IN TERMS OF HELPING US FRAME THE FUTURE.

WE CAN USE THE SUPPORT AND THE GREAT IDEAS THAT YOU HAVE GOT THROUGH YOUR LIVED EXPERIENCES.

THERE ARE SO MANY QUESTIONS.

THERE MIGHT JUST BE TOO SMALL POINTS.

ONE, PEOPLE HAVE ASKED ABOUT EXPANDING TO INCLUDE FIRST NATIONS, MÉTIS, AND INUIT PEOPLE.

THAT IS AN AREA OF GREAT INTEREST FOR OUR HEALTH ACROSS CANADA.

AS A TEAM, WE HAVE BEEN WORKING FOR MANY YEARS NOW TO SUPPORT INDIGENOUS COMMUNITIES, LEADERS, ORGANIZATIONS, AND SCHOLARS.

WE WANT TO ENSURE THAT THIS TYPE OF PREVENTION ORIENTED HEALTH RESEARCH CAN BE DRAWN TO BENEFIT THE CANADIAN INDIGENOUS PEOPLES.

THAT WORK WILL CONTINUE.

FINALLY, PEOPLE HAVE ASKED ABOUT HOW THEY CAN ACCESS OUR PUBLICATIONS.

AGAIN, GO TO OUR WEBSITE.

WE ARE CONSTANTLY TRYING TO ENSURE THAT WE ARE PUBLISHING IN OPEN ACCESS FORUMS.

IF YOU SEE IT ON OUR WEBSITE, YOU SHOULD BE ABLE TO LINK IT AND READ IT.

THAT IS A COMMITMENT AS WELL.

THERE IS MUCH MORE DIALOGUE.

I WOULD LIKE TO THINK, AGAIN, THE SPEAKERS.

I LIKE TO THANK THE ORGANIZERS.

MEGHAN, YOU HEARD HER AT THE VERY BEGINNING.

I WANT TO THANK THE TRANSLATING STAFF IN THE BACKGROUND.

I THINK EVERYONE.

I DO LOOK FORWARD TO THE NEXT TIME THAT WE GET TO SPEAK.

THANK YOU ALL.

GOODBYE.