QUEENSLAND COURTS

CORONERS COURT OF QUEENSLAND

FINDINGS OF INVESTIGATION

CITATION:	**Non-inquest findings into the death of DR**
TITLE OF COURT:	Coroners Court
JURISDICTION:	Brisbane
DATE:	9 June 2017
FILE NO(s):	2015/456
FINDINGS OF:	Ainslie Kirkegaard, Coronial Registrar
CATCHWORDS:	CORONERS: Death in care (disability); death in care (involuntary mental health); funded residential service provider; co-ordination of care issues

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Background

DR was a 46 year old woman who was found unresponsive in her room by a carer on 2 February 2015. DR was one of three residents of a supported accommodation service in Brisbane. She had two sons.

DR's death was reported to the coroner as a death in care because she lived in funded disability supported accommodation captured by the death in care (disability) reporting requirements under the *Coroners Act 2003*. The group home was operated by FSG Australia and funded through the Department of Communities, Child Safety and Disability Services.

It was subsequently identified that DR was under a community involuntary treatment order under the *Mental Health Act 2000* at the time of her death. Consequently her death is also captured by the death in care (involuntary mental health) reporting requirements under the *Coroners Act 2003*.

DR's medical history

Review of DR's medical records (treating General Practitioner, The Prince Charles Hospital (TPCH), Queensland Ambulance Service) shows she suffered from bipolar/schizoaffective disorder, intellectual impairment type 2 diabetes mellitus (diagnosed in August 2012), hypertension, high cholesterol, morbid obesity, smoking, asthma/emphysema, obstructive sleep apnoea (described as severe and associated with severe oxygen saturations; she was non-compliant with CPAP treatment) and dust mite allergy.

DR was taking multiple regular prescription medications for these conditions. Her diabetes was being managed with oral hypoglycaemic agents and Lantus insulin. Her emphysema was being treated with a Seretide and Salbutamol inhalers.

DR had a long history of chronic psychotic disorder dating back to 1996. There was a strong family history of psychotic illness with her mother having taken her own life at age 40 after a life-long struggle with schizophrenia. Her sister also suffered from schizophrenia. Her youngest son was removed from her care in September 2008, an event that caused her great distress.

From 1996 onwards, DR had more than 24 mental health admissions and had been managed under a community involuntary treatment order since July 2005. She was last admitted to The Prince Charles Hospital Mental Health Unit as an involuntary patient on 4 September 2012 due to her ability to maintain accommodation safely in the community. She had previously been living independently in a public housing unit. During her 395-day admission, DR was identified as having impaired decision making capacity due to her chronic mental health condition and lacked insight regarding her medical and psychiatric conditions. She was under a guardianship order and her financial affairs were being managed by the Public Trustee. She was discharged on 4 October 2013 into supported accommodation. DR had been assessed as clinically ready for discharge in May 2013 but remained in hospital to enable appropriate accommodation arrangements to be made given her high level care needs.

DR remained on an involuntary treatment order in the community. Her mental health condition was managed with Quetiapine 100mg at night), Sodium Valproate (500mg twice daily), Lithium SR (450mg at night) and Zuclopenthixol Depot (450mg intramuscularly every fortnight). She had a well-established relationship with her mental health case worker who visited her to administer her fortnightly depot injections.

Information provided by the Office of the Public Guardian indicates that DR was able to communicate effectively and had a history of disputing medical advice. She would deny having a mental illness. She had been refusing to engage with any community health teams

and was non-compliant with her medication and self-care. She did her own grocery shopping, chose her own food supplies and refused to follow dietary plans which affected the management of her diabetes. These circumstances informed the accommodation decision for DR to reside in supported accommodation.

The residential service provider, Department of Communities Child Safety and Disability Services and the Office of the Public Guardian liaised frequently as DR continually resisted any form of diet restriction and refused to comply with strategies to support her wellbeing. Despite these efforts, DR continued to make her own choices. She was able to communicate her choices and demonstrated capacity to action them.

Review of the Office of the Public Guardian file shows that by 2014, her carers were concerned about what they perceived to be a decline in DR's physical and mental health. They were working closely with her general practitioner, dietician, mental health team, guardian and the Public Trustee to manage issues including her incontinence, weight gain, diabetes, menu planning and food in general, mobility and costs associated with her increasing support needs.

In May 2014 she was provided with a hospital bed to enable her to sleep in an upright position (as her general practitioner was concerned about her weight impacting on her ability to breathe while lying flat).

In mid-July 2014, DR's care was transferred to a new general practitioner, Dr J. Dr J identified the need for DR to undergo a sleep study due to concerns she may have sleep apnoea.

Correspondence from the residential service provider to the Office of the Public Guardian in August 2014 indicates that DR had been experiencing low blood sugar levels due to not eating her meals at regular times. When asked to eat something to bring her blood sugar levels back up she would decline saying she was not hungry. The residential service provider reported that staff were having to be more firm with DR by telling her that she needed to eat or they would need to call an ambulance, and only then would she eat.

Dr J implemented a diabetes management plan which stipulated DR's acceptable BGLs were between 4-15mmol/L, above which she was not to have insulin but was to be referred for urgent medical advice. It is evident that her carers adhered carefully to this plan by phoning for an ambulance whenever DR's BGL exceeded 15mmol/L. DR was considered capable of administering her own insulin but was required to do so under carer supervision. The residential service provider records show careful documentation of carer efforts to encourage DR to make healthy food choices and to eat regular meals.

In early December 2014, Dr J formally assessed DR's capacity to self-administer her insulin and was satisfied she could continue to do so. DR was generally very reluctant for carers to observe her self-administration.

DR was reviewed by a consultant cardiologist at The Prince Charles Hospital in late 2014 following referral by Dr J. An echocardiogram performed on 25 November 2014 showed pulmonary hypertension (high blood pressure in the lungs), a severely dilated right ventricle, significant reduction in right ventricular function and tricuspid valve regurgitation (leakage of the tricuspid valve). There was mild dilatation of the right atrium. The left ventricle was normal in size and function. There was no evidence of right heart failure at this time. The cardiologist considered the pulmonary hypertension to be secondary to DR's obesity and suspected obstructive sleep apnoea. It was planned to confirm the diagnosis with a right heart catheter and to investigate DR for secondary causes as an outpatient.

Unfortunately an initial attempt to perform right heart catheterisation on 8 December 2014 was abandoned as DR was unable to tolerate the procedure.

DR subsequently had multiple overnight admissions to The Prince Charles Hospital for hyperglycaemia (high blood glucose level).

DR presented to the emergency department by ambulance on the evening of Friday 19 December 2014. Her carers had called the ambulance because she was sweaty and pale with a BGL of 17mmol/L. She had recently been treated for a urinary tract infection and a chest infection. She was admitted overnight with hyperglycaemia after having binged on sugary biscuits. Her observations were stable overnight and she was discharged home the next day for ongoing outpatient investigations, including a VQ scan.

Hospital admission over 1-7 January 2015

DR was admitted to The Prince Charles Hospital under the medical team over 1-7 January 2015 with left lower lobe pneumonia. Dr J had commenced her on oral antibiotics for a chest infection the previous day. She had also been given steroid medication with advice to her carers that this could result in a rise in her BGLs. Carers phoned for an ambulance on Thursday 1 January when DR's BGL was noted to be 19mmol/L.

DR was admitted under the respiratory team and treated with oral antibiotics and steroid medication for an infective exacerbation of her chronic obstructive airways disease. She was placed under an involuntary treatment order to facilitate this admission and the Public Guardian was involved in her health care decision making.

During this admission DR's oxygen saturations were recorded between 88%-93% on room air. She underwent a comprehensive work-up for her recently diagnosed pulmonary hypertension and right heart failure. Lung function testing showed evidence of extra-thoracic pulmonary restriction. A CT pulmonary angiogram was attempted on 2 January to exclude pulmonary embolism but due to her body habitus it was deemed a suboptimal test. On 5 January, she underwent a VQ lung scan which excluded pulmonary embolism. DR also underwent an inpatient sleep study which diagnosed severe obstructive sleep apnoea for which she was prescribed CPAP. Her carer was given CPAP education and informed of the need to apply to the Public Trustee for funding to purchase or hire a CPAP machine. DR was subsequently non-compliant with its use.

She was discharged home on 7 January.

DR received seven days of daily Prednisolone therapy (50mg, 50mg, 25mg, 25mg, 12.5mg, 12.5mg, 12.5mg, 12.5mg) as an inpatient, and two further daily doses (10mg, 10mg) as an outpatient on 8 & 9 January.

DR's inpatient BGLs were usually below 15mmol/L, though at times ranged between 5.1 – 25mmol/L despite her Lantus insulin being omitted until 6 January (for reasons not apparent, though a sliding scale of short acting insulin was being used).

Emergency department presentation on 9 January 2015

DR's carers phoned for an ambulance at around 7:00pm on Friday, 9 January because her BGL was above 15mmol/L. On assessment, her BGL was 16.2mmol/L. DR refused any treatment or transport to hospital at this time.

Her carers phoned again for an ambulance at around 9:30pm because her BGL was 16.6mmol/L after having taken insulin at 9:00pm. Despite DR's initial reluctance to go to hospital, she was taken to the emergency department. Carers told attending paramedics that DR had deliberately bent her insulin needle that evening, something she had done previously.

On examination in the emergency department, DR was noted to be afebrile with no chest pain, shortness of breath or abdominal pain. She was mildly tachycardic (110 beats per minute). Her BGL was 17.2mmol/L. ECG and chest x-ray revealed no issues of concern. She was discharged home from the emergency department the next morning after her hyperglycaemic episode resolved.

Emergency department presentation on 11 January 2015

DR continued to record high BGLs reaching 22.3mmol/L and 21.9mmol/L on Sunday 11 January. Her carers phoned for an ambulance at around 6:15pm that evening. On assessment, her BGL was 19.7mmol/L. Despite her reluctance to go to hospital again she was transported by ambulance to the emergency department.

On examination in the emergency department, DR was noted to be asymptomatic with no complaint of chest pain, shortness of breath or abdominal pain. She was afebrile and her observations were within normal limits. Her BGL was 16mmol/L and noted to come down to 13mmol/L. She was thought to have experienced an episode of mild hyperglycaemia for which she was given her regular night dose of insulin. She was then discharged home.

The emergency department clinical summary includes a notation about the need for follow up "*with GP ASAP please to re-adjust her insulin doses".* There is no indication this recommendation was formally communicated by the hospital to Dr J.

Hospital admission over 12-13 January 2015

DR's carers contacted the ambulance again at around 8:30pm on Monday 12 January because her BGL was high. On assessment her BGL was 26.1mmol/L. She had a low grade temperature (37.6 degrees) and an increased heart rate (120 beats per minute). She had an increased respiratory rate (40), a wheeze that resolved with Ventolin and her chest was congested on auscultation. Her oxygen saturation was 98% on room air but dropped to 89% as she was loaded into the ambulance. This resolved enroute to hospital. DR refused supplemental oxygen. She was aggravated and uncooperative with paramedics and her carer prior to being taken to hospital meaning the ambulance did not arrive at the emergency department until 9:40pm.

When triaged shortly before 10:00pm, her BGL was 16.8mmol/L. It was noted that she had been seen there the previous evening with uncontrolled BGLs.

When medically reviewed in the emergency department, her BGL was noted to be 14.4mmol/L, she was mildly tachycardia (heart rate 113 beats per minute) and her blood pressure 164/85. Her oxygen saturations were 93% on room air. Her urine was smelly, indicating a possible urinary tract infection. She was commenced on broad spectrum intravenous antibiotics for this and possible pneumonia and referred to the medical team for further management.

It appears she was reviewed by a member of medical team at around 4:30am. She was considered likely to have an uncomplicated urinary tract infection which may have caused or contributed to her elevated BGLs in the context of poorly controlled diabetes. The plan was for her to be admitted under the general medical team led by consultant physician, Dr M. She was commenced on oral amoxicillin with instructions for her BGL to be monitored with view to her being discharged home the next day if improved.

DR was admitted on the medical ward at 7:30am on 13 January. Once there, her oxygen levels were noted to fall when she was lying down (89% on room air). She required supplemental oxygen (2L per minute by nasal prong) to maintain her oxygen saturations above

91%. Nursing staff noted that she did not require supplemental oxygen to maintain her oxygen saturations when sitting up.

DR was reviewed by Dr M on the morning ward round at around 11:15am. The clinical impression was that she had a simple urinary tract infection without evidence of sepsis. Her elevated BGL was thought to be secondary to this and her recent pneumonia. She was prescribed a 10-day course of amoxicillin and considered well enough for discharge home that day. DR was discharged with a taxi voucher shortly after 1:00pm after a ward admission of under six hours.

Review of the care provider records shows that the residential service provider liaised with DR's mental health case worker about the circumstances of DR being taken to hospital and her eating habits which affecting her BGLs.

Hospital admission over 16-17 January 2015

DR's carers phoned for an ambulance at around 7:00pm on Friday 16 January as her BGLs were high. She was again uncooperative, declining to be assessed until she had finished smoking. On assessment her BGL was 19.9mmol/L. She had a slight temperature (37.4 degrees) and a respiratory rate of 35. She was transported to the emergency department, arriving at around 8:15pm.

On examination in the emergency department, DR was noted to look unwell, had widespread crackles in both lungs and a slight wheeze. Her BGL was 13.4mmol/L. She had a low grade temperate (37.2), pulse rate of 105 beats per minute and blood pressure 95/50. Her respiratory rate was 35 and her oxygen saturation was 88% on room air. She was referred to the medical team for further management.

A chest x-ray performed at around 10:00pm showed underinflated lungs but no consolidation or pleural effusion.

It appears DR was reviewed by a member of the Dr M's medical team in the emergency department at around 2:30am. At this time she was noted to be afebrile with a blood pressure of 120/70, elevated heart rate (115) and oxygen saturations of up to 95% on 4L oxygen by nasal prongs. She had generalised crackles and wheeze on auscultation of her chest. The clinical impression was that DR's ongoing shortness of breath was due to obesity hyperventilation syndrome, non-infective exacerbation of her emphysema or exacerbation of heart failure (despite there being no overt signs of this with no peripheral oedema and only a slightly elevated BNP - B-type natriuretic peptide). She was commenced on intravenous diuretic medication and prescribed a stat dose of prednisolone and was to be admitted under Dr M's team for further investigations.

Nursing observations recorded in the emergency department at 4:30am showed very low blood pressure (73/53), tachycardia of 123 beats per minute, an elevated respiratory rate (34) and low oxygen saturations at 90% on supplemental oxygen.

DR was eventually admitted on to the medical ward at around 5:30am. Once on the ward she was noted to be non-compliant with oxygen therapy, recording oxygen saturations in the 80s when not wearing the Hudson mask so she was trialled with nasal prongs.

Although admitted under Dr M, she was reviewed by the on-call consultant physician, Dr R on the morning ward round. Dr R noted DR's recent previous admission and took account of her view that nothing had changed since then as she was no more short of breath than usual and she had only been sent to hospital because of her diabetes management plan requirements. Her observations were documented as stable, she was afebrile and her BGLs were "OK". She

was to be discharged home that day. There is a note indicating the need to provide her carers with education about DR's hospital admission requirements.

DR was given a single dose of prednisolone orally before being discharged at 11:15am with a taxi voucher, seven hours after her physiological parameters were quite alarming, with little clinical investigation.

A retrospective medical entry made at 1:00pm indicates that the Medical Registrar contacted DR's carers advising them "*..re BGL (blood glucose level) control and indications of admission + need for regular GP review + insulin sliding scale + adjustment of insulin regime if uncontrolled BGLs*."

There was no documentation in the chart as to what the sliding scale was, what form it was to take (what agent) and whether carers understood what a sliding scale was or when to seek assistance.

A sliding scale of insulin management would require DR to be on a short acting insulin preparation (which she was not at the time) and the sliding scale regime would need to be clearly documented with specific instructions on how to manage hypoglycaemia particularly that could be understood by non-clinical carers and DR, what to do in an emergency if her sugars were too low or too high and when to refer her for medical review.

The Medical Registrar's note included instructions for a discharge summary to be prepared for the general practitioner with a clear plan "*as soon as possible*".

The residential service provider records document this conversation and indicate that the Medical Registrar has sought clarification of the diabetes management plan parameters for DR's acceptable BGLs. When told it was between 4-15mmol/L, the Medical Registrar recommended that it be adjusted to between 4-22mmol/L. The carer asked that hospital staff contact Dr J to inform her of this recommendation. The Medical Registrar sought confirmation of the general practitioner's details and also provided advice, at the carer's request, about DR's consumption of Equal sachets.

The residential service provider records also documented plans to arrange an appointment for DR with a local diabetes educator.

DR's condition after discharge from hospital on 17 January 2015

Review of the Office of the Public Guardian file shows that DR's carers remained concerned about her poor dietary choices and the impact on her diabetes as she was continuing to record high BGLs. As at 21 January 2015, the Office of the Public Guardian was actively considering a referral for restrictive practices to manage DR's access to food.

The residential service provider records indicate that DR was restless and having trouble sleeping in the days following her return from hospital. The residential service provider sought assistance from DR's mental health care worker about this and obtained a prescription for PRN Ativan at night.

DR saw Dr J on 22 January about her sleeplessness. She was prescribed melatonin which is considered reasonably safe given her comorbidities. Carers advised a Community Visitor during an unannounced visit that day that DR's diabetes management plan was to be reviewed at this appointment, at the hospital's request, with a view to altering the BGL at which carers were required to phone for an ambulance. While Dr J's consultation notes document discussion with DR about the importance of healthy diet and diabetes management, there is no indication of any change made to the diabetes management plan at this time.

DR continued to refuse to use her CPAP machine. The residential service provider had asked staff to have the CPAP mask refitted. Arrangements had also been made for a diabetes educator to work with DR around meal planning.

Events of 1-2 February 2015

DR was noted to be her usual self on Sunday 1 February and participated in a group outing that day.

At around 9:00pm that evening, DR's carer entered DR's room to administer her regular medication and insulin injection. DR was awake and listening to music on the radio at this time.

DR approached the carer at around 12:45am asking for some pain relief for stomach cramps which she thought was period pain. She was given two ibuprofen tablets and went back to bed. The carer heard DR moving about in the kitchen at around 2:30am and went out to check on her. She was getting herself a glass of water at the sink. She told the carer she was fine but just having trouble getting to sleep. It was not unusual for DR to be up and about during the night.

When the carer went to DR's room at around 6:00am to administer her medication, she found DR lying askew on the bed showing no signs of life. She was unresponsive and cold to touch. The carer immediately phoned the afterhours support number to advise she was calling the ambulance because she believed DR was deceased. The carer then phoned 000 and with guidance from the 000 call taker performed CPR pending the paramedics' arrival. Paramedics attended soon afterwards but did not continue resuscitation efforts as DR was obviously deceased.

Police attended the scene and were satisfied there were no suspicious circumstances.

Dr J attributed the death to heart failure resulting from diabetes. Having regard to independent clinical advice prior to autopsy, I was not satisfied this was an appropriate cause of death diagnosis given DR's poorly controlled diabetes (making diabetic ketoacidosis a possibility) and her history of valvular heart disease and obstructive sleep apnoea cast doubt on heart failure being the primary cause of death. For this reason, I declined to accept the proposed cause of death certificate.

Autopsy findings

An external examination and full internal autopsy were performed at the John Tonge Centre on 6 February 2015. The final autopsy report issued on 29 January 2016. The autopsy revealed evidence of dilated cardiomyopathy which the pathologist considered caused the death. This condition can lead to death by progressive heart failure or by a sudden abnormal heart rhythm. I am satisfied that the circumstances of DR's death are consistent with her having developed a sudden arrhythmia. I note the pathologist's advice that possible factors contributing to DR's heart disease include diabetes mellitus, morbid obesity (BMI 56), obstructive sleep apnoea, hypertension and a combination of these factors. The pathologist considered that the tricuspid valve leakage identified on the November 2014 echocardiogram may have been the consequence, rather than a cause, of the dilated cardiomyopathy.

There was no evidence of hyperglycaemia or diabetic ketoacidosis.

Preliminary independent clinical review

As DR's death is reportable as a death in care, my investigation has considered whether there were any issues of concern regarding DR's care which may have played a role in her death.

I arranged for an independent doctor from the Department of Health Clinical Forensic Medicine Unit to review DR's record and advise whether there may have been an opportunity to have prevented her death. This advice informed my decision as to whether an autopsy was required and consequently was given prior the preliminary autopsy findings becoming available.

The reviewing doctor observed that DR's diabetes was clearly uncontrolled but acknowledged that this may have been difficult to manage given her mental state, poor insight and impulse control and obesity. However, the reviewing doctor expressed concerns about the appropriateness of DR having recently been discharged from The Prince Charles Hospital back to a residential service with apparently minimal advice to her non-clinically trained carers about her post-discharge management. The reviewing doctor was also somewhat critical of the general practitioner's diabetes management plan.

The Prince Charles Hospital clinical review outcomes

Internal Medicine Morbidity & Mortality Meeting

At my request, The Prince Charles Hospital referred these concerns to its Internal Medicine Morbidity & Mortality Meeting for review and discussion on 21 July 2015. The then hospital executive provided me with case presentation notes prepared by Dr M for this discussion, together with a statement from Dr M regarding her involvement in DR's care.

Dr M's notes give the clear impression that much of the group's discussion centred on debating differential cause of death diagnoses under consideration prior to autopsy rather than genuinely reflecting on DR's hospital management and discharge planning. The Meeting did not consider DR's death to be related to her recent hospital care.

Contrary to the reviewing doctor's preliminary concerns, the Meeting reportedly considered that DR's diabetes was very well controlled, as evidenced by normal glycosylated haemoglobin levels (HbA1C) readings of less than 7% as at 2013, and the absence of diabetic complications. I do not accept this view, as it is difficult to accept that results from 2013 would have any bearing on the glycaemic control in January 2015 given that HbA1C reflects control of blood sugar over the life of the red blood cells tested (which I understand to have a life of 120 days).

The only information available to me about DR's glycaemic control in January 2015 are the random blood sugars tested and the diabetic management plan requirement for DR to be sent to hospital with a BGL above 15mmol/L. The triage note for 12 January 2015 recorded a BGL of 16.8mmol/L with the comment "*was here last night with uncontrolled BGL*". Given that an elevated BGL of over 15mmol/L was the trigger for DR's carers to send her to hospital, there appears to have been a missed opportunity at her multiple emergency presentations and hospital admissions for the treating doctors to have tested for glycaemic control with HbA1C.

The reviewing doctor had raised issues concerning the treating team's apparent lack of communication and failure to ascertain whether DR and her carers understood her condition and how to monitor and manage it.

Dr M's case presentation note disclosed that the discharge summary for DR's final admission was in fact not completed until almost two months following her discharge from hospital (this being almost one month after her death). It was prepared by a junior doctor who was not involved in her care. This meant that clear instructions were not conveyed to DR's general practitioner regarding ongoing monitoring of her diabetes in the community, including when to seek further medical attention (and not available to Dr J when she saw DR on 22 January). In response to this, the Meeting recommended that registrars, resident medical officers and

interns be reminded of the importance of discharge summaries and the need for timely completion of them (ideally prior to the day of discharge but within four weeks).

DR spent more time in the emergency department than on the ward with her definitive treating team in her last two admissions and the level of documentation reflected this with admission being an implied concern by emergency department staff that she required inpatient management.

This raises the question whether these two admissions provided an appropriate timeframe to assess DR's presentations at the time and fully differentiate her clinically, as well as allowing for appropriate patient education, carer education and assessment of whether she was safe for discharge. The reviewing doctor considered both admissions fell far short of reasonable in the circumstances. Disappointingly, it appears the Meeting did not turn its collective mind to this aspect of DR's care and did not take the opportunity offered to them to reflect on the appropriateness of the apparent early discharge of a patient lacking insight about her condition to supported accommodation with no documentation to assist her carers or general practitioner. As such I place very little weight on the Internal Medicine Morbidity & Mortality Meeting outcomes.

Formal clinical review

In response to my concerns about the M&M outcomes, the new TPCH Executive Director of Medical Services (the EDMS) subsequently commissioned a formal clinical review of the care provided to DR. In doing so, the EDMS acknowledged it was evident there were opportunities to improve the care delivered to DR. The EDMS considered that DR's multiple admissions and emergency department presentations provided multiple opportunities to better coordinate and improve her holistic care, and acknowledged that the systems designed to ensure co-ordinated care in the afterhours (weekend) setting are less robust than in hours, an issue being actively examined by the hospital's 24/7 Care Steering Committee.

The EDMS also conveyed Dr M's acknowledgement and apology for the inconsistencies within her statement. The EDMS advised that Dr R had been located (he was no longer employed by TPCH) and had agreed to provide a statement about his involvement in DR's care during her final admission. He reportedly agreed that there were opportunities to re-evaluate how holistic DR's care was during this admission and over time. Unfortunately Dr R's statement has not been forthcoming.

I received the formal clinical review outcomes in late November 2016. The review concluded:

- There had been appropriate focus and clinical work up of DR's respiratory issues in consideration of the diagnosis of pulmonary hypertension. A discharge summary was provided to her general practitioner advising the need to continue to manage DR's diabetes according to "usual" guidelines.

- Two days after DR's discharge on 7 January, she re-presented to the emergency department with hyperglycaemia "*each night for the next four nights*". In retrospect it was evident her treatment focused on increasing shortness of breath on exertion associated with tachypnoea and tachycardia. Each presentation noted that she had recently been treated for pneumonia.

- Treatment with prednisolone was unavoidable given her respiratory status and hyperglycaemic medication was maximised in an effort to manage her type 2 diabetes mellitus. DR received insulin while in the emergency department which was given in accordance with the existing instructions from the general practitioner and at no higher dose.

- DR's management plan as advised by her carer stipulated that her insulin should be withheld when her BGL reached 15mmol/L or higher and she should present to hospital. This plan was actioned and DR received her routine insulin with good effect.

- DR's intermittent hyperglycaemic episodes were undoubtedly the result of non-compliance, variable diet and self-cares and insufficient communication from the hospital to the general practitioner.

- Ongoing education and support of DR's carers, along with liaison with her general practitioner was not evident in the hospital discharge summaries or the medical record.

- There were several missed opportunities to improve care planning after DR's mental health admission which were considered to have contributed to her multiple night time presentations to the emergency department for the administration of insulin.

- Although the medical registrar documented a clear plan to liaise with DR's carers and general practitioner after the weekend admission on 16-17 January, this was not incorporated into a discharge summary and there is no evidence that any further actions were taken.

I am advised that TPCH has commissioned a discharge summary quality improvement project due to concerns about its ability to meet the communication needs of its community. This project will incorporate the importance of medical handover as a focus in after-hours discharges.

Findings required by s. 45 *Coroners Act 2003*

Identity of the deceased: **DR**

How she died: **DR died from an acute complication of her underlying dilated cardiomyopathy.**

It is evident that DR's chronic mental health issues impacted significantly on her willingness and ability to comply with a range of social and health interventions to enhance her well-being and to manage her insulin-dependent diabetes and obstructive sleep apnoea. This is despite the diligent efforts of the residential service provider, FSG, whose staff liaised closely with mental health personnel, DR's general practitioner, Department of Communities Child Safety and Disability Services, Office of the Public Guardian and the Public Trustee to manage DR's high care needs proactively. I have no concerns about the care provided to DR by FSG and its carers.

While DR's respiratory issues were investigated appropriately over November 2014 – January 2015, her multiple emergency department presentations and admissions to The Prince Charles Hospital over this

time represented missed opportunities to consider her care holistically. While the management of DR's last two hospital admissions in January 2015 was less than optimal, I am satisfied it neither caused nor contributed significantly to her death. This is because the autopsy findings indicate she died from an acute complication of her dilated cardiomyopathy (sudden cardiac arrhythmia) rather than as a result of heart failure or a complication of her diabetes. However, the hospital's failure to communicate with and educate DR's carers (who were not clinically trained) about her condition and to liaise with her general practitioner in a timely and informative way impacted on the management of her diabetes, which was clearly challenging.

The events leading to DR's death demonstrate the importance of treating doctors providing clear information and instructions to non-clinical carers in order to help ensure the patient's treatment is continued on discharge from hospital, that the patient remains compliant and that medical follow up is undertaken, together with clear instructions regarding action plans/emergency management. I am satisfied that TPCH has now recognised this deficiency in its delivery of care to DR and has prioritised action to improve discharge summary quality and to examine improvements to the coordination of care in after-hours settings

Place of death:	**Funded disability supported accommodation**
Date of death:	**2 February 2015**
Cause of death:	**1(a) Dilated cardiomyopathy** **2 Diabetes mellitus; morbid obesity; obstructive sleep apnoea; hypertension**

Ainslie Kirkegaard
Coronial Registrar
Coroners Court of Queensland
9 June 2017