Issue Date: Thursday, December 17, 2015
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IN THE PROVINCIAL COURT OF MANITOBA

IN THE MATTER OF: ***THE FATALITY INQUIRIES ACT***

AND IN THE MATTER OF: DRIANNA ROSS
(Deceased)
(DOD: November 26, 2011)

Report on Inquest and Recommendations of
The Honourable Judge Don Slough
Issued this 17th day of December 2015

APPEARANCES:

Counsel to the Inquest: Ms. S. Thomas
Counsel for the Northern Regional Health Authority: Ms. T. Epp
Counsel for the Government of Manitoba – Department of Health: Mr. A. Ladyka
Counsel for the Winnipeg Regional Health Authority: Mr. D. Ryall
Counsel for Dr. Hadi: Mr. T. Campbell and Mr. A. Boumford
Counsel for the parents: Mr. W. Onchulenko
Counsel for the Department of Justice Canada (limited standing): Ms. S. Eros

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1.) INTRODUCTION

[1] Drianna Ross was born on September 1, 2011 in Thompson General Hospital, after a very short stay, she returned to God's Lake Narrows. Throughout most of her short life she was a normal, happy baby with two devoted parents. However, on November 22, 2011 her parents sought help for her at the God's Lake Narrows nursing station. Over the next three days they repeatedly contacted the nursing station seeking help because their daughter was "burning up". Ultimately, Drianna was transferred to Thompson General Hospital on November 25, 2011. Within 18 hours she died; the victim of an aggressive methicillin-resistant staphylococcus aureus (MRSA) infection. This inquest is an examination of how, notwithstanding the courageous efforts of her parents, Drianna's life was not saved.

[2] The Chief Medical Examiner of Manitoba concluded that Drianna Ross's death preventable. In his letter detailing the reasons for calling the inquest, wide parameters were set for this proceeding (See Appendix A). Evidence was called with respect to most of the issues raised in the Chief Medical Examiner's letter, but at the end of the day I am bound by the *Fatality Inquiries Act* and must make my recommendations within the confines of that legislation.

[3] Expert medical evidence called at this inquest established that although mistakes were made in Drianna Ross's care while she was at the nursing station, the critical events occurred during her time in Thompson General Hospital. Initially, I will be reviewing the evidence relating to health care in Northern Manitoba, the nursing station system and some of the problems that are particularly acute in the North. I hope that this review will provide context when examining the issues that arose in Drianna's care. Finally, I will be providing recommendations as to how the issues that arose with respect to Drianna Ross's treatment can be avoided in the future.

2.) HEALTH CARE IN NORTHERN MANITOBA

[4] I will examine the following topics:

a) Northern Medical Services
b) Health Care in God's Lake Narrows
c) Working Conditions for Nurses
d) Nursing Education
e) MRSA in Northern Manitoba

a) NORTHERN MEDICAL SERVICES

[5] Medical Services in most Manitoba communities are under the jurisdiction of provincially funded, regional health units. However, in Manitoba First Nations communities, the financial responsibility for medical services is split between the Federal and Provincial governments. The province is responsible for the provision of physician care to members of First Nations communities, but the Federal government is responsible for other services such as transportation, facilities, nurses, nurse practitioners and diagnostic services. These services are provided by the First Nations and Inuit Health Branch (FNIHB).

[6] Any examination of the provision of medical services in Northern Manitoba must not lose sight of the fact, that according to a number of witnesses, there is a worldwide shortage of nurses. In addition, the difficulties confronting the health care system in providing sufficient physicians to provide for Canadians in every region of the country are well known. This situation makes the provision of medical services to First Nations communities very challenging in terms of recruitment and retention.

[7] The provision of physician services to Manitoba First Nation communities is delivered thru a variety of providers, including:

- The Northern Medical Unit practicing out of University of Manitoba, Faculty of Medicine.
- AMDOCS an organization that provides physicians, many of whom were former residents of South Africa, to a number of northern communities, including God's Lake Narrows.
- Other First Nations communities have fee for service arrangements, with particular physicians or groups of physicians.

[8] There are currently efforts being made to consolidate the provision of these medical services through the Northern Regional Health Authority which is the provincial agency responsible for the delivery of health services to northern communities. These discussions involve the Provincial and Federal governments and the First Nations communities.

b) HEALTH CARE IN GOD'S LAKE NARROWS

[9] God's Lake Narrows is a remote First Nations community in northern Manitoba. Population estimates vary between 1300 to 2500 people. The community cannot be reached by road and the only way to get in and out of the community is by plane. Trips to Thompson or to Winnipeg are available through regular commercial flights. Flying times to Thompson are slightly shorter than to Winnipeg but the difference in flight times are not particularly significant.

[10] In God's Lake Narrows like other northern remote communities, medical care is delivered from nursing stations. The inquest visited the nursing station in God's Lake Narrows and in terms of layout and organization the facility is very much like a clinic. However, unlike medical clinics in southern Manitoba, the services of a physician are not always available. Many patients are seen by nurses who are able to make referrals, if necessary, to physicians in either Winnipeg or Thompson.

[11] The inquest heard evidence with respect to the volume of patients seen in God's Lake Narrows. At the request of inquest counsel, a snapshot was provided of patient volumes in November, 2014. During this month a total of 865 patients were seen during regular hours at the nursing station. Of the 865 patients, 33% were pediatric cases. This patient volume was not considered atypical. Given the population of God's Lake Narrows, these volumes suggest a high needs community.

[12] In God's Lake Narrows, a physician, Dr. Khusi, is in the community from Monday morning until Friday afternoon. Dr. Khusi has worked in God's Lake Narrows for a number of years and continues to work in that community. No physician is available on the weekends or when Dr. Khusi is away on holidays or for any other reason.

[13] Evidence presented at the inquest established that even though Dr. Khusi was in the community while Drianna Ross was ill, she was not seen by Dr. Khusi. The reasons for this are not entirely clear, but it was the evidence of Drianna's parents that they did not believe that Dr. Khusi saw pediatric patients. Nurses testified that this was their understanding as well. One nurse, who worked at the God's Lake Narrows nursing station, testified that it was her understanding that Dr. Khusi only saw chronic patients. Nurses testified that if a nurse felt that a doctor should be consulted with respect to a child of Drianna Ross's age, this was done by phone with Thompson General Hospital. This consultation process was followed even if Dr. Khusi was in the clinic. In large part I suspect this practice is a result of Dr. Khusi being so busy with the treatment of chronic patients with diseases such as tuberculosis or diabetes that she simply has no time to deal with infants. The evidence heard at the inquest confirmed that the lack of access for pediatric patients is not confined to God's Lake Narrows but is a common situation in nursing stations, across the North.

[14] Dr. Khusi testified and provided a letter to inquest counsel; in her letter and testimony she described the following difficulties she has in working in God's Lake Narrows:

- She lacks a physician's assistant. As a result, in addition to her clinical duties she has to do clerical work, such as filling out billing cards, collecting vital data from patients, weighing the patients, urinalysis and other routine matters that do not require a physician's skills.
- Because there is no physician's assistant to follow up on the execution of medical orders, Dr. Khusi indicates that: some of the orders are not carried out; patients are not booked for follow-up; and diagnostic request forms and specialist consults are not faxed.
- She notes that the nursing station uses only hardcopy paper records, which makes patient care difficult to manage and track.
- There is no support from visiting medical specialists and when she is away, no physician is available in the community.
- Given her workload, she does not have enough time to dedicate to the management of chronic disease, let alone pediatric cases.

[15] **RECOMMENDATION: For any community, physician services are a valuable commodity. Given the limited time Dr. Khusi is able to spend in the community, it is essential that the resources necessary to support a physician be provided, so that she can devote her time to the provision of medical services. This would include a staff person to do the completion of billing cards, collecting vital data from patients, weighing patients and other routine matters that can be delegated. Assuming Dr. Khusi's circumstances are not unique, stronger assistance to physicians should be implemented in all nursing stations.**

c) WORKING CONDITIONS FOR NURSES

[16] The Court heard evidence from a number of nurses who worked in the God's Lake Narrows nursing station. Included in that group was Mike Dove who spent five years working in God's Lake Narrows, initially as a community health nurse and then as the nurse in charge. He indicated that during his tenure, which included the time that Drianna Ross was being seen at the nursing station, God's Lake Narrows was essentially a five nurse station. Like so many other nurses who dealt with Drianna Ross's parents he was impressed by how devoted they were to Drianna Ross describing them as "awesome parents".

[17] Nurses working at nursing stations in Manitoba in addition to their regular duties, also work on-call, in their off hours. The on-call is divided between an evening and an overnight shift. The nurses who work these shifts take the calls in their residence but can go across the street to the nursing station to meet patients if necessary. Consultation with a physician is by phone, typically, to Thompson General Hospital.

[18] The use of technology to improve the quality of care at nursing stations has been an important issue for the inquest. For example, Mike Dove testified with respect to the use of a derma camera and how in Ontario it allowed for consultation with a dermatologist on an expedited basis. This consultation is done via the internet. This is an excellent example of how, if connectivity issues were resolved, better, more immediate and less costly care could be delivered to patients in remote communities. However, the evidence demonstrated that due to difficulties with internet connectivity the significant advances that could be made in health care for residents of remote northern communities are being thwarted. I will be examining this issue in greater detail later on in this report.

[19] Consistent with Dr. Khusi's evidence, Mike Dove, described the paper based filing system in God's Lake Narrows as atrocious, indicating that due to the volume of reports it was very difficult to find information, frequently resulting in confusion and errors with respect to medication and tests done in Thompson or Winnipeg. He also testified that the lack of a tracking system for lab results resulted in a lack of follow up for patients at the nursing station.

[20] **RECOMMENDATION: assuming nursing stations are brought up to a reasonable standard in terms of the ability to handle electronic data, I would recommend the use of computers for nurses or other health care staff to take patient profiles and track lab results to ensure information is properly stored and available electronically. This would facilitate the exchange of information between the nursing station and any receiving institution, once a patient was transferred from the nursing station to a hospital. In the short term, a system to track lab results must be put in place.**

[21] Michael Dove described the high volumes of pediatric patients seen at the nursing station including complex cases. Yet for pediatric patients in God's Lake Narrows there was no opportunity to see a physician at the nursing station. Any consultation with a physician had to be made via telephone or by having the patient flown out of the community. He did, however, testify that in his experience there was not a problem getting access to specialists either in Thompson or Winnipeg.

d) NURSING EDUCATION

[22] The inquest heard evidence with respect to the mandatory training required for nurses, working in nursing stations. First of all, nurses must be registered nurses. In addition, they are required to take a number of courses including: advanced cardiac life support; pediatric advanced life support; and international trauma life support. All of these programs take two or three days to complete. In addition, nurses employed by First Nations and Inuit Health

Branch are required to take the northern clinical education program which is a four month, university-based program dealing with subject areas such as maternal child health, mental health and chronic disease. Other courses dealing with community health, provide education with respect to social determinants of health such as the environment, income, education, and social supports and the impact of living in communities lacking adequate services. In addition specialized training can be arranged for nurses as part of their learning plan.

e) MRSA IN NORTHERN MANITOBA

[23] An MRSA (methicillin-resitant staphylococcus aureus) infection caused Drianna Ross's death. MRSA is a bacterial infection that is resistant to many antibiotics including methicillin, penicillin and oxacillin, thus making it challenging to treat. Often referred to as a superbug, an MRSA infection may commence as a minor skin infection but if it invades the body, it can cause serious, even fatal, illness sometimes in the form of necrotizing pneumonia as was the case with Drianna Ross.

[24] There has been a steady increase in the prevalence of MRSA infections and it is estimated that one in twenty-three hospitalized Canadians stand to be infected with MRSA. The prevalence of MRSA is even more pronounced in remote First Nations communities. Studies of Manitoba communities by Public Health Canada, found that the rates of infection in Northern communities are growing at a disproportionate rate to the rest of Manitoba. The reasons for this explosive growth are associated with high rates of illness, such as, diabetes, asthma and non-infectious skin conditions such as eczema, and recent antibiotic use. Social factors, such as crowded households, busy and cramped facilities, e.g. nursing stations, contribute to the prevalence and spread of MRSA.

[25] Michael Dove testified that MRSA was endemic in God's Lake Narrows and that virtually everyone tested was positive for MRSA. Another nurse, who worked in northern Manitoba, testified that in her experience MRSA had become "normalized". She testified that in southern Canada, if a patient the same age as Drianna Ross had MRSA they would be admitted to hospital and treated, whereas in the north, because of its prevalence, MRSA is frequently left untreated. Once MRSA is established in a facility, thorough and comprehensive cleaning must take place to eradicate it. The same witness testified that the cleaning in the nursing stations where she worked was inadequate and below the standards required to ensure that MRSA was not spread to other patients.

[26] First Nations and Inuit Health Branch provides training for the staff in nursing stations who are employed to do the cleaning in the nursing stations. In response to the evidence with respect to the alleged poor cleaning at nursing stations, testimony was provided by a representative of First Nations and Inuit

Health Branch describing an audit that was done with respect to cleaning. As a result of this audit a standardized approach was developed in terms of what should be on the housekeeper's cart and what types of cleaning material should be used in order to prevent the spread of MRSA.

[27] **RECOMMENDATION: In my view, the acceptance of MRSA as a fact of life in northern communities cannot be tolerated. Stringent efforts must be taken to ensure cleaning in nursing stations meets acceptable standards and that if there is an outbreak strong measures are taken to bring it under control. If a patient is MRSA positive, that condition should be flagged on the front of the file so that health care providers who subsequently deal with that patient are aware of this condition and appropriate treatment can be provided.**

3.) THE PARENTS STORY

[28] Drianna Ross was the first child of Erna Hastings and Paul Ross. The first two months of her life were relatively uneventful with one exception: as a result of a staph infection, Drianna was put on the antibiotic Septra. Drianna reacted badly to the Septra and when Erna Hastings asked what to do she was told to discontinue the Septra. However, there was no follow-up and Drianna was not prescribed with another medication, leaving the infection untreated. In my opinion, this lack of follow-up illustrates the problems described by witnesses with respect to the poor record keeping in the God's Lake Narrows nursing station and the need for much stronger physician support.

[29] On November 22, 2011 Drianna had a very high fever. The parents went to the nursing station. After an examination, the parents took Drianna home with instructions to call back if her condition persisted.

[30] On November 25 at 1:25 a.m., Erna Hastings called the nursing station to report that Drianna Ross had vomited. Earlier in the evening she had been given Tylenol to treat a fever. At the time of the call to the nursing station, Drianna's temperature had reached an alarming, 39.3 C. The parents were advised that as they had an appointment in the morning they should attend the appointment and to call back if the child's condition worsened. That same night, at 4:20 a.m. they again called the nursing station because Drianna was crying and was having difficulty breathing. At 5:00 a.m. they again called the nursing station because Drianna's high fever had not abated. At this point, the parents were told to bring Drianna to the nursing station for assessment. Upon arrival her temperature was recorded as 38.6 C. The parents were told to give Drianna Tylenol and to bring her back to the nursing station at 1 p.m. the same day.

[31] The nurse who received these calls had very limited experience in dealing with infants. Her evidence was that while she had examined some infants as part of well baby clinics, she had never dealt with a sick infant. Nor was she aware of the fever protocols that dealt with the treatment and procedures to be followed if an infant under the age of three months had a high fever. This protocol required that if an infant under the age of three months presented with a fever greater than 38°C a physician was to be consulted. Such consultation was not undertaken. In her testimony, this nurse acknowledged that given the very high temperatures, and the length of time that the Drianna Ross had been ill, she should have consulted a pediatrician. When asked if she had received any additional training since this incident the nurse responded that she had not. She did indicate that the fever protocol dealing the infants was widely available, in her words: "plastered everywhere". The nurse testified that she did not feel that she had been given the proper educational tools or possessed the skills to deal with an infant like Drianna Ross, on her own, in the middle of the night.

[32] The inexperience of the nurse treating Drianna Ross and the failure to follow protocols illustrate in a specific fashion, many of the general findings made in an April 2015 report by the Auditor-General of Canada dealing with the quality of care provided by nursing stations in Manitoba and North-Western Ontario. That report found that only 1 in 45 nurses employed in nursing stations had completed all the mandatory training required by First Nations and Inuit Health Branch. (See Appendix B for a summary of the Auditor-General's findings.)

[33] The parents returned to the nursing station at noon and when Drianna was examined her crying was described as weak. A pediatrician in Thompson, Dr. Hadi, was contacted and he recommended that in addition to Tylenol, Drianna be given Advil. It was also suggested that the parents monitor her fluid intake and to give her liquids with a syringe if necessary.

[34] That same day, at 4:20 p.m. Drianna was brought back to the nursing station as her parent's believed that she was getting sicker. Her temperature was recorded as 38.2 C. She was described as having some difficulty breathing and overall being: quiet, whimpering and hoarse. At this point, the decision was made to transfer Drianna Ross to Thompson General Hospital.

[35] Drianna Ross was "medevaced" to Thompson. During the flight Drianna Ross was held in her father's arms and was not subject to any other form of restraint. Evidence at the inquest suggested this was the manner in which infants are normally transported on Medevac flights.

[36] **RECOMMENDATION: The failure to provide secure seating for infants on Medevac flights needs to be reviewed. Medevac flights land**

and take off in remote communities with rudimentary runways. Weather conditions can be difficult. In my view, the practice of allowing an infant to be held in his or her parent's arms is inherently risky and needs to be reviewed by the agency responsible for Medevac flights.

4.) THOMPSON GENERAL HOSPITAL

[37] Drianna Ross arrived in Thompson at 7:48 p.m. At this time she was seen by a pediatrician, Dr. Hadi, and diagnosed as having pneumonia. She was placed on antibiotics. The prescribed antibiotic was ineffective in treating MRSA. (There was no indication at that time that Drianna Ross was MRSA positive.)

[38] It appears that information regarding Drianna Ross`s treatment and high fever over the last few days while she was in God's Lake Narrows and at the nursing station was not included in the material sent to Thompson General Hospital.

[39] Drianna Ross was admitted and placed on a ward with a wide variety of patients including: geriatric patients, patients recovering from surgery, palliative patients, and infants like Drianna. Dr. Hadi ordered a course of treatment for Drianna. Initially, she responded well and the pediatrician left the hospital for the night, having ordered that Drianna's monitoring be on a two hour basis. (Constant monitoring of Drianna Ross's vital signs, which would have been optimal, did not occur, because Thompson General Hospital lacked the equipment capable of providing such monitoring.)

[40] Nurse K. Sato was primarily responsible for Drianna's care. He testified that he lacked any specialized pediatric training and had only been working as a nurse for a little over a year. He also testified that on the evening he was looking after Drianna Ross, there was a confused patient on the ward which further compromised his ability to focus on Drianna Ross. Overall, Nurse Sato testified that he felt overwhelmed with the responsibility for Drianna's care.

[41] Erna Hastings stayed at the hospital with her daughter. At approximately 3 a.m. she discovered that Drianna's intravenous, instead of pumping into a vein was delivering fluid into Drianna's arm causing significant swelling and pain. Erna Hastings called the nurses for assistance. Nurse Sato called upon another nurse to assist him with the reinsertion of the intravenous. (That nurse was also inexperienced and testified that she lacked the training to deal with an infant as ill as Drianna Ross.) The intravenous was reinserted. When the intravenous was placed into Drianna's vein, a painful procedure, it was noted that Drianna Ross was listless and unresponsive to the reinsertion of the needle. While there is

evidence that there was consultation with Dr. Hadi shortly thereafter, it is clear that a significant deterioration in Drianna Ross's condition had not been recognized.

[42] By morning, the parents and the nurses who were looking after Drianna Ross were very concerned about her condition. At 7:00 a.m., when Dr. Hadi returned to the Thompson General Hospital he considered sepsis to be a possibility. Accordingly, the decision was made to transfer Drianna to the emergency department where she could be kept under close observation, until she was flown to Winnipeg. That move was delayed for a few hours because there was no room in the emergency department.

[43] When the transfer from the ward to the emergency department was undertaken, Drianna was disconnected from oxygen. En route to the emergency department her heart stopped. Intensive efforts were made to revive her and ultimately her heart started. However, when a neurological assessment was done it was determined that Drianna's prognosis was very poor. With the parents' consent, care was withdrawn and Drianna died.

[44] An autopsy was performed. The pathologist described the cause of death as respiratory failure caused by a "severe diffuse necrotizing lower respiratory tract infection [to the] larynx, trachea, bronchi, and lungs." This infection was a consequence of an MRSA induced sepsis. The pathologist testified that death as a result of an MRSA infection in the lungs was a very rare occurrence, as MRSA typically exists on the skin, but it is unusual for it to get into the lungs. The pathologist indicated that once the infection takes hold it can quickly become very severe with fatal consequences.

DR. STASA VEROUKIS

[45] Dr. Stasa Veroukis, a pediatric intensivist at Children's Hospital, Winnipeg, performed a review of Drianna Ross's care at the God's Lake Narrows nursing station and Thompson General Hospital. She testified that the care Drianna Ross received at the nursing station, notwithstanding the failures to follow the fever protocol, was reasonable. She concluded that the significant problems that arose with respect to Drianna Ross's care took place at Thompson General Hospital. Dr. Veroukis indicated that, initially, Dr. Hadi's assessment and plan of care was appropriate. She testified that while she would have initially prescribed antibiotics that were effective against MRSA, the decision not to do so, was a judgment call and reasonable in the circumstances known to Dr. Hadi.

[46] She testified that once Dr. Hadi left Thompson General Hospital and the nurses were responsible for Drianna Ross's care, difficulties arose and there was a failure to recognize a seriousness deterioration in Drianna Ross`s condition.

Specifically, when the nurses, at approximately 3:00 a.m., discovered that the intravenous was not properly situated and upon reinsertion Drianna Ross was unresponsive, that lack of reaction should have prompted significant concern. Dr. Veroukis noted the nurses did call Dr. Hadi but there is no record of what was said and most importantly, no revision in Drianna's care. Because there is no record of that conversation, there is no way of knowing whether there was a failure to ask questions by Dr. Hadi or whether the nurse did not provide essential information. Dr. Veroukis testified that this amounted to a serious failure in communication between Dr. Hadi and the nursing staff. Whatever occurred, the seriousness of the situation was not appreciated at 3:00 a.m. and four hours passed until Dr. Hadi returned to the hospital.

[47] When Dr. Hadi arrived at the hospital it was his testimony that sepsis was a possible diagnosis. In Dr. Veroukis's opinion, at this point, more aggressive treatment was warranted. Dr. Veroukis testified that in her view: the high fever, the persistent high heart rate, combined with the fact that Drianna did not respond when the intravenous was reinserted, indicating a decreased level of consciousness, indicating Drianna Ross was very ill.

[48] Dr. Veroukis testified that infants will fight against an infection and are very strong; however, once the infection takes hold they deteriorate very quickly. For this reason it is very important that the doctors and nurses, treating an infant, be vigilant with respect to the possibility of sepsis and once sepsis is diagnosed, immediate steps be taken to treat the infection. Such action did not occur in this case.

[49] Dr. Veroukis's review of the file indicates that once the decision was made to send Drianna Ross to Winnipeg for treatment, no consultation occurred between Thompson General Hospital and the specialists at Children's Hospital, in Winnipeg. She indicates that had such consultation occurred, it is probable that more aggressive treatment, while Drianna Ross was waiting to be transferred, including the use of antibiotics to effectively deal with MRSA would have taken place. That more aggressive treatment could very well have changed the outcome.

[50] Dr. Veroukis commented on the structure of the ward where Drianna Ross was placed. That ward had a wide mix of patients including surgical patients, patients with dementia and infants. She testified that this wide range of patients required that the nurses working in such an environment possess a very high skill set. On the contrary, the nurses who were responsible for Drianna Ross's care had little experience in pediatric care. In addition, other witnesses testified that this ward was considered an entry level ward with a high level of turnover. This evidence is consistent with the experience level of the nurses who were involved in Drianna Ross's care.

[51] Dr. Veroukis contrasted this level of experience, with the training of nurses who start at Children's Hospital; these nurses receive substantial orientation; are partnered with more experienced nurses for a period of time and work in a pediatric setting day in and day out.

DR. TERRY KLASSEN

[52] The inquest also heard evidence from Dr. Terry Klassen with respect to Drianna Ross's care and recent developments in the treatment of pediatric patients in Manitoba. Since 2010, Dr. Klassen has been the CEO and Scientific Director for the Children's Hospital Research Institute of Manitoba. He is also the Head of Pediatrics for the Department of Pediatrics, College of Medicine, at the University of Manitoba and Medical Director for the Child Health Program for the Winnipeg Regional Health Authority.

[53] Dr. Klassen reviewed Drianna Ross's chart and like Dr. Veroukis he confirmed that by morning the diagnosis of sepsis was probable. Dr. Klassen testified that sepsis occurs when bacteria gains entry to the body infecting organs such as the lungs or the fluid surrounding the brain or spine. Such an infection, once established, if it is not identified and treated can lead to septic shock with devastating results. A child in the first few months of life is at high risk from such an infection because their immune system is developing and adjusting to the outside world.

[54] Dr. Klassen testified that once the diagnosis of sepsis is made there must be a strong and immediate response. This response includes the provision of antibiotics with a broader spectrum, including the ability to treat MRSA, along with fluid boluses. It was his evidence once Dr. Hadi returned to the hospital, taking into account the increased heart rate, there should have been an immediate reassessment and re-examination of Drianna Ross. He also suggested a call should have been made to Children's Hospital in Winnipeg for further consultation and expert advice.

[55] A number of witnesses testified that Thompson General Hospital, in its nursery, has a monitor that is connected to the neonatal intensive care unit at the Children's Hospital in Winnipeg. This allows for consultation with specialists in Winnipeg regarding newborns in Thompson. The connection to the intensive care in Winnipeg and the specialist physicians who work at Children's Hospital has been a very successful program. Had such a connection been available for the nurses working with Drianna Ross, given her condition and vital signs, the nurses could have received the expert advice they required to properly care for Drianna Ross. In addition, based on the evidence of Dr. Veroukis I expect that the aggressive treatment Drianna so desperately needed would have been initiated in a timely fashion.

[56] Dr. Klassen testified with respect to a new program that provides access, at any time day or night to a pediatrician, working at Children's Hospital in Winnipeg. While nursing stations are encouraged to use their existing call systems, this new program is available if they are having trouble getting in touch with a physician using the regular channels or if nurses feel they need the expertise of Children's Hospital to deal with a particular issue. This specialist could advise on appropriate management and would also be able available to make a decision as to whether or not the child ought to be transferred and to where.

[57] **RECOMMENDATION: Drianna Ross's death in Thompson General Hospital raises a number of issues. In my opinion, the treatment and placement of infants who are admitted to Thompson General Hospital needs to change:**

1. **The care of these infants should not be left to the most inexperienced nurses.**
2. **There needs to equipment available capable of providing constant monitoring, so that the nurses and physicians responsible for an infant's care are aware of any deterioration in their patients condition and are able to respond in a timely fashion.**
3. **Thompson General Hospital should establish a video connection to Children's Hospital in Winnipeg that would allow for timely and effective consultation for pediatric patients, not just newborns. Clearly, the program described by Dr. Klassen with the on-call pediatrician at Children's Hospital would play a significant role in such an enhancement in the care available at Thompson General Hospital.**
4. **Given the prevalence of MRSA in the North, there needs to be a careful review of what antibiotics are administered on admission to determine the best practices in ensuring coverage with respect to MRSA in appropriate cases (I note the inquest heard evidence that the administration of antibiotics that effectively treat MRSA is not without its own set of risks.)**

TREKK

[58] Dr. Klassen testified that he is also involved in the establishment of a program called Translating Emergency Knowledge for Kids (TREKK). This is a national program, headquartered in Manitoba, based on the belief that Children's Hospitals across the country are producing new knowledge and better ways to treat children. The goal of the program is to share the specialized knowledge within smaller hospitals or nursing stations, so that they have the benefit of the advances made by the specialized facilities. This program has been four years in

the making and focuses on the twenty most serious conditions afflicting children and provides the most current information on the recognition and treatment of those conditions. (Sepsis, unsurprisingly, is one of the twenty conditions.) The website includes video vignettes providing information as to the optimal treatment of these conditions. In addition, two page summaries are provided outlining appropriate treatment. The goal is to create not only an educational tool, but a clinical tool doctors and nurses can access when treating a patient.

PEDIATRIC TRANSPORTATION

[59] Finally, Dr. Klassen testified about a new program improving pediatric air ambulance transportation. This program will utilize a registered nurse to fly with the patient but will be led by a physician at Children's Hospital who will be directing care and guiding treatment. This program will be used to pick up children who are determined to be in need of advanced care. The advantage of this program over the current life flight program is the personnel will be based at Children's Hospital and will have specialized pediatric training.

TRANSFER ISSUE

[60] Counsel for Drianna Ross's parents strongly advocated for a protocol that infants under 6 months of age, if they were going to be transported out of nursing stations, be flown to Children's Hospital as opposed to Thompson General Hospital, in order to access the specialized treatment available at Children's Hospital for these vulnerable patients. Dr. Klassen supported the model put forward by all witnesses at the inquest that the decision about whether or not a child be transferred to Thompson or Winnipeg is one that should be taken after consultation with the pediatric specialist. It was his evidence that in the vast majority of cases, the pediatricians in Thompson should be able to deal with any young patients. If the child, upon examination at the nursing station was very ill direct transfer to Children's Hospital in Winnipeg would be the appropriate step. I am persuaded that if the changes I have recommended in the treatment of infants like Drianna Ross, are implemented Thompson General Hospital has the resources to provide quality care for children.

5.) GOING FORWARD

[61] Considerable time has passed since Drianna Ross's death. Evidence presented at the inquest demonstrated that significant changes that have been made at Thompson General Hospital since November 2011. In addition, the Court heard evidence with respect to how the nursing station system could be improved so that the residents of remote communities could receive better care.

THOMPSON GENERAL HOSPITAL

[62] The Court heard evidence with respect to Thompson General Hospital in terms of its challenges, capacity and its relationship with the University of Manitoba medical school. A great deal of that important evidence came from Brenda Dawyduk and Helga Bryant.

[63] Brenda Dawyduk is a nurse practitioner and the head of pediatrics at Thompson General Hospital. Prior to becoming a nurse practitioner she worked in nursing stations in northern Manitoba, Ontario, and the Yukon and the Northwest Territories. In order to qualify as a nurse practitioner, she completed substantial extra training. Her designation as a nurse practitioner enables her to independently diagnose and treat; perform invasive procedures; order diagnostic tests, write prescriptions and admit patients to Thompson General Hospital. Currently, she is a lecturer in the Faculty of Medicine at the University of Manitoba. Her duties are both administrative and clinical, working closely with the pediatricians who are employed at Thompson General Hospital. Other duties include education for nurses with respect to pediatric issues.

[64] Brenda Dawyduk described a number of changes made at Thompson General Hospital in response to Drianna Ross's death including: a pediatric sepsis protocol, renewed efforts to ensure that nursing staff have PALS (pediatric advanced life support training) and emergency pediatric training and the hiring of a halftime educator to improve education for nurses who work on the medical/surgical/pediatric ward. In addition, protocols have been put in place to ensure there is no interruption of care when a child like Drianna Ross is transferred from one ward to another. Specifically, the child would not be taken off oxygen and the intravenous and intubation would remain in place. These educational efforts and protocols address some of the significant areas of concern with respect to the care received by Drianna Ross.

[65] Brenda Dawyduk stressed the varied nature of practice for pediatricians at Thompson General Hospital including many patients with ADHD or fetal alcohol syndrome. She believes that Thompson General Hospital is quite capable of dealing with sepsis in infants. Secondly, she maintained that it is necessary for Thompson General Hospital to have a wide range of patients in order to attract good physicians to work in that hospital. Brenda Dawyduk described the need for pediatricians working at Thompson General Hospital to deal with newborns, numbering more than a thousand a year, thereby highlighting the importance of strong pediatric services to deal with the large number of newborns.

[66] **RECOMMENDATION: The inquest heard evidence about the fact that the pediatricians working at Thompson General Hospital are also on 24 hour call, sometimes for many days in a row. Such call is, of**

course, in addition to their regular duties working on the wards and in clinics. I appreciate that medical doctors, as part of their training frequently work extremely long hours and that sleep deprivation is to some extent tolerated and accepted in the medical community, as being part of the job. That being said, given Dr. Klassen's evidence regarding the availability of the 24 hour on-call physician working out of Children's Hospital, I would suggest that in a high volume facility such as Thompson General Hospital, guidelines be established to ensure that the pediatricians working at Thompson General Hospital are given adequate rest, so that they are able to provide optimal care to their patients.

[67] In terms of pediatric patients admitted to Thompson General Hospital the Court heard evidence that the occupancy rate for the pediatric beds in the combined unit at Thompson General Hospital since 2011 ranged between 17-28%. The number of patients in that unit in 2011/2012 was 207; 2012/2013 was 311 and in 2013/2014 was 265. The number of pediatric patients transferred to Winnipeg in the three years since Drianna Ross's death were 21, 26 and 28 respectively but these numbers would include patients sent out for tests such as MRIs that are not available at Thompson General Hospital. In summary, the evidence is that the average number of pediatric patients admitted to Thompson General Hospital was two per day. Brenda Dawyduk testified that, in her opinion, this relatively low volume of admitted patients, does not justify a separate pediatric ward with specialized nursing and physicians. I would agree, subject to the need to improve the level of care and monitoring of pediatric patients, as set out in my recommendation.

THE ROLE OF THOMPSON GENERAL HOSPITAL IN NORTHERN MANITOBA

[68] Brenda Dawyduk testified that it was her goal to expand her educational role to all Manitoba's nursing stations, including the nursing stations that are the responsibility of the federal government. I strongly support any initiative that would provide better and more current education to the nurses, working at the nursing stations, particularly with respect to pediatric issues. The specific evidence presented at the inquest in terms of the deficiencies in training of some nurses working at nursing stations and the general findings of the Auditor-General emphasize the need for further and better education. Thompson General Hospital is affiliated with the University of Manitoba Faculty of Medicine. As part of their training pediatric residents rotate through Thompson General Hospital. These residents can provide additional training and education to nurses working in nursing stations.

[69] **RECOMMENDATION: the Northern Regional Health Authority working in collaboration with the University of Manitoba Faculty of Medicine and First Nations and Inuit Health Branch develop and deliver educational programs for nurses working in Manitoba nursing stations.**

[70] Other evidence indicated that the **provincially** controlled nursing stations were going to be moved under the governance and management of the Northern Regional Health Authority. This is a positive step as it will serve to standardize practice within the region and provided a unified health care system for the residents of those communities. Unfortunately, communities such as God's Lake Narrows will not be included in this amalgamation as they are federally administered by First Nations and Inuit Health Branch.

[71] Brenda Dawyduk testified that because Thompson General Hospital has been able to recruit full-time pediatricians to work out of their hospital, it may be possible to have pediatricians fly to remote communities such as God's Lake Narrows and treat pediatric patients in their home communities. The evidence clearly establishes that, in God's Lake Narrows, pediatric patients do not have access to the care of a physician. The establishment of such a program working out of Thompson General Hospital, would go a considerable distance to solving this serious problem.

NURSE PRACTITIONERS

[72] In terms of going forward, the evidence suggested that increased use of nurse practitioners would be one of the best ways to improve care at nursing stations. The reason for this is that the education required for certification as a nurse practitioner demands a series of courses at an advanced level, as well as, several hundred hours of clinical practice. At the end of this training, the nurse practitioner has the ability to write prescriptions, perform minor surgical and invasive procedures independently without consultation with a physician. This would allow a nurse practitioner to provide far more extensive treatment for patients at nursing stations. The inquest heard evidence of the establishment of clinics in southern Ontario where nurse practitioners are the providers of medical services. In the north, nurse practitioners could be used to provide coverage when the physician at a particular location is not available or to expand the medical services available at a nursing station. For example, a nurse practitioner could be used in God's Lake Narrows to provide more extensive treatment for pediatric patients in their own communities.

[73] **RECOMMENDATION: The increased training and use of nurse practitioners is a matter that needs to be vigorously examined by Northern Regional Health Authority, Manitoba Health and First Nations Inuit Health Branch. Ideally, nurses already working in the North,**

could be offered incentives and support to take the training required to become a nurse practitioner, with the expectation they would use this training while working in an expanded role in northern communities.

JURISDICTIONAL GAPS

[74] Brenda Dawyduk testified about her frustration with the jurisdictional and bureaucratic issues that arise between the federal and the provincial healthcare systems. For example, in the treatment of eczema, a skin disease, the best treatment available is not covered under, the federally administered non-insured health benefits. Given the limited means of many residents of First Nations communities, this means the patient will not receive appropriate treatment. In order to get around this problem she prescribes the appropriate medication with an additional, but unnecessary ingredient, that is covered by the Federal plan, so the patients receives appropriate care. These sort of bureaucratic machinations do not provide reasonable care for patients. The inquest heard that many First Nation children do not have Treaty numbers; as a result they cannot access the federally funded treatment and medication to which they are entitled. This situation creates difficulty in obtaining treatment in areas such as: physiotherapy, diet, speech pathology, and psychological and psychiatric services.

[75] While of a somewhat different nature, it is clear that there was considerable frustration and confusion on the part of nurses working at nursing stations with respect to procedural issues regarding access to physicians at Thompson General Hospital. For example, the nurses indicated the implementation of a system, that required them to send a fax to the emergency department at Thompson General Hospital delayed consultation with a pediatrician. In contrast, Brenda Dawyduk testified that the new process permitted access to a pediatrician in appropriate cases and eliminated those calls that impeded clinics that were going on at Thompson General Hospital. There was a clear disconnect between the expectations and understanding of the current protocol as between the nursing stations and Thompson General Hospital.

[76] There was also a significant amount of conflicting evidence about whether it was the nurse at the nursing station or the receiving physician at Thompson General Hospital who made the final call as to whether a patient is transferred out. There needs to be clarity on this point. These examples of confusion and uncertainty as to lines of communication demonstrate the need for an integrated approach, harmonizing protocols and procedures between the nursing stations and Thompson General Hospital.

[77] There was agreement by all parties that nurses working in nursing stations be provided with comprehensive orientation with respect the services

available in the communities in which they are working. To the extent possible, there needs to be continuity in the staffing at nursing stations to ensure that nurses are familiar with their patients and are able to establish strong relationships with their clients. Although it was not an issue in Drianna Ross's care, there was also agreement that translation services be available to ensure patients at nursing stations are able to effectively communicate with physicians and nurses.

[78] Notwithstanding the problems outlined above, the evidence at the inquest suggested that there is a greater willingness on the part of Northern Regional Health Authority and First Nations and Inuit Health Branch to work together to improve services to remote northern communities. The inquest heard from Pamela Smith, the executive director of First Nations and Inuit Health Branch in Manitoba. She testified that there are 22 nursing stations and 2 hospitals in Manitoba that are under the jurisdiction of First Nations and Inuit Health Branch. (Two other nursing stations are under Provincial control.) Ms. Smith testified that the ultimate goal of First Nations and Inuit Health Branch is to transfer control of the health care system in remote First Nation communities to the First Nations themselves. Ms. Smith indicated that, in the recent past, greater efforts have made by First Nations and Inuit Health Branch to coordinate their programs with the Northern Regional Health Authority. She indicated a willingness to be involved in integration projects with the Northern Regional Health Authority.

[79] Helga Bryant, the Chief Executive Officer of the Northern Regional Health Authority also described the significant improvements in the relationship between the Northern Regional Health Authority and First Nations and Inuit Health Branch. She indicated that in her capacity as the head of the Northern Regional Health Authority she meets on a monthly basis with the regional director of First Nations and Inuit Health Branch. In addition, First Nations and Inuit Health Branch have provided resources to Thompson General Hospital, specifically, a ward clerk, whose job is to provide support to the Federal Nursing Stations in terms of their consultation with emergency staff at Thompson General Hospital. She testified that it is critically important there be significant improvement in communication and cooperation between the Northern Regional Health Authority and First Nations and Inuit Health Branch.

[80] In my opinion, such collaboration and partnership between the Northern Regional Health Authority First Nations and Inuit Health Branch and First Nation communities are crucial aspects of any serious effort to improve the quality of healthcare in the North. Overall, I have been impressed by the willingness of both the Northern Regional Health Authority and First Nations and Inuit Health Branch to improve their level of communication and cooperation. I would suggest that working with First Nations communities, these two agencies develop a pilot

project aimed at eliminating the barriers that impede effective health care in remote northern communities.

[81] A pilot project is not the ultimate solution to the jurisdictional barriers. None of the witnesses who testified at the inquest suggested that the residents of God's Lake Narrows or the other northern communities benefitted in any way from the split jurisdiction between the Federal and Provincial governments. The split jurisdiction model has been abandoned in provinces such as British Columbia. In British Columbia a tripartite agreement between the Federal and Provincial governments and the First Nations has resulted in enhanced participation by First Nations governments in the delivery of health care to the residents of their communities. This is a long term goal, but one that needs to be pursued.

TELEHEALTH

[82] Telehealth is information technology used to connect people to health care services at a distance. In theory, it is a high speed, secure video link used to connect patients to health care providers in different locations in Manitoba. In addition, it is used to provide professional education and administrative support to regional health authorities.

[83] A number of witnesses testified to the need for expanded use of Telehealth to improve patient care at Manitoba nursing stations. Brenda Sanderson, a nurse by training, currently working for the Assembly of Manitoba Chiefs, testified with respect to the use of Telehealth. Ms. Sanderson testified that 70% of the use of Telehealth is to connect patients in remote locations with specialists, thereby allowing people in remote communities to have access to specialists without leaving their communities. In addition, Telehealth is used to provide educational service for nurses and healthcare workers so that they can receive educational programs in a remote setting. The advantage of Telehealth for this sort of educational purpose is that the staff in nursing stations would be able to ask questions and deal with specific issues confronting them in their day-to-day practice. A smaller portion of Telehealth usage is committed to televisitation which involves people in hospital in Thompson or Winnipeg visiting with family members in their home community.

[84] A number of witnesses suggested that Telehealth could be used for treatment, in addition to educational uses. For example, Brenda Sanderson suggested that if connectivity issues were resolved an additional and significant use of Telehealth would be for emergency situations where a patient could not immediately be flown out of a remote community. Specifically, Telehealth would allow a nurse in a nursing station to establish a link with a physician in either

Thompson or Winnipeg so that the physician could provide a diagnosis and plan of treatment until the patient could be transferred.

[85] Brenda Dawyduk also gave evidence with respect to the clinical use of Telehealth. Like Ms Sanderson she indicated that a great deal of work still has to be done in both Thompson and at the nursing stations so that Telehealth functions in an effective manner for clinical treatment. This is particularly the case in those nursing stations which have connectivity issues. She indicated that it was her practice to use Telehealth for clinics so that she would be able to see a patient in a remote location without the necessity of the patient having to travel to Thompson. She strongly advocated the advantages of being able to see a patient as opposed to simply having the patient being described over the phone.

[86] A number of nurses testified that Telehealth was potentially a very useful tool in terms of clinical applications. However the lack of connectivity in many of the nursing stations meant that it was too slow to be used for patient care and was primarily used for educational purposes, if used at all.

[87] Clearly, a program such as TREKK, providing state-of-the-art information about treatment of the 20 most serious illnesses afflicting pediatric patients, would be very helpful in improving care at nursing stations, but to be effective this internet based service, like Telehealth, would needs to be accessible on a timely basis and that requires adequate internet service.

CONNECTIVITY

[88] An examination of the connectivity capabilities of many nursing stations was conducted by experts from the Northern Regional Health Authority. This review determined that for many remote First Nations communities there were "huge issues" impeding effective internet communication.

[89] Ms. Smith, speaking on behalf of First Nations and Inuit Health Branch acknowledged that there are significant issues with respect to connectivity, describing it as a major challenge for the nursing stations. She acknowledged that improvements are absolutely necessary and must be achieved. She testified that in other regions, the presence of significant economic activity such as mining has led to partnerships to improve connectivity.

[90] All witnesses testified that the connectivity, and the ability to use the internet, was extremely problematic in many northern communities. The inability to get on the internet and communicate in a timely fashion does not allow for the best use of systems such as Telehealth or access to services such as E-chart. With respect to the connectivity issue, Ms. Sanderson testified that Industry

Canada is offering substantial funding directed towards creating the infrastructure to create high-speed Internet for schools in remote communities. This creates an opportunity to piggyback the school high-speed Internet with the nursing stations in order to create a high speed Internet system for use in both educational and medical settings. She did caution that difficulties will still exist, in terms of connectivity because the system is based on satellite communication and if difficulties arise, technicians have to fly into communities to resolve the issues.

[91] Ms. Sanderson testified about another serious issue preventing the most effective use of technology in the nursing stations, specifically, the fact that the cabling and internal network infrastructure that is required to support transfer of electronic information is not present in many of the nursing stations. This is due to the fact that many of the nursing stations were built prior to the advent of electronic networks and as a result lack the wiring and other resources required to support modern technology.

[92] **RECOMMENDATION: Connectivity issues must be resolved in order that residents of remote northern communities are able to take advantage of the opportunities for education and clinical services provided by the Internet. Nursing stations must be brought up to appropriate standards, in order to support the technology necessary to provide effective healthcare in First Nation communities. The evidence suggests that before new technologies can be brought into the nursing stations, a great deal of work must be done to standardize equipment to ensure that the infrastructure within the nursing stations is current and capable of supporting the demands that will be made upon it.**

POINT OF CARE TESTING

[93] Advances in technology have created diagnostic modalities that were once the subject of science fiction. For example, a device similar to the "tricorder" of Star Trek fame, is on the verge of being commercially available. Such a device can, in seconds, record 14 of a patient's vital signs and send the results to a smart phone where the display would compare the patient's results to normal readings. Other handheld devices can diagnose everything from H.I.V. to strep throat. The availability of such tests could allow for a great deal more information to be gathered by nurses working in nursing stations-the point of care- which would inform decision making in terms of diagnosis and treatment. What information would be most valuable and what tests should be performed is a matter for study and consultation between the agencies providing medical services to the nursing stations. There needs to be a coordinated approach to

developing these technologies and to providing the training necessary to make them effective in any nursing station, whether it is federal or provincial.

[94] **RECOMMENDATION: that the Northern Health Region Authority in consultation with Children's Hospital, First Nations and Inuit Health Branch, establish a process to determine what is the best point of care testing that can be provided to the nursing stations. Because of their remote locations and limited access to physicians, nursing stations should be given priority in the acquisition and use of point of care testing.**

6.) CONCLUSION

[95] The medical system failed Erna Hastings, Paul Ross and Drianna Ross. Numerous witnesses described the outstanding care Drianna's parents provided to her. When she got sick, Drianna's parents fought for her with all the energy and tenacity they possessed. Drianna fought her illness with that same tenacity and energy, but because the seriousness of her condition was not recognized in a timely way she died. It is the task of this inquest to make suggestions to improve health care for people like Drianna and her parents. I hope that the recommendations I have provided will serve to achieve that goal.

[96] There is no doubt that the provision of health care in the North is challenging. Without exception, I found all the individuals who gave evidence were committed to making things better so that a repetition of this tragedy can be avoided. As we move forward, there must be the consultation and respect for the needs and wishes of the First Nations communities that are most impacted by the deficiencies in service that have been identified at this inquest. The Northern Regional Health Authority and First Nations and Inuit Health Branch demonstrated a willingness to make the changes that will make a difference for all the residents of northern Manitoba communities. The cooperation between these agencies, in collaboration with First Nations communities, must expand in its scope, with the goal of ensuring that residents of some of Manitoba's most disadvantaged communities have access to the quality health care that is the right of all Canadians.

[97] This proceeding was fortunate to have the benefit of the counsel who worked in a cooperative fashion to ensure that the Court had the information required to examine the complex issues raised by Drianna Ross's death. In particular, I want to thank inquest counsel Sharyl Thomas for her skilled and thorough presentation of the evidence. The court benefitted by having government funding for counsel to represent the parents. Mr. Onchulenko, who initially worked pro-bono, provided excellent representation for the parents and

greatly assisted the Court in its task. Thank you to all counsel and parties for their assistance in this difficult matter.

DATED at the City of Dauphin, in the Province of Manitoba, this 17th day of December, 2015.

Judge Don Slough
Provincial Court of Manitoba

Appendix A

Manitoba

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June 7, 2012

Honourable Chief Judge Ken Champagne
The Provincial Court of Manitoba
The Law Courts
5th Floor, 408 York Avenue
Winnipeg MB R3C 0P9

Dear Chief Judge Champagne:

Drianna Ross
Date of Death: November 26, 2011
Place of Death: Thompson, Manitoba
CME File: 2912/11

The Office of the Chief Medical Examiner has concluded its investigation into the death of Drianna Ross, age two months, of God's Lake, Manitoba. Drianna was transferred on November 25, 2011 from the nursing station at God's Lake to Thompson General Hospital, Thompson, Manitoba, where she died on November 26, 2011.

During the course of our investigation, the following chronology of events was compiled based on Drianna's medical chart:

November 22, 2011
Drianna was brought to God's Lake Nursing Station by her mother, Erna Hastings, as she felt the child was "burning up". Drianna was assessed by a nurse at 11:35 hours who documented the following information in her chart: had diarrhea x 1 yesterday; bowel movements normal today; spits up her food if she does not have a good burp; taking her bottle well and as much as usual; drinks soy formula, voiding 6 to 8 times per day; no cough; has "sticky snots" but no runny nose; happy and smiling++. At the time of her assessment, Drianna's temperature was 37.3° C; respiratory rate was 32 breaths per minute; pulse was 137 beats per minute; and, oxygen saturation was 97%. Her weight was 4.91 kg. Following the examination, the nurse concluded that Drianna was a "well baby". The plan was to send Ms Hastings home with Tylenol and instructions not to administer the medication unless she spoke with a nurse first. The mother was also told to return to the nursing station if Drianna developed diarrhea, began vomiting, or "burning up" again.

At 20:00 hours, Ms Hastings called the nursing station. Apparently Drianna had a rectal temperature of 38° C. Nursing staff advised her to give the child 0.75 ml of Tylenol.

November 24, 2011
At 01:30 hours, the father, Paul Ross, called the nursing station, as Drianna was "still coughing" and was losing her voice. Instructions were given for the child to be brought to the nursing station in the morning.

At 16:30 hours, Ms Hastings called the nursing station to ask if Drianna should be brought in. The nurse asked why the child was not brought in during the day, as they had been expecting her. Ms Hastings advised that the driver had not picked her up and that she would bring Drianna to the nursing station the next day. The appointment was scheduled for November 25, 2011 at 09:00 hours. (Note: This latter entry for November 24, 2011 was a late entry in the chart and dated November 28, 2011.)

November 25, 2011
At 01:25 hours, Ms Hastings called the nursing station to report that Drianna had vomited. She had been given Tylenol earlier, as she had a fever and a temperature of 39.3° C. Nursing staff noted that the child had an appointment at 09:00 hours and advised the mother to call back if still concerned or if the child's condition worsened.

At 04:20 (?04:50) hours, Ms Hastings called the nursing station to advise that the child was crying and "stuffed up", and was having difficulty breathing.

At 05:00 hours, Mr. Ross called the nursing station. Drianna was now "burning up". Apparently the parents had administered some Tylenol about an hour earlier, but it was not working. The child was to be brought to the nursing station for assessment.

At 05:20 hours, Drianna was brought back to the nursing station by her parents. A nurse took her history and examined her. At this time, Drianna's temperature was 38.6° C and her weight was 4.89 kg. Her increased temperature was assessed as being due to viral illness. ?Colic. The plan was to continue with Tylenol every 4 hours, to increase fluids/formula as tolerated, and to give Ovol and nasal saline drops. Drianna was scheduled to be brought back to the nursing station at 13:00 hours for follow up.

At 12:00 hours, Drianna was brought back to the nursing station for follow up. The nurse took her history and examined her. Tylenol (0.75 ml) had been given at 08:00 hours by her mother. It was noted that Drianna had some canker sores in the back of her throat. Her crying was weak sounding. She was assessed as having stomatitis secondary to a viral illness. At 12:45 hours, the nurse spoke with "Dr. Haddley". The plan was to give the child 1.0 ml of Tylenol every 4 hours. As well, she was treated with 50 mg of Advil while at the nursing station. An additional dose of Advil was given to the parents, which was to be given to Drianna at home. The parents were advised to monitor her fluid

intake and to push fluids using a syringe, and, to monitor wet diapers. The child was scheduled for follow up later that day at 20:00 hours or sooner if there were concerns.

At 16:20 hours, Drianna was brought back to the nursing station as her condition had worsened and she appeared to be "burning up again". Apparently at 14:00 hours the parents had given her "Tylenol 1 m". Although she had taken 5 ½ ounces of formula, she vomited most of it out. There were no wet diapers. Her temperature was 38.2° C. Her respiration rate had increased to 52 to 54 breaths per minute. She also had slight "WOB" (work of breathing) and "indrawing". In the chart, Drianna is described as a "quiet, whimpering baby – cry sounds hoarse". At this time the nurse assessed her with an "ongoing increased temperature NYD ?viral". The plan was to consult Dr. Hadi, the pediatrician at Thompson General Hospital. Dr. Hadi accepted the patient for assessment and the nursing station made arrangements with Perimeter Airlines to transfer Drianna to Thompson. At 18:15 hours, the child was noted to be grunting while breathing. Her temperature was 38.2° C. Oxygen saturation had decreased to 94%. It was noted the area around the nares was "bluish pale" in color. At 18:20 hours, the child was wrapped up and taken by air ambulance to Thompson General Hospital.

At 19:48, the child was received in the Emergency Department, Thompson General Hospital. She was seen by the pediatrician and diagnosed with right middle lobe and left lower lobe pneumonia. Despite treatment, Drianna's condition did not improve. Due to her poor prognosis and following discussion with her parents, she was placed on comfort care only.

November 26, 2011
At 12:38 hours, Drianna Ross was pronounced dead.

The medical examiner was notified and an autopsy was ordered. The autopsy, which was performed at the Health Sciences Centre in Winnipeg, Manitoba, confirmed that Drianna's death was the result of respiratory failure due to severe diffuse necrotizing lower respiratory tract infection (larynx, trachea, bronchi, lungs) due to Methicillin resistant Staphylococcus aureus sepsis. The manner of death was natural.

This was a preventable death.

Therefore, in accordance with *s. 19(1)* and *s. 19(2)* of *The Fatality Inquiries Act*, I direct that an inquest be held into the death of Drianna Ross for the following reasons:

1) to determine the circumstances relating to Drianna's death; and,
2) to determine what, if anything, can be done to prevent similar deaths from occurring in the future with regard to, but not limited to, the following:
    (a) appropriateness of the medical facility/services that are available at the nursing station not only at God's Lake, but also at other nursing stations throughout Manitoba.

(b) feasibility of a single health care system to be responsible for providing medical service to Manitoba First Nations;
(c) provision of observation beds in all nursing stations in Manitoba;
(d) provision of guidelines/protocols for management of fevers in children and other similar conditions for use in all nursing stations in Manitoba;
(e) development of a live telelink service between the Health Sciences Centre and all nursing stations in Manitoba with back-up provided by consultants in Winnipeg; and,
(f) availability of resources at nursing stations to manage new infections that emerge and appear to be more prevalent in northern communities in Manitoba.

A press release with respect to this inquest will go out on June 14, 2012.

In due course, it would be appreciated if the Office of the Chief Medical Examiner could be advised as to the date, time, and location of the inquest.

Thank you.

Sincerely,

A. Thambirajah Balachandra, MBBS, FRCPC, FCAP
Chief Medical Examiner

cor\Correspondence 2012\June\08 Champagne
Encl.

c. Please refer to Distribution List

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Appendix B

Audit at a Glance

Report 4—Access to Health Services for Remote First Nations Communities

What we examined (see Focus of the audit)

Health Canada supports First Nations through various health programs based on the 1979 Indian Health Policy. Under these programs, the Department provides funding for the delivery of health services in remote First Nations communities, where individuals face special health challenges and have limited access to provincial health services. According to the Department, support to these communities extends to 85 health facilities, where health services are delivered through collaborative health care teams, led by approximately 400 nurses. These health facilities serve approximately 95,000 First Nations individuals.

This audit focused on whether Health Canada had reasonable assurance that eligible First Nations individuals living in remote communities in Manitoba and Ontario had access to clinical and client care services, and medical transportation benefits.

Why we did this audit

This audit is important because First Nations individuals living in remote communities face unique challenges in obtaining essential health services. They rely on the federal government's support to access health services within their communities, or on federally supported transportation benefits to access health services outside their communities.

What we concluded

Overall, we concluded that Health Canada did not have reasonable assurance that eligible First Nations individuals living in remote communities in Manitoba and Ontario had access to clinical and client care services and medical transportation benefits as defined for the purpose of this performance audit.

What we found

Nursing stations

Overall, we found that Health Canada nurses working in nursing stations were properly registered with their provincial regulatory bodies, but only 1 of the 45 nurses in our sample had completed all five of Health Canada's mandatory training courses that we selected for examination.

Health Canada acknowledges that its nurses sometimes work outside their legislated scope of practice in order to provide essential health services in remote First Nations communities. However, we found that Health Canada had not put in place supporting mechanisms that would authorize the nurses to perform activities outside their legislated scope of practice, such as medical directives to allow nurses to perform specific tasks under particular circumstances.

We also found that Health Canada had identified numerous deficiencies in nursing stations related to health and safety requirements or building codes. For a sample of 30 deficiencies, the Department could not provide evidence that the deficiencies had been addressed. Furthermore, one of the residences at a nursing station that we visited had been unusable for more than two years because the septic system had not been repaired. Consequently, medical specialists cancelled their visits to the community.

Lastly, we found that Health Canada had recently defined essential health services that should be provided in nursing stations. However, the Department had not assessed whether nursing stations had the capacity to provide these services nor had it informed First Nations individuals what essential services were provided at each nursing station.

These findings are important because First Nations individuals in remote communities should have access to essential health services from qualified nurses who have the authority to provide those services. Nursing stations that are non-compliant with health and safety requirements or building codes can put patients and staff at risk and may limit access to health services.

- **Health Canada did not ensure that nurses had completed mandatory training courses**

  Recommendation. Health Canada should ensure that its nurses working in remote First Nations communities successfully complete the mandatory training courses specified by the Department.

- **Health Canada had not put in place supporting mechanisms for nurses who performed some activities beyond their legislated scope of practice**

  Recommendation. Health Canada should ensure that its nurses are provided with appropriate supporting mechanisms that allow them to provide essential health services that are outside their legislated scope of practice.

- **Health Canada could not demonstrate whether it had addressed nursing station deficiencies related to health and safety requirements or building codes**

  Recommendation. Health Canada should work with First Nations communities to ensure that nursing stations are inspected on a regular basis and that deficiencies related to health and safety requirements or building codes are addressed in a timely manner.

  Recommendation. Health Canada should work with First Nations communities to ensure that new nursing stations are built according to applicable building codes.

- **Health Canada had not assessed the capacity of nursing stations to provide essential health services**

Recommendation. Health Canada should work with First Nations communities to ensure that nursing stations are capable of providing Health Canada's essential health services.

Recommendation. Health Canada should work with First Nations communities to communicate what services each nursing station provides.

Medical transportation benefits

Overall, we found that medical transportation benefits were available to registered First Nations individuals in the Indian Registration System, but those who had not registered may be denied access to these benefits. This is important because First Nations individuals who are denied access to medical transportation benefits may not be able to receive health services that are only available outside of their community.

We also found that Health Canada's documentation concerning the administration of medical transportations benefits was insufficient. For example, there was lack of documentation to demonstrate that the requested transportation was medically necessary and to confirm that individuals attended the appointments for which they had requested transportation. Sufficient documentation is needed to document decision making and facilitate consistent delivery of services and benefits.

- **Some First Nations individuals had not registered and were therefore ineligible for Health Canada's medical transportation benefits**

  Recommendation. Health Canada should work with First Nations communities, and Aboriginal Affairs and Northern Development Canada, to facilitate the registration of First Nations individuals.

- **Health Canada did not sufficiently document the administration of medical transportation benefits**

  Recommendation. Health Canada should maintain sufficient documentation to comply with the Treasury Board's 2009 Directive on Recordkeeping and to demonstrate that medical transportation benefits are administered according to Health Canada's 2005 Medical Transportation Policy Framework.

Support allocation and comparable access

Overall, we found that Health Canada did not take into account the health needs of remote First Nations communities when allocating its support. Taking into account communities' health needs is important because it would help to ensure that available departmental support is allocated to areas with the greatest needs and that it contributes to improving the health status of First Nations.

We also found that Health Canada had not implemented its objective of ensuring that First Nations individuals living in remote communities have comparable access to clinical and client care services as other provincial residents living in similar geographic locations. Health Canada needs to know whether its support is providing comparable access so it can make adjustments that may be necessary to ensure its support provides access to an appropriate level of service.

- **Health Canada did not take into account community health needs when allocating its**

support

Recommendation. When allocating nursing staff levels and other support, Health Canada should work with First Nations communities and take into account their health needs.

- **Health Canada did not compare access to health services in remote First Nations communities to access in other remote communities**

  Recommendation. Health Canada should work with First Nations communities, provinces, and health service providers to ensure that First Nations individuals living in remote communities have comparable access to clinical and client care services as other provincial residents living in similar geographic locations.

Coordination of health services among jurisdictions

We found that committees comprising representatives of Health Canada and other stakeholders in Manitoba have not proven effective in developing workable solutions to interjurisdictional challenges that negatively affect First Nations individuals' access to health services. In Ontario, two formal coordinating committees were either recently established or in the process of being established but it was too early to assess their effectiveness.

This is important because the lack of coordination among jurisdictions can lead to inefficient delivery of health care services to First Nations individuals and to poorer health outcomes for First Nations individuals. Workable solutions are needed to improve accountability and ensure that individuals in remote First Nations communities have comparable access to health services.

- **Committees to resolve interjurisdictional challenges have generally not been effective**

  Recommendation. Working with First Nations organizations and communities, and the provinces, Health Canada should play a key role in establishing effective coordinating mechanisms with a mandate to respond to priority health issues and related interjurisdictional challenges.

Entity Responses to Recommendations

The audited entities agree with our recommendations, and have responded (see List of Recommendations).

Related Information

Report of the	Auditor General of Canada
Type of product	Performance audit
Topics	• Health • Aboriginal Affairs

Audited entities	• Aboriginal Affairs and Northern Development Canada • Health Canada
Completion date	20 January 2015
Tabling date	28 April 2015
Related audits	

For more information

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The Auditor General's Comments

Health Canada has not adequately managed its support of access to health services for remote First Nations

Large video and transcript

APPENDIX C

RECOMMENDATIONS

1.) **RECOMMENDATION: For any community, physician services are a valuable commodity. Given the limited time Dr. Khusi is able to spend in the community, it is essential that the resources necessary to support a physician be provided, so that she can devote her time to the provision of medical services. This would include a staff person to do the completion of billing cards, collecting vital data from patients, weighing patients and other routine matters that can be delegated. Assuming Dr. Khusi's circumstances are not unique, stronger assistance to physicians should be implemented in all nursing stations. (at para 15)**

2.) **RECOMMENDATION: assuming nursing stations are brought up to a reasonable standard in terms of the ability to handle electronic data, I would recommend the use of computers for nurses or other health care staff to take patient profiles and track lab results to ensure information is properly stored and available electronically. This would facilitate the exchange of information between the nursing station and any receiving institution, once a patient was transferred from the nursing station to a hospital. In the short term, a system to track lab results must be put in place. (at para 20)**

3.) **RECOMMENDATION: In my view, the acceptance of MRSA as a fact of life in northern communities cannot be tolerated. Stringent efforts must be taken to ensure cleaning in nursing stations meets acceptable standards and that if there is an outbreak strong measures are taken to bring it under control. If a patient is MRSA positive, that condition should be flagged on the front of the file so that health care providers who subsequently deals with that patient are aware of this condition and appropriate treatment can be provided. (at para 27)**

4.) **RECOMMENDATION: The failure to provide secure seating for infants on Medevac flights needs to be reviewed. Medevac flights land and take off in remote communities with rudimentary runways. Weather conditions can be difficult. In my view, the practice of allowing an infant to be held in his or her parent's arms is inherently risky and needs to be reviewed by the agency responsible for Medevac flights. (at para 36)**

5.) **RECOMMENDATION: Drianna Ross's death in Thompson General Hospital raises a number of issues. In my opinion, the treatment and placement of infants who are admitted to Thompson General Hospital needs to change:**

1. **The care of these infants should not be left to the most inexperienced nurses.**
2. **There needs to equipment available capable of providing constant monitoring, so that the nurses and physicians responsible for an infant's care are aware of any deterioration in their patients condition and are able to respond in a timely fashion.**

3. Thompson General Hospital should establish a video connection to Children's Hospital in Winnipeg that would allow for timely and effective consultation for pediatric patients, not just newborns. Clearly the program described by Dr. Klassen with the on-call pediatrician at Children's Hospital would play a significant role in such an enhancement in the care available at Thompson General Hospital.
4. Given the prevalence of MRSA in the North, there needs to be a careful review of what antibiotics are administered on admission to determine the best practices in ensuring coverage with respect to MRSA in appropriate cases (I note the inquest heard evidence that the administration of antibiotics that effectively treat MRSA is not without its own set of risks.). (at para 58)

6.) RECOMMENDATION: The inquest heard evidence about the fact that the pediatricians working at Thompson General Hospital are also on 24 hour call, sometimes for many days in a row. Such call is, of course, in addition to their regular duties working on the wards and in clinics. I appreciate that medical doctors, as part of their training frequently work extremely long hours and that sleep deprivation is to some extent tolerated and accepted in the medical community, as being part of the job. That being said, given Dr. Klassen's evidence regarding the availability of the 24 hour on call physician working out of Children's Hospital, I would suggest that in a high volume facility such as Thompson General Hospital, guidelines be established to ensure that the pediatricians working at Thompson General Hospital are given adequate rest, so that they are able to provide optimal care to their patients. (at para 66)

7.) RECOMMENDATION: the Northern Regional Health Authority working in collaboration with the University of Manitoba Faculty of Medicine and First Nations and Inuit Health Branch develop and deliver educational programs for nurses working in Manitoba nursing stations. (at para 70)

8.) RECOMMENDATION: The increased training and use of nurse practitioners is a matter that needs to be vigorously examined by Northern Regional Health Authority, Manitoba Health and First Nations Inuit Health Branch. Ideally, nurses already working in the north, could be offered incentives and support to take the training required to become a nurse practitioner, with the expectation they would use this training while working in an expanded role in northern communities. (at para 74)

9.) RECOMMENDATION: Connectivity issues must be resolved in order that residents of remote northern communities are able to take advantage of the opportunities for education and clinical services provided by the Internet. Nursing stations must be brought up to appropriate standards, in order to support the technology necessary to provide effective healthcare in First Nation communities. The evidence suggests that before new technologies can be brought into the nursing stations, a great deal of work must be done to standardize equipment to ensure that the infrastructure within the nursing stations is current and capable of supporting the demands that will be made upon it. (at para 93)

10.) **RECOMMENDATION: that the Northern Health Region Authority in consultation with Children's Hospital, First Nations and Inuit Health Branch, establish a process to determine what is the best point of care testing that can be provided to the nursing stations. Because of their remote locations and limited access to physicians, nursing stations should be given priority in the acquisition and use of point of care testing. (at para 95)**