Smoking and Pregnancy in Tasmania 2011

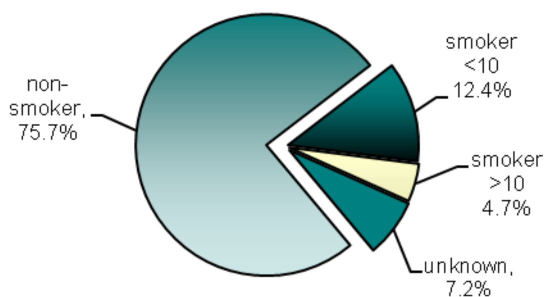
August 2013

Perinatal Data Collection: This is a state-wide collection of obstetric and perinatal information for all births reported in Tasmania, including live births and stillbirths of at least 400 grams or 20 weeks gestation. The data on smoking prevalence during pregnancy are derived from self-reported information obtained by clinicians from the mother and reported to the Perinatal Data Collection.

Smoking during pregnancy is regarded as one of the key preventable causes of low birth weight and pre-term birth. Low birth weight (LBW) babies (less than 2500 grams) are more likely to die in the first year of life and are more susceptible to chronic illness later in life, such as heart and kidney disease and diabetes.

In 2011, a significantly ($p<0.001$) reduced proportion of Tasmanian women compared to previous years smoked tobacco during their pregnancy (17.1%), with 12.4% smoking less than 10 cigarettes per day and 4.7% reporting to have smoked more than 10 cigarettes daily.

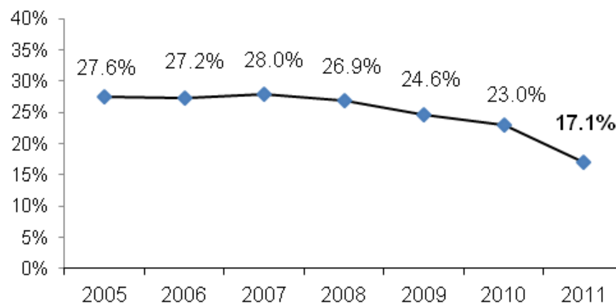
Self-reported tobacco smoking status during pregnancy, Tasmania 2011



Number: of mothers reporting 6,220, Council of Obstetric and Pediatric Mortality and Morbidity Annual Report 2011

The prevalence of smoking during pregnancy in 2011 has declined by **10.5% since 2005**, and by **6% from 2010**, a statistically significant decrease.

Self-reported tobacco smoking during pregnancy, Tasmania 2005-2011



Council of Obstetric and Pediatric Mortality and Morbidity Annual Reports

In 2010, Tasmania had the second highest proportion of women who smoked during their pregnancy.

Self-Reported Tobacco Smoking during Pregnancy by State and Territory, 2010

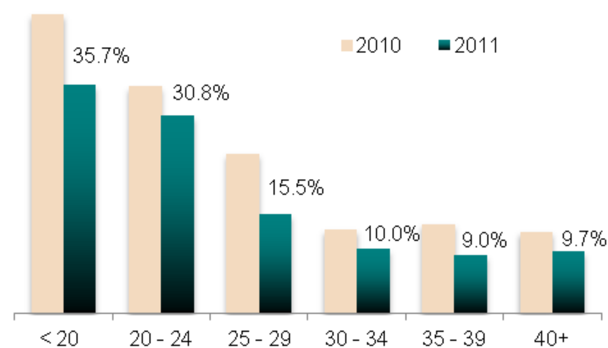
State/Territory	%
NT	25.5%
Tas	**23.0%***
SA	17.4%
Qld	17.2%
WA	12.0%
Vic	11.8%
ACT	11.2%
NSW	11.2%

AIHW, National Perinatal Statistics Unit, Australia's Mothers and Babies 2010

Young Women: maternal smoking continues to be more prevalent among younger women in Tasmania, particularly those aged less than 20 years.

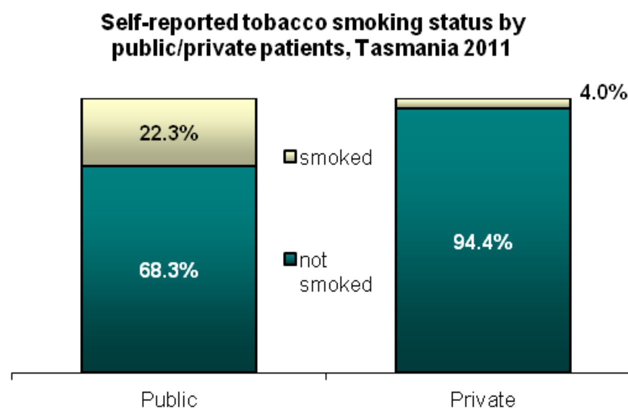
The prevalence of maternal smoking of women aged less than 20 years (35.7%) continues to decline compared to previous years (46.8% in 2010). Similarly, the proportion of women aged 30 years and over who smoked during pregnancy also declined, from 13.1% in 2010 to 10.0% in 2011; this difference was statistically significant ($p<0.001$). Decreases in maternal smoking in the 30-34 and 40 years and over age groups were not statistically significant ($p>0.05$).

Self-reported tobacco smoking during pregnancy by age, 2010 and 2011



Council of Obstetric and Pediatric Mortality and Morbidity Annual Report, 2011

Patient Type: Smoking during pregnancy continues to be more prevalent for public patients (22.3%) compared to private patients (4.0%) which reflects the higher prevalence of smoking in lower socio-economic groups.



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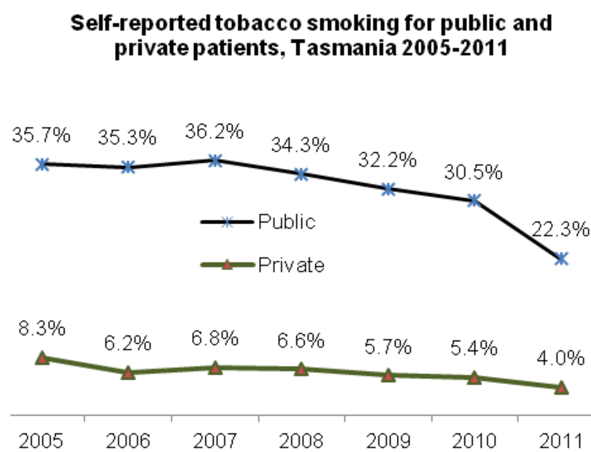
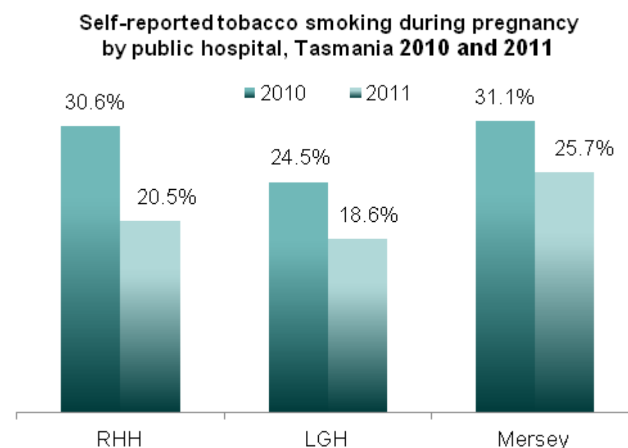
Smoking during pregnancy has declined further for both public and private patients over the previous 12 months.



Council of Obstetric and Pediatric Mortality and Morbidity Annual Reports

Hospital: Smoking during pregnancy in 2011 was reported most frequently by patients at the Mersey Community Hospital (25.7%), followed by the Royal Hobart Hospital (20.5%). Reductions in smoking since 2010 were statistically significant for the RHH and the LGH.



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Since 2005, the prevalence of maternal smoking has declined for all public hospitals, with the greatest decline in the RHH.

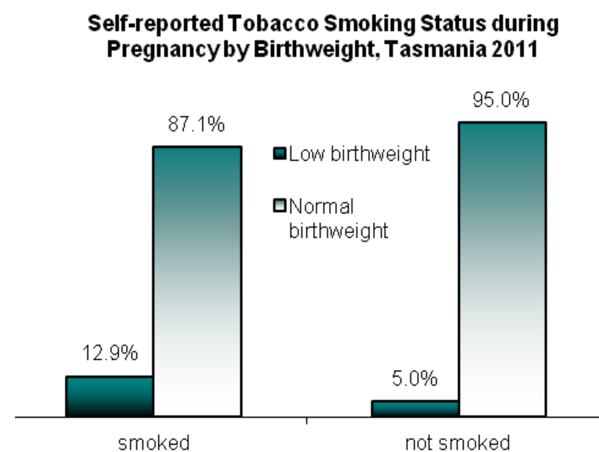
Self-Reported Tobacco Smoking during Pregnancy by Public Hospital, Tasmania 2005-10(%)

	2005	2006	2007	2008	2009	2010	2011
RHH	38.2	36.6	33.3	30.8	33.9	30.6	20.5%
LGH	26.2	27.0	24.3	23.7	24.2	24.5	18.6%
Mersey	30.7	31.1	25.6	27.4	28.6	31.1	25.7%

Council of Obstetric & Paediatric Mortality and Morbidity, Annual Reports

Low birth weight: LBW is defined as a weight of less than 2500 grams and includes babies that are small for gestational age as well as premature. Excluding multiple births, a total of 399 babies were born in 2011 with a birth weight of less than 2500 grams. Of these, 22.8% (91) had a weight of less than 1500 grams (very LBW).

Of all women who had smoked in pregnancy in 2011, 12.9% had a LBW baby, compared to 5.0% of women who reported not to have smoked, a difference which is statistically significant ($p<0.0001$). The relative risk of having a LBW baby in 2011 was 2.56 (95%CI 2.09–3.13) in women who smoked in pregnancy compared with those who reported not to have smoked.



Council of Obstetric and Pediatric Mortality and Morbidity Annual Report 2011

It is important to note that a number of sources of error may influence the strength of the association between smoking during pregnancy and birthweight. For example, since some women may be uncomfortable in disclosing their smoking status during the course of their pregnancy, the reported data may not provide an accurate measure of trends.

Furthermore, maternal smokers may have other risk factors associated with LBW babies including younger maternal age, poorer prenatal care, inadequate maternal weight gain or other substance abuse. Such factors were not able to be adjusted for in the analyses and if one or more is positively associated with LBW, they may be responsible for some of the excess risk that is attributed to maternal smoking. That is, the relative risk estimate of RR = 2.56 may be an overestimate due to confounding.