Neonatal Cot Utilisation 2013

SITE	Birth weight and gestation SCN admission criteria	Glucose Monitoring for well infants with risk factors for hypoglycaemia	Meconium Liquor	Caesarean Section	Antibiotic Administration (for risk factor, baby well)	Jaundice	Withdrawal
RBWH	<2000g 100% 2-2499 91% 2500-2999 34% 3000-3999 22% 4000-4499 29% 4500+ 43% 35 wks 84% 36 wks 75% 37 wks 46% 38 wks 26% >38 22%	• Not admitted to SCN. • On PN ward. • To SCN if IV required. • What about IDDM, NIDDM, ±Macrosomia?	• If asymptomatic, PN ward.	• PN Ward.	• Admitted to SCN. • Blood cultures + iv / FBC in SCN with 4 hrly obs. To PN ward if asymptomatic. Returns to SCN for Ab administration.	• Phototherapy in PN ward up to double lights.	• Scored on PN ward. • Admitted to SCN if treatment required.
Mater Health Service, Brisbane **15.4% overall admissions of inborn babies**	Policy is all <35wks or <1800g BUT Actual admits 2012 <2000g 100% 2-2499g 64% 25-2999g 17% 3-3999g 6% 4-4499g 9% 4500g+ 16% 35w 82% 36w 42% 37w 17% 38w 7% >38w 5%	• Not admitted to SCN. • Cared for on PN ward. • If low, extra feed given and BGL repeated before admission. • Except IDMs admitted if poor maternal control and macrosomic (clinical decision). • Most IIDDM and ININDDM go to PN ward.	• If asymptomatic, PN ward. • If symptomatic, admitted to SCN.	• Observed with mother. • If unwell, admitted. If respiratory distress either admit to SCN or observe for short time to see if settles.	• Not admitted to SCN. • Cared for on PN ward. • IV inserted and blood culture in birth room. Abs given on PN ward.	• In room with mother. Admit if SBR extreme (not defined). • May have light + biliblanket on PN ward. • Home PT programme with biliblanket.	• Scored on PN ward. • Observe with mother. • If symptomatic, admit to SCN when needs treatment. • Also, often social or child protection issues and may need admission for these.
Townsville	• <K37 weeks, <2500g	• IDMs are admitted to the nursery if mother has been on insulin or if baby's initial (or on-going) BGL is low.	• If asymptomatic, post natal ward. • Admitted to nursery if other risk factors are present or showing signs of respiratory distress.	• Only admitted to nursery if meets admission criteria.	• Admitted to SCN. • Any newborn requiring IVAB administration is admitted to the Neonatal Unit. Cared for on SCN or with mum?	• <37 weeks or <2500g	• IDMs are admitted to the nursery if mother has been on insulin or if baby's initial (or on-going) BGL is low.
Gold Coast Hospital	• <K37 weeks, <2500g	• Any infant <2.5 kg or >4.5kg or infant of a gestational diabetic mother is initially admitted to nursery for blood glucose monitoring until stable. • These babies receive their care in the PN ward beside their mother but care provided by SCN staff.	• If asymptomatic, PN ward. • 4 hourly obs for 24 hours done on PN ward as per Statewide guideline. (process currently under r/v at GCH).	• Not routinely admitted.	• .Admitted to SCN. • .Cared for on PN ward. • All infants requiring IV antibiotics are admitted to the nursery for duration of course of treatment. Can go to be with mother in between doses.	• All infants requiring phototherapy are admitted to SCN. Stable babies are admitted but can be nursed on PN ward with mother on Bilisoft. • Phototherapy in an incubator is done in SCN (due to lack of room on PN Ward).	• Scored on PN ward. • Initial scoring done by midwives on PN ward. • Babies only admitted to the SCN if they score above 12 or have 3 consecutive scores above 8.

Neonatal Cot Utilisation 2013

SITE	Birth weight and gestation SCN admission criteria	Glucose Monitoring for well infants with risk factors for hypoglycaemia	Meconium Liquor	Caesarean Section	Antibiotic Administration (for risk factor, baby well)	Jaundice	Withdrawal
Cairns	• < K37, < 2500g	• We admit to the nursery all babies who qualify for blood glucose monitoring according to the statewide guidelines. • All IDMs (insulin or non-insulin), all <37wks, IUGR (i.e. <2.8k at term), macrosomia are admitted but stay with mum if not hypoglycaemic.	• If asymptomatic, PN ward. • We do admit babies with a high lactate who are asymptomatic until the lactate is <5.	• We don't routinely admit babies to the nursery that are born by C/S and are well.	• Babies who require antibiotics are admitted to and stay in the nursery.	• All infants requiring phototherapy are admitted to and stay in the SCN.	• Babies requiring NAS scoring are admitted to and stay in the nursery.
Mackay	• < K37, < 2500g We do not follow BSL guidelines to the letter & monitor all SGA's < 10% otherwise we would be admitting term infants at 2.9 & 3.0kg as per new percentile charts.	• All babies are admitted to SCN that meet statewide guidelines for glucose monitoring. • All managed on the PN ward, not physically in the nursery.	• If asymptomatic, PN ward. • Q4H Obs for 24 hours on the PN ward only, never admitted to SCN unless MAS or respiratory distress.	• QH Obs for 4hrs on the PN ward, never routinely admitted to SCN.	• All admitted to SCN, only kept in unit in acute phase of illness otherwise managed on PN ward.	• Admitted to SCN but managed on PN ward wherever possible on bilisoft or blanket.	• Admitted to SCN. • Managed on the PN ward unless requiring closer observations.
Bundaberg	• < K37, < 2500g All babies less than 37 weeks until identified that no concerns. In reality probably 36 weeks or less Until recently less than 2500gms and >4500 gms but this has been modified to address gestation and needs, so now flexible?	• Where are at risk non-IDMs admitted. Admitted to SCN but we attempt to place them with their mothers if stable and bring them in for BSL's and monitoring. This is a little consultant dependant as some consultants are more flexible than others. • IDDM and GIDDM admitted to SCN but cared for on PN ward. • Babies are admitted /attached to the nursery for Infants of mothers with IDDM and GIDDM. • If the sugars are satisfactory they are with the mothers but due to nursing ratios their care is monitored by SCN and staff. Unfortunately with the current guidelines many more require intervention and therefore admission.	• Not admitted unless require resuscitation.	• Not admitted unless the baby has concerns, eg TTN.	• Admitted for the duration although can be with mum but attached to the SCN for duration of care. Numbers have increased with the statewide guidelines.	• Variable but usually for phototherapy other than bilibed admitted to the SCN as it impacts on the sleep habit of other mothers in the ward and also ensures that the baby is monitored.	• Aim to score on PN ward. • Depends on the condition of the baby, any interventions. Nursing staff have identified difficulties if with mother as difficult to score sneezing/ irritability/ excessive sucking if you are not able to observe them over a period of time.

Neonatal Cot Utilisation 2013

SITE	Birth weight and gestation SCN admission criteria	Glucose Monitoring for well infants with risk factors for hypoglycaemia	Meconium Liquor	Caesarean Section	Antibiotic Administration (for risk factor, baby well)	Jaundice	Withdrawal
Nambour	• <K36, <2500g	• Babies of GDM (non-IDM and GIDDM are not admitted to SCN routinely and are cared for on PN ward. • Currently, babies of IDD mothers are admitted.	• If asymptomatic, post natal ward. • Not admitted to SCN.	• Not admitted to SCN.	• Admitted to SCN for duration of IV AB course (can spend time on ward with mother but remain a 'nursery' baby).	• Depends on SBR levels and treatment required. • Phototherapy is done on the PN ward.	• Scored on PN ward. • Stay on PN ward with mother for observation and scoring. • Admitted to SCN if require treatment. • May be admitted to SCN for observation and scoring if unable to do on PN ward.
Toowoomba	• < K35, < 2000g admitted routinely. However a lot of 35/36 weekers are subsequently admitted.	• Glucose monitoring done on PN ward. • Admitted to SCN if needing NG supplements or IV therapy.	• If asymptomatic, PN ward. • Not admitted to SCN unless symptomatic e.g. respiratory distress.	• Not admitted to SCN unless baby is unwell.	• Admitted to SCN initially but may be discharged to the PN ward and have Ab continued there.	• Phototherapy provided in PN ward. Will be admitted to SCN if needing intense phototherapy or other therapy.	• Scored on PN ward. • Initial monitoring in PN ward. Will be admitted to SCN if needing treatment.
Rockhampton	• <K37, <2500g Officially keep from 32 weeks and 1500g, however, if condition of baby permits occasionally keep below those criteria in discussion with RBWH.	• BSL monitoring on PN ward. i.e. not admitted to SCN. • Infants of IDDM routinely admitted, infants of GDM or GIDDM only if hypoglycaemic/ symptomatic.	• If asymptomatic, PN ward. • Not routinely admitted unless complications. • ½ hourly obs on PN ward for 2 hours followed by 4 hourly obs for up to 24 hours.	• Not routinely admitted, but triaged in SCN if unable to stay with mother. • No admission, 'babysitting' until mother able to take, usually 1-2hrs max.	• Admitted to SCN for duration of IV ab, can go to PN ward between doses at discretion of consultant, remains a 'nursery baby'.	• Double lights to SCN, single lights can remain on PN ward.	• Scored on PN ward. • Admitted to SCN only if requiring treatment or if PN ward unable to do obs and scoring.
Hervey Bay	• ?	• Not admitted to SCN. Cared for on PN ward. • Except all infants of IDDM admitted.	• Will be admitted if poor adaptation requiring intervention, poor cord gases, other risks e.g. PROM with inadequate antibiotic cover.	• Not routinely admitted – usually triaged through SCN.	• Admitted to SCN for antibiotics – can spend time with mother on PN ward if "low risk" and clinically well.	• Admitted to SCN for Phototherapy. • So all babies on PT are physically in SCN?	• Scored on PN ward if asymptomatic. • Admitted to SCN for obs and scoring if symptomatic.
Redland	• < K35, < 2000g (35-36 weeks admitted if other risk factors or not feeding well). (2000-2200 grams are admitted if they have additional risk factors or not feeding well). (At times we are unable to admit some high acuity babies because of the constraints of bedspace in our 6 bedded nursery and are managed at bed side under close monitoring).	• Admission not done for routine monitoring as indicated by the statewide guidelines. • Low threshold for admission for high risk babies especially with BSL abnormalities (macrosomic, poorly controlled maternal diabetes, low BGE's, poor feeding etc).	• Not admitted unless required resuscitation or is symptomatic. • Q4H obs on PN ward.	• Not routinely admitted.	• Not admitted routinely unless unwell (cared for by paediatric team on the PN ward). • Q4H obs on PN ward.	• Not routinely admitted unless intense phototherapy or rising SBR levels despite treatment or pathological jaundice.	• Scored on the PN ward. • Usually admitted only if they need morphine or medications as per the state guidelines.

Neonatal Cot Utilisation 2013

SITE	Birth weight and gestation SCN admission criteria	Glucose Monitoring for well infants with risk factors for hypoglycaemia	Meconium Liquor	Caesarean Section	Antibiotic Administration (for risk factor, baby well)	Jaundice	Withdrawal
Redcliffe SCN procedure guides all admissions to SCN. Contains selected admission criteria.	• ≤ K36, < 2200g	• All neonates of diabetic mothers requiring insulin (either pre-existing or gestational) regardless of blood glucose estimations are admitted to SCN. • All other well babies with risk factors (as per state wide guidelines and where BW < 2600 and > 4000g) have 1, 2 & 4 hours BGL screening occurring in Birth Suite and/or PN ward. If low BGL or symptomatic then Paed MO & SCN staff notified and admitted to SCN at their discretion.	• If asymptomatic cared for in PN ward. • Routinely admitted to SCN if other risk factors exist, eg. BW or gestation criteria, low 5 minute apgar, significant or unexpected resus, sepsis risk, respiratory distress.	• Not admitted to SCN unless baby is unwell. • Maybe triaged/observed in SCN if unable to stay with mother.	• All admitted to SCN for course of treatment. • If well, and nil other significant risk factors, may go to be with mother in between doses.	• All neonates requiring phototherapy are admitted to SCN. • Those requiring phototherapy and isolette care are physically cared for in SCN. • Those receiving phototherapy via a Bilibed may be cared for with the mother in the PN ward.	• Depends upon severity, maternal drugs, and existence of other risk factors (example child safety concerns etc). • For example if maternal drug is SSRI, then scoring will occur in postnatal ward with baby being admitted to SCN if symptomatic. • If maternal drug is methadone or other opioid, amphetamine etc with significant exposure then may be admitted to and cared for in SCN from birth.
Caboolture	• <K36, < 2200g	• BSL monitoring on PN ward. • Admitted to SCN if becomes symptomatic or BSL remains low after intervention. • All babies requiring BSL monitoring Qualified.	• 4hrly obs on PN ward for 48 hrs. • Qualified babies. • Admitted to SCN if symptomatic.	• Baby cared for on PN ward with mother.	• IVC placed in SCN, but baby cared for on PN ward, returning to SCN for administration of IV A/Bx. • Baby qualified.	• Single Ptx cared for on PN ward. • Double Ptx admitted to SCN. • All babies requiring Ptx qualified.	• Scored on PN and admitted to SCN if symptomatic. • All NAS babies qualified.
Ipswich	• < K36, < 2200g	• Glucose monitoring done on PN ward. • Admitted to SCN if needing NG supplements or IV therapy.	• If asymptomatic, PN ward. • If symptomatic, admitted to SCN.	• Not admitted unless the baby has concerns, eg TTN.	• Admitted to SCN. • Cared for on PN ward. • All infants requiring IV antibiotics are admitted to the nursery for duration of course of treatment. Can go to be with mother in between doses.	• Double lights admitted to SCN. • Single light can remain on PN ward (not admitted to SCN).	• Scored on PN ward. • Initial scoring done by midwives and mother on PN Ward. • Babies only admitted to the SCN if treatment required or closer observation for accurate scores.

Neonatal Cot Utilisation 2013

SITE	Birth weight and gestation SCN admission criteria	Glucose Monitoring for well infants with risk factors for hypoglycaemia	Meconium Liquor	Caesarean Section	Antibiotic Administration (for risk factor, baby well)	Jaundice	Withdrawal
Logan	• <K36 weeks,<2300g • Apgar score <4 at 1 minute	• On PN ward. If low, feed and repeat BGL. If low then needs to be admitted to SCN. • <36 <IUGR <2.3kg Macrosomia >4.5kg • Needs NG supplements or IV therapy.	• If asymptomatic, PN ward. • 4 hourly obs for 24 hours – done on PN ward as per Statewide Guidelines.	• PN ward. • If respiratory distress → SCN. • If settles <4 hours, no investigations and return to PN ward.	• Admitted to SCN for Blood cultures and IV line, first dose antibiotics given. • If asymptomatic – to virtual SCN/PN ward bed. This will allow a DRG to be given and Logan Hospital is in consultation with Q Health ABF team to have babies considered for activity (WAU's) and ABF funding.	• Phototherapy on PN ward with mother (one light and Biliblanket on ward). If any further therapy required eg IV fluids to SCN • With the ↓in LOS on PN ward, previously discharged babies aged >1 day of age with jaundice are admitted to the Paediatric medical ward in increasing numbers. • All pathological jaundice from PN ward eg ABO incompatibility are admitted to SCN.	• Scored on PN ward by midwives. • Babies admitted to SCN if they score above 12 or have three consecutive scores above 8 as treatment maybe required. • If mother discharged early and further scoring is required then baby admitted to SCN.

Purpose of the document: Explore current practice and consider opportunities that may improve neonatal cot utilisation in level 4, 5 and 6 Queensland Special Care Nurseries.
Source: Template populated by Directors of Neonatology and Directors of Paediatrics.
Timeframe: Request for information February 2013. It is anticipated that the document will be finalised at the 13 June 2013, Queensland Neonatal Services Advisory Group Meeting.

Evaluation of the
Report of the Statewide
Neonatal Intensive Care Services Project (2006) -

Recommendations status report
May 2012

Queensland Neonatal Services Advisory Group
Subgroup of the Statewide Maternity and Neonatal Clinical Network

Document version history

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Contents

1. Background

In response to concerns regarding service capacity, in 2006 a ministerially endorsed statewide review of neonatal intensive care and special care services was undertaken (Queensland Health 2006). The resulting *Report of the Statewide Neonatal Intensive Care Services Project* (the Report) highlighted an increasing birth rate and advances in clinical care, especially for very low birth weight neonates, resulting in rising demand for neonatal services. The report recommended increases in neonatal intensive care cot numbers and a review of complementary special care nursery services.

In addition to immediate increases in neonatal intensive care cot numbers from 48 to 67, the Queensland Government responded by ordering an evaluation of the report's findings (the Evaluation) (Queensland Health 2008). The Evaluation agreed that cot numbers were inadequate for current and projected future demand and in addition to supporting the call for increases in cot numbers, made a number of other recommendations designed to strengthen the entire network of neonatal service planning and provision. This status report summarises the progress made with respect to those recommendations.

2. Context

In late 2011, the Queensland Neonatal Services Advisory Group (QNSAG) (a subgroup of the Statewide Maternity and Neonatal Clinical Network) was reconvened with an extended membership inclusive of corporate office Planning Branch representation. In addition to other specialty specific project work (including workforce and capital planning), the group aims to lead an assessment of statewide neonatal and special care capacity and demand, review the 2006 Report and subsequent Evaluation, and re-examine the service planning benchmark for neonatal and special care nursery services in Queensland.

3. Recommendations status

In November 2011, members of the advisory group (appendix 1) were requested to provide feedback on the 20 specific recommendations made in the Evaluation. Reponses are summarised as follows:

3.1 Recommendation 1: Clinical Network

Statewide maternity & neonatal network (SMNCN) assume a clinical leadership role related to clinical reforms including clinical governance, the Queensland Children's Hospital neonatal intensive care unit (NICU), development and implementation of health service planning recommendations, workforce, NICU/special care nursery (SCN) capacity, admission and care management criteria.

The SMNCN is in operation and functioning effectively to provide leadership in improving Queensland Health maternity and neonatal clinical services. The complementary QNSAG is also actively involved in service evaluation and improvements, with membership representative of statewide need. In addition to significant work in the areas of quality and care management, a number of planning activities have been undertaken by various areas within Queensland Health. In 2011 Health Service District Plans were developed by Planning Branch for Central Queensland, Cairns and Hinterland, Mt Isa and Townsville Health Service District, which considered current and future needs for both neonatal and special care nursery services. Implementation of planning has seen the establishment of a new service of two NICU cots at the Gold Coast Hospital, with further capacity under construction as part of the Gold Coast University Hospital new build, and SCN cot numbers growing by 21 across the state. In 2012, planning will occur for Cape York, Mackay, Darling Downs-West Moreton, South West, Metro South, Sunshine Coast and Gold Coast Health Service Districts. These activities will also consider local neonatal and special care nursery needs, however further coordinated work with respect to capacity and workforce issues would be useful to maximise service effectiveness.

3.2 Recommendation 2: Statewide transport and demand coordination

Until the CHO review of statewide transport and accommodation issues is complete, a statewide neonatal transport coordination team is appointed by the Chief Health Officer responsible for:

- *statewide strategic neonatal transfer issues*
- *emergency retrievals*
- *daily demand management for NICU/SCN cots.*

Retrieval Services Queensland (RSQ), Health Coordination Services Directorate, Division of the Chief Health Officer, is responsible for the coordination of emergency and urgent statewide retrieval and transfer of patients. RSQ collaborates with specialist neonatal clinicians at the Mater Hospital, Royal Brisbane and Women's Hospital (RBWH) and The Townsville Hospital (TTH) who provide clinical assessment, agree to transfer, identify a cot space and activate a specialist neonatal team to manage and retrieve patients. Once transfer is agreed, RSQ coordinate and action transport, including the transfer of the retrieval team. Strategic transport issues are discussed at regular RSQ meetings and at local tertiary centre audit forums. There are currently plans for the RBWH to coordinate all neonatal retrievals/transfers in central and southern areas of Queensland, with TTH maintaining coordination for the north of the state. However, whilst emergency retrievals occur relatively expeditiously, further improvements in the area of non-urgent transfer including step-downs or 'back transfer' from metropolitan to regional services would aid efficient use of cots and overall capacity management.

Further work is required to formalise and standardise statewide demand management standing operating procedures for NICU/SCN cots, including escalation procedures, which currently rely upon informal communications when clinical activity and acuity is particularly high.

3.3 Recommendation 3: Perinatal Services Clinical Information System

A Perinatal Services Clinical Information System (PSCIS) should be developed to provide accurate data. A concept brief/business proposal should be developed by Information Division and the SMNCN.

At present, incidence data relies upon the Perinatal Data Collection and activity data upon the Queensland Health Admitted Patient Data Collection (QHAPDC), with no standard system for recording and evaluating more in depth clinical and quality based information.

In 2009, a Perinatal Clinical Information System Advisory Group (PCISAG) was formed. Their purpose was to progress a single, integrated, standardised, statewide electronic clinical information system that enables clinicians to have access to critical patient information when decisions need to be made; that improves workflow and helps drive informed, collaborative care across the perinatal continuum. In the absence of an appropriate and adequate readily available commercial off-the-shelf product, a PCISAG Feasibility Report in October 2011 recommended the evaluation of 'PowerChart Maternity' via the eHealth project.

PowerChart Maternity (PCM) is the Cerner clinical information solution specifically developed for the care of pregnant women, birth and immediately after birth, including the care of newborn babies. Patients include those who may require intensive care and support at birth. The PCM module was demonstrated to a number of key perinatal stakeholders in August 2011 and in January 2012, the co-lead of the PCISAG was informed by Integrated Electronic Medical Record executive (ieMR), that Cerner were agreeable to bringing PowerChart Maternity product out to Australia. The PCISAG have been tasked with evaluating the product to ensure that PCM is fit-for-purpose for Queensland Health Maternity and Neonatal services. It is anticipated that evaluation will commence in April 2012.

3.4 Recommendation 4: Queensland Children's Hospital NICU

Issues around QCH NICU be urgently addressed, including activity levels, staffing, networks, cots required, determined by a working party made up of Area, QCH, PCB, SMNCN and clinicians.

Following widespread concern regarding the impact upon wider maternity and paediatric services, the decision was made and approved by the Minister for Health in 2009 to remove the NICU service from the Queensland Children's Hospital build. Alternative plans were made at that time to open a service at the

new Gold Coast University Hospital (GCUH) with 12 neonatal cots to alleviate the workload of current neonatal services and provide a more local service to the growing populations south of Brisbane and Northern New South Wales.

3.5 Recommendation 5: Clinical Services Capability Framework (CSCF)

Review and redevelopment of the CSCF Neonatal module and admission criteria be developed for SCN/NICU.

Since the publication of the Report and Evaluation in 2006, the Clinical Service Capability Framework (CSCF) has been reviewed and republished in its entirety. The resultant CSCF version 3.0 was published in 2010, including a redeveloped neonatal services module (Queensland Health 2010) with an improved outline of service requirements relating to clinical service configuration. There are currently ongoing discussions to refine the service requirements following additional feedback from clinicians, in particular the requirement for children's anaesthetic services for level 5 services. The module is currently under review by the Access Improvement Service, Centre for Healthcare Improvement, Queensland Health, in association with the SMNCN.

3.6 Recommendation 6: Standardised care criteria

Criteria for management of neonates requiring complex care and CPAP be developed by the SMNCN

A number of statewide neonatal guidelines have been developed and released by the Queensland Maternity and Neonatal Clinical Guidelines Program. These include:

Guideline and Supplement	Review Date
Breastfeeding initiation (PDF)	Oct 2015
Supplement: Breastfeeding initiation (PDF)	
Examination of the newborn (PDF)	July 2014
Hypoglycaemia - neonatal (PDF)	Feb 2012
Hypoxic-ischaemic encephalopathy (PDF) *(updated Oct 2011)*	May 2015
Jaundice - neonatal (PDF) *(under review)*	Nov 2012
Neonatal abstinence syndrome (PDF) *(updated Dec 2011)*	Aug 2015
Supplement: Neonatal abstinence syndrome (PDF)	
Respiratory distress and the administration of CPAP (PDF)	July 2014
Resuscitation - neonatal (PDF) *(new)*	Oct 2016
Supplement: Resuscitation - neonatal (PDF)	
Seizures - neonatal (PDF) *(new)*	Oct 2016
Supplement: Seizures - neonatal (PDF)	
Stabilisation for retrieval - neonatal (PDF) *(new)*	Oct 2016
Supplement: Stabilisation for retrieval - neonatal (PDF)	
Term small for gestational age baby (PDF)	Dec 2015
Supplement: Term small for gestational age baby (PDF)	

Neonatal guidelines are available at www.clinicalguidelines.gov.au

3.7 Recommendation 7: Access to maternal and neonatal transport

Issues surrounding maternity and neonatal transport be addressed by the Office of the CHO, including:

- *improving access to community-based transport*
- *routine back transfers to regional SCNs*
- *additional financial assistance for travel and accommodation*
- *funding for dedicated emergency retrieval teams for in utero, post birth and high risk maternal transfers*

Improvements have occurred in maternal and neonatal retrieval since the report as outlined in recommendation two. However, it has been recognised that further improvements are required to enable more expeditious non-urgent transport for step down or 'back transfers' from metropolitan centres to regional services, and for neonatal transfers to tertiary centres for provision of care not available locally (e.g. developmental or ophthalmology review). In particular, tertiary screening for retinopathy of prematurity results in many neonates remaining in high level facilities for longer than otherwise clinically indicated due to difficulties accessing return transport to regional centres. A study looking at the potential of mobile retinal screening is already underway in South East Queensland and work to improve transport is being considered via the Queensland Neonatal Services Advisory Group.

3.8 Recommendation 8: Workforce planning

Workforce taskforce be urgently formed to address neonatal workforce issues including developing a sustainable neonatal workforce plan.

Improvements have been realised with respect to standardised training particularly for nursing staff. However, further work is required in the area of statewide workforce planning across all disciplines. Sustainability, particularly of appropriately trained and qualified personnel in regional areas, is an ongoing issue. This contributes to the occasional inability of regional centres to accept 'back transfers' from higher CSCF level services, therefore limiting capacity in level 6 neonatal services.

3.9 Recommendation 9: Neonatal Nurse Practitioners

Develop new positions for Neonatal Nurse Practitioners.

Townsville and Mackay Health Service Districts have been successful in developing a total of five Neonatal Nurse Practitioner (NNP) positions via redistribution of salary funding and successful sponsorship applications to the Office of the Chief Nursing Officer. A fifth nurse is training towards NNP at Townsville and a second is already trained at Mackay but not yet funded into a position. The RBWH and Mater Health Service have indicated strong interest in developing such a service should funding options be identified. Evaluation of the current NNP role, outcomes and options for further development of positions may be warranted.

3.10 Recommendation 10: Neonatal nurse education

Support all new NICU/SCN nursing staff to complete the Transition to Practice Nurse Education Program (TPNEP) in neonatal care.

All new nursing staff in Queensland Health neonatal services complete the TPNEP, now known as the Transition Support Program, with education costs absorbed within operational budgets. The program is a practice based skills improvement program, readily accessible and based in the workplace to enable embedded learning using a combination of standardised workshops and mentored clinical practice. Competency assessments and assignments must be completed to fulfil program requirements. The program has been evaluated to ensure it meets tertiary academic standards with completion of the program equating to two subjects of a graduate certificate in neonatal care. Data relating to the programme is held in the TPNEP Information System, held by the Nursing and Midwifery Office, Queensland Health. Since January 2009, 131 nurses have completed the foundations programme, with 139 ongoing. Of those that have already completed, 80 per cent have undertaken either the 'complex needs in regional areas' module, or the NICU 'Intensive Care' component of the program, which requires experience and facilitated learning within a CSCF level 6 environment. Although provision of this final

component of the education program is limited by the capacity of CSCF level 6 services to provide it for regional centres in addition to training at their own sites, good training rates have been realised. The Mater Health Service uses an alternative but equivalent education model.

3.11 Recommendation 11: Workforce review

Review the number of medical, nursing and allied health positions for NICUs and SCNs.

Improvements with respect to training have been achieved; however a workforce review across all Queensland neonatal services has not yet been undertaken. A review and projection of future requirements remains necessary, especially with respect to nursing and allied health service positions, including funded positions, vacancy factors and training/specialist positions and has been identified as part of an action plan following this status report.

3.12 Recommendation 12: Casemix cost per cot

Review the annual casemix cost of a cot to ensure adequate funding for medical, nursing and allied health positions.

Given the imminent introduction of activity based funding with payments based on weighted DRG's and bed days set by the National Pricing Authority, this is unlikely to be a necessary activity at this stage. It may be appropriate for the QNSAG to ensure they provide feedback on any pricing frameworks as they are released and to be fully briefed on the impact of ABF on the clinical area. The dedicated Activity Based Funding Team, Finance, Procurement and Legal Division, are currently involved with developing and disseminating such frameworks.

3.13 Recommendation 13: Increase NICU and SCN capacity

NICU and SCN cot numbers are increased to meet current and future demand with the priority being SCN cots in the next four years.

In addition to the increase in NICU cot numbers immediately following the 2006 Neonatal Services Report, a new service of two NICU cots has now opened at the Gold Coast Hospital, with further capacity under construction as part of the Gold Coast University Hospital new build. SCN cot numbers have grown by 21 by opening built capacity in a number of facilities. An updated review of activity growth, capacity levels and projected service demand translated into cot numbers is warranted and will be undertaken as part of the service planning benchmark review. A workforce review to examine whether staffing levels and skill mix has increased commensurate with increasing cot numbers may also be desirable.

3.14 Recommendation 14: NICU provision benchmark

A target of 1.2 NICU cots per 1000 births at 70 per cent occupancy rates (built capacity increases) be realised over the next 10 years.

A review of this service planning benchmark endorsed by Queensland Health's Integrated Policy and Planning Executive has recently commenced under Queensland Health Planning Branch's service planning benchmarks team. An evaluation of the status with respect to this benchmark is planned as part of this review. Minimum and maximum numbers of cots per unit will also be considered.

3.15 Recommendation 15: Townsville and Gold Coast NICU provision

TTH unit open with 20 NICU cots (built capacity - 25); GCUH open with built capacity for minimum 15 NICU cots (with the potential to expand) regardless of how many cots are commissioned initially.

Townsville has an operating NICU of 12 cots and Gold Coast Hospital currently has 2 NICU cots operational with plans to open further cots at the beginning of 2013. Current reviews of activity and service planning benchmark will support planning for future capacity requirements. Building work is ongoing at these sites and built capacity will be confirmed as part of the benchmark review process.

3.16 Recommendation 16: Address currently unfunded active SCN cots

Unfunded SCN cots already in use at RBWH, Toowoomba, Cairns, Townsville, Mackay and Rockhampton be funded.

Current bed counts indicate that SCN capacity has grown to utilise built capacity at a number of facilities, including Bundaberg, Ipswich, RBWH, Toowoomba and Townsville resulting in an additional 21 SCN cots compared with 2008. Evaluation of current special care nursery capacity levels (built and operational) at all facilities is planned as part of the service planning benchmark review process. The benchmark review will also convert projected demand for services into cot numbers to evaluate likely requirements.

3.17 Recommendation 17: Increase (with minor works) SCN capacity

Funding be provided for additional SCN cots including necessary minor capital works at Ipswich, Redlands, Bundaberg, Cairns and Hervey Bay

Additional cots are now operational at Ipswich, Bundaberg and Hervey Bay according to the Queensland Health Monthly Activity Collection (MAC) 'available beds' count. Evaluation of requirements at Redlands and Cairns will be undertaken as part of the service planning benchmark review process.

3.18 Recommendation 18: Master Planning for SCNs

Where units are at built capacity (e.g. Caboolture), service and master planning be supported to expand SCN

District master planning undertaken jointly between selected Health Service Districts and Planning Branch has included activity analyses and planning activities for NICU and SCN cots. The review of the service planning benchmark for NICU and SCN will further support future standardised planning activities at the Network level. An evaluation of built and operational capacity across the state is currently being planned by the Queensland Neonatal Advisory Group and as part of the service planning benchmark review process which will further aid strategic planning.

3.19 Recommendation 19: SCNs and new maternity units

Where capital works are planned for new maternity units including SCNs e.g. Rockhampton/Bundaberg, the opening of cots be supported.

The Activity Based Funding (ABF) purchasing framework allocates funding based on agreed activity targets. The establishment of 2012-13 activity targets for Local Health and Hospital Networks has been informed by detailed activity assessments including flow analysis where appropriate, as well as consideration of the availability of built capacity to deliver services. The need for Neonatal Intensive Care and Special Care Nursery services has been assessed using the endorsed Queensland Health service planning benchmarks. In making decisions regarding the portion of health service need that could be expected to be delivered by individual facilities, consideration was given to those facilities which were expected to have additional built capacity available in 2012-13. Future capital works plans will need to be built into future purchasing discussions in a similar way.

3.20 Recommendation 20: Queensland Children's Hospital NICU

Issues around the proposed 20 cot surgical NICU at QCH be urgently considered and addressed, including activity levels, staffing, impact on statewide neonatal service, cots required, determined by a working party made up of Area, QCH, PCB, SMNCN and clinicians. Decisions by EMT on endorsement of these cot numbers should be informed by these planning discussions.

Following widespread concern regarding the impact upon wider maternity and paediatric services, the decision was made and approved by the Minister for Health in 2009 to remove the NICU service from the Queensland Children's Hospital build. Alternative options for service provision in the South East Queensland region were agreed, namely the development of a neonatal unit at the new build Gold Coast University Hospital.

4. Additional issues

In addition to assisting in development of the status report on the recommendations, clinicians raised two further important areas for ongoing review and service improvement including:

- a statewide approach to cot management and real time occupancy, with development of uniform measures to address capacity issues and maximise cot availability.
- provision of screening services for retinopathy of prematurity (ROP), as the current process poses multi-faceted challenges which frequently impact negatively upon cot occupancy and capacity, particularly at higher level centres.

5. Action Plan

As a result of this status report, a number of action areas have been identified.

1. **NICU/SCN cot capacity and service planning**
   a. Review current statewide cot numbers (built, operational, planned)
   b. Review current NICU cot number benchmark
   c. Review SCN cot number benchmark
   d. Develop projections for future statewide requirements including District breakdowns where appropriate

   Responsible Officer: Planning Branch representative in association with the QNSAG.

2. **Workforce planning**
   a. Identify personnel/departments to assist with workforce planning issues
   b. Develop clear action plan for reviewing and developing NICU and SCN multidisciplinary workforce across the state
   c. Consider training and development issues that affect the provision of a sustainable workforce
   d. Evaluate provision of the TPNEP education program, particularly with respect to any difficulties in regional centres accessing the program

   Responsible Officer: Temporary Project Officer in association with the QNSAG.

3. **Transport issues**
   a. Identify relevant personnel and departments with respect to transport services and planning
   b. Develop action plan for review (and improvement) of transport services, particularly for non-urgent neonatal transport

   Responsible Officer: Temporary Project Officer in association with the QNSAG.

4. **Cot management and Information Technology**
   a. Identify relevant personnel and departments with respect to cot management and IT services and planning
   b. Develop action plan for review (and improvement) of cot management
   c. Ensure ongoing involvement with review and evaluation of any proposed e-health initiatives (e.g. Powerchart Maternity)

   Responsible Officer: Temporary Project Officer in association with the QNSAG.

5. **ROP screening**
   a. Review current service models with respect to ROP screening across the state
   b. Evaluate experiences and results from the Mater/Logan/Ipswich portable RetCam study as they become available
   c. Following service review, action plan to be developed by the QNSAG.

   Responsible Officer: To be arranged by QNSAG.

6. References

Queensland Health (2006) *Report of the Statewide Neonatal Intensive Care Services (NICS) Project*. Brisbane, Queensland Government.

Queensland Health (2008*) Evaluation of the Report of the Statewide Neonatal Intensive Care Services Project – Summary Report to Minister*. Brisbane, Queensland Government.

Queensland Health (2011) *Clinical Services Capability Framework for Public and Licensed Private Health Facilities v3.0*. Brisbane, Queensland Government.

Appendix I – Advisory Group Members

Dr David Cartwright, Co-Chair, Director of Neonatology, RBWH

Dr David Knight, Co-Chair, Director of Neonatology, Mater Mothers' Hospital, Mater Health Service, Brisbane

Ms Amanda Carver, Principal Planning Officer, Planning Branch, Health Planning and Infrastructure Division

Ms Eileen Cooke, Consumer representative, PIPA

Dr Jan Cullen, Director of Paediatrics, Logan Hospital

Ms Margot van Drimmelen, Nurse Unit Manager, SCN/NICU, Gold Coast Hospital

Ms Jen Egan, A/Director Statewide Planning Unit, Planning Branch, Health Planning and Infrastructure Division

Ms Lynne Elliott, Director, Neonatal and Maternal Fetal Medicine Service, Mater Health Service, Brisbane

Ms Anndrea Flint, Clinical Nurse Consultant, SCN, RBWH

Ms Virginia Hancl, Nursing Director, Metro North HSD, Project Officer for QNSAG

Ms Karen Hose, Clinical Nurse Consultant, ICN, RBWH

Dr Guan Koh, Director of Neonatology, Women's and Children' Health Institute, The Townsville Hospital

Dr David McCrossin, District Clinical Leader – Medical, Office of the DCEO, Children's Health Services

Ms Katrina Roberts, A/Nursing Director, Women's and Children' Health Institute, The Townsville Hospital

Dr Peter Schmidt, Senior Staff Specialist Paediatrics/Neonatology, Gold Coast Hospital

Dr Eva Stuwe, Paediatric Consultant, Rockhampton Hospital

Ms Jacqui Thomson, Clinical Networks Team, PSQ

Dr Alison Tigg, Paediatrician, Cairns Base Hospital

Dr Judy Williams, Clinical Director of Paediatrics, Bundaberg Hospital

Office of the District CEO
Metro North Health Service District

Enquiries to: Virginia Hancl
Telephone 07 33289091
Facsimile:
Our Ref:
Your Ref:

Dr Adrian Nowitzke
Chief Executive Officer
Executive Offices,
8 Little High Street,
Southport, QLD 4215

Dear Dr Nowitzke,

We write as co-chairs of the Queensland Neonatology Services Advisory Group to express to you concerns from this group about the availability of neonatal intensive care (NICU) and special care nursery (SCN) cots within the south east corner of Queensland and the current pressure experienced by existing tertiary neonatal intensive care units on a day to day basis. QNSAG is reviewing the need for NICU and SCN cots in Queensland and will be reporting later in the year. We anticipate that the current number of cots will be deemed insufficient for the reasons set out below.

Following the recent release of information advising that the new Royal Children's Hospital would not provide extra NICU and SCN cots it was hoped that the new Gold Coast University Hospital (GCUH) would open with twelve (12) of the NICU cots within the built capacity, thereby relieving some of the excessive workload currently directed to both the Mater Mothers' Hospital and the Royal Brisbane and Women's Hospital (RBWH) which sees a situation of these facilities delivering services over their funded capacity.

Currently the Mater Mothers' Hospital has 25 private/public NICU cots, the RBWH has 30 and the Townsville Hospital has 12 which have not increased the number of available cots from 67 since 2006 despite significant increases in demand for these services.

The *Evaluation of the Report on State-wide Neonatal Intensive Care Services Project (2006), Summary Report to the Minister* identified that in the period 2006 to 2016 births would increase by 21.5% with a projected increase in cross-border flows from NSW adding a projected 2750 births per year to the catchment flows[1]. Aboriginal and Torres Strait Islander births represent 5.6% of all projected births with an almost double the rate of pre-term births compared to other Australians. The

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Level 3 15 Butterfield Street HERSTON QLD 4029	Dr David Cartwright Director of Neonatology, RBWH C/- PO Box 150 RBWH Post Office HERSTON QLD 4029	07 3328 9091 ISD + 61 7 3328 9921	07 3328 9988

Queensland birth numbers for 2009 were provisionally 62,051 and the available 67 NICU falls short today of the 93 NICU required at 1.5 NICU cots for every 1000 live births at 80% occupancy.

It is anticipated that the GCUH will be part of the network of NICUs within south-east Queensland with the RBWH and the Mater Mothers Hospital (MMH) and as such will be a primary NICU for babies from the Gold Coast region including Tweed Heads, Murwillumbah, Lismore, Grafton and other northern NSW centres. It is expected that there will be approximately 3,500 births per year at the GCUH, 7,000 in the Gold Coast Health Service District serviced by GCUH, and another 3-4,000 in northern NSW, requiring at least 12 neonatal intensive care beds at 1.5 cots/1,000 births. The metropolitan NICUs are often at or above capacity at present and expect that the GCUH's 12 NCU beds will be available when the hospital opens. It is also anticipated that GCUH may at times need to take in-utero transfers and babies from other areas, principally Ipswich and Logan, at times of stress on the Brisbane NICUs.

It is the opinion of the clinicians who form the Queensland Neonatal Services Advisory Group that it is becoming difficult, if not impossible for services to accept or manage the risks posed by continuing to manage increasing demands in peak periods which see existing NICU and SCN services operate above the capacity of these services. The better option is to improve access to safe and sustainable health services in the location the patient is resident; in this case the delivery of pre-term babies requiring NICU or SCN services within the Gold Coast catchment area.

We would appreciate your views on this topic and how best the tertiary facilities can work together to collaboratively manage the increasing demand for these critical NICU services.

Yours sincerely

Dr David Cartwright
Director, Neonatology Services
Royal Brisbane & Women's Hospital
05/04/2012

Dr David Knight
Director, Neonatology Services
Mater Mothers' Hospital
05/04/2012

[1] *Evaluation of the Report on Statewide Neonatal Intensive Care Services Project (2006) Summary Report to the Minister*, page 7-8

Queensland Government

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Dr David Cartwright
Director Neonatology Services
Royal Brisbane & Women's Hospital
PO Box 150
RBWH Post Office
HERSTON QLD 4029

Mr David Knight
Director Neonatology Services
Mater Mothers' Hospital
Raymond Terrace,
South Brisbane QLD 4101

Dear Dr Cartwright and Dr Knight,

Thank you very much for your correspondence of 5 April 2012 to Dr Adrian Nowitzke. Please accept our sincerest apologies for the length of time taken to respond your letter but I believe it was better to have certainty around NICU funding before responding to you.

We appreciate your advocacy for neonatal intensive care services here on the Gold Coast. We also appreciate the support that has been given to the development and expansion of those services.

The Service Agreement for 2012/13 financial year agrees activity for two neonatal intensive care cots for the full financial year, plus an additional six cots (total eight) for the last two months of the financial year. The additional two cots are intended to be brought on line to coincide with the move to Gold Coast University Hospital (GCUH). The eight cots will operate from as soon as is practicable after the physical move to GCUH is completed. An exact date for the move has not been decided as yet. Preparations and recruitment plans to enable this are well progressed.

Funding for the financial years 2013/14 and beyond will be the subject of discussions to be held with the System Manager in September and October of 2012. After those discussions are completed I will be able to give you further information about future funded growth for the NICU.

I wish you all the very best for the continuation of the Queensland Neonatology Services Advisory Group.

Yours sincerely,

Ms Naomi Dwyer
A/Chief Executive Officer
Gold Coast Health Service District
16/8/12

CC *Mike Allsopp, Executive Director, Strategic Development*
Karlyn Chettleburgh, A/Chief Operations Officer
Lance Le Ray, Executive Director, Family, Women's and Children

Queensland Government

Patient Safety and Quality Improvement Service

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - Outcomes from QNSAG Meeting 2 February 2012.

Attendees: Dr David Knight (DK), Dr David Cartwright (DC), Karen Hose (KH), Dr Guan Koh (GK), Katrina Roberts, Dr Peter Schmidt (PS), Margot van Drimmelen (MVD), Amanda Carver (AC), Dr Eva Stuwe (ES), Dr Judy Williams (JW), Dr Jan Cullen (JC), Eileen Cooke (EC), Virginia Hancl (VH), Jacqui Thomson (JT).

Apologies: Jen Egan (JE), Lynne Elliott (LE).

In progress - bring up at later meeting			In progress - for review next meeting	Outcome for noting this meeting	Closed		Decision Only	
(TC) = Teleconference			Standing Agenda Item					
Meeting Date	Agenda Item	**Agenda Topic**	**Discussion / Decision**	**Action Required**	**By Whom**	**By When**	**Progress/Status**	**Date Closed**
2/2/12	1.1	Confirmation of Action Register		Action register endorsed and accepted.	DC	Feb 2012		
2/2/12	1.2	Feedback on status report	All members in receipt of draft status report. Feedback incorporated into the document. Action areas identified. Draft Action plan in development. Members review and feedback encouraged. Forward comments to AC. Current content under each recommendation discussed. Additional comments for inclusion provided during the course of the meeting.	All members to review draft action areas captured in the draft status report and forward suggestions to AC.	All members	Mid Feb 2012		

2/2/12	1.2 cont…	Feedback on status report cont…	AC has cot capacity and service planning component in hand. VH to engage colleagues in workforce planning to better inform actions. VH and KH to further develop transport actions. Cot management and information technology component to be led by VH. ROP screening component of the action plan to be developed by members. Mater and Logan ROP project results will also inform this part of the action plan. VH and LE to lead. Actions identified will need to be done in discussion with Ophthalmologists and Neonatologists.	VH to organise meeting with AC, KH, KR and LE to progress.	AC/LE/KH/ KR&VH			

2/2/12	1.3	Update on current CSCF for neonatal services across Queensland Health.	Self assessment against the CSCF v 3.0 by Districts tabled.					
2/2/12	1.4	Development of template to go out to all NICU's and SCU's to capture cot capacity, occupancy and workforce etc.	AC has cot capacity and service planning questions in hand. VH to engage colleagues in workforce planning to assist in the development of questions. VH and KH to develop transport questions. Cot management and information technology component to be led by VH. ROP screening component of the action plan to be informed by members. Suggest need to know current/future ROP service models. To be included in questionnaire.	VH,AC, KH, KR and LE to progress.	AC/LE/KH/ KR&VH	March 2012		
2/2/12	2.1	Gold Coast University Hospital commissioned cots.	Unsure if GCUH will have 16 NICU cots and 28 SCN cots commissioned for use by 2014.	Letter to be written to Gold Coast DCEO, Adrian Nowitzke seeking clarification on number of cots that the GCUH will open with and the final operative NICU/SCU cots for the GCUH. Contents of letter may also include: impact of not opening with full complement of cots or other neonatal services; 2006 NICS report recommendations; QNSAG re-established and their purpose and the potential for increased safety issues when functioning under a certain level of clinical activity. PIPA to write letter to Gold Coast DCEO, Adrian Nowitzke to advocate that parents receive neonatal intensive care/special care within or close to their community.	VH/DC/DK - to be cleared by Chair, SMNCN. EC	March 2012		
2/2/12	4.1	Next meeting	2nd Thursday of March 2012, (8 March 2012, 1300 - 1430 hrs).	Resources to be secured. Electronic appointment to be created and forwarded to members.	JT	Feb 2012		

Queensland Government

Patient Safety and Quality Improvement Service

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - Outcomes from QNSAG Meeting 8 March 2012.

Attendees: Dr David Knight (DK), Karen Hose (KH), Dr Guan Koh (GK), Anndrea Flint (AF), Katrina Roberts, Dr Peter Schmidt (PS), Jen Egan (JE), Amanda Carver (AC), Eileen Cooke (EC) and Jacqui Thomson (JT).

Apologies: Dr David Cartwright (DC), Virginia Hancl (VH), Lynne Elliott (LE), Dr Jan Cullen (JC), Catherine Van den Berg (CVB), Dr Judy Williams (JW), Dr Alison Tigg (AT), Dr Eva Stuwe (ES).

In progress - bring up at later meeting	In progress - for review next meeting	Outcome for noting this meeting	Closed	Decision Only
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Meeting Date	Agenda Item	Agenda Topic	Discussion /Decision	Action Required	By Whom	By When	Progress / Status	Date Closed
8/3/2012	1.1	Confirmation of Action Register.		Action register endorsed and accepted.	KH	Mar 2012		
8/3/2012	1.2	Completion of action plan captured in the draft status report.	Members invited to comment on the draft status report. KH requested that further discussion be undertaken around content in recommendation 2 to gain a better of understanding of what this means in an actual sense. DK shared that it is hoped that in the future retrieval services for the north east corner of the State will be centralised at the RBWH. Important that this service is retained by the clinical services and not corporate office. Action Plan 1. 2. Workforce planning. To be completed as part of the survey. VH following up with experts in the field at the corporate level to seek their assistance. QMAN content may reduce/prevent duplication of effort. 3. VH following up. Meeting scheduled for 13 March 2012. DK would like urgent acute retrievals strengthened in the document. KH will forward a sentence or two for inclusion in the action plan. 4. As previously discussed 5. MHS has commenced their mobile screening at Logan and Ipswich. Funded by SAHS.	KH will work with AC to ensure that the wording in the status report clearly articulates governance and accountability for the coordination of retrievals/transfers and daily demand management of NICU/SCU cots.				
8/3/2012	1.2	Completion of action plan captured in the draft status report.	EC suggested that the final document be sent to members out of session for their endorsement. Supported. Status report and action plan to be attached to a brief to the DG to raise awareness and what has been achieved to date and planning for moving forward. Correspondence to Dr Adrian Nowitzke re clarification on GCUH cots and the number that the service will open with currently in draft. Thought that it will be 8 NICU @70% and 20 SCU cots in April. PS pushing for 16 NICU and 28 SCU cots in February 2014. Operationally, nursing recruitment identified as an issue. EC shared that PIPA are in the process of progressing correspondence highlighting their concerns if the GCUH don't open with the required number of cots.	Final status report and action plan to be endorsed by members out of session. One week turnaround for response. Brief to be progressed to DG at the request of the Chair of the SMNCN	All members JT/JE	end March 2012 end March 2012		

8/3/2012	1.3	Template to capture cot capacity, occupancy and workforce.	VH, KH and AC met two weeks ago to discuss content to be included in the template. AC shared that supplementary data not currently captured in the QMAN survey for consideration in the template includes: built capacity, funded capacity, models of care etc. Need to consider format of template. Issues identified with survey monkey. Timelines need to be determined. Risk that not having this information in a timely fashion will impact on work being completed by AC. AC will be analysing all of the data. Perinatal data currently 18 months behind. HSC unable to provide timeframes for when 2011 data will be available. Projections for births will be based on 2009 data and five years prior to this. Request in for detailed patient admitted data - this will provide neonatal admitted activity for both private and public services. Expect to be in receipt of this within 2 - 3 weeks.	Formal project plan to be developed that prioritises actions inclusive of timeframes.	VH	April 2012		
8/3/2012	3.1	Next meeting agenda items.	Topics to be captured in April 2012 agenda: * Progress of Project Plan - VH * Progress of data - AC * Progress of draft template - VH	Agenda to be developed and sent to members.	VH	April 2012		

Queensland Government

Patient Safety and Quality Improvement Service

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - Outcomes from QNSAG Meeting 12 April 2012

Attendees: Dr David Cartwright (DC), Karen Hose (KH), Dr Guan Koh (GK), Dr Peter Schmidt (PS), Dr Jan Cullen (JC), Jen Egan (JE), Amanda Carver (AC) and Jacqui Thomson (JT).

Apologies: Eileen Cooke (EC), Virginia Hancl (VH), Anndrea Flint (AF), Lynne Elliott (LE), Dr Eva Stuwe (ES).

In progress - bring up at later meeting	In progress - for review next meeting	Outcome for noting this meeting	Closed	Decision Only
(TC) = Teleconference	Standing Agenda Item			

Meeting Date	Agenda Item	Agenda Topic	Discussion /Decision	Action Required	By Whom	By When	Progress / Status (Date Closed)
12/4/2012	1.1	Confirmation of action register.		Action register endorsed and accepted.		April 2012	
12/4/2012	1.2	Completion of action plan captured in the draft status report.	Amanda finishing of the status report. Hopes to have it completed shortly. Additional information to be included as per advice received from the Director of Planning. Action plan completed. Virginia will flesh it out as part of the project plan.	Brief for noting to be progressed to DG at the request of the Chair of the SMNCN with the status report attached. Information re services currently experiencing issues with built capacity, occupancy staffing etc to be included.	JT/JE	April 2012	

12/4/2012	1.3	Progress on data.	GK enquiring after benchmark re ratio of cots to births and occupancy. AC shared that this is a major body of work that she is currently progressing. Benchmarks reviewed every three years. Information will be compiled in to a large discussion paper (inclusive of SCN and ICN information) that will be widely distributed amongst stakeholders with a 4 - 6 week turnaround time for feedback. AC expects that this will be available in a months time. A recommendation paper will then be created in consultation with key stakeholders and tabled at IPEC.	Discussion paper progressing.	AC	May 2012	

12/4/2012	1.4	Progress on template to capture cot capacity, occupancy and workforce.	QMAN database reviewed. Much of the information required is captured in this tool. Survey to be developed will capture additional information not currently available in the QMAN e.g. occupancy, built capacity, staffed capacity etc. Virginia is following up with workforce planning and development re workforce information required for the survey.	QMAN survey to be sent to QNSAG members for their information only. Not for response.	JT to distribute to members.	April 2012	
12/4/2012	1.5	Progress on project plan.	Current format challenging to follow.	Project plan template and example to be sent to Virginia. JT to assist in compiling.	JE	April 2012	
12/4/2012	1.6	Progress on correspondence to DCEO, Gold Coast Health Service District.	Item not captured in agenda. Letter progressing. Expect to forward in the coming week. Additional supporting data to be incorporated including birthing numbers from families who ordinarily reside in Northern NSW. KH suggested RSQ may be able to provide in utero transfer data. AC in receipt of Queensland Health admitted patient data collection for all NICU and SCN activity for the past five years. This will provide information re flows inclusive of interstate in to Queensland Health services. Progress on the correspondence from PIPA to the DCEO, Gold Coast Health Service District to be followed up at the next meeting.	PS to review correspondence and provide feedback prior to progression.	PS	April 2012	
12/4/2012		Next meeting agenda items.	Topics to be captured in May 2012 agenda: * Progress on project plan - VH * Endorse status report - all members * Progress of data - AC * Progress of draft survey questionnaire VH * Meetings and resources to be booked for the remainder of the calendar year and electronic appointments sent to members - JT.	Agenda to be developed and sent to members.	VH	May 2012	
12/4/2012	3.1	SMNCN Forum	Forum Presentation.	VH to assist DK with forum presentation.	VH/DK	early May 2012	

Queensland Government

Patient Safety and Quality Improvement Service

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - Outcomes from QNSAG Meeting 10 May 2012

Attendees: Dr David Cartwright (DC), Karen Hose (KH), Dr David Knight (DK), Anndrea Flint (AF), Dr Peter Schmidt (PS), Margot Van Drimmelen (MVD), Eileen Cooke (EC), Jen Egan (JE), Virginia Hancl (VH), and Jacqui Thomson (JT).

Apologies: Dr Guan Koh (GK), Lynne Elliott (LE), Dr Judy Williams (JW), and Amanda Carver (AC).

In progress - bring up at later meeting			In progress - for review next meeting	Outcome for noting this meeting	Closed		Decision Only
(TC) = Teleconference			Standing Agenda Item				

Meeting Date	Agenda Item	Agenda Topic	Discussion /Decision	Action Required	By Whom	By When	Progress / Status (Date Closed)
10/5/2012	1.1	Confirmation of action register		Action register from 12 April 2012 meeting endorsed and accepted.	KH	May 2012	
10/5/2012	1.2	Endorsement of status report	Changes from previous draft discussed. Amendments to the report considered balanced and more positively framed.	Members to review document and forward comments to AC by 24 May 2012. Document will then be finalised.	All members	24 May 2012	
10/5/2012	1.3	Progress on data	AC has conducted a literature search and is currently analysing data that will inform the discussion paper around the benchmark review.	Draft discussion paper will be ready for the first round of consultation in a couple of weeks.	AC	early June 2012	

10/5/2012	1.4	Progress on draft survey questionnaire	Draft survey progressing. Questions not currently captured in QMAN identified. There is a meeting scheduled early next week to further discuss.	JT to forward the survey topic areas document to members for their review. Comments to be sent to VH.	All members	Mid May 2012	
10/5/2012	1.5	Progress on Project plan	Progressing. Awaiting bench marking information for inclusion.	VH hopes to have the document finalised and sent out prior to the next scheduled meeting.	VH	early June 2012	
10/5/2012	1.6	Correspondence to DCEO, GCH	Letter sent to DCEO, GCH. No response received to date. DC to forward copy of letter to JT for placement on electronic file.	Follow up if no response received by end May 2012. DC to forward copy of letter to JT for filing.	VH DC	May 2012	
10/5/2012	2.2	Clinical Services Capability Framework (version 3.0) neonatal module	Members received amended framework and module issues log with comments received to date. Each comment individually explored.	Changes as discussed to be included in the neonatal module issues log. Members agreeable to checking the log to ensure accuracy of comments prior to progression of the document to AIS.	JT	May 2012	
10/5/2012	4.1	Agenda items for 14 June 2012 meeting	Data, survey questionnaire and project plan.	Agenda to be developed. JT will assist in the distribution to members.	VH	early June 2012	

Queensland Government

Patient Safety and Quality Improvement Service

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - Outcomes from QNSAG Meeting 2012

Attendees: David Cartwright (DC), David Knight (DK), Anndrea Flint (AF), Karen Hose (KH), Virgina Hancl (VH), Eileen Cooke (EC).

Teleconference: Katrina Roberts (KR), Amanda Carver (AC), Jan Cullen (JC), Peter Schmidt (PS).

Apologies: Judy Williams (JW), Jacqui Thomson (JT), Lynne Elliot (LE).

In progress - bring up at later meeting	In progress - for review next meeting	Outcome for noting this meeting	Closed	Decision Only
(TC) = Teleconference	Standing Agenda Item			

Meeting Date	Agenda Item	Agenda Topic	Discussion /Decision	Action Required	By Whom	By When	Progress / Status (Date Closed)
14/6/2012	1.1	Confirmation of action register		Action register from 12 April 2012 meeting endorsed and accepted.		14/06/12	
14/6/2012	1.2	Endorsement of status report	Now a final copy of the report, minor grammar and wording changes only required. Agreement to table at next Statewide Maternity Clinical Network meeting scheduled for last week in June, then for tabling with IPEC and DG for noting.	Addition to Clinical Network agenda	AC	30/06/2012	
14/6/2012	1.3	Progress on benchmark data	AC has completed a discussion paper on cots and occupancy that she will distribute for consultation. 3x methods proposed in paper for projecting acuity and occupancy at 80%	Distribution of discussion paper to QNSAG members	AC	12/07/2012	

14/6/2012	1.4	Progress on workforce survey	Discussion around funded and operational cot definitions. Survey now ready to run; proposal is to survey all level 4 and above nurseries by utilising a process of (1) mail out of survey with covering letter, (2) utiliseAN contact list, (3) telephone contact with identified person, (4) telephone contact by surveyor to gather data, (5) surveyor will input responses	Distribution of survey to contacts identified in QMAN. Run survey during week 1 and 2 of July, with early feedback for July meeting.	VH	12/07/2012	
14/6/2012	1.5	Project Plan	Distributed to members. Discussion regarding risk (5). Request for all members to review the risks and constraints area more closely and provide feedback.	All members to review document and provide feedback by next meeting.	All	12/07/2012	
14/6/2012	1.6	Correspondence to Gold Coast GCUH DCEO	No response to date to correspondence forwarded to DCEO of Gold Coast. Discussion of options including (1) escalate issue to new chair of GCHHS, (2) escalate to dr Michael Cleary and schedule appointment with Rebecca Kimble, DC to discuss concerns, (3) approach DCEO GC's ESO regarding the status of the correspondence	DC to contact DCEO GC ESO regarding status of correspondence. DC to speak with Rebecca Kimble regarding contact with Dr Michael Cleary on the issue.	DC	12/07/2012	
14/6/2012	1.7	Clinical Services Capability Framework (version 3)	No information available due to ill health of JT	Carry over to next meeting	JT	12/07/2012	
14/6/2012	2.1	Ministerial announcement	Announcement this week by Minister that the Beaudesert Hospital will reopen birthing unit from 2014.	For noting	All	12/07/2012	
14/6/2012	2.2	Cot issues when change to LHHS	Concern expressed by DC and DK about caps to bed numbers and occupancy with the move to LHHS and risks of s1b. Budget issues expected by all acute services. Townsville currently operating 12 but have a staged implementation to 25 cots by 2015/16.	DC requested KR forward the implementation plan to QNSAG for noting.	KR	12/07/2012	

Queensland Government

Patient Safety and Quality Improvement Service

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - Outcomes from QNSAG Meeting 12 July 2012

Attendees: David Cartwright (DC),

Teleconference: Amanda Carver (AC), Jan Cullen (JC), Peter Schmidt (PS), Eva Stuwe (ES).

Apologies: Judy Williams (JW), Jacqui Thomson (JT), Lynne Elliot (LE), David Knight (DK), Anndrea Flint (AF), Karen Hose (KH), Virgina Hancl (VH), Eileen Cooke (EC), Katrina Roberts (KR), Guan Koh (GK), Margot van Drimmelen (MD), Alison Tigg (AT).

In progress - bring up at later meeting			In progress - for review next meeting	Outcome for noting this meeting	Closed		Decision Only
(TC) = Teleconference			Standing Agenda Item				

Meeting Date	Agenda Item	Agenda Topic	Discussion /Decision	Action Required	By Whom	By When	Progress / Status (Date Closed)
12/7/2012	1.1	Confirmation of action register		Action register from 14 June 2012 meeting endorsed and accepted.		09/08/2012	
12/7/2012	1.2	Progress on benchmark data	Benchmark paper being disseminated widely across Queensland public health service on Monday 16 July 2012. Feedback requested by 10 Aug from all interested parties.	Await feedback and discuss as required at next QNSAG meeting.	AC	09/08/2012	

12/7/2012	1.3	Progress on workforce survey	Progress report provided to AC from VH. 1. majority of survey completed. 2. QMAN contact details have been unreliable 3. some staffing questions esp medical, have been difficult for sites to answer. 4. has already provided some interesting data, inlcuding some sites reporting ability to increase capacity by up to 200% at times of high demand. 5. Mater responses not yet acquired; need DK to discuss with Mater staff to get survey response.	Request DK d/w NUM/Nursing Director at Mater re: survey. VH to upload survey reponses during July.	VH	09/08/2012	

12/7/2012	1.4	Project Plan	Request for all members to review the risks and constraints area more closely and provide feedback still stands from previous meeting.	All members to review document and provide feedback by next meeting.	All	09/08/2012	
12/7/2012	1.5	Clinical Services Capability Framework (version 3)	Inadequate group members to discuss	Carry over to next meeting.	JT	09/08/2012	
12/7/2012	1.6	Correspondence to Gold Coast GCUH DCEO	No response to date to correspondence forwarded to DCEO of Gold Coast. Discussion of options including (1) escalate issue to new chair of GCHHS, (2) escalate to dr Michael Cleary and schedule appointment with Rebecca Kimble, DC to discuss concerns, (3) approach DCEO GC's ESO regarding the status of the correspondence. Item from June meeting; no progress to date.	DC to contact DCEO GC ESO regarding status of correspondence. DC to speak with Rebecca Kimble regarding contact with Dr Michael Cleary on the issue. Carry over to next meeting.	DC	09/08/2012	
12/7/2012	2.2	Cot issues when change to LHHS	Ongoing concerns re: funding and capacity issues under new HHS. JC reported Exec planning day soon at Logan which may provide clarity. Concerns re: local limitations already set on admin cover and relief staff, impacting upon outpatient services. ES reported current plans to increase SCN services to 8 cots (flexing to 12 if required)	For noting.	KP	09/08/2012	
12/7/2012	2.3	Neonatal resus	ES reported facilitator workshop planned for later this month at Rockhampton with aim to roll out in August. DC reported no progress with training at RBWH.	ES to update on progress.	ES	09/08/2012	
12/7/2012	3.1	Endorsement of status report	June Statewide Maternity Clinical Network meeting cancelled; report should roll to next meeting. Brief to DDG SPP and DG once endorsed.	Ensure on next Clinical Network agenda. Prepare draft brief.	AC/JT	09/08/2012	

Queensland Government

Patient Safety and Quality Improvement Service

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - Outcomes from QNSAG Meeting 9 August 2012

Attendees: Dr David Cartwright (DC), Dr David Knight (DK), Ms Karen Hose (KH) & Ms Jacqui Thomson (JT).

Teleconference: Ms Katrina Roberts (KR), Dr Peter Schmidt (PS), Ms Amanda Carver (AC), Ms Virginia Hancl (VH) & Dr Mary Kane (MK) proxy for Ms Lynne Elliott.

Apologies: Dr Guan Koh (GK), Dr Judy Williams (JW), Ms Anndrea Flint (AF) & Dr Jan Cullen (JC).

In progress - bring up at later meeting	In progress - for review next meeting	Outcome for noting this meeting	Closed	Decision Only
(TC) = Teleconference	Standing Agenda Item			

Meeting Date	Agenda Item	Agenda Topic	Discussion /Decision	Action Required	By Whom	By When	Progress / Status (Date Closed)
9/8/2012	1.1	Confirmation of action register.		Action register from 12 July 2012 meeting endorsed and accepted.		09/08/2012	
9/8/2012	1.2	Workforce survey update.	Awaiting from data from RBWH. Good staffing information received. VC offered a brief analysis on key components of the survey.	VH will chase up. The graphs, spreadsheet and analysis will be completed by end August 2012. VH will forward to JT for distribution to members prior to the next meeting.	VH	August 2012	
9/8/2012	1.3	Progress on project plan.		Final project plan to be tabled at September 2012 meeting for ratification.	VH	August 2012	
9/8/2012	1.4	Benchmark discussion paper.	NICU & SCN Service Planning Benchmarks discussion paper discussed. Projection methods individually explored inclusive of pros and cons. Workforce issues etc will be captured in the recommendations paper. Neonatal activity in paediatric environments under further investigation. Individual members issues explored. Noted that there is an increasing proportion of 22 & 23 weekers being treated due to family pressure.	DC/DK/GK to forward AC the numbers and survival rate of 22 & 23 weekers from their services. The Australian/New Zealand Neonatal Network data will provide (medium) length of stay. Revised benchmark discussion paper incorporating feedback will be tabled for discussion at the next meeting.	DC/DK/GK AC	August 2012 September 2012	

9/8/2012	1.5	Correspondence to CEO, GCH.	PS informed members that the GCUH will open with eight beds in May/June 2013. Their current cots (2) will remain until this time. He expects that they will know by end September 2012 what number of cots they will have for the July 2013/June 2014 financial year.	EMT neonatal presentation 22 October 2012.	DC/DK	October 2012	

Queensland Government

Patient Safety and Quality Improvement Service

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - Meeting cancelled

Attendees:

Apologies:

In progress - bring up at later meeting			In progress - for review next meeting	Outcome for noting this meeting	Closed		Decision Only
(TC) = Teleconference			Standing Agenda Item				
Meeting Date	Agenda Item	**Agenda Topic**	**Discussion /Decision**	**Action Required**	**By Whom**	**By When**	**Progress / Status (Date Closed)**

Queensland Government

Patient Safety and Quality Improvement Service

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - Meeting cancelled

Attendees:

Apologies:

In progress - bring up at later meeting	In progress - for review next meeting	Outcome for noting this meeting	Closed	Decision Only
(TC) = Teleconference	Standing Agenda Item			

Meeting Date	Agenda Item	Agenda Topic	Discussion /Decision	Action Required	By Whom	By When	Progress / Status (Date Closed)

CARU

Clinical Access and Redesign Unit

Queensland Neonatal Services Advisory Group Meeting
ACTION REGISTER - 8 November 2012

Attendees:

Apologies:

Teleconference:

In progress - bring up at later meeting	In progress - for review next meeting	Outcome for noting this meeting	Closed	Decision Only
	Standing Agenda Item			

Meeting Date	Agenda Item	Agenda Topic	Discussion /Decision	Action Required	By Whom	By When	Progress / Status (Date Closed)

CARU
Clinical Access and Redesign Unit

Queensland Neonatal Services Advisory Group Meeting Minutes

Date and Time:	13 December 2012 1300 – 1430 hrs
Venue:	RBWH Block 7, Level 14, Meeting Room 2.
Organiser:	Jacqui Thomson (JT)
Purpose:	Queensland Neonatal Services Advisory Group

Invitees:

Name	Position / Site	Attendance	Proxy
Dr David Cartwright (DC) (Co-Chair)	Director of Neonatology - RBWH	Y	
Dr David Knight (DK) (Co-Chair)	Director of Neonatology – Mater Health Services	☎	
Ms Karen Hose (KH)	Nurse Unit Manager, ICN/SCN - RBWH	Y	
Ms Lynne Elliott (LE)	Deputy Director, Neonatal and Maternal Fetal Medicine Services – Mater Health Services	☎	
Ms Anndrea Flint (AF)	Clinical Nurse Consultant – RBWH	A	
Dr Guan Koh (GK)	Director of Neonatology – Townsville Hospital	☎	

Ms Katrina Roberts (KR)	Nursing Director – Townsville Hospital	☎	
Dr Peter Schmidt (PS)	Director of Paediatrics – Gold Coast Hospital	☎	
Ms Margot VanDrimmelen (MVD)	Nurse Unit Manager, ICN/SCN – Gold Coast Hospital	☎	
Ms Amanda Carver (AC)	Principal Planning Officer – Planning Branch, System Policy and Performance Division	Apology	
Dr Eva Stuwe (ES)	Paediatric Consultant – Rockhampton Hospital	A	
Dr Jan Cullen (JC)	Director of Paediatrics – Logan Hospital	A	
Dr Alison Tigg (AT)	Consultant Paediatrician – Cairns Base Hospital	☎	
Dr Judy Williams (JW)	Director of Paediatrics – Bundaberg Hospital	☎	
Ms Eileen Cooke (EC)	Consumer Representative - PIPA	A	

☎= Via Teleconference Phone **V** = Via Videoconference **A** = Apologies **N** = Did not attend **Y** = Attended

Item	Description	Discussions/Key Points	Actions	Accountable Officer/s	Due Date
1	**Attendance/apologies**	▪ As Above	▪ Noted	N/A	N/A
2	**Confirmation of previous minutes**	▪ Action register from 8 November 2012 meeting confirmed.	▪ Confirmed		
3	**Business arising from previous meeting**	**3.1 Workforce Survey Analysis.** Anomalies with data identified. Cairns, Bundaberg and Gold Coast have forwarded their amendments. If Advisory group were to involve workforce, what is their role and what do we want from them? Suggestions included: What services perceive to be their required operational cot numbers, physical	▪ Action: DC to contact Suzanne Wilkinson to receive raw data to assist with the analysis. ▪ Action: Forward amendments to workforce survey to JT.	DC All members	Feb 2013 21 Dec 2012

Item	Description	Discussions/Key Points	Actions	Accountable Officer/s	Due Date
		capacity and how does this fit with current staffing levels. Maintaining and sustaining a constant workforce particularly in this current climate should also be considered.			
3.2	**NICU and SCN Benchmark Project update**	Document will be delayed. It is on the priority list. Activity rather than population based measure likely to be utilised.	▪ Action: Discuss progress at next meeting.	AC	Feb 2013
3.3	**GCH NICU transfer website feedback**	Metavision is an adult ICU clinical information system. It was recently demonstrated at the Gold Coast Hospital. It was thought that the system could be altered to the NICU environment. There is no ready off the shelf product. The company are focused on trauma, through to theatre through to adult ICU pathway. Integrated electronic medical record program have no knowledge of this system being implemented into Queensland Health NICUs/SCUs. There has been a contract signed. However, this means nothing despite what the company may think. The Perinatal Clinical Information System Advisory Group will continue to evaluate a perinatal system that will follow the continuum of care from commencement of a pregnancy. A demonstration of the Cerner PowerChart Maternity product will occur late January 2013. DC shared that Meridian have turned Matrix into a clinical information system rather than a database. K2 has joined with them to build a neonatal system to go on the back of Matrix. The K2 system is at least a year off being ready. Royal Women's in Melbourne are currently going through a tender process. DC and DK will keep in contact with the Director to receive updates.	▪ Action: Review GCH NICU transfer website and provide comment to PS, cc JT in. ▪ Resend the link.	All members JT	21 Dec 2012
4	**New Business**	**4.1 Meeting** dates for 2013. Request from members to consider change of day / time for meeting due to conflict with operational commitments (outpatient	▪ Action: Send out request for preferred day and time for meetings in 2013.	▪ JT - All members to respond.	21 Dec 2012

Item	Description	Discussions/Key Points	Actions	Accountable Officer/s	Due Date
		clinics and the like).			
5	**Any other business**	**5.1** Neonatal Cot Utilisation Bundaberg reviewed term babies admitted to their nursery in relation to the Queensland Maternity and Neonatal Clinical Guidelines (in particular sepsis and neonatal hypoglycaemia). The significant incidence of this occurring was noted to be impacting on separation of mothers and babies, service delivery and capacity. RBWH commence IV antibiotics in the nursery, the neonate stays for a few hours and then returned to their mother on the ward with an iv bung insitu. Ward staff give the flushes. Babies are brought to SCN by maternity staff and the IV antibiotics administered in SCN. It is understood that the babies do remain qualified. They get assigned a DRG as they have spent >4 hours in the nursery. Mater treat their babies on the ward post cultures and IV cannulation in birthsuite. They are counted as maternity clientele, not neonatal. Townsville commence treatment in SCN, if the baby is okay, they are returned to their mother on the ward but they remain a patient of SCN, as they return to SCN for antibiotic administration. Similar issues to Bundaberg were identified at the Gold Coast Hospital. They are in the middle of reviewing their model of care and would be keen to further explore opportunities. Other nursery admissions for consideration include: glucose monitoring, meconium liquor, phototherapy etc. Noted that admission criteria of babies to SCN varies worldwide and is financially driven. It was suggested that the group consider if cots are being occupied by babies that shouldn't be in them. Agreed that the meeting in February 2013 be dedicated to further explore what is currently happening and what can be done to address these issues. Specifically in relation to: caesarean section, meconium, antibiotics,	▪ Action: Forward resources to JT for distribution prior to the next meeting. ▪ Action: Book resources for meetings and communicate to members accordingly. February 2013 meeting will be two hours in length.	▪ DK, DC, GK ▪ JT	Jan 2013 Jan 2013

Item	Description	Discussions/Key Points	Actions	Accountable Officer/s	Due Date
		phototherapy, glucose monitoring and withdrawal. Colleagues in regional services to be invited to attend to participate eg. Hervey Bay, Mackay, Nambour and Toowoomba. Intent will be to explore what is currently happening and consider opportunities in relation to clinical practice that may improve neonatal cot utilisation. Supporting documents for consideration include: NICE Guidelines, Queensland guidelines, clinical pathways and local service work instructions etc.			
6	**Correspondence**	**IN:**	**Out:**		

Item	Summary of Actions	By Whom
3.1	Action: Contact Suzanne Wilkinson to request raw data to assist with the analysis.	DC
3.1	Action: Forward amendments to Workforce Survey to JT by the 15 November 2012 please.	All members
3.2	Action: Discuss progress at next meeting.	AC
3.3	Action: Review GCH NICU transfer website and provide comment to PS, cc JT in.	All members
3.3	Action: Resend the link.	JT
4.1	Action: Send out request for preferred day and time for meetings in 2013.	All members
5.1	Action: Forward resources to JT for distribution prior to the next meeting.	DK, DC, GK
5.1	Action: Book resources for 2013 meetings and communicate to members accordingly. February 2013 meeting will be two hours in length.	JT

NEXT MEETING		
Date	**Time**	**Location**
21 March 2013	1:00pm – 3:00pm	Level 2, Interview Room 3, Citilink Building

CARU
Clinical Access and Redesign Unit

Queensland Neonatal Services Advisory Group Meeting Minutes

Date and Time:	21 March 2013 1300 – 1430 hrs
Venue:	Citilink Business Centre Lobby 2, Level 2, Interview Room 3
Organiser:	Jacqui Thomson (JT)
Purpose:	Queensland Neonatal Services Advisory Group

Invitees:

Name	Position / Site	Attendance	Proxy
Dr David Cartwright (DC) (Co-Chair)	Director of Neonatology - RBWH	A	
Dr David Knight (DK) (Co-Chair)	Director of Neonatology – Mater Health Services	Y	
Ms Karen Hose (KH)	Nurse Unit Manager, ICN/SCN - RBWH	Y	
Ms Lynne Elliott (LE)	Deputy Director, Neonatal and Maternal Fetal Medicine Services – Mater Health Services	A	
Ms Anndrea Flint (AF)	Clinical Nurse Consultant – RBWH	Y	
Dr Guan Koh (GK)	Director of Neonatology – Townsville Hospital	☎	

Ms Katrina Roberts (KR)	Nursing Director – Townsville Hospital	A	
Dr Peter Schmidt (PS)	Director of Paediatrics – Gold Coast Hospital	☎	
Ms Margot VanDrimmelen (MVD)	Nurse Unit Manager, ICN/SCN – Gold Coast Hospital	☎	
Ms Amanda Carver (AC)	Principal Planning Officer – Planning Branch, System Policy and Performance Division	Y	
Dr Eva Stuwe (ES)	Paediatric Consultant – Rockhampton Hospital	A	
Dr Jan Cullen (JC)	Director of Paediatrics – Logan Hospital	A	
Dr Alison Tigg (AT)	Consultant Paediatrician – Cairns Base Hospital	☎	
Dr Judy Williams (JW)	Director of Paediatrics – Bundaberg Hospital	A	
Ms Eileen Cooke (EC)	Consumer Representative – PIPA	Y	
Ms Jacqui Thomson (JT)	Principal Project Officer – Clinical Access and Redesign Unit,	A	

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Item	Description	Discussions/Key Points	Actions	Accountable Officer/s	Due Date
1	**Attendance/apologies**	As Above	▪ Noted	N/A	N/A
2	**Confirmation of previous minutes**	Minutes from 13 December 2012 meeting confirmed.	▪ Confirmed		
3	**Business arising from previous meeting**				

Item	Description	Discussions/Key Points	Actions	Accountable Officer/s	Due Date
3.1	**Workforce Survey**	AF to contact Suzanne Wilkinson to request raw data to reformat/assist with the analysis. Query re Mater data. Specifically funded fte in relation to numbers of beds and whether they were counted twice? DK confirmed that data is incorrect. 97 in NICU and 46 on SCN not enough. The Mater have 150 +fte and >250 total staff. Query re RBWH medical staffing after hours. At present reads 13 consultants and 7 registrars after hours. Thought that information captured is number available to be on the roster rather than persons actually present.	▪ AF to contact Suzanne Wilkinson to request raw data to assist with the analysis. ▪ LE to review Mater data in survey and forward changes to JT. ▪ KH to review RBWH data in survey and forward changes to JT.	AF LE KH	
3.2	**NICU and SCN Benchmark Project update**	Benchmark recommendation paper under development. Leaning towards an activity based benchmark. Rationale: Capture activity that currently isn't happening in the correct bed spaces and allocate it appropriately. A full new dataset has been requested up and to end June 2012. This will enable as clear a projection of activity as is possible. Aim for final draft of benchmark recommendation paper by the end of the month. Activity within the private sector SCN environment difficult to achieve. It isn't split. It is combined with under fives. The number and location of SCN cots within the private sector is known. If using activity based methodology it is assumed that private provision will remain stable and additional provision will occur within the public sector. Activity is presently funded on place of treatment, not residence. Analysis by place of residence assists in determining whether there should be growth in a particular area due to demand.			

Item	Description	Discussions/Key Points	Actions	Accountable Officer/s	Due Date
3.3	**Neonatal cot utilisation**	Noted that this is a useful document. Helpful to understand the utilisation of cots and cot spaces. This information will assist in the prediction of the number of cots that may be required in the future. Clarification sought re babies admitted to the NICU/SCN but managed on the postnatal ward and what this means for funding eg. glucose monitoring. Funding for newborns dependent on the assigned code and resultant nominal placement. Professional cultural changes identified as a challenge for some sites when neonates are nominally placed in the SCN 'qualified' but actually cared for on the postnatal ward with their mums. Care and support of the baby provided by SCN staff while they are on SCN books. Workload and workforce issues would need to be considered in relation to activity and funding for postnatal ward/s if changes are enacted. Ideal model of care would be one of a shared partnership between SCN and postnatal staff eg having single rooms with licensed/funded cots staff jointly by neonatal nurses and midwives. The length of stay, breast feeding and relationship of the mother baby dyad would be inevitably strengthened. Request to tidy up responses provided to enable ease of interpretation. Admission weight/gestation to be included in the template for response. Nurseries noted to be missing from template.	▪ Rework responses to reflect practice. ▪ Resend out to verify changes and seek responses from services not previously included.	DK JT	End March 2013
4	**New Business**				
5	**Any other business**				

Item	Description	Discussions/Key Points	Actions	Accountable Officer/s	Due Date
6	**Correspondence**	**IN:**	**Out:**		

Item	Summary of Actions	By Whom
3.1	Action: Contact Suzanne Wilkinson to request raw data to assist with the analysis.	DC
3.1	Action: Forward amendments to Workforce Survey to JT please.	LE & KH
3.2	Action: Progress final draft of benchmark recommendation paper at next meeting.	AC
3.3	Action: Rework responses to reflect practice.	DK
3.3	Action: Resend template to members that includes admission weight and gestation, request that members verify changes to responses provided and seek responses from services not previously included.	JT
4.1		
5.1		
5.1		

NEXT MEETING		
Date	**Time**	**Location**

Executive Management Team Briefing Note

Agenda Item: *(Secretariat use only)*

Subject: Neonatal intensive care workload and cot availability

Reference No.	**Secretariat use only**
Meeting date:	**Secretariat use only**
Submitted by:	**Dr David Knight, Director of Neonatology, Mater Mothers Hospital and Dr David Cartwright, Director of Neonatology, Royal Brisbane and Women's Hospital.**
New Item / Previously Raised:	**New Item**
System Manager / Department:	**Statewide Issue**

Recommendation(s):

That EMT:

1. **Note** the information in this brief, specifically regarding the current unsustainable demand for neonatal intensive care unit (NICU) and special care nursery (SCN) cots in Queensland and support an increase in resources to Hospital and Health Services that will enable them to meet future activity and service requirements.

Strategic Plan Alignment: http://qheps.health.qld.gov.au/emt/stratobj.htm

- Access to quality services delivered in the right way, at the right place and the right time
- Create a sustainable, proactive and continually improving health system and
- A sustainable and high quality workforce to meet future health needs.

Executive Committee Pathway:

☐ Performance Management Executive Committee
☐ ICT Governance Investment Board
☐ Close the Gap Executive Committee
☐ Resources Executive Committee
☐ Audit & Risk Management Committee
☒ None

SUPPORTING INFORMATION:

Context:

2. In the 2011 calendar year, the Royal Brisbane and Women's Hospital (RBWH), Mater Mothers' Hospital (MMH) and The Townsville Hospital (TTH) provided neonatal intensive care services for 62,150 Queensland births, as well as to approximately 3000 northern New South Wales neonates.

3. Queensland's current crude birth rate is 14.3 births per 1000 estimated resident population. The number of births in Queensland each year is projected to steadily increase over the next 50 years, rising to 70 300 by 2020 and 102 600 births by 2056.

4. The AIHW reported 16.9 percent of Queensland babies born in 2006 required NICU or SCN admission. If these rates were applied to the number of births in Queensland in 2011, then 10 503 babies required NICU/SCN admission.

5. The increased birth rate in Queensland in recent years has created an unsustainable demand for NICU and SCN cots. This is partly as a result of preterm birth rates rising significantly, but also:
   - an increase in multiple births as a result of greater access to assisted reproductive technologies
   - improved survival rate among very low birth weight babies
   - trends in assisted ventilation
   - increase in retrievals
   - cross border activity and
   - delay in back transfers due to the lack of available cots in regional Special Care Nurseries, and transport vehicle availability, particularly aero medical resources.

Issues:

6. The current number of cots in the South East Queensland totals 69. However, based on the existing number of births and cross border activity; 79.2 cots at 100% occupancy are required and 99 cots at 80% occupancy. The current Queensland endorsed service planning benchmark is 1.2 cots/1000 births at 70% occupancy for a NICU. If this endorsed bench mark were to be applied then in fact 113 cots would be necessary for the state.

7. The RBWH and the MMH NICU and SCU have consistently high occupancy rates >85%, often at the same time. High occupancy rates are associated with:
   - Higher neonatal infection rates
   - Increased staff stress
   - Unnecessary transportation and
   - Increased infant mortality.

8. NICU bed days have increased at a slightly higher rate than separations, indicating a small increase in length of stay.

9. It is anticipated that the Gold Coast University Hospital (GCUH) will be part of the network of NICUs within south-east Queensland along with the RBWH and the MMH. It is expected that they will be a primary NICU for babies from the Gold Coast region including Tweed Heads, Murwillumbah, Lismore, Grafton and other northern New South Wales centres.

10. It is presently understood that 8 cots will be commissioned when GCUH opens in 2013. There will be approximately 3,500 births per year at the GCUH, 7,000 in the Gold Coast Hospital and Health Service serviced by GCUH, and another 3-4,000 in northern NSW, as such at least 12 neonatal intensive care beds at 1.5 cots/1,000 births need to be operational. Delay in commissioning of NICU cots at the GCUH will continue to exacerbate current pressures on Level 6 nurseries already operating well beyond what is considered a safe workload.

11. The main influence upon mortality for preterm and very low birth weight babies is access to high risk obstetrical and neonatal intensive care services. It is critical that regional, rural and remote services are supported to provide newborn intensive care for short periods whilst urgent transfer to a NICU is arranged.

Author: Jacqui Thomson Position: Principal Project Officer Division / CBU: Clinical Access and Redesign Unit, Health System Innovation Branch Telephone No: 07 3131 6912 Date: 12 October 2012	Submitted through: Name: Mr Michael Zanco Position: Executive Director, Clinical Access and Redesign Unit, Health System Innovation Branch Telephone No: 07 3131 6920 Date: October 2012	Submitted through: Name: Ms Jan Phillips Position: Executive Director, Health System Innovation Branch Telephone No: 07 3646 2056 Date: October 2012	Cleared By: (EMT Member) Name: Dr Jeannette Young Position: A/Deputy Director-General, Health Service and Clinical Innovation Division Telephone No:07 3234 1524 Date: October 2012

However, there are limited resources from a retrieval point of view. There are only two teams between two hospitals covering a large geographical area.

Health Reform Considerations:

12. Each of the seventeen new Hospital and Health Boards have now been established as an independent Statutory Body, and is responsible for delivering health services which best meet the community needs and priorities.

13. Whilst it is acknowledged that maternity and neonatal activity based funding has increased. To enable neonatal services to accommodate unpredictable caseload, elective services are ultimately impacted upon.

Risk Assessment:

14. Continuing to operate well beyond what is considered a safe workload increases the risk of:
    - Reduced patient safety and clinical outcomes in an environment which is high volume, high cost and litigation susceptible and
    - Difficulty in recruiting and maintaining health professionals within the specialty area due to untenable and unsafe workloads.

http://qheps.health.qld.gov.au/audit/IRM_Stream/RM_Policy/matrix_2011.pdf

Brief summary of risk	Risk Rating	Risk Control Actions
Queensland neonatal services consistently operate above the endorsed service planning benchmark of 1.2 cots/1000 births at 70% occupancy. Queensland NICU occupancy sits around 94%.	High	• Expedite back transfers • Increase trained health professionals to work within this speciality area and • Work with level four nurseries to increase their capacity.

Resource Considerations:

15. Twelve cots to be commissioned when the GCUH opens in 2013.

16. Provide neonatal units with the budgetary capacity to maintain a flexible workforce to ensure adequate staffing at times of peak demand.

17. Level 4 and five units need to be resourced adequately to support level 6 units when the need is identified.

18. Aero medical resources need to be reviewed and increased to enable early mobilization when the need for transport is required.

Attachments: Nil

Author: Jacqui Thomson Position: Principal Project Officer Division / CBU: Clinical Access and Redesign Unit, Health System Innovation Branch Telephone No: 07 3131 6912 Date: 12 October 2012	Submitted through: Name: Mr Michael Zanco Position: Executive Director, Clinical Access and Redesign Unit, Health System Innovation Branch Telephone No: 07 3131 6920 Date: October 2012	Submitted through: Name: Ms Jan Phillips Position: Executive Director, Health System Innovation Branch Telephone No: 07 3646 2056 Date: October 2012	Cleared By: (EMT Member) Name: Dr Jeannette Young Position: A/Deputy Director-General, Health Service and Clinical Innovation Division Telephone No:07 3234 1524 Date: October 2012

NICU Plans query, Leanne Clemesha

From: Amanda Carver
To: Leanne Clemesha
CC: Liz Drake
Date: 18/02/2013 8:36 am
Subject: Re: Seeking information about neonatal ICU
Attachments: 120208 NICS status report final v1.2.doc; 120711 NICU_SCN disc paper final v1.1.doc; Copy of maternity_qmans.xls

Hi Leanne

Last year I was involved with the neonatal clinical network subgroup and produced a report for them on developments against recommendations made in 2009. The report was endorsed by the Statewide Maternal and Neonatal Network and is attached. I am unaware whether they have yet forwarded it, as planned, to the DG as there have been no advisory group meetings over the last few months for various reasons. The next meeting is scheduled for March. I would imagine that this forms the most current 'plan' they have.

As part of the review, and in preparation for the development of benchmark recommendations for a NICU/SCN cot service planning benchmark which will be commenced imminently, some work was undertaken on behalf the Queensland Neonatal Service Advisory Group (QNSAG) with respect to NICU capacity and activity which provides some information. David Knight (Mater) and David Cartwright (RBWH) are co-chairs of the QNSAG and were extremely co-operative during all of the work last year. They have the data that was collected re: capacity and activity, but it was done by a surplus officer lent to them by Keith McNeill and I don't think the work was done quite as expected or hoped. Unfortunately, the officer has since left the organisation with therefore no option to follow up and improve the work. I am sure though that there is some worthwhile data, but have not yet had the opportunity to analyse due to other priorities. I plan to do so as part of the benchmark recommendations.

There is also an annual (or maybe biennial?) data collection completed called QMAN managed by PCEC which provides detailed data re: workforce etc. (copy attached). I believe there is also some ongoing work re: metro activity and capacity and transfer practices being run out of RBWH. Anndrea Flint and Karen Hose are the best contacts for that.
I have also attached the benchmark discussion paper which was widely distributed and feedback from which will form the basis for development of the benchmark recommendations. Until I commence writing the paper, I am unsure whether we will go will an activity based (i.e. based on historical activity and trends) or population based (i.e. per 100,000 live births). If we go with population based, my current expectation is that the recommendation will be for the NICU benchmark to be amended upwards marginally. The SCN will stay essentially the same as the number of cots per 100,000 live births will rise, but the occupancy will also rise.

I hope that helps, happy to discuss further.

thanks
Amanda

>>> Leanne Clemesha 15/02/2013 9:20 am >>>
Hi Amanda,

The Integrated Planning Unit is collating a Register of national and state plans

I have been advised that you have done some work reviewing neonatal ICU in Queensland and I am keen to seek your help on a couple of queries linked to that work.

Do you know:
if Queensland has a current NICU Plan?
What was the outcome of the review you completed?
if the NICU review report is available?
is there an area that is monitoring NICU capacity/activity.
If you have any information e.g. documents - reports, plans etc you can forward me re: this would be much appreciated.

Regards

Leanne.

Leanne Clemesha
Principal Planning Officer
Integrated Planning Unit
Policy and Planning Branch

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NW planning

From: Julie Ingle
To: Amanda Carver; Amy Cox
Date: 4/04/2012 11:55 am
Subject: Fwd: Re: NICU/SCN planning

Hi Amanda,
Current service profile is adequate
No plans to expand to 4 cots in the future as some of the activity is basically baby sitting?
Cheers
J
>>> Amanda Carver 04/04/2012 11:28 am >>>
thanks Amy/Julie
I suppose the outcome was then that the current service profile is adequate? were there any plans to expand in the future due to activity projections? (pop growth being most likely...) I believe that Mt Isa has a built capacity of 4 Special Care Nursery cots, but is only funded for 3 currently. Were there any plans to open the 4th cot?
thanks
a

>>> Amy Cox 4/04/2012 11:22 am >>>
Hi Amanda,

Julie asked me to forward the attached info to you. Julie has copied and pasted some points from the Service Activity Background paper (from the North West LHHN HSP).

Amy

>>> Jodi Hallas 2/04/2012 3:36 pm >>>
NICU and SCN was considered in the context of each of the HSD plans from 2012. Im sure, Donna, Holly or Julie would be happy to discuss.
j

If I may be of further assistance my contact details are:

****

Jodi Hallas
Acting Director
Planning Branch

Health Planning and Infrastructure Division (HPID) **| QueenslandHealth**

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If I may be of further assistance my contact details are:

****

>>> Amanda Carver 4/2/2012 3:18 pm >>>
Hi Jodi
I'm just tying up a status report re: neonatal and special care nursery planning evaluating progress against recommendations made in a 2009 report to Minister. Colleen has suggested that I include a couple of lines re: the Branch's activity in this area as part of the District plans. I don't need a great deal of details, just an indication of where planning re: NICU?SCN capacity in particular has occurred. Could you point me in the right direction of someone who can help please?
many thanks
amanda

If I may be of further assistance my contact details are:

****
Amanda Carver
Principal Planning Officer
Planning Branch
Health Planning and Infrastructure Division (HPID) | Queensland Health

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North West LHHN (Mt Isa)

Between 2005–06 and 2009–10, overnight demand in the SRG of qualified neonate decreased by 15.3 per cent—from 176 separations to 149 separations. Twenty-six of the 27 separations were lost from the public sector. Same day demand increased by 22.2 per cent from 9 to 11 separations in the same period. Appendix table 11 below details changes in demand for neonatal services by SRG for the period 2005–06 to 2009–10.

In 2009–10, 57.0 per cent of overnight neonatal services were for Aboriginal and Torres Strait Islander patients. Overnight demand for neonatal services decreased by 24.1 per cent (27 separations) from 2005–06 to 2009–10 for Aboriginal and Torres Strait Islander children, compared to no change for non-Indigenous neonatal services. Appendix table 12 below details resident demand for children's neonatal services, by Indigenous status.

1.1.1.1 Private utilisation

Demand for neonatal services is largely met in the public sector. In 2009–10, 2.0 per cent of overnight resident demand and 0 per cent same day demand for qualified neonates was met by the private sector. Appendix table 1 provides detailed information on the proportion of total neonatal service demand met by the private sector.

Appendix table 1: Resident demand for other children's inpatient services 2005–06 to 2009–10

SRG	Stay type	Sum of separations																				
		2005–2006			2006–2007			2007–2008			2008–2009			2009–2010			Change 5–6 to 9–10			% Change 5–6 to 9–10		
		Private	Public	Total	Private	Public	Total	Private	Public	Total	Private	Public	Total	Private	Public	Total	Private	Public	Total	Private	Public	Total
Chemotherapy & Radiotherapy	Same day		6	6	26	28	54	6	51	57		30	30		15	15	0	9	9		150.0	150.0
Medical Oncology	Overnight		<5	<5	<5	<5											0	-1	-1		-100.0	-100.0
	Same day				<5	<5		<5		<5		<5	<5				0	0	0			
Non acute	Overnight		6	6					<5	<5					<5	<5	0				-83.3	-83.3
	Same day					<5											0	0	0			
Obstetrics	Overnight		<5	<5		<5			<5	<5		6	6		<5	<5	0				-50.0	-50.0
	Same day								<5	<5					<5	<5	0					
Psychiatry-Acute	Overnight		6	6		<5	<5		<5	<5		5	5		9	9	0	3	3		50.0	50.0
	Same day		<5	<5		<5	<5					<5	<5		<5	<5	0				200.0	200.0
Qualified Neonate	Overnight	<5	172		<5	126		<5	126		6	106		3	146	149	-1	-26	-27	-25.0	-15.1	-15.3
	Same day	<5	8		<5	18		<5	11			7	7		11	11	-1	3	2	-100.0	37.5	22.2
Tracheostomy	Overnight		<5	<5		<5	<5		<5	<5		<5	<5		<5	<5	0				0.0	0.0
	Same day					<5	<5										0	0	0			
Unallocated	Overnight		<5	<5		<5	<5		<5	<5							0	-1	-1		-100.0	-100.0
Total	**Overnight**	**4**	**191**	**195**	7	136	143	**1**	**137**	**138**	**6**	**121**	**127**	**3**	**160**	**163**	**-1**	**-31**	**-32**	**-25.0**	**-16.2**	**-16.4**
	Same day	**1**	**15**	**16**	**31**	**55**	**86**	**8**	**63**	**71**	**0**	**40**	**40**	**0**	**30**	**30**	**-1**	**15**	**14**	**-100.0**	**100.0**	**87.5**

Appendix table 2: Resident demand for other children's inpatient services 2005–06 to 2009–10 by Indigenous status

SRG	Stay type	Indigenous status	Sum of separations						% Change	% ATSI 09–10
			2005–2006	2006–2007	2007–2008	2008–2009	2009–2010	Change No.		
Qualified Neonate	Overnight	ATSI	112	60	86	54	85	-27	24.1	
		Non-Indigenous	64	70	41	58	64	0	0.0	
	Overnight Total		176	130	127	112	149	-27	15.3	57.0
	Same day	ATSI	5	6	<5	<5	9	<5	80.0	
		Non-Indigenous	<5	13	9	<5	<5	-2	50.0	
	Same day total			19					22.2	81.8

The top ESRG by beddays for overnight outflows in 2009–10 was for neonates, with 1119 beddays and an average length of stay of 19.0 days. The top 10 outflows (by ESRG) based on beddays in 2009–10 for the District are detailed in **Error! Reference source not found.**.

Appendix Table 1: Top 10 overnight outflow ESRGs (by beddays 2009–10) from Mount Isa to rest of Queensland

ESRG	2005–06	2006–07	2007–08	2008–09	2009–10	ALOS 09–10	% Change 2005–06 to 2009–10	
							Seps	Beddays
Qualified Neonate	679	839	973	861	1119	19.0	13	65

Source: QHAPDC, provided by Health Statistics Centre, extracted Feb, 2011

1.1.2 Qualified neonates

Overnight supply in the SRG of qualified neonates decreased by 37 separations, or 28.7 per cent from 2005–06 to 2009–10, to total 92 separations in 2009–10. Mount Isa Hospital experienced a decrease in overnight supply of 39 separations over the five year period (to total 89 separations), and remains the largest supplier in the District. Collectively, the remote facilities admitted 3 neonates overnight in 2009–10. Appendix table 3 details changes in the supply of neonatal services for the period 2005–06 to 2009–10.

In 2009–10, 59.8 per cent of overnight neonatal services were for Aboriginal and Torres Strait Islander patients. Overnight supply for neonatal services decreased by 39.6 per cent (36 separations) from 2005–06 to 2009–10 for Aboriginal and Torres Strait Islander neonates, compared to a decrease of 2.6 per cent (1 separation) for non-Indigenous neonates. Appendix table 4 details the change in supply of neonatal services between 2005–06 and 2009–10, by Indigenous status.

Appendix table 3: District supply of other children's inpatient services 2005–06 to 2009–10

SRG	Stay type	Sum of separations					Change #	% Change
		2005–2006	2006–2007	2007–2008	2008–2009	2009–2010		
Qualified neonate	Overnight	129	88	81	71	92	-37	-28.7
	Same day	8	15	11	6	10	2	25.0

Appendix table 4: District supply of neonatal services 2005–06 to 2009–10, by Indigenous status

Stay type	Indigenous status	Sum of separations						% Change	% ATSI 09–10
		2005–2006	2006–2007	2007–2008	2008–2009	2009–2010	Change No.		
Overnight	ATSI	91	44	56	39	55	-36	-39.6	
	Non-Indigenous	38	44	25	32	37	-1	-2.6	
Overnight total		129	88	81	71	92	-37	-28.7	59.8
Same day	ATSI	5	<5	<5	<5	8	3	60.0	
	Non-Indigenous	<5	11	8	<5	<5	-1	-33.3	
Same day total					6		2	25.0	80.0

Their reply generally is 'all'. They say they put no (or virtually no) private NICU work through them. The PHRU confirmed they are licensed for 25 NICU, although they can swing up to 37 to meet demand.
a

>>> Liz Drake 6/05/2013 9:01 am >>>
Hi,

Do we know how many of the cots at Mater are public?

Liz

>>> Amanda Carver 6/05/2013 9:00 AM >>>
MAC reports only 21 cots at Mater and 12 at Townsville. the extra 4 Townsville cots opened late last financial year from recollection.
a

>>> Liz Drake 6/05/2013 8:58 am >>>
thanks

>>> Amanda Carver 6/05/2013 8:57 AM >>>

Hospital & Health Service (HHS) 2012	Hospital	Level 2 (i.e. SCN: CSCF level 4&5)	Level 3 (i.e. NICU: CSCF level 6)
Cairns and Hinterland	Cairns	22	-
Mackay	Mackay	4	-
North West	Mount Isa	3	-
Townsville	Townsville	26	16
Metro South	Redland	6	-
Metro South	Logan	16	-
Metro North	Redcliffe	10	-
Metro North	Caboolture	12	-
Metro North	RBWH	39	30
Central Queensland	Rockhampton	6	-
Gold Coast	Gold Coast	20	2
Darling Downs	Toowoomba	12	-
West Moreton	Ipswich	16	-
Sunshine Coast	Nambour	16	-
Wide Bay	Hervey Bay	4	-
Wide Bay	Bundaberg	8	-
Mater Public Hospitals	Mater Mothers' Public	*54(42)	*25(37)
TOTALS		**274(262)**	**73(85)**

Sources: Infobank:Bed numbers 1991/1992 to 2011/2012 - accessed 20 March 2013 plus QNSAG clinician reports for NICU.
**Mater Mothers' Hospital count represents the full complement of cots including both public and private provision. Numbers in brackets represent 'swing' cots.*

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From: Amanda Carver
To: HlthStat
Date: 3/04/2013 11:14 AM
Subject: Re: Hospital Bed numbers

Thanks so much Ben for your speedy response. The only difference I have is that Townsville are reporting 12 and 26 to me rather than the 12 and 28 you have (although I know your numbers fit within their built capacity and there has been some changes long the way over the past year about the actual number of cots they were going to make operational). The SCN numbers are very helpful indeed as they appear to have changed significantly and I did not have a reliable count for them.
Best wishes
amanda

>>> HlthStat 3/04/2013 9:53 am >>>
Amanda

Here are the SCN and NICU available bed numbers, as at end June 2012 and end February 2013. Please note that February 2013 data are preliminary and subject to change.

The bed categories changed slightly between 2011/2012 and 2012/2013 (ie the labels for level 2 and 3). I've listed the current bed categories in the second workbook just for your reference.

Regards

Ben

Ben Wilkinson

Manager,
Statistical Reporting and Coordination
Health Statistics Unit
Department of Health

GPO Box 48
Brisbane Q 4001

>>> On Wednesday, 3 April 2013 at 9:23 am, in message
<515BF50C.AD0C.0049.0@health.qld.gov.au>, Amanda Carver <Amanda Carver@health.qld.gov.au> wrote:

Hi Ben

statewide I'm afraid, by HHS and facility, but just for NICU and SCN. I am completing the service planning benchmark recommendations paper....I can marry up against another source of self reported data, but it's collection was not robust enough to be able to quote with certainty in this paper.
thanks
amanda

>>> HlthStat 3/04/2013 9:20 am >>>

Hi Amanda

Is it just Townsville you are interested in, or a state-wide figure, or every facility individually?

Ben

Ben Wilkinson

Manager,
Statistical Reporting and Coordination
Health Statistics Unit
Department of Health

GPO Box 48
Brisbane Q 4001

>>> On Wednesday, 3 April 2013 at 9:17 am, in message
<515BF3A9.AD0C.0049.0@health.qld.gov.au>, Amanda Carver <Amanda.Carver@health.qld.gov.au> wrote:
Hi

I am looking for up to date reported numbers for neonatal and special care nursery cots and note that those provided on Infobank are only up to June 2012. I am also aware that the numbers do not accurately reflect current provision (in particular with relation to Townsville). Is there a more up to date official bed (cot) count that I may be able to access please?

Many thanks
Amanda

Amanda Carver
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From: GUAN KOH
To: Amanda Carver
Date: 28/03/2013 3:28 PM
Subject: Re: NICU/SCN cots

Correct, Amanda.
Happy Easter.
Guan

>>> Amanda Carver 3/28/2013 1:12 pm >>>

Thanks Guan
so do you have 16 + 26 operational at the moment Guan? With a total built capacity of 25 +25 to expand to as time goes on.....is that a correct understanding? I would of course note that there is swing between the two cot types to account for demand surge in either.
thanks
amanda

>>> GUAN KOH 28/03/2013 8:34 am >>>
Hi Amanda,

We are funded for 16 cots in NICU at 80% occupancy and 26 cots in SCN at 80% occupancy.

We have capacity for 25 NICU babies and 25 SCN babies. The movements between the two setups are porous (therefore swinging) - for the last month we have been sitting at around 30 SCN babies some of whom are being cared for in NICU cots.

regards
Guan

>>> Amanda Carver 3/27/2013 11:08 am >>>
Hi Guan
Finally getting this benchmark paper sorted...
From the MAC report, I have Townsville down as 20 SCN and 12 NICU cots, but it doesn't seem to have been updated for a while. Is that still correct? I have a feeling your built capacity for NICU was greater? Are there any plans yet re: more cots? And do you swing any?
Hope all is good and that I don't have to annoy you too much with irritating questions in the forthcoming few weeks!
best wishes
amanda

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From: "Elliott, Lynne" <Lynne.Elliott@mater.org.au>
To: Amanda Carver <Amanda_Carver@health.qld.gov.au>
Date: 27/03/2013 5:07 PM
Subject: RE: Cot numbers
CC: "Knight, David" <David.Knight@mater.org.au>

Sounds perfect Amanda.

Kind Regards

Lynne

From: Amanda Carver [mailto:Amanda_Carver@health.qld.gov.au]
Sent: Wednesday, 27 March 2013 2:47 PM
To: Elliott, Lynne
Cc: Knight, David
Subject: RE: Cot numbers

Thanks Lynne. As they are swing, I will not formally count them in the NICU numbers (though may refer to them in the text along with the other swing cots across the state to illustrate that surge may only currently be manageable due to these additional 'unrecognised' cots.....). I'm sure the extra one for licensing is merely some mild anomaly, so will use your numbers.
best wishes
amanda

>>> "Elliott, Lynne" <Lynne.Elliott@mater.org.au> 27/03/2013 1:46 pm >>>

Hi Amanda

Yes it is probably the swing cots which there are 12. So that means that we have 25 NICU, 12 swing cots and 42 SCN giving a total of 79 cots.

You mention 80 below but it is definitely 79

Kind Regards

Lynne

From: Amanda Carver [mailto:Amanda_Carver@health.qld.gov.au]
Sent: Wednesday, 27 March 2013 11:25 AM
To: Elliott, Lynne
Cc: Knight, David
Subject: Cot numbers

Hi Lynne
Getting to grips with this benchmarks paper....I'm hoping you can help clarify something for me. In feedback to the discussion document received last August, Mater fed back that they had 37 NICU cots and 42 SCN cots. In clarifying statewide private cot numbers last week, the PHRU told me that Mater had 25 NICU and 55 SCN cots. I'm wondering if the number you use for 'swing' is the difference? And do those swing cots need to be NICU licensed or can they just be used for surge management without the formal NICU label?
Many thanks
amanda

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From: Amanda Carver
To: Margot VanDrimmelen
Date: 27/03/2013 12:43 PM
Subject: Re: cots numbers

Margot, that is perfect detailed information. Thank you so much. Have an excellent day.
amanda

>>> Margot VanDrimmelen 27/03/2013 12:38 pm >>>
Hi Amanda,

Our official funded cots currently are 20 SCN and 2 NICU. Our NICU cots are at Level 5 and officially babies receiving BCPAP are classified as NICU. As this is the work we also did prior to becoming a NICU, we do ramp up to 4 NICU when required, depending on the acuity of those babies. Eg. we couldn't manage 4 ventilated babies but 4 BCPAP or a combination would be manageable.

Our 2 extra cots are considered swing cots but are not funded. We do this to increase the exposure of our staff to higher acuity babies for the clinical experience.

At GCUH there are 16 NICU cots and 28 SCN cots built. We still haven't got total confirmation but are expecting to open (in September 28) with 8 functioning NICU and 20 SCN cots. We haven't yet decided if this will be at Level 5 for an initial period first or if we open and immediately function as a level 6 service. This is a safety consideration with staff needing to get familiar with a whole new environment on top of new staffing mixes, let alone a cohort of higher acuity babies.

Let me know if there is any other information you require.

Regards
Margot

Margot van Drimmelen
_____
Nurse Unit Manager
Newborn Care Unit
Gold Coast Hospital
(07) 5519 8072
0434 180699

>>> Amanda Carver 3/27/2013 11:42 am >>>
Hi Margot
Getting to grips with this benchmark paper and just wanted to clarify cot numbers for GCH.
MAC has you down for 20 SCN and 2 NICU cots. Is that correct? I believe you actually run 4 NICU cots but is it correct to assume that they are 'unfunded'? Are they 2 in addition to the SCN cot numbers or are they swing cots? And could you please confirm for me, the present plan re: cot numbers expansion and what your total built capacity will be?
If it would be easier to discuss, please call me or let me know when would be suitable to call you.
Many thanks
amanda

From: Amanda Carver
To: Private_Health.Herston-PO12.BNS@health.qld.gov.au
Date: 21/03/2013 10:23 AM
Subject: Re: Private NICU/SCN licenced capacity

Tracey, thank you so much for your help, that is exactly what I need.
Best wishes

Amanda

>>> Private_Health 21/03/2013 7:48 am >>>
Dear Amanda

Please find below the amended list:

Hospital	Neonatal Cots - Level 4/5 (SCN)	Neonatal Cots - Level 6 (NICU)
Brisbane South Mater Private	(CSCF Level 5)55	25
Brisbane NW Private	15	
Brisbane Wesley	12	
Brisbane Sunnybank	6	
Cairns Private Hospital	2	
Gold Coast John Flynn	3	
Gold Coast Pindara	16	
Ipswich St Andrews	2	
Mackay Mater Private	3	
~~**Nambour Selangor**~~	0~~6~~	
Rockhampton Mater Private	6	
Sunshine Coast Private	7~~2~~	
Toowoomba St Vincents	8	
Townsville Mater Private	8	
Greenslopes Private Hospital	10	
TOTAL	153	25

Under the CSCF v3.1 the levels have changed for SCN and NICU.
SCN is level 4 and 5. Mater South Brisbane is the only Level 5 SCN all the other facilities have a level 4 SCN.
Nambour Selangor has ceased their neonatal services and Greenslopes have commenced neonatal services.
The Sunshine Coast Private Hospital has increased to 7 SCN cots.

Hope this helps

Regards
Tracey

For Legislative requirements for Applications, Forms & Fees, please go to: www.health.qld.gov.au/privatehealth/. Please note that all applications must address the requirements contained in the applicable section of the Application Requirements document.

Helen Rees, A/Director,
Tracey McGowan, Clinical Auditor,
Cath McCourt, Assistant Licensing Officer,
Ph 07 332 89051

Private Health Regulation, Chief Health Officer Branch
Fax: 07 332 89054
Street Address: Level 3, 15 Butterfield Street HERSTON QLD 4006

Postal Address: PO Box 2368 FORTITUDE VALLEY BC QLD 4006

>>> Amanda Carver 20/03/2013 3:41 pm >>>
Hi

Around this time last year you kindly provided me with details regarding the numbers of licenced Neonatal Intensive Care and Special Care Nursery cots in the private sector across Queensland to assist with development of a neonatal services status report. I am now in the process of finalising recommendations for a NICU/SCN service planning benchmark and need to check if the numbers of cots remains unchanged. I have attached a summary table outlining all the cots I was previously informed about and would be grateful if you could confirm whether this is still the case or let me know where changes have occurred. I will be working from home tomorrow and can be contacted by email should you need to discuss.

Kind regards
Amanda

Queensland Private Sector Neonatal Service Cots - Reported Licenced Capacity

Hospital	Neonatal Cots - Level 2 (SCN)	Neonatal Cots - Level 3 (NICU)
Brisbane South Mater Private	55	25
Brisbane NW Private	15	
Brisbane Wesley	12	
Brisbane Sunnybank	6	
Cairns Private Hospital	2	
Gold Coast John Flynn	3	
Gold Coast Pindara	16	
Ipswich St Andrews	2	
Mackay Mater Private	3	
Nambour Selangor	6	
Rockhampton Mater Private	6	
Sunshine Coast Private	2	
Toowoomba St Vincents	8	
Townsville Mater Private	8	
Grand Total	144	25

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QUEENSLAND PERINATAL DATA COLLECTION

NUMBER OF MOTHERS BY SELECTED VARIABLES BY YEAR [a]

Selected variable	Year of birth																					
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Indigenous status of mother [b]																						
Aboriginal	1,250	1,424	1,697	1,638	1,874	1,788	1,884	1,944	2,052	1,914	2,118	2,147	2,059	1,898	1,984	2,030	1,995	2,260	2,098	2,255	2,444	2,403
Torres Strait Islander	413	473	506	561	502	494	482	540	556	552	521	508	513	541	494	553	501	522	554	586	581	580
Both Aboriginal & Torres Strait Islander	-	-	-	-	-	-	-	-	-	20	92	194	229	254	243	277	271	287	285	329	348	349
Neither Aboriginal nor Torres Strait Islander	38,910	40,347	42,116	41,842	43,653	44,437	44,961	45,335	44,648	44,790	44,713	45,192	45,714	46,207	45,593	46,644	47,280	51,265	52,768	56,018	56,918	57,667
Not stated	55	52	148	90	44	46	29	45	46	2	6	1	9	8	10	8	4	3	14	40	37	24
Age of mother (years)																						
Less than 20	2,976	3,154	3,351	3,231	3,286	3,189	3,259	3,299	3,205	3,235	3,085	3,159	3,183	3,158	3,067	3,046	3,003	3,069	3,076	3,260	3,456	3,340
20-34	34,512	35,563	37,121	36,729	38,299	38,792	38,842	38,972	38,138	37,705	37,849	38,117	38,147	38,303	37,795	38,342	38,528	41,566	42,289	44,564	44,934	45,523
35 or more	3,140	3,579	3,995	4,171	4,488	4,784	5,255	5,593	5,959	6,338	6,516	6,765	7,194	7,447	7,462	8,124	8,520	9,702	10,354	11,404	11,938	12,160
Not stated	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Marital status																						
Single	4,482	4,897	4,781	4,787	5,182	5,248	5,445	5,697	5,846	5,915	5,786	5,640	5,595	5,720	5,551	5,520	5,417	5,985	5,868	6,681	6,951	6,967
Married/defacto	35,111	36,172	39,125	38,808	40,396	41,017	41,366	41,635	40,887	40,829	41,059	41,693	42,245	42,475	42,064	43,277	43,956	47,601	49,042	51,735	52,536	53,192
Other	583	641	526	521	493	488	518	490	535	534	603	709	673	698	699	709	671	750	793	799	821	838
Not stated	452	586	35	15	2	12	27	42	34	-	2	-	11	15	10	6	7	1	16	13	20	26
Number of previous pregnancies [c]																						
None	15,723	16,499	17,586	17,295	17,910	18,292	18,770	18,700	18,612	18,718	18,509	19,070	19,448	19,759	19,205	20,033	20,356	21,708	22,208	23,731	24,149	24,649
One to four	24,246	25,152	25,730	25,686	26,940	27,345	27,676	28,344	27,814	27,702	28,015	28,049	28,103	28,214	28,165	28,438	28,717	31,372	32,264	34,088	34,707	34,899
Five or more	633	620	740	770	770	795	810	812	869	858	924	823	972	935	953	1,041	977	1,255	1,247	1,409	1,472	1,475
Not stated	26	25	411	380	453	333	100	8	7	-	2	-	1	-	1	-	1	2	-	-	-	-
Plurality of pregnancy																						
Singleton	40,153	41,758	43,917	43,496	45,451	46,111	46,689	47,224	46,645	46,554	46,763	47,361	47,762	48,156	47,484	48,674	49,210	53,418	54,754	58,231	59,270	60,015
Twin	455	516	525	616	593	626	644	611	633	690	662	658	733	723	810	821	826	896	941	978	1,042	988
Other multiple	20	22	25	19	29	28	23	29	24	34	25	23	29	29	30	17	15	23	24	19	16	20
Onset of labour																						
Spontaneous - not augmented [d]	22,729	20,883	20,020	20,032	21,396	20,903	19,358	17,462	17,362	17,126	17,177	17,179	16,514	15,700	15,446	15,948	16,164	18,097	18,577	19,840	20,506	21,409
Spontaneous - augmented	6,189	9,037	11,706	11,405	11,775	11,475	12,704	14,452	14,124	13,237	12,668	12,431	12,828	12,658	11,869	11,920	12,439	12,731	12,653	13,744	13,935	13,431
Induced	7,660	7,982	7,997	7,677	7,885	9,233	9,713	10,162	10,224	11,038	11,484	12,003	12,200	12,752	12,261	12,422	11,699	12,687	13,048	13,553	13,615	13,661
No labour	4,044	4,363	4,710	4,985	5,005	5,141	5,564	5,785	5,591	5,877	6,118	6,429	6,980	7,798	8,747	9,220	9,749	10,822	11,439	12,091	12,270	12,519
Not stated	6	31	34	32	12	13	17	3	1	-	3	-	2	-	1	2	-	-	2	-	2	3
Number of mothers	**40,628**	**42,296**	**44,467**	**44,131**	**46,073**	**46,765**	**47,356**	**47,864**	**47,302**	**47,278**	**47,450**	**48,042**	**48,524**	**48,908**	**48,324**	**49,512**	**50,051**	**54,337**	**55,719**	**59,228**	**60,328**	**61,023**

(a) Changes to the MR63d form may have influenced reporting. Form changes occurred in 1990, 1991, July 1994, July 1997, July 1998 and July 1999.
(b) This item was modified in 1998 to allow capture of data for mother's Indigenous status.
(c) Includes pregnancies with an outcome after 20 weeks and/or 400grams
(d) Changes to the form may have significantly affected this data item.

QUEENSLAND PERINATAL DATA COLLECTION

NUMBER OF MOTHERS BY SELECTED VARIABLES BY YEAR[a]

Selected variable	Year of birth																					
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	*2008*	*2009*
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Indigenous status of mother [b]																						
Aboriginal	*3.1*	*3.4*	*3.8*	*3.7*	*4.1*	*3.8*	*4.0*	*4.1*	*4.3*	*4.0*	*4.5*	*4.5*	*4.2*	*3.9*	*4.1*	*4.1*	*4.0*	*4.2*	*3.8*	*3.8*	*4.1*	*3.9*
Torres Strait Islander	*1.0*	*1.1*	*1.1*	*1.3*	*1.1*	*1.1*	*1.0*	*1.1*	*1.2*	*1.2*	*1.1*	*1.1*	*1.1*	*1.1*	*1.0*	*1.1*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
Both Aboriginal & Torres Strait Islander	-	-	-	-	-	-	-	-	-	*0.0*	*0.2*	*0.4*	*0.5*	*0.5*	*0.5*	*0.6*	*0.5*	*0.5*	*0.5*	*0.6*	*0.6*	*0.6*
Neither Aboriginal nor Torres Strait Islander	*95.8*	*95.4*	*94.7*	*94.8*	*94.7*	*95.0*	*94.9*	*94.7*	*94.4*	*94.7*	*94.2*	*94.1*	*94.2*	*94.5*	*94.3*	*94.2*	*94.5*	*94.3*	*94.7*	*94.6*	*94.3*	*94.5*
Not stated	*0.1*	*0.1*	*0.3*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*
Age of mother (years)																						
Less than 20	*7.3*	*7.5*	*7.5*	*7.3*	*7.1*	*6.8*	*6.9*	*6.9*	*6.8*	*6.8*	*6.5*	*6.6*	*6.6*	*6.5*	*6.3*	*6.2*	*6.0*	*5.6*	*5.5*	*5.5*	*5.7*	*5.5*
20-34	*84.9*	*84.1*	*83.5*	*83.2*	*83.1*	*83.0*	*82.0*	*81.4*	*80.6*	*79.8*	*79.8*	*79.3*	*78.6*	*78.3*	*78.2*	*77.4*	*77.0*	*76.5*	*75.9*	*75.2*	*74.5*	*74.6*
35 or more	*7.7*	*8.5*	*9.0*	*9.5*	*9.7*	*10.2*	*11.1*	*11.7*	*12.6*	*13.4*	*13.7*	*14.1*	*14.8*	*15.2*	*15.4*	*16.4*	*17.0*	*17.9*	*18.6*	*19.3*	*19.8*	*19.9*
Not stated	-	-	-	-	-	-	-	-	-	-	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Marital status																						
Single	*11.0*	*11.6*	*10.8*	*10.8*	*11.2*	*11.2*	*11.5*	*11.9*	*12.4*	*12.5*	*12.2*	*11.7*	*11.5*	*11.7*	*11.5*	*11.1*	*10.8*	*11.0*	*10.5*	*11.3*	*11.5*	*11.4*
Married/defacto	*86.4*	*85.5*	*88.0*	*87.9*	*87.7*	*87.7*	*87.4*	*87.0*	*86.4*	*86.4*	*86.5*	*86.8*	*87.1*	*86.8*	*87.0*	*87.4*	*87.8*	*87.6*	*88.0*	*87.3*	*87.1*	*87.2*
Other	*1.4*	*1.5*	*1.2*	*1.2*	*1.1*	*1.0*	*1.1*	*1.0*	*1.1*	*1.1*	*1.3*	*1.5*	*1.4*	*1.4*	*1.4*	*1.4*	*1.3*	*1.4*	*1.4*	*1.3*	*1.4*	*1.4*
Not stated	*1.1*	*1.4*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*0.1*	*0.1*	-	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Number of previous births																						
None	*38.7*	*39.0*	*39.5*	*39.2*	*38.9*	*39.1*	*39.6*	*39.1*	*39.3*	*39.6*	*39.0*	*39.7*	*40.1*	*40.4*	*39.7*	*40.5*	*40.7*	*40.0*	*39.9*	*40.1*	*40.0*	*40.4*
One to four	*59.7*	*59.5*	*57.9*	*58.2*	*58.5*	*58.5*	*58.4*	*59.2*	*58.8*	*58.6*	*59.0*	*58.4*	*57.9*	*57.7*	*58.3*	*57.4*	*57.4*	*57.7*	*57.9*	*57.6*	*57.5*	*57.2*
Five or more	*1.6*	*1.5*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.8*	*1.8*	*1.9*	*1.9*	*2.0*	*1.9*	*2.0*	*2.1*	*2.0*	*2.3*	*2.2*	*2.4*	*2.4*	*2.4*
Not stated	*0.1*	*0.1*	*0.9*	*0.9*	*1.0*	*0.7*	*0.2*	*0.0*	*0.0*	-	*0.0*	*0.0*	*0.0*	-	*0.0*	-	*0.0*	*0.0*	-	-	-	-
Plurality of pregnancy																						
Singleton	*98.8*	*98.7*	*98.8*	*98.6*	*98.6*	*98.6*	*98.6*	*98.7*	*98.6*	*98.5*	*98.6*	*98.6*	*98.4*	*98.5*	*98.3*	*98.3*	*98.3*	*98.3*	*98.3*	*98.3*	*98.2*	*98.3*
Twin	*1.1*	*1.2*	*1.2*	*1.4*	*1.3*	*1.3*	*1.4*	*1.3*	*1.3*	*1.5*	*1.4*	*1.4*	*1.5*	*1.5*	*1.7*	*1.7*	*1.7*	*1.6*	*1.7*	*1.7*	*1.7*	*1.6*
Other multiple	*0.0*	*0.1*	*0.1*	*0.0*	*0.1*	*0.1*	*0.0*	*0.1*	*0.1*	*0.1*	*0.1*	*0.0*	*0.1*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Onset of Labour																						
Spontaneous - not augmented [c]	*55.9*	*49.4*	*45.0*	*45.4*	*46.4*	*44.7*	*40.9*	*36.5*	*36.7*	*36.2*	*36.2*	*35.8*	*34.0*	*32.1*	*32.0*	*32.2*	*32.3*	*33.3*	*33.3*	*33.5*	*34.0*	*35.1*
Spontaneous - augmented	*15.2*	*21.4*	*26.3*	*25.8*	*25.6*	*24.5*	*26.8*	*30.2*	*29.9*	*28.9*	*26.7*	*25.9*	*26.4*	*25.9*	*24.6*	*24.1*	*24.9*	*23.4*	*22.7*	*23.2*	*23.1*	*22.0*
Induced	*18.9*	*18.9*	*18.0*	*17.4*	*17.1*	*19.7*	*20.5*	*21.2*	*21.6*	*23.3*	*24.2*	*25.0*	*25.1*	*26.1*	*25.4*	*25.1*	*23.4*	*23.3*	*23.4*	*22.9*	*22.6*	*22.4*
No labour	*10.0*	*10.3*	*10.6*	*11.3*	*10.9*	*11.0*	*11.7*	*12.1*	*11.8*	*12.4*	*12.9*	*13.4*	*14.4*	*15.9*	*18.1*	*18.6*	*19.5*	*19.9*	*20.5*	*20.4*	*20.3*	*20.5*
Not stated	*0.0*	*0.1*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	-	*0.0*	*0.0*	*0.0*	-	*0.0*	*0.0*	-	-	-	-	-	-
Number of mothers	**40,628**	**42,296**	**44,467**	**44,131**	**46,073**	**46,765**	**47,396**	**47,864**	**47,302**	**47,278**	**47,450**	**48,042**	**48,524**	**48,908**	**48,324**	**49,512**	**50,051**	**54,337**	**55,719**	**59,228**	**60,328**	**61,023**

(a) Changes to the MR63d form may have influenced reporting. Form changes occurred in 1990, 1991, July 1994, July 1997, July 1998 and July 1999.
(b) This item was modified in 1998 to allow capture of data for mother's Indigenous status.
(c) Changes to the form may have significantly affected this data item .

QUEENSLAND PERINATAL DATA COLLECTION

NUMBER OF BABIES BY SELECTED VARIABLES BY YEAR[a]

Selected Variable	Year of birth																				
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Method of birth																						
Vaginal non-instrumental [b]	28,487	29,421	30,861	30,417	31,730	32,385	32,813	33,560	33,140	32,684	32,648	32,881	32,163	31,706	30,445	30,623	30,570	32,754	32,980	34,852	34,962	35,331
Forceps	3,979	4,041	4,182	3,741	3,674	3,231	2,976	2,778	2,747	2,357	2,180	1,999	1,819	1,529	1,262	1,004	949	947	1,096	1,174	1,184	1,142
Vacuum	832	1,007	1,092	1,204	1,316	1,637	1,828	1,841	1,902	2,099	2,098	2,183	2,354	2,515	2,577	2,942	3,055	3,391	3,353	3,849	4,320	4,494
Caesarean section	7,796	8,345	8,866	9,393	9,979	10,157	10,398	10,294	10,122	10,821	11,188	11,650	12,940	13,879	14,852	15,761	16,309	18,148	19,266	20,368	20,935	21,084
Other	-	-	34	26	24	33	28	60	74	77	47	34	40	61	60	36	25	41	11	-	-	-
Not stated	29	45	7	6	3	6	3	2	2	-	2	-	2	-	-	1	2	-	2	1	1	-
Birthweight (grams)																						
Less than 1,500	538	609	618	668	738	723	707	744	773	783	732	790	806	798	752	774	809	828	955	926	937	959
1,500-2,499	1,015	2,130	2,328	2,387	2,396	2,464	2,540	2,549	2,439	2,527	2,560	2,496	2,679	2,571	2,811	2,683	2,835	3,085	3,202	3,183	3,209	3,430
2,500-3,999	34,666	35,407	36,658	36,725	38,211	38,544	39,215	39,348	39,052	38,824	38,839	39,321	39,368	39,852	39,435	40,428	40,913	44,596	45,559	48,556	49,418	49,750
4,000 or more	4,872	4,687	5,345	4,967	5,352	5,692	5,566	5,880	5,720	5,900	6,026	6,135	6,460	6,464	6,192	6,473	6,340	6,767	6,980	7,561	7,832	7,901
Not stated	32	26	93	40	29	26	18	14	3	4	6	5	5	5	6	9	13	5	12	18	6	11
Gestation (weeks)																						
Less than 28	251	285	313	325	365	391	344	388	427	412	410	432	440	442	406	384	453	459	531	490	517	537
28-36	2,730	2,856	3,055	3,115	3,398	3,288	3,404	3,446	3,354	3,461	3,388	3,449	3,725	3,632	3,803	3,890	4,028	4,369	4,595	4,763	4,775	4,909
37-41	36,752	38,104	39,781	39,488	41,270	41,967	42,736	43,184	43,094	43,107	43,358	44,025	44,209	44,897	44,365	45,599	46,005	50,070	51,234	54,566	55,686	56,177
42 or more	1,364	1,561	1,872	1,826	1,677	1,786	1,560	1,511	1,110	1,058	1,003	840	933	718	620	491	417	379	342	414	419	422
Not stated	26	53	21	33	16	17	2	6	2	-	4	1	11	1	2	3	7	4	6	11	5	6
Facility Type																						
Public	32,654	33,833	35,259	35,046	37,044	37,648	36,363	35,747	35,123	34,838	35,350	36,250	36,388	34,503	33,312	34,119	34,430	37,658	38,742	41,530	42,201	42,795
Private	8,402	8,853	9,620	9,561	9,524	9,630	11,487	12,509	12,595	12,984	12,637	12,332	12,723	14,922	15,656	15,946	16,138	17,284	17,615	18,294	18,731	18,767
Home Births	66	173	158	177	156	163	172	242	240	213	171	164	126	103	61	67	58	42	47	81	110	123
Born Before Arrival (BBA) [c]	-	-	-	-	-	-	-	-	-	-	-	-	79	162	166	234	283	297	302	339	359	366
Not stated	1	-	5	3	2	7	24	37	29	3	5	1	2	-	1	1	1	-	2	-	1	-
Perinatal deaths																						
Stillbirths	285	299	326	324	305	292	330	363	362	353	341	347	358	363	329	307	347	375	391	417	384	447
Neonatal deaths	202	221	219	193	231	229	173	201	200	200	208	171	184	199	177	176	198	185	223	202	206	239
Perinatal deaths	487	520	545	517	536	521	503	564	562	553	549	518	542	562	506	483	545	560	614	619	590	686
Number of babies	**41,123**	**42,859**	**45,042**	**44,787**	**46,726**	**47,449**	**48,046**	**48,535**	**47,987**	**48,088**	**48,163**	**48,747**	**49,318**	**49,690**	**49,196**	**50,367**	**50,910**	**55,281**	**56,708**	**60,244**	**61,402**	**62,051**

(a) Changes to the MR63d form may have influenced reporting. Form changes occurred in 1990, 1991, July 1994, July 1997, July 1998, July 1999 and July 2006.

(b) Includes all spontaneous cephalic deliveries for the years 1988 - 1989. Includes breech deliveries.

(c) Not collected prior to 1 July 2000.

QUEENSLAND PERINATAL DATA COLLECTION

NUMBER OF BABIES BY SELECTED VARIABLES BY YEAR[a]

Selected Variable	Year of birth																				
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Method of birth																						
Vaginal non-instrumental [b]	69.3	68.6	68.5	67.9	67.9	68.3	68.3	69.1	69.1	68.0	67.8	67.5	65.2	63.8	61.9	60.8	60.0	59.3	58.2	57.9	56.9	56.9
Forceps	9.7	9.4	9.3	8.4	7.9	6.8	6.2	5.7	5.7	4.9	4.5	4.1	3.7	3.1	2.6	2.0	1.9	1.7	1.9	1.9	1.9	1.8
Vacuum	2.0	2.3	2.4	2.7	2.8	3.5	3.8	3.8	4.0	4.4	4.4	4.5	4.8	5.1	5.2	5.8	6.0	6.1	5.9	6.4	7.0	7.2
Caesarean section	19.0	19.5	19.7	21.0	21.4	21.4	21.6	21.2	21.1	22.5	23.2	23.9	26.2	27.9	30.2	31.3	32.0	32.8	34.0	33.8	34.1	34.0
Other	-	-	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	-	-	-
Not stated	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	0.0	0.0	-
Birthweight (grams)																						
Less than 1,500	1.3	1.4	1.4	1.5	1.6	1.5	1.5	1.5	1.6	1.6	1.5	1.6	1.6	1.6	1.5	1.5	1.6	1.5	1.7	1.5	1.5	1.6
1,500-2,499	2.5	5.0	5.2	5.3	5.1	5.2	5.3	5.3	5.1	5.3	5.3	5.1	5.4	5.2	5.7	5.3	5.6	5.6	5.6	5.3	5.2	5.5
2,500-3,999	84.3	82.6	81.4	82.0	81.8	81.2	81.6	81.1	81.4	80.8	80.6	80.7	79.8	80.2	80.2	80.3	80.4	80.7	80.3	80.6	80.5	80.2
4,000 or more	11.8	10.9	11.9	11.1	11.5	12.0	11.6	12.1	11.9	12.3	12.5	12.6	13.1	13.0	12.6	12.9	12.5	12.2	12.3	12.6	12.8	12.7
Not stated	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gestation (weeks)																						
Less than 28	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.9	0.8	0.8	0.9
28-36	6.6	6.7	6.8	7.0	7.3	6.9	7.1	7.1	7.0	7.2	7.0	7.1	7.6	7.3	7.7	7.7	7.9	7.9	8.1	7.9	7.8	7.9
37-41	89.4	88.9	88.3	88.2	88.3	88.4	88.9	89.0	89.8	89.7	90.0	90.3	89.6	90.4	90.2	90.5	90.4	90.6	90.3	90.6	90.7	90.5
42 or more	3.3	3.6	4.2	4.1	3.6	3.8	3.2	3.1	2.3	2.2	2.1	1.7	1.9	1.4	1.3	1.0	0.8	0.7	0.6	0.7	0.7	0.7
Not stated	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Facility Type																						
Public	79.4	78.9	78.3	78.3	79.3	79.3	75.7	73.7	73.2	72.5	73.4	74.4	73.8	69.4	67.7	67.7	67.6	68.1	68.3	68.9	68.7	69.0
Private	20.4	20.7	21.4	21.3	20.4	20.3	23.9	25.8	26.3	27.0	26.2	25.3	25.8	30.0	31.8	31.7	31.7	31.3	31.1	30.4	30.5	30.2
Home Births	0.2	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Born Before Arrival (BBA) [c]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	0.2	0.3	0.3	0.5	0.6	0.5	0.5	0.6	0.6	0.6
Not stated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-
Perinatal deaths	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
Stillbirths [d]	6.9	7.0	7.2	7.2	6.5	6.2	6.9	7.5	7.5	7.3	7.1	7.1	7.3	7.3	6.7	6.1	6.8	6.8	6.9	6.9	6.3	7.2
Neonatal deaths [e]	4.9	5.2	4.9	4.3	5.0	4.9	3.6	4.2	4.2	4.2	4.3	3.5	3.8	4.0	3.6	3.5	3.9	3.4	4.0	3.4	3.4	3.9
Perinatal deaths [d]	11.8	12.1	12.1	11.5	11.5	11.0	10.5	11.6	11.7	11.5	11.4	10.6	11.0	11.3	10.3	9.6	10.7	10.1	10.8	10.3	9.6	11.1
Number of babies	**41,123**	**42,859**	**45,042**	**44,787**	**46,726**	**47,449**	**48,046**	**48,535**	**47,987**	**48,038**	**48,163**	**48,747**	**49,318**	**49,690**	**49,196**	**50,367**	**50,910**	**55,281**	**56,708**	**60,244**	**61,402**	**62,051**

(a) Changes to the MR63d form may have influenced reporting. Form changes occurred in 1990, 1991, July 1994, July 1997, July 1998, July 1999 and July 2006.

(b) Includes all spontaneous cephalic deliveries for the years 1988 - 1989. Includes breech deliveries.

(c) Not collected prior to 1 July 2000.

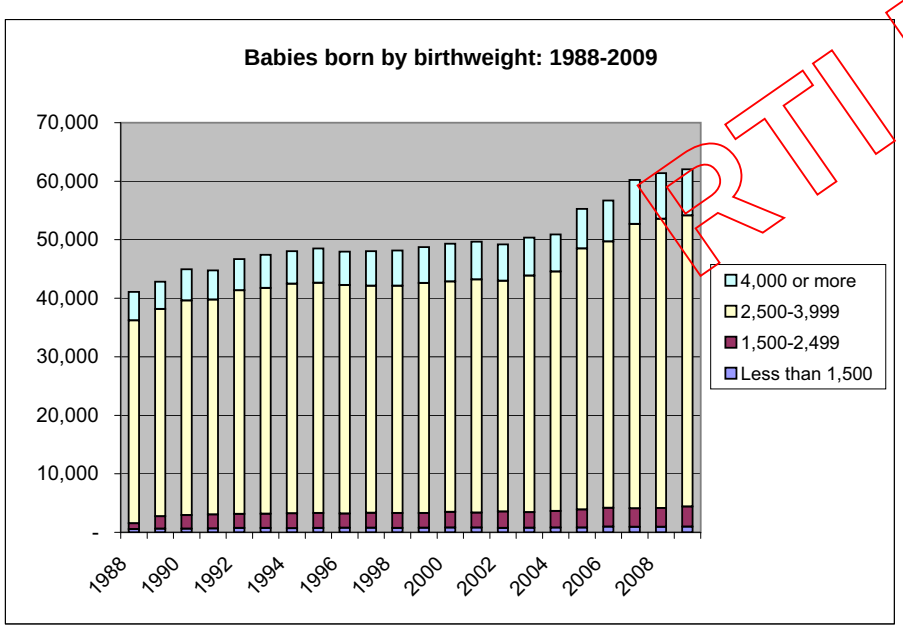
(d) Per 1,000 births.

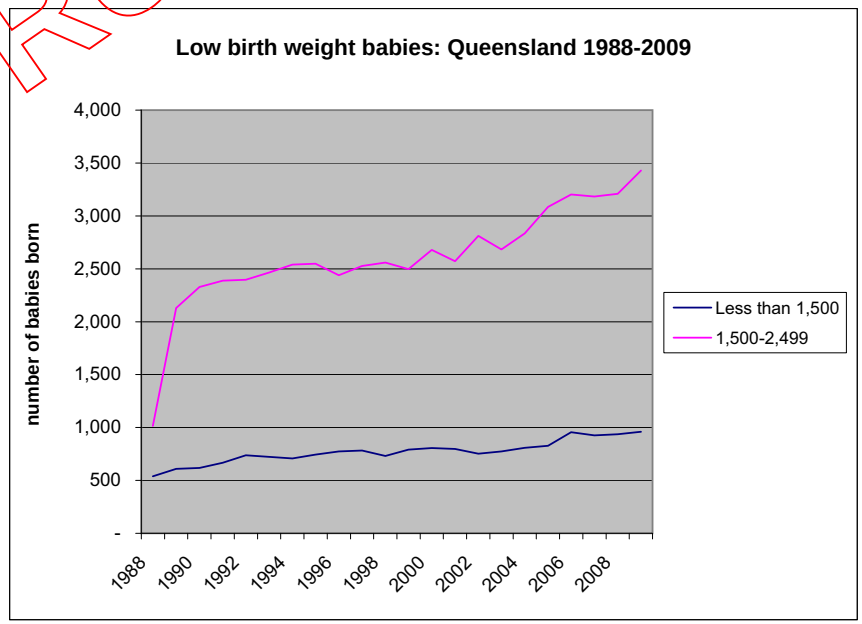
(e) Per 1,000 livebirths.

QUEENSLAND PERINATAL DATA COLLECTION

NUMBER OF BABIES BY SELECTED VARIABLES BY YEAR[a]

Birthweight (grams)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Less than 1,500	538	609	618	668	738	723	707	744	773	783	732	790	806	798	752	774	809	828	955	926	937	959
1,500-2,499	1,015	2,130	2,328	2,387	2,396	2,464	2,540	2,549	2,439	2,527	2,560	2,496	2,679	2,571	2,811	2,683	2,835	3,085	3,202	3,183	3,209	3,430
2,500-3,999	34,666	35,407	36,658	36,725	38,211	38,544	39,215	39,348	39,052	38,824	38,839	39,321	39,368	39,852	39,435	40,428	40,913	44,596	45,559	48,556	49,418	49,750
4,000 or more	4,872	4,687	5,345	4,967	5,352	5,692	5,566	5,880	5,720	5,900	6,026	6,135	6,460	6,464	6,192	6,473	6,340	6,767	6,980	7,561	7,832	7,901
Not stated	32	26	93	40	29	26	18	14	3	4	6	5	5	5	6	9	13	5	12	18	6	11
Gestation (weeks)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Less than 28	251	285	313	325	365	391	344	388	427	412	410	432	440	442	406	384	453	459	531	490	517	537
28-36	2,730	2,856	3,055	3,115	3,398	3,288	3,404	3,446	3,354	3,461	3,388	3,449	3,725	3,632	3,803	3,890	4,028	4,369	4,595	4,763	4,775	4,909
37-41	36,752	38,104	39,781	39,488	41,270	41,967	42,736	43,184	43,094	43,107	43,358	44,025	44,209	44,897	44,365	45,599	46,005	50,070	51,234	54,566	55,686	56,177
42 or more	1,364	1,561	1,872	1,826	1,677	1,786	1,560	1,511	1,110	1,058	1,003	840	933	718	620	491	417	379	342	414	419	422
Not stated	26	53	21	33	16	17	2	6	2	-	4	1	11	1	2	3	7	4	6	11	5	6
Facility Type	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Public	32,654	33,833	35,259	35,046	37,044	37,648	36,363	35,747	35,123	34,838	35,350	36,250	36,388	34,503	33,312	34,119	34,430	37,658	38,742	41,530	42,201	42,795
Private	8,402	8,853	9,620	9,561	9,524	9,630	11,487	12,509	12,595	12,984	12,637	12,332	12,723	14,922	15,656	15,946	16,138	17,284	17,615	18,294	18,731	18,767
Home Births	66	173	158	177	156	163	172	242	240	213	171	164	126	103	61	67	58	42	47	81	110	123
Born Before Arrival (BBA) [c]	-	-	-	-	-	-	-	-	-	-	-	79	162	166	234	283	297	302	339	359	366	
Not stated	1	-	5	3	2	7	24	37	29	3	5	1	2	-	1	1	1	-	2	-	1	-
Number of babies	**41,123**	**42,859**	**45,042**	**44,787**	**46,726**	**47,449**	**48,046**	**48,535**	**47,987**	**48,038**	**48,163**	**48,747**	**49,318**	**49,690**	**49,196**	**50,367**	**50,910**	**55,281**	**56,708**	**60,244**	**61,402**	**62,051**





QUEENSLAND PERINATAL DATA COLLECTION

NUMBER OF BABIES BY SELECTED VARIABLES BY YEAR[a]

Selected Variable	Year of birth																					
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Method of birth																						
Vaginal non-instrumental [b]	28,487	29,421	30,861	30,417	31,730	32,385	32,813	33,560	33,140	32,684	32,648	32,881	32,163	31,706	30,445	30,623	30,570	32,754	32,980	34,852	34,962	35,331
Forceps	3,979	4,041	4,182	3,741	3,674	3,231	2,976	2,778	2,747	2,357	2,180	1,999	1,819	1,529	1,262	1,004	949	947	1,096	1,174	1,184	1,142
Vacuum	832	1,007	1,092	1,204	1,316	1,637	1,828	1,841	1,902	2,099	2,098	2,183	2,354	2,515	2,577	2,942	3,055	3,391	3,353	3,849	4,320	4,494
Caesarean section	7,796	8,345	8,866	9,393	9,979	10,157	10,398	10,294	10,122	10,821	11,188	11,650	12,940	13,879	14,852	15,761	16,309	18,148	19,266	20,368	20,935	21,084
Other	-	-	34	26	24	33	28	60	74	77	47	34	40	61	60	36	25	41	11	-	-	-
Not stated	29	45	7	6	3	6	3	2	2	-	2	-	2	-	-	1	2	-	2	1	1	-
Birthweight (grams)																						
Less than 1,500	538	609	618	668	738	723	707	744	773	783	732	790	806	798	752	774	809	828	955	926	937	959
1,500-2,499	1,015	2,130	2,328	2,387	2,396	2,464	2,540	2,549	2,439	2,527	2,560	2,496	2,679	2,571	2,811	2,683	2,835	3,085	3,202	3,183	3,209	3,430
2,500-3,999	34,666	35,407	36,658	36,725	38,211	38,544	39,215	39,348	39,052	38,824	38,839	39,321	39,368	39,852	39,435	40,428	40,913	44,596	45,559	48,556	49,418	49,750
4,000 or more	4,872	4,687	5,345	4,967	5,352	5,692	5,566	5,880	5,720	5,900	6,026	6,135	6,460	6,464	6,192	6,473	6,340	6,767	6,980	7,561	7,832	7,901
Not stated	32	26	93	40	29	26	18	14	3	4	6	5	5	5	6	9	13	5	12	18	6	11
Gestation (weeks)																						
Less than 28	251	285	313	325	365	391	344	388	427	412	410	492	440	442	406	384	453	459	531	490	517	537
28-36	2,730	2,856	3,055	3,115	3,398	3,288	3,404	3,446	3,354	3,461	3,388	3,449	3,725	3,632	3,803	3,890	4,028	4,369	4,595	4,763	4,775	4,909
37-41	36,752	38,104	39,781	39,488	41,270	41,967	42,736	43,184	43,094	43,107	43,358	44,025	44,209	44,897	44,365	45,599	46,005	50,070	51,234	54,566	55,686	56,177
42 or more	1,364	1,561	1,872	1,826	1,677	1,786	1,560	1,511	1,110	1,058	1,003	840	933	718	620	491	417	379	342	414	419	422
Not stated	26	53	21	33	16	17	2	6	2	-	4	1	11	1	2	3	7	4	6	11	5	6
Facility Type																						
Public	32,654	33,833	35,259	35,046	37,044	37,648	36,363	35,747	35,123	34,838	35,350	36,250	36,388	34,503	33,312	34,119	34,430	37,658	38,742	41,530	42,201	42,795
Private	8,402	8,853	9,620	9,561	9,524	9,630	11,487	12,509	12,595	12,984	12,637	12,332	12,723	14,922	15,656	15,946	16,138	17,284	17,615	18,294	18,731	18,767
Home Births	66	173	158	177	156	163	172	242	240	213	171	164	126	103	61	67	58	42	47	81	110	123
Born Before Arrival (BBA) [c]	-	-	-	-	-	-	-	-	-	-	-	-	79	162	166	234	283	297	302	339	359	366
Not stated	1	-	5	3	2	7	24	37	29	3	5	1	2	-	1	1	1	-	2	-	1	-
Perinatal deaths																						
Stillbirths	285	299	326	324	305	292	330	363	362	353	341	347	358	363	329	307	347	375	391	417	384	447
Neonatal deaths	202	221	219	193	231	229	173	201	200	200	208	171	184	199	177	176	198	185	223	202	206	239
Perinatal deaths	487	520	545	517	536	521	503	564	562	553	549	518	542	562	506	483	545	560	614	619	590	686
Number of babies	**41,123**	**42,859**	**45,042**	**44,787**	**46,726**	**47,449**	**48,046**	**48,535**	**47,987**	**48,038**	**48,163**	**48,747**	**49,318**	**49,690**	**49,196**	**50,367**	**50,910**	**55,281**	**56,708**	**60,244**	**61,402**	**62,051**

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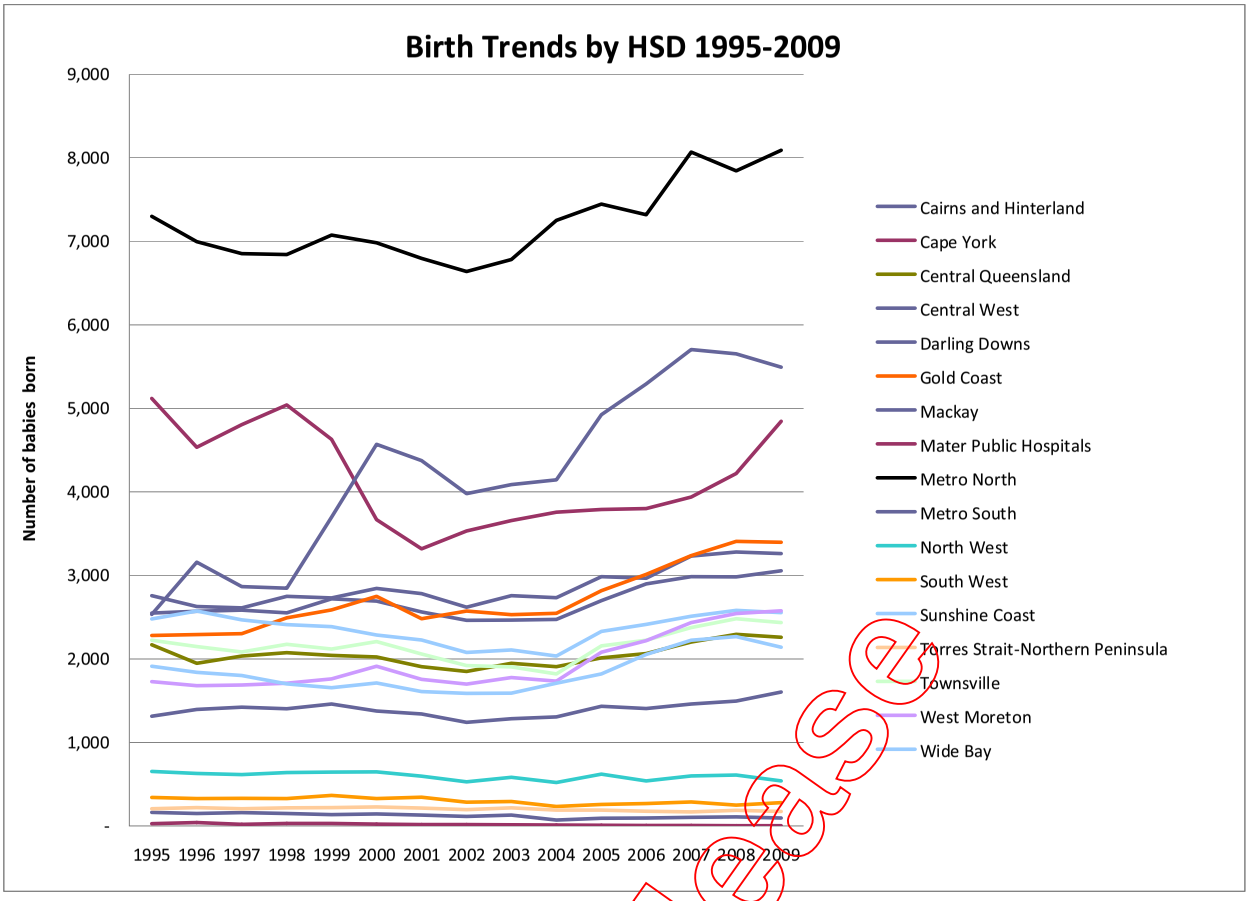
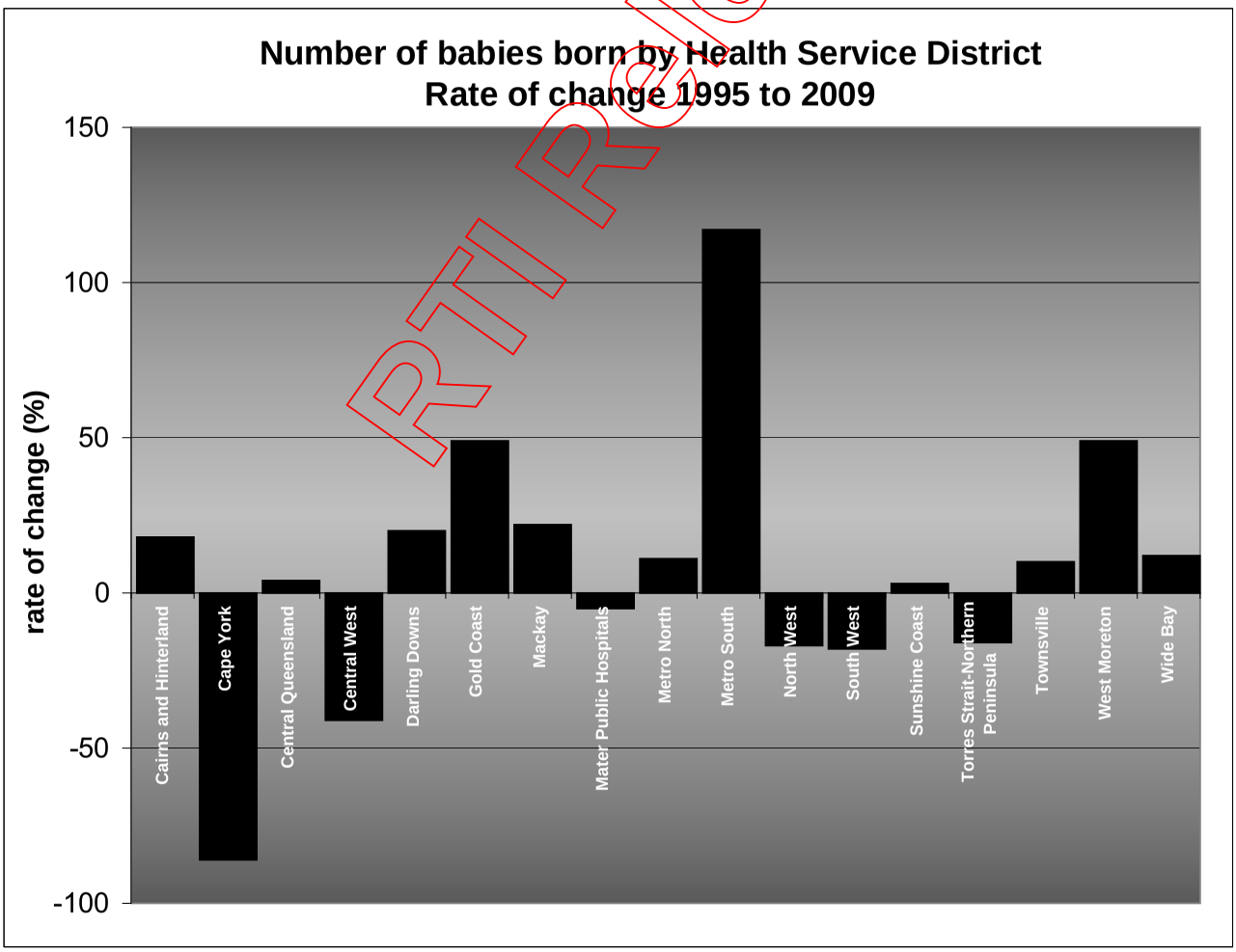

Birth Trends by HSD 1995-2009
Number of babies born
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009
Cairns and Hinterland
Cape York
Central Queensland
Central West
Darling Downs
Gold Coast
Mackay
Mater Public Hospitals
Metro North
Metro South
North West
South West
Sunshine Coast
Torres Strait-Northern Peninsula
Townsville
West Moreton
Wide Bay


Number of babies born by Health Service District
Rate of change 1995 to 2009
rate of change (%)
150
100
50
0
-50
-100
Cairns and Hinterland
Cape York
Central Queensland
Central West
Darling Downs
Gold Coast
Mackay
Mater Public Hospitals
Metro North
Metro South
North West
South West
Sunshine Coast
Torres Strait-Northern Peninsula
Townsville
West Moreton
Wide Bay

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Cairns and Hinterland	2,756	2,626	2,611	2,748	2,729	2,845	2,782	2,620	2,757	2,732	2,986	2,965	3,230	3,280	3,261	3,203	3,246	3,288
Cape York	28	40	18	29	30	22	15	16	13	12	7	5	6	3	4	- 2	- 4	- 6
Central Queensland	2,170	1,947	2,033	2,074	2,041	2,022	1,908	1,851	1,946	1,907	2,013	2,065	2,201	2,293	2,259	2,141	2,152	2,164
Central West	162	149	160	149	135	143	131	114	131	70	91	95	104	107	95	80	74	69
Darling Downs	2,548	2,570	2,584	2,551	2,720	2,692	2,561	2,462	2,465	2,472	2,697	2,897	2,986	2,983	3,055	2,935	2,966	2,998
Gold Coast	2,280	2,290	2,303	2,491	2,587	2,749	2,481	2,573	2,529	2,545	2,818	3,013	3,237	3,407	3,396	3,331	3,408	3,485
Mackay	1,313	1,396	1,423	1,402	1,459	1,376	1,340	1,241	1,284	1,306	1,433	1,405	1,460	1,495	1,603	1,469	1,478	1,487
Mater Public Hospitals	5,120	4,535	4,804	5,039	4,629	3,667	3,317	3,531	3,656	3,757	3,788	3,801	3,937	4,221	4,844	3,745	3,691	3,637
Metro North	7,298	6,996	6,852	6,842	7,073	6,981	6,795	6,639	6,781	7,251	7,446	7,318	8,068	7,843	8,090	7,797	7,869	7,942
Metro South	2,532	3,158	2,865	2,846	3,698	4,570	4,373	3,978	4,087	4,143	4,925	5,291	5,703	5,653	5,493	5,998	6,221	6,443
North West	652	628	615	640	645	647	595	528	581	519	620	539	599	610	540	548	542	536
South West	340	328	330	328	366	328	343	285	293	232	258	267	288	248	280	246	239	232
Sunshine Coast	2,478	2,573	2,466	2,410	2,386	2,286	2,227	2,076	2,108	2,035	2,330	2,412	2,510	2,581	2,554	2,363	2,363	2,363
Torres Strait-Northern Peninsula	206	220	206	217	219	228	213	194	217	189	190	176	168	188	173	173	170	167
Townsville	2,223	2,148	2,082	2,176	2,119	2,208	2,059	1,919	1,905	1,819	2,155	2,223	2,374	2,480	2,435	2,278	2,293	2,309
West Moreton	1,728	1,679	1,686	1,708	1,760	1,913	1,754	1,697	1,776	1,733	2,081	2,218	2,436	2,542	2,575	2,453	2,516	2,578
Wide Bay	1,913	1,840	1,800	1,700	1,654	1,711	1,609	1,588	1,590	1,708	1,820	2,052	2,223	2,268	2,139	2,074	2,103	2,132
Queensland Public Total	37,742	37,119	36,835	37,348	38,249	38,388	36,504	35,314	36,122	36,434	39,663	40,748	43,537	44,210	44,805	42,841	43,337	43,834
Private Hospitals	12,509	12,595	12,984	12,637	12,332	12,723	14,922	15,656	15,946	16,138	17,284	17,615	18,294	18,731	18,767	19,555	20,090	20,625

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	rate of change comparing 1995 and 2009
Cairns and Hinterland	2,756	2,626	2,611	2,748	2,729	2,845	2,782	2,620	2,757	2,732	2,986	2,965	3,230	3,280	3,261	18%
Cape York	28	40	18	29	30	22	15	16	13	12	7	5	6	3	4	-86%
Central Queensland	2,170	1,947	2,033	2,074	2,041	2,022	1,908	1,851	1,946	1,907	2,013	2,065	2,201	2,293	2,259	4%
Central West	162	149	160	149	135	143	131	114	131	70	91	95	104	107	95	-41%
Darling Downs	2,548	2,570	2,584	2,551	2,720	2,692	2,561	2,462	2,465	2,472	2,697	2,897	2,986	2,983	3,055	20%
Gold Coast	2,280	2,290	2,303	2,491	2,587	2,749	2,481	2,573	2,529	2,545	2,818	3,013	3,237	3,407	3,396	49%
Mackay	1,313	1,396	1,423	1,402	1,459	1,376	1,340	1,241	1,284	1,306	1,433	1,405	1,460	1,495	1,603	22%
Mater Public Hospitals	5,120	4,535	4,804	5,039	4,629	3,667	3,317	3,531	3,656	3,757	3,788	3,801	3,937	4,221	4,844	-5%
Metro North	7,298	6,996	6,852	6,842	7,073	6,981	6,795	6,639	6,781	7,251	7,446	7,318	8,068	7,843	8,090	11%
Metro South	2,532	3,158	2,865	2,846	3,698	4,570	4,373	3,978	4,087	4,143	4,925	5,291	5,703	5,653	5,493	117%
North West	652	628	615	640	645	647	595	528	581	519	620	539	599	610	540	-17%
South West	340	328	330	328	366	328	343	285	293	232	258	267	288	248	280	-18%
Sunshine Coast	2,478	2,573	2,466	2,410	2,386	2,286	2,227	2,076	2,108	2,035	2,330	2,412	2,510	2,581	2,554	3%
Torres Strait-Northern Peninsula	206	220	206	217	219	228	213	194	217	189	190	176	168	188	173	-16%
Townsville	2,223	2,148	2,082	2,176	2,119	2,208	2,059	1,919	1,905	1,819	2,155	2,223	2,374	2,480	2,435	10%
West Moreton	1,728	1,679	1,686	1,708	1,760	1,913	1,754	1,697	1,776	1,733	2,081	2,218	2,436	2,542	2,575	49%
Wide Bay	1,913	1,840	1,800	1,700	1,654	1,711	1,609	1,588	1,590	1,708	1,820	2,052	2,223	2,268	2,139	12%

																rate of change comparing 1995 and 2009 actual and total average annual change
Queensland Public Total	37,742	37,119	36,835	37,348	38,249	38,388	36,504	35,314	36,122	36,434	39,663	40,748	43,537	44,210	44,805	19%
		-2%	-1%	1%	2%	0%	-5%	-3%	2%	1%	9%	3%	7%	2%	1%	1.29%
Private Hospitals	12,509	12,595	12,984	12,637	12,332	12,723	14,922	15,656	15,946	16,138	17,284	17,615	18,294	18,731	18,767	50%
Queensland tot (inc bba etc)	48,535	47,987	48,038	48,163	48,747	49,318	49,690	49,196	50,367	50,910	55,281	56,708	60,244	61,402	62,052	28%

rate of change comparing 1995 and 2009

Health Service District	Rate of change %	
Cairns and Hinterland	18	18%
Cape York	-86	-86%
Central Queensland	4	4%
Central West	-41	-41%
Darling Downs	20	20%
Gold Coast	49	49%
Mackay	22	22%
Mater Public Hospitals	-5	-5%
Metro North	11	11%
Metro South	117	117%
North West	-17	-17%
South West	-18	-18%
Sunshine Coast	3	3%
Torres Strait-Northern Peninsula	-16	-16%
Townsville	10	10%
West Moreton	49	49%
Wide Bay	12	12%
Queensland Public Total	19%	
Queensland Priivate Total	23%	

Birthweight (grams)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Rate of change 1995-2009
Less than 1,500	744	773	783	732	790	806	798	752	774	809	828	955	926	937	959	29%
1,500-2,499	2,549	2,439	2,527	2,560	2,496	2,679	2,574	2,811	2,683	2,835	3,085	3,202	3,183	3,209	3,430	35%
2,500-3,999	39,348	39,052	38,824	38,839	39,321	39,368	39,852	39,435	40,428	40,913	44,596	45,559	48,556	49,418	49,750	26%
4,000 or more	5,880	5,720	5,900	6,026	6,135	6,460	6,464	6,192	6,473	6,340	6,767	6,980	7,561	7,832	7,901	34%
Not stated	14	3	4	6	5	5	5	6	9	13	5	12	18	6	11	-21%
															62,051	

Gestation (weeks)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
Less than 28	388	427	412	410	432	440	442	406	384	453	459	531	490	517	537	38%
28-36	3,446	3,354	3,461	3,388	3,449	3,725	3,632	3,803	3,890	4,028	4,369	4,595	4,763	4,775	4,909	42%
37-41	43,184	43,094	43,107	43,358	44,025	44,209	44,897	44,365	45,599	46,005	50,070	51,234	54,566	55,686	56,177	30%
42 or more	1,511	1,110	1,058	1,003	840	933	718	620	491	417	379	342	414	419	422	-72%
Not stated	6	2	-	4	1	11	1	2	3	7	4	6	11	5	6	0%

2013	2014	2015	2016	2017	2018
3,331	3,374	3,416	3,459	3,502	3,544
- 8	- 11	- 13	- 15	- 18	- 20
2,175	2,187	2,198	2,210	2,222	2,233
64	58	53	48	42	37
3,029	3,061	3,092	3,124	3,155	3,187
3,562	3,639	3,716	3,794	3,871	3,948
1,496	1,505	1,514	1,523	1,532	1,541
3,583	3,529	3,475	3,421	3,367	3,313
8,014	8,086	8,159	8,231	8,303	8,376
6,665	6,887	7,109	7,331	7,554	7,776
530	523	517	511	505	499
226	219	212	205	198	191
2,363	2,363	2,363	2,363	2,363	2,363
163	160	157	153	150	147
2,324	2,339	2,355	2,370	2,385	2,401
2,641	2,703	2,766	2,829	2,891	2,954
2,161	2,190	2,219	2,248	2,277	2,306
44,331	44,827	45,324	45,820	46,317	46,814
21,160	21,695	22,230	22,765	23,300	23,835

Mothers and Babies by Hospital of Delivery, Queensland 1995 to 2010 (Jan-Jun)

Notes:

Born Before Arrival are included as a separate category.

(a) BBA Not collected prior to 1 July 2000.

2010 (Jan-Jun) data are preliminary, incomplete and subject to change.

Source: Perinatal Data Collection, Queensland Health (updated 3 June 2011 MV)

Prepared by: Statistical Output, Health Statistics Centre, Queensland Health Ph: 3234 0911

			1995		1996		1997		1998		1999		2000		2001		2002		2003		2004
District 2011	Fac_id	Fac_Name	Mother	Babies	Mother	Babies	Mother	Babies	Mother	Babies	Mother	Babies	Mother	Babies	Mother	Babies	Mother	Babies	Mother	Babies	Mother
Cairns and Hinterland	211	Atherton	318	319	291	291	271	273	285	286	296	296	278	279	250	252	206	207	207	210	204
	212	Babinda	17	17	23	23	20	20	11	11	12	12	9	9	1	1	-	-	-	-	1
	214	Cairns	1,649	1,670	1,573	1,606	1,664	1,701	1,701	1,734	1,743	1,782	1,908	1,945	1,944	1,984	1,851	1,895	2,029	2,061	2,026
	215	Chillagoe	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
	217	Croydon	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	1	-
	220	Gordonvale	1	1	4	4	-	-	3	3	-	-	2	2	-	-	-	-	-	-	-
	222	Innisfail	317	318	322	324	282	283	330	331	290	291	308	308	250	250	256	256	225	225	217
	223	Mareeba	226	230	220	225	172	177	223	227	206	208	184	189	204	204	173	173	196	197	203
	224	Mossman	124	125	105	105	101	101	106	106	98	98	81	81	61	61	62	62	28	28	6
	227	Tully	63	63	38	38	49	49	38	38	35	35	26	26	21	21	20	20	25	26	25
	229	Yarrabah	13	13	10	10	7	7	11	11	6	7	6	6	8	8	7	7	9	9	14
Cairns and Hinterland Total			2,728	2,756	2,586	2,626	2,566	2,611	2,709	2,748	2,686	2,729	2,802	2,845	2,740	2,782	2,575	2,620	2,720	2,757	2,696
Cape York	216	Cooktown	11	11	20	20	15	15	19	19	19	19	17	17	12	12	9	9	9	9	3
	228	Weipa	9	9	15	16	3	3	10	10	6	6	2	2	2	2	-	-	2	2	3
	230	Aurukun PHC	4	4	1	1	-	-	-	-	4	4	-	-	1	1	4	4	1	1	4
	231	Hope Vale Primary Health Care Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1
	232	Wujal Wujal Primary Health Care Centr	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	233	Lockhart River PHC	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	253	Kowanyama PHC	1	1	1	1	-	-	-	-	-	-	2	2	-	-	1	1	-	-	-
	254	Pormpuraaw PHC	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-
	255	Coen PHC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
Cape York Total			28	28	39	40	18	18	29	29	30	30	22	22	15	15	16	16	13	13	12
Central Queensland	132	Baralaba	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	-	-	-
	133	Biloela	116	118	125	125	123	123	116	116	110	110	137	137	131	132	117	121	144	144	139
	134	Blackwater	13	13	14	15	-	-	6	6	3	3	3	3	-	-	3	3	4	4	1
	135	Emerald	271	273	221	223	275	275	282	283	299	301	342	344	356	357	321	321	300	300	277
	136	Gladstone	540	546	486	488	509	512	514	519	504	510	469	470	412	413	403	405	429	433	424
	139	Mount Morgan	9	9	12	12	9	9	6	6	6	6	3	3	5	5	8	8	10	10	7
	140	Moura	40	40	33	33	34	34	31	32	26	26	35	35	27	27	22	22	18	18	3
	141	Rockhampton	1,071	1,083	979	993	1,006	1,024	1,037	1,051	1,018	1,030	965	979	926	937	926	940	980	994	1,008
	142	Springsure	29	29	16	16	20	20	18	18	15	15	22	22	12	12	11	11	13	13	11
	143	Theodore	20	20	20	20	11	11	20	20	22	22	19	19	17	17	18	18	24	24	16
	144	Capricorn Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Yeppoon	32	32	15	15	18	18	15	15	13	13	7	7	7	7	1	1	4	4	2
	145	Woorabinda	7	7	7	7	7	7	8	8	5	5	2	2	1	1	-	-	2	2	4
Central Queensland Total			2,148	2,170	1,928	1,947	2,012	2,033	2,053	2,074	2,021	2,041	2,005	2,022	1,894	1,908	1,831	1,851	1,928	1,946	1,892
Central West	131	Alpha	9	9	3	3	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
	151	Aramac Primary Healthcare Centre	2	2	2	2	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-
	152	Barcaldine	18	18	13	13	19	20	17	17	13	13	24	24	20	20	8	8	8	8	1
	153	Blackall	19	19	19	19	20	20	21	21	21	21	15	15	15	15	3	3	9	9	2
	156	Longreach	87	87	92	92	94	96	85	87	82	85	90	93	81	81	98	98	111	112	67
	159	Winton	26	27	20	20	22	22	23	23	16	16	11	11	14	14	5	5	2	2	-
Central West Total			161	162	149	149	157	160	147	149	132	135	140	143	131	131	114	114	130	131	70
Darling Downs	63	Cherbourg	6	6	-	-	9	9	7	7	5	5	4	4	5	5	7	7	6	6	1
	70	Kingaroy	301	303	279	283	329	331	299	303	310	311	383	384	353	355	354	363	386	389	385
	75	Murgon	2	2	3	3	1	1	-	-	-	-	-	-	2	2	4	4	-	-	-

	76	Nanango	-	-	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
	77	Wondai	41	41	35	35	30	30	39	39	53	54	41	41	25	25	3	3	1	1	2
	91	Chinchilla	66	66	78	78	74	74	75	75	80	80	82	82	101	102	63	63	77	78	62
	92	Dalby	198	198	208	208	197	198	211	211	199	199	189	189	181	181	184	184	161	161	168
	93	Goondiwindi	116	117	121	122	102	102	125	125	120	121	127	130	127	128	81	81	98	100	86
	94	Inglewood	16	16	5	5	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1
	95	Jandowae	11	11	6	6	3	3	5	5	3	3	6	6	5	5	2	2	-	-	-
	97	Miles	28	29	28	28	43	45	30	30	23	23	35	35	18	18	8	8	12	12	8
	98	Millmerran	4	4	1	1	5	5	-	-	-	-	1	1	-	-	1	1	-	-	-
	99	Oakey	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
	100	Stanthorpe	82	82	124	124	107	108	105	105	128	128	94	94	151	151	123	123	111	113	132
	101	Tara	22	22	11	11	6	6	-	-	-	-	-	-	4	4	-	-	1	1	1
	102	Taroom	17	17	14	14	15	15	10	10	17	17	11	11	8	8	2	2	-	-	-
	103	Texas	11	11	6	6	1	1	1	1	2	2	-	-	1	1	-	-	1	1	-
	104	Toowoomba	1,413	1,428	1,400	1,415	1,362	1,389	1,406	1,424	1,464	1,486	1,450	1,470	1,329	1,351	1,383	1,403	1,344	1,369	1,400
	105	Warwick	195	195	230	230	266	266	216	216	291	291	244	245	223	223	218	218	234	234	197
Darling Downs Total			2,529	2,548	2,550	2,570	2,551	2,584	2,529	2,551	2,695	2,720	2,667	2,692	2,535	2,561	2,433	2,462	2,432	2,465	2,443
Gold Coast	50	Gold Coast	2,252	2,280	2,268	2,290	2,283	2,303	2,463	2,491	2,565	2,587	2,708	2,749	2,452	2,481	2,549	2,573	2,499	2,529	2,523
	991	Gold Coast Hospital Birthing Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold Coast Total			2,252	2,280	2,268	2,290	2,283	2,303	2,463	2,491	2,565	2,587	2,708	2,749	2,452	2,481	2,549	2,573	2,499	2,529	2,523
Mackay	171	Clermont	41	41	41	41	36	36	33	33	31	32	32	32	17	17	1	1	3	3	3
	172	Mackay	838	852	939	952	955	976	950	971	988	1,003	963	971	891	906	885	903	878	902	884
	173	Moranbah	46	46	41	41	34	34	35	35	32	32	37	37	34	34	36	36	25	25	23
	174	Proserpine	185	186	179	180	211	211	210	210	254	254	225	225	238	238	191	191	222	222	255
	175	Sarina	2	2	-	-	-	-	-	-	1	1	2	2	-	-	-	-	-	-	-
	176	Dysart	65	65	50	51	36	36	24	24	11	11	2	2	8	8	12	12	12	12	12
	192	Bowen	33	33	47	47	41	41	38	38	29	30	15	15	15	16	9	9	6	6	1
	194	Collinsville	9	9	10	11	1	1	4	4	-	-	4	4	2	2	1	1	1	1	-
	995	Mackay Base Hospital Birthing Centre	79	79	73	73	88	88	87	87	96	96	88	88	119	119	88	88	113	113	108
Mackay Total			1,298	1,313	1,380	1,396	1,402	1,423	1,381	1,402	1,442	1,459	1,368	1,376	1,324	1,340	1,223	1,241	1,260	1,284	1,286
Mater Public Hospitals	1	Mater Adult Public	1	1	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1
	3	Mater Mothers' Public	5,037	5,119	4,446	4,534	4,715	4,804	4,956	5,039	4,552	4,629	3,591	3,667	3,235	3,316	3,444	3,531	3,568	3,656	3,659
Mater Public Hospitals Total			5,038	5,120	4,447	4,535	4,715	4,804	4,956	5,039	4,552	4,629	3,591	3,667	3,236	3,317	3,444	3,531	3,568	3,656	3,660
Metro North	4	The Prince Charles Hospital	-	-	1	1	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-
	5	Royal Brisbane	2	2	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
	9	Royal Women's	4,768	4,892	4,273	4,367	4,076	4,192	3,949	4,045	3,919	4,024	3,859	3,959	3,727	3,828	3,649	3,757	1,797	1,845	-
	16	Redcliffe	1,176	1,189	1,178	1,190	1,108	1,116	1,121	1,131	1,178	1,190	1,230	1,242	1,152	1,171	1,115	1,125	983	993	1,046
	30	Caboolture	1,087	1,093	1,200	1,211	1,313	1,324	1,433	1,446	1,515	1,533	1,452	1,464	1,446	1,459	1,426	1,443	1,493	1,509	1,544
	46	Kilcoy	35	35	31	31	23	23	23	23	30	30	16	16	14	14	13	13	1	1	1
	201	Royal Brisbane and Women's	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,025	2,087	4,172
	994	Royal Brisbane & Women's Birthing Ce	87	87	196	196	197	197	196	197	294	294	299	299	323	323	301	301	346	346	350
Metro North Total			7,155	7,298	6,879	6,996	6,717	6,852	6,722	6,842	6,938	7,073	6,857	6,981	6,662	6,795	6,504	6,639	6,645	6,781	7,113
Metro South	11	Princess Alexandra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22	Queen Elizabeth II	-	-	-	-	1	1	-	-	-	-	1	1	-	-	2	2	-	-	-
	24	Wynnum	-	-	1	1	-	-	1	1	1	1	-	-	-	-	1	1	1	1	-
	25	Marie Rose Centre	3	3	1	1	6	6	3	3	4	4	-	-	2	2	-	-	2	2	1
	28	Redland	-	-	1	1	3	3	-	-	806	807	1,430	1,430	1,386	1,386	1,359	1,359	1,469	1,469	1,476
	29	Logan	2,184	2,206	2,805	2,825	2,518	2,546	2,485	2,505	2,514	2,532	2,636	2,669	2,568	2,597	2,569	2,602	2,532	2,561	2,633
	41	Beaudesert	321	323	327	330	304	309	334	337	354	354	468	470	385	388	14	14	54	54	3
Metro South Total			2,508	2,532	3,135	3,158	2,832	2,865	2,823	2,846	3,679	3,698	4,535	4,570	4,341	4,373	3,945	3,978	4,058	4,087	4,113
North West	242	Camooweal Health Clinic	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
	243	Cloncurry	6	6	5	5	9	9	7	7	6	6	7	7	7	7	5	5	4	4	4
	245	Julia Creek	1	1	3	3	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
	246	Mount Isa	637	639	610	617	600	603	622	626	625	633	630	635	576	582	519	523	570	574	509
	247	Normanton	2	2	1	1	2	2	5	5	3	3	1	1	-	-	-	-	-	-	2
	249	Mornington Island	2	2	1	1	-	-	1	1	1	1	3	3	-	-	-	-	1	1	1

	250	Karumba Health Clinic	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
	252	Doomadgee	2	2	1	1	1	1	1	1	1	1	1	1	4	4	-	-	2	2	1
North West Total			650	652	621	628	612	615	636	640	637	645	642	647	589	595	524	528	577	581	517
South West	111	Augathella	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	112	Charleville	62	63	76	76	72	73	85	86	89	90	60	60	66	68	67	67	49	49	50
	113	Cunnamulla	30	30	21	21	16	16	18	18	19	19	15	16	15	15	16	16	15	15	10
	114	Dirranbandi	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	5	5	2
	115	Injune	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
	116	Mitchell	13	13	11	11	9	9	7	7	8	8	5	5	4	4	-	-	-	-	-
	117	Mungindi	2	2	-	-	-	-	-	-	2	2	2	2	-	-	1	1	2	2	-
	118	Quilpie	8	8	2	2	7	7	2	2	1	1	-	-	-	-	-	-	-	-	-
	119	Roma	160	162	155	157	150	152	143	146	160	163	155	157	166	170	141	142	150	152	121
	120	St George	60	60	61	61	73	73	69	69	82	82	88	88	83	83	59	59	68	70	49
	121	Surat	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
South West Total			337	340	326	328	327	330	324	328	362	366	325	328	337	343	284	285	289	293	232
Sunshine Coast	43	Caloundra	-	-	4	4	3	3	1	1	3	3	-	-	-	-	-	-	1	1	-
	48	Maleny	22	22	31	31	29	29	27	27	26	26	16	16	19	19	27	27	-	-	-
	49	Nambour	1,996	2,017	2,091	2,120	2,007	2,037	1,971	1,995	1,984	2,010	1,858	1,885	1,856	1,875	1,802	1,830	1,796	1,831	1,723
	68	Gympie	437	439	418	418	396	397	385	387	346	347	383	385	333	333	218	219	276	276	279
Sunshine Coast Total			2,455	2,478	2,544	2,573	2,435	2,466	2,384	2,410	2,359	2,386	2,257	2,286	2,208	2,227	2,047	2,076	2,073	2,108	2,002
Torres Strait-Northern Penins	213	Bamaga	8	8	2	2	-	-	1	1	5	5	2	2	3	3	2	2	2	2	2
	226	Thursday Island	198	198	215	216	205	205	216	216	211	211	222	223	207	207	189	190	212	212	186
	939	Island Medical Service	-	-	-	-	-	-	-	-	-	-	1	1	3	3	-	-	1	1	-
	942	Badu Island Primary Health Care Centr	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	943	Boigu Island Primary Health Care Cent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
	945	Dauan Island Primary Health Care Cen	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	948	Murray island Medical Aid Post	-	-	1	1	-	-	-	-	1	1	2	2	-	-	-	-	-	-	-
	949	Saibai Island Primary Health Care Cen	-	-	-	-	-	-	-	-	2	2	-	-	-	-	2	2	1	1	-
Torres Strait-Northern Peninsula Total			206	206	219	220	206	206	217	217	219	219	227	228	213	213	193	194	217	217	188
Townsville	191	Ayr	250	252	195	197	171	171	198	200	161	162	170	170	147	147	136	136	123	123	107
	193	Charters Towers	116	117	37	37	59	59	80	80	70	70	93	93	56	56	58	58	42	42	60
	196	Ingham	144	144	163	163	148	148	156	156	135	135	141	141	125	125	108	110	63	63	89
	197	Joyce Palmer HS	12	12	10	10	22	23	19	19	15	15	21	21	21	21	20	20	7	7	11
	198	Townsville	1	1	2	2	-	-	1	1	2	2	1	1	-	-	-	-	-	-	-
	199	Kirwan	1,658	1,660	1,696	1,722	1,641	1,669	1,687	1,712	1,694	1,728	1,729	1,774	1,343	1,366	-	-	-	-	-
	200	Townsville	-	-	-	-	-	-	-	-	-	-	-	-	333	340	1,559	1,589	1,641	1,667	1,530
	244	Hughenden	12	12	5	5	8	8	6	6	6	6	5	5	3	3	4	4	2	2	1
	248	Richmond	4	4	8	8	2	2	2	2	-	-	1	1	1	1	-	-	-	-	-
	916	Magnetic Island Health Service	1	1	4	4	2	2	-	-	1	1	2	2	-	-	2	2	1	1	-
	989	Townsville Hospital Birthing Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Townsville Total			2,198	2,223	2,120	2,148	2,053	2,082	2,149	2,176	2,084	2,119	2,163	2,208	2,029	2,059	1,887	1,919	1,879	1,905	1,798
West Moreton	15	Ipswich	1,676	1,697	1,638	1,652	1,652	1,670	1,656	1,683	1,717	1,744	1,889	1,910	1,734	1,752	1,674	1,694	1,758	1,774	1,711
	42	Boonah	15	15	12	12	1	1	2	2	-	-	-	-	1	1	-	-	1	1	1
	44	Esk	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	45	Gatton	14	14	15	15	14	15	22	22	15	15	1	1	1	1	3	3	-	-	2
	47	Laidley	1	1	-	-	-	-	1	1	-	-	2	2	-	-	-	-	1	1	2
	799	Brisbane Womens Offender Health Ser	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
West Moreton Total			1,707	1,728	1,665	1,679	1,667	1,686	1,681	1,708	1,733	1,760	1,892	1,913	1,736	1,754	1,677	1,697	1,760	1,776	1,717
Wide Bay	61	Biggenden	-	-	-	-	-	-	1	1	1	1	3	3	2	2	1	1	1	1	1
	62	Bundaberg	882	894	767	782	847	856	881	896	840	848	868	879	822	829	755	765	742	751	832
	64	Childers	3	3	-	-	1	1	1	1	1	1	-	-	1	1	4	4	2	2	4
	65	Eidsvold	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-
	66	Gayndah	10	10	10	10	5	5	5	5	8	8	6	6	3	3	4	4	3	3	1
	67	Gin Gin	1	1	2	2	1	1	-	-	1	1	-	-	-	-	-	-	1	1	-
	69	Hervey Bay	58	58	70	70	43	43	383	386	412	418	431	434	415	420	598	612	759	770	795
	71	Maryborough	852	856	858	867	804	810	368	377	321	324	344	350	328	332	171	172	40	40	26

72	Monto	45	45	34	34	38	38	28	28	37	37	33	33	22	22	29	29	21	21	28
74	Mundubbera	22	22	5	5	13	13	5	5	16	16	6	6	-	-	1	1	1	1	2
996	Bundaberg Hospital Birthing Centre	24	24	70	70	32	32	-	-	-	-	-	-	-	-	-	-	-	-	-
Wide Bay Total		1,897	1,913	1,816	1,840	1,785	1,800	1,673	1,700	1,637	1,654	1,691	1,711	1,593	1,609	1,563	1,588	1,570	1,590	1,689
Public Hospitals Total		**35,295**	**35,747**	**34,672**	**35,123**	**34,338**	**34,838**	**34,876**	**35,350**	**35,771**	**36,250**	**35,892**	**36,388**	**34,035**	**34,503**	**32,809**	**33,312**	**33,618**	**34,119**	**33,951**
Home Birth		**242**	**242**	**238**	**240**	**212**	**213**	**171**	**171**	**164**	**164**	**126**	**126**	**102**	**103**	**61**	**61**	**67**	**67**	**57**
Private Hospitals		**12,290**	**12,509**	**12,363**	**12,595**	**12,726**	**12,984**	**12,399**	**12,637**	**12,106**	**12,332**	**12,425**	**12,723**	**14,609**	**14,922**	**15,288**	**15,656**	**15,594**	**15,946**	**15,759**
Born Before Arrival (BBA) [(a)]		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**79**	**79**	**162**	**162**	**165**	**166**	**232**	**234**	**283**
Not Stated		**37**	**37**	**29**	**29**	**2**	**3**	**4**	**5**	**1**	**1**	**2**	**2**	**-**	**-**	**1**	**1**	**1**	**1**	**1**
Queensland		**47,864**	**48,535**	**47,302**	**47,987**	**47,278**	**48,038**	**47,450**	**48,163**	**48,042**	**48,747**	**48,524**	**49,318**	**48,908**	**49,690**	**48,324**	**49,196**	**49,512**	**50,367**	**50,051**

	2005		2006		2007		2008		2009		2010(Jan-June)p	
Babies	Mother	Babies	Mother	Babies	Mother	Babies	Mother	Babies	Mother	Babies	Mothers	Babies
204	224	225	231	232	245	246	224	224	205	206	117	117
1	-	-	-	-	-	-	-	-	-	-	-	-
2,061	2,293	2,323	2,296	2,325	2,466	2,521	2,543	2,588	2,565	2,604	1,292	1,307
-	-	-	-	-	-	-	1	1	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
217	251	253	212	213	249	249	302	303	294	294	155	155
204	138	138	157	157	172	174	138	138	124	124	72	72
6	13	13	10	10	9	9	9	9	10	10	4	4
25	26	26	22	23	20	20	9	9	17	17	6	6
14	8	8	5	5	11	11	7	8	6	6	3	3
2,732	2,953	2,986	2,933	2,965	3,172	3,230	3,233	3,280	3,221	3,261	1,649	1,664
3	5	5	2	2	3	3	1	1	3	3	4	4
3	1	1	2	2	1	1	1	1	-	-	1	1
4	-	-	-	-	-	-	-	-	1	1	-	-
1	-	-	-	-	-	-	1	1	-	-	-	-
-	-	-	-	-	1	1	-	-	-	-	-	-
1	-	-	1	1	-	-	-	-	-	-	-	-
-	-	-	-	-	1	1	-	-	-	-	-	-
-	1	1	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
12	7	7	5	5	6	6	3	3	4	4	5	5
-	-	-	1	1	-	-	-	-	-	-	-	-
139	129	130	155	155	134	134	119	119	111	111	43	43
1	4	4	-	-	-	-	6	6	2	2	-	-
277	305	306	180	180	277	279	304	304	311	311	141	142
429	388	393	434	436	510	513	538	544	483	485	248	249
7	4	4	4	4	3	3	2	2	2	2	1	1
3	-	-	-	-	1	1	3	3	2	2	-	-
1,018	1,118	1,139	1,221	1,247	1,220	1,237	1,270	1,290	1,302	1,317	702	714
11	8	8	12	12	5	5	2	2	2	2	-	-
16	25	25	26	26	24	24	22	22	21	21	15	15
-	-	-	-	-	-	-	-	-	3	3	1	1
2	3	3	2	2	3	3	1	1	1	1	-	-
4	1	1	2	2	2	2	-	-	2	2	1	1
1,907	1,985	2,013	2,037	2,065	2,179	2,201	2,267	2,293	2,242	2,259	1,152	1,166
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	1	1	-	-	-	-	-	-	-	-
67	89	89	94	94	101	104	104	106	95	95	66	66
-	2	2	-	-	-	-	1	1	-	-	-	-
70	91	91	95	95	101	104	105	107	95	95	66	66
1	5	5	11	11	3	3	3	3	1	1	1	1
387	403	409	431	435	426	432	433	437	393	394	226	228
-	-	-	1	1	1	1	1	1	1	1	-	-

-	-	-	1	1	-	-	1	1	-	-	-	-
2	1	1	-	-	-	-	-	-	-	-	-	-
62	62	62	90	90	71	72	70	70	71	71	23	23
168	198	198	196	196	208	209	232	232	244	245	129	129
86	94	95	109	109	106	106	120	120	87	87	65	65
1	1	1	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	1	1	2	2	1	1	-	-
9	5	5	1	1	1	1	1	1	1	1	1	1
-	-	-	-	-	1	1	-	-	2	2	1	1
-	-	-	-	-	-	-	-	-	-	-	-	-
135	135	136	136	137	141	141	135	135	147	147	75	75
1	-	-	1	1	3	3	1	1	-	-	-	-
-	-	-	-	-	-	-	1	1	-	-	-	-
-	-	-	-	-	1	1	2	2	-	-	-	-
1,423	1,529	1,548	1,658	1,688	1,751	1,779	1,720	1,752	1,850	1,880	975	988
197	236	237	227	227	236	236	225	225	224	225	96	96
2,472	2,669	2,697	2,862	2,897	2,950	2,986	2,947	2,983	3,022	3,055	1,592	1,607
2,545	2,775	2,818	2,888	2,929	3,066	3,103	3,227	3,274	3,221	3,265	1,692	1,722
-	-	-	84	84	134	134	133	133	131	131	61	61
2,545	2,775	2,818	2,972	3,013	3,200	3,237	3,360	3,407	3,352	3,396	1,753	1,783
3	-	-	1	1	1	1	-	-	-	-	1	1
904	1,027	1,049	1,041	1,057	1,077	1,090	1,093	1,104	1,174	1,190	546	550
23	22	22	3	3	4	4	4	4	3	3	1	1
255	240	241	237	238	259	259	286	286	303	303	145	145
-	1	1	2	2	-	-	-	-	1	1	-	-
12	14	14	12	12	3	3	3	3	2	2	2	2
1	4	4	5	5	2	2	4	4	9	9	2	2
-	-	-	1	1	1	1	1	1	-	-	1	1
108	102	102	86	86	100	100	93	93	95	95	48	48
1,306	1,410	1,433	1,388	1,405	1,447	1,460	1,484	1,495	1,587	1,603	746	750
1	-	-	-	-	-	-	-	-	-	-	1	1
3,756	3,671	3,788	3,692	3,801	3,822	3,937	4,117	4,221	4,726	4,844	2,462	2,532
3,757	3,671	3,788	3,692	3,801	3,822	3,937	4,117	4,221	4,726	4,844	2,463	2,533
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
1,056	1,144	1,160	1,303	1,314	1,456	1,473	1,490	1,510	1,533	1,552	747	754
1,559	1,765	1,782	1,791	1,816	1,776	1,804	1,936	1,959	1,929	1,949	1,004	1,017
1	1	1	1	1	-	-	-	-	-	-	-	-
4,285	4,057	4,162	3,776	3,885	4,402	4,521	4,056	4,175	4,210	4,317	2,118	2,174
350	341	341	302	302	270	270	199	199	272	272	165	165
7,251	7,308	7,446	7,173	7,318	7,904	8,068	7,681	7,843	7,944	8,090	4,034	4,110
-	-	-	-	-	-	-	-	-	1	1	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
1	1	1	1	1	2	2	4	4	4	4	1	1
1,476	1,785	1,785	1,938	1,938	2,189	2,196	2,120	2,133	2,015	2,029	1,000	1,004
2,663	3,106	3,139	3,325	3,352	3,475	3,503	3,482	3,512	3,427	3,458	1,741	1,763
3	-	-	-	-	2	2	4	4	1	1	1	1
4,143	4,892	4,925	5,264	5,291	5,668	5,703	5,610	5,653	5,448	5,493	2,743	2,769
-	-	-	-	-	-	-	-	-	-	-	-	-
4	3	3	2	2	1	1	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
511	609	614	536	537	586	591	595	605	532	536	288	290
2	2	2	-	-	2	2	3	3	3	3	1	1
1	-	-	-	-	1	1	1	1	-	-	1	1

-	-	-	-	-	-	-	-	-	-	-	-	-
1	1	1	-	-	4	4	1	1	1	1	-	-
519	615	620	538	539	594	599	600	610	536	540	290	292
-	-	-	-	-	-	-	1	1	-	-	-	-
50	49	49	43	43	52	52	46	46	74	74	26	26
10	7	7	10	10	10	10	8	8	6	6	7	7
2	-	-	1	1	1	1	2	2	1	1	1	1
-	-	-	-	-	2	2	-	-	-	-	-	-
-	-	-	1	1	-	-	1	1	-	-	1	1
-	-	-	-	-	-	-	1	1	2	2	-	-
-	-	-	-	-	-	-	-	-	1	1	-	-
121	136	136	142	142	151	151	126	127	132	133	52	52
49	65	65	70	70	72	72	62	62	62	62	31	31
-	1	1	-	-	-	-	-	-	1	1	-	-
232	258	258	267	267	288	288	247	248	279	280	118	118
-	-	-	1	1	-	-	-	-	-	-	-	-
-	2	2	-	-	1	1	-	-	1	1	-	-
1,756	1,989	2,017	2,070	2,103	2,133	2,169	2,167	2,200	2,180	2,209	1,093	1,105
279	311	311	307	308	340	340	381	381	344	344	174	176
2,035	2,302	2,330	2,378	2,412	2,474	2,510	2,548	2,581	2,525	2,554	1,267	1,281
2	2	2	2	2	1	1	-	-	1	1	-	-
187	180	181	171	171	161	161	186	187	161	162	81	81
-	2	2	-	-	2	2	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	1	1	-	-
-	-	-	-	-	2	2	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	2	2	-	-
-	5	5	3	3	2	2	1	1	7	7	2	2
189	189	190	176	176	168	168	187	188	172	173	83	83
107	140	141	155	155	169	171	161	162	139	139	72	72
60	73	75	39	39	58	58	39	39	41	42	13	13
89	16	16	13	13	11	11	14	14	9	10	7	7
11	15	15	3	3	9	9	6	6	5	5	1	1
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
1,551	1,881	1,908	1,969	2,013	2,084	2,124	2,217	2,252	2,118	2,155	991	1,007
1	-	-	-	-	-	-	1	1	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	1	1	-	-	-	-	-	-
-	-	-	-	-	-	-	6	6	84	84	62	62
1,819	2,125	2,155	2,179	2,223	2,332	2,374	2,444	2,480	2,396	2,435	1,146	1,162
1,727	2,051	2,077	2,191	2,215	2,394	2,428	2,503	2,538	2,546	2,572	1,269	1,283
1	1	1	-	-	-	-	-	-	1	1	-	-
1	-	-	1	1	1	1	-	-	-	-	-	-
2	1	1	-	-	1	1	1	1	1	1	1	1
2	2	2	2	2	6	6	3	3	1	1	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
1,733	2,055	2,081	2,194	2,218	2,402	2,436	2,507	2,542	2,549	2,575	1,270	1,284
1	2	2	-	-	1	1	1	1	1	2	-	-
845	839	850	1,037	1,049	1,138	1,156	1,204	1,218	1,128	1,142	591	598
4	-	-	1	1	1	1	-	-	1	1	-	-
-	1	1	-	-	-	-	-	-	-	-	-	-
1	1	1	2	2	3	4	1	1	1	1	2	2
-	-	-	2	2	2	2	-	-	1	1	-	-
801	910	917	978	989	1,042	1,052	1,028	1,044	977	991	548	554
26	16	16	5	5	3	3	2	2	1	1	-	-

28	32	32	4	4	3	3	1	1	-	-	-	-
2	1	1	-	-	1	1	1	1	-	-	1	1
-	-	-	-	-	-	-	-	-	-	-	-	-
1,708	1,802	1,820	2,029	2,052	2,194	2,223	2,238	2,268	2,110	2,139	1,142	1,155
34,430	**37,107**	**37,658**	**38,182**	**38,742**	**40,901**	**41,530**	**41,578**	**42,202**	**42,208**	**42,796**	**21,519**	**21,828**
58	**42**	**42**	**47**	**47**	**81**	**81**	**110**	**110**	**123**	**123**	**51**	**51**
16,138	**16,891**	**17,284**	**17,188**	**17,615**	**17,909**	**18,294**	**18,281**	**18,731**	**18,328**	**18,767**	**9,463**	**9,680**
283	**297**	**297**	**300**	**302**	**337**	**339**	**358**	**358**	**365**	**366**	**207**	**208**
1	**-**	**-**	**2**	**2**	**-**	**-**	**1**	**1**	**-**	**-**	**-**	**-**
50,910	**54,337**	**55,281**	**55,719**	**56,708**	**59,228**	**60,244**	**60,328**	**61,402**	**61,024**	**62,052**	**31,240**	**31,767**

District 2011	Fac_Name	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Cairns and	Atherton	319	291	273	286	296	279	252	207	210	204	225	232	246	224	206
	Babinda	17	23	20	11	12	9	1	-	-	1	-	-	-	-	-
	Cairns	1,670	1,606	1,701	1,734	1,782	1,945	1,984	1,895	2,061	2,061	2,323	2,325	2,521	2,588	2,604
	Chillagoe	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-
	Croydon	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-
	Gordonvale	1	4	-	3	-	2	-	-	-	-	-	-	-	-	-
	Innisfail	318	324	283	331	291	308	250	256	225	217	253	213	249	303	294
	Mareeba	230	225	177	227	208	189	204	173	197	204	138	157	174	138	124
	Mossman	125	105	101	106	98	81	61	62	28	6	13	10	9	9	10
	Tully	63	38	49	38	35	26	21	20	26	25	26	23	20	9	17
	Yarrabah	13	10	7	11	7	6	8	7	9	14	8	5	11	8	6
Cairns and Hinterland Total		2,756	2,626	2,611	2,748	2,729	2,845	2,782	2,620	2,757	2,732	2,986	2,965	3,230	3,280	3,261
Cape York	Cooktown	11	20	15	19	19	17	12	9	9	3	5	2	3	1	3
	Weipa	9	16	3	10	6	2	2	-	2	3	1	2	1	1	-
	Aurukun PHC	4	1	-	-	4	-	1	4	1	4	-	-	-	-	1
	Hope Vale Primary Health Care Centre	-	-	-	-	-	-	-	1	1	1	-	-	-	1	-
	Wujal Wujal Primary Health Care Centre	2	1	-	-	-	-	-	-	-	-	-	-	1	-	-
	Lockhart River PHC	1	1	-	-	-	-	-	-	-	1	-	1	-	-	-
	Kowanyama PHC	1	1	-	-	-	2	-	1	-	-	-	-	1	-	-
	Pormpuraaw PHC	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-
	Coen PHC	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Cape York Total		28	40	18	29	30	22	15	16	13	12	7	5	6	3	4
Central Qu	Baralaba	-	-	-	-	-	1	-	1	-	-	-	1	-	-	-
	Biloela	118	125	123	116	110	137	132	121	144	139	130	155	134	119	111
	Blackwater	13	15	-	6	3	3	-	3	4	1	4	-	-	6	2
	Emerald	273	223	275	283	301	344	357	321	300	277	306	180	279	304	311
	Gladstone	546	488	512	519	519	470	413	405	433	429	393	436	513	544	485
	Mount Morgan	9	12	9	6	6	3	5	8	10	7	4	4	3	2	2
	Moura	40	33	34	32	26	35	27	22	18	3	-	-	1	3	2
	Rockhampton	1,083	993	1,024	1,051	1,030	979	937	940	994	1,018	1,139	1,247	1,237	1,290	1,317
	Springsure	29	16	20	18	15	22	12	11	13	11	8	12	5	2	2
	Theodore	20	20	11	20	22	19	17	18	24	16	25	26	24	22	21
	Capricorn Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	Yeppoon	32	15	18	15	13	7	7	1	4	2	3	2	3	1	1
	Woorabinda	7	7	7	8	5	2	1	-	2	4	1	2	2	-	2
Central Queensland Total		2,170	1,947	2,033	2,074	2,041	2,022	1,908	1,851	1,946	1,907	2,013	2,065	2,201	2,293	2,259
Central We	Alpha	9	3	-	-	-	-	1	-	-	-	-	-	-	-	-
	Aramac Primary Healthcare Centre	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-
	Barcaldine	18	13	20	17	13	24	20	8	8	1	-	-	-	-	-
	Blackall	19	19	20	21	21	15	15	3	9	2	-	1	-	-	-
	Longreach	87	92	96	87	85	93	81	98	112	67	89	94	104	106	95
	Winton	27	20	22	23	16	11	14	5	2	-	2	-	-	1	-
Central West Total		162	149	160	149	135	143	131	114	131	70	91	95	104	107	95
Darling Do	Cherbourg	6	-	9	7	5	4	5	7	6	1	5	11	3	3	1
	Kingaroy	303	283	331	303	311	384	355	363	389	387	409	435	432	437	394
	Murgon	2	3	1	-	-	-	2	4	-	-	-	1	1	1	1
	Nanango	-	1	-	-	-	-	1	-	-	-	-	1	-	1	-
	Wondai	41	35	30	39	54	41	25	3	1	2	1	-	-	-	-
	Chinchilla	66	78	74	75	80	82	102	63	78	62	62	90	72	70	71
	Dalby	198	208	198	211	199	189	181	184	161	168	198	196	209	232	245

	Goondiwindi	117	122	102	125	121	130	128	81	100	86	95	109	106	120	87
	Inglewood	16	5	1	-	-	-	-	-	-	1	1	-	-	-	-
	Jandowae	11	6	3	5	3	6	5	2	-	-	-	-	1	2	1
	Miles	29	28	45	30	23	35	18	8	12	9	5	1	1	1	1
	Millmerran	4	1	5	-	-	1	-	1	-	-	-	-	1	-	2
	Oakey	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	Stanthorpe	82	124	108	105	128	94	151	123	113	135	136	137	141	135	147
	Tara	22	11	6	-	-	-	4	-	1	1	-	1	3	1	-
	Taroom	17	14	15	10	17	11	8	2	-	-	-	-	-	1	-
	Texas	11	6	1	1	2	-	1	-	1	-	-	-	1	2	-
	Toowoomba	1,428	1,415	1,389	1,424	1,486	1,470	1,351	1,403	1,369	1,423	1,548	1,688	1,779	1,752	1,880
	Warwick	195	230	266	216	291	245	223	218	234	197	237	227	236	225	225
Darling Downs Total		2,548	2,570	2,584	2,551	2,720	2,692	2,561	2,462	2,465	2,472	2,697	2,897	2,986	2,983	3,055
Gold Coast	Gold Coast	2,280	2,290	2,303	2,491	2,587	2,749	2,481	2,573	2,529	2,545	2,818	2,929	3,103	3,274	3,265
	Gold Coast Hospital Birthing Centre	-	-	-	-	-	-	-	-	-	-	-	84	134	133	131
Gold Coast Total		2,280	2,290	2,303	2,491	2,587	2,749	2,481	2,573	2,529	2,545	2,818	3,013	3,237	3,407	3,396
Mackay	Clermont	41	41	36	33	32	32	17	1	3	3	-	1	1	-	-
	Mackay	852	952	976	971	1,003	971	906	903	902	904	1,049	1,057	1,090	1,104	1,190
	Moranbah	46	41	34	35	32	37	34	36	25	23	22	3	4	4	3
	Proserpine	186	180	211	210	254	225	238	191	222	255	241	238	259	286	303
	Sarina	2	-	-	-	1	2	-	-	-	-	1	2	-	-	1
	Dysart	65	51	36	24	11	2	8	13	12	12	14	12	3	3	2
	Bowen	33	47	41	38	30	15	16	9	6	1	4	5	2	4	9
	Collinsville	9	11	1	4	-	4	2	1	1	-	-	1	1	1	-
	Mackay Base Hospital Birthing Centre	79	73	88	87	96	88	119	88	113	108	102	86	100	93	95
Mackay Total		1,313	1,396	1,423	1,402	1,459	1,376	1,340	1,241	1,284	1,306	1,433	1,405	1,460	1,495	1,603
Mater Publ	Mater Adult Public	1	1	-	-	-	-	1	-	-	1	-	-	-	-	-
	Mater Mothers' Public	5,119	4,534	4,804	5,039	4,629	3,667	3,316	3,531	3,656	3,756	3,788	3,801	3,937	4,221	4,844
~~Mater Public Hospitals Total~~		~~5,120~~	~~4,535~~	~~4,804~~	~~5,039~~	~~4,629~~	~~3,667~~	~~3,317~~	~~3,531~~	~~3,656~~	~~3,757~~	~~3,788~~	~~3,801~~	~~3,937~~	~~4,221~~	~~4,844~~
Metro Nort	The Prince Charles Hospital	-	1	-	-	1	1	-	-	-	-	-	-	-	-	-
	Royal Brisbane	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-
	Royal Women's	4,892	4,367	4,192	4,045	4,024	3,959	3,828	3,757	1,845	-	-	-	-	-	-
	Redcliffe	1,189	1,190	1,116	1,131	1,190	1,242	1,171	1,125	993	1,056	1,160	1,314	1,473	1,510	1,552
	Caboolture	1,093	1,211	1,324	1,446	1,533	1,464	1,459	1,443	1,509	1,559	1,782	1,816	1,804	1,959	1,949
	Kilcoy	35	31	23	23	30	16	14	13	1	1	1	1	-	-	-
	Royal Brisbane and Women's	-	-	-	-	-	-	-	-	2,087	4,285	4,162	3,885	4,521	4,175	4,317
	Royal Brisbane & Women's Birthing Centre	87	196	197	197	294	299	323	301	346	350	341	302	270	199	272
Metro North Total		7,298	6,996	6,852	6,842	7,073	6,981	6,795	6,639	6,781	7,251	7,446	7,318	8,068	7,843	8,090
Metro Sout	Princess Alexandra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Queen Elizabeth II	-	-	1	-	-	1	-	2	-	-	-	-	-	-	-
	Wynnum	-	1	-	1	1	-	-	1	1	-	-	-	-	-	-
	Marie Rose Centre	3	1	6	3	4	-	2	-	2	1	1	1	2	4	4
	Redland	-	1	3	-	807	1,430	1,386	1,359	1,469	1,476	1,785	1,938	2,196	2,133	2,029
	Logan	2,206	2,825	2,546	2,505	2,532	2,669	2,597	2,602	2,561	2,663	3,139	3,352	3,503	3,512	3,458
	Beaudesert	323	330	309	337	354	470	388	14	54	3	-	-	2	4	1
Metro South Total		2,532	3,158	2,865	2,846	3,698	4,570	4,373	3,978	4,087	4,143	4,925	5,291	5,703	5,653	5,493
North Wes	Camooweal Health Clinic	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
	Cloncurry	6	5	9	7	6	7	7	5	4	4	3	2	1	-	-
	Julia Creek	1	3	-	-	-	-	1	-	-	-	-	-	-	-	-
	Mount Isa	639	617	603	626	633	635	582	523	574	511	614	537	591	605	536
	Normanton	2	1	2	5	3	1	-	-	-	2	2	-	2	3	3
	Mornington Island	2	1	-	1	1	3	-	-	1	1	-	-	1	1	-
	Karumba Health Clinic	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	Doomadgee	2	1	1	1	1	1	4	-	2	1	1	-	4	1	1
North West Total		652	628	615	640	645	647	595	528	581	519	620	539	599	610	540
South Wes	Augathella	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-

	Charleville	63	76	73	86	90	60	68	67	49	50	49	43	52	46	74
	Cunnamulla	30	21	16	18	19	16	15	16	15	10	7	10	10	8	6
	Dirranbandi	-	-	-	-	-	-	2	-	5	2	-	1	1	2	1
	Injune	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-
	Mitchell	13	11	9	7	8	5	4	-	-	-	-	1	-	1	-
	Mungindi	2	-	-	-	2	2	-	1	2	-	-	-	-	1	2
	Quilpie	8	2	7	2	1	-	-	-	-	-	-	-	-	-	1
	Roma	162	157	152	146	163	157	170	142	152	121	136	142	151	127	133
	St George	60	61	73	69	82	88	83	59	70	49	65	70	72	62	62
	Surat	-	-	-	-	1	-	-	-	-	-	1	-	-	-	1
South West Total		340	328	330	328	366	328	343	285	293	232	258	267	288	248	280
Sunshine C	Caloundra	-	4	3	1	3	-	-	-	1	-	-	1	-	-	-
	Maleny	22	31	29	27	26	16	19	27	-	-	2	-	1	-	1
	Nambour	2,017	2,120	2,037	1,995	2,010	1,885	1,875	1,830	1,831	1,756	2,017	2,103	2,169	2,200	2,209
	Gympie	439	418	397	387	347	385	333	219	276	279	311	308	340	381	344
Sunshine Coast Total		2,478	2,573	2,466	2,410	2,386	2,286	2,227	2,076	2,108	2,035	2,330	2,412	2,510	2,581	2,554
Torres Stra	Bamaga	8	2	-	1	5	2	3	2	2	2	2	2	1	-	1
	Thursday Island	198	216	205	216	211	223	207	190	212	187	181	171	161	187	162
	Island Medical Service	-	-	-	-	-	1	3	-	1	-	2	-	2	-	-
	Badu Island Primary Health Care Centre	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
	Boigu Island Primary Health Care Centre	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-
	Dauan Island Primary Health Care Centre	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
	Murray island Medical Aid Post	-	1	-	-	1	2	-	-	-	-	-	-	-	-	2
	Saibai Island Primary Health Care Centre	-	-	-	-	2	-	2	1	-	5	3	2	1	7	
Torres Strait-Northern Peninsula Total		206	220	206	217	219	228	213	194	217	189	190	176	168	188	173
Townsville	Ayr	252	197	171	200	162	170	147	136	123	107	141	155	171	162	139
	Charters Towers	117	37	59	80	70	93	56	58	42	60	75	39	58	39	42
	Ingham	144	163	148	156	135	141	125	110	63	89	16	13	11	14	10
	Joyce Palmer HS	12	10	23	19	15	21	21	20	7	11	15	3	9	6	5
	Townsville	1	2	-	1	2	1	-	-	-	-	-	-	-	-	-
	Kirwan	1,680	1,722	1,669	1,712	1,728	1,774	1,366	-	-	-	-	-	-	-	-
	Townsville	-	-	-	-	-	-	340	1,589	1,667	1,551	1,908	2,013	2,124	2,252	2,155
	Hughenden	12	5	8	6	6	5	3	4	2	1	-	-	-	1	-
	Richmond	4	8	2	2	-	1	1	-	-	-	-	-	-	-	-
	Magnetic Island Health Service	1	4	2	-	1	2	-	2	1	-	-	-	1	-	-
	Townsville Hospital Birthing Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	6	84
Townsville Total		2,223	2,148	2,082	2,176	2,119	2,208	2,059	1,919	1,905	1,819	2,155	2,223	2,374	2,480	2,435
West More	Ipswich	1,697	1,652	1,670	1,683	1,744	1,910	1,752	1,694	1,774	1,727	2,077	2,215	2,428	2,538	2,572
	Boonah	15	12	1	2	-	-	1	-	1	1	1	-	-	-	1
	Esk	1	-	-	-	-	-	-	-	-	1	-	1	1	-	-
	Gatton	14	15	15	22	15	1	1	3	-	2	1	-	1	1	1
	Laidley	1	-	-	1	-	2	-	-	1	2	2	2	6	3	1
	Brisbane Womens Offender Health Service	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
West Moreton Total		1,728	1,679	1,686	1,708	1,760	1,913	1,754	1,697	1,776	1,733	2,081	2,218	2,436	2,542	2,575
Wide Bay	Biggenden	-	-	-	1	1	3	2	1	1	1	2	-	1	1	2
	Bundaberg	894	782	856	896	848	879	829	765	751	845	850	1,049	1,156	1,218	1,142
	Childers	3	-	1	1	1	-	1	4	2	4	-	1	1	-	1
	Eidsvold	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-
	Gayndah	10	10	5	5	8	6	3	4	3	1	1	2	4	1	1
	Gin Gin	1	2	1	-	1	-	-	-	1	-	-	2	2	-	1
	Hervey Bay	58	70	43	386	418	434	420	612	770	801	917	989	1,052	1,044	991
	Maryborough	856	867	810	377	324	350	332	172	40	26	16	5	3	2	1
	Monto	45	34	38	28	37	33	22	29	21	28	32	4	3	1	-
	Mundubbera	22	5	13	5	16	6	-	1	1	2	1	-	1	1	-
	Bundaberg Hospital Birthing Centre	24	70	32	-	-	-	-	-	-	-	-	-	-	-	-
Wide Bay Total		1,913	1,840	1,800	1,700	1,654	1,711	1,609	1,588	1,590	1,708	1,820	2,052	2,223	2,268	2,139

Public Hospitals Total	35,747	35,123	34,838	35,350	36,250	36,388	34,503	33,312	34,119	34,430	37,658	38,742	41,530	42,202	42,796
Home Birth	242	240	213	171	164	126	103	61	67	58	42	47	81	110	123
Private Hospitals	12,509	12,595	12,984	12,637	12,332	12,723	14,922	15,656	15,946	16,138	17,284	17,615	18,294	18,731	18,767
Born Before Arrival (BBA) [(a)]	-	-	-	-	-	79	162	166	234	283	297	302	339	358	366
Not Stated	37	29	3	5	1	2	-	1	1	1	-	2	-	1	-
Queensland	48,535	47,987	48,038	48,163	48,747	49,318	49,690	49,196	50,367	50,910	55,281	56,708	60,244	61,402	62,052

0738401949

Mater

Health Services Brisbane Limited

Facsimile

To:	Colleen Jen Senior Director, Planning Branch
Fax:	340 56138
From:	Mary Kane A/g Deputy Director, Newborn Sevices & Maternal Fetal Medicine
Phone:	07 3163 2488 / 2276
Date:	10 August 2012
Subject:	Health Service Planning Benchmarks Discussion Paper Feedback from Mater Health Services
# Pages (inc. this cover sheet):	4

☐ Urgent ☐ Reply required ☐ Original to follow ☑ Confirm Receipt

Dear Colleen

Please find following Feedback from Mater Health Services re the Health Service Planning Benchmarks Discussion Paper.

Kind Regards

R. Olsen

Rose Olsen (*on behalf of*)
Mary Kane
A/g Deputy Director – Newborn Services & Maternal Fetal Medicine
Mater Health Services

Tel. 07 3163 2488
Fax: 07 3616 1949
Email: mary.kane@mater.org.au

Health Service Planning Benchmarks Discussion Paper

Feedback from Mater Health Services Due 10 August

Submitted to: **Colleen Jen**

Senior Director, Planning Branch

On the 9th August 2012

Key Questions Feedback:

1. ***Are you aware of any issues in applying the currently endorsed service planning benchmark for neonatal intensive care or special care nursery services?***

   YES

   a. Page 8 2.2, last paragraph: "there are a further 25 licensed NICU" change to 37 licensed NICU cots with the understanding that these NICU cots are at Mater Health Services and are the total number of private and public NICU cots within Mater Health Services, Brisbane. All Mater cots are licensed private cots and the Queensland health funded babies are cared for in these cots

   b. In relation to the SCN cots it appears there may be some double counting. Mater has 42 SCN cots in total

   c. Private Hospital Association of QLD for consultation (PHAQ)

   d. Mater Brisbane not to be separated to private and public but to be counted together i.e. NICU 37 cots, SCN 42 cots

   e. Recommend counting all NICU cots together for benchmarking purposes and not artificially dividing public and private cots

2. ***Are there any other benchmarks that you are aware of that may be more appropriate than those included in this document?***

   NO

3. ***Based on the options presented, do you believe the currently endorsed service planning benchmark needs to be amended?***

   YES

   a. Using a one size fits all model may not be relevant to all areas of the state (eg Far North Queensland (FNQ)) Current service planning benchmark does not recognise the geography of South East Queensland (SEQ) and the need for statewide provision for some services in a single location (eg neonatal cardiac services)

   b. Many areas of QLD which may have maternity services will require level 4 nurseries, which may have relatively low occupancy. Planning occupancy of 80% across the state may therefore underestimate requirements in other areas.

      Outside of SEQ there is very limited ability to transfer babies between level 6 nurseries within the state. Transferring from Townsville to Brisbane and vice versa is as far as transferring from Brisbane to Sydney. FNQ beds should therefore not be an

option for 'overflow' from SEQ and numbers for service planning should be considered separately.

c. ***Which of the three benchmark methodologies identified for the neonatal intensive care / special care nursery cots is most appropriate for the QLD context? Section 5, please include rationale***

All methodologies are flawed in that they can be applied to a densely populated small geographical area (eg SEQ, UK). The Geography and diverse population groups in QLD may preclude the application of these methodologies to a 'whole of QLD' population.

Method 1 Is the simplest and easiest to apply across the board.

Method 2 Results in numbers which are significantly less than the numbers of cots which are perceived to be required, particularly in SCN

Method 3 Does not include private births which are 30% of total births for the State. There is significant cross over with regard to bed utilisation between public and private, particularly with respect to NICU cots, and to exclude these from consideration in service planning would be a mistake.

4. ***Do you agree with target occupancy of 80%?***
   YES for NICU, however
   Geographical considerations mean many smaller level 4 units are necessary. This may require consideration of lower occupancy levels to maintain sustainable units.

5. ***Do you agree that definitions for minimum unit size should remain unchanged?***
   NO
   a. Page 6, 1.1, Background, remove dot point five. This point is not evidence based in relation to minimum NICU size, it appears to be related to the first two dot points not Aboriginal & Torres Strait Islander population.
   b. Page 14, 3.3, paragraph 4 – 'NICU size is currently endorsed at 16 cots' Is this referring to a split of NICU and SCN cots giving a total of 16 cots? Total unit size versus cot numbers in NICU and SCN are confusing the discussion.
   c. Clinician opinion sought for this document is from QLD clinicians. Other states (eg NSW) run units with fewer than 16 NICU cots without issues of sustainability or staffing..

6. ***What may impact on the sustainability of these benchmarks / projection methodologies over time? (e.g. additional emerging technology, new service models).***
   Public pressure and parental expectations will increase the intensive care that will be provided to babies born at less than 24 weeks gestation. Average length of stay (ALOS) for surviving babies at this gestation is 140 days of which approximately 100 days are spent in NICU. A change in practice towards provision of intensive care for these babies will lead to significantly increased pressure on NICU beds.

7. ***Are there any additional particular patient groups within the QLD population who may require proportionally greater levels of service which should therefore be factored into projection calculations (i.e. weightings)***
   YES
   a. Complex congenital and surgical abnormalities. (particularly babies born at term with ALOS far outside the norms for their gestation)

b. Congenital heart disease.
c. Babies born at borderline viability
d. Indigenous population in North Queensland
e. Babies requiring long term respiratory support (predicted to increase as numbers of extremely preterm infants increase)

8. ***Are there any additional issues that should be accounted for in the review of this benchmark?***

YES

a. Interstate transfer from QLD requires much greater distance than a comparable transfer from the Southern states (eg NSW -> VIC, SA -> VIC). Any service planning for QLD NICUs must take this into consideration so that the need for long distance interstate transfer of babies can be avoided in all but the most extreme of cases.
b. North Queensland cots cannot be used as overflow for South East Queensland. There is no difference in time taken or distances travelled between Brisbane and either Townsville or Sydney.

9. ***Do you have any additional comments?***

YES

a. Include Northern NSW births ie Tweed Heads, Lismore, Grafton.
b. Page 8, last paragraph requires correction to '37 licensed NICU'.
c. Page 8, last paragraph '144 licensed SCN cots' may not have included Mater The correct number is 42 Special Care Nursery cots at MMH.
d. To obtain private licensed cots was Private Hospital Association Queensland consulted?
e. Page 9, Table 1 – in the title add Public, as private SCNs not included.
f. Page 9, Table 1 – Change Mater to 42 SCN cots and 37 NICU cots (total number of private and public cots). Reduce confusion of Mater cots and possible double counting.
g. Page 10, second paragraph- Remove 'as necessary'.
h. Page 10, Table 2 – Mater's public data included in the table information?
i. Page 12, Table 4 – Mater's private data included in the table information?
j. Page 15, 3.5 – Reference to UK models however these programs will not impact on this current planning process or in the near future within QLD.
k. Page 15, 3.6 – reference to USA data who have a high preterm delivery rate compared with Australia. Suggest this document does not benchmark with USA data for that reason. No reference to evidence, suggest remove 3.6.
l. Table 9, Table 10 and 11 – change Mater, Brisbane to 37 NICU and 42 SCN and count in one area otherwise may see double counting.

Planning Branch, System Policy and Performance Division

NICU and SCN Services Service Planning Benchmark Consultation

Queensland Neonatal Services Advisory Group

Dr David Cartwright	Co-Chair, Director of Neonatology, Royal Brisbane and Women's Hospital
Dr David Knight	Co-Chair, Director of Neonatology, Mater Mothers' Hospital, Mater Health Service, Brisbane
Ms Karen Hose	Clinical Nurse Consultant, ICN, Royal Brisbane and Women's Hospital
Ms Lynne Elliott	Director, Neonatal and Maternal Fetal Medicine Services, Mater Health Service, Brisbane
Ms Anndrea Flint	Clinical Nurse Consultant, SCN, Royal Brisbane and Women's Hospital
Dr Guan Koh	Director of Neonatology, Women's and Children' Health Institute, The Townsville Hospital
Katrina Roberts	A/Nursing Director, Women's and Children' Health Institute, The Townsville Hospital
Dr Peter Schmidt	Senior Staff Specialist Paediatrics/Neonatology, Gold Coast Hospital
Ms Margot van Drimmelen	Nurse Unit Manager, SCN/NICU, Gold Coast Hospital
Ms Eileen Cooke	Preterm Infants Parents Association Inc. Representative
Dr Judy Williams	Clinical Director of Paediatrics, Bundaberg Hospital
Dr Alison Tigg	Consultant Paediatrician, Cairns Base Hospital
Dr Eva Stuwe	Consultant Paediatrician, Rockhampton Hospital
Dr Jan Cullen	Director of Paediatrics, Logan Hospital
Dr David McCrossin	District Clinical Leader – Medical, Office of the CEO, Queensland Children's Hospital Representative
Jacqui Thompson	Clinical Networks Team, PSQ, CHI
Virginia Hancl	Nursing Director, Metro North HHS, Project Officer for QNSAG

Statewide Maternity and Neonatal Clinical Network Chair (and Area Chairs)

Associate Professor Rebecca Kimble	Chair, Statewide Maternity and Neonatal Clinical Network Clinical Director Obstetric Services, Royal Brisbane and Women's Hospital, Clinical Co-Chair, Central Maternity and Neonatal Clinical Network
Dr David Cartwright	Co-Chair, Central Maternity and Neonatal Clinical Network, Director of Neonatology, Royal Brisbane and Women's Hospital
Ms Rymer Tabulo	Chair, Northern Queensland Maternity and Neonatal Clinical Network, Nursing/Midwifery Director, Division of Family Health, Mackay Health Service District
Dr Peter Schmidt	Co-Chair, Southern Queensland Maternity and Neonatal Clinical Network, Senior Staff Specialist Paediatrics/Neonatology, Gold Coast Hospital
Ms Amanda Ostrenski	Co-Chair, Southern Queensland Maternity and Neonatal Clinical Network, Nursing/Midwifery Director, Women's and Children's Health, Toowoomba Hospital

Hospital and Health Services (HHS) Acting Chief Executive Officers

Martin Heads	**Metro North HHS**
Richard Ashby	**Metro South HHS**
Julie Hartley-Jones	**Cairns & Hinterland HHS**
Susan Turner	**Cape York HHS**
Maree Geraghty	**Central Queensland HHS**
Wendy Jensen	**Central West HHS**
Peter Bristow	**Darling Downs HHS**
Sharon Kelly	**West Moreton HHS**
Naomi Dwyer	**Gold Coast HHS**
Kerry McGovern	**Mackay HHS**
Marek Klein	**North West HHS**
Meryl Brumpton	**South West HHS**
Kevin Hegarty	**Sunshine Coast HHS**
Oscar Whitehead	**Torres Strait-Northern Peninsula HHS**
Karen Roach	**Townsville HHS**
Kieran Keyes	**Wide Bay HHS**
Peter Steer	**Childrens Health Services HHS**

System Manager

Michael Cleary, DDG	**Health Service and Clinical Innovation Division**
Susan Middleditch, DDG	**System Support Services Division**
Terry Mehan, DDG	**System Policy and Performance Division**
Kathy Byrne	**Health Services Support Agency**

Queensland Government

Queensland Health

MEMORANDUM

To:	Consultation Group – Neonatal Intensive Care Unit and Special Care Nursery Health Service Planning Benchmark Review		
Copies to:	Hospital and Health Services Chief Executive Officers		
From:	Colleen Jen, Senior Director Planning Branch	**Contact No:**	323 40618
		Fax No:	340 56138
Subject:	Health Service Planning Benchmarks – Neonatal Intensive Care Unit and Special Care Nursery.		
		File Ref:	PS000008

Queensland Health has developed a series of benchmarks to support robust and consistent health service planning across the state. This work is led by the Planning Branch within System Policy and Performance Division.

The health service planning benchmark for neonatal intensive care (NICU) and special care nursery (SCN) services was endorsed in June 2009 and is now due for review.

The review process includes:

- a literature review to identify any new approaches to benchmarking and
- consultation with key stakeholders to identify, in particular, any lessons learnt from the application of the benchmark.

Your comments are sought on the attached Health Service Planning Benchmarks Discussion Paper - Neonatal Intensive Care Unit and Special Care Nursery services (Discussion Paper). The Discussion Paper outlines the results of desktop research and preliminary informal consultation and includes a number of key questions to assist with the provision of feedback and comments. Feedback will inform further consultation, if required, and a recommendation regarding the future benchmarking of Neonatal Intensive Care Unit and Special Care Nursery services.

Activity targets for specific services are not part of the process of development or review of health service planning benchmarks. Similarly, workforce planning is not within the remit of such projects, although completed service planning benchmarks may assist in developing future workforce plans.

Where related distinct or complementary projects are running in parallel with health service planning benchmark development and review, every effort is made to ensure consistency, avoid duplication of work and reduce involvement required from clinicians and other stakeholders. If at times there is overlap, your consideration and patience is appreciated.

Comments on the attached Health Service Planning Benchmarks Discussion Paper - Neonatal Intensive Care Unit and Special Care Nursery services should be forwarded by close of business on 10 August 2012 to 'PB-Benchmarks@health.qld.gov.au'.

Please forward the paper to relevant peers, clinicians and health service planners who may be interested in providing feedback. Questions about this discussion paper should be directed to Ms Amanda Carver, Principal Planning Officer, Planning Branch, via email 'amanda_carver@health.qld.gov.au' or telephone 323 40913.

Colleen Jen
Senior Director
Planning Branch
System Policy and Performance Division
12 July 2012

Amendment to the **Neonatal Intensive Care & Special Care Nursery Services Health Service Planning Benchmarks Discussion Paper July 2012**

Following feedback, the following amendments have been made:

1. Table 7 was intended to provide a comparative illustration of currently endorsed Queensland service planning benchmarks for NICU/SCN against average median published normative benchmarks. The method used was to convert all benchmarks to a standard hypothetical 100% occupancy for comparison. Following feedback, the table has been amended and now uses conversion to actual cot numbers per 1000 births as the comparator for clarity.

Table 7 amended: Normative service planning benchmarks - comparison

	Currently endorsed service planning benchmark:		**Average (median) published normative benchmark**	
	Occupancy rate 70% (NICU) 90% (SCN)	**Actual bed number/1000 live births**	**Occupancy rate** 80%	**Actual bed number/1000 live births**
NICU	1.2 cots/1000 live births	**1.71**	1.3 (1.3)/1000 live births	**1.63**
SCN	5.6 cots/1000 live births	**6.22**	4.4 (4.5)/1000 live births	**5.5(5.62)**

2. An error has been identified in the occupancy calculations throughout the paper, which affects the total number of cots projected which has been corrected. This affects the total number of required cots calculated and has necessitated an amendment to the proposed normative level. The following table 1(Am) outlines the current proposed service planning benchmarks, the proposed normative levels in the July discussion paper with both incorrect (as in the paper) and correct (as now amended) calculations, and the amended proposed normative levels. It uses the same method of conversion to actual cots per 1000 live births to enable clear comparison. Please note, the discussion paper used the normative level to calculate population based cot numbers in table 9 which has also been amended. Cots per 1000 live births were not presented in the original paper and therefore the calculation error was not immediately apparent.

Table 1(Am): comparison on endorsed, proposed (correct and incorrect calculations) and amended proposed normative service planning benchmark levels.

NICU	Normative level	Cots per 1000 live births
Currently endorsed	1.2/1000 births at 70% occupancy	1.71
Discussion paper proposal: Incorrect calculation Correct calculation	1.3/1000 births at 80% occupancy	 1.57 1.625
Amended proposal	1.4/1000 births at 80% occupancy	1.75*
SCN	**Normative level**	**Cots per 1000 live births**
Currently endorsed	5.6/1000 births at 90% occupancy	6.22
Discussion paper proposal: Incorrect calculation Correct calculation	6.3/1000 births at 80% occupancy	7.56 7.87
Amended proposal	5/1000 births at 80% occupancy	6.25**

*NICU - the normative level of 1.4/1000 live births at 80% occupancy (1.75 cots/1000 live births) is proposed. The level in line with published data of 1.3/1000 at 80% converts to a cot base below current endorsed levels (1.57 compared with current 6.22/1000 births). It is recognised that Queensland requirements are higher than median published levels due to differences in geography. Current activity data supports this marginal rise.

** SCN - the normative level of 5/1000 live births at 80% occupancy is proposed to maintain equivalence with conversion rate of the currently endorsed benchmark with a 90% occupancy level (6.25 compared with current 6.22/1000 births). This results in a cot number per 1000 live births in excess of current published medians, acceptable for the Queensland context as above. Queensland activity data does not suggest the requirement for an increase in SCN cot numbers per 1000 live births at this time.

Table 9 ***AMENDED****: Method 1 - Normative Benchmark*

Measure	Projection Methodology and data source	Calculation applied to whole of Queensland (public and private)	Comparison to current and planned cot numbers
Whole of population	Normative rate **NICU** 1.3 per 1000 live births at 80% occupancy **SCN** 6.3 per 1000 live births at 80% occupancy Queensland Perinatal Data Collection	2009: 61605 live births = **NICU** (1.3 x 61.6) x 80% = ~~97~~ **(101)** cots **(1.4 x 61.6) x 80% = 108 cots** **SCN** (6.3 x 61.6) x 80% = ~~466~~ **(485)** cots **(5 x 61.6) x 80% = 385 cots** 2015: 65604 projected live births = **NICU** (1.3 x 65.6) x 80% = ~~103~~ **(107)** cots **(1.4 x 65.6) x 80% = 115 cots** **SCN** (6.3 x 65.6) x 80% = ~~496~~ **(517)** cots **(5 x 65.6) x 80% = 410 cots**	Current cots (February 2012): **NICU** = 63 public + 25 private = 88 cots* **SCN** = 236 public + 144 private = 380 cots Planned cots for 2015: **NICU** = 77 public + 25 private = 102 cots* **SCN** = To be established
Planned cots = current cot numbers plus planned developments at Gold Coast University Hospital and Townsville Hospital. Private numbers assumed static. **current cot numbers under review: feedback suggests this assessment may be incorrect*			

Key: strikethrough – incorrect calculation (e.g. ~~97~~); bracketed bold result – correct calculation (e.g. **(101)**); red text – amended proposed normative level

Health Service Planning Benchmarks

Discussion Paper

Neonatal Intensive Care & Special Care Nursery Services

July 2012

DOH-DL-12/13-016

Queensland Government

Document version history

Version	*Date*	*Prepared by*	*Comments*
Final v1.1	*11 July 2012*	*Planning Branch, System Policy & Performance*	

For discussion only

This is a working document and does not represent Queensland Health policy at this time.

Contents

Key Questions

Your feedback on the following key questions is requested:

1. **Are you aware of any issues in applying the currently endorsed service planning benchmark for neonatal intensive care or special care nursery services?**
2. **Are there any other benchmarks that you are aware of that may be more appropriate than those included in this document? (please include source and rationale)**
3. **Based on the options presented, do you believe the currently endorsed service planning benchmark needs to be amended? (please include rationale)**
4. **Which of the three benchmark methodologies identified for neonatal intensive care/special care nursery cots is most appropriate for the Queensland context? (section 5) (please include rationale)**
5. **Do you agree with a target occupancy rate of 80 per cent?**
6. **Do you agree that definitions for minimum unit size should remain unchanged?**
7. **What may impact on the sustainability of these benchmarks/projection methodologies over time? (e.g. additional emerging technology, new service models)**
8. **Are there any additional particular patient groups within the Queensland population who may require proportionally greater levels of service which should therefore be factored into projection calculations (i.e. weightings)?**
9. **Are there any additional issues that should be accounted for in the review of this benchmark?**
10. **Do you have any additional comments?**

Please forward comments to PB-Benchmarks@health.qld.gov.au by 10 August 2012.

If you require further information or clarification on the discussion paper, please contact Amanda Carver at amanda_carver@health.qld.gov.au

1. Introduction

In October 2008, Queensland Health agreed to the development of health service planning benchmarks. The benchmarks aim to assist those involved in planning health services to better meet the needs of Queenslanders by allowing for:

- the application of evidence based methodology in service planning
- standardisation and consistency in planning across Queensland Health
- streamlined review and approval processes for developed service plans
- increased transparency and knowledge of planning processes for staff undertaking planning activities
- comparisons of 'special groups' which may require variation of endorsed benchmarks.

In June 2009, Queensland Health endorsed service planning benchmarks for neonatal intensive care unit (NICU) and special care nursery (SCN) cots. These service planning benchmarks are now due for review in order to take account of any new evidence or changes in service configuration or demand. This discussion paper outlines available data and evidence for the consideration and feedback of stakeholders.

1.1 Background

Service planning benchmarks are used for the projection of health service activity and the translation of this activity into treatment space requirements to assist capital infrastructure planning. The currently endorsed service planning benchmarks for NICU and SCN cots are:

- 1.2 NICU cots per 1,000 live births at 70 percent occupancy
- 5.6 SCN cots per 1,000 live births at 90 percent occupancy

and in areas with a significant Aboriginal and Torres Strait Islander population:

- 2.5 and 1.1 NICU cots per 1,000 live births at 70 percent occupancy for Aboriginal and Torres Strait Islander births and non-Indigenous births respectively
- 10 and 5.3 SCN cots per 1,000 live births at 90 percent occupancy for Aboriginal and Torres Strait Islander births and non-Indigenous births respectively
- and a minimum NICU size of 16 cots (defined by a catchment of at least 10 000 live births) (http://qheps.health.qld.gov.au/planning/html/benchmarks.htm)

More recently, service planning benchmarks have provided a point of reference in discussions regarding the purchasing of health services in Queensland. The benchmarks are not intended to address issues of clinical competence, workforce requirements, or patient safety. The benchmarks do not determine if a service is to be delivered or established (except where minimum volumes are stated); instead they are platforms on which to base planning for the delivery of the service.

Planning Branch is leading the development and review of service planning benchmarks with the support and contribution of the various clinical services across the State. This

consultative process is integral to benchmark development to ensure alignment with current service delivery and any emerging trends.

1.2 Purpose

The review process for the NICU and SCN service planning benchmark includes:

- an extensive literature review to identify relevant evidence and developments
- development of a discussion paper outlining
    - the previously endorsed service planning benchmarks for NICU and SCN services
    - any new available evidence or relevant benchmarks
    - implications of recent developments for the currently endorsed benchmark and potential alternative options for review
    - proposed activity projection methodologies
- consultation seeking insight into any issues with the previously endorsed service planning benchmark
- consultation with key stakeholders on any proposed projection methodology and functional application
- consultation seeking feedback on the most robust, yet practical, methodology for planning requirements for NICU and SCN services in Queensland.

Feedback and general consensus will provide the basis for the development of recommendations for a future service planning benchmark for Queensland Health. Endorsed benchmarks are available electronically through the Planning Branch benchmarks intranet site at: http://qheps.health.qld.gov.au/planning/html/benchmarks.htm

2. Context

2.1 Scope

This discussion paper outlines identified service planning projection methodologies and benchmarks for NICU and SCN. Data includes all admitted activity into these designated units across Queensland. It does not include neonatal activity (i.e. children under the age of one year) that takes place in paediatric intensive care units as admissions are grouped by five year age cohorts and may not be split to examine neonates only. Activity data from both the public and private health sectors have been examined. However, private sector data includes all activity for children under the age of one, irrespective of location of treatment within the facility. It is not possible to separate out NICU and SCN activity from other medical or surgical activity in the private sector. Therefore, where private data is discussed, the criteria used for examination are clearly defined.

For the purposes of this discussion paper, the following areas are excluded:

- building design: information regarding the physical facility design may be sourced from The Australian Health Facility Guidelines v4.0

(http://www.healthfacilityguidelines.com.au/default.aspx)**Error! Hyperlink reference not valid.** or elsewhere [1, 2]

- workforce planning.

However, it is noted that there is an increasing body of evidence regarding the impact of the physical environment upon neonatal growth and development which supports single room designs. A controlled environment, reduced stimulation and resultant increased family contact also reduces morbidity and decreases length of stay, mainly due to faster weight gain [3,4]. It is also suggested that individual room NICUs reduce staff stress and thereby aid employee retention [4]. Furthermore, required cot space is increasing due to technology, as more machines and equipment are introduced to daily care [5]. Such evidence may require consideration when new capital developments are being planned.

2.2 What are Neonatal Intensive Care and Special Care Nursery Services?

Definitions and classifications for neonatal services are not standard internationally, although in general services appear to be organised and separated across three levels of complexity. The lowest level of care consists of a nursery providing care to essentially healthy newborns. The second level provides care to neonates of a minimum 32 weeks gestation with a minimum weight of 1500 grams. It may provide non-invasive ventilatory support via continuous positive airways pressure (CPAP) and may provide very short term emergency ventilation. The third level is most complex, and provides all required care to neonates of any weight and gestational age, including pre and post surgical care and mechanical ventilation(6).

In Queensland, the Clinical Services Capability Framework for Public and Licensed Private Health Facilities v3.0 (CSCF v3.0) [7] outlines six service levels for neonatal care. Levels one to three relate to healthy newborns born at or near term and this service planning benchmark therefore relates to neonatal services covered by CSCF levels 4 and 5 (hereafter referred to as Special Care Nursery) and level 6, more commonly termed a neonatal intensive care unit (NICU). These divisions align well with the second and third levels of the international norm.

Services are provided in the public or private hospital setting. Community programs to support early discharge are beginning to emerge resulting in potential future 'hospital in the home' activity. There are currently 236 SCN and 63 NICU cots in the public sector according to the Monthly Activity Report (MAC) for February 2012 (table 1). Further NICU cots are currently under construction at Townsville Hospital and at Gold Coast University Hospital.

In the private sector there are a further 25 licensed NICU and 144 licensed SCN cots; it is unknown how many of these are in daily use.

Table 1. Queensland NICU and SCN cot count by facility

Hospital	Neonatal Cots - Level 2 (i.e. CSCF level 4 & 5 SCN)	Neonatal Cots - Level 3 (i.e. CSCF level 6 NICU)
Bundaberg	8	
Caboolture	12	
Cairns	22	
Gold Coast	20	2
Hervey Bay	5	
Ipswich	16	
Logan	16	
Mackay	4	
Mater Mothers' Public	29	19
Mount Isa	3	
Nambour	10	
Redcliffe	10	
Redland	6	
Rockhampton	4	
Royal Brisbane & Women's	39	30
Toowoomba	12	
Townsville	20	12
Grand Total	236	63

Source: Monthly Activity Report February 2012

2.3 NICU and SCN service activity

2.3.1 Preterm birth and low birth weight incidence

Developed countries preterm birth rates have risen significantly over the last 20 years. Although some of the rise may be attributed to changes in definitions or clinical practice [(8)], it is clear that rising numbers of older mothers, caesarean section, and pregnancies as a result of assisted reproduction are all contributing to higher numbers of babies being born before a gestational age of 37 weeks, the standard definition for preterm birth. Preterm birth rates range from 6.2 per cent in Europe to 10.6 per cent in North America and 11.9 per cent in Africa.

National data reports that 8.2 per cent of all babies born in Australia in 2006 were preterm, with 6.4 per cent of live-born babies weighing less than 2500 grams at birth. Of the preterm births, 0.9 per cent were at 20-27 weeks, 0.8 per cent at 28-31 weeks and 6.5 per cent at 32-36 weeks gestation. Queensland's total preterm birth rate of nine per cent was higher than the national rate, with a correspondingly higher low birth weight proportion [(9)].

More recent Queensland data shows that from 2000 to 2009, 26 630 women (5.0 per cent) gave birth at less than 36 weeks gestation (8.4 per cent at 36 weeks or less) with the rate relatively constant during this time [(10)]. However, there was a noticeable increase in the 36-38 week cohort, likely to be at least partially attributable to rising rates of elective caesarean section.

2.3.2 Service activity data

Specific activity data has been sourced from the Queensland Health Admitted Patient Data Collection (QHAPDC), the corporately endorsed data source for Queensland admitted patient data activity. Data are available from all recognised Queensland hospitals permitted to admit patients, including public and licensed private hospitals. Public sector activity for NICU and SCN is differentiated; however it is not possible to differentiate between the varying SCN levels of public service activity according to the CSCF v3.0 (i.e. Levels 4 and 5). Private sector activity is combined, with no ability to differentiate between NICU and SCN and is therefore not included here. Additional detail has been sourced from the Queensland Perinatal Data Collection (QPDC) (http://qheps.health.qld.gov.au/hic/infobank/demography.htm#subtopic2) and published national data.

In 2006, admission to a NICU or SCN was reported as necessary for 16.9 per cent of Queensland's babies compared with 14.9 per cent nationally [9]. Queensland's public NICU admission rate for 2009-10 was approximately 2.5 per cent, calculated from calendar year births (from QPDC) and financial year separations (from QHAPDC).This compares with 2.3 per cent (6044 babies) admitted to NICUs in New South Wales in 2006 [11] and 2.8 per cent in New Zealand in 2001 [5].

Analysis of QHAPDC shows that NICU bed days have increased at a slightly higher rate than separations over the last five years, indicating a small increase in length of stay. SCN separations are marginally less but the five year bed day trend is essentially stable (table 2). Rates of change are indicated in table 3.

Table 2. Queensland public neonatal services activity 2006-2011

NICU	2006-07	2007-08	2008-09	2009-10	2010-11
Beddays	17375	18155	21234	19326	21628
Separations	1421	1516	1684	1551	1531
SCN	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**
Beddays	63825	58596	64079	63552	64543
Separations	8445	7945	9114	8942	7821

Source: QHAPDC May 2012

Table 3. Queensland public neonatal services activity rates of change 2006-2011

NICU	Total rate of change 2006-07 to 2010-11	Average annual rate of change 2006-07 to 2010-11
Beddays	24.5%	6.1%
Separations	7.7%	2.1%
SCN	**Total rate of change 2006-07 to 2010-11**	**Average annual rate of change 2006-07 to 2010-11**
Beddays	1.9%	0.7%
Separations	-7.4%	-1.4%

Source: QHAPDC May 2012

2.3.3 Public versus private provision

NICU and SCN provision in Queensland is a mix of both public and private care.

Approximately 70 per cent of women gave birth in public hospitals and 30 per cent in private hospitals between 2000 and 2009, a rate which is stable [10].

Queensland mothers in private hospital care were more likely to give birth in the 36 to 39 week gestational period compared with women in public hospital care. This is similar to elsewhere, and is due to the higher elective caesarean section rate in private health care with the tendency for such elective caesarean sections to be performed prior to 39 weeks gestation [10].

Private sector activity is not easily analysed as activity for NICU and SCN is combined with other medical and surgical data and even simple proportional rates of activity may not be generated. In addition, data includes all admissions aged less than five years. However, it has been possible to gain some understanding of private activity by considering only the diagnostic codes grouped under the service related group (SRG) for 'qualified neonate'. These include all admissions coded as low birth weight and non-low birth weight neonates with a 'significant operating room procedure'. Excluding neonatal admissions coded as greater than 2499 grams at birth, without significant operating room procedures or other complications may provide some indication of likely NICU/SCN activity.

Analysis of these restricted groups indicates that private sector activity has changed little over the five years from 2006 to 2011 (table 4). Assumptions have therefore been made that private activity and growth will continue unchanged.

Private activity is unlikely to be evenly distributed across the state and a generalised calculation is therefore unlikely to be adequate. Local private service provision and utilisation must be taken into account when projecting future public service demand.

Table 4. Queensland private neonatal (NICU and SCN) services activity 2006-2011

SRG 'Qualified neonate'	2006-07	2007-08	2008-09	2009-10	2010-11
Separations	18925	19200	19726	19774	19211
Bed days	92924	92346	94034	96786	92536
SRG 'Qualified neonate' – excluding >2499g without surgery or complications	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**
Separations	3270	3225	3330	3289	3243
Bed days	30937	29632	30599	33318	31031

Source: QHAPDC May 2012

3. Literature Review

Much is written on neonatal mortality rates but less on neonatal service activity [12]. International data can be difficult to apply to the Australian setting. In the United States, relatively high NICU cot numbers are believed to be due to the capacity for revenue generation rather than true clinical demand [13-15]. European data generally applies to relatively concentrated populations, with closely networked services, and a greater ease of transfer between them to deal with surges in demand that does not reflect the dispersed populations and vast geography of Queensland. However, all identified related evidence, methodologies and benchmarks are outlined in the following section.

Please review and consider the following information in order to evaluate the proposed planning methodologies and answer the questions on page 5.

3.1 Factors affecting activity rates

Developments in the care of very low birth weight babies has dramatically improved survival and with it neonatal service utilisation [16]. In addition, increasing numbers of babies are born preterm and require NICU or SCN services due to the higher risk of major neonatal complications [17]. Babies born at 36-38 weeks gestation are almost 2.5 times more likely to require admission to a NICU or SCN than babies born at 39 weeks or more (20.8 per cent compared with 8.7 per cent) with the most marked need in babies born electively by caesarean section or induced labour, a sizeable cohort which has seen significant growth [10].

Multiple births are also a clear indicator for increased neonatal service utilisation due to relatively low birth weight for gestational age. Up to 65 per cent of twins require NICU admission (and many more require SCN care) [6,18]. Rising levels of assisted conception have increased the incidence of multiple pregnancies, although this has fallen significantly from 2000-2009, with multiple pregnancies due to in-vitro fertilisation (IVF) type techniques down 40 per cent [10]. This trend is expected to continue as technology improves. Although assisted conception is anecdotally presented as an inherent risk factor for increased neonatal service use, the evidence to support this is unclear, with one

study showing that non-IVF twins have a significantly higher requirement for NICU admission than IVF twins [18]. It may be that a combination of factors such as multiple births and resultant low birth weights, potentially older age of mothers, and higher incidence of caesarean section in this group are confounding contributors to NICU/SCN utilisation.

The increasing age of birthing mothers is frequently cited as a risk factor for NICU/SCN utilisation. The number of babies born in Queensland to women over the age of 35 increased from 15 to 20 per cent of all births between 2000 and 2009 [10]. A New Zealand study showed that infants born to mothers over the age of 40 represented 3% of total births in 2009 but 5% of NICU admissions despite greater birth weight and greater gestational age [19]. Again, the reason for the apparent increased use of neonatal services by babies of older mothers is unclear and may be due to confounders other than age.

Other data shows that the risk of babies requiring NICU or SCN admission is much greater for babies born to women under 20 years of age, only slightly less than the risk for those born to mothers of 35 or more [10]. Although they are slowly declining, teenage pregnancy rates are five and a half times higher in the Aboriginal and Torres Strait Islander population than for non-Indigenous mothers [20]. In addition, low birth weights are significantly more frequent for babies born to all Aboriginal and Torres Strait Islander mothers, irrespective of geographical location and unaffected by socioeconomic disadvantage [20]. In 2006, 13.7 per cent of Aboriginal and Torres Strait Islander babies were born preterm compared with 5.1 per cent of non-Indigenous babies [9]. This combination of factors presents a considerable additional need where Aboriginal and Torres Strait Islander population levels are significant.

Contrastingly, it has been shown that birthing mothers from a culturally and linguistically diverse (CALD) background actually have a reduced likelihood of adverse outcomes with fewer requirements for neonatal services [21]. This may be explained by the 'healthy migrant' phenomenon brought on by rigorous health screening or by treatment of pre-existing disease identified during refugee assessment, along with lower levels of alcohol, tobacco and illicit drug use than that of the Australian born population. Studies have also shown significantly higher NICU use for babies born to morbidly obese women [22] and although this currently represents a small amount of activity, increasing levels of obesity may require consideration of this group in future activity projections.

In summary, three factors appear to have the greatest influence on NICU and SCN service utilisation; gestational age, birthweight, and babies of Aboriginal and Torres Strait Islander mothers.

3.2 Length of stay

From 2006-07 to 2010-11, the average length of stay for NICU admission was 12.7 days, with 7.4 days on average for SCN admissions. Length of stay has been fairly consistent in both areas with a small rise in 2010-11 only.

Although length of stay has decreased in some SCN settings, possibly due to capacity pressures forcing the development of alternative care models, there has been little change in average NICU length of stay, probably due to the increasing rates of preterm babies, and increasing survival at early gestation time points necessitating longer stays [5]. It is suggested that there is potential to decrease length of stay through developments in coordinated care, integrated discharge support programs, 'step-down units' for parent

care provision or even single room facilities [4,26,27]. Length of stay is an important factor in projecting activity for incidence based methodologies.

3.3 Unit Size

Unit size is an important factor for three reasons. Firstly, services for smaller populations are subject to greater random variability and therefore require relatively more cots to ensure availability on an equivalent proportion of days [28]. Larger populations produce a higher activity count but more consistent demand, and fewer cots per 1000 births are required. As an example, using 1990's benchmarks Burton et al [28] showed that cot requirements ranged from 0.88 cots per 1000 births for places with 25,000 births annually, to 1.2 per 1000 for 5000 births, and 2 cots for places with 1000 births to ensure available capacity on 96 per cent of days.

Secondly, providing services for small populations is relatively cost-inefficient, with those serving less than 5000 annual births resulting in excessive relative cot requirements and extremely variable occupancy levels [28,29]. It has been suggested that NICUs should have a minimum six cots, with 12 cots being most cost efficient, and SCNs were most cost-efficient with at least 16 cots [29]. It is unknown how contemporary models of service delivery and costs associated with technological developments have affected such suggested levels.

Finally, and most importantly, there is a strong positive association between mortality outcome and unit volume, particularly for neonates of less than 29 weeks gestation. It is therefore suggested that NICUs should expect at least 50 neonates of less than 1500 grams birth weight annually [30].

Based on expert feedback to the 2009 discussion paper, recommended NICU unit size is currently endorsed at 16 cots with a minimum catchment of 10,000 births. Clinicians reported that the minimum unit size of 6 cots (ideal 12 cots) suggested by published cost efficiency studies would be inefficient in terms of workforce planning, training and skills maintenance in Queensland. A minimum recommended size of eight cots for a level 5 SCN has since been defined by the CSCFv3.0 [7]. Level 4 services have not been assigned a minimum size. No evidence has been identified which suggests a change in the endorsed minimum unit size is necessary.

Of additional importance is the capacity relationship between NICU and SCN services; adequate SCN capacity is essential to ensure avoidance of bottlenecks and appropriate utilisation of NICU resources [24]. An ideal proportional relationship has not been identified in the literature, but some suggest a ratio of two SCN cots to each NICU cot may assist capacity management [31].

3.4 Regional, Rural and Remote Provision

Around one-third of Australian people live outside the state capitals [32]. The main influence upon mortality for preterm and very low birth weight babies is access to high risk obstetrical and neonatal intensive care [16]. Having accepted that complex neonatal care should only be provided at facilities with a large enough catchment, it is therefore critical to ensure that lower level services are adequately supported to provide newborn intensive care for short periods whilst urgent transfer to a NICU is arranged [25,33]. A review of retrieval service management is currently underway by clinicians.

3.5 Hospital in the Home

There are increasing anecdotal reports of Hospital in the Home (HITH) services being developed, especially services supporting early discharge. This mirrors service developments internationally, with a UK audit noting that many units were initiating community nursing packages to expedite discharge and free up cots [24]. It is considered that such activity will not only be minimal for the immediate future, but that in the short term it is more likely to alleviate system pressure rather than replace cot requirement. Unless coded as admitted data, HITH activity has not been accounted for when calculating cot requirements in this discussion paper, but may need future consideration should services continue to develop.

3.6 Emerging technologies and future directions

A 2010 report examining trends in US neonatal services highlighted a declining preterm birth rate due to technological advances, including targeted therapies to prevent (or at least postpone) preterm labour, and more single embryo transfer in assisted reproduction such that NICU activity growth would be much less than projected population growth [13]. In addition, financial incentives already emerging in the US are designed to significantly reduce early elective caesarean section rates, which have risen rapidly, particularly in the private sector, impacting upon neonatal care in the 34-38 week gestational age group. Survivorship gains which have historically increased demand are also slowing considerably. The report suggests that research is now concentrating on preterm birth reduction rather than lowering the gestational age of viability. It is unlikely that such advances will affect Queensland activity during the life of this service planning benchmark, but such expectations should be taken into consideration when projecting future activity and service requirements.

3.7 Normative benchmarks

Service planning benchmarks which are based on population levels are termed 'normative benchmarks'. They may also be referred to as 'per capita' benchmarks and are generally expressed as a particular number of beds (or cots) per 1000 of the chosen population, in this case births.

Normative benchmarks for the provision of neonatal services have been suggested for 25 years, and despite marked changes in models of care, technology, and neonatal characteristics it is noteworthy that the 'internationally accepted level of 1.5 NICU cots per 1000 births' [5] was a UK Royal College of Physicians recommendation in 1988 [28]. Published benchmarks for planning cot numbers are generally either calculated based on incidence of low birth weight/preterm births and expected length of stay, or are more frequently actually a reflection of observed cot provision and take no account of actual demand.

Table 5 outlines the recommendations and observed rates sourced in the literature. The recommendations average around 1.3 NICU cots per 1000 births, with observed rates averaging 1.67/1000 (1.3/1000 removing United States outlying result).

Table 5: Recommended and observed normative benchmarks for NICU/SCN

Country	NICU cots per 1000 births	SCN cots per 1000 births	Reference	Observed/ Recommended
UK	1.5/1000		Royal College of Physicians 1988 [28]	Recommended
UK	0.9-1.25/1000		Morris 1993 [28]	Recommended
Canada British Columbia	1.6/1000 1.1/1000	3.1/1000	Lee et al 2002 [31]	Observed/ Recommended
UK	0.75/1000 (plus 0.7/1000 high dependency = 1.45/1000)	4.4/1000	British Association of Perinatal Medicine 2004 [30]	Recommended
NZ	1.5-2/1000	4.5/1000	NZ MoH 2005[5]	Recommended
NZ	0.83-1.47/1000 (ave 1.18/1000)	3.05-5.68/1000 (ave 4.68/1000)	NZ MoH 2005[5]	Observed
USA	3.4/1000		RAND 2007[34]	Observed
England*	1.1/1000	3.9/1000	NAO 2007[24] ONS 2009[35]	Observed
Australia	1.3/1000	4.6/1000	Western Australia Dept of Health 2009[36]	Recommended (at 75% occupancy)
Australia	1.2/1000	5.6/1000	Queensland Health 2009[37]	Recommended (at 70% and 90% occupancy respectively)

*England rates calculated using audited cot numbers from NAO 2007 report and 2008 birth rates provided by the UK Office of National Statistics (ONS 2009).

The New Zealand Ministry of Health report observed that there were excessive transfer numbers of NICU babies purely due to capacity issues, suggesting inadequate cot availability for activity surges [5].

3.8 Activity based benchmarks

Victorian capital planning provides a separation based benchmark recommending 18 separations per annum per cot for a Level 6 facility (equates broadly to NICU) and 45/44 separations per annum per cot for levels 5/4 facilities (SCN) [38]. This suggests an average expected length of stay of 16 days for NICU admissions and around 6.5 days for SCN admissions at 80 per cent occupancy. A New Zealand report uses historical separation counts combined with average length of stay and a recommended occupancy of 75 per cent to calculate required cots and compare the outcome with the observed cot numbers and the numbers calculated by a normative method [5].

4. Projection methodologies

Queensland Health service planning benchmarks are designed to determine the capacity required to meet projected activity and therefore require standardised projection methodologies. Activity projection also relies upon accurate population projections, whether directly (as in applying incidence rates to an entire population) or indirectly (when accounting for ongoing population growth as part of linear activity trends).

4.1 Projecting population levels

Queensland Health, Health Statistics Centre develops population projections based on census derived data published by the Queensland Treasury, Office of Economic and Statistical Research (OESR) and the Australian Bureau of Statistics (ABS). The data incorporate assumptions on future levels of fertility, mortality, international and interstate migration and major land releases. Medium series projections are recommended by OESR as the preferred series.

4.1.1 Population weights

Demand for health services is not generally uniform across the entire population. Recognising the increased demands that a population sector presents for services, weights such as those included in the Queensland Health Resource Allocation Model [39] may be applied to adjust for future health need requirements, particularly for population based benchmark methodologies. Activity based benchmarks automatically account for differences by using actual activity counts for projection and therefore do not require application of weights.

Age and Gender

Age/gender weights recognise the varying resource intensity of different age-sex cohorts and are agreed through the Australian Health Care Agreement 2003-08. Any population based benchmark would require stratification for female population levels at fertile age groups.

Aboriginal and Torres Strait Islander People

It is difficult to entirely separate the negative impact of socioeconomic disadvantage versus Indigenous status, but it is without doubt that the requirement for NICU and SCN services is much greater for babies born to Aboriginal and Torres Strait Islander mothers, irrespective of place of residence or socio-economic status [9]. The currently endorsed service planning benchmark assigns a higher per capita cot number for this population sector whilst maintaining the overall population based benchmark. Feedback is particularly welcome on whether this has been applied in the clinical setting, the ease of application, particularly with respect to identifying the Aboriginal and Torres Strait Islander population served, and whether this application has translated into operational cots.

4.2 Projecting activity

4.2.1 Normative benchmarks

As discussed in section 3, although normative benchmarks could be based on some evidenced level of per capita activity published by experts in the field, in neonatal services normative benchmarks generally reflect either observed service levels or recommendations based on historical activity (table 5).

Normative benchmarks are limited in their application. They encompass activity from both the public and private sectors and as they apply to a whole population count, do not account for inter hospital flows, varying models of service delivery or different levels of service complexity. However, they are simple to apply where population levels are clearly defined and service utilisation well understood. Normative benchmarks may be applied to projected estimated resident population levels such as those produced by the Office of Economic and Statistical Research (OESR).

4.2.2 Projecting by incidence (birth rate)

Queensland birth rates are recorded and monitored in the Queensland Perinatal Data Collection which is updated annually. Available data includes number of births and numbers of mothers across the state separated by a range of demographic subgroups, including age, Indigenous status, plurality of pregnancy and number of prior births. Clinical sub groups include method of birth, gestation at birth and birth weight. The updating of population projections (generally every two years) will impact on birth rate projections.

Birth rates may be considered for use in calculating likely whole of state activity, by taking into account expected preterm births or low birth weight incidence. However, such rates encompass service provision from both the public and private sectors, do not account for interstate flow and are difficult to apply at the local level due to variable provision of private services, differences in models of service delivery and local flow patterns. However, birth rates may be calculated for local Hospital and Health Services to enable more accurate application with local attention to the public/private split of services. Projections using birth rates are generally converted into normative benchmarks.

4.2.3 Activity based projections

Activity based projections take account of trends in activity levels to predict future demand.

Linear projections apply historical growth rates to project future activity. As a general rule, the number of historical years used for linear trending should equal the number of years forward that are being projected. Linear projections do not account for unmet need or future changes in models of service delivery that may affect activity. However, the data source is relatively reliable and combining historical activity trends with population projections accounts for population growth or decline, potentially reflecting likely demand more accurately than population based methods alone.

The Acute Inpatient Modelling tool (AIM) may be used to enhance linear projections. The tool uses various elements of QHAPDC data to project hospital separations through the extrapolation of historic trends, incorporating assumptions that demand will be influenced by population growth and changing demographics. The tool also has the ability to model projected demand by constructing scenarios such as anticipated changes in service delivery, changes in referral patterns and/or utilisation rates. This allows for a more tailored approach when considering activity projections at the local level. AIM is currently endorsed as a tool for activity projection for Queensland Health for selected clinical streams.

As outlined in the literature review, activity based projections are utilised to calculate required cot numbers in other jurisdictions including New Zealand and Victoria.

5. Occupancy

Unduly high occupancy rates (above 80-85 per cent) are associated with higher neonatal infection rates, increased staff stress and resultant turnover levels, unnecessary transportation and most importantly higher infant mortality [5, 23]. The currently endorsed NICU benchmark uses an occupancy rate of 70 per cent in line with Burton's 1995 study for enabling available capacity on 29 days out of 30. A 90 per cent occupancy rate was endorsed for special care nurseries based on Statewide Maternity and Neonatal Clinical Network recommendations. Informal feedback in advance of this discussion paper suggests that Queensland clinicians believe an occupancy rate of 70 per cent for NICU to be too low.

A 2007 audit noted that occupancy rates in the UK ranged widely from 25-111 per cent, with an average of 74 per cent [24]. Fifty-eight units (33 per cent) operated above the British Association of Perinatal Medicine (BAPM) guideline of 70 per cent cot occupancy. High occupancy was associated with higher level units. A New South Wales report highlighted a 90 per cent occupancy rate for Hunter New England NICU cots in 2009 [25]. Occupancy rates for Queensland units are currently being sought. However, on a Monthly Activity Report (MAC) declared NICU cot count of 63 and a 2010/2011 NICU occupied bed day count of 21628, we can assume Queensland statewide public NICU occupancy sits at around 94 per cent. This does not appear to include additional 'swing' cots which may convert from SCN to NICU use for short term surge management. Similarly, public SCN occupancy, based on 236 declared cots and 64543 bed days, calculates to 75 per cent.

Recommended occupancy rates from sourced information appear consistent at around 80 per cent for both NICU and SCN cots, with the New Zealand Ministry recommending an occupancy level of 75-85 per cent [5] and the UK Department of Health advising neonatal service commissioners to ensure that planned capacity does not exceed 80 per cent due to the associated increases in mortality above this level [23].

It is important to note that a stated occupancy rate for a service planning benchmark merely allows for provision of adequate service levels to cater for potential surges in activity. It is not a target occupancy rate with respect to daily operational throughput. The lower the occupancy rate in a service planning benchmark, the greater the number of required beds that will be calculated.

6. Activity projection methods

Table 6 outlines the activity projection method options based on the literature reviewed. Where population projections have been undertaken, population levels are those quoted in the estimated resident population and population projection tables prepared by the Health Statistics Centre available at http://qheps.health.qld.gov.au/hic/infobank/home.htm.

Each method has been applied to the Queensland context in tables 9, 10 and 11 at the end of the paper.

Table 6: Activity projection methodologies

Measure	Projection Methodology	Data Source
Population	Method 1: Normative Method 2: Incidence (birth rate)	Office of Economic and Statistical Research Office of Economic and Statistical Research, Queensland Perinatal Data Collection
Activity	Method 3: Activity Linear projections (4.2.3) • separations Projection tool (AIM) (4.2.3) • separations	Queensland Health Admitted Patient Data Collection (QHAPDC) QHAPDC with AIM

6.1.1 Method 1 – Normative based on published normative levels

The currently endorsed service planning benchmark is for 1.2 NICU cots per 1000 live births at 70 per cent occupancy and 5.6 SCN cots per 1000 live births at 90 per cent occupancy. Although no issues have so far been highlighted with respect to application of the currently endorsed service planning benchmark, it has been suggested by clinicians that the occupancy rate of 70 per cent is unnecessarily low. This is supported by published evidence which consistently recommends occupancy levels of around 80 per cent. Table 7 compares the current benchmark with published data and provides 100 per cent occupancy calculations for comparison.

Table 7: Normative service planning benchmarks - comparison

	Currently endorsed service planning benchmark:		Average (median) published normative benchmark	
Occupancy rate	70% (NICU) 90% (SCN)	100%	80%	100%
NICU	1.2 cots/1000 births	0.84/1000	1.3 (1.3)/1000	1.04 (1.04)/1000
SCN	5.6 cots/1000 births	5.04/1000	4.4 (4.5)/1000	3.52 (3.6)/1000

Based on the available data, the following normative level is presented for consideration:

- 1.3 NICU cots per 1000 live births at 80 per cent occupancy (equivalent to 1.04/1000 at 100 per cent occupancy, a relative increase from the current benchmark).
- 6.3 SCN cots per 1000 live births at 80 per cent occupancy (equivalent to 5.04/1000 at 100 per cent occupancy, equivalent to the current benchmark).

6.1.2 Method 2 – Incidence based

Table 8 outlines the proportions of births from 2000-2009 which were low or very low birth weight or pre-term, and which therefore could reasonably be expected to require neonatal or special care. Babies of multiple pregnancies have not been included as it is expected they would be included in either the low birth weight or pre-term cohorts. A further cohort exists of those babies with congenital problems or requiring surgical care who may not fall into either the low birth weight or gestation categories. It may be that specific diagnostic codes would allow identification of this cohort and enable a proportional correction to be applied to the calculation. Feedback is welcome on how best this cohort could be accounted for.

Table 8: Queensland proportion of births requiring (or likely to require) NICU or SCN

Cohort	Proportion of 2000-2009 total babies
VLBW (<1500g)	1.6%[a]
LBW (1500-2500g)	5.4%[a]
Gestation =/<36 weeks	8.4%[a]
Total LBW/VLBW/preterm	15.4%[a]
All babies requiring NICU or SCN (reported separately)	19.3%[a]
All babies requiring NICU or SCN	16.9% (2006 only)[b]

Source: a. Humphreys (2011) Maternal and Perinatal Mortality and Morbidity in Queensland [10] b. Laws (2008) Australia's mother and babies 2006 [9]

It is important to note that of course the low birth weight and preterm birth groups are not mutually exclusive. Merely adding those groups therefore does not provide a clear indication of NICU and SCN use. Given the overlap of preterm birth and low birth weight, which form the bulk of neonatal services activity, a total activity proportion of 19.3 per cent of all births may appear high, even when allowing for the activity generated by surgery and congenital health issues. The AIHW reported 16.9 per cent of Queensland babies born in 2006 required NICU or SCN admission [9]. These rates could be applied as a measure of 'incidence' of NICU/SCN utilisation in Queensland and used to project future activity.

There were 62 031 babies born in Queensland in calendar year 2010. Using the above proportions calculate that 10483 (16.9 per cent) or 11972 (19.3 per cent) babies would

require NICU/SCN admission. QHAPDC reports 10493 public separations in financial year 2009-10 and 9352 in 2010-2011, which aligns well with the 16.9% proportion. However, private sector activity is unclear and may need accounting for using the higher proportion to calculate bed requirements.

Expected annual separations may therefore be calculated as:

- Expected annual separations = Number of live births annually x proportion requiring NICU/SCN care.
- The proportion is suggested as 16.9 percent of total live births of the population served.
- Flow calculations to accurately assess the number of live births in the served population are necessary at the facility level and account for activity flowing out to other providers, or flowing in from elsewhere in Queensland, interstate, or overseas.
- This method provides combined NICU/SCN projected requirements and would require methodology to assign a proportional split between NICU and SCN services (e.g. 1:2 ratio as suggested elsewhere[31]) unless a method of separating expected NICU and SCN activity could be ascertained.

6.1.3 Method 3 – Activity based on linear projections and AIM modelling

Using AIM as the currently endorsed tool for activity projection for Queensland Health, the number of cots required is calculated as:

Number of cots = projected occupied bed days / days of operation / target occupancy

- Projected occupied bed days as projected by AIM.
- Days of operation is expected to be 365.
- Target occupancy is proposed at 80 per cent in line with published benchmarks.

7. Service Planning Benchmark

Activity projections are converted into numbers of cots needed via a standardised conversion calculation. The standardised chosen activity projection method coupled with the conversion calculation forms the service planning benchmark. Different activity projection methods require different methods to convert to cot numbers.

7.1.1 Method 1 – Normative based on published normative levels

- Conversion to required cot numbers is achieved by application to the birth numbers in the population served.
- Flow calculations to accurately assess the served population are necessary at the facility level and account for activity flowing out to other providers, or flowing in from elsewhere in Queensland, interstate, or overseas.
- Weighting corrective factors similar to those accounted for in the currently endorsed service planning benchmark for populations where the Aboriginal and

Torres Strait Islander birth rate is significant (>10 per cent of the total birth rate for NICU calculations, >8 per cent of the total birth rate for SCN calculations) may be calculated based on up to date service utilisation rates in the applicable local areas.

- This method is applied to the Queensland population in table 9 for illustration of whole of state cot numbers using the proposed normative levels of 1.3 NICU and 6.3 SCN cots per 1000 live births at 80 per cent occupancy.

7.1.2 Method 2 – Incidence based

By combining the expected separations calculated by the method in 5.1.2 with average length of stay and ideal occupancy, we can project required cots as:

$$\frac{\textit{Expected annual separations} \times \textit{average length of stay}}{\textit{Annual days (365)}} \times \textit{(target occupancy)}$$

- Average length of stay for NICU is proposed at 12.7 based on last five years QHAPDC data.
- Average length of stay for SCN is proposed at 7.4 based on last five years QHAPDC data.
- Average length of stay for NICU/SCN combined is proposed as 8.3 based on last five years QHAPDC data.
- Target occupancy is proposed at 80 per cent in line with published benchmarks.
- This method is applied to the Queensland population in table 10 for illustration of whole of state cot numbers. It appears that this methodology may underestimate actual requirements; an alternative proportion of 'incidence' (or expected requirement for NICU/SCN admission) may be warranted.

7.1.3 Method 3 – AIM modelling

Using AIM to provide the projected number of occupied bed days, the number of cots required is therefore calculated as:

Projected occupied bed days / days of operation / target occupancy

- Projected occupied bed days as projected by AIM.
- Days of operation are expected to be 365.
- Target occupancy is proposed at 80 per cent in line with published benchmarks.
- This method is applied to the Queensland population in table 11 for illustration of whole of state cot numbers *using linear projections only* rather than the more accurate AIM projections which would require modelling based around local service provision variations.

8. Review date for benchmarks

The intention of these service planning benchmarks is to identify a consistent methodology to plan future NICU and SCN requirements. It is recognised that changes in demand, models of care and adoption of future technology have the potential to influence the continuing demand for services, as does changes in population growth and fertility levels.

In recognising these influences, it is proposed that a review of this service planning benchmark be conducted in three years from the date of endorsed recommendations.

9. Summary

Three activity projection methodologies are presented for consideration and feedback:

- Normative –1.3 NICU cots and 6.3 SCN cots per 1000 live births at 80 per cent occupancy (using a median of published normative benchmarks for NICU and adjusting SCN cot levels using a lower occupancy level to provide equivalent numbers to those in the currently endorsed service planning benchmark.
- Incidence based – expected separations calculated using 16.9 per cent of total live births.
- Activity based – expected separations projected by AIM modelling to include local service provision variations and expected changes in models of service delivery (e.g. service expansion and changes in patient flow).

These three activity projections are converted into required bed numbers using a functional benchmark conversion calculation:

- Normative – applied to the number of live births in the served population, with patient flows accounted for and weighting for Aboriginal and Torres Strait Islander populations.
- Incidence based –

  $$\frac{\text{Expected annual separations} \times \text{average length of stay}}{\text{Annual days (365)}} \times (\text{target occupancy})$$

  With NICU length of stay at 12.7 ~~days,~~ SCN length of stay at 7.4 days and occupancy at 80 per cent
- AIM modelling - Number of cots = projected occupied bed days / days of operation (365) / target occupancy (80%)

In the absence of any new evidence, minimum NICU size should remain at 16 cots (minimum catchment of 10 000 live births) as agreed in the currently endorsed service planning benchmark and 8 cots for CSCF level 5 SCN units in line with the CSCF. No minimum unit size is suggested for CSCF level 4 services.

Table 9: Method 1 - Normative Benchmark

Measure	Projection Methodology and data source	Calculation applied to whole of Queensland (public and private)	Comparison to current and planned cot numbers
Whole of population	Normative rate **NICU** 1.3 per 1000 live births at 80% occupancy **SCN** 6.3 per 1000 live births at 80% occupancy Queensland Perinatal Data Collection	2009: 61605 live births = **NICU** (1.3 x 61.6) x 80% = 97 cots **SCN** (6.3 x 61.6) x 80% = 466 cots 2015: 65604 projected live births = **NICU** (1.3 x 65.6) x 80% = 103 cots **SCN** (6.3 x 65.6) x 80% = 496 cots	Current cots (February 2012): **NICU** = 63 public + 25 private = 88 cots **SCN** = 236 public + 144 private = 380 cots Planned cots for 2015: **NICU** = 77 public + 25 private = 102 cots **SCN** = To be established
Planned cots = current cot numbers plus planned developments at Gold Coast University Hospital and Townsville Hospital. Private numbers assumed static.			

Table 10: Method 2 - Incidence based benchmark

Measure	Projection Methodology & Data Source	Calculation	Methodology applied (whole of Queensland - public and private)
Activity proportion	Expected separations = 16.9% or 19.3% of live birth rate Queensland Perinatal Data Collection	[(Expected annual separations x average length of stay)/ Annual days (365)] x target occupancy) NICU length of stay = 12.7 days SCN length of stay = 7.4 days Combined length of stay = 8.3 days Occupancy = 80%	**2009:** 61605 live births 16.9% = 10411 expected separations 19.3% = 11890 expected separations (10493 actual public separations in 2009-10) **NICU/SCN combined** at 16.9% [(10411 x 8.3)/365] x 80% = 284 cots at 19.3% [(11890 x 8.3)/365] x 80% = 325 cots* **2015:** 65604 projected live births 16.9% = 11087 expected separations 19.3% = 12662 expected separations **NICU/SCN combined** at 16.9% [(11087 x 8.3)/365] x 80% = 303 cots at 19.3% [(12662 x 8.3)/365] x 80% = 346 cots** at 1:2 ratio = 101 NICU and 202 SCN cots or 115 NICU and 231 SCN cots
**Actual combined cot numbers in February 2012 were 468 as reported in MAC.* ***Expected combined cot numbers in 2015 are at least 482 accounting for developments currently underway.*			

Table 11: Method 3 - Activity (AIM) based benchmark

Measure	Projection Methodology & Data Source	Calculation	Methodology applied to whole of Queensland (public)
Activity (occupied bed days)	AIM projections (2016 linear projection provided for illustration only) QHAPDC	**Overnight beds = Occupied bed days per annum / days of operation per annum (365)/ occupancy rate (80%)**	**2011** whole of Queensland (public): NICU 21628 / 365 /80% = **72 cots** SCN 64543 / 365 /80% = **213 cots**
	Queensland Health 2010	Queensland 2016 occupied bed days per annum projection – projected by method of least squares (assumed to include population growth at same unchanged rate) based on previous 5 years data.	**2016** whole of Queensland (public): NICU 26318 / 365 /80% = **87 cots** SCN 67993 / 365 /80% = **224 cots**

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11. Appendix 1 – Definitions

The following definitions are from the Queensland Health 2010-2011 Monthly Activity Collection (MAC) Manual Public Facilities and may be important when considering data and projection methodologies.

Acute Inpatient Modelling (AIM)

The Acute Inpatient Modelling (AIM) tool is the Queensland Health endorsed electronic tool for projecting inpatient activity. AIM projects activity based on the historical trend of separations, current utilisation and population projections. It also has the ability to model potential scenarios to increase accuracy of calculations.

Admissions

Admission is the administrative process by which a hospital records the provision of treatment and/or care and accommodation of a patient.

Admitted patients are those who undergo the formal admission process. It may include same day admissions as well as overnight or longer stays.

Non-admitted patients are those who do not undergo a hospital's formal admission process. Non-admitted patients receive direct care within the emergency department or as outpatients (including non-admitted day program patients) or through other non-admitted service such as community and outreach.

Australian Institute of Health and Welfare AR-DRG

The Australian Institute of Health and Welfare (AIHW) publishes separation rates per 10,000 population for each AR-DRG in the annual Australian Hospital Statistics report which could be used to project future requirements on a population (per capita) basis. There are several limitations to using this data for projections. Data may be up to three years old (due to delays in publication) and does not include non-admitted activity. Any projections based on this data would also assume that the district or catchment rates for the area of planning are the same as the state average rates.

Beds

Numbers of beds and bed alternatives are reported according to specific definitions via the Bed Activity Reporting Application (BARA) for the Monthly Activity Collection (MAC) Online.

Overnight bed

A bed is an overnight bed if it is used exclusively or predominantly to provide accommodation for overnight admitted patients. Overnight or longer stay patients are those who are admitted to and separated from the hospital on different dates.

Same day bed and bed alternatives

A same day bed and/or bed alternative is one which is used exclusively or predominantly to provide accommodation for *admitted* same day patients. Same day patients are those who are admitted and separated on the same date. Same day bed and bed alternatives are not reported via the BARA.

A bed alternative is an item of furniture (trolley or chair) which is used as an alternative to a bed.

For the purposes of this paper, all bed spaces are considered to be overnight beds, even if they may on occasion be utilised by a neonatal patient for a same day stay only.

Diagnosis Coding

AR-DRG (DRG) - Australian Refined Diagnosis Related Groups classify inpatient episodes of care into categories based on similar clinical content and comparative levels of hospital resource consumption. There are almost 700 AR-DRGs. Those used within this discussion paper are listed at Appendix 1.

ESRG - Enhanced service related groups are aggregations of the AR-DRGs into 128 related diagnostic and procedural groups enabling more manageable data analysis and linking each patient episode to a clinical specialty. ESRGs may be further mapped to (42) Service Related Groups (SRGs). ESRGs and SRGs have been developed by Hardes and Associates for data analysis and projection purposes as part of the Acute Inpatient Modelling (AIM) tool.

ACHI - Australian Classification of Health Interventions is a procedure classification system that captures procedures and interventions performed in public and private hospitals, day centres and ambulatory settings. Procedures are coded in blocks using the International Classification of Diseases coding system (version ICD-10-AM).

Queensland Hospital Admitted Patient Data Collection (QHAPDC)

The QHAPDC is the corporately endorsed data source for Queensland admitted patient activity. Data are available from all recognised Queensland hospitals permitted to admit patients, including public and licensed private hospitals and day surgery units. Hospital separations are listed as overnight (one or more nights) or same day ('day cases'), emergency or elective. Standardised data fields in QHAPDC include, but are not limited to, DRGs, procedures by ACHI codes and diagnosis codes using ICD-10-AM, as well as various demographic and geographic data.

Public sector facilities admit all overnight stay patients, but may not formally admit same day patients. Private facilities admit all patients (overnight and same day) and therefore complete private facility activity data may be accessed via QHAPDC. The QHAPDC data has been used for projecting activity for other service planning benchmarks developed for Queensland Health hospitals.

Separations

A separation is the process by which an admitted patient completes an episode of care.

A *formal separation* is the administrative process by which a hospital records the completion of treatment and/or care and accommodation of a patient (e.g. through discharge, transfer, or death). A *statistical separation* is the administrative process by which a hospital records the completion of each episode of care occurring within a single hospital stay (e.g. if a patient changes from an acute episode of care to a maintenance episode of care, they are statistically separated from the acute episode of care and statistically admitted to the maintenance episode of care). Queensland Health uses separation data, as opposed to admission data, for activity analyses and service planning.

Appendix- 2 Search Methodology

Search methodology informing literature review for NICU and SCN services planning benchmark discussion paper.

Key Word List

Neonatal Intensive Care/NICU
Organisation and Administration
Health Services Accessibility
Health Facility Planning
Planning Techniques
Delivery of Health Care
Length of stay
Hospital Bed (cot) Capacity
Service Capacity
Special Care Nursery/Special Care Baby Unit
Benchmarking
Organisational Models
Projection methodologies
Hospital Design and Construction
Health Services Needs and Demands
Bed (cot) occupancy
Hospital Planning

Sources Searched
Databases

AUSTHealth
Business Source Premier
Embase
HMIC (UK)
Medline
CINAHL
Emerald Management
Cochrane Library

Library Catalogues

- Libraries Australia
- HealthCat – QH Library catalogue
- HMIC (Health Management Information Consortium UK)
- New York Academy of Medicine Library

Web sites
Australian

Australian Bureau of Statistics	http://www.abs.gov.au/
Australian Health - Dept Health and Ageing	http://www.health.gov.au/
Australian Institute of Health & Welfare	http://www.aihw.gov.au/
Australasian Health Facility Guidelines	http://www.healthfacilityguidelines.com.au/
Australia and New Zealand Health Policy	http://www.anzhealthpolicy.com/home

Australian Resource Centre for Healthcare Innovations (ARCHI) – open access section

http://www.archi.net.au/

New South Wales Health http://www.health.nsw.gov.au/

South Australia Health	http://www.health.sa.gov.au/
Victoria Health	http://www.health.vic.gov.au/
Western Australia Health	http://www.health.wa.gov.au/home/

International

Audit Commission (UK)	http://www.audit-commission.gov.uk/
Care Quality Commission (UK)	http://www.cqc.org.uk
Canadian Government	http://www.canada.gc.ca/home.html
Canadian Health	http://www.hc-sc.gc.ca/index-eng.php
Cochrane Collaboration	http://www.cochrane.org/
Department of Health (UK)	http://www.dh.gov.uk
Kings Fund (UK)	http://www/kingsfund.org.uk
National Institute for Health and Clinical Excellence (NICE) (UK)	http://www.nice.org.uk/
National Library for Health (UK)	http://library.nhs.uk/Default.aspx
New Zealand Health	http://www.moh.govt.nz/moh.nsf
Scottish Intercollegiate Guidelines Network	http://www.sign.ac.uk/

Clinical Evidence (BMJ) https://clinicalevidence-bmj-com.cknservices.dotsec.com/ceweb/index.jsp

British Association of Perinatal Medicine	http://www.bapm.org/
The Joanna Briggs Institute	http://www.joannabriggs.edu.au/

NICU flows 11/12 16/17

From: Christina McIntosh
To: Amanda Carver; Liz Drake
Date: 11/04/2013 9:44 AM
Subject: Re: 2011/12 NICU and SCN flows
CC: Matt Vance
Attachments: 20130411 flow comparison_1112_2016_17.xls

Hi Liz

Attached is a snapshot from the Purchasing Health Need dataset (V10.2). This includes both 2011-12 actual and 2016-17 projected beddays. Snapshot is saved under G:\SPP\PPB\HSRAM\Data\2012\Projects\Purchasing\NICU and SCN .

The most significant reductions in flows to Mater appear to be for NICU activity and are associated with increased capability/capacity at Gold Coast, Sunshine Coast and Townsville.

Let me know if further detail is required.

Christina

>>> Amanda Carver 4/10/2013 9:50 am >>>
Will be in the dataset I have requested from Holly. She has just said she will aim to have them to me by the end of the week, so I could prioritise that to do Monday? Would that be soon enough? Nicu should be straightforward....not sure about SCN. I could look at flows up to June 11 today if you like.
a

>>> Liz Drake 10/04/2013 7:50 am >>>
Hi,

do we have easy access to the 11-12 flows for NICU and SCN? In percentages I think would be best.

I have to send them to Mater.

Thanks,
Liz

Source: 20130327_March projections_1112_1213_16_17_ALL_v10.2																	
2011-12 NICU & SCN beddays (converted to flows) sourced from DSS																	
2016-17 NICU & SCN beddays base on methodology outlined in 20130327 Health need methodolgoy_revised_v5.6																	
Age_group	(All)																
Emerg_status	(All)																
Stay_type	(All)																
SRG	(All)																
ESRG	(All)																
Facility_of_treatment	(All)																
SRG2	(All)																
Service_stream	Qualified neonates																

			Values	HHS_of_treatment													
			Sum of Activity (beddays)														
ESRG2	HHS_of_residence	Year	Cairns and Hinterland	Central Queensland	Children's Health Queensland	Darling Downs	Gold Coast	Mackay	Mater Public Hospitals	Metro North	Metro South	North West	Sunshine Coast	Townsville	Western Moreton	Wide Bay	Total activity
NICU	Cairns and Hinterland	2011-12	0%	0%	0%	0%	0%	0%	1%	9%	0%	0%	0%	90%	0%	0%	1,048
		2016-17	0%	0%	0%	0%	0%	0%	21%	6%	0%	0%	0%	73%	0%	0%	1,844
	Cape York	2011-12	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	95%	0%	0%	204
		2016-17	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	111

	Central Queensland	2011-12	0%	0%	0%	0%	0%	0%	3%	88%	0%	0%	0%	10%	0%	0%	1,210
		2016-17	0%	0%	0%	0%	0%	0%	12%	87%	0%	0%	0%	2%	0%	0%	1,568
	Central West	2011-12	0%	0%	0%	0%	0%	0%	2%	88%	0%	0%	0%	10%	0%	0%	48
		2016-17	0%	0%	0%	0%	0%	0%	16%	84%	0%	0%	0%	0%	0%	0%	83
	Darling Downs	2011-12	0%	0%	0%	0%	0%	0%	69%	30%	0%	0%	0%	2%	0%	0%	698
		2016-17	0%	0%	0%	0%	0%	0%	75%	25%	0%	0%	0%	0%	0%	0%	1,729

	Gold Coast	2011-12	0%	0%	0%	0%	30%	0%	54%	16%	0%	0%	0%	0%	0%	0%	1,611
		2016-17	0%	0%	0%	0%	97%	0%	2%	1%	0%	0%	0%	0%	0%	0%	3,081
	Mackay	2011-12	0%	0%	0%	0%	0%	0%	1%	5%	0%	0%	0%	95%	0%	0%	707
		2016-17	0%	0%	0%	0%	0%	0%	0%	16%	0%	0%	0%	84%	0%	0%	1,308
	Metro North	2011-12	0%	0%	0%	0%	0%	0%	4%	96%	0%	0%	0%	0%	0%	0%	4,069
		2016-17	0%	0%	0%	0%	0%	0%	7%	92%	0%	0%	0%	1%	0%	0%	5,288

	Metro South	2011-12	0%	0%	0%	0%	1%	0%	91%	8%	0%	0%	0%	0%	0%	0%	3,943
		2016-17	0%	0%	0%	0%	0%	0%	88%	12%	0%	0%	0%	0%	0%	0%	7,047
	North West	2011-12	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	75%	0%	0%	410
		2016-17	0%	0%	0%	0%	0%	0%	18%	21%	0%	0%	0%	61%	0%	0%	310
	NSW - Northern	2016-17	0%	0%	0%	0%	30%	0%	54%	16%	0%	0%	0%	0%	0%	0%	1,261
	South West	2011-12	0%	0%	0%	0%	0%	0%	21%	79%	0%	0%	0%	0%	0%	0%	24

		2016-17	0%	0%	0%	0%	0%	0%	77%	23%	0%	0%	0%	0%	0%	0%	218
	Sunshine Coast	2011-12	0%	0%	0%	0%	0%	0%	6%	94%	0%	0%	0%	0%	0%	0%	1,171
		2016-17	0%	0%	0%	0%	0%	0%	1%	98%	0%	0%	0%	0%	0%	0%	1,982
	Torres Strait-Northern Peninsula	2011-12	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	97%	0%	0%	173
		2016-17	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	122
	Townsville	2011-12	0%	0%	0%	0%	0%	0%	7%	8%	0%	0%	0%	85%	0%	0%	1,822

		2016-17	0%	0%	0%	0%	0%	0%	1%	2%	0%	0%	0%	98%	0%	0%	1,845
	West Moreton	2011-12	0%	0%	0%	0%	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	1,569
		2016-17	0%	0%	0%	0%	0%	0%	72%	28%	0%	0%	0%	0%	0%	0%	2,056
	Wide Bay	2011-12	0%	0%	0%	0%	0%	0%	9%	91%	0%	0%	0%	0%	0%	0%	871
		2016-17	0%	0%	0%	0%	0%	0%	3%	97%	0%	0%	0%	0%	0%	0%	1,121
SCN	Cairns and Hinterland	2011-12	94%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	5%	0%	0%	6,061

		2016-17	86%	0%	0%	0%	0%	0%	5%	1%	0%	0%	0%	8%	0%	0%	7,981
	Cape York	2011-12	93%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	437
		2016-17	94%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	501
	Central Queensland	2011-12	0%	64%	0%	0%	0%	0%	1%	33%	0%	0%	0%	1%	0%	1%	3,021
		2016-17	0%	67%	0%	0%	0%	1%	3%	24%	0%	0%	0%	3%	0%	0%	5,961
	Central West	2011-12	0%	6%	0%	1%	0%	0%	0%	82%	0%	0%	0%	11%	0%	0%	267

		2016-17	0%	11%	0%	12%	3%	0%	9%	44%	0%	0%	0%	21%	0%	0%	307
	Darling Downs	2011-12	0%	0%	0%	78%	0%	0%	9%	11%	0%	0%	0%	0%	1%	0%	3,339
		2016-17	0%	0%	0%	78%	0%	0%	11%	10%	0%	0%	0%	0%	0%	0%	6,329
	Gold Coast	2011-12	0%	0%	0%	0%	87%	0%	8%	1%	3%	0%	0%	0%	0%	0%	4,937
		2016-17	0%	0%	0%	0%	98%	0%	1%	0%	1%	0%	0%	0%	0%	0%	9,445
	Interstate	2011-12	5%	1%	2%	12%	15%	1%	23%	22%	11%	0%	1%	5%	0%	1%	7,373

	Mackay	2011-12	0%	0%	0%	0%	0%	78%	0%	1%	0%	0%	0%	20%	0%	0%	2,951
		2016-17	0%	2%	0%	0%	0%	80%	0%	3%	0%	0%	0%	15%	0%	0%	5,190
	Metro North	2011-12	0%	0%	0%	0%	0%	0%	3%	97%	0%	0%	0%	0%	0%	0%	11,757
		2016-17	0%	0%	0%	0%	0%	0%	3%	96%	0%	0%	0%	0%	0%	0%	16,964
	Metro South	2011-12	0%	0%	0%	0%	2%	0%	43%	6%	46%	0%	0%	0%	2%	0%	11,258
		2016-17	0%	0%	0%	0%	1%	0%	39%	7%	50%	0%	0%	0%	2%	0%	25,149

	North West	2011-12	3%	1%	0%	0%	0%	2%	1%	5%	0%	0%	0%	88%	0%	0%	697
		2016-17	13%	0%	0%	0%	0%	0%	4%	16%	0%	0%	0%	67%	0%	0%	1,314
	South West	2011-12	0%	3%	0%	62%	0%	0%	12%	12%	0%	0%	0%	0%	0%	12%	156
		2016-17	0%	0%	0%	53%	0%	0%	29%	11%	0%	0%	7%	0%	0%	0%	921
	Sunshine Coast	2011-12	0%	0%	0%	0%	0%	0%	2%	25%	0%	0%	73%	0%	0%	0%	4,253
		2016-17	0%	0%	0%	0%	0%	0%	0%	14%	0%	0%	85%	1%	0%	0%	7,722

	Torres Strait-Northern Peninsula	2011-12	65%	0%	0%	0%	0%	0%	0%	4%	0%	0%	2%	29%	0%	0%	705
		2016-17	74%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	24%	0%	0%	551
	Townsville	2011-12	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	98%	0%	0%	5,687
		2016-17	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	99%	0%	1%	7,253
	West Moreton	2011-12	0%	0%	0%	3%	0%	0%	13%	7%	0%	0%	0%	0%	76%	0%	5,705
		2016-17	0%	0%	0%	6%	0%	0%	12%	4%	2%	0%	0%	0%	77%	0%	7,308

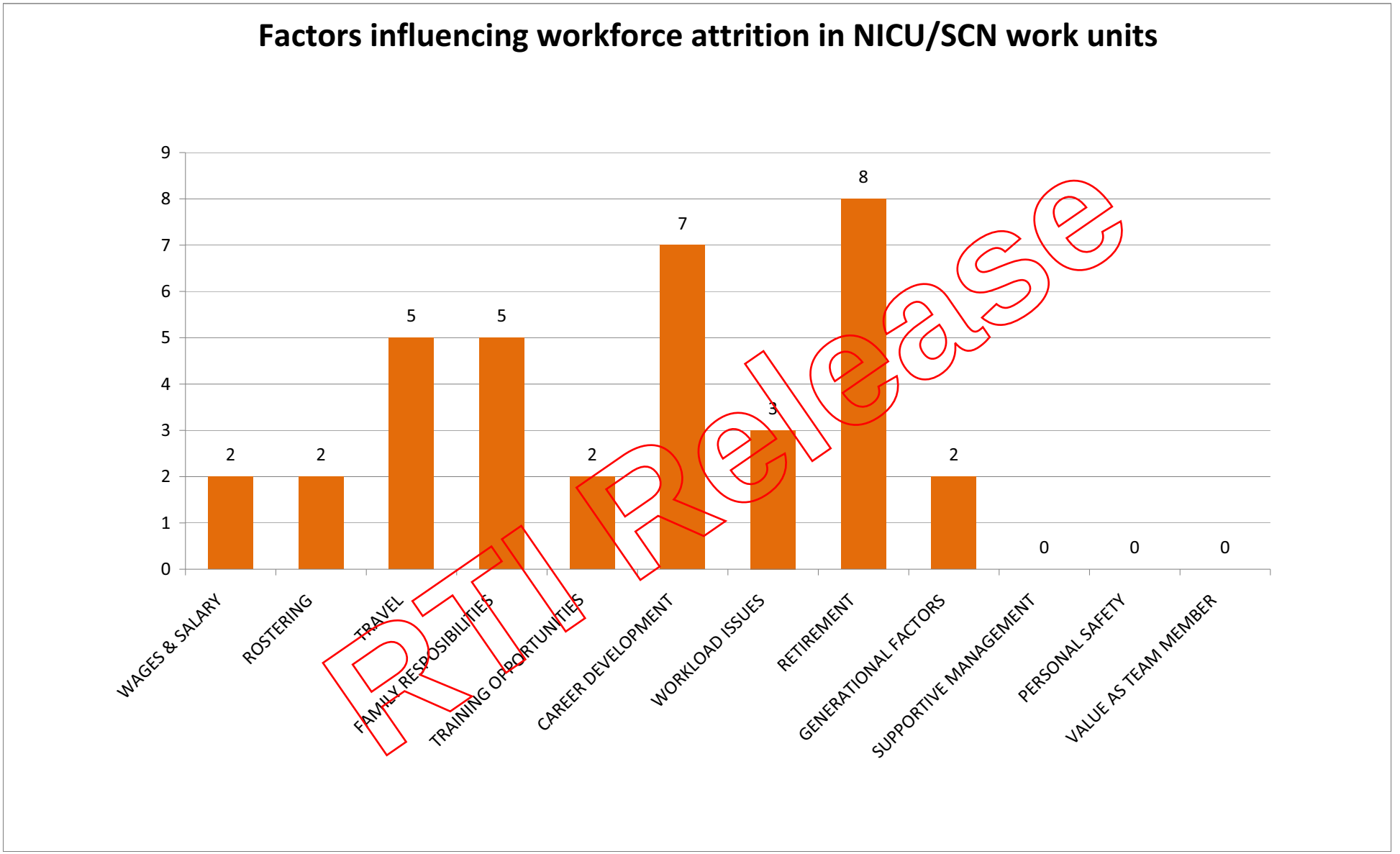
	Wide Bay	2011-12	0%	1%	0%	0%	0%	0%	1%	21%	0%	0%	1%	0%	0%	77%	3,961
		2016-17	0%	0%	0%	0%	0%	0%	1%	17%	0%	0%	1%	0%	0%	82%	4,772

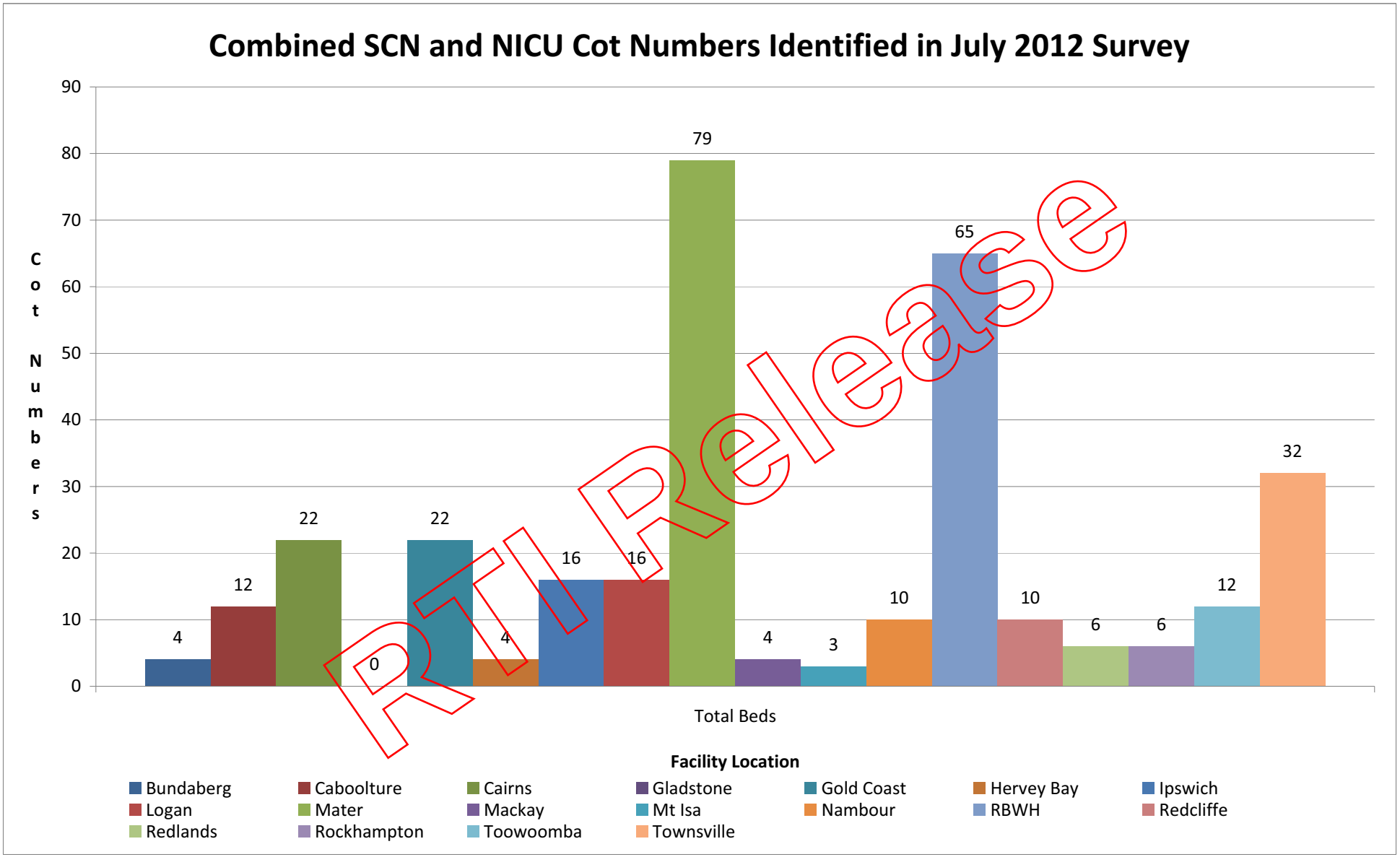
QUESTIONS	T'VILLE	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE	CABOOLTURE	GLADSTONE	MACKAY	GC	REDLANDS	MT ISA	R'HAMPTON	IPSWICH	RBWH	MATER
FUNDED FTE NICU		NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	LEVEL 3	NO NICU		NO NICU	NO NICU	NO NICU	NO NICU		
NNP										NURSERY								
RN	43.59									NO NICU		7.46					99.97	97
RM	5.26									NO SCN								
EN																		
AIN																		
CONS																		
REG/PHO																		
SHO																		
INTERNS																		
FUNDED FTE SCN																		
NNP			0								1				3.5			
RN	30.04	9	7.2		1.47	12.68		8.4	15.63		4.42	25.12	8.4	5.9	6	13.26	72.46	37
RM	2.74	13.6	7.7		2.95	10.32	4.42								1.63			
EN						1						1.53						9
AIN																	4.2	
CONS		1	5.5 (PAEDS)		4 (PAEDS)	3	3(PAEDS)	4.1(MAT)	4.1(MAT)		3.5 (PAEDS)		3.33 (PAEDS)	3 (PAEDS)	1	3.3 (PAEDS)		
REG/PHO		1	2		6 (PAEDS)	6	4 (PAEDS)	3 (MAT)	3 (MAT)		2 (PAEDS)		6 (PAEDS)	1 (PAEDS)	1	6.5 (PAEDS)		
SHO		<1	9		1 (PAEDS)		2 (PAEDS)	2 (MAT)	2 (MAT)		2 (PAEDS)		1(PAEDS)	1(PAEDS)	1			
VMO							1											
INTERNS			2					2 (MAT)	2 (MAT)		2 (PAEDS)					3 (PAEDS)		
FUNDED FTE ACROSS NICU & SCN																		
NNP	4																	
RN	5.68			20.1														
RM	3.18																	
EN																		
AIN	4.5																	
CONS	4			1 PAEDS								3					7	7.2
REG/PHO	5			2								3					14	16
SHO												1					2	1
INTERNS												1					2	1
ALLIED HEALTH		AS REQUIRED	AS REQUIRED		AS REQUIRED	AS REQUIRED	AS REQUIRED	Shared MAT	AS REQUIRED		AS REQUIRED		AS REQUIRED	AS REQUIRED	AS REQUIRED	AS REQUIRED		AS REQUIRED
PSYCHOLOGIST	0.5																	
PHYSIO	0.6			0.3				0.2				0.4						
SOCIAL WORKER	1	0.5		0.6				1.2				0.5						
OT	0.1																	
SPEECH THERAPY	0.5			0.4				0.2										
ABORIGINAL LIAISON OFFICER	1																	
HP5 PHARMACIST	1			0.5														
HP3 PHARMACIST	0.5											0.4						
003 PHARMACY ASSISTANT	0.5																	
MED STAFF AFTER HOURS NICU ONLY		NO NICU	NO NICU		NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU		NO NICU	NO NICU	NO NICU	NO NICU		
CONS																		
REG/PHO																		
SHO																		
INTERNS																		
MED STAFF AFTER HOURS SCN ONLY																		
CONS																		
REG/PHO																		
SHO																		
INTERNS																		
MED STAFF AFTER HOURS NICU & SCN		NO NICU	NO NICU		NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU		NO NICU	NO NICU	NO NICU	NO NICU		
CONS	1 + 2nd on call											1 on call					1	1
REG/PHO	2											1					2	2-3
SHO												1 until midnight					0	
INTERNS																	0	
MED STAFF AFTER HOURS SHARE OTHER INPT AREA																		
CONS		1	1	1	1	1	1	1	1				1	1 ON CALL	1	1		
REG/PHO		1		1	1	1	1	1	1		1 (16:00-24:00)		1		1	1		
SHO			3															
INTERNS																		
SHARE INPT AREA		PAEDS	PAEDS/DEM	PAEDS	PAEDS	PAEDS/DEM	PAEDS	MAT/PAEDS	MAT/PAEDS		PAEDS/DEM		PAEDS/DEM	MAT/PAEDS	MAT/PAEDS	MAT/PAEDS		
VACANT FTE NICU ONLY		NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU		NO NICU	NO NICU	NO NICU	NO NICU		
NNP																		
RN	0.44																1.62	
RM												1.67						
EN												0.06						
AIN																		
CONS																		
REG/PHO																		
SHO																		
INTERNS																		
VACANT FTE SCN ONLY																		
NNP													4.6					
RN	0.86	1.2				1					2.5						0.86	
RM												1.57		9				
EN																		
AIN																	0.3	
CONS					1 (PAEDS)						2 (PAEDS)			1 (PAEDS)				

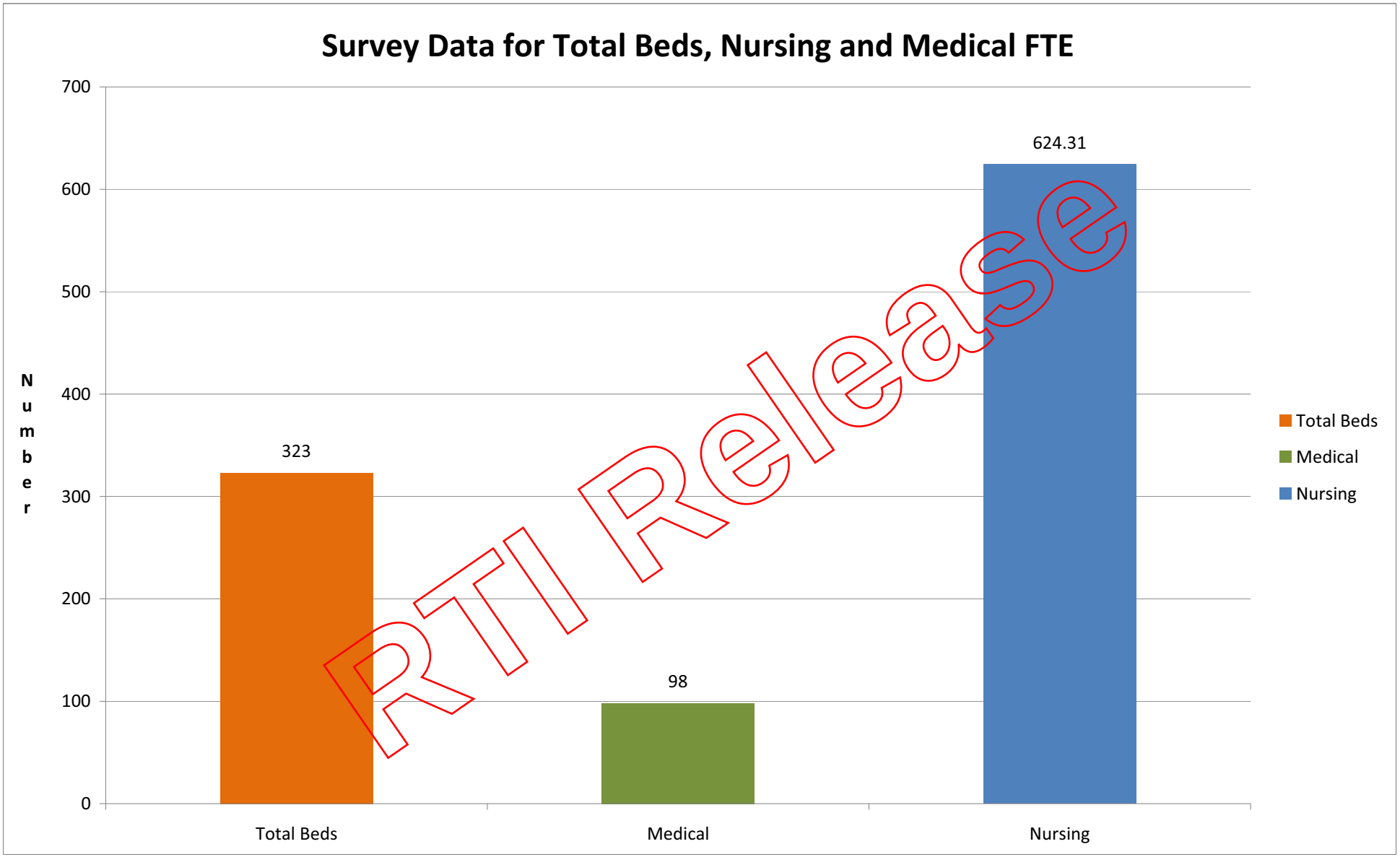
REG/PHO					4 (PAEDS)						1 (PAEDS)				1			
SHO																		
INTERNS																		
VACANT FTE NICU & SCN ONLY		NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU		NO NICU	NO NICU	NO NICU	NO NICU		
NNP																		
RN	1.32			2.9														
RM																		
EN																		
AIN	1.7																	
CONS				1														
REG/PHO																		
SHO																		
INTERNS																		
VACANT FTE ALLIED HEALTH																		
PSYCHOLOGY																		
PHYSIO																		
SOCIAL WORKER																		
OT																		
SPEECH THERAPY																		
ABORIGINAL LIAISON OFFICER																		
ADMINISTRATION	0.29																	
HP5 PHARMACIST																		
HP3 PHARMACIST																		
003 PHARMACY ASSISTANT																		
VACANT FTE SCN AS AT 1st MAY 2012	NIL	NIL	NIL		NIL		NIL	NIL	NIL		NIL					NIL		NIL
NNP																		
RN				2.9		1						2.99	4.6					
RM														9				
EN																		
MEDICAL												1		1	1			
PSYCHOLOGY																		
PHYSIO																		
SOCIAL WORKER																		
OT																		
SPEECH THERAPY																		
ABORIGINAL LIAISON OFFICER																		
AUDIOLOGY																		
NUTRITION & DIETETICS																		
ADMINISTRATION																		
ROSTERED STAFF AGE RANGE																		
< 39	?	9	6	10	3	10	0	1	0		0	18	2	5	8	X	39	92
40 - 44	?	6	8	6	0	5	0	2	5		X	6	1	5	2		31	25
45 - 49	?	9	2	10	0	3	0	3	3		X	22	1	2	2	X	27	42
50 - 54	?	6	4	3	2	10	7	6	3		0	7	1	0	4		23	37
55 - 59	?	3	1	0	0	4	1	2	3		0	3	0	0	0	X	15	24
60 - 64	?	4	1	3	2	0	0	0	1		0	2	0	3	1		10	8
> 65	?	1	0	0	1	0	0	0	0		0	0	0	0	0	3 (CONS)	5	1
NICU NURSING FATIGUE HRS LAST MNTH	0	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU	0	NO NICU	NO NICU	NO NICU	NO NICU	0	0
NICU MEDICAL FATIGUE HRS LAST MNTH	0	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU	0	NO NICU	NO NICU	NO NICU	NO NICU	24	0
SCN NURSING FATIGUE HRS LAST MNTH	0	0	0	10	0	0	0	0	0		0	0	0	0	0	0	0	0
SCN MEDICAL FATIGUE HRS LAST MNTH	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
RETENTION ISSUES NIC & SCN STAFF		NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU		NO NICU	NO NICU	NO NICU	NO NICU		
WAGES & SALARY					X									X				
ROSTERING									X			X					X	
TRAVEL		X												X		X	X	
FAMILY RESPOSIBILITIES				X	X							X			X			X
TRAINING OPPORTUNITIES						X						X		X				
CAREER DEVELOPMENT				X								X	X	X			X	
WORKLOAD ISSUES	X											X			X			
RETIREMENT		X	X	X	X									X	X	X	X	
GENERATIONAL FACTORS	X			X														
SUPPORTIVE MANAGEMENT																		
PERSONAL SAFETY																		
VALUE AS TEAM MEMBER																		
OTHER	Transiant			Transiant			N/P	N/P			N/P	Delay in new hospital		Accommodation				
HOW FILL PLANNED LEAVE NICU & SCN		NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU		NO NICU	NO NICU	NO NICU	NO NICU		
POOL STAFF			X	X	X	X								X				
CASUAL ON CALL STAFF			X	X		X	X							X				
P/T UNIT STAFF MEMBER	X	X		X				X					X	X				
OVERTIME UNIT STAFF				X														
CONTRACT STAFF WITH APPROP SKILLS	X	X			X									X				
NURSING AGENCY														X				
DO NOT FILL														X				
OTHER									ROSTERED BPF		ROSTERED BPF	ROSTERED BPF	FROM MAT		ROSTERED BPF	ROSTERED BPF	STERED B	ROSTERED BPF
HOW FILL UNPLANNED LEAVE NICU & SCN		NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU		NO NICU	NO NICU	NO NICU	NO NICU		
POOL STAFF	X		X	X	X	X						X		X	X	X	X	X
CASUAL ON CALL STAFF		X	X	X	X	X	X	X	X				X	X	X	X		X
P/T UNIT STAFF MEMBER	X	X	X	X			X	X	X			X		X	X	X	X	
OVERTIME UNIT STAFF	X		X	X	X		X					X	X	X	X	X		
CONTRACT STAFF WITH APPROP SKILLS														X	X			
NURSING AGENCY														X	X			

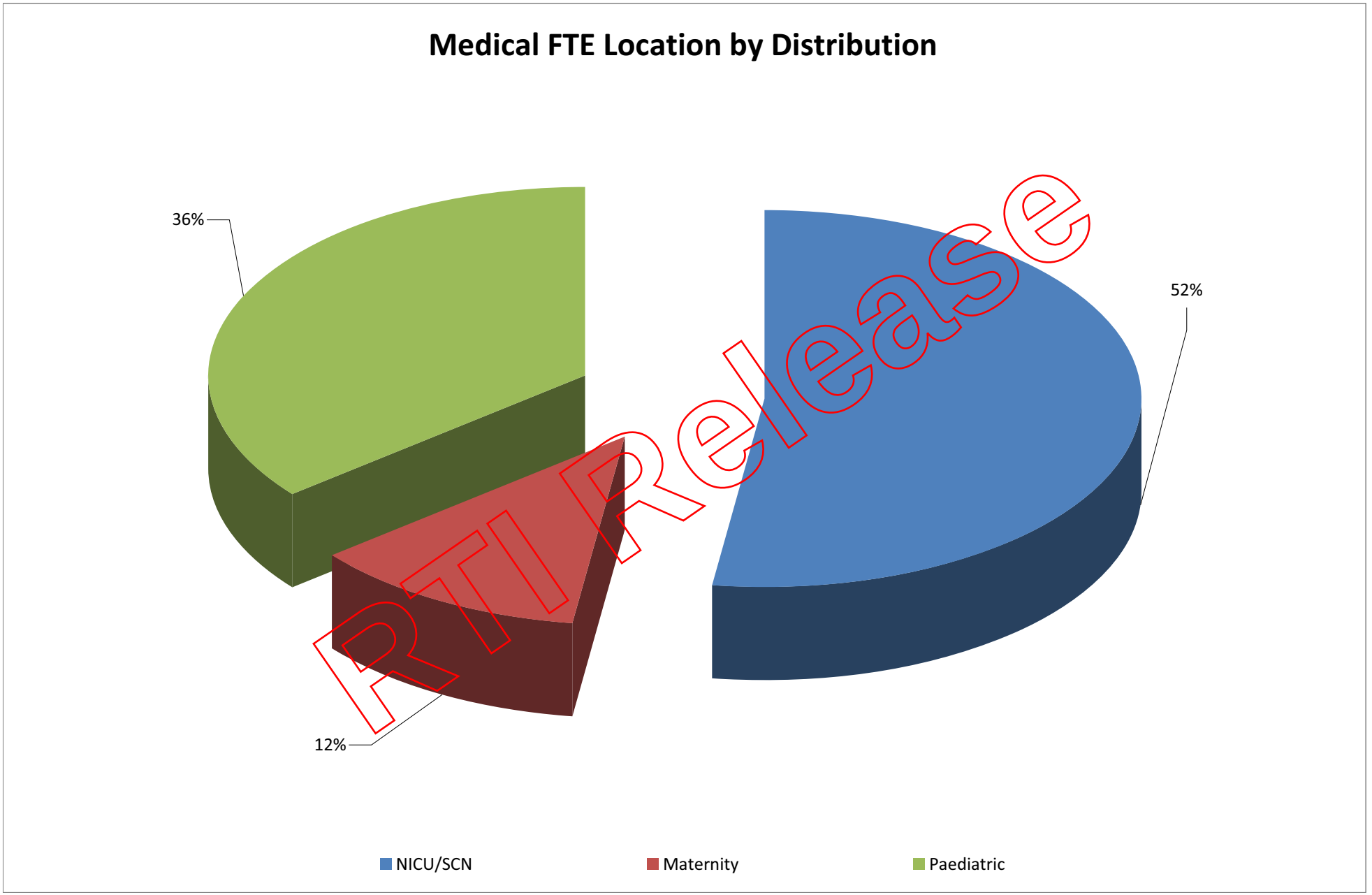
DO NOT FILL	X				X									X	X			
OTHER														X	X			
ANNUAL WORKFORCE ATTRITION RATE	1.97%	15%	1.50%	1%	0%	0%	0%	0%	2%		0%	1.50%	50%	10%	10%	0%	12	2%
METHOD MANAGE STAFF TURNOVER														X	X	X		
RECRUIT INTERNALLY		X	X					X			X	X		X	X	X	X	
RECRUIT WITHIN QLD HEALTH	X	X	X				X		X			X		X		X	X	
EXTERNALLY WITHIN QLD			X		X	X	X		X			X					X	X
EXTERNALLY WITHIN AUSTRALIA			X	X								X	X				X	
INTERNATIONAL	X											X						
RECRUITEMANT AGENCY															X			
CLOSE BEDS																		
OTHER											RN TRANSITION							
FUNDED NICU COTS NUMBER	12	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU	2	NO NICU	NO NICU	NO NICU	NO NICU	30	37
FUNDED SCN COTS NUMBER	20	22	10	10	4	16	4	10	12		4	20	6	3	6	16	35	42
EXTREME DEMAND CAN YOU INCREASE NICU COT NUMBERS		NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU		NO NICU	NO NICU	NO NICU	NO NICU		
YES	X											X					X	X
NO																		
WHAT IS MAX NUMBER TAKEN	19											4						
EXTREME DEMAND CAN YOU INCREASE SCN COT NUMBERS																		
YES	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
NO																		
WHAT IS MAX NUMBER TAKEN	31	37	20	18	14	22	12	14	18		13	24	9	8	12	22	40-43	
AVERAGE OCCUPANCY NICU (NO) 6/12	9	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU	NO NICU		NO NICU	2	NO NICU	NO NICU	NO NICU	NO NICU	28	35
AVERAGE OCCUPANCY SCN (%) 6/12	116%	83%	101%	110%	122%	75%	150%	70%	80%		200%	65%	75%	90%	124%	81.64%	82	98%
WHY CLOSED BEDS IN LAST 3/12																		
NURSING STAFF NUMBERS												X						
MEDICAL STAFF NUMBERS																		
INSUFFICENT DEMAND					X									X				
FUNDING/BUDGET MANAGEMENT																		
REPAIR & OR MAINTAINANCE OF COTS																		
INFECTION CONTROL ISSUES																		
NATURAL DISASTER																		
OTHER												Lack of equipment/cots						
NEVER CLOSE BEDS	X	X	X	X		X	X	X	X		X		X		X	X	X	X
DOCUMENTED PROCESS TO CLOSE BEDS																		
YES	X		X	X		X						X			X	X	X	
NO		X			X		X	X	X		X		X	X				X
BRIEF DESCRIPTION	Senior Mangmt		Senior Mangmt	Senior Mangmt		Demand Management Plan						Executive Mangmt			Worckforce Mangmt Plan	DRAFT Worckforce Mangmt Plan	Escalation through senior and executive manageme nt	
DOCUMENTED PROCESS TO OPEN BEDS																		
YES	X					X						X				X	X	
NO		X	X	X	X		X	X	X		X		X	X	X			X
BRIEF DESCRIPTION	Senior Mangmt	Senior Mangmt	Senior Mangmt	Senior Mangmt	Senior Mangmt	Demand Management Plan	Senior Mangmt	Senior Mangmt	Senior Mangmt		Senior Mangmt	Executive Mangmt			Senior Mangmt	DRAFT Worckforce Mangmt Plan	Escalation	
WHERE RECORD COT CLOSURES	N/A			MEMO	TRENDCARE							Email to executive management			TRENDCARE		HBCIS	NU PLAN
DO RETRIEVALS AFFECT UNIT STAFFING														**TARMAC**				
YES	X	X		X			X				X		X	X			X	X
NO			X		X	X		X	X			X			X	X		
BRIEF DESCRIPTION	< STAFFING	< STAFFING		< STAFFING			< STAFFING				< STAFFING		< STAFFING	< STAFFING			STAFFING	< STAFFING
DO STEP DOWN/BACK TRANS AFFECT UNIT STAFFING																		
YES	X			X	X	X		X	X			X	X			X	X	
NO		X	X				X				X			X	X			X
BRIEF DESCRIPTION	< STAFFING	PRE ARRANGE	PRE ARRANGE	< STAFFING	< STAFFING	< STAFFING	PRE ARRANGE	< STAFFING	< STAFFING		Townsville Cover	< STAFFING	< STAFFING			< STAFFING	STAFFING	
EXPANSION PLANS												+6 NICU cots in 2013, total build capacity 16 NICU cots, 28 SCN cots							
> SCN COTS											8				12			

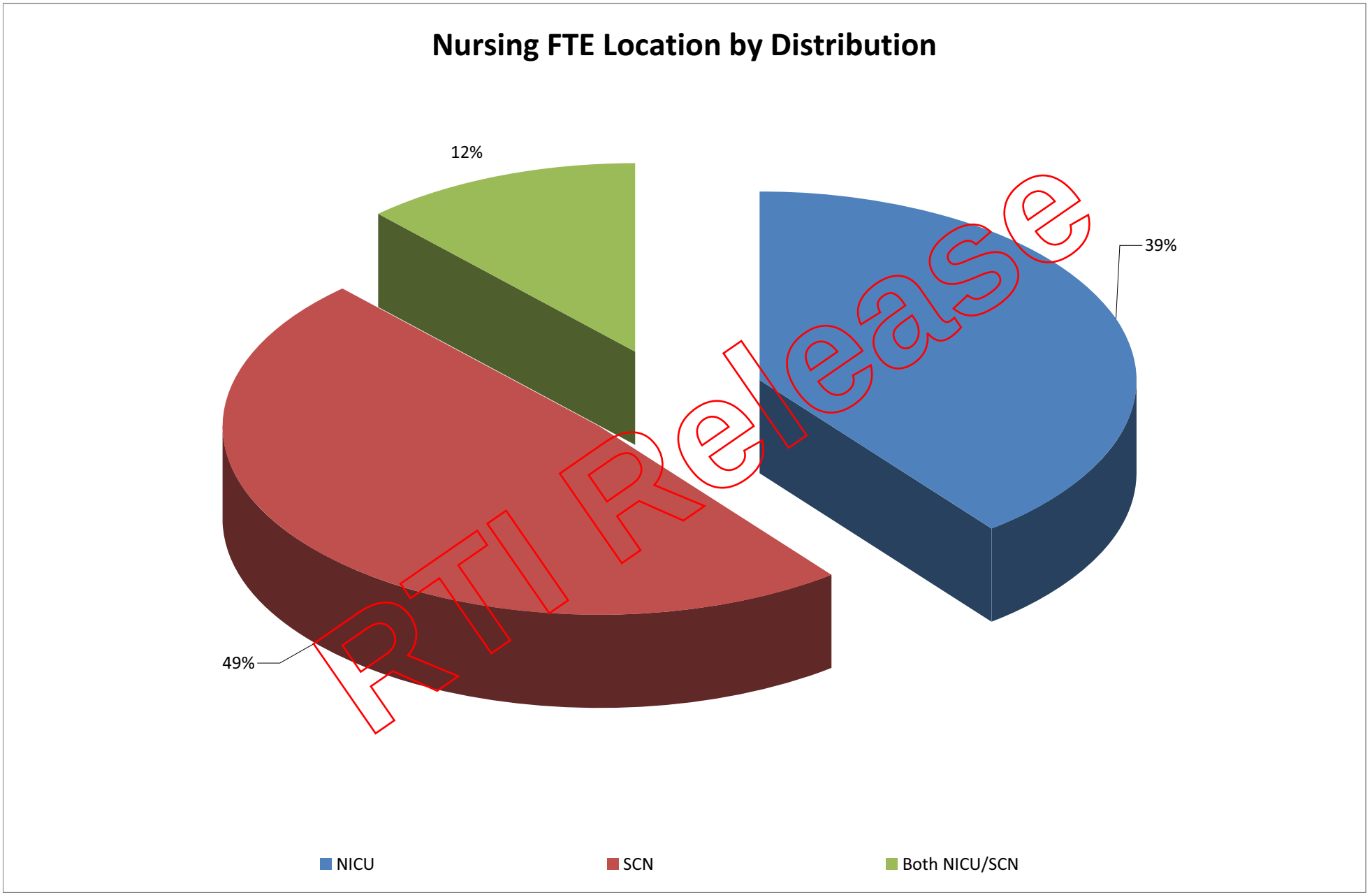
CONTACT NUMBERS INCORRECT - QMAN NEEDS UPDATING
SURVEYMONKEY UNSUITABLE FOR QUESTION RESPONSES
QUESTIONS INAPPROPRIATE FOR SMALLER UNITS - COMBINED STAFFING WITH MATERNITY - ROSTER COMBINED WITH MATERNITY - BREAKDOWN OF SPECIFIC DATA UNATTAINABLE
MEDICAL QUESTIONS NEED TO BE POSED TO MEDICAL STAFF
NURSING DIRECTORS UNAWARE OF QUESTIONNAIRE
TARGETED CONTACTS OFTEN HAD INADEQUATE KNOWLEDGE TO ANSWER QUESTIONS CORRECTLY

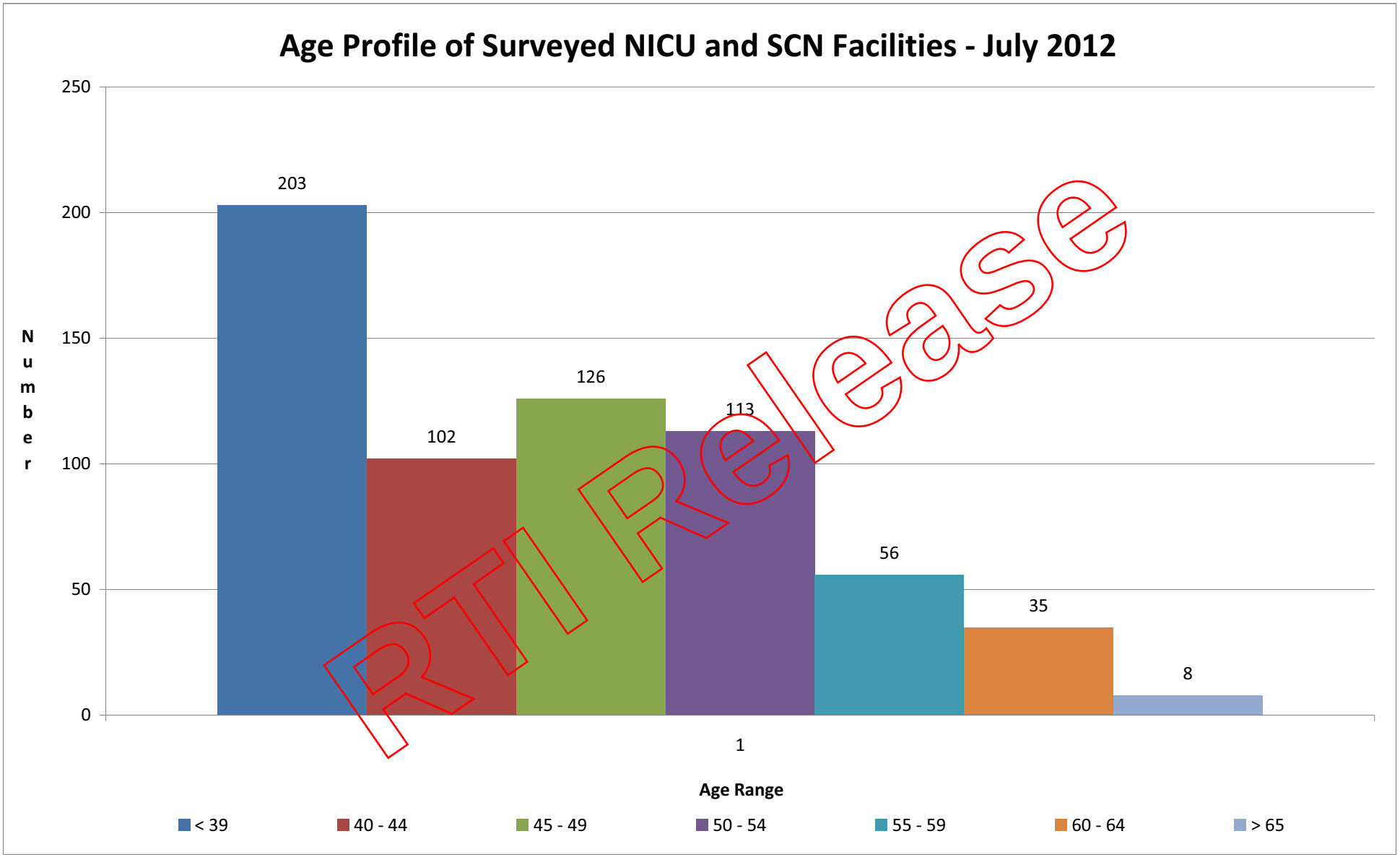


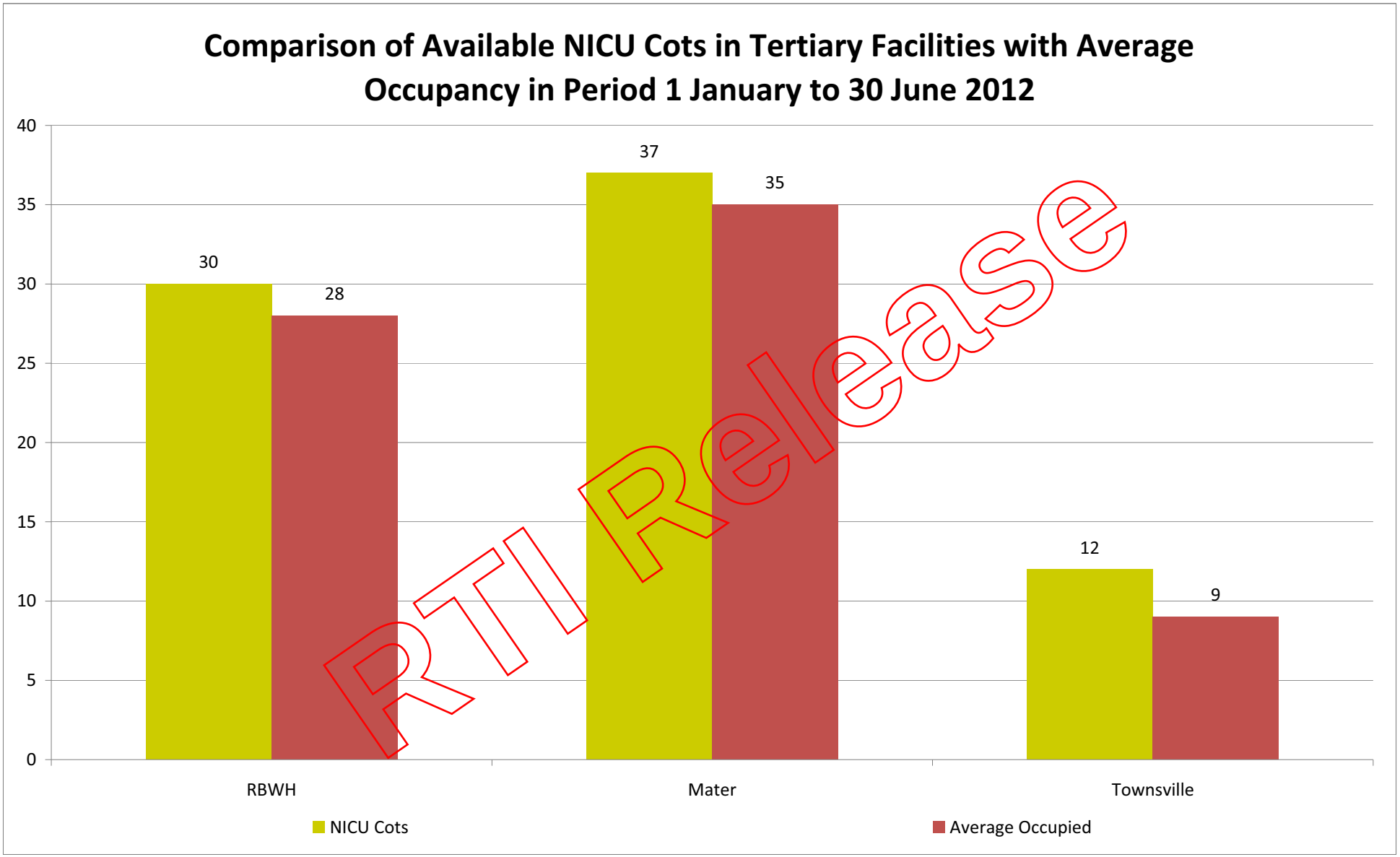

Combined SCN and NICU Cot Numbers Identified in July 2012 Survey
Cot Numbers
90
80
70
60
50
40
30
20
10
0
4
12
22
0
22
4
16
16
79
4
3
10
65
10
6
6
12
32
Total Beds
Facility Location
Bundaberg
Caboolture
Cairns
Gladstone
Gold Coast
Hervey Bay
Ipswich
Logan
Mater
Mackay
Mt Isa
Nambour
RBWH
Redcliffe
Redlands
Rockhampton
Toowoomba
Townsville


Survey Data for Total Beds, Nursing and Medical FTE
Number
700
600
500
400
300
200
100
0
323
98
624.31
Total Beds
Medical
Nursing
Total Beds
Medical
Nursing

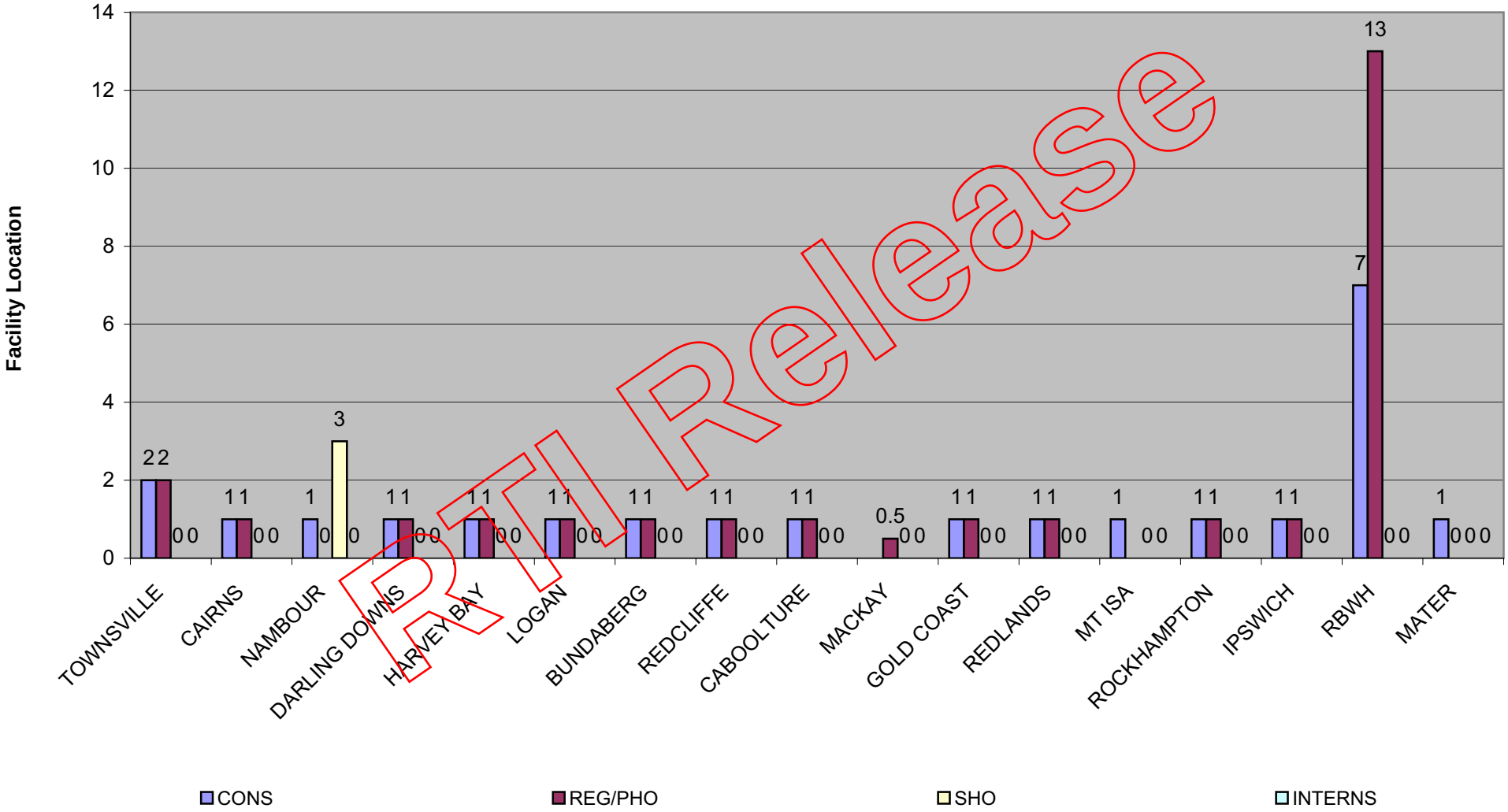

Medical FTE Location by Distribution
36%
52%
12%
NICU/SCN
Maternity
Paediatric

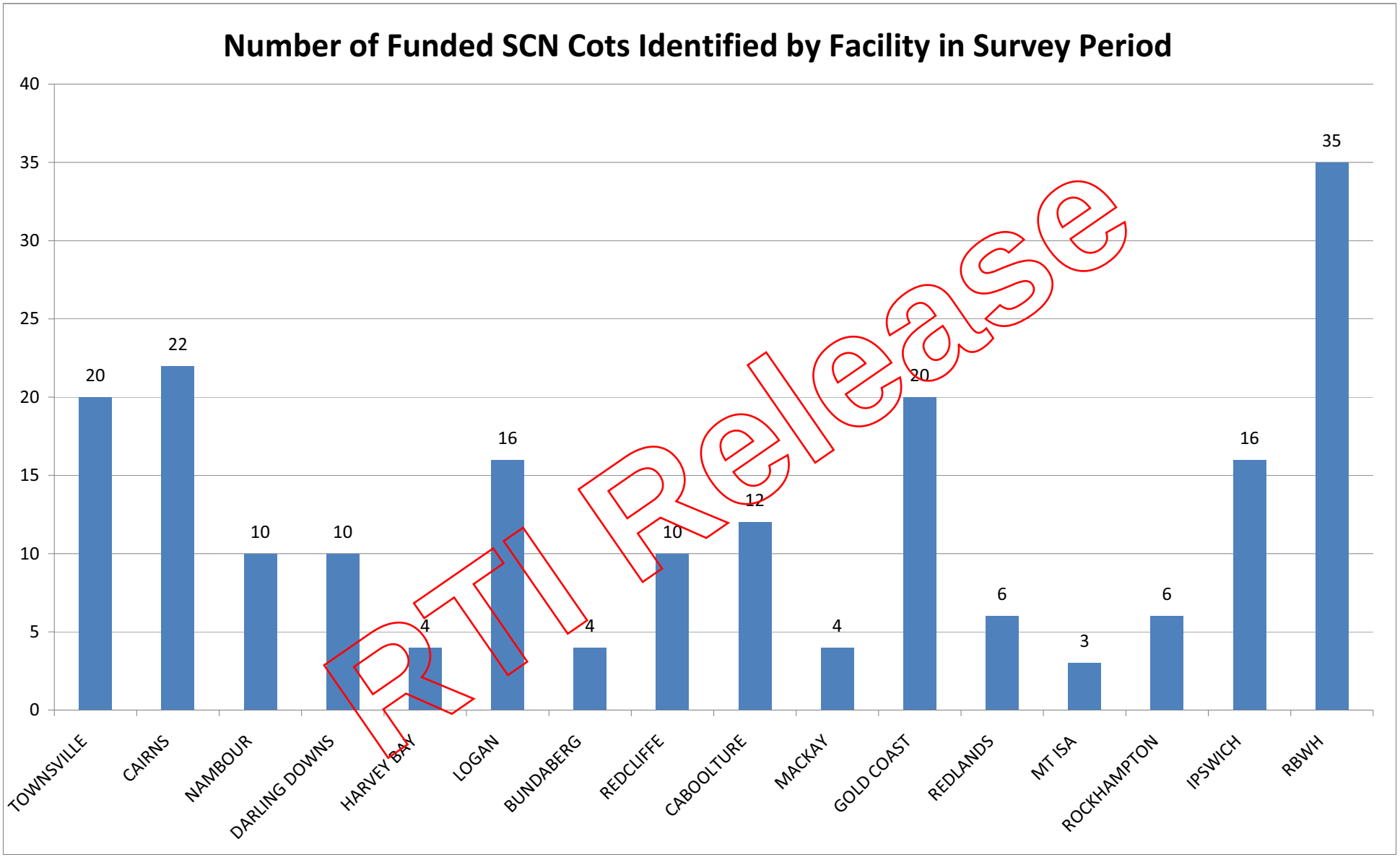

Nursing FTE Location by Distribution
12%
39%
49%
NICU
SCN
Both NICU/SCN

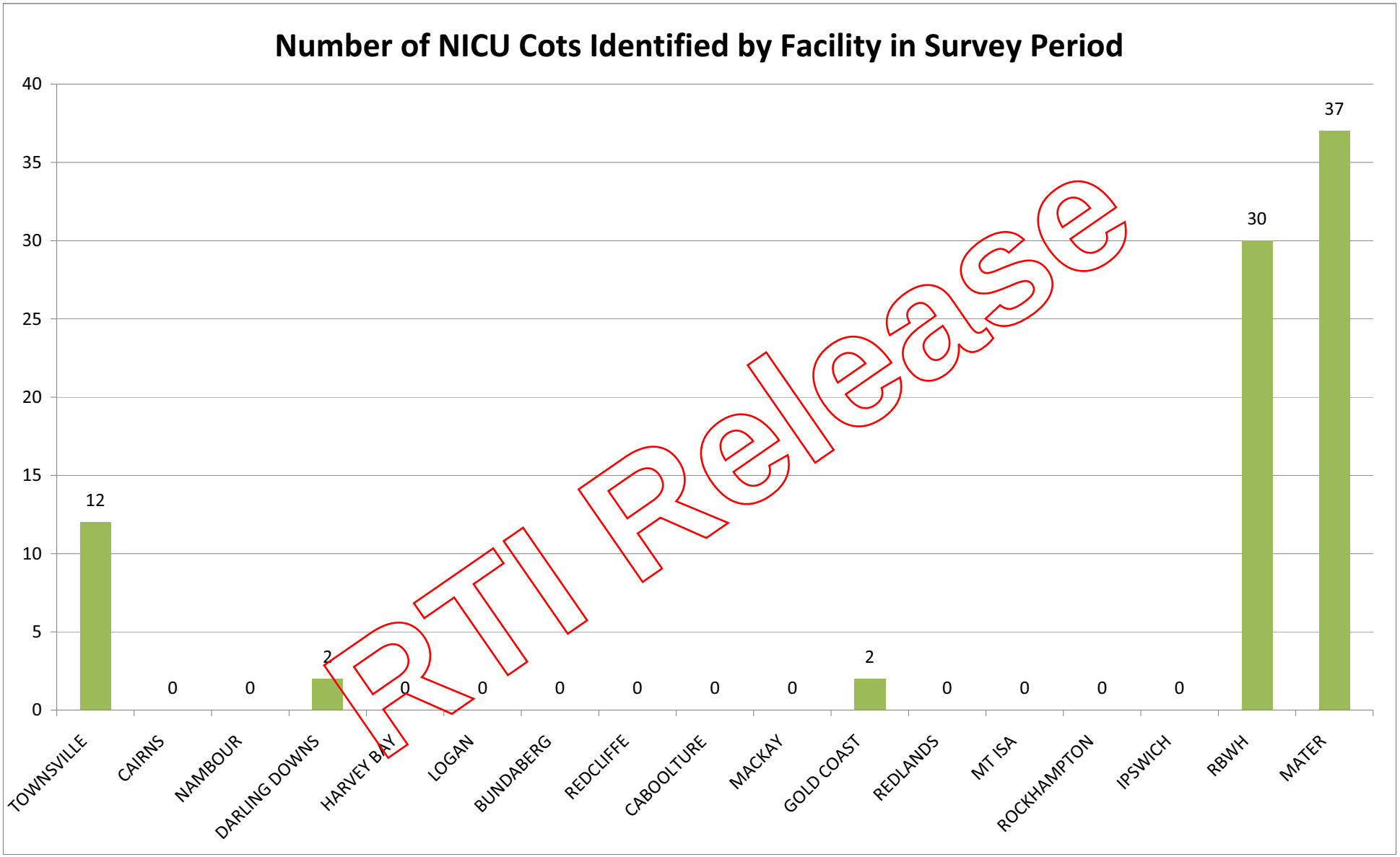

Age Profile of Surveyed NICU and SCN Facilities - July 2012
Number
250
200
150
100
50
0
203
102
126
113
56
35
8
1
Age Range
< 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
> 65

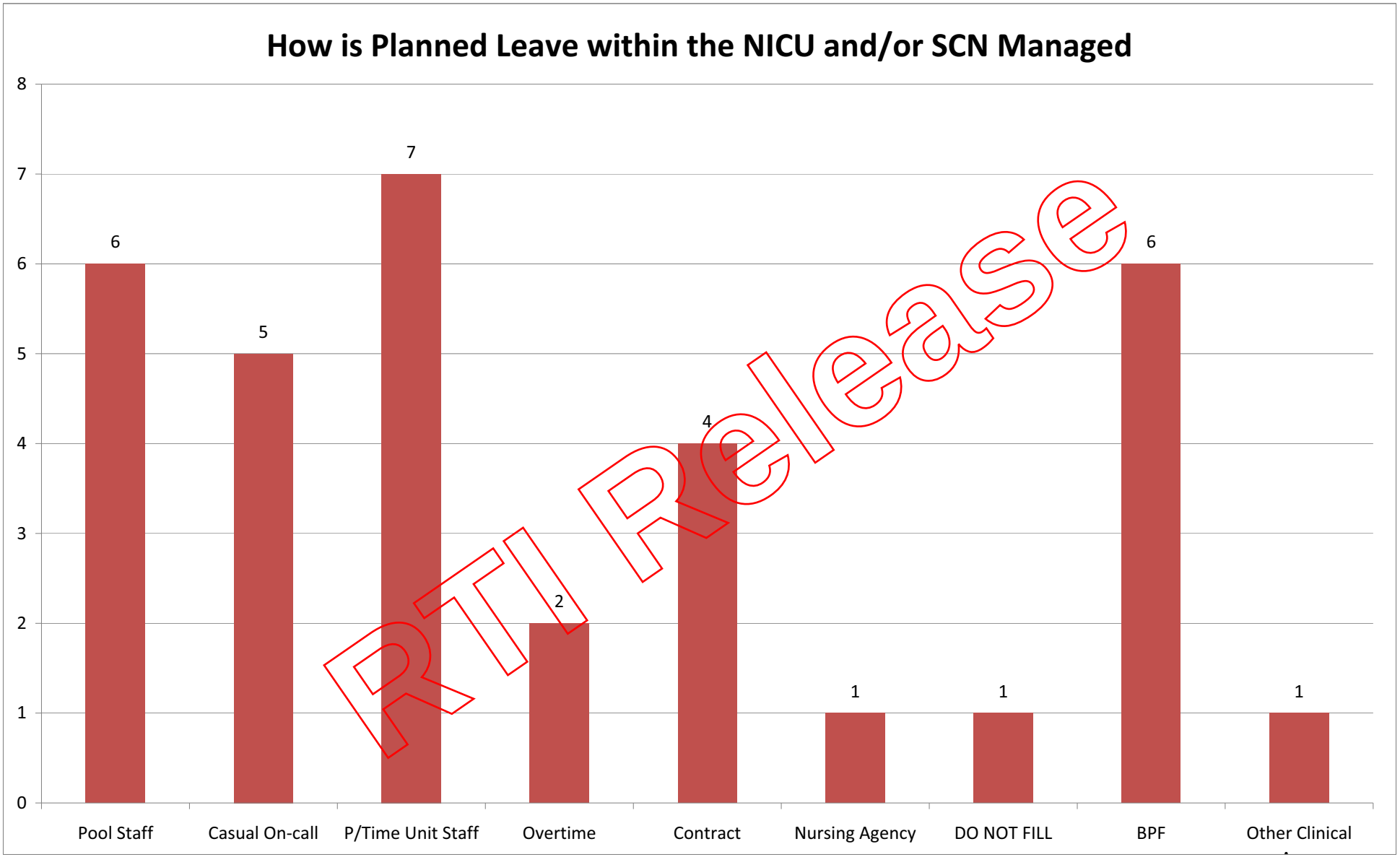

Comparison of Available NICU Cots in Tertiary Facilities with Average Occupancy in Period 1 January to 30 June 2012
40
35
30
25
20
15
10
5
0
30
28
37
35
12
9
RBWH
Mater
Townsville
NICU Cots
Average Occupied

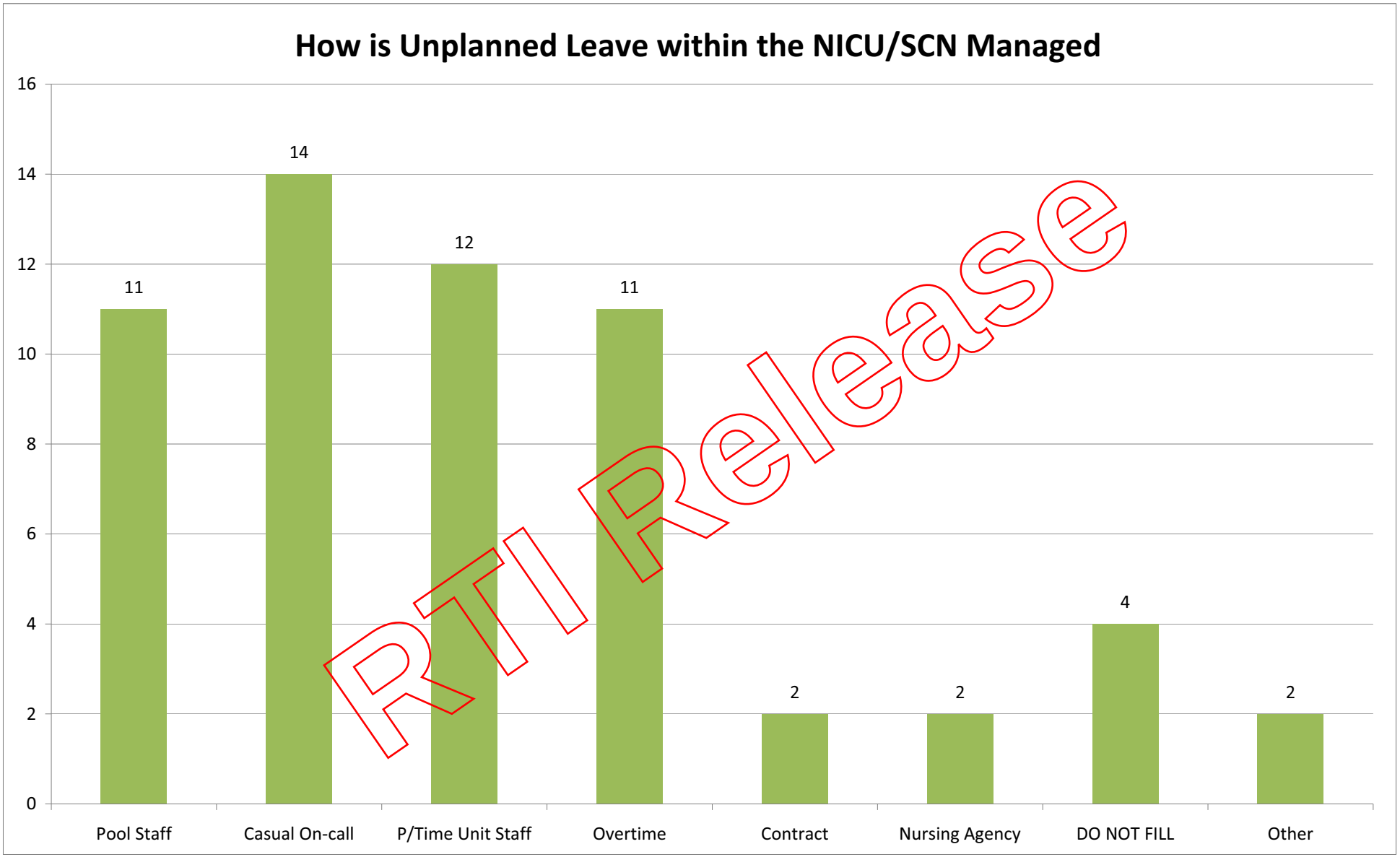
After Hours Medical Coverage by FTE Type and Number



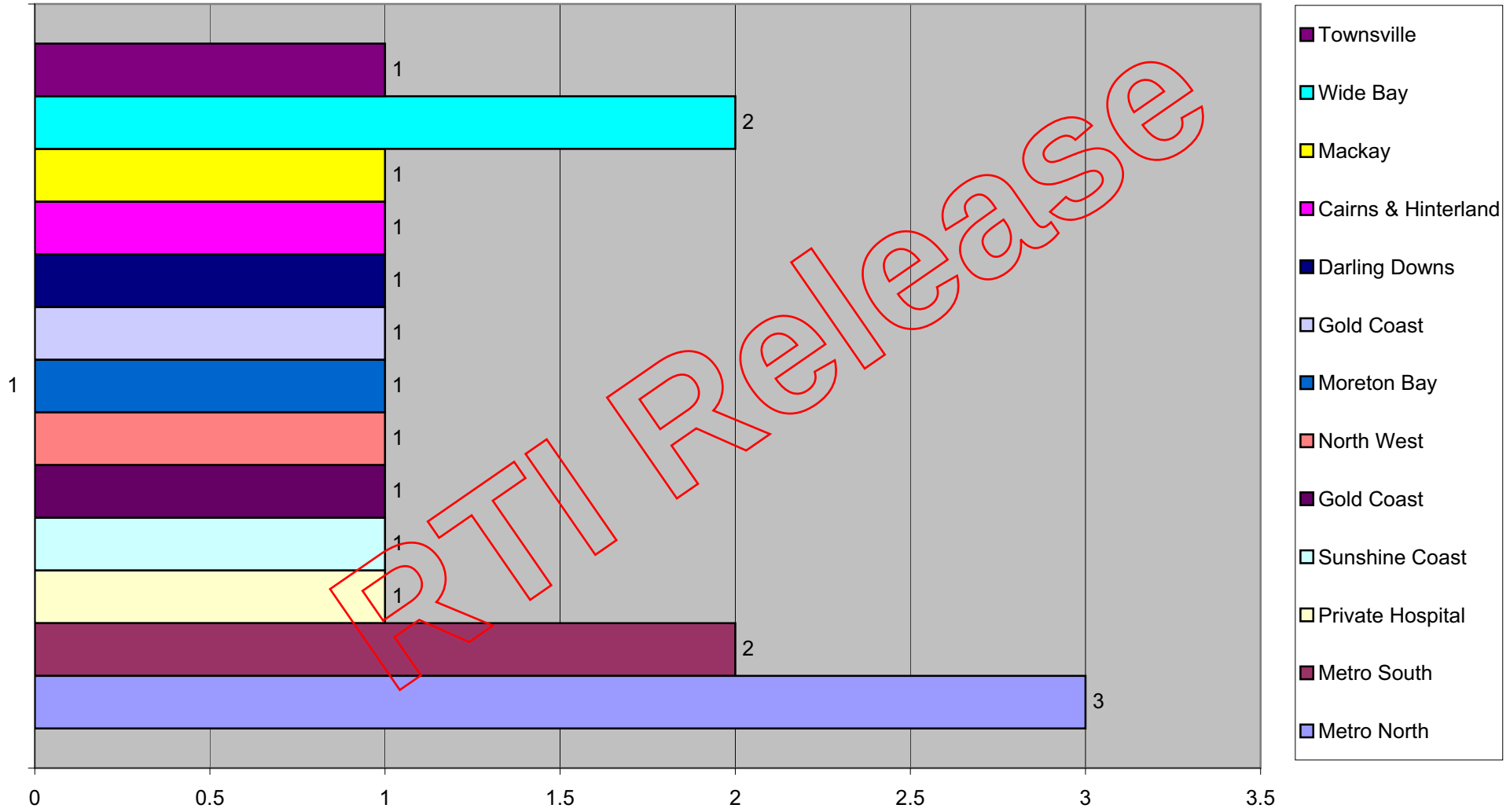



Number of NICU Cots Identified by Facility in Survey Period
40
35
30
25
20
15
10
5
0
12
0
0
2
0
0
0
0
0
0
2
0
0
0
0
30
37
TOWNSVILLE
CAIRNS
NAMBOUR
DARLING DOWNS
HARVEY BAY
LOGAN
BUNDABERG
REDCLIFFE
CABOOLTURE
MACKAY
GOLD COAST
REDLANDS
MT ISA
ROCKHAMPTON
IPSWICH
RBWH
MATER




How is Unplanned Leave within the NICU/SCN Managed
16
14
12
10
8
6
4
2
0
11
14
12
11
2
2
4
2
Pool Staff
Casual On-call
P/Time Unit Staff
Overtime
Contract
Nursing Agency
DO NOT FILL
Other

Respondents by Local Health and Hospital Service Location



	Yes
WAGES & SALARY	2
ROSTERING	2
TRAVEL	5
FAMILY RESPONSIBILITIES	5
TRAINING OPPORTUNITIES	2
CAREER DEVELOPMENT	7
WORKLOAD ISSUES	3
RETIREMENT	8
GENERATIONAL FACTORS	2
SUPPORTIVE MANAGEMENT	0
PERSONAL SAFETY	0
VALUE AS TEAM MEMBER	0
OTHER	

	L 6	L 5	L 4
RBWH	X		
Mater	X		
Townsville	X		
Cairns		X	
Gold Coast		X	
Toowoomba		X	
Caboolture			X
Gladstone			X
Mt Isa			X
Nambour			
Hervey Bay			
Logan			
Rockhampton			
Bundaberg			
Mackay			
Redcliffe			
Redlands			
Ipswich			

	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE
< 39	9	6	10	3	10	0	1
40 - 44	6	8	6	0	5	0	2
45 - 49	9	2	10	0	3	0	3
50 - 54	6	4	3	2	10	7	6
55 - 59	3	1	0	0	4	1	2
60 - 64	4	1	3	2	0	0	0
> 65	1	0	0	1	0	0	0

SCN Cots

Bundaberg	4
Caboolture	12
Cairns	22
Gladstone	
Gold Coast	20
Hervey Bay	4
Ipswich	16
Logan	16
Mater	42
Mackay	4
Mt Isa	3
Nambour	10
RBWH	35
Redcliffe	10
Redlands	6
Rockhampton	6
Toowoomba	10
Townsville	20
	240

Level 6

	NICU Cots	Average Occupied	Max Capacity
RBWH	30	28	
Mater	37	35	
Townsville	12	9	19

Level 5

	NICU Cots	Average Occupied
Cairns	0	0
Gold Coast	2	2
Toowoomba	2	2

NICU Cots

	L 6	L 5	TOTAL
RBWH	30		30
Mater	37		37
Townsville	12		12
Cairns		0	0
Gold Coast		2	2
Toowoomba		2	2
	79	4	83

Beds:FTE

	Total Beds	Medical	Nursing
Bundaberg	4		4.2
Caboolture	12		15.63
Cairns	22	7.8	37
Gladstone	0		0
Gold Coast	22	7	37.43
Hervey Bay	4		4.42
Ipswich	16		13.26

L 6 Facility

	Total Beds	Medical	Nursing
Mater	79	25.2	143
RBWH	65	22	176.63
Townsville	32	13.5	94.49
Total	176	60.7	414.12

11
15
10
8
10
6
8
4
6
9
4
3
5
6
6
8

Logan	16	9	24
Mater	79	25.2	143
Mackay	4		5.42
Mt Isa	3		5.9
Nambour	10	13	14.9
RBWH	65	22	176.63
Redcliffe	10		8.4
Redlands	6		8.4
Rockhampton	6	3	11.13
Toowoomba	12	2	20.1
Townsville	32	9	94.49
	323	98	624.31

** ? Medical shared with Paed

L 5 Facility

	Total Beds	Medical	Nursing
Cairns	22	7.8	37
Gold Coast	22	7	37.43
Toowoomba	12	2	20.1
Total	56	16.8	94.53

119

L 4 Facility

	Total Beds	Medical	Nursing

Medical FTE

NICU/SCN	98
Maternity	22.2
Paediatric	67.13
	187.33

Nursing FTE

NICU	245.82
SCN	303.77
Both NICU/SCN	74.72
	624.31

CABOOLTURE	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON	RBWH	MATER	
0	18	2	5	8	39	92	203
5	6	1	5	2	31	25	102
3	22	1	2	2	27	42	126
3	7	1	0	4	23	37	113
3	3	0	0	0	15	24	56
1	2	0	3	1	10	8	35
0	0	0	0	0	5	1	8

	TOWNSVILLE	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE	CABOOLTURE	MACKAY	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON
CONS	2	1	1	1	1	1	1	1	1		1	1	1	1
REG/PHO	2	1	0	1	1	1	1	1	1	0.5	1	1		1
SHO	0	0	3	0	0	0	0	0	0	0	0	0	0	0
INTERNS	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	TOWNSVILLE	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE	CABOOLTURE	MACKAY	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON
FUNDED SCN COTS NUMBER	20	22	10	10	4	16	4	10	12	4	20	6	3	6

	TOWNSVILLE	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE	CABOOLTURE	MACKAY	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON
Funded NICU	12	0	0	2	0	0	0	0	0	0	2	0	0	0

	TOWNSVILLE	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE	CABOOLTURE	MACKAY	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON
Pool Staff			X	X	X	X							X	
Casual On-call			X	X		X	X						X	
P/Time Unit Staff	X	X		X				X				X	X	
Overtime				X										
Contract	X	X			X								X	
Nursing Agency													X	
DO NOT FILL													X	
BPF									ROSTERED BPF	ROSTERED BPF	ROSTERED BPF	FROM MAT		ROSTERED BPF

Other Clinical Area

Pool Staff	11
Casual On-call	14
P/Time Unit Staff	12
Overtime	11
Contract	2
Nursing Agency	2
DO NOT FILL	4
Other	2

Facilities	
Metro North	3
Metro South	2
Private Hospital	1
Sunshine Coast	1
Gold Coast	1
North West	1
Moreton Bay	1
Gold Coast	1
Darling Downs	1
Cairns & Hinterland	1
Mackay	1
Wide Bay	2
Townsville	1

IPSWICH	RBWH	MATER
1	7	1
1	13	2
0	0	0
0	0	0

IPSWICH	RBWH	MATER
16	35	42

240

IPSWICH	RBWH	MATER
0	30	37

IPSWICH	RBWH	MATER	
	X		6
			5
	X		7
	X		2
			4
			1
			1
ROSTERED BPF		ROSTERED BPF	6
			1

	Yes
WAGES & SALARY	2
ROSTERING	2
TRAVEL	5
FAMILY RESPONSIBILITIES	5
TRAINING OPPORTUNITIES	2
CAREER DEVELOPMENT	7
WORKLOAD ISSUES	3
RETIREMENT	8
GENERATIONAL FACTORS	2
SUPPORTIVE MANAGEMENT	0
PERSONAL SAFETY	0
VALUE AS TEAM MEMBER	0
OTHER	

	L 6	L 5	L 4
RBWH	X		
Mater	X		
Townsville	X		
Cairns		X	
Gold Coast		X	
Toowoomba		X	
Caboolture			X
Gladstone			X
Mt Isa			X
Nambour			
Hervey Bay			
Logan			
Rockhampton			
Bundaberg			
Mackay			
Redcliffe			
Redlands			
Ipswich			

	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE
< 39	9	6	10	3	10	0	1
40 - 44	6	8	6	0	5	0	2
45 - 49	9	2	10	0	3	0	3
50 - 54	6	4	3	2	10	7	6
55 - 59	3	1	0	0	4	1	2
60 - 64	4	1	3	2	0	0	0
> 65	1	0	0	1	0	0	0

SCN Cots

Bundaberg	4
Caboolture	12
Cairns	22
Gladstone	
Gold Coast	20
Hervey Bay	4
Ipswich	16
Logan	16
Mater	42
Mackay	4
Mt Isa	3
Nambour	10
RBWH	35
Redcliffe	10
Redlands	6
Rockhampton	6
Toowoomba	10
Townsville	20
	240

Level 6

	NICU Cots	Average Occupied	Max Capacity
RBWH	30	28	
Mater	37	35	
Townsville	12	9	19

Level 5

	NICU Cots	Average Occupied
Cairns	0	0
Gold Coast	2	2
Toowoomba	2	2

NICU Cots

	L 6	L 5	TOTAL
RBWH	30		30
Mater	37		37
Townsville	12		12
Cairns		0	0
Gold Coast		2	2
Toowoomba		2	2
	79	4	83

Beds:FTE

	Total Beds	Medical	Nursing
Bundaberg	4		4.2
Caboolture	12		15.63
Cairns	22	7.8	37
Gladstone	0		0
Gold Coast	22	7	37.43
Hervey Bay	4		4.42
Ipswich	16		13.26

L 6 Facility

	Total Beds	Medical	Nursing
Mater	79	25.2	143
RBWH	65	22	176.63
Townsville	32	13.5	94.49
Total	176	60.7	414.12

Logan	16	9	24
Mater	79	25.2	143
Mackay	4		5.42
Mt Isa	3		5.9
Nambour	10	13	14.9
RBWH	65	22	176.63
Redcliffe	10		8.4
Redlands	6		8.4
Rockhampton	6	3	11.13
Toowoomba	12	2	20.1
Townsville	32	9	94.49
	323	98	624.31

** ? Medical shared with Paed

L 5 Facility

	Total Beds	Medical	Nursing
Cairns	22	7.8	37
Gold Coast	22	7	37.43
Toowoomba	12	2	20.1
Total	56	16.8	94.53

L 4 Facility

	Total Beds	Medical	Nursing

119

Medical FTE

NICU/SCN	98
Maternity	22.2
Paediatric	67.13
	187.33

Nursing FTE

NICU	245.82
SCN	303.77
Both NICU/SCN	74.72
	624.31

CABOOLTURE	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON	RBWH	MATER	
0	18	2	5	8	39	92	203
5	6	1	5	2	31	25	102
3	22	1	2	2	27	42	126
3	7	1	0	4	23	37	113
3	3	0	0	0	15	24	56
1	2	0	3	1	10	8	35
0	0	0	0	0	5	1	8

	TOWNSVILLE	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE	CABOOLTURE	MACKAY	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON
CONS	2	1	1	1	1	1	1	1	1		1	1	1	1
REG/PHO	2	1	0	1	1	1	1	1	1	0.5	1	1		1
SHO	0	0	3	0	0	0	0	0	0	0	0	0	0	0
INTERNS	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	TOWNSVILLE	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE	CABOOLTURE	MACKAY	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON
FUNDED SCN COTS NUMBER	20	22	10	10	4	16	4	10	12	4	20	6	3	6

	TOWNSVILLE	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE	CABOOLTURE	MACKAY	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON
Funded NICU	12	0	0	2	0	0	0	0	0	0	2	0	0	0

	TOWNSVILLE	CAIRNS	NAMBOUR	DARLING DOWNS	HERVEY BAY	LOGAN	BUNDABERG	REDCLIFFE	CABOOLTURE	MACKAY	GOLD COAST	REDLANDS	MT ISA	ROCKHAMPTON
Pool Staff			X	X	X	X							X	
Casual On-call			X	X		X	X						X	
P/Time Unit Staff	X	X		X				X				X	X	
Overtime				X										
Contract	X	X			X								X	
Nursing Agency													X	
DO NOT FILL													X	
BPF									ROSTERED BPF	ROSTERED BPF	ROSTERED BPF	FROM MAT		ROSTERED BPF

Other Clinical Area

Pool Staff	11
Casual On-call	14
P/Time Unit Staff	12
Overtime	11
Contract	2
Nursing Agency	2
DO NOT FILL	4
Other	2

Facilities	
Metro North	3
Metro South	2
Private Hospital	1
Sunshine Coast	1
Gold Coast	1
North West	1
Moreton Bay	1
Gold Coast	1
Darling Downs	1
Cairns & Hinterland	1
Mackay	1
Wide Bay	2
Townsville	1

IPSWICH	RBWH	MATER
1	7	1
1	13	2
0	0	0
0	0	0

IPSWICH	RBWH	MATER
16	35	42

240

IPSWICH	RBWH	MATER
0	30	37

IPSWICH	RBWH	MATER	
	X		6
			5
	X		7
	X		2
			4
			1
			1
ROSTERED BPF		ROSTERED BPF	6
			1