

Section 3



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Chapter 10



FINDINGS AND RECOMMENDATIONS

INTRODUCTION

The preceding chapters have recounted the events surrounding the deaths of 12 children during or after pediatric cardiac surgery at the Winnipeg Health Sciences Centre in 1994. While each of these children died under very specific circumstances, common issues have arisen from the evidence presented to this Inquest. They point to the conclusion that the serious organizational and personnel problems experienced by the Health Sciences Centre's Pediatric Cardiac Surgery Program during 1993 and throughout 1994 may have contributed to the deaths of some of these children. This leads to a central finding of this Inquest:

■ Finding

The evidence suggests that, during 1994, the Pediatric Cardiac Surgery Program at the Health Sciences Centre did not provide the standard of health care that it was mandated to provide and which parents believed, and had a right to expect, that their children would receive.

While some of the problems that the program faced related to the abilities and conduct of specific individuals, other problems were largely systemic in nature. These systemic problems related to the structure of the HSC, in particular to hospital policies and procedures governing staffing, leadership, teamwork, communication, decision-making and quality assurance. Weaknesses in all of these areas led to problems in the procedures and outcomes of the program. As a further result of systemic failures, the issues surrounding the abilities and conduct of certain team members, and the performance of the surgical team itself, were not dealt with in a timely or effective manner.

This chapter is devoted to setting out those findings and recommendations that are essential for ensuring that the situations that occurred in this program in 1994, and the manner in which these children died, will not be repeated. They include, among other things, the question of whether or not the HSC should continue to attempt to maintain a Pediatric Cardiac Surgery Program.

The overall objective of these recommendations, however, is to prevent a similar situation from arising at the HSC as occurred in 1994. The evidence suggests that this objective can best be met by strengthening program planning, establishing appropriate preventive measures and improving risk management.

The evidence also makes it clear that improving interpersonal and team communications and devoting resources to building and maintaining a properly functioning surgical team are keys to any similar future programs.

Meeting the latter objective requires that the culture of health-care institutions must change. It is particularly important that medical professionals provide parents with more information than was done in these cases. Also of particular importance is that nurses not be treated by doctors and hospital administrators as undertrained subordinates, whose concerns can be readily dismissed as emotional responses to tragic outcomes.

The ubiquitous nature of human error in a medical setting must also be accepted and better understood, and its occurrence no longer treated as a moral failing. Methods must be developed to reduce the frequency of medical and human errors within hospitals, trap such errors as they occur and reduce their impact.

The thrust of the recommendations in this chapter is not punitive. The need is to improve the health-care system so as to prevent the recurrence of events that occurred in 1994. It is necessary to accept that the health-care system will not improve if people act solely on the basis of a fear of consequences for themselves or their careers. Instead, the recommendations are intended to establish a structure within which highly skilled and talented people can establish a health-care team that continually works together to provide a high standard of care. All of the comments and recommendations in this chapter are intended to fulfil this objective.

However, there are recommendations that do call upon appropriate existing agencies to examine this report with a view to determining if any disciplinary or other action is required for those whose performance and actions may not have met the appropriate standard for the positions they held.

This rest of this chapter is made up of eight sections. They include findings and recommendations with regard to:

- The loss and recruitment of program staff before 1994;
- Problems within the Pediatric Cardiac Surgery Program during 1994;
- The treatment of nurses;
- The treatment of the families of the deceased patients;
- Monitoring of issues and problems within and outside the HSC;
- Human and medical error;
- The future of pediatric cardiac surgery in Manitoba; and
- Referral to the College of Physicians and Surgeons of Manitoba.

Each section contains findings, explanatory text and recommendations. The findings and recommendations flow from information already presented in previous chapters. For this reason, the explanatory text has been kept to a minimum.

THE LOSS AND RECRUITMENT OF PROGRAM STAFF BEFORE 1994

LOSS AND RECRUITMENT OF PROGRAM STAFF

■ **Finding**

The evidence suggests that the loss of and failure to replace professional medical staff from the Variety Children's Heart Centre in 1992 and 1993 represented a serious erosion in the ability of the Pediatric Cardiac Surgery Program to continue to provide the level of service that it had previously provided.

■ **Finding**

The evidence suggests that the impact on the Pediatric Cardiac Surgery Program of the loss of medical staff in and before 1993 was not appreciated by the heads of the responsible departments.

■ **Finding**

The evidence suggests that the HSC's recruitment of a pediatric cardiac surgeon in 1993 to replace Dr. Kim Duncan was flawed.

■ **Finding**

The evidence suggests that the process of replacing Dr. George Collins as head of the Variety Children's Heart Centre following his retirement in 1993 also was flawed.

Those responsible for staff replacements in 1993 and 1994:

- were slow to begin the process of recruitment and replacement;
- took too long to find capable replacements once they did begin;
- relied on inadequate professional staff recruitment processes; and
- failed to take appropriate steps to address case load and other program issues when positions were left vacant for extended periods of time.

Two staff cardiologists had left the pediatric cardiac surgery program during 1992–93 and had not been replaced by the time of their departures. In addition, Dr. Kim Duncan, who gave notice in April of 1993 of his intention to leave the hospital in July for a position in the U.S.A., was also not replaced by the time he had left. While Duncan was under no obligation to provide any greater notice than he gave, the period of time between his notice and departure was also likely insufficient to ensure that a replacement would be in place by the time he left.

The evidence also suggests that there was confusion as to who was on the formal search committee established to find a candidate to replace Duncan. While Drs. Blanchard and Giddins testified that they believed that Dr. George Collins was a member of a search committee for the new pediatric cardiac surgeon and responsible for assessing the candidates' surgical skills, Collins testified that he did not view himself as a member of any such committee. Accordingly he had only peripheral involvement in the recruitment of Duncan's replacement.

There are no documents establishing a formal search committee and no minutes of any formal committee meetings; nor are there any criteria set out for the candidates that were sought.

Although Collins informed Dr. Agnes Bishop in April 1993 of his intention to leave the hospital at the end of October of that year, it appears that no one—including Collins—took steps to inform the other department and section heads involved in the Pediatric Cardiac Surgery Program of that resignation. Dr. Niels Giddins, the only cardiologist left after Collins, was not aware of Collins's resignation until shortly before Collins's departure.

There was also no formal committee or selection process put into place to find a replacement for Collins, nor was there a formal discussion and assessment made of the potential impact of his resignation on the program so soon after the resignation of Duncan and the other cardiologists. Although Collins gave the HSC six months notice, a permanent replacement had not been found by the time he left. Indeed, by the time the program was suspended in December 1994, a year and a half after his departure, the Children's Hospital had not yet appointed a permanent replacement.

The inability to replace medical staff by the time of their departures may speak to the need to require lengthier notice periods from those HSC staff members whose specialties are in high demand. It may also speak to the need for the hospital to put into place a better method of professional recruitment, particularly for multidisciplinary specialized programs, such as the Pediatric Cardiac Surgery Program. The hospital might have benefited, for example, from engaging the services of a professional recruitment agency.

The details of Odim's appointment, which are outlined in Chapter Five, also indicate the inadequacies of the recruitment process in place at the HSC in 1993. While his credentials appeared to be quite impressive, no one in Winnipeg actually saw him perform a surgical procedure or spoke with anyone at Boston where he had most recently trained, before offering him the position as Chief of Pediatric Cardiac Surgery. The assessment of Odim's operating-room skills appears to have been made largely on the basis of what he told them, where he had trained, what his resume revealed and comments from people who had not observed him in surgery or had had no involvement with him for three years or more. Additionally, little consideration seems to have been given to assessing his ability to work with or develop a surgical team such as was in place in Winnipeg.

Information about Odim was gathered from sources such as personal contacts, word of mouth, interviews and an assessment of paper credentials. These sources can be useful. However, when they comprise almost all the information that is used in coming to a decision as to whether or not to hire an important individual such as a surgeon, they can prove to be ineffective in determining the individual's appropriateness in a number of important areas.

The prime area, obviously, is that of surgical ability. It seems logical to think that when hiring a surgeon, one of the most important areas to investigate is that of the individual's surgical skills and ability. One can properly assume that any trained surgeon has been certified as being capable of performing the surgical procedures associated with the field of specialty for which he or she is being hired. However, such certification does not provide information on the level of skill and ability that the person brings to the position. That can best be determined by observing the candidate while he or she actually performs surgery and by interviewing those who have recently observed the candidate in surgery and have the capabilities themselves to make judgments about the level of skill of the candidate. Those at the HSC responsible for recruiting Odim did none of those things.

Had they consulted with individuals such as Dr. John Mayer, who had supervised Odim during his most recent medical training in Boston, they would have learned that, in his view, Odim was not ready for the position he undertook in Winnipeg. Armed with that knowledge, they might have reconsidered hiring him, or at the very least, been able to put into place measures to monitor and assist Odim, as well as ensure that his lack of experience and need for assistance in some technical areas did not compromise patient care.

All of this speaks to the need for the HSC to revamp the approach it takes to the recruitment and hiring of senior or specialized medical professionals such as surgeons.

RECOMMENDATION

It is recommended that: The HSC establish a medical staff recruitment process for senior or specialized positions within the hospital that has as its main priority the creation of a mechanism that results in the best possible candidate being hired or appointed. The process should include these elements:

Before the recruitment of a specialized surgeon to a staff position, personnel in related fields, such as nursing, anaesthesia and perfusion, should have input into the criteria developed for the position.

The process should be time-sensitive, and include a provision that requires that those holding senior or specialized positions within the hospital give a reasonable amount of notice to the hospital before leaving, to enable the hospital to seek and hire replacements.

The recruitment and hiring process should be overseen by a formal search committee, consisting of the head of the department doing the recruitment and such other individuals as have a related medical or administrative interest in the appointment. This should include nurses. In addition, the search committee should include members with expertise and experience in professional recruitment and hiring.

Where there is a limited pool of experienced and/or trained candidates capable of filling the position, the hospital should consider engaging the services of a personnel recruitment agency specializing in the field of professional staff recruitment.

When hiring an individual with specialized surgical skills, the department head should ensure that the candidate is observed while performing surgery before a final assessment is made.

One of the important criteria for the hiring of a surgeon must be the ability to work well in a team setting and a demonstrated understanding of surgical team concepts.

THE COMPENSATION PAID TO PEDIATRIC CARDIAC SURGEONS

■ Finding

The manner in which pediatric cardiac surgeons are financially compensated in Manitoba is not satisfactory.

The evidence suggests that one of the issues that encouraged Duncan to leave Manitoba related to the manner by which pediatric cardiac surgeons are compensated financially. As well, this was an issue when Dr. Odim was being recruited, and, if not addressed, will continue to present an issue for the future recruitment of pediatric cardiac surgeons.

For a variety of reasons, the global compensation available to pediatric cardiac surgeons in Manitoba is considerably less than that available to adult cardiac surgeons. This results from lower caseloads and lower surgical fees for procedures that are more complex and take longer than adult procedures. This disparity is in large measure based on historic circumstances that no longer apply. Unless the schedule is amended, it will be difficult to attract and retain experienced pediatric cardiac surgeons to this province.

RECOMMENDATION

It is recommended that: The Manitoba government and the Manitoba Medical Association adjust the Manitoba doctors' fee schedule to allow for the payment of compensation to pediatric cardiac surgeons that does not stand in the way of the effective recruiting of, and maintenance of, pediatric cardiac surgeons in Manitoba. The fee schedule should reflect the fact that pediatric cardiac surgeons are as highly trained as adult cardiac surgeons; that because of a lower case load, pediatric cardiac surgeons will perform fewer operations than adult cardiac surgeons; and that the operations that pediatric cardiac surgeons perform will be just as, if not more, complex than adult cardiac operations.

PROBLEMS WITHIN THE PEDIATRIC CARDIAC SURGERY PROGRAM

UNCLEAR LINES OF AUTHORITY

The responsibility of department heads

■ Finding

The evidence establishes that the ultimate responsibility for the Pediatric Cardiac Surgery Program at the HSC was jointly held by the head of the Department of Surgery and the head of the Department of Pediatrics.

■ Finding

The evidence establishes that the lines of authority and responsibility for the Pediatric Cardiac Surgery Program were unclear and confusing to hospital staff during 1994.

The heads of the Department of Surgery and the Department of Pediatrics had overall responsibility for ensuring that the program was providing an appropriate level of service. Their joint agreement was needed for a reduction in service in May and a suspension of the service in December. For the purposes of this report, the persons who held those positions throughout 1994 were:

1. Dr. Robert Blanchard—head of Surgery throughout 1994;
2. Dr. Agnes Bishop—head of Pediatrics until June 1;
3. A variety of persons who held the position of acting head of Pediatrics until September 15;
4. Dr. Brian Postl—head of Pediatrics from September 15.

There was considerable confusion among the staff in the program as to who had immediate responsibility for taking action with respect to their concerns. That confusion was in part due to the fact that the Pediatric Cardiac Surgery Program was a multidisciplinary program within which medical professionals from a variety of departments (Nursing, Perfusion, Surgery, Cardiology, Anaesthesia, Pediatrics, Intensive Care, Neonatology and Pathology) worked on cases in a joint endeavour. This created confusion when it came to determining who had overall responsibility for the entire program, or if those who did have such responsibility were also responsible for specific professionals. This was the case with regard to determining who was responsible for monitoring the performance of the surgeon.

The matter was exacerbated by the fact that, historically, the medical director of the Variety Children's Heart Centre had provided day-to-day management and monitoring of the surgical aspect of the program. This was despite the fact that the surgeon was formally responsible to the section head of Cardiovascular Thoracic Surgery, a position held by Dr. Helmet Unruh on an acting basis. In addition, many hospital staff believed that Dr. Nathan Wiseman, the head of Pediatric Surgery had some responsibility for monitoring the Pediatric Cardiac Surgery Program by virtue of his title. He did, in fact, have very little such authority.

It appears that Dr. Helmut Unruh, the acting section head of CVT Surgery, assumed that Giddins, as Collins's interim replacement, would take over Collins's role in monitoring the Pediatric Cardiac Surgery Program's outcomes. This assumption was neither correct nor appropriate. When Giddins replaced Collins as the head of the VCHC, he did not approach the position in the same manner as Collins had.

Additionally, Unruh and Blanchard should have been involved enough with the Pediatric Cardiac Surgery Program to have recognized the staffing problems the program faced in 1994. They ought to have spoken directly to Giddins about whether or not their expectation was reasonable that Giddins would monitor surgical outcomes.

RECOMMENDATIONS

It is recommended that: If a Pediatric Cardiac Surgery Program is re-established at the HSC, it have clear written lines of authority and responsibility. Efforts must be made to ensure that program members understand these lines of authority. This is of particular importance in a multidisciplinary program.

It is recommended that: If a Pediatric Cardiac Surgery Program is restarted at the HSC, overall supervision for the program should be the responsibility of a single Department Head—logically the head of Pediatrics. The head of Pediatrics can more easily supervise a program that has as its focus pediatric cases. Staff providing service to any revamped Pediatric Cardiac Surgery Program should be primarily assigned to the program and be accountable to the head of Pediatrics through their appropriate department head or line manager for their performance. In particular, the head of Pediatrics should also have responsibility for monitoring the surgical performance of the pediatric cardiac surgeon through the assistance of the head of Pediatric Surgery and the head of Pediatric Cardiology. The head of Pediatrics should ensure that the surgeon, the head of Pediatric Cardiology and the head of Pediatric Anaesthesia have a plan to phase in the surgical program. In addition, the program should be monitored closely, with regular reports going to the head of Pediatrics.

The responsibility of Dr. Jonah Odim and Dr. Niels Giddins for the events of 1994

■ Finding

The evidence suggests that neither Dr. Odim nor Dr. Giddins carried out their responsibilities to monitor and respond suitably to the poor surgical results in the program.

While the department heads had ultimate responsibility for the program, it was the responsibility of the pediatric cardiac surgeon, Dr. Jonah Odim, and the acting medical director of the Variety Children's Heart Centre, Dr. Niels Giddins, to ensure on a day-to-day basis that the program was providing an appropriate level of care.

Additionally, as the referring cardiologist, Giddins, regardless of his role at the Variety Children's Heart Centre, had an additional responsibility for monitoring the surgical outcomes of the cases he referred to Odim.

It is noted as well, that Giddins not only referred patients to Odim, he reassured parents of those patients that Odim was capable of performing any and all of the procedures required for his patients. Therefore he had a responsibility to ensure that the assurances he was giving were justified.

As the chief of service, Odim also had a responsibility to ensure that the program did not undertake cases that were beyond his and the program's ability and experience, to monitor results and ensure the orderly development of the surgical team.

MISUSING THE CONCEPT OF A 'LEARNING CURVE'

■ Finding

The evidence suggests that the acceptance of a learning curve muted the degree of concern that Drs. Odim, Giddins and Wiseman should have had when surgical nurses and anaesthetists voiced concerns about surgical results.

The question of a 'learning curve' needs to be placed into a proper context.

Neither Blanchard nor Bishop (the department heads responsible for the program at the relevant time), the cardiologist nor the surgeon gave appropriate consideration to the fact that junior surgeons (such as Odim) and newly established (or re-established) surgical teams experience a learning curve. This learning curve is a recognized fact. Indeed, it was precisely because of the concept of a learning curve that many witnesses expressed a concern that the Pediatric Cardiac Surgery Program at the Children's Hospital was not able to perform enough operations to allow team members to establish and maintain their skills at a high enough level.

To that extent, there is validity to the consideration of a learning curve for individuals and teams. However, the concept of a learning curve can be abused. There should be no allowance for a learning curve where patient safety is concerned or when analysing results of surgery. While witnesses before this Inquest said that they recognized that a learning curve has no place in determining the acceptability of poor surgical results, there was a noted tendency on the part of some, in defending the events of 1994, to point to what they considered similar 'results' at the start of Dr. Kim Duncan's career in Winnipeg. This was apparently used as a rationale for believing that there was no need to be alarmed about what was occurring in the Pediatric Cardiac Surgery Program in Winnipeg in the spring or fall of 1994. That was simply not an appropriate use of the concept of a learning curve.

The evidence does establish that surgeons and surgical teams have the potential to have higher morbidity and mortality rates in the early stages of their development. These rates are likely to be higher if the program in which they are functioning does not go through a carefully planned and initiated start-up, if it is not properly and closely monitored and if steps are not taken to identify and resolve problems and improve performance. That fact should have caused those in charge of the program to have taken two major steps before the start-up of the program in 1994.

First, an effort should have been made to ensure that an experienced person was in a position of authority in the program to provide guidance with respect to start-up issues that the program was inevitably going to face.

Secondly, those in charge of the program ought to have been careful to ensure that the new surgeon and the restarted program were closely monitored at least throughout the first year. Initial patient selection ought to have been restricted to those cases that promised the best results during the period of time that individual and team experience was gained. The evidence suggests that, unfortunately, few steps were taken to ensure that the program did not take on cases that were beyond the capabilities of either the surgeon or the team as a whole throughout the year. Those in charge of the program acted on the basis that poor surgical results would simply improve over time. That was simply not appropriate.

Blanchard and Bishop, the department heads responsible for the program at the relevant time, Giddins, the cardiologist, and Odim, the pediatric cardiac surgeon, all bear some responsibility in that they failed, individually and collectively, to ensure that the program was restarted on a carefully phased basis.

ADMINISTRATIVE ISSUES

■ Finding

The evidence suggests that Drs. Blanchard and Bishop, the department heads responsible for the program at the relevant time, did not address the underlying issues that led to the depar-

ture of Collins and Duncan. Instead, the program was placed in the hands of a relatively inexperienced cardiologist and an even more junior surgeon who had just completed his training.

Two key members of the program's medical staff, Dr. George Collins and Dr. Kim Duncan, resigned from the Variety Children's Heart Centre in 1993, in part, because they believed the centre was not receiving sufficient support from the HSC. While the lack of support they mentioned was partially related to finances, the issue seems to have been related primarily to whether or not the hospital was prepared to support the program in a manner that allowed it to meet the objectives and standards that both Duncan and Collins had set for it.

■ Finding

The evidence suggests that Drs. Blanchard and Bishop failed to recognize that, in light of the significant changes in personnel at the Variety Children's Heart Centre, the lack of experience of the new leadership of the Pediatric Cardiac Surgery Program, and the fact that the cardiologists who had left the program in the previous year and a half had not yet been replaced, the program would require close supervision and monitoring in early 1994.

It would appear that the budgetary and administrative changes undertaken at the hospital during 1993–94 were a significant distraction for the department heads and other supervisory staff. Given those demands during this period, it is conceivable that the department heads did not have the time to provide the necessary leadership for a program that was being restarted. If that was so, Blanchard and Bishop should have recognized that and should have considered delaying the program's restart.

■ Finding

The evidence suggests that Drs. Blanchard and Bishop furthermore did not prepare for or have in place a proper orientation for either a new surgeon or a new director of the VCHC. Giddins was assigned interim responsibility for the position vacated by Collins, but there is no evidence that he was prepared for the duties he was assigned.

■ Finding

The evidence suggests that Drs. Blanchard and Bishop, along with Giddins, also did not ensure that there was either formal or informal mentoring of Odum upon his arrival at the HSC. In the case of a young surgeon in his first appointment following his residency, more careful consideration ought to have been given to the fact that he was facing an entirely different experience from what he had faced as a surgical resident.

■ Finding

The evidence suggests that Drs. Bishop, Blanchard and Giddins also did not ensure that anyone was assigned responsibility or took responsibility for building and mentoring the Pediatric Cardiac Surgery team as a whole in the early part of 1994. Without this leadership, the problems that arose in the early operations rapidly led to unresolved—and, in the end, unresolvable—conflicts.

As a result of the lack of appropriate orientation and mentoring, the program was plagued throughout 1994 with a variety of very serious problems. HSC operating-room and ICU staff were not properly pre-

pared for Odim's particular approach to surgery and post-operative care, while Odim often made assumptions based on his limited experience at other institutions. Examples are numerous and are found in the preceding chapters. These problems may, in fact, have compromised patient care.

- Finding

The evidence suggests that Drs. Bishop, Blanchard, Giddins and Odim did not give sufficient consideration both to Odim's lack of experience and to the level of team development.

- Finding

The evidence suggests that the lack of supervision and the lack of a phased start-up plan meant that the Pediatric Cardiac Surgery Program was marked by poor case selection in 1994 and that the program undertook cases that were beyond the skill and experience of the surgeon and the team.

- Finding

The evidence suggests that the cardiologist and the surgeon did not take appropriate steps to establish and maintain open and ongoing lines of communication with other related medical services in the hospital, such as nursing and anaesthesia.

Additionally, one of the factors that increased team dysfunction was the surgeon's use of techniques and approaches with which other team members were not familiar and for which the surgeon did not prepare them. The surgeon seems to have erroneously assumed that everyone knew what he was talking about. In some cases there was a lack of sufficient consultation and briefing before the team undertook specific, complicated procedures. For example, it would appear that the neonatal intensive care unit staff were not sufficiently briefed and prepared by the surgeon, or the cardiologist, for the patients undergoing Norwood procedures.

RECOMMENDATIONS

It is recommended that: The Health Sciences Centre develop protocols for providing orientation and support to all new staff and staff moving into new positions. This should be done even when the appointment is to an Acting position.

It is recommended that: Any re-established Pediatric Cardiac Surgery Program involve all units that would be affected by the program in the development of appropriate protocols. Such protocols should include a requirement that the entire team, including those individuals responsible for post-operative care, be fully prepared before the program moves to higher-risk cases or new procedures.

INAPPROPRIATE STAFFING LEVELS

Small surgical units must always struggle to find a balance with staffing issues. The team members must not be overworked, thereby putting patient care at risk. At the same time, each team member must be involved in a sufficient number of cases to maintain an appropriate skill level. There are no hard and fast

rules on these issues. The evidence suggests that in 1994 staffing levels were stretched throughout the HSC. However, staffing issues in Cardiology, Surgery, Anaesthesia and Pathology proved to be of particular significance.

- Finding

The evidence suggests that Drs. Blanchard and Bishop, the department heads responsible for the program at the relevant time, appear to have failed to recognize fully the implications of only one cardiologist being at the Variety Children's Heart Centre for most of 1994. Steps should have been taken to limit the number of patients seen at the centre, on the basis of Giddins's workload alone.

- Finding

The evidence suggests that the fact that, throughout the existence of this program, there was only one surgeon who was on constant call, also placed a high degree of pressure on the surgeon.

- Finding

The evidence suggests that shortages in the Department of Pathology also contributed to the fact that autopsy reports were not completed in a timely manner.

- Finding

The evidence suggests that an appropriate balance had not been struck between the number of anaesthetists providing anaesthetic care to the program and the number of cases in which each anaesthetist participated.

Evidence was presented to the Inquest that, after spending all night at the bedside of a patient, Duncan was asked by Collins not to undertake a surgical procedure the next morning. On the other hand, there was evidence that Odim went into the operating room to perform a surgical procedure, on very little sleep, after spending the entire night in the ICU.

In contrast, while there were issues relating to staff shortages, there was also an issue with regard to whether there were too many anaesthetists providing service to the program. While there was no evidence presented to this Inquest to suggest that care suffered as a result, legitimate questions were raised throughout 1994 about the number of anaesthetists providing coverage to the Pediatric Cardiac Surgery Program.

The concept of the ability to develop and maintain skill levels is the same for an anaesthetist as for a surgeon, and for that reason, the number of anaesthetists providing coverage for the program should relate to the number of cases available. Williams and Roy, for example, said that the ideal number of anaesthetists should be between two and three anaesthetists for a program the size of Winnipeg.

RECOMMENDATIONS

It is recommended that: Any restart of the Pediatric Cardiac Surgery Program be initiated only after the relevant department heads jointly review staffing levels and assure themselves that they are appropriate to avoid overwork and fatigue and maintain appropriate skill levels. This applies to every discipline involved in the program.

More specifically:

Any restart of the Pediatric Cardiac Surgery Program be initiated only at a time when pediatric cardiology is staffed appropriately.

If the number of cardiologists in the Pediatric Cardiac Surgery Program is reduced following a restart, the program should reduce the level of service it provides.

Any new Pediatric Cardiac Surgery Program have provisions for relief for the pediatric cardiac surgeon. This could involve protocols for referral of patients out of province or arrangements to bring other surgeons into Manitoba.

The Department of Surgery for the HSC establish guidelines and protocols for surgeons that help in the decision as to when to operate if fatigued: for example, after being on call. These guidelines and protocols could be similar to those used by anaesthetists.

The Department of Pathology be properly staffed so as to be able to comply with reasonable guidelines for the completion of autopsies and autopsy reports as set out later in this chapter.

The Department of Anaesthesia ensure that the program has an appropriate number of anaesthetists. This number would have to take into account the need for anaesthetists to be involved in a sufficient number of cases to enable them to obtain a requisite level of experience, as well as ensuring that they are able to provide appropriate coverage for all cases.

TREATMENT OF NURSES

■ Finding

The evidence suggests that because nursing occupied a subservient position within the HSC structure, issues raised by nurses were not always treated appropriately.

Throughout 1994, the experiences and observations of the nursing staff involved in this program led them to voice serious and legitimate concerns. The nurses, however, were never treated as full and equal members of the surgical program, despite the fact that this was the stated intent of the administrative changes that the program underwent in June 1994. Intensive care unit nurses, for example, were never properly involved in the review team that assessed the program during 1994, and nurses were not properly involved in the Williams and Roy Review. The concerns expressed by some of the cardiac surgical nurses were dismissed as stemming from an inability to deal emotionally with the deaths of some of the patients. As well, any concerns over medical issues that the nurses expressed were rejected as not having any proper basis, clearly stemming from the view that the nurses did not have the proper training and experience to hold or express such a view. In addition, while HSC doctors had a representative on the hospital's board of directors, nurses did not.

Historically, the role of nurses has been subordinate to that of doctors in our health-care system. While they are no longer explicitly told to see and be silent, it is clear that legitimate warnings and concerns raised

by nurses were not always treated with the same respect or seriousness as those raised by doctors. There are many reasons for this, but the attempted silencing of members of the nursing profession, and the failure to accept the legitimacy of their concerns, meant that serious problems in the pediatric cardiac surgery program were not recognized or addressed in a timely manner. As a result, patient care was compromised.

■ **Finding**

The evidence suggests that nurses were not allowed to play a role in planning the February 1994 restart of the Pediatric Cardiac Surgery program, even though they formed an essential element of that program.

The concerns expressed by the PICU and the NICU nurses over the types of procedures that were to be carried out in the intensive care units were not addressed in a timely manner. In a number of cases it appears that the concerns of the operating room nurses over the nature of the deaths that occurred and with the mortality rate were interpreted as an inability to cope with the unfortunate, unavoidable death of a child. There was an implication that the nurses lacked a vision of the larger picture.

When the hospital was reorganized in the summer of 1994, the position of Vice-President (Nursing) was eliminated, although a commitment was made by the President of the hospital that there would always be one vice-president with a nursing background. (While the medical vice-presidency was also eliminated, HSC doctors continued to have direct representation on the HSC board). The restructuring that took place in 1994 also led to the creation of the position of unit manager, to replace the previous position of head nurse. While there were a number of benefits to this structure, creation of the new position led to a situation where nurses could theoretically be reporting to non-nurses. (While head nurses had to be nurses, this is not the case with unit managers.)

Finally, the evidence suggests that despite its stated intent, the hospital reorganization of 1994 implicitly devalued nurses, since it appears to have been driven by a concern to cut costs primarily by reducing staff, the bulk of whom ended up being nursing staff.

Throughout 1994 the nurses made proper and appropriate use of existing channels to voice their concerns. For a variety of reasons—some personal, some institutional—their concerns were not attended to. Indeed, the reception they were given led some nurses to silence themselves. It also left them frustrated and distraught. Many paid a heavy emotional price. By the time the program ended, at least one nurse was on the verge of taking her concerns outside the hospital, at great risk to her position and career.

It is necessary to put in place structures that ensure that all staff can make their concerns known without fear of reprisal. It is also important to ensure that the structure of the HSC be adjusted to ensure that the position of nursing does not continue to be a subservient one.

RECOMMENDATIONS

It is recommended that: The HSC restructure its Nursing Council to allow nurses to select its membership and to give it responsibility for nursing issues within the hospital. The Nursing Council should have representation on the hospital's governing body and be responsible for monitoring, evaluating, and making recommendations pertaining to the nursing profession within the hospital and

for nursing care. The Council should also serve as a vehicle through which nurses could report incidents, issues, and concerns without risk of professional reprisal.

It is recommended that: The HSC establish a clear policy on how staff is to report concerns about risks for patients. This policy must ensure that there is no risk to the person who is making the report. It should be clear to every staff member to whom they are to present such reports.

It is recommended that: The Province of Manitoba consider passing ‘whistle blowing’ legislation to protect nurses and other professionals from reprisals stemming from their disclosure of information arising from a legitimately and reasonably held concern over the medical treatment of patients.

TREATMENT OF THE FAMILIES

The families of the children who died in 1994 put their faith and the lives of their children into the hands of our health-care system. As indicated at the outset of this chapter, the evidence suggests that these children did not always receive the standard of care that their parents had every right to expect. The preceding findings and recommendations have addressed the reasons why the system failed to provide an appropriate level of care. However, there are a number of findings that must be made about the way parents were and were not informed about matters that were of the utmost importance to them.

THE ISSUE OF INFORMED CONSENT

■ Finding

The evidence suggests that the parents of the children involved in these cases were not as fully informed as they were entitled to be when asked to give consent to surgery on their children.

Patients and family members granting consent on behalf of a patient are entitled to know the risks involved, before they give their consent to surgery. However, there was clear disagreement over the sort of information that must be shared.

The experience of the surgeon and the team

A number of the medical witnesses felt that declaring one’s medical experience is not a requirement for informed consent, while many of the parents felt strongly that they should have been provided with more information about the program and about the surgeon’s experience.

Many hospital staff seemed to feel that it was appropriate to describe the surgeon as highly trained, or ‘one of the best’, and to state that the Winnipeg program was ‘as capable as anywhere else’. Yet they also felt it would have been inappropriate to tell the families that Odum had not performed any of the procedures he proposed in 1994 without supervision. How one could feel free to do the former while not feeling obligated to do the latter is a matter of some concern.

Some witnesses felt that the patient or parent is owed the truth if a question about previous experience is asked, but that a doctor can remain silent on the same point if the patient or parent does not ask. While the obligation to tell the truth is obvious, it seems illogical that some would see the obligation to be truthful as not encompassing an obligation to disclose a relevant fact.

While it might not be necessary to disclose a surgeon's abundant experience at performing a particular procedure, a surgeon's lack of experience is clearly a fact that is relevant to the question of whether or not someone would be willing to entrust his life, or the life of his or her child, to that surgeon. For that reason alone, such information ought to have been disclosed without prompting.

Information about surgical risk

Furthermore, the risk factors that were cited to parents for the procedures undertaken by Odim in 1994 were not based on the facts of the situations that the children actually faced in Winnipeg.

In many cases the indications of risk that were given to the parents were reflective of profession-wide risk, rather than the level of risk for the procedure at the HSC. Information such as the relative inexperience of the surgeon, and the fact that he would be performing the procedure in an unsupervised setting for the first time in his career, was not factored into the risk assessment shared with the families. This information should have been included when determining what risk level to advise the parents was associated with the operation on their child.

All the available data clearly suggest that there is a risk factor attached to a surgeon's experience. While that risk factor diminishes with experience, the fact that it is clearly higher with inexperience ought to have been disclosed to the parents, along with an indication as to what was applicable with Odim. Additionally, the state of experience and level of functioning of the surgical team was not, as it ought to have been, factored into the assessment of risk.

Information about the May 17 withdrawal of services by the anaesthetists

All parents whose children underwent operations after May 17, 1994, should have been informed about the anaesthetists' withdrawal of service on that date. As well, parents were entitled to be informed of the decision to perform only low-risk procedures thereafter, and the decision to resume full service in September 1994.

Information about the Williams and Roy Report and the February 1995 suspension of the program

Parents also should have been made aware of the Williams and Roy report and should have been allowed to read it. Additionally, parents should have been contacted and informed of the decision to suspend the program in February 1995, before that decision was made public.

RECOMMENDATION

It is recommended that: The Department of Health of the Manitoba Government prepare a patient's rights handbook that, among other things, deals with the issue of informed consent. That handbook should clearly set out that a patient and a parent acting on behalf of a minor have a number of rights, including, but not limited to:

- The right to be fully informed before giving consent to medical treatment;
- The right to information about a surgeon's experience in performing a particular procedure, as well as the experience of the hospital and/or surgical team;
- The right to a second opinion;
- The right to an out-of-province referral in certain circumstances, including where the patient or parent chooses to have a procedure performed by a surgeon or institution with more appropriate experience and where the surgeon or institution in Manitoba lacks the same experience; and
- The right to have an out-of-province surgeon perform the procedure in Manitoba, provided that there is a surgeon willing and able to do the procedure here.

It is recommended that: The Department of Health direct Manitoba hospitals to require that, as part of their obligation to obtain informed consent from a patient, hospitals have a positive obligation to provide to a patient, or a parent on behalf of a minor, information about:

- The right to information about a surgeon's experience in performing a particular procedure as well as the experience of the hospital and/or surgical team;
- The right to a second opinion;
- The right to an out-of-province referral in certain circumstances, including where the patient or parent chooses to have a procedure performed by a surgeon or institution with more appropriate experience and where the surgeon or institution in Manitoba lacks the same experience; and
- The right to have an out-of-province surgeon perform the procedure in Manitoba, provided that there is a surgeon willing and able to do the procedure here.

It is recommended that: The HSC review its policies on consent and communication with families. All information that is germane to a child's care or to decisions that must be made about a child's care should be provided to those from whom consent is being obtained. In particular, the policy on consent must make it clear that the medical staff treating a patient must be forthright and truthful in disclosing all relevant information to the patient or representative before the procedure in question. The fact that a surgeon has not performed a particular surgical procedure on his or her own in an unsupervised setting in the past must be disclosed.

FUNDING FOR THE FAMILIES

■ Finding

The evidence suggests that the families involved in this Inquest were hampered throughout the hearings by the burden of the costs associated with having legal counsel present throughout.

An important issue that arose almost from the outset of these proceedings had to do with the question of funding for legal counsel for the families involved in these proceedings.

The families of the 12 children who died in 1994 had compelling reasons to choose to follow and participate in the proceedings of this Inquest. However, the length of the proceedings and their complexity would have effectively barred all but the wealthiest of families from participating. The struggle of the families for financial assistance for their legal costs as the proceedings wore on was mentioned from time to time, although no formal assistance was sought from me. However, from the information available, it is unclear if all or only a portion of the legal costs of the families who participated have actually been covered. I believe that the families are entitled to have all their legal costs associated with this Inquest paid.

The role of all counsel for the families was of fundamental importance in these proceedings. While both counsel for the Inquest performed their tasks admirably, their role was not that of advocate for the families, but to bring forward the evidence as best they could. Given the active role of counsel for the other parties under scrutiny, having counsel whose sole responsibility was that of advocating for the families was essential for a fair and proper proceeding.

In this case the families actively pursued the matter with the government of the day and were successful (in part at least) in persuading government to pay for their legal costs. However, it seems unfair for families to have to take steps to persuade the government to provide them with financial assistance for legal costs on a case-by-case basis. Families that are best able to develop and marshal private or public support stand in a potentially more favourable position than do those whose political contacts or influence is lesser.

It is not unusual for Inquest proceedings to inquire into the conduct or decisions of a government department or official. In such a case, for the government to decide whether or not to pay for the legal costs of counsel for the deceased's family, without the family knowing on what basis such assistance will or will not be provided, can lead to the appearance of unfairness. Therefore some guidelines for such assistance should be provided.

RECOMMENDATIONS

It is recommended that: The Government of Manitoba establish a policy for the payment for counsel for families granted standing at inquests, taking into account the following factors:

1. The length of the proceedings.
2. The complexity of the issues.
3. Whether or not the costs of family involvement in the proceedings would be prohibitive to the applicant.
4. Whether or not the presiding judge so recommends on application by the family.

It is recommended that: The Government of Manitoba pay the entire legal costs of the families involved in these proceedings.

The amount of legal costs to be provided to the families involved in these proceedings be referred to an independent fact finder appointed by the Manitoba government and agreed to by the families. The fact finder shall investigate and make a report to the provincial government on whether or not the families should receive any additional financial assistance for legal costs beyond that which has already been provided. In determining what amount should be provided, the fact finder should have regard to the criteria mentioned above, as well as any amounts that have actually been paid. The rates paid to outside counsel retained by the Government should be used as a guideline.

COMPENSATION

In their presentations to this Inquest, counsel for some of the families have asked me to make a recommendation as to whether or not the families are entitled to financial compensation for the deaths of their children. It should be clear to any reader of this report that families did not always receive all the information that should have been provided to them and that their children's care did not at all times meet an acceptable standard. I have made numerous recommendations based on these findings.

However, I have concluded that I am unable to make any recommendation regarding such compensation. As noted in Chapter One of this report, an Inquest cannot make findings of culpability. For me to make a recommendation as to the question of financial compensation for the death of a person who is the subject of the Inquest would likely contravene my obligation not to make a finding of culpability. Secondly, it would appear that the families that have asked for compensation have already started civil proceedings. The question of their entitlement to compensation is best determined in accordance with the rules and laws applicable in those proceedings.

MONITORING OF ISSUES AND PROBLEMS WITHIN AND OUTSIDE THE HSC

MONITORING WITHIN THE HSC

The evidence discussed in Chapters Six through Nine gives rise to the following findings regarding issues of monitoring of the HSC's Pediatric Cardiac Surgery Program in 1994.

■ **Finding**

The evidence suggests that the formal and informal monitoring of issues at the HSC failed to identify the problems with the Pediatric Cardiac Surgery Program in a timely fashion.

■ **Finding**

The evidence suggests that Drs. Blanchard and Bishop, the department heads responsible for the program at the relevant time, as well as the cardiologist, and the surgeon, did not adequately

ly monitor surgical performance and results of the PCS program, on either a case-by-case or collective basis, particularly in the early startup period of 1994.

■ Finding

The evidence suggests that Drs. Blanchard and Bishop, the cardiologist and the surgeon also did not appreciate the significance of the poor level of communications and the poor interpersonal relationships between the surgeon and others that very quickly developed, and continued throughout the year.

■ Finding

The evidence suggests that Drs. Blanchard and Bishop were slow to respond effectively to concerns that were raised by program staff in the spring of 1994.

■ Finding

The evidence suggests that Drs. Bishop, Blanchard, and Craig should have informed their respective vice-presidents, in writing and in detail, of the anaesthetists' withdrawal of services in May 1994.

■ Finding

The evidence suggests that the Pediatric Cardiac Surgery Program should not have been allowed to return to full service in September 1994.

■ Finding

The evidence suggests that Dr. Odim's membership on the panel of surgeons that reviewed each surgical death for the Children's Hospital Standards Committee had the potential for a serious conflict of interest when the death involved one of Dr. Odim's patients.

As the numerous findings in this section indicate, there was a generally a failure of monitoring of issues and problems at the HSC in 1994.

There was no tracking of common indicators that might point to matters of concern, such as the duration of cardiopulmonary bypass times, the duration of total circulatory arrest times, the volume of blood loss, the number of units of blood and blood components transfused. According to the evidence, there were no plans in place to develop such a database at the time that the program was suspended. While a database was eventually developed, and showed times for such details as cardiopulmonary bypass, total circulatory arrest and cross-clamping, the database provided only a list of details for each individual patient. While data were collected for each child, they were not collected and analysed for patients as a group. As a result, it was not possible to track trends.

Nor was there any attempt to collect data from the Pediatric Cardiac Surgery Program and compare the results of the Winnipeg program with any others, and make some evaluation of the program's performance.

There was no debriefing setting in which members of the surgical team could debate and discuss pre-operative issues, intra-operative care (including surgical procedures and post-operative care) and outcomes. The M & M Rounds were mentioned as a possible setting for such discussions, but they dealt with cases long after the operation. (This was usually several weeks after the autopsy had been completed.) In addition, the M & M Rounds were clearly intended as teaching and learning opportunities for staff in the hospital generally and were open to individuals not involved in the case, such as medical students. These

rounds were not intended as a forum for a full and frank discussion of the details of each procedure. These factors meant, in the medical culture of the time, that the M & M rounds provided limited opportunity where related concerns, such as communication between personnel, could easily be discussed.

In addition, the medical culture of the HSC unfortunately reflected the concept of the surgeon as the supreme and infallible captain of the ship. This meant that what should have been the collective concern about the team's ability to handle certain cases turned into highly charged conflicts centring on the surgeon. Once framed in that manner, it became difficult to have open discussions or successfully resolve the issues.

Furthermore, despite formal policies, it is clear that the use of incident reports was not an engrained element of the HSC culture. Hospital staff observed many serious and alarming events in 1994. Indeed, many staff members began keeping private accounts of these events. However, only one incident report was filed for the cases under review during the entire year. Problems and complications during operations were often not charted, recorded or reported to the Standards Committee.

The Standards Committee structure that the HSC depended upon was simply not capable of addressing and evaluating important questions in a timely fashion. The Standards Committee process did not, in most instances, begin to review a death until an autopsy had been completed.

Finally, often in 1994, managers ignored pertinent information that was brought to their attention and, at best, simply tolerated the bearers of bad news. Lamentably, the responsibility for dealing with this information was never clearly delineated.

MONITORING OUTSIDE THE HSC

■ Finding

The evidence suggests that the Chief Medical Examiner's Office failed to identify the problems with the Pediatric Cardiac Surgery Program in a timely fashion. This is in large measure a result of over-reliance on information provided by the surgeon alone and the fact that, in most cases, the CME's investigation team waited for the final autopsy report. Autopsy results were not available to the Chief Medical Examiner's Office in a timely manner.

The office of the CME did not track surgical deaths by program. As a result the CME's office was not able to identify trends in the Pediatric Cardiac Surgery Program.

The office of the Chief Medical Examiner was not informed of the changes in the Pediatric Cardiac Surgery Program in 1994, particularly the anaesthetists' withdrawal of service on May 17, the slowdown that occurred afterward and the Wiseman Committee review. Since these events were linked to concerns about mortality, it was critical to any review of surgical deaths and, as such, ought to have been communicated to the CME's office.

In these cases, while the Chief Medical Examiner's investigators read the charts and spoke with the surgeon about the patients who fell under the Chief Medical Examiner's jurisdiction, even a cursory discussion with the nurses and the anaesthetists would have revealed significant underlying concerns.

In the autopsies performed in these cases, over-reliance was clearly placed on the information that was obtained from the surgeon. If the information as to what happened during surgery is vital to the conclusions

to be drawn by the pathologist, a greater attempt must be made to gather such information from as many of the people involved in the proceeding as possible. To rely exclusively on the one party who might be most responsible for the fatal outcome seems unwise.

The autopsies of the children whose deaths are under review were done in a timely manner; however, the final reports in some cases took months to complete. In none of the CME cases were final reports completed within 30 days of the autopsy as set out in the *Fatality Inquiries Act*. This meant that those responsible for monitoring the program, such as the CME and the Children's Hospital Standards Committee, were not able to use them effectively. The delays were due partially to staffing shortages in the Department of Pathology, as well as to the length of time that it took for all laboratory tests to be completed.

The timelines for the completion of autopsy reports ought to reflect reality as well as change it, because the length of time to obtain these reports seems far too long.

It also is not appropriate to have the autopsies in Chief Medical Examiner's cases involving surgical deaths performed by the staff of the hospital in which the operation took place. The better practice would be to have autopsies in CME cases performed by a pathologist not affiliated with the hospital in order to overcome any appearance of a potential conflict of interest.

Additionally, the HSC's practice of not informing parents that their children's hearts would be retained following autopsies was not appropriate.

RECOMMENDATIONS

It is recommended that: The Office of the Chief Medical Examiner develop a protocol requiring hospitals to inform that Office of significant changes in the delivery of medical services, such as program slowdowns and shutdowns, as well as any hospital-related deaths that cause the hospital to undertake a program review.

It is recommended that: The Office of the Chief Medical Examiner maintain a database of hospital deaths, which would track in-hospital deaths and causes of death on a weekly and monthly basis.

It is recommended that: As part of their investigation into a patient's death, the Chief Medical Examiner's investigators conduct preliminary interviews of nursing and medical staff who had been involved in the patient's care.

It is recommended that: For CME cases the Chief Medical Examiner arrange to have autopsies performed by a pathologist not affiliated with the hospital where the operation has been performed, unless it is unreasonable or impossible to do so due to distance, time or expertise.

It is recommended that: The Chief Medical Examiner develop guidelines for pathologists to follow in obtaining information before performing an autopsy in CME cases. These guidelines should not place over-reliance on anyone whose involvement might have contributed to the death of the patient.

It is recommended that: The Office of the Chief Medical Examiner establish reasonable timelines to complete autopsies, prepare and forward preliminary results and complete the final reports, including the completion of necessary laboratory work.

It is recommended that: The Chief Medical Examiner insist on compliance with reasonable timelines for the preparation and delivery of autopsy results.

It is recommended that: The HSC and other hospitals amend their autopsy consent forms. The forms should make it clear that the hospital might wish to retain organs and other specimens from the bodies of deceased patients. Families should have the option of withholding such consent, while still consenting to the autopsy itself.

HUMAN AND MEDICAL ERROR

In performing its mandate, an inquest has a responsibility to determine if changes are needed in the way that institutions and organizations go about their activities, so as to prevent such deaths from recurring. That requirement calls upon judges who preside at inquests in this province to consider the question of medical error and institutional responsibility. While it does not permit inquest judges to declare on the question of culpability (as has been discussed elsewhere), it does permit judges to identify and discuss individual and institutional error.

ERROR, ACCIDENT AND HUMANITY

Pediatric cardiac surgical procedures are planned and performed by human beings. The hospitals in which those procedures are carried out are designed and built by human beings. They design, manufacture, and maintain all the equipment used in the diagnosis of patients, and in their anaesthetic, surgical and intensive care. Human beings decide if a child will or will not undergo pediatric cardiac surgery. Human beings, as a team, provide the child's pre-operative, intra-operative and post-operative care.

Human beings make errors. We make errors in the design and construction of systems. (A system is defined as a grouping of inter-related components, which interact within a working environment to produce an outcome.) Thus, the health-care system represents everything from patients, personnel, the equipment and the environment within which care is provided, the organizations that provide that care, and the regulatory agencies, such as the government, that legislate or otherwise regulate the provision of health care.

We make errors in the design and construction of technology used in the system, and we make errors when we maintain those technologies. We make errors when we plan and when we execute plans. We make errors when we execute individual tasks that are part of a larger plan. We make errors through ignoring rules, misapplying rules, forgetting to execute part of our plan, and failing to execute plans properly. All errors and problems in a hospital, such as surgical complications, are related to human activity. Error is a human reality.

It is completely appropriate to strive to eliminate error or reduce the frequency at which errors are made. It is, however, unrealistic to believe that human error can be totally eliminated. More importantly, it is impossible to design a system that relies totally on everyone doing the tasks assigned to them properly. Allowances must be made for the possibility that errors will be committed and mechanisms to address that possibility must be put into place.

It is important, therefore, to set out how human error in a medical setting ought to be addressed by the hospital.

DEALING WITH HUMAN ERROR

Error can be handled in two very different ways. One way is to seek out and identify the one who committed the error in order to hold him or her, or the institution that employs the ‘culprit’, responsible for it. The other way is analyse the error in order to learn from it and to improve things so as to reduce the probability that the error will not be made again.

Blaming

Blaming or holding people responsible and accountable for their actions, such as those types of error which involve violations of existing standards or rules, is a major focus of the court system. The laws of torts, of contracts, child welfare and crime—among others—all focus on the consequences that come to bear, or at least ought to, on the person who commits a legal wrong.

Legal blaming involves a determination of culpability in order for the system to become engaged in the resolution of the matter. Legal blaming, or fault finding, is a normal (indeed, perhaps even necessary) aspect of resolving and addressing those errors that violate rules or standards. Judicial systems exist in part to provide a vehicle by which individuals can address the question of wrongs that are committed against them or their loved ones, in order that they can relieve their feelings of loss, pain and anger. Without a properly functioning judicial system, some have argued that people may surrender to the urge to exact revenge for their loss and pain upon the individual or institution they feel is most responsible.

Learning from human error

However, because inquests are not able to make findings of culpability, the obligation of an inquest ought therefore to be to focus on discussing error in the context of what can be learned from it.

For the same reason, hospitals need to approach the issue of error from a learning perspective, for they have an obligation to provide the best possible care to their patients. If it is discovered that a problem has resulted from human error during the course of treatment, then hospitals ought to be empowered—indeed obligated—to consider such error from the perspective of what can be learned. In particular, efforts should be made to determine how to prevent errors from recurring, by discovering where the flaws lie in the system that contributed to errors being made.

In order to do so, a process must be put into place that emphasizes the need to gather and consider all of the relevant facts in an honest and candid manner, without regard to any individual or institutional consequences that might flow from the errors.

For that to happen, consideration must obviously be given to balancing the issue of confidentiality and protection of informants from liability for describing what happened, with the equally strong need for patients and their families to be informed as to what really happened.

THE INVESTIGATION OF HUMAN ERROR

While humans are responsible for all errors, it is often extremely difficult to determine the underlying reason for a problem or complication. Indeed, it is usually a mistake to try to seek out a single cause of a complication in the belief that eliminating that one cause will result in eliminating all future problems of the same kind. Serious, untoward results come from a series of errors: errors of omission and commission and errors of planning and execution. A death in the operating room might easily result from more than one type of error. Errors of commission might be made by someone who carries out a task incorrectly because of a misunderstood instruction. Errors of omission might include the institution's lack of training to ensure that operating-room personnel analyse and improve communications.

The descriptions of errors in this report are a necessary first step in an analysis of how individuals on their own and those responsible for organizations and regulatory agencies can learn from error. While analysis is required, however, it is often hindered by forces that exist within the medical community. These forces seek to minimize the appearance of errors when they occur. This may arise from the fact that the current culture of medicine reinforces the belief that medical personnel must perform without error. All too often, the making of an error in medicine is equated with a moral failing or is regarded as a sign of ignorance or incompetence. To admit to error, or to imply that a colleague's actions were in error, is to raise serious questions about someone's competence, and hence legitimacy and authority within the health-care system. One of the aims of this Report is to contribute to increasing openness about the existence of human error in the medical community.

One of the reasons why the medical system is able to operate as if doctors, nurses and other health-care workers were flawless is the fact that very few errors actually lead to problems or complications for a patient. In a few cases, the potential negative effect of an error does not actually materialize because the error is made in isolation of any other significant factor that might trigger the development of a problem. In most cases, an error such as failure to comply with a standard operating procedure is caught, either by a safeguard that is built into the system, or by medical personnel (by the person making the error or by someone else). In other cases, the effect of an error on the patient's condition is negligible. But this does not happen in all cases—some errors, in combination with other factors, do lead to some patients developing complications, which may range from minor irritation to death.

HIERARCHY OF THE EFFECTS OF ERRORS

Errors, in and of themselves, are worthy of assessment, regardless of consequences. Although some errors may not have negative consequences, there is, in effect, a hierarchy or evolution of the effects of errors. This hierarchy starts with errors that give rise to simple incidents, which may evolve into more serious events called 'critical incidents', which may then evolve into 'complications' or 'accidents'.

Errors are unplanned events that could, or do, lead to negative consequences. Humans commit errors, not because of any moral failing, but because humans are flawed beings, working in flawed systems that together contribute to the commission of errors.

Errors, coupled with a patient's medical condition and other flaws in the system, can result in an incident. The occurrence of an incident simply implies that the course of care, such as a cardiac operation, did not go as planned or predicted.

Should an incident occur, given the right circumstances, it may then contribute to the development of a 'critical incident'. The transition to critical incident is characterized by the development of the potential for harm to a patient, but not actual harm. This is the threshold point before a complication occurs. Another term for a critical incident is an 'adverse process'.

A critical incident may then further evolve into a complication or 'accident'. (Use of the word 'accident' should not be taken to mean that the problem arose 'accidentally' or by chance.) Only when the outcome of a case is not as planned or predicted, and the patient has suffered some harm, is an accident said to have occurred. Another term used in medicine to describe an accident is an 'adverse outcome'.

Nevertheless, it is important to understand that in medicine, errors only rarely lead to complications and so usually do not get past the 'incident' stage. For that reason, perhaps, incidents and even critical incidents are rarely recorded. When they are recorded they may be dismissed, or not pursued, because they did not produce negative results or consequences. Critical incidents are often termed 'near misses' and the fact that they did not give rise to complications is often ascribed to 'good fortune'. It should be understood however, that the lack of complications (or 'good fortune') ought to have no bearing on the question of whether or not an error occurred. All that the phrase 'good fortune' really means is that those discovering the incident were unable (or unwilling) to determine the reasons for the 'near miss' and acted solely on the basis that the lack of a negative result was enough. Similarly, to dismiss the occurrence of complications as simply 'bad luck' is to forfeit the opportunity to determine some of the underlying contributory factors to the problem.

When investigating a problem with patient care, it is not enough simply to determine 'what' happened: for example, the patient died. Nor is it enough to determine only 'how' the patient died: for example, from being given the 'wrong' drug because of human error. The most important, and often ignored step, is to determine 'why' the patient died and the underlying contributory system and human factors to the making of the error. (Some examples include confusing labelling of the drug, inadequate lighting, two patients with the same name, an over-worked and fatigued doctor, and lack of an assistant.)

Everyone can learn when studying their own and others' errors. Improvements in the system would be made more rapidly, however, if errors, incidents and critical incidents were more closely and systematically examined.

The importance of early reaction to error

One of the facts that clearly arises from these proceedings is that there was a clear lack of a timely and critical examination in the hospital of the events that occurred in the operating room during the surgical procedures that have been the focus of this report.

The M & M Rounds, which were often described in the evidence as a means by which mistakes could be identified and discussed, failed in several other respects. These rounds involved several other people in the hospital over and above the team members involved in the operations. They also did not have the appropri-

ate focus as will be seen later in this discussion. More importantly, the rounds were not scheduled at times that allowed for or required full participation by all team members.

While it is possible that the Wiseman Committee was intended to provide such a process, it failed to do so in several respects, all of which have been discussed in detail elsewhere in this report.

There was also a report issued by the Paediatric Death Review Committee of the College of Physicians and Surgeons that assessed the deaths of these twelve children and which concluded that four of these deaths might have been prevented through better medical management. That review did not occur until long after the events in question. However, that review did not involve the program participants in a team-like setting, nor allow for the sharing of results in a manner that contributed to the improvement of the team's overall ability to perform their tasks or improve their collective and individual abilities to treat their patients better. As well, that review did not consider the errors and 'near misses' that did not have fatal consequences.

Furthermore, the Williams and Roy review in 1995 was not intended as a review of error. It was intended as an overall assessment of the program. There was no attempt by those reviewers to look at each or any of the cases.

What was clearly missing at the HSC in 1994, therefore, was a process that allowed team members to comfortably and collectively assess and evaluate the events that occurred in the operating room in a manner that contributed to improvements in the way that the patients were treated. Because of this deficiency, problems and concerns developed to the point that by the time of the death of the twelfth child, the level of confidence among those within the program was at its lowest. It is safe to say that most members of the team probably felt anxiety over whether or not they could perform even the simplest procedure without complication.

If the hospital is to consider renewing the program or participating in a similar program in a different form, it needs to seriously consider developing a better process for members of surgical teams and programs to learn from the mistakes that they will inevitably make. Even if the hospital does not move toward re-establishing a similar program in the future, a mechanism that focuses members of a surgical team on the process of learning from mistakes would be of benefit to the hospital generally. Therefore, such a mechanism will be discussed.

HUMAN FACTORS ANALYSIS

Where should institutions focus their attention as they work to create mechanisms to identify errors, limit their impact, and prevent their recurrence? Persuasive evidence was presented to the Inquest suggesting that the field of human factors analysis provides some useful tools in making this decision.

Human factors analysis arose out of the study of accidents in the aviation industry. Studies of air disasters suggested that the majority of accidents did not result from technological faults or a lack of technical skills. Instead, the studies suggested that in addition to an underlying flawed system, the contributing factors or triggers for the disaster lay within the area termed human factors. This is the scientific discipline concerned with interactions among humans and other parts of a system in carrying out a purposeful activity. Human factors include leadership, teamwork, communication and decision-making.

These issues have also been identified as critical in medical mishaps. Leadership, teamwork, communication and decision-making are recurring themes in this Report. They are not side issues, not matters of mere personality difference, but central issues. Where these issues were not resolved, they often led to tragic results.

Human factor analysts suggest that the errors, incidents, critical incidents and accidents that arise from human behaviour can best be addressed in a systematic fashion through programs of quality assurance and error and risk management. These programs need to address the behaviour of people who might appear to perform at less than an optimal level. However, more importantly, these programs must address what are termed 'systemic issues', that is, problems that lie within the whole of the hospital or even the health care system itself.

A NEW APPROACH TO THE HANDLING OF MEDICAL ERROR AT THE HSC

As noted in Chapter Four, the HSC was formally committed to the concept of quality assurance. Whether or not it was able to achieve its commitment is a matter that was a significant part of the investigative review undertaken into these 12 deaths.

It is clear from the findings set out in this chapter, that the current reliance on line management, incident reports, and the Standards Committee structure at the Health Sciences Centre was just not sufficient to prevent the events that led to the deaths of these children. While the safeguards that the hospital did deploy must be left in place, they must also be augmented. The HSC must develop an institutional culture in which information about safety hazards is actively sought, messengers are trained to gather and transmit such information, and responsibility for dealing with that information is shared by all. This will require new approaches to quality assurance, risk management and team performance.

Dr. Jan Davies¹ prepared a detailed report on these topics for this Inquest. Her report outlines how modern health-care institutions are incorporating new approaches to quality assurance, risk management and team performance into their operations. The evidence presented to this Inquest indicates that the HSC must adopt and adapt these approaches. The following sections outline a number of key elements in a new approach to the handling of medical error at the HSC.

The benefits of these approaches include:

- For patients (and their families): an improvement in safety of the care delivered, as measured and demonstrated through the review of complications, such as death or injury;

¹ Dr. Jan Davies was, at the time of her testimony, a professor of anaesthesia in the Faculty of Medicine at the University of Calgary and a member of the medical staff of the Calgary Regional Health Authority hospitals. A 1975 graduate of the University of Calgary's Faculty of Medicine, Davies interned at Dalhousie University in Halifax, Nova Scotia, from 1975 to 1976. She completed her anaesthetic training there, between 1976 and 1980, during part of which time she was also a research fellow in the Departments of Physiology and Biophysics and Anaesthesia. She was appointed a member of the active anaesthesia staff of the Victoria General and Camp Hill Hospitals in Halifax and a fellow in the Department of Anaesthesia at Dalhousie University in 1980. In 1981 she was appointed an assistant professor and then in 1985 an associate professor at the University of Calgary. Davies was qualified to give expert evidence in medical error, human factors, quality assurance and surgical team dynamics. Her expertise was established as a result of her extensive study in the area, as well as her numerous publications, since the early 1980s.

- For health-care workers: an improvement in morale, in part because of improved patient outcome and in part because of an improvement in the process of the delivery of care. Teams that communicate and work together more effectively will also work more efficiently;
- For the organization: an improvement in efficiency. This can be measured against the use of both physical and fiscal resources.

Quality Assurance

Quality Assurance (QA) differs from the traditional method of establishing a particular standard of care as acceptable, or unacceptable. The traditional method often serves only to point the finger at one individual whose performance may not have been optimal. QA is also unlike quality assessment, which seeks only to determine the quality of a service. QA programs go beyond simply ensuring that quality care is being provided. Rather, they seek to improve quality and stress the need to identify problems, develop and implement solutions and monitor results to ensure that solutions work. They also need to ensure that they do not introduce new problems through a comprehensive method which involves working from the solution back to the original problem. This is sometimes referred to as ‘closing the loop’.

The primary goal of any QA program should be to provide both excellent patient care and optimal working conditions for the providers of that care. Although health-care workers may need to continue to work under pressure (e.g., during natural or environmental crises) it should be kept in mind that the results of that care will suffer. Thus, quality assurance should also contribute to the development of optimal workplace conditions.

QA programs emphasize the importance of monitoring systemic performance and should be guided by information about the performance of the team, the organization and medicine in general. Data should include problems from everyday life, results concerning the actions of the team and team members’ attitudes, the operation and culture of the organization and new trends in the provision of health care. A quality assurance program will therefore require a quantitative database to be effective. Measurement of outcome, however, particularly mortality, may not be sensitive enough to show that there is systemic dysfunction. For this reason, emphasis must be placed on evaluating even those processes of care that might have led, but did not lead, to a complication.

Use should be made of ongoing, episodic and focused measurements and evaluations. In the period under consideration, funding cutbacks led to a decrease in computerized record keeping of the Department of Anaesthesia’s data collection program. This should not be allowed to happen again. When quality assurance processes are eliminated or suspended because of financial considerations, there cannot be any assurance that health care may not also be compromised. That is what the compilation and evaluation of such data are intended to provide, and when the data are lacking, that assurance is lacking. Data collection must ensure that the strengths and weaknesses of the organization’s practices and training programs are measured and compared with published results from other institutions. Verbal debriefing and written reports can give individuals and teams the performance feedback needed to work towards improvement. Trends in performance must be measured over time to detect areas that require more or less emphasis. Both short and long-term performance data must also be collected to serve as criteria for selection of new team members.

Risk management

It is not possible to eliminate risk from pediatric cardiac surgery. The best team operating with the best equipment in the best organization will not always achieve a successful outcome. Since risk cannot be eliminated, it must be managed through risk management, the cornerstone of which is the assessment and evaluation of risks.

The integration of quality assurance and risk management

Quality assurance programs can be linked with risk management programs. These latter programs attempt to manage and eliminate risk by establishing appropriate defences against errors at each of the three components that QA programs analyse.

The three quality assurance and risk management components interact in the following manner:

Structure: The structure of an organization comprises its personnel, equipment and environment, and administration. Risk management at this level involves applying preventive measures, such as constantly evaluating training and planning, personnel, equipment and environment, to minimize the chance of an error being made. Thus, risk prevention involves the prior evaluation of risk of an error being made. Personnel should be evaluated to ensure optimal numbers, proper credentials and staff well-being. Equipment should be evaluated to ensure that what is needed is present when required, is working, has been serviced regularly and is present in adequate numbers. There should be a plan for both phased and emergency replacement of equipment. The environment should be conducive to the activities that must be carried out. At the administrative level, policies and procedures should be considered and protocols developed to deal with critical events. At the regulatory level, an evaluation should be made as to whether or not the government and other regulatory authorities are supportive of appropriate health care.

Process: Process deals with what was done and how it was done. This is the stage of care where it is possible to detect, mitigate or recover from errors. Risk management strategies for the Process component focus on identifying high-risk activities and their potential for bad outcomes, and attempting to minimize complications by preventing the development of further problems. For example, it might be determined that even though a surgical team and equipment were functioning at their peak, the severity of a patient's condition might require that the patient be transferred to another, larger facility.

Outcome: In assessing the Outcome component, efforts are made to decrease the consequences of an error. QA programs in this area focus on what is measured and monitored. For example, a QA program would ask if near-misses are monitored and investigated or if only those with complications are assessed. The Outcome component of risk management focuses on trying to limit loss or damage after any complication and on formulating methods to prevent future problems. To this end, surgical programs need effective and timely methods to recognize, manage and investigate adverse outcomes, as well as adverse processes.

One of the most effective approaches to risk management is the development of a Critical Incident Review Policy.

Critical incident review policy

A critical incident review policy should provide immediate, multidisciplinary identification, management and review of critical incidents and accidents. To avoid impeding communication and facilitate fact-finding, the policy should be implemented non-judgmentally. Reviews might include any of the involved medical, nursing, or other staff. Consideration must also be given not only to the actions of the individuals involved, but to faults in the system in which those people work and which contributed to the problem.

At the HSC, a critical incident review policy for pediatric cardiac surgery might encompass those working in the cardiology clinic, radiology suite, pre-operative (pre-assessment) clinic and nursing unit, operating room, intensive care unit and post-operative nursing unit. In such a structure, it would be appropriate to appoint one or several team members to the position of risk manager.

A review would be triggered by the occurrence of either a ‘critical incident’ (one in which process of care was not as planned or anticipated, even though outcome of care was acceptable) or a complication or ‘accident’ (one with true adverse outcome, such as death or serious bodily harm). In addition, a review could be activated by a department head or senior administrator.

The goal would be to have an initial review conducted within 48 hours and a report completed within 72 hours. Before such a review was conducted, priority would be given to the care of the persons involved. All of the equipment should be isolated, the facts documented and the family informed. The hospital should have the facilities to care for and debrief family and staff members.

The review should consist of:

- a survey of the scene;
- a review of all documentation;
- the establishment of a timeline of events;
- a review of all other pertinent information; and
- a review of all pertinent policies and guidelines.

Within 48 hours, there should be a meeting of a review committee. The purpose of the meeting should be to corroborate facts, identify contributing factors and develop recommendations. Either the department head or risk manager of the major department involved should chair the meeting, which should include those involved in the event. Minutes should be kept but not necessarily circulated.

The department risk manager should prepare the report. The final form of the recommendations developed by the review committee should be submitted, with a plan for their implementation and monitoring to the hospital or health authority risk manager. This person may choose to release the recommendations to the patient’s family, but the report need not become part of the patient’s hospital record.

The responsibility for ensuring that recommendations are implemented should lie with the hospital and regional health authority or equivalent.

One of the issues that should be considered is that of the need for confidentiality of the proceedings of the review committee, and protection of the information obtained from public disclosure.

At present the medical standards committees of the hospital are protected from disclosure through provisions in provincial legislation that allow members of those committees to refrain from answering questions

about the discussions at the committees. If there is to be openness in the discussion of matters at quality assurance and risk management reviews, consideration will have to be given to providing similar protection for those processes. However, the need for protection from disclosure of the discussions from those proceedings will need to be balanced against the right and the need for patients and their families to know what occurred. The detail of how that would be accomplished is beyond the scope of this report. However, it is safe to say that consideration needs to be given to providing for such protection and disclosure.

According to Davies's report, a review policy similar to that discussed above is currently in use by the Calgary Regional Health Authority (CRHA). This policy was developed from one originally proposed and implemented in the Department of Anaesthesia at Foothills Hospital.

There are probably others as well. They can serve as a model for what needs to be put into place at the HSC.

Team performance

Problems in leadership, teamwork, communication and decision-making loom large in this report's account of the history of the Pediatric Cardiac Surgery Program in 1994. The HSC needs to take steps to address these human factors, since problems with human factors play a significant role in contributing to negative surgical outcomes.

It is beyond the scope of this Inquest to provide a detailed description of the improvements in team performance that the HSC should undertake if the Pediatric Cardiac Surgery Program were to be restarted. However, it is clear that these efforts would need to be ongoing, as opposed to a simple start-up initiative.

Ongoing, overall initiatives to improve team performance

The initiatives would have to pay attention to:

- the necessity for team building through a briefing and orientation process that included all players;
- the initiation of pre-operative briefing sessions that focused on the plan for the operation (including the anaesthetic) and plans to address any contingencies, should problems arise with the patient, equipment or personnel;
- the planning and the use of standard operating procedures;
- the development of leadership skills;
- the provision for team development or maintenance;
- emphasizing team communication;
- clarity in the decision-making process;
- a process of conflict resolution;
- post-operative debriefing sessions (for all operations, regardless of outcomes); and
- a stress management component.

Team Training

An important element of team performance is training that is specifically designed to:

- decrease or reduce the probability of errors occurring;
- correct errors before they have an impact; and
- contain or decrease the severity of the consequences of those errors that have been made.

Such training focuses on the development of concepts and behavioural strategies as measures to manage error. Teams should learn to address those day-to-day issues, particularly those relating to communication and decision-making, that arise between different members of the team, such as between doctor and nurse or surgeon and anaesthetist. These issues require an understanding of how teams and their individual members manage errors.

One component of such a training program would involve training in the principles of crisis management, using simulations of critical incidents. The purpose of such crisis training is to:

- provide participants with predetermined responses to critical incidents which can be called upon when needed, and
- instruct participants in the co-ordinated integration of all available resources to maximize safe patient outcomes.

However, health-care workers need to learn how to work together, not only during crises but also, more importantly, under normal circumstances, when nothing goes wrong. Teams that normally work well together will probably make fewer errors and encounter fewer problems. Then, if things do go wrong, the team will have already dealt with any interpersonal and organizational difficulties before the crisis.

Training to manage error must be inaugurated into the earliest training of doctors, nurses and other health-care workers. Without this type of training from the start of professional life, health-care workers will find it difficult to support and enhance the change from doctor-based to true team-based care. To be effective, the value of quality assurance, risk management and team performance must become embedded in the HSC culture. This will require active promotion by senior staff responsible for training and evaluation. These senior staff will therefore need additional training themselves.

Both health-care workers and administrators should establish the details of the program. Effective programs in the operating room will involve surgeons, anaesthetists, operating-room nurses, anaesthetic assistants, perfusionists, anaesthetic (respiratory) therapists, technicians, unit assistants and clerical staff.

Such training cannot be a single lesson, taken once, and assumed to 'fix' the problem. Repetition and reinforcement are vital if the desired outcomes are to be achieved.

Finally, if there is to be a Pediatric Cardiac Surgery Program at the Winnipeg Health Sciences Centre, it must incorporate ongoing policies of quality assurance, risk management and team performance. These must be ongoing programs that stress the need to identify problems, develop and implement solutions and monitor to ensure that solutions work and do not introduce new problems.

RECOMMENDATIONS

It is recommended that: The Province of Manitoba consider legislation that requires hospitals throughout Manitoba to establish appropriate quality assurance and risk-management programs that accord with the principles and suggestions contained in this report, and that legislative protection be granted to the discussions that form part of those processes, provided that the right of patients and their families to full disclosure of what has occurred to them during the course of treatment is not compromised.

It is recommended that: The HSC, in conjunction with the Winnipeg Regional Health Authority, develop a quality assurance and risk management program employing the principles and suggestions contained in this report.

It is recommended that: The HSC exclude doctors who have been involved in a case that is under review by any of the hospital standards committees from participating in the decision-making process relating to such a review.

It is recommended that: The HSC Department of Surgery develop an appropriate database for all surgical procedures, but particularly for pediatric cardiac surgical operations. The database should include information such as cross-clamp times, cardiopulmonary bypass times, total circulatory arrest times, amount of blood products used and such other relevant information as would allow for the proper monitoring of surgical trends within a given program or for a particular surgeon.

It is recommended that: Pediatric cardiac surgical data be collected in a way that makes it possible to compare Winnipeg procedures with those performed in other centres.

It is recommended that: The HSC establish a clear policy on how staff is to report concerns regarding risks for patients. This policy must ensure that there is no personal or professional jeopardy to the person who is making the report. It should be clear to every staff member to whom they are to present such reports.

It is recommended that: The HSC administration ensure that all staff members are made aware of their responsibility to use incident reports and fully chart problems with the process of delivery of care and any complications in the outcome of care.

THE FUTURE OF PEDIATRIC CARDIAC SURGERY IN MANITOBA

■ Finding

The evidence suggests that the Province of Manitoba lacks a sufficient population base to assure the establishment of a high-quality, full-service Pediatric Cardiac Surgery Program.

■ Finding

The evidence suggests that there are real benefits to patients to having a high-quality, limited service pediatric cardiac surgery program in Manitoba that is integrated into a regional Pediatric Cardiac Surgery Program.

The available information suggests that the limited number of cases that can be undertaken in a province like Manitoba with a population of just over one million increases the risk of morbidity and mortality, particularly in the case of high-risk surgery. Even if the catchment area were expanded to include other areas such as Nunavut or Northwestern Ontario, the base population would still be quite small and the number of complex procedures would still not be large enough to support a full-service program.

However there are difficult issues associated with sending children to other provinces for pediatric cardiac surgery. Some children cannot tolerate travelling such distances very well. Some cannot travel at all. A program that relies exclusively on extra-provincial transportation could contribute to their greater risk and might even doom some of them to death.

There are also the emotional, psychological and physical tolls that are exacted on families who have to travel long distances under very stressful circumstances to face a difficult ordeal, without the strength and support of nearby family members. It seems both unnecessary and unfair to require parents and families of small children and infants to have to travel to other parts of the country in order to have relatively simple procedures performed. Additionally, the cost of delivering all pediatric cardiac surgery services to the citizens of Manitoba by sending them out of province is tremendously expensive.

Collins, who originated the idea of having a full-service program in this province, felt strongly that medical treatment is better when the diagnostic and medical treatment facility and the surgical facility are one and the same, and the surgical team knows the patient and family.

There is merit, as Collins testified, to having a facility where the surgical team can be involved in the initial diagnosis and treatment of a patient and will be involved in the post-surgical treatment and where parents, as well as the patients, are fully prepared for surgery. Where possible, treating a child in such a centre is psychologically preferable to transporting a child to a centre where the surgical team (figuratively speaking) meets the patient the day before surgery and sends the child ‘back home’ a few days later.

In addition, every province needs to have at least one facility where a full range of services can be provided to the patients who are brought into care. In concert with that, developments in related fields might require the existence of a pediatric cardiac facility. The developing field of invasive pediatric cardiology—which can reduce the number of pediatric cardiac surgical procedures—requires that a pediatric cardiac surgeon be available in the event of complications. If there is no pediatric cardiac surgeon, it would be difficult, if not impossible, to attract such leading-edge pediatric cardiologists to Winnipeg.

Dr. Brian Postl testified that regionalization of pediatric cardiac care in Western Canada has been under consideration since the closure of the Winnipeg program. Such a model might involve the establishment of a regional pediatric cardiac centre in a central location (such as Edmonton). Under this system, a local surgical team would perform lower-risk procedures in Winnipeg. Complex cases would be transferred to the regional centre. If necessary, a surgeon capable of performing complex procedures could travel to Winnipeg and other locations to perform scheduled procedures. Such a program must, of course, pay close attention

to the issues of team-building, training, communication and decision-making that have been identified throughout this report. If a surgeon is flown into Winnipeg to perform an operation, the surgeon must also become a well-integrated member of the team. He or she must develop a degree of familiarity and comfort with local team members. Team performance on a regional basis would have to be considered.

RECOMMENDATIONS

It is recommended that: The HSC, the Winnipeg Regional Health Authority and the Manitoba Department of Health pursue discussions with provinces in Western Canada for the development of a Western or Prairie regional Pediatric Cardiac Surgery Program.

It is recommended that: A provincial Pediatric Cardiac Surgery Program be developed at the HSC that is limited to undertaking lower and medium-risk procedures, but can undertake more complex procedures in conjunction with a regional pediatric cardiac surgery centre.

It is recommended that: The Province of Manitoba develop a financial assistance package for families required to travel out of province for surgical treatment of family members. The package should ensure that family members are in no worse a financial position than if the treatment had been provided in Manitoba.

COMBINING THE ICUS

Legitimate questions were raised throughout 1994 about the decision to have both the neonatal intensive care unit and the pediatric intensive care unit provide service to the Pediatric Cardiac Surgery Program. The evidence suggests that pediatric cardiac surgery patients should be treated in one ICU.

It is recommended that: As a part of any planned restart of the Pediatric Cardiac Surgery Program, the post-operative care of pediatric cardiac patients be centralized in a single intensive care unit.

REFERRAL TO THE COLLEGE OF PHYSICIANS AND SURGEONS OF MANITOBA

■ Finding

The evidence suggests that there may be a need for the College of Physicians and Surgeons of Manitoba to investigate the evidence set forth in these proceedings to determine if other proceedings may be necessary.

A number of facts that were disclosed in the evidence suggest that appropriate medical standards may not have been met. It is not the role of this Inquest to determine whether there are grounds for disciplinary or any other action as a result of any such finding. Where medical professionals have not performed their responsibilities in an appropriate manner, or in a manner that meets an appropriate professional standard,

the College of Physicians and Surgeons has a responsibility to conduct an investigation and determine if disciplinary proceedings should be undertaken.

According to the evidence of Dr. Ken Brown, the registrar of the College, no official complaint has ever been filed with the College with respect to any of the medical professionals associated with the care of the patients whose deaths were the subject of these proceedings. Therefore the College has never undertaken any official investigation of any of these cases from a disciplinary perspective. This apparently stems from a policy that the College maintains of waiting for a formal complaint before undertaking any such proceedings.

It is recommended that: The College of Physicians and Surgeons of Manitoba revamp its policies and procedures so that in the future investigations and disciplinary proceedings no longer depend on whether or not a formal complaint has been filed with the College.

It is recommended that: The College of Physicians and Surgeons review this report to determine if there are grounds for undertaking disciplinary proceedings against any of the medical professionals involved in the care of any of the 12 children whose deaths were the subject of these proceedings.

CONCLUSION

Life is a precious and fragile gift. The gift to the parents of the children who were the subject of these proceedings lay in what they could be. Born with the burden of a defective heart, they yet stood on the threshold of possibility. For reasons beyond their control, however, their possibilities were not to be realized.

The events surrounding their deaths have been examined in considerable detail and the findings and recommendations that seem appropriate have been set out. But for the families, that may never be the end of it.

The evidence suggests that some of the children need not have died. The Paediatric Death Review Committee of the College of Physicians and Surgeons, in its annual report for 1994, classified four of the twelve cases (without identifying which cases) as being possibly preventable with improved medical management. I believe that that number could be even higher.

The evidence from these proceedings suggests that the deaths of Jessica Ulimaumi, Vinay Goyal, Marietess Capili, Jessie Maguire and Erin Petkau involved some form of mismanagement, surgical error or misadventure and were all at least possibly preventable or preventable. The operations on Daniel Terziski and Erica Bichel involved procedures that were probably outside the ability of the surgeon and the team to attempt and ought not to have been done in this province. The operation on Shalynn Piller was outside the permitted parameters applicable to the team at the time of the operation and also ought not to have been done in this province.

The deaths of Gary Caribou, Alyssa Still and Ashton Feakes are still surrounded by more questions than answers. Only the death of Aric Baumann from a fatal and untreatable disease has been acceptably explained.

Much of the time involved in the writing of this Report has been spent in determining what occurred and when and how. To a certain extent there remains the question of why. To that there are no easy answers. The

best that this report and the hearings could do is to uncover the events of that year and reveal what went on. To the extent that there are reasons for what occurred, they are offered in this and preceding chapters.

Yet we are faced with the fact that the parents of these children have been left with a great burden: the loss of a child. Parents are not supposed to outlive their children. Those parents have no choice but to try to adapt to that situation.

For some of them, this proceeding may have provided a catharsis, but for others it has not. Some of the families feel the obligation to take the matter of their children's deaths further, through other types of proceedings and actions. For some of the families, a belief in a Higher Power has allowed them to come to terms with what has happened. For others, there is nothing, I suspect, that will bring them peace. If they can find any solace in this report, it is in the knowledge that the details of the tragic events of 1994 have finally been brought to light.

However, there is something that must be stated clearly.

From all of the facts and evidence that have been uncovered, there is one that stands out. The deaths of these children were not the result of any failing on the part of the parents. There was nothing that these parents did that they ought not to have done. There was nothing that they did not do that they should have done. Faced with the situation that each of them saw, they did what they believed was best for their child and they acted on the basis of the best information that they were able to obtain.

Yet of all those who have been involved in this sad proceeding, the parents will continue to carry the greatest burden.

For that, we owe them the commitment to do all that we can to ensure that this does not happen again.