KOORI HEALTH COUNTS

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COUNTING KOORI BIRTHS IN 1998

A collaborative project between:

Perinatal Data Collection Unit, Department of Human Services
Koori Health Unit, Department of Human Services
Registry of Births Deaths and Marriages
Acute Health Branch, Department of Human Services

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This publication is one of the Koori Health Counts series. The aim of these publications is to improve the availability of Koori health information in Victoria and to provide the information in a way that is useful and appropriate.

We need to have accurate information about the health of Koori people and the use of health services by the Koori community in order to:

- decide on Koori health priority issues and programs
- obtain adequate resources for health programs and health services for Koori people
- develop appropriate health promotion programs and health screening programs
- make sure that ‘main-stream’ health care services are providing appropriate and accessible health services for the Koori community
- monitor changes in the health of the Koori community

In this publication, the word “Koori” has been used to include Aboriginal and Torres Strait Islander people.

The Koori Health Unit welcomes comments and suggestions on ways of improving the quality of the information that is available on the health of Koori people in Victoria, and on improving the way in which this information is presented.

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COUNTING KOORI BIRTHS IN 1998

Summary

- There are three main sources of information on births in Victoria. The Perinatal Data Collection Unit receives data from midwives when a baby is born; the Registry of Births, Deaths and Marriages collects data when parents register their new baby; and information is also collected by hospital admission staff when the mother goes into hospital to have her baby.

- The three datasets were linked using a computer, so that we could look at how consistently Koori status was recorded in the datasets in 1998.

- There were many mothers who were identified as Koori in one dataset, but who were not identified as Koori in the other datasets. The number of mothers identified as Koori in at least one of the three datasets was 715. It is possible that some of the mothers who were recorded as being Koori by hospital admission staff and midwives were not Koori.

- By using a statistical method (called “capture-recapture”), it is estimated that there were 145 Koori mothers who were not identified as being Koori by any of the three datasets.

- The estimated number of Koori mothers who gave birth was 860. For these 860 mothers, the total number of births was 870.

- None of the three datasets used in this project were very good at identifying the Koori status of the mother. Only half of the total estimated number was identified by any one of the datasets.

- The Registry of Births, Deaths and Marriages is the only dataset that records Koori status of the father. In 1998 there were 225 births in Victoria where the father was recorded as being Koori, and the mother was recorded as being non-Koori in all of the three datasets.

- Therefore, we estimate that in 1998, there were at least 1095 births where either the mother and/or the father was Koori.

- Overall, there was almost no change in identification of Koori mothers in 1998 as compared to 1996. However, some of the datasets identified a larger number of Koori mothers in 1998 than for 1996.
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Where do we get information on babies born in Victoria?

Information on babies born in Victoria is collected by 3 main places:

1. The Victorian Perinatal Data Collection Unit
2. The Registry of Births, Deaths and Marriages
3. Public and Private Hospitals

Koori Hospital Liaison Officers also provide some information on Koori births in the monthly reports they provide to the Koori Health Unit. However, there are only eighteen positions for these staff and the information that they can provide on Koori births does not cover all hospitals.

1. Perinatal Data Collection Unit (Midwives data)

Every time there is a birth in Victoria, the midwife completes a form that provides information for the Perinatal Data Collection Unit. Information is recorded about the mother, including the area of Victoria she lives in, what country she was born in, and the date of the birth. Information is also collected about the pregnancy and the birth, and about the health of the mother and the baby during pregnancy and at the time of birth. The midwives are asked to record whether the mother is of Aboriginal or Torres Strait Islander origin.

2. Registry of Births, Deaths and Marriages (Birth Registry)

When a baby is born in Victoria the birth is ‘Registered’ with the Registry of Births, Deaths and Marriages. This involves the parents completing a form about the baby and the parents, and there is space on the form for both the mother and the father to identify as being of Aboriginal or Torres Strait Islander origin. A new form was introduced in 1997. This form was designed to make it easier to see the question about Koori status and to have the question more clearly defined. Since the form was changed, more parents have been completing this part of the form and more parents have identified themselves as Koori.

3. Victorian Hospitals (Hospital data)

Victorian hospitals, both public and private, collect information on people who are admitted to hospital for the Victorian Admitted Episode Dataset (VAED). This dataset was previously known as the Victorian In-patient Minimum Dataset (VIMD). When a woman is admitted to give birth, this is recorded in the Hospital dataset.
Information on the health of the baby is collected in a separate record if the baby needs to be admitted to hospital. Since 1993, hospital admission staff have been required to record whether the person being admitted was of Aboriginal or Torres Strait Islander descent.

This report will mainly be concerned with the number of Koori mothers. All of the three datasets record Koori status of the mother but only the Registrar of Births, Deaths and Marriages records the Koori status of the father. It is possible that some of the mothers who were recorded as being Koori by hospital admission staff and midwives were not Koori.
Number of mothers who were identified as Koori in Victoria in 1998

Each of the three datasets recorded a different number of Koori mothers.

The number of Koori mothers in 1998 recorded in each dataset was:

- **445** Koori mothers in Midwives data
- **412** Koori mothers in Hospital data
- **433** Koori mothers in Birth Registry data

The number Koori mothers recorded in each dataset can be shown using circles as in the diagram below:

Diagram1. The number of Koori mothers recorded in each dataset in 1998
Linking Records

For each birth, we needed to know if the three different datasets had reported the mother as Koori. We could do this by using a computer to link the three datasets. Almost all of the births recorded as Koori in the Birth Registry data (99.7%) were found amongst the births recorded by midwives, and almost all of the births recorded as Koori in the Hospital data (99.1%) were found amongst the births recorded by midwives.

It is most unlikely that the computer linking process we used resulted in two different births being linked to appear as the same birth.

For each mother we asked:

Was the mother reported as being Koori by Midwives data?
Was the mother reported as being Koori by Hospital data?
Was the mother reported as being Koori by the Birth Registry?

An example of the combined information for each birth is shown below:

<table>
<thead>
<tr>
<th>Post code</th>
<th>Mothers Date of Birth</th>
<th>Child’s Date of Birth</th>
<th>Was the mother reported as being Koori by Midwives?</th>
<th>Was the mother reported as being Koori by Hospital data?</th>
<th>Was the mother reported as being Koori by the birth Registry?</th>
<th>Was the father reported as being Koori by the birth Registry?</th>
</tr>
</thead>
<tbody>
<tr>
<td>3053</td>
<td>12/03/74</td>
<td>02/03/98</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3522</td>
<td>02/12/81</td>
<td>02/03/98</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3211</td>
<td>18/11/69</td>
<td>03/03/98</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3021</td>
<td>30/01/67</td>
<td>04/03/98</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3033</td>
<td>23/03/82</td>
<td>05/03/98</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Understanding the diagrams used in this report

Here is the key to understanding the diagrams used in this report:

- Each of the three circles is named and represents one of the datasets.
- The number of Koori mothers recorded on all three datasets is shown at the centre of the diagram where all three circles overlap.
- The number of Koori mothers recorded in two data sets is shown where there is overlap between two circles.
- The number of Koori mothers recorded in only one of the three data sets is shown in the part of the circle, which does not overlap with any other circles.

![Diagram](image_url)
How many mothers were reported as being Koori on all three datasets?

We found some large differences in the reporting of whether the mother was Koori in the three datasets.

There were **194 mothers** identified as Koori on all **three** datasets.

This is shown in the diagram below.

Diagram 2. The number of Koori mothers identified in all three datasets.
How many mothers were reported as being Koori on only two of the three datasets?

Altogether there were **178 mothers** who were reported as being Koori in **two** of the datasets.

- **87 mothers** were reported as being Koori by **midwives and hospital admissions staff**, but they were not reported as being Koori in the Births Registry

- **61 mothers** were reported as being Koori by **midwives and on the Birth Registry**, but they were not reported as being Koori by hospital admissions staff

- **30 mothers** were reported as being Koori by **hospital admissions staff and on the Births Registry**, but they were not reported as being Koori by the midwives

This is shown in the diagram below.

Diagram 3. The number of Koori mothers identified in two of the datasets.
How many mothers were reported as being Koori on only one of the three datasets?

Altogether there were **343 mothers** reported as being Koori in only **one** of the three datasets in 1998.

- **97 mothers** were reported as being Koori by **midwives**, but were not identified as being Koori by either hospital admissions staff or by the Births Registry.

- **145 mothers** were reported as being Koori by the **Birth Registry**, but were not reported as being Koori by either the midwives or by hospital admissions staff.

- **101 mothers** were reported as being Koori by **hospital admissions staff**, but were not reported as being Koori by either the midwife or by the Births Registry.

This is shown in the diagram below.

Diagram 4. Number of Koori mothers identified as Koori in only one of the three datasets.
How many mothers were reported as being Koori in at least one of the datasets?

This is a summary of the information on the number Koori mothers in the different datasets.

- 194 mothers were reported as being Koori on all three datasets
- 178 mothers were reported as being Koori in two of the three datasets.
- 343 mothers were reported as being Koori in only one of the three datasets

So, this means that the total number of mothers who were identified as being Koori in at least one of the datasets is 715.
Were there any Koori mothers who were not reported by any of the three datasets?

Since there is only a small amount of overlap between the three datasets, there are probably some births to Koori mothers who were not identified as being Koori in any of the three datasets.

By using a statistical method called *capture-recapture*, we estimate that there was likely to have been an extra **145 Koori mothers** who were not reported by any of the three datasets.

When using the *capture-recapture* method we assume that all mothers recorded as being Koori were actually Koori. However there may have been some mothers incorrectly recorded as Koori in the Hospital data or in the Midwives data. This could have occurred if hospital staff or midwives assumed that the woman was a Koori, rather than actually asking her the question "Are you of Aboriginal or Torres Strait Islander descent?" We do not know if there are many births where the mother was incorrectly recorded as being Koori.
What is the estimated number of Koori women who had a baby in 1998?

- 194 mothers were reported as being Koori in all three datasets
- 178 mothers were reported as being Koori in two of the three datasets
- 343 mothers were reported as being Koori in only one of the three datasets
- 145 Koori mothers were not reported by any of the datasets

So in 1998, the estimated total number of Koori mothers who gave birth was **860**

When births of twins are included, for these 860 mothers there was a total of **870 births**
How good were each of the datasets at reporting a Koori mother as Koori?

We can use the information on the total number of births to Koori mothers to see how well each of the datasets reported mothers as being Koori.

- Midwives identified 445 Koori mothers who gave birth out of the total estimated number of 860 (52%).
- Hospital admissions staff reported 412 Koori mothers who gave birth out of the total estimated number 860 (48%).
- The Birth Registry reported 433 Koori mothers who gave birth out of the total estimated number of 860 (50%).
- When the three datasets were linked together, there were 715 Koori mothers who gave birth out of the estimated total number of 860 (83%).

This is shown in the diagram on the next two pages.
Midwives data

48% 52%

\[
\frac{445}{860} = 52\%
\]

Hospital data

52% 48%

\[
\frac{412}{860} = 48\%
\]

Birth Registry data

50% 50%

\[
\frac{433}{860} = 50\%
\]

All 3 Datasets (linked)

17% 83%

\[
\frac{715}{860} = 83\%
\]

- Correctly identified as Koori
- Incorrectly identified as non-Koori
Why are there not many births where the mother was reported as being Koori in all of the three datasets?

It is unclear why there are so few of the births to Koori mothers where the mother is identified as being Koori by all three datasets.

- Some Koori mothers may have chosen to say that they are Koori for only some of the data collections. This may be because the question is not always asked in a culturally appropriate way, or because of fear of different standard or type of care.

- However, hospital admissions staff and midwives may not always be asking the mothers if they are of Aboriginal or Torres Strait Islander origin. These staff may assume that it is possible to tell whether a person if Koori or not on the basis of skin colour or ‘local knowledge’.

- There are also a number of reasons that some Koori people might chose not to be identified as being Koori by staff of institutions or government agencies, particularly when a birth has occurred.
BIRTHS TO NON-KOORI MOTHERS AND KOORI FATHERS

What about births where the mother is non-Koori but the father is Koori?

The Birth Registry is the only dataset that collects information about whether the baby's father is Koori.

In 1998, there were 225 births registered where the father was reported as being Koori and the mother was reported as non-Koori in each of the three datasets.
BIRTHS WHERE EITHER THE MOTHER OR THE FATHER WAS KOORI

How many births were there in Victoria in 1998 where either the baby’s mother or father was Koori?

The number of Koori mothers who gave birth was estimated to be 860, and when twins are included these 860 mothers had a total of 870 births.

The number of births to non-Koori mothers and Koori fathers was 225.

So the estimated total number of Koori births is 1095.

So for 225 of the estimated total 1095 Koori births, the father was identified as being Koori and the mother was non-Koori (21%).
How good were each of the datasets at reporting Koori mothers for births at metropolitan hospitals compared to rural hospitals?

Overall, Koori mothers were better identified in rural regions.

92% of Koori mothers were identified for births in rural hospitals, compared to 71% of Koori mothers identified for births in metropolitan hospitals.

This is shown on the next two pages.
<table>
<thead>
<tr>
<th>Dataset</th>
<th>Correctly identified as Koori</th>
<th>Incorrectly identified as non-Koori</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwives data</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>Hospital data</td>
<td>37%</td>
<td>63%</td>
</tr>
<tr>
<td>Birth Registry data</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>All 3 Datasets (linked)</td>
<td>29%</td>
<td>71%</td>
</tr>
</tbody>
</table>

Metropolitan Hospitals
(1998 estimated)

\[
\frac{161}{494} = 33\%
\]

\[
\frac{183}{494} = 37\%
\]

\[
\frac{205}{494} = 42\%
\]

\[
\frac{349}{494} = 71\%
\]
Rural Hospitals (1998 estimated)

Midwives data

\[
\frac{278}{398} = 70\%
\]

Hospital data

\[
\frac{229}{398} = 57\%
\]

Birth Registry data

\[
\frac{225}{398} = 56\%
\]

All 3 Datasets (linked)

\[
\frac{366}{398} = 92\%
\]

- Correctly identified as Koori
- Incorrectly identified as non-Koori
How does identification of Koori mothers in 1998 compare to 1996?

A similar study was undertaken to identify the number of Koori mothers reported on the three datasets in 1996. The results of the study were published as the Department of Human Services report: ‘Koori Health Counts: How many Koori babies were born in Victoria in 1996?’ (DHS 1999)

There was very little change in the identification of Koori mothers for most of the datasets for 1996 and 1998.

In 1998, with the three datasets combined, a higher proportion of Koori mothers were identified in data collected for births in rural hospitals (92%) compared to births in metropolitan hospitals (71%). This difference was also seen in 1996 where 92% births to Koori mothers in rural hospitals were identified, compared to 66% of births to Koori mothers in metropolitan hospitals.

Identification of Koori mothers by hospital admission staff increased in 1998. In 1996, hospital admission staff identified 42% of the births to Koori mothers and this increased to 48% in 1998.
CONCLUSION

- None of the three datasets were very good at identifying the Koori status of the mother.

- The total number of Koori births was higher in 1998 than for 1996. There were 1095 Koori births in 1998 and 988 Koori births in 1996.

- Overall, Koori mothers were identified more completely when the birth occurred at rural hospitals than when the birth occurred at hospitals in the Melbourne metropolitan area.

- As in 1996, there is a significant proportion of births where the father is identified as being Koori and the mother is non-Koori.