QUEENSLAND COURTS

OFFICE OF THE STATE CORONER

FINDINGS OF INQUEST

CITATION:	**Inquest into the death of Joshua Jai Plumb**
TITLE OF COURT:	Coroner's Court
JURISDICTION:	Brisbane
FILE NO(s):	COR 2010/4265
DELIVERED ON:	18 October 2012
DELIVERED AT:	Brisbane
HEARING DATE(s):	14 June, 24-26 September, 28 September 2012
FINDINGS OF:	Christine Clements, Deputy State Coroner
CATCHWORDS:	CORONERS: Inquest – Special needs child in hospital, type and frequency of nursing observations, hospital beds, bed bumpers, entrapment of head, cause of death including asphyxia, aspiration, pneumonia, epilepsy, neurological impairment
REPRESENTATION:	
Counsel Assisting:	Mr C Minnery
West Moreton Hospital and Health Service:	Mr C Fitzpatrick, instructed by Corrs Chambers Westgarth
Queensland Nurses Union:	Dr K Forrester, instructed by Roberts and Kane Solicitors

Introduction

Joshua Jai Plumb was born on 27 July 2003 and died on 16 December 2010 at the age of seven. He died unexpectedly in the Ipswich General Hospital and his death was reported to the coroner as the cause of death was unknown.[1] The circumstances leading to his death were investigated as his death could also have been a health care related death. Section 10AA of the *Coroners Act 2003* defines a health care related death as-

'10AA *Health care related death* defined

(1) A person's death is a ***health care related death*** if, after the commencement, the person dies at any time after receiving health care that—

(a) either—

(i) caused or is likely to have caused the death; or
(ii) contributed to or is likely to have contributed to the death; and

(b) immediately before receiving the health care, an independent person would not have reasonably expected that the health care would cause or contribute to the person's death.

(2) A person's death is also a ***health care related death*** if, after the commencement, the person dies at any time after health care was sought for the person and the health care, or a particular type of health care, failed to be provided to the person and—

(a) the failure either—

(i) caused or is likely to have caused the death; or
(ii) contributed or is likely to have contributed to the death; and

(b) when health care was sought, an independent person would not have reasonably expected that there would be a failure to provide health care, or the particular type of health care, that would cause or contribute to the person's death.

(3) For this section—

(a) health care contributes to a person's death if the person would not have died at the time of the person's death if the health care had not been provided; and

(b) a failure to provide health care contributes to a person's

[1] Section 8 (3) (e) Coroners Act 2003

death if the person would not have died at the time of the person's death if the health care had been provided.

(4) For this section, a reference to an independent person is a reference to an independent person appropriately qualified in the relevant area or areas of health care who has had regard to all relevant matters including, for example, the following—

(a) the deceased person's state of health as it was thought to be when the health care started or was sought;

Example of a person's state of health—

an underlying disease, condition or injury and its natural progression

(b) the clinically accepted range of risk associated with the health care;

(c) the circumstances in which the health care was provided or sought.

Example for paragraph (c)—

It would be reasonably expected that a moribund elderly patient with other natural diseases would die following surgery for a ruptured aortic aneurysm.

(5) In this section—

commencement means the commencement of this section.

health care means—

(a) any health procedure; or

(b) any care, treatment, advice, service or goods provided for or purportedly for the benefit of human health.'

Background history

At the time of his death Joshua lived with his mother Miranda Plumb (Miranda) and his younger brother who was born in 2008. His mother was told after Joshua's birth he had aspirated meconium. He was diagnosed with epilepsy and spastic quadriplegia. He experienced seizures from the time he was 48 hours old and required specialist care commencing at the Royal Women's Hospital. Dr Malcolm Miller was Joshua's treating paediatrician throughout his life. Joshua was often hospitalised due to breathing difficulties. Joshua was admitted to Ipswich Hospital 122 times in seven years, 26 times during 2010.[2]

[2] Exhibit B13 page 1

Miranda cared for Joshua as a single parent after an initial period of support during the first year when Miranda and Joshua lived with Miranda's mother. Miranda was a highly dedicated, loving and competent mother. She learned the many skills required to care for Joshua who was entirely dependent on her for all his needs; physically, emotionally and medically. Despite Joshua often being unwell and requiring frequent hospitalisation, his mother described him as being a happy, bubbly boy. He could not speak or walk or crawl but moved on his back when kicking his legs. He had no head control and could not sit up. He had a medical procedure to reduce problem reflux which stopped his ability to vomit and reduced, but did not eliminate, the risk of aspiration. His mother pushed him in a wheel chair. Joshua attended Ispwich Special School from 2008.

His mother was acutely attuned to his needs and understood when he was crying loudly in pain or when he was 'whingeing', expressing a need for company or comfort. She administered medication as required into his feeding tube sited in his abdomen. In the 18 month period prior to his death a diagnosis of ulcerative colitis was made and another medication was added to his regime of care. However, this diagnosis was subsequently reconsidered and the medication was ceased shortly before his final hospital admission.

Miranda observed Joshua would experience seizures when he had a virus, causing him to lose consciousness and twitch. His breathing would become depressed. Joshua had not experienced a grand mal (tonic clonic seizure) from the time he was aged about three years of age.

Distinct from his epilepsy, Joshua also experienced spasms which increased in severity over the last year of his life. He would become very stiff and his limbs would be extended or clenched in rigid positions. These spasms were often associated with distress or constipation. His mother thought they were triggered by the pain of constipation. He would sometimes thrash about when experiencing a spasm, kicking repetitively and sustaining bruising to his knees and shins. He could move while in bed but in her experience he would cry out quite a lot if he was in distress.

In April 2009 his mother Miranda lodged a complaint with Ipswich Hospital as she felt hospital staff was not listening to her concerns for Joshua, particularly as he was frequently requiring admission. This led to a management plan to facilitate Joshua's access to necessary care. Guidelines were formulated to inform Emergency Department staff and paediatric staff of Joshua's and his mother's needs. They are significant and are therefore reproduced as follows-

1 Low threshold for admission
2 Paediatric Registrar to conduct physical assessment
3 Ask Ms Plumb '*What would you like us to do for Joshua right now?*'
4 If admission is not arranged, Ms Plumb will likely re-present because Joshua's condition is unstable and fluctuations occur between ED and home. Ms Plumb only presents for good reasons, and sometimes this may be because her ability to cope with Joshua during periods of declining

health status is compromised. During these times, she needs our support to improve his current condition

5 We have advised Ms Plumb to make the following statements as relevant;
'What I need you to do for Joshua right now is….
If I take him home, it is likely I'll have to come back because he has been sick for some time.
He is uncomfortable/in pain but he cannot tell you. The doctors here usually admit him when he is like this.'

6 Please respect Ms Plumb's decision about her son's needs.

Final Admission to Ipswich Hospital

On the morning of 15 December 2010, Miranda attended Ipswich Hospital with Joshua due to concern about blood in his bowel motions followed by deterioration in his condition. She was concerned this may be a flare up of the colitis. He was dry retching. He could not vomit due to a previous medical procedure to reduce risks associated with reflux and aspiration - fundoplication. She arrived at the hospital with Joshua at about 11.30am. She was concerned he might seriously and quickly deteriorate as had occurred in the past. She brought with her a faecal specimen to facilitate testing. Initially Joshua was seen by a doctor who Miranda found difficult to understand, (Dr Hasaneen). She told this doctor there was an alert notice on Joshua's file stating the paediatrician should be called. Dr Alex Athanassiadis subsequently reviewed Joshua. Miranda recalled a blood sample being taken to check his sodium levels and fluid being administered, prior to his admission to the children's ward at about 5pm.

Dr Alexander Athanassiadis was the paediatric registrar who saw Joshua in the emergency ward. Prior to her work at Ipswich Hospital she completed her medical studies in the United States, including her paediatric training. She saw Joshua with his mother at about 3.30 in the afternoon. She was familiar with Joshua having seen him on possibly five previous presentations, mostly for respiratory compromise and gastroenteritis. She knew he suffered from spastic quadriplegia, epilepsy and had PEG feeds as well as reflux problems, reactive airway disease and ulcerative colitis. She also knew Joshua's mother whom she considered a caring and devoted mother.

She knew from the chart that Joshua's treating gastroenterologist had recently ceased a sulphur based medication administered for colitis after reconsidering the diagnosis. She also noted his most recent admission had been for rotavirus-positive gastroenteritis. On her examination and assessment of Joshua she did not think he looked unwell and he was not showing any sign of respiratory problem. Miranda told her of five episodes of diarrhoea overnight and that morning, and showing signs of blood. He had been retching but not vomiting. Miranda told her Joshua had been a bit chesty the previous day but this had been relieved with ventolin via a nebuliser. There was no change in his seizure pattern.

Dr Athanassiadis' examination confirmed he did not have an elevated temperature, nor were there any problems with oxygenation (96% on room air). Significantly, she examined his chest and recorded there was no sign of

wheeze, or extra effort required to breathe, and there was no rattling sound. He was well perfused.

His abdomen was not tender or distended. There were audible bowel sounds and there was no sign of any problem in the vicinity of the PEG. She observed some bruising to his knees which Miranda explained was due to him knocking against the sides of his bed.

Although she considered Joshua was not particularly unwell she decided to admit him as there was a low threshold to do so. More particularly she said that although she may not have admitted another child with this presentation, in Joshua's case, given his history, she thought it appropriate to do so. She could not see any reason to call for the consultant, Dr Miller to review him prior to the next scheduled round the following morning. Had she been concerned she would not have hesitated in calling Dr Miller.

Her presumptive diagnosis was gastroenteritis with mild dehydration which she addressed with an order for a normal saline fluid bolus administered over an hour in emergency followed by admission to the isolation room in the children's ward and fluid balance monitoring. A stool sample was collected for testing. Bloods tests confirmed mild dehydration and possible viral illness. He was ordered to receive hydralyte for his feeds and, if his diarrhoea escalated, then administration was to be via intravenous means.

Dr Athanassiadis said she phoned the children's ward to inform them Joshua was to be admitted and told a nurse she wanted his output checked every two hours and receive fluids in the form of hydralyte. She did not stipulate the frequency of observation as this is a matter within the nurse's competency as long as output was being monitored because of the risk of dehydration. She relied on the nurses to monitor him according to his condition with respect to the frequency of his observations. She expected as a general rule that observations of fluids would commence at two hourly intervals and then be reviewed and varied according to the patient's condition. Dr Athanassiadis went to the children's ward advising that Joshua would be coming to the ward.

Dr Athanassiadis handed over to Dr Wu requesting Dr Wu to write the order for hydralyte through his PEG and follow up later in the evening if his output was excessive which might then require a change to intravenous hydration. She left the hospital by 4.30 that afternoon.

There is no evidence to contradict Dr Athanassiadis' assessment; indeed Miranda also considered her son was not unduly unwell when she brought him to hospital. It was a precautionary measure to ensure his condition was investigated and did not escalate, especially leading into Christmas.

Dr Athanassiadis was aware of the use of bed bumpers for Joshua as he was known to move around and it was a protective measure to stop him from falling out of bed. She had also been told by his mother the bruised knees were as a result of bumping into the sides of his bed.

Dr Athanassiadis conceded that Joshua was unable to specifically call out for help or seek help and might have therefore required more frequent observations. She did not think his clinical condition at the time necessitated a need for 'specialling', by a designated nurse to provide one on one care. Once he was on the ward he was in the nurse's care. They could call for the registrar Dr Wu to review him, or ultimately call for the consultant, Dr Miller.

She identified the risks to Joshua on this admission were of dehydration if his diarrhoea increased, rather than respiratory risks. She acknowledged there was a potential risk from his moving within the bed as evidenced by his current bruising and therefore the need for cushioning bumpers. She was not aware of the extent to which he could move and agreed this could have been useful information.

She was asked to comment on evidence Joshua's nappy was checked at 8.00pm and then at 9.30pm and there had been one nappy with diarrhoea in the emergency ward and two in the period on the ward. Doctor Athanassiadis considered this depended on Joshua's overall condition including volume of diarrhoea, urine output and his observations, whether or not this was a matter for concern.

She also considered the appropriateness of taking standard observations at 6.00pm, 7.00pm and then 8.00pm followed by a longer two hour interval. She said this depended on the stability of the observations. It was noted at 9.30pm a nurse visually checked him and found the cord for his PEG feed was tangled around his arm and this was unwound.

Her review at inquest of the various readings taken at observations at 7.00pm and 8.00pm did not cause her concern although the heart rate was slightly elevated.[3] Given those readings she did not criticise the scheduled interval to the next formal observations increasing to two hourly intervals but she did comment about needing simply to check on him given he had a PEG and the cord being found tangled around his arm early during the shift.

In retrospect she considered it was now appropriate that patients such as Joshua who have special needs and are mobile in bed, now require specialling to ensure their safety.

The evidence confirms Dr Athanassiadis' examination, assessment, differential diagnosis, admission to hospital and instructions for his care on the ward were appropriate.

Nursing care

Registered Nurse Anitha Bharathan provided her statement on 19 July 2012 with respect to her involvement with Joshua on 5 December 2010. She obtained her nursing qualifications in India in 2001 before qualifying to register in Australia in 2008. She worked part time in the children's Sunshine Ward at Ipswich Hospital since 2009. On 15 December she worked a 12 hour shift

[3] Exhibit C1, medical record page 216

from 10.30 in the morning until 11.00pm that evening. She was working with Clinical Nurse Yarnold and two other nurses during the day shift. She was assigned four children to care for. CN Yarnold informed her Joshua was to be admitted to the ward and Enrolled Endorsed Nurse Rew admitted Joshua to the ward at 5.15 in the afternoon. RN Bharathan knew Joshua from previous admissions.

RN Bharathan did not provide care for Joshua until after 7.30pm. Upon returning to the ward after her tea break at about 7 30pm she saw Registered Nurse Bettina Gonzales come out of the handover room with CN Yarnold. RN Gonzales told RN Bharathan they would work together as a team as it was just the two nurses working until 10 45pm and this was agreed. Both nurses therefore assumed responsibility to work together to care for all the patients on the ward, with RN Gonzales the designated team leader during this period.

At about 7.40pm RN Bharathan agreed to give Joshua's medications to him when requested by CN Yarnold, who was completing her shift. The medications were the prescribed Baclofen, Glycopyrolate and Keppra as well as the gastrolyte continous feed at 30mls per hour.

She attended Joshua's room for about five minutes. She recalled Joshua was crying and upset. His mother Miranda and a little girl were also present at the time and Miranda requested bed bumpers to protect her son. She told RN Bharathan Joshua's legs had been hanging through the bed rails. RN Bharathan went to look for the bed bumpers but could not find them. She saw RN Gonzales who also confirmed Miranda had spoken with her and she would phone the recovery ward to obtain some bed bumpers. CN Yarnold overheard their conversation and asked if RN Bharathan had seen Joshua with his leg through the rails but she indicated no; it was his mother who had told her this. CN Yarnold then went with RN Bharathan and spoke with Miranda indicating she would write an incident report. It was during this attendance that RN Bharathan administered the medications, gastrolyte feed and took the observations (of temperature, blood pressure, oxygen saturations) which she recorded on the special observation sheet at 20:00 (8pm.). She also separately recorded on the fluid balance sheet a loose bowel motion at 20:00 (8pm) with some blood staining. This was recording Miranda's information that she had just changed Joshua's nappy. Recordings were only made on the fluid balance sheet when there was either a fluid input (hydralyte) or loss (wet or soiled nappy.) Checks on the nappy were not recorded unless there was a fluid loss.

RN Gonzales came into the room during this period with the bed bumpers which RN Bharathan then attached.

At this point it is noted from the re-enactment video that although these bed bumpers were secured vertically around the top and bottom bed rail by ties, they were not secured end to end of the bed. It was therefore physically possible, as demonstrated in the re-enactment, for even this firm but protective padded material to be pushed and protrude through the vertical bed rails.

RN Bharathan was then engaged with nursing tasks with various other patients as the ward was quite busy. She recalled Miranda spoke with the two nurses together as they were checking a dangerous drug to be administered and told them she was going home. She asked the nurses to put on a special lullaby CD for Joshua to help him go to sleep. The two nurses then moved to the four bed bay to administer medicines. She attended to various other tasks including preparation of the room adjacent to Joshua for a new admission. It was while doing this she heard Joshua crying and went to check on him. He was lying lengthways in the bed on his back. The tubing from the PEG was tangled around his left arm. She untangled him, checked his nappy, which was dry and adjusted the position of the television so he could see it. She left his room about 9.35pm. This was the last time she attended upon Joshua.

She described her activities caring for other children from 9.35pm through to about 10.10pm when a new admission arrived. She recalled at this time she and RN Gonzales discussed the fact they were late doing the 10pm observations and decided RN Bharathan would attend to the new admission while RN Gonzales would attend to the observations and medications. Together they checked the medications to be administered and completed this by about 10.25pm. RN Bharathan then admitted the new patient requiring her attention until about 10.45pm.

She returned to the nurse's station to document the new admission and saw Clinical Nurse Verrall had arrived. It was then that RN Gonzales approached and said she had done all the observations *except* for Joshua. She was required to do the handover with CN Verrall and so RN Bharathan indicated she would do Joshua's observations once she completed the admission documentation.

It is at this point that an inappropriate understanding of prioritisation of duties to be performed seems to have occurred. RN Bharathan knew Joshua had become entangled in a cord at about 9.35pm and his scheduled observations were overdue by 45 minutes. RN Bharathan heard another buzzer sound and decided to assist this child to the toilet and then back to bed. Another child then pressed the buzzer with a coughing episode and the saturation monitor was alarming, causing concern to the mother who was present with her child. RN Bharathan attended, and assessed the child who was not cyanosed, reset the monitor and calmed the mother. Another post-op child in bed 40 pressed the buzzer and RN Bharathan attended this call, ascertaining the child was requesting pain relief. She explained it would be a little while as she had to check the medicine with another nurse who was in handover. As she left this room she saw RN Gonzales and CN Verrall come out from the handover room. RN Gonzales asked about progress and RN Bharathan told her how she had been busy and therefore had still not attended to Joshua's observations.

Again, there was a failure by RN Gonzales to immediately follow this up. She said she would attend to Joshua. By this time it was 11.05pm and so RN Bharathan handed over the information about the request for pain relief and

what she had done for the newly admitted child before completing her shift and leaving the ward by 11.10pm.

RN Gonzales' evidence was consistent with RN Bharathan that it was immediately following the completion of handover to CN Verrall (at 11.00pm) that she was told Joshua's observations and nappy check had still not been done, and that another child required pain relief. She decided to attend to the pain relief first by checking the pain medication before going to Joshua's room.

CN Verrall's statement confirmed handover was completed at 11.00pm and she would take over the team leader role from RN Gonzales. She was given a general handover of Joshua's condition but it can be presumed from her statement she was not told Joshua's observations were overdue as RN Gonzales had asked RN Bharathan to follow these up immediately before handover commenced. No doubt RN Gonzales expected this had been done.

On completion of handover from RN Gonzales, CN Verrall immediately commenced attending to calls starting at bed 46 with a feeding pump problem. Her statement indicates it was after this she returned to the nurse's station and RN Bharathan told her she was finishing her shift and the patient in bed 40 needed pain relief. CN Verrall said she went to that patient to check the need for pain relief before proceeding to the medication room to obtain the pain relief and then return to the nurse's station to have the medication checked with RN Bharathan. (There is some discrepancy in the evidence at this point as RN Gonzales said it was she who checked the medication with CN Verrall as RN Bharathan has finished her shift by this time.) After doing this, CN Verrall went to return the unused medication to the medication room. She saw RN Gonzales applying her personal protection equipment outside room 53. She went on to the patient in bed 40 and gave the pain relief before doing visual checks on the other two patients in that room. She then responded to the feeding pump buzzer sounding again from bed 46 and then to the needs of the patient in bed 47 before leaving the room. It was at this point she saw RN Gonzales run past the room. RN Gonzales turned and saw CN Verrall and said 'Come quick I need help with Joshua'.

RN Gonzales gave evidence and confirmed the contents of her statement which was dated 20 July 2012. While it was clear that English is her second language she appeared to understand the questions with perhaps one demonstrated error when she referred to 'elevating' a patient's pain rather 'alleviating' the pain. She qualified as a registered nurse in the Philippines in 2004 before immigrating to Australia and gaining her Australian qualification in 2007. She agreed as part of that training in Australia she understood the required response to an emergency situation was first to ensure the safety of patient and staff, and second, to raise the alarm by yelling for help or pressing the emergency button.

She recalled nursing Joshua on previous admissions to the Sunshine ward at Ipswich Hospital but not how many times. She was generally aware of his medical history and conditions and his particular needs. When asked about

whether she knew of any special policies applying to Joshua she referred to the need for bed bumpers. She assumed this was an agreement between the hospital and Joshua's mother. She had noticed it was part of his care plan through information gained at handovers. No-one had specifically told her this.

She agreed Joshua could move in the bed by thrashing around. She knew he could not use the call button. She agreed he could verbalise to express his emotions but not speak and she was aware of different ways he expressed himself. She agreed with the description he had a lower pitched and lower volume sound described as 'crying or whinging' when he wanted company or to alleviate a problem. He also had a higher pitched and louder cry indicating he was in pain or serious distress. She was familiar with both. When asked if she could hear the first type of quieter whinging cry from his room 52 if she was at the nurse's station, she answered this would depend on the other noise around.

On 15 December she was working from 7.00pm and scheduled to finish at 7.30am. At the commencement of the shift she received a handover from CN Yarnold, who was her senior. She said there were no details given in the course of the verbal handover about the frequency of observations or about additionally looking in on Joshua. For this information she would have to refer to the chart about what had occurred since his admission to the ward.

RN Gonzales was the senior nurse between 7.00pm and 11.00pm when just she and RN Bharathan were working together. It was busy during this period and RN Gonzales was asked if she thought the ward was understaffed. She replied yes. She acknowledged as the senior nurse on that shift it was her responsibility to request more staff if she considered this was necessary, but she indicated she required 'concrete evidence' to do so. She said she would not have this level of information until after handover and after she had seen all of the patients on the ward. When asked if she had reached that assessment by 8.00pm that evening, she said no, as there were only eight patients on the ward at that time. It was later, at about 10.30pm, by which time she had seen all the patients and before the handover to CN Verrall that she had reached the conclusion she was understaffed. By this time there were 10 patients on the ward, including two children with cystic fibrosis, three in isolation and three post operative patients. She agreed it was her responsibility to request additional staff from the nurse manager on duty but she had not done so. She explained she needed a concrete detailed account of the whole of the ward to argue or even ask the question of the nurse manager. I note her reticence appeared to be due to inexperience in communicating with senior staff. I also accept her assessment that she and RN Bharathan were both attending to required duties but not able to keep up with the necessary work required of them during that shift.

RN Gonzales was in Room 52 with Joshua, his mother and RN Bharathan at about 7.20pm after the completion of handover to her. She agreed she made inquiry and arranged to obtain the bed bumpers from the recovery ward which she knew Joshua would need. She then started preparing the work plan for the night. RN Gonzales was at the nurse's station with CN Yarnold who was

completing her paperwork before completion of her shift. CN Yarnold said she had instructed RN Bharathan to commence Joshua's hydralyte feed. RN Gonzales noted there was no nursing care plan prepared for Joshua. This should have been prepared by the nurse who admitted Joshua to the ward but had not been completed. The document in question appears to be Exhibit C1 page 232, which is titled 'Integrated care plan'. With the exception of a weight noted as 21.8kg that page was not filled out. It is unclear on the evidence whether the admitting nurse was CN Yarnold or RN Rew.

As a result of this deficiency RN Gonzales prepared a plan in consultation with CN Yarnold but, again, this was not reduced to writing. In RN Gonzales' words, she 'failed to do that'. A perusal of the medical record shows consistency of completion of this Integrated Care Plan document at other admissions, but not on this occasion.

Despite the absence of a written nursing care plan an understanding was reached between the two nurses, based on Joshua's acuity that two hourly observations of temperature, pulse, respiratory rate, and oxygen saturations would be appropriate. As well, four hourly nappy checks were decided upon in consultation with CN Yarnold.

The separate work plan document was described as a grid sheet of paper with times, bed numbers, hours of shift and then columns for observations and medications for the shift. It is not a patient specific document and it is shredded at the end of the shift. The work plan was completed by about 7.55pm and it was about 8.00pm when the bed bumpers arrived on the ward. RN Gonzales took them to Joshua's room. RN Bharathan was already in Joshua's room giving him the PEG feed. She told RN Gonzales she would do the 8.00pm observations and agreed to fit the bed bumpers. CN Yarnold came into the room to say goodnight and left the ward.

RN Gonzales had decided she and RN Bharathan would look after all of the patients on the ward together in a team nursing approach during the four hours when only two nurses were rostered. Both nurses were each responsible for all of the required care and tasks for the patients. She informed RN Bharathan of this at the time she delivered the bed bumpers.

When asked how this worked in practice, the potential for difficulty in the team nursing approach was revealed. She was asked whose responsibility it was to perform the 10.00pm observations. She answered that either nurse could perform this. At the inquest, RN Bharathan gave evidence that at about 10.10pm she discussed work with RN Gonzales. Neither had yet commenced the 10.00pm observations. RN Bharathan's evidence was RN Gonzales told her she would do the observations and medications while RN Bharathan did the new admission. However, at inquest RN Gonzales' evidence was she did not think there was a discussion at that point about who would do the 10.00pm observations for Joshua. She denied ever discussing with RN Bharathan who was to do the 10.00pm observations for Joshua, saying it was a shared responsibility.

I cannot resolve this discrepancy other than to note the result was neither nurse fulfilled their joint responsibility to Joshua to perform the 10.00pm observation or at a reasonable time thereafter.

It was not until more than an hour later that RN Gonzales entered Joshua's room again. The workplan RN Gonzales referred to did not stipulate who was going to perform which task with respect to observations or nappy changes regarding Joshua. It was simply a matter of crossing off a task as and when each was performed by either person. The plan was on the counter at the nurse station. It was up to both nurses to read the plan and recognise if there was a task outstanding and attend to it.

RN Gonzales was aware RN Bharathan had given the hydralyte and performed the 8.00pm observations because she recalled seeing this as she went into the room to deliver the bed bumpers when they arrived.

Between about 8.30pm and 9.00pm, RN Gonzales was involved with preparing for new admissions in beds 51 and 53; in rooms either side of Joshua. She said she could hear whimpers from his room around 9.00pm and she went into his room. She reset the DVD for the Wiggles he had been watching on television to settle him. She returned to the admission of new patients. She said she could still hear Joshua whimpering but said it was not a distressed cry. She did not go to him because she was attending to the new admissions, completing necessary paperwork. She acknowledged when she completed these tasks she did not check again on Joshua. While doing this paperwork she recalled Miranda rang to check on Joshua. In her statement she said she told Miranda that 'Josh was unsettled when she left but his crying had only just settled'. She went on to say 'He was still watching television the last time I saw him'.[4]

When asked to recall at the inquest the contents of this conversation she said 'I told her Josh was unsettled when she left and he was crying and had only settled at that point.'

She disagreed that she had said he was totally fine.

It was suggested to her she had given the impression she had recently seen him. She acknowledged this was correct. She thought the phone call was probably after she had completed the admissions, about 9.30pm. However subsequent police inquiries of a call charge record from Miranda Plumb's phone show there were three calls from Miranda's phone to the Ipswich Hospital on 15 December. The calls were at 10.55am, 10.20pm and 11.27pm. I accept that Miranda called the hospital and spoke with RN Gonzales at 10.20pm that night. RN Gonzales said she would not have looked at the time when taking the phone call from Miranda. She conceded it could have been 10.20pm and then conceded her response to Miranda was misleading because she had not seen Joshua for more than an hour at that time.

[4] Exhibit B11 page 4 para 34

According to RN Gonzales' recollection, it was before this; at around 9.45-10.00pm that the after hours nurse manager visited the ward accompanied by a trainee nurse manager. She acknowledged by this time she recognised she was understaffed on the ward having been on duty for over three hours. She thought one admission had not yet arrived, but she had seen all the patients and had a handover. She did not raise staffing issues with the nurse manager.

She was asked if she checked the work plan at 10.00pm when observations were due. She indicated she did so because she had to give some antibiotics. She saw that Joshua's observations had not been done but she did not speak to RN Bharathan about this. She continued performing other duties for patients including observations over the next half hour.

At about 10.30pm, she agrees, there was a discussion with RN Bharathan about Joshua. RN Gonzales told RN Bharathan she had not yet performed Joshua's observations and he was also due for a nappy check. She asked RN Bharathan to do Joshua's observations while she performed calculations on the nursing trend care program on the computer in preparation for handover to the next senior nurse. Clinical Nurse Verrall arrived at 10.45pm and RN Gonzales commenced a handover to her. This continued through until 11.00pm. It was on returning to the nurses' station that RN Bharathan approached and indicated the patient in bed 40 needed pain relief. She also informed RN Gonzales she had not yet done Joshua's observations. RN Gonzales said she would attend to this. She checked the pain relief with CN Verrall, taking a short time to do so and then proceeded to Joshua's room. She acknowledged by this time she had not seen Joshua since 9.00pm and, as far as she knew, nor had RN Bharathan. (RN Bharathan last saw Joshua about 9.35pm.)

She agreed there had not been any inclusion in the care plan for Joshua where the nurses would just go in and have a look at him during the shift other than for the set observations and nappy checks. However she said this would have happened if the patient was allocated to the particular nurse rather than the team nursing approach. Again this appears to raise an issue regarding how team nursing works in practice.

RN Gonzales 'totally agreed' with the proposition that the approach of not assigning a particular nurse to a particular patient leads to the potential for things to be missed. She agreed that this team approach continued at Ipswich Hospital. However, children with higher care needs normally now received 'specialled' nursing care meaning a nurse was assigned to them.

RN Gonzales said she had learned a lot about being a team leader and assessing a particular patient's needs, including visual observations as well as set observations. She would now include visual observations as part of a work plan where appropriate. She acknowledged that Joshua certainly was a child who had high care needs.

Discovery of Joshua in an unresponsive state

RN Gonzales recalled when she entered Joshua's room at about 11.10-11.15pm he was lying across the bed with his head wedged between the padded vertical bed rail and the mattress. His legs were pointing towards the other side of the bed closest to the doorway. She immediately noticed his legs were pale and cyanosed. She quickly repositioned him by lifting his head out from between the mattress and the side bed rail covers. She moved his body further towards the other side of the bed. She noted he was not breathing, not responsive, his face was very pale and his lips were cyanosed. She noticed a cut on his forehead which was bleeding. She yelled out to CN Verrall that she needed help. She left the room and saw CN Verrall coming out of a room. She grabbed her arm and took her to Joshua's room while telling her how she found him. CN Verrall then pressed the emergency buzzer. RN Gonzales had not done so. RN Gonzales then went back to the nurse's station and rang switch to confirm a paediatric emergency. She ran back to the room with the resuscitation trolley. She firstly cleared the room by removing the television stand so the crash trolley could fit in the room. She placed a bed board under the mattress for CPR. She connected the air viva mask to the oxygen on the wall. Then the emergency team arrived and took over. RN Gonzales went back to the nurse's station to phone switch to make sure the paediatric consultant had been called. She provided information from Joshua's chart about his weight upon request of those treating him.

RN Gonzales explained her actions were her response to a traumatic emergency and her first reaction was to seek help from the senior Clinical Nurse on duty with her, CN Verrall. She agreed in doing this she had not notified the team required to respond to an emergency code blue situation. She conceded there was a delay in commencing cardiac pulmonary resuscitation by her calling out and running from the room and seeking CN Verrall before that nurse hit the emergency buzzer and CPR was commenced. She could not say what period of time elapsed before CPR was started.

She then left to attend to other patients on the ward. She was at the nurses' station when Miranda rang again and she saw CN Verrall answer the phone and inform Miranda to come into the hospital because Joshua had been found unresponsive. This call was recorded in Miranda's phone records at 11.27pm. Miranda arrived shortly after this.

The Nurse Manager, Donna Clausen directed RN Gonzales into the resource room to have a break as RN Gonzales was very distressed at this time. During this period police officers spoke with RN Gonzales who provided a rough timeline of events to them. She clarified she had not said Joshua was found with his head wedged between the bed rails and the wall. She also thought she told the police the emergency buzzer was pressed but this was by CN Verrall, not by her. She was very upset at the time and she required medical attention. She was then directed by the Nurse Manager to go home.

RN Gonzales confirmed her participation in the re-enactment video prepared to assist and inform the inquest, and to assist the pathologist in understanding the circumstances in which Joshua was found.

It is noted there is generally a different staff to patient ratio during the night shift as patients are often asleep, but the level of staffing required depends ultimately on the level of acuity of the group of patients. Some children are accompanied by their parents who can assist. RN Gonzales also clarified that her perception of being understaffed, particularly once the two new admissions arrived, could have been addressed by having 'a couple of extra hands for a couple of hours'. This kind of additional relief can be provided from elsewhere in the hospital. She seemed to be saying the Trend care analysis computer tool did not necessarily provide her with backup support to request additional help from the nurse manager, and she had not done so.

She also agreed the level of observations was established principally with reference to the medical condition of the patient, and started with more frequent observations. The interval between observations lengthened with the stabilisation and improvement of a patient. As well, there could be simple visual observations which are not recorded unless there is a change in condition observed. This would be transferred from information recorded on the bedside records to the medical chart.

CN Verrall's recollection of Joshua's condition when she entered his room for the first time was broadly consistent with RN Gonzales. She saw some blood around Joshua's upper right eyelid which was swollen. He was unresponsive. She activated the emergency buzzer and paused the feed pump. She started compressions and gave instructions to RN Gonzales to call switch and bring the resuscitation trolley.

Evidence relating to cause of death

A complete autopsy examination was undertaken by the forensic pathologist, Dr Philip Storey. He provided his initial autopsy report, was present at a scene reconstruction of the circumstances in which Joshua was found in an unresponsive state, and then provided an additional report. He gave evidence at the inquest discussing and explaining his opinions regarding Joshua's death.

In summary he could not reach a definitive conclusion as to the cause of death. However he was able to conclude the following could have contributed to death:

aspiration,
pneumonia,
smothering and
epilepsy.

In Dr Storey could not say which of these potential contributors to death, if any, was the dominant cause of death. All were possible contributors to death.

Dr Storey found visible evidence of aspiration at autopsy, much of which he described as an acute event occurring in the peri-mortem period immediately before death. The extent though was not sufficient in itself to have caused death. He could not identify a specific cause of the aspiration, which can be the result of irritants or food particles but these were not found in this instance. He said the position of Joshua's head in a hyper extended position opened the airways and there was some potential he could have aspirated in that position. The fact Joshua had previous surgery to assist in prevention of reflux and aspiration would protect him to an extent, but would not totally prevent an episode of aspiration occurring.

There was pneumonia in one lobe of the right lung. This was not able to be identified as either viral or bacterial. Accepting the observations of temperature and oxygenation levels taken until 8.00pm, Dr Storey considered it unlikely pneumonia could have worsened in the period before death to such an extent to be the major cause of death. He described the pneumonia as 'restricted and mild'. However, he still considered pneumonia a significant contributor but could not say it was causative of death. He noted the pattern of pneumonia observed was associated with aspiration. He concluded the pneumonia was secondary to the aspiration which was evident throughout the lungs.

With respect to epilepsy he noted the established diagnosis of epilepsy and the neurological examination of the brain with findings consistent with the existence of epilepsy. There was no direct evidence of seizure leading either to an asphyxial or cardiac death. I also note the evidence that Joshua's seizure activity had declined and he had not experienced a tonic clonic seizure for some years. However, Dr Storey noted the possibility existed of sudden death in a person with chronic epilepsy, despite preventative medication being regularly administered. There would be no physical sign of an epileptic death having occurred at autopsy.

With respect to smothering against the bed bumper, he said there was potential for smothering as a contributing factor in terms of the nose, however it was very difficult to say what happened with the mouth. The re-enactment used a rigid model. As well, he noted Joshua had neurological impairments and he did not know how he would respond as a result of lower oxygenation levels in the blood. Dr Storey specifically stated that marks sometimes found around the mouth in asphyxial deaths by smothering are not always present. He said the absence of marks on Joshua's face around the mouth and the absence of petechiae in Joshua's case does not exclude smothering as a contributing factor in Joshua's death.

Dr Storey noted the position of the nose and mouth in relation to the side mat was the relevant issue with respect to the possibility of an asphyxial component of death. He could not say this was causative and he could not exclude it as a potential contributor. He considered it was not possible to breathe through the bumper material but could not comment further. He noted on the re-enactment the bumper did not recoil after the model was removed, indicating there was no tension. He considered the reconstruction showed

there was a risk of the nasal passages being obstructed. This would then require breathing through the mouth. It was not clear what if any obstruction of the mouth occurred. He also could not evaluate whether it was relevant that Joshua was in an awkward position and had a neurological impairment. He could not say how he might respond to reduced oxygen levels. It was suggested to Dr Storey that the re-enactment did not show occlusion of the mouth. Dr Storey responded noting the model was a rigid one rather then a child, who has pliable tissue, presumably leaving open this possibility.

The observation by the nurse that Joshua was seen to be cyanosed in his face and legs did not assist in determining a time of death as the condition can exist in life. He could not say how long it would take for cyanosis to develop. Cyanosis was understood to be the physical sign of lowered oxygen levels.

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It was noted when resuscitation efforts were commenced, Joshua's heart rate was said to be 'asystole'. Dr Storey explained this meant there was no electrical or mechanical activity in the heart, nor was there any breathing. Resuscitation efforts could not re-establish respiration or cardiac function.

He concluded all these factors contributed to the death.

There is a level of uncertainly around the issue of whether the mouth as well as the nose was covered by the bed bumper. When RN Gonzales discovered Joshua, his neck was hyper extended backwards and his head was wedged between the rails which were covered by the bed bumper. RN Gonzales said his nose and mouth were covered by the bed bumper, but later on re-examination she said she did not recall if it was covered or not and agreed she could not see his nose or mouth before she shifted Joshua from that position.

Dr Storey was present at the re-enactment and his evidence was that it was not clear that the mouth was occluded by the bed bumper. However, he considered the overall presentation of the re-enactment and the hyper-extended position of the child's neck could include the possibility the mouth was also against the bed bumper. He also referred to the possibility of the child's neurological deficit being relevant to his continued capacity to breathe if his breathing was compromised by blocking of the nasal outlet.

Consideration and conclusion of cause of death

It has been clearly established that Joshua was found lying across the bed with his neck in a hyper extended position trapping his head which protruded backwards and downwards between the bedrails which were covered with bed bumpers. From the re-enactment it can be seen his head is lower than his body. The nurse has variously said:

- his nose and mouth were covered by the bed bumper
- she could not see his face; (which was wedged between the covered vertical bed rails)

- she could not recall if it was covered or not.

At the time she found him, Joshua was not breathing, he was cyanosed and he was unresponsive. A short period elapsed before the commencement of cardio pulmonary resuscitation. When these efforts commenced his heart was asystole and despite multiple doses of adrenalin being administered and all other efforts, his cardiac and respiratory functions were unable to be re-established.

Dr Storey has been unable to determine the cause of death other than to say aspiration, pneumonia, smothering and epilepsy are all factors likely to have contributed to his death. He could not say which of these, if any, were the dominant cause(s) but none could be excluded. He did say pneumonia was secondary to aspiration and the level of pneumonia was mild and restricted and not sufficient of itself to have caused death. Nor in his opinion was aspiration sufficient of itself to cause death.

Perhaps the least likely to be causative of death was epilepsy given, on my understanding, the practice of not attributing epilepsy as the cause unless there are no other possible pathological causes present at time of death. Here, there are other identified contributing factors.

It is concluded Joshua died due to a combination of factors including aspiration induced pneumonia, together with physically impeded breathing due to a combination of entrapment of his head and face in contact with, or at least partially in contact with a bed bumper. This entrapment persisted for an unknown period of time during which his head was below the level of his body. It is likely Joshua's neurological impairment contributed to his restricted capacity to free himself. His neurological impairment is also likely to have adversely affected his respiratory capacity in an awkward position with some degree of occlusion of the nose and mouth. His underlying condition of epilepsy is also likely to have contributed to his death.

Joshua died due to a combination of physical entrapment of his head, which occluded or partly occluded his nose and/or mouth, aspiration induced pneumonia, epilepsy and neurological impairment.

Discussion of nursing issues

In her evidence at the inquest, RN Bharathan did not concede that Joshua's inability to communicate any need for help, coupled with his capacity for movement in the bed, including by rigid spasms, should have meant his observations were more frequent than two hourly. Her response was there were visual checks which were performed intermittently. The problem though was that her last visual check was at 9.35pm and neither she nor RN Gonzales physically checked on Joshua until he was found by RN Gonzales at about 11.15pm. This was approximately an hour and forty minutes since he was last seen and an hour and fifteen minutes later than his scheduled 10.00pm observations. She described his verbalising that evening between 8.00pm and 9.30pm as 'whimpering'. This was what led her to check on him

at 9.30pm when she heard this from the next room she was preparing. She knew he would verbalise if he was uncomfortable. It was at this time she discovered he had the PEG tube tangled around his arm.

The arrangement for shared nursing between RN Gonzales and RN Bharathan failed to deliver necessary overview of Joshua with sufficient regularity to meet his needs and manage the known risks associated with his potential to move in the bed.

RN Gonzales failed to document a nursing care plan for Joshua. However, it had been the initial responsibility of the nurse who admitted Joshua to the Sunshine Ward to document an integrated care plan prior to commencement of RN Gonzales' shift.

The separate work plan, which was not patient specific, did not stipulate which nurse was responsible for which task. It was simply to be filled in as each task was completed. This arrangement required the nurses to be in communication to know who was accepting responsibility for each task and to check the plan to ensure compliance in completing these tasks. Both had agreed to 'team nurse', meaning each assumed overall responsibility for nursing care of all of the patients on the ward.

All that was agreed was that RN Bharathan perform the 8.00pm observations and, at some stage, RN Gonzales indicated she would perform the 10.00pm observations. RN Bharathan's evidence was she was not sure what RN Gonzales was planning with respect to visual checks on Joshua apart from formal observations. Without a specific agreed understanding of whom and how often visual checks of Joshua were to be made, they were not performed from 9.30pm. This attendance was prompted by hearing Joshua from the adjoining room. RN Bharathan assumed RN Gonzales had performed the 10.00pm observations as agreed between them, and she planned another visual check at 10.30pm. What happened though was because the ward was busy both nurses were behind and the 10.00pm observations were not commenced until about 10.15pm. RN Bharathan assumed Joshua had been checked and so she did not do a visual check at 10.30pm. It was not until 10.45pm RN Bharathan was aware Joshua's 10.00pm observations had not been done.

Comments aimed to improve public safety and reduce the likelihood of another death occurring in similar circumstances, particularly with respect to children with special needs. Section 46

(1) Nurse training might usefully be reviewed in light of this coronial inquest around particular issues namely to highlight;

(a) the responsibility of the person in the team leader nurse role on each shift to continually consider the need for additional staffing during the shift and to communicate such a need assertively when necessary

(b) *the responsibility of the person in the appropriate nurse role to actively enquire, assess and respond to a unit's capacity to deliver adequate nursing services throughout a shift*

(c) *emphasis on training nursing staff to assess the risk and prioritise competing demands for attention from patients to maximise patient safety*

(d) *review of the Team nursing model to ensure emphasis on the requirement for the creation of a documented plan to assist in identifying necessary tasks and aid communication between the team to ensure these tasks are dealt with in a timely manner.*

I note the following positive changes have been implemented at Ipswich Hospital since Joshua's death. I quote directly from the sworn statement of Clinical Nurse Verrall.

'High dependency patients such as Joshua are now admitted to beds which have direct visualisation from the nurses' station wherever possible. If a patient or carer is unable to stay with the child, a nursing special is allocated to stay with the patient at all times. The nursing special can be an assistant in nursing, enrolled nurse or registered nurse depending on the condition of the patient. The role of the nursing special is to perform a documented visual check hourly recording whether the patient is asleep or awake and the position of the patient whether in the bed, chair or elsewhere. Any interactions with the patient are recorded, for example, if the patient is repositioned in the bed.[5] (The decision to provide a 'nursing special' is made by the Nurse Unit Manager, Nursing support Unit and Nursing Director.

It is also noted, a working party was established in February/March 2011 to identify safety concerns and needs of high dependency patients. The group is comprised of two registered nurses, one nurse unit manager, the Director of Nursing and a representative from Patient Safety Queensland (PSQ). This working party has been reviewing available bed types, matching appropriate beds to the child's age and size.

The summary prepared by Drs Gerry Costello, Deputy Director of Medical Services, and Dr John Gavranich, Director of Paediatrics, who both assisted the inquest with their oral evidence was valuable.[6]The working party has developed a draft workplace instruction leading to '*Standards for admissions, ward placement, bed types, nursing observations, monitoring and documentation for children admitted to 5BSCW*' (children's ward).

A hospital wide 'specialling' procedure has also been developed as well as a 'children with high care needs project'. This work is understood to be rolled

[5] Exhibit B9, paragraph 29

[6] Exhibit B 13

into continuing work within the District by the Queensland Children's Hospital. I consider this work is particularly important.

What is apparent in Joshua's death is not that his clinical condition was more serious than assessed and was overlooked, but that his underlying special needs, of themselves placed him at higher risk than was otherwise appreciated.

The Children's Early Warning Tool (CEWT) is a valuable way of collecting objective recordings of particular observations and escalating the frequency and response by nursing staff to appropriate medical personnel if certain triggers are reached. This tool may still require adjustment and fine tuning when applied to a child with special needs like Joshua. I understand from Dr Gavranich's evidence, the tool can be manipulated to reflect the needs of a particular child whose readings might, for example, always be outside the usual parameters being measured.

I also note Ipswich Hospital now has 'hourly observations clinical and/or visual are recorded including mobility/activity of each of the patients'.[7] The inclusion of the requirement to at least sight a child on an hourly basis is a significant safety improvement.

Ipswich Hospital has worked with PSQ to review bed safety issues. Again, it is important the work done is not lost and is available and applied across the state. Dr Costello indicated the work done at Ipswich Hospital relating to bed safety was then a matter for PSQ to consider across the state.

A detailed and helpful report was available to the inquest from Dr John Wakefield, the Executive Director of Patient Safety and Quality Improvement Services in Queensland Health. He noted there is no Australian standard for hospital beds for paediatric use, and so, no specialised procurement category for paediatric beds. Each Queensland Health facility makes their own purchase arrangements.

The standard for adult beds is AS/NZS 3200.2.38.2007 which is the second edition of the original standard issued in 1997. In April 2009, notification was received that the vertical bars on previously provided hospital beds were no longer compliant with the standard. Replacement parts for the existing vertical rails would be run out. New horizontal side rails were recommended as a replacement. This information was provided to the major supplier of hospital beds in Queensland, but not to PSQ at the time. Subsequently, the supplier commenced replacement of the vertical rails with horizontal rails.

In June 2010, PSQ reviewed two near misses of falls incidents involving vertical rails in adult hospital beds. A review identified both a falls risk and a risk of entrapment. PSQ noted the vertical rails were no longer compliant with the current Australian standard. These matters were reported to the Therapeutic Goods Administration (TGA). In December 2010, an evaluation of

[7] Exhibit B13 paragraph 46

Queensland Health's incident reporting and consumer complaints system, (PRIME) was undertaken. This was initiated prior to knowledge within PSQ of Joshua's death. Three hundred and fifty five clinical incidents associated with beds were recorded between 2005 and 2010. Analysis confirmed falls and entrapment of body parts were recurring and causing injury to patients. The information base was insufficiently detailed to identify root causes of each incident. It was shortly before the completion of this PRIME review that Joshua's death was reported as a SAC1 (Severity Assessment Code 1) event.

This led to the report of Joshua's death to the TGA in relation to the Hill-Rom Pty Ltd bed.

At the time of his report, Dr Wakefield noted there had been no analysis of the incident leading to Joshua's death and so his report does not reach a finding of whether or not, and, if so, how, the bed and or accessories contributed to Joshua's death.

Nevertheless, PSQ appropriately went on to consider how bed safety could be improved. It is a complex issue and examples were provided where beds with horizontal rails also provided risk of falls and entrapment, so it is not simply a question of changing over to horizontal rails from vertical rails. The suitability of particular beds must be assessed against the condition of individual patients. I agree with the report that no single solution exists.

Action was taken to review and improve safety under the guidance of PSQ and on a collaborative basis with suppliers.

Importantly the TGA arranged with the bed supplier to send a Safety Alert to all hospitals in Australia to alert them their vertical bed rails were no longer compliant with Australian standards. The bed supplier has been encouraged by TGA to implement planned design changes in response to identified concerns as soon as possible.

Dr Wakefield's report went on to detail PSQ's ongoing review and consideration of safety of alternative beds. In particular, this work identified that horizontal railed beds themselves could present an entrapment risk in the 'intermediate position'. This has been addressed and the aim is to ensure replacement beds comply with the international standard rather than the Australian standard.

Annual audits of beds in Queensland Health continue and aim to eliminate the older beds as soon as possible and modify newer horizontal beds by removing the intermediate position. Older style beds are not to be used with patients with a disability.

Given this background investigation and work I add:

(2) The work of Ipswich Hospital together with Patient Safety Queensland's work referred to in this inquest is to be commended. It is hoped Patient

Safety Queensland will continue to be sufficiently funded and resourced to continue and complete this review, and other vital work to review and improve patient safety. I note this is required state-wide and it is particularly significant given the advent of independent hospital districts. There is a risk that isolated incidents which threaten patient safety may not be identified and addressed at the state-wide level unless the work of Patient Safety Queensland is allowed to continue at a meaningful level.

In particular, it is noted the current report was unable to consider other issues as no root cause was identified. It appears that although a Root Cause Analysis review was initiated, it was not continued or completed, presumably because investigating police commenced their investigation on the assumption this was potentially a 'criminal' matter. Why this death was categorised in such a way is unclear, but presumably the police wished to commence investigations to consider whether there was evidence of criminal negligence.

Curiously a decision was made almost by default that the matter was not 'criminal' when the investigator was met with refusal to provide statements by some witnesses. A report was then forwarded in April 2012 to the Office of the State Coroner, and regrettably belatedly, coronial processes were instigated to elicit information from witnesses to complete the investigation. Due to this history I add the following:

(3) Educational follow up by the Office of the State Coroner for investigating police will be arranged to ensure a greater knowledge and cooperation between Queensland police and the Office of the State Coroner to assist them in investigating matters for and on behalf of the coroner.

(4) It would appear essential that Queensland Health now completes the Root Cause Analysis process or otherwise completes the review of bed and bed bumper related safety issues, particularly in the context of children, and children with disabilities.

Standards for care of children with special needs should apply across the state. While it is acknowledged changes have been implemented in Ipswich Hospital to increase staffing levels to provide 'specialling' by a designated nurse for disabled children, reviewing the regime of observations and to consider the appropriate bed for each child, the evidence at inquest could not establish this was a Queensland Health wide safety improvement. The use of bed bumpers in the Ipswich Children's ward has also been ceased, but again it is unclear whether this safety measure has been considered across Queensland Health.

Completion of the root cause analysis or other investigative process should then disseminate results across Queensland Health to ensure improvement of patient safety state-wide.

(5) While it is noted the use of bed bumpers at Ipswich Hospital immediately ceased, the inquest did not establish whether this had occurred state-

wide. At the least, the evidence on this inquest suggests if bed bumpers are used they must be firmly secured not just to the top bed rail, but also to the base of the bed/mattress and to each end of the bed to eliminate the risk of the mat being forced between the rails, either vertically or horizontally. A consideration of the 'breathability' of the bumper material could also be undertaken. The better course appears to be removal state-wide of their use. In some cases this will necessarily require the increase of nursing resources to 'special' a patient to safeguard against the risk of perceived harm when a patient moves within a bed and comes into contact with bed rails.

Consideration of referral of any person pursuant to section 48 Coroner's Act

'48(4) A coroner may give information about a person's conduct in a profession or trade, obtained while investigating a death, to a disciplinary body for the person's profession or trade if the coroner reasonably believes the information might cause the body to inquire into, or take steps in relation to, the conduct.'

An integrated care plan should have been prepared by the nurse who admitted him to the Children's ward on 15 December. It was not done at the time of his admission and the nurse in the team leader role who subsequently commenced her shift did not complete that document either. Despite that omission, decisions had been reached that Joshua would commence on hourly observations and from 8.00pm two hourly observations were to be performed by the nursing team of two.

It is clear on the evidence, the nursing decision to commence with hourly observations from 6.00pm through until 8.00pm was within the nurse's decision making authority and appropriate given Joshua's clinical condition. The evidence also supports the decision as clinically appropriate when formal observations were reduced to a two hourly interval from 8.00pm.

What was critically late was the performance of the formal observations due at 10.00pm. The nurse did not enter his room until between 11.10 - 11.15 pm. Both nurses were responsible for these observations as they had agreed to team nurse until the next nurse rotation arrived at about 10.45pm. At various times, each nurse individually told the other they would take the 10.00pm observations. Each nurse was interrupted by other calls for assistance further delaying the time at which Joshua was attended to. There was no evidence to suggest they were deliberately failing to do his observations or shirking their work, but they failed to perform it.

It cannot be known at what time Joshua became trapped with his head wedged backwards in between the bed-bumper covered vertical bed rails. It is unknown how soon after 9.30pm when he was last seen that this occurred. Therefore it cannot be said that if the 10.00pm observations occurred on time this would have altered the outcome, although this is small comfort to his mother in the circumstances.

Despite some discrepancies, I consider both nurses involved in Joshua's care gave full and frank evidence and acknowledged their failings. It is apparent both were deeply affected by Joshua's death and both have reflected and learned from his tragic death. It is important to note hindsight has made it clear a child such as Joshua required frequent if not continuous supervision, but this had not been appreciated or directed by medical staff at the time. I do not consider, in the absence of such direction from medical staff, that nursing staff should be unduly criticised or referred to their disciplinary body.

There were indicators of risk associated with Joshua's movement in the bed that were overlooked and could have triggered consideration of higher levels of observation:

His mother pointed out the risk of his legs going between the bed rails and this is what led to the bed bumpers being obtained.

He was observed by one of the nurses at 9.30pm to have his arm tangled in the PEG tubing.

There had been a previous incident on 3 September 2010 leading to a formal PRIME report by a nurse when Joshua was found lying across the bed with his head against the bed rails and his legs through the bed rails. Bed bumpers were arranged. Despite this previous incident including a notation of a possible risk of suffocation, it was not within any of the medical or nursing staff's contemplation that this risk was real.[8]

Joshua's death was tragic and continues to cause his mother and family and friends great sorrow. It is to be hoped that other children with special needs will receive care specifically addressing those needs when being cared for in our hospitals.

Christine Clements
Deputy State Coroner
Brisbane
18 October 2012

[8] Exhibit B 19 page 2