## CHAPTER 10 CHILD HEALTH

This chapter presents findings in several important areas that reflect or influence child health. Information on birth weight differentiated by maternal and household characteristics can assist in the design and implementation of programmes aimed at reducing neonatal and infant mortality. Many early childhood deaths can be prevented by immunising children against preventable diseases and by ensuring children receive prompt and appropriate treatment when they become ill. Information on treatment practices and health-seeking behaviour regarding the three most important syndromic childhood illnesses (acute respiratory infection, fever and diarrhoea) helps in assessing programmes that seek to reduce mortality associated with these illnesses. In addition to prevalence data for all three syndromes, information is also provided on antibiotic treatment and - in the case of diarrhoea - oral rehydration therapy and feeding practices. Appropriate sanitary practices can prevent diarrhoeal disease, and consequently the disposal of children's faecal matter is also examined.

The results must be interpreted with caution due to the small number of children covered by the survey. During the five years preceding the 2007 NDHS, slightly more than 300 children were born to the slightly more than 200 mothers surveyed. Conclusions cannot be drawn regarding the influence of a mother's education on child health, because almost all children had mothers with some secondary education. Only five children had mothers who lacked a secondary education, and only 13 had mothers with a post-secondary education.

### 10.1 BIRTH WEIGHT

Birth weight and size at birth are important indicators of a child's vulnerability to childhood illnesses and their chance of survival. Children with low birth weight (LBW, defined as less than 2.5 kg ), or children reported by their mother to be 'very small' or 'smaller than average' are considered to have a higher-than-average risk of early childhood death. For all births in the five years preceding the survey, birth weight (if available) was recorded, either from a written record or the mother's recall. Because birth weight may not be known for some babies, the mother's estimate of the baby's size at birth was also obtained (although subjective, such estimates can be a useful proxy for birth weight). Table 10.1 presents information on children's weight and size at birth, by maternal and household characteristics.
Table 10.1: Child's weight and size at birth
Percent distribution of live births in the five years preceding the survey with a reported birth weight by birth weight; percent distribution of all live births in the five years preceding the survey by mother's estimate of baby's size at birth; and percentage of all births with a reported birth weight, according to background characteristics, Nauru 2007

| Background characteristic | Percent distribution of births with a reported birth weight ${ }^{1}$ |  | Total | Number of births | Percentage of all births with a reported birth weight | Percent distribution of all live births by size of chil at birth |  |  |  | Total | Number of births |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Less than } \\ 2.5 \mathrm{~kg} \end{gathered}$ | 2.5 kg or more |  |  |  | Very small | Smaller than average | Average or larger | Don't know/ missing |  |  |
| Mother's age at birth |  |  |  |  |  |  |  |  |  |  |  |
| <20 | 24.3 | 75.7 | 100.0 | 50 | 93.1 | 18.2 | 10.7 | 62.8 | 8.3 | 100.0 | 54 |
| 20-34 | 27.5 | 72.5 | 100.0 | 231 | 96.3 | 6.9 | 10.1 | 75.1 | 7.9 | 100.0 | 239 |
| 35-49 | (28.2) | (71.8) | 100.0 | 28 | (96.8) | (0.0) | (10.0) | (90.0) | (0.0) | 100.0 | 28 |
| Birth order |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 31.6 | 68.4 | 100.0 | 78 | 96.5 | 12.9 | 14.8 | 65.1 | 7.2 | 100.0 | 81 |
| 2-3 | 20.2 | 79.8 | 100.0 | 126 | 96.4 | 9.9 | 5.5 | 78.2 | 6.4 | 100.0 | 131 |
| 4-5 | 38.2 | 61.8 | 100.0 | 69 | 92.8 | 4.2 | 11.7 | 72.7 | 11.4 | 100.0 | 74 |
| $6+$ | (19.9) | (80.1) | 100.0 | 36 | (98.0) | (0.0) | (13.8) | (84.1) | (2.0) | 100.0 | 37 |
| Mother's smoking status |  |  |  |  |  |  |  |  |  |  |  |
| Smokes cigarettes/tobacco | 29.1 | 70.9 | 100.0 | 145 | 92.9 | 7.0 | 12.3 | 68.3 | 12.4 | 100.0 | 156 |
| Does not smoke | 25.2 | 74.8 | 100.0 | 163 | 98.5 | 9.3 | 8.2 | 80.0 | 2.4 | 100.0 | 166 |
| Mother's education |  |  |  |  |  |  |  |  |  |  |  |
| Less than secondary | * | * | 100.0 | 5 | * | * | * | * | * | 100.0 | 5 |
| Secondary | 27.9 | 72.1 | 100.0 | 290 | 96.3 | 8.3 | 10.4 | 75.1 | 6.2 | 100.0 | 302 |
| More than secondary | * | * | 100.0 | 13 | * | * | * | * | * | 100.0 | 15 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 38.8 | 61.2 | 100.0 | 59 | 96.6 | 12.2 | 9.9 | 69.2 | 8.7 | 100.0 | 61 |
| Second | 28.8 | 71.2 | 100.0 | 67 | 96.7 | 7.7 | 15.5 | 74.2 | 2.7 | 100.0 | 69 |
| Middle | 23.0 | 77.0 | 100.0 | 65 | 94.4 | 7.3 | 16.0 | 66.6 | 10.0 | 100.0 | 69 |
| Fourth | 20.8 | 79.2 | 100.0 | 57 | 94.5 | 6.5 | 3.2 | 84.7 | 5.5 | 100.0 | 60 |
| Highest | 23.8 | 76.2 | 100.0 | 61 | 96.9 | 7.5 | 5.2 | 77.9 | 9.4 | 100.0 | 63 |
| Total | 27.0 | 73.0 | 100.0 | 309 | 95.8 | 8.2 | 10.2 | 74.3 | 7.2 | 100.0 | 322 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases.

[^0]Birth weight was reported for 96 percent of the $323^{1}$ children born to survey respondents, which is to be expected as the vast majority of deliveries take place in a health facility. Of these, 27 percent weighed less than 2.5 kg at birth (a high proportion by international standards). LBW was even more common among children born to poor mothers ( 39 percent weighed less than 2.5 kg ), ${ }^{2}$ and was also found among children born to currently smoking mothers ( 29 percent), ${ }^{3}$ but not among children born to young mothers ( 24 percent). ${ }^{4}$ LBW was also common among first-born children ( 32 percent) and children of birth order 4 or 5 ( 38 percent); among children of birth order 2 or 3, and the 36 children of birth order 6 for whom weight was reported, LBW was less prevalent ( 20 percent).

Table 10.1 includes information on the mother's assessment of the baby's size at birth, but it should be noted that young mothers are particularly likely to assess their child as 'very small' (this was done by 18 percent). The 'very small' category was rarely chosen for children of higher birth order (4 percent of children of birth order 4-5 were rated 'very small', and none of those of birth order $6+$ ). These figures do not correspond to the actual LBW proportions, suggesting a perception bias, with young mothers more likely to perceive their children (who are of low birth order) as being "very small", even when this may not be the case.

The large proportion of LBW children is not associated with teenage pregnancies, nor sufficiently through maternal smoking practices, and is not consistent with body mass and weight patterns of women and children weighed during the 2007 NDHS. Since the mother's recall and the mother's estimate of the baby's sizes at birth were also obtained, the data are not 100 percent accurate.

According to clinical staff, birth weight in Nauru has varied in recent history, in line with the general economic situation. LBW was most common around 2002 and 2003 (during a severe economic crisis) and has improved considerably since then. It would be interesting to analyse the proportion of LBW by year of birth.

### 10.2 VACCINATION COVERAGE

Universal immunisation of children against vaccine-preventable diseases is crucial in reducing infant and child mortality. Information on immunisation coverage is important for the monitoring and evaluation of the Expanded Programme on Immunisation (EPI).
At the time of the 2007 NDHS, the child vaccination schedule consisted of BCG vaccinations (for TB ) at age 1 month; DPT (protecting against diphtheria, pertussis and tetanus) and polio vaccinations at the ages of $2,4,6,18$ and 48 months; hepatitis $B$ vaccinations at birth, and 1 and 6 months; MMR at vaccinations at 15 months and measles vaccinations at one year. DPT and polio vaccinations are usually given together, unless one is not in stock. Because all births are registered, it is possible and common practice for 'Well Baby Clinic' staff to call mothers and make appointments for immunisation according to this schedule.
Nauru plans to introduce a new vaccination programme as recommended by WHO, with the following schedule to be initiated in early 2009.

[^1]| Immunisation schedule |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Birth | BCG | HepB |  |  |
| 4 weeks | - |  |  |  |
| 6 weeks |  | Penta1* |  |  |
| 10 weeks | Penta2 |  | OPV1** |  |
| 14 weeks | Penta3 |  | OPV2 |  |
| 12 months |  |  |  | MR1*** |
| 15 months |  |  |  |  |
| 18 months |  |  | DTP**** | OPV4 |

Treated at 1st contact, +4 weeks
*a vaccine used to prevent 5 diseases: diphtheria, tetanus, pertussis, hepatitis B and polio
**oral polio vaccine ***measles and rubella vaccine
**** vaccine against diphtheria, tetanus and pertussis (whooping cough)

The 2007 NDHS collected information on vaccination coverage for all living children born in the five years preceding the survey, either from vaccination cards shown to the interviewer (for 60 children) or, in three cases, from mothers' recall.

Table 10.2 shows the percentage of the 63 children aged $18-29$ months who received the various vaccinations at any time prior to the survey, and the percentage vaccinated by 12 months of age.

## Table 10.2: Vaccinations by source of information

Percentage of children aged 18-29 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's report), and percentage vaccinated by age 12 months, Nauru 2007

| Source of information | BCG | $\begin{gathered} \text { DPT } \\ 1 \end{gathered}$ | $\begin{gathered} \text { DPT } \\ 2 \end{gathered}$ | $\begin{gathered} \text { DPT } \\ 3 \end{gathered}$ | Polio 1 | $\begin{gathered} \text { Polio } \\ 2 \end{gathered}$ | $\begin{gathered} \text { Polio } \\ 3 \end{gathered}$ | Measle <br> s | All basic vaccina - tions ${ }^{1}$ | No vaccina - tions | Number of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vaccinated at any time before survey |  |  |  |  |  |  |  |  |  |  |  |
| Vaccination card | 95.5 | 95.5 | 92.8 | 89.0 | 95.5 | 93.5 | 91.0 | 92.6 | 85.5 | 0.0 | 60 |
| Mother's report | * | * | * | * | * | * | * | * | * | * | 3 |
| Either source | 98.4 | 98.4 | 92.8 | 89.0 | 98.4 | 93.5 | 91.0 | 95.4 | 85.5 | 1.6 | 63 |
| Vaccinated by 12 months of age ${ }^{2}$ | 96.9 | 95.5 | 75.8 | 55.7 | 98.4 | 85.0 | 69.5 | 59.9 | 37.5 | 1.6 | 63 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases.
${ }^{1}$ BCG, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth).
${ }^{2}$ For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.

In total, 86 percent of these children were fully vaccinated, with each single vaccination given to more than 90 percent (except DPT 3, which was given to 89 percent; see also Figure 10.1). Only 38 percent were fully vaccinated by 12 months of age, showing a pattern of slightly delayed immunisation.

Due to the small sample size no further analysis has been undertaken.

Figure 10.1: Percentage of children aged 18-29 months with specific vaccinations, Nauru 2007*


### 10.3 ACUTE RESPIRATORY INFECTION

Acute respiratory infection (ARI) is a leading cause of childhood morbidity and mortality throughout the world. Early diagnosis and treatment with antibiotics can prevent a large proportion of deaths caused by ARI. In the 2007 NDHS, the prevalence of ARI was estimated by asking mothers whether their children under age 5 had been ill in the two weeks preceding the survey, with a cough accompanied by short, rapid breathing that was chest-related. This syndrome is considered a proxy for pneumonia. It should be noted that the morbidity data collected are based on the mother's perception without validation by medical personnel.

Table 10.3 shows that 16 percent of children under age 5 years showed symptoms of ARI at some time in the two weeks preceding the survey. This figure is very high compared with data collected during the 2007 DHSs in other countries in the region (e.g. 2 percent in the Marshall Islands, 5 percent in Solomon Islands).

Table 10.3: Prevalence and treatment of symptoms of acute respiratory infection
Among children under age five, the percentage who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey; among children with symptoms of ARI, the percentage for whom advice or treatment was sought from a health facility or provider, and the percentage who received antibiotics as treatment, according to background characteristics, Nauru 2007

| Background characteristic | Children under age 5 |  | Children under age 5 with symptoms of ARI |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage with symptoms of ARI ${ }^{1}$ | Number of children | Percentage for whom advice or treatment was sought from a health facility or provider ${ }^{2}$ | Percentage who received antibiotics | Number of children |
| Sex |  |  |  |  |  |
| Male | 20.1 | 151 | (76.6) | (58.8) | 30 |
| Female | 12.2 | 158 | * | * | 19 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 24.2 | 59 | * | * | 14 |
| Second | 14.1 | 67 | * | * | 9 |
| Middle | 17.2 | 65 | * | * | 11 |
| Fourth | 6.0 | 59 | * | * | 4 |
| Highest | 18.8 | 61 | * | * | 11 |
| Total | 16.1 | 310 | 68.8 | 47.0 | 50 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ Symptoms of ARI (cough accompanied by short, rapid breathing which was chest-related) is considered a proxy for pneumonia.
${ }^{2}$ Excludes pharmacy, shop, and traditional practitioner.

The results indicate that the prevalence of ARI is twice as high ( 20 percent) among boys as among girls (12 percent). ARI prevalence shows no consistent association with household wealth.

Among mothers of the 50 affected children, 69 percent sought advice or treatment from a health facility, ${ }^{5}$ and 47 percent received antibiotics. Both proportions were higher for boys than for girls.

Due to the small sample size no further analysis has been undertaken.

### 10.4 FEVER

Fever is also a symptom of acute infections in children. Illnesses that cause fever contribute to high levels of malnutrition and mortality.

Table 10.4 shows the proportion of children under five with fever during the two weeks preceding the survey and the proportion of these for whom advice or treatment was sought, and antibiotics administered.

[^2]Table 10.4: Prevalence and treatment of fever
Among children under age 5, the percentage who had a fever in the two weeks preceding the survey; and among children with fever, the percentage for whom treatment was sought from a health facility or provider, the percentage who took antimalarial drugs and the percentage who took antibiotic drugs, by background characteristics, Nauru 2007

| Background characteristic | Among children under age 5: |  | Children under age 5 with fever |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage with fever | Number of children | Percentage for whom advice or treatment was sought from a health facility or provider ${ }^{1}$ | Percentage who took antibiotic drugs | Number of children |
| Age in months |  |  |  |  |  |
| <6 | (34.1) | 28 | * | * | 10 |
| 6-11 | (51.3) | 39 | * | * | 20 |
| 12-23 | 52.8 | 51 | (59.8) | (14.0) | 27 |
| 24-35 | 32.9 | 66 | * | * | 22 |
| 36-47 | 26.8 | 69 | * | * | 18 |
| 48-59 | 22.2 | 57 | * | * | 13 |
| Sex |  |  |  |  |  |
| Male | 38.7 | 151 | 61.8 | 31.7 | 59 |
| Female | 32.0 | 158 | 37.6 | 21.1 | 51 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 41.5 | 59 | * | * | 24 |
| Second | 32.1 | 67 | * | * | 21 |
| Middle | 36.7 | 65 | (44.8) | (28.2) | 24 |
| Fourth | 22.1 | 59 | * | * | 13 |
| Highest | 44.1 | 61 | (41.3) | (21.1) | 27 |
| Total | 35.3 | 310 | 50.6 | 26.8 | 109 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases
${ }^{1}$ Excludes pharmacy, shop, and traditional practitioner
A total of 35 percent of children under five were reported to have had a fever in the two weeks preceding the survey. As with ARI, the prevalence of fever in Nauru was much higher than that reported in the Marshall Islands ( 9 percent) and Solomon Islands (17 percent).

The prevalence of fever symptoms varies by age of child. Children in the age groups 6-11 and 12-23 months were most affected, and more than half had displayed symptoms of fever in the preceding two weeks. Boys had a higher prevalence ( 39 percent) than girls ( 32 percent). Fever prevalence was not correlated to household wealth, being high ( 42 percent) in the poorest and wealthiest (44 percent) quintiles.

About half of children with fever were taken to a health facility for advice or treatment. This proportion was much larger for boys ( 62 percent) than for girls ( 38 percent). ${ }^{6}$ Overall, antibiotics were given to 27 percent, with a higher proportion of boys ( 32 percent) receiving antibiotics than girls ( 21 percent).

Due to the small sample size no further analysis has been undertaken.

[^3]
### 10.5 DIARRHOEA

Dehydration caused by severe diarrhoea is a major cause of morbidity and mortality among young children, although the condition can be easily treated with oral rehydration therapy (ORT). Exposure to diarrhoea-causing pathogens often results from the use of contaminated water, unhygienic food preparation, and excreta disposal practices. In interpreting the findings of the 2007 NDHS, it should be borne in mind that prevalence of diarrhoea in Nauru varies with rainfall patterns.

### 10.5.1 Prevalence

Table 10.5 shows the proportion of children under age 5 with diarrhoea in the two weeks preceding the survey, by selected background characteristics. Overall, 21 percent had diarrhoea, which is more than double the 9 percent prevalence rate reported in both the Marshall Islands and Solomon Islands. Only one case of diarrhoea with blood was reported.

Table 10.5: Prevalence of diarrhoea
Percentage of children under age 5 who had diarrhoea in the two weeks preceding the survey, by background characteristics, Nauru 2007

|  | Diarrhoea in the two weeks <br> preceding the survey |  |  |
| :--- | :---: | :---: | :---: |
| Background <br> characteristic | All <br> diarrhoea | Diarrhoea <br> with blood | Number of <br> children |
| Age in months |  |  |  |
| <6 | $(5.7)$ | $(0.0)$ | 28 |
| 6-11 | 24.2 | 0.0 | 39 |
| 12-23 | 34.4 | 0.0 | 51 |
| $24-35$ | 22.3 | 0.0 | 66 |
| 36-47 | 17.7 | 1.5 | 69 |
| 48-59 | 16.1 | 0.0 | 57 |
| Sex |  |  |  |
| Male | 20.9 | 0.7 | 151 |
| Female | 20.8 | 0.0 | 158 |
| Source of drinking water ${ }^{1}$ |  |  |  |
| Improved | 20.0 | 0.4 | 279 |
| Not improved | $(28.9)$ | $(0.0)$ | 31 |
| Toilet facility ${ }^{2}$ |  |  |  |
| Improved, not shared | 21.4 | 0.5 | 223 |
| Non-improved or shared | 18.4 | 0.0 | 83 |
| Missing | $*$ | $*$ | 4 |
| Wealth quintile |  |  |  |
| Lowest | 20.9 | 0.3 | 310 |
| Second | 19.3 | 0.0 | 59 |
| Middle | 15.4 | 0.0 | 67 |
| Fourth | 26.3 | 0.0 | 65 |
| Highest | 17.9 | 0.0 | 59 |
| Total | 1.7 | 61 |  |

[^4]The prevalence of diarrhoea varies by the age of the child. As in most countries, it is highest ( 34 percent) in the $12-23$ month age group, but prevalence is high in all other age groups as well. Diarrhoea prevalence is below 15 percent only in children under 6 months of age.
There is no difference in the prevalence of diarrhoea between boys and girls.
A large majority ( 90 percent) of children live in households with an improved source of drinking water, and more than 70 percent in households with an improved and non-shared toilet facility, meaning all prevalence data for children in households without improved sanitation are based on small numbers. A non-improved drinking water source appears to increase the risk of diarrhoea, but no correlation is evident with the type of toilet facilities. There is also no consistent association between household wealth and diarrhoea prevalence; interestingly, children in the wealthiest households have a higher prevalence ( 25 percent) than those in the poorest households (19 percent).

### 10.5.2 Knowledge of ORS packets

A simple and effective response to dehydration caused by diarrhoea is a prompt increase in the child's fluid intake through some form of oral rehydration therapy, which may include the use of a solution prepared from packets of oral rehydration salts (ORS). To ascertain how widespread the knowledge of ORS is in Nauru, mothers aged 15-49 who gave birth in the five years preceding the survey were asked whether they knew about ORS packets.

Table 10.6 shows that a large majority ( 82 percent) of the mothers interviewed knew about ORS packets. ORS knowledge increases with household wealth, albeit not consistently, and with mother's age, from 74 percent in the 20-24 age group to 92 percent in the oldest age group.

Table 10.6: Knowledge of ORS packets or prepackaged liquids
Percentage of mothers aged 15-49 who gave birth in the five years preceding the survey who know about ORS packets or ORS pre-packaged liquids for treatment of diarrhoea by background characteristics, Nauru 2007

|  | Percentage of <br> women who know <br> about ORS packets <br> or ORS pre- | Number of |
| :--- | :---: | :---: |
| Background <br> characteristic | wackaged liquids | women |
| Age | * |  |
| $15-19$ | 73.8 | 13 |
| $20-24$ | 88.2 | 63 |
| $25-34$ | $(91.5)$ | 101 |
| $35-49$ |  | 29 |
| Wealth quintile | $(78.6)$ |  |
| Lowest | $(77.1)$ | 38 |
| Second | 79.6 | 42 |
| Middle | $(89.9)$ | 48 |
| Fourth | $(84.8)$ | 37 |
| Highest | 81.8 | 40 |
| Total |  | 205 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
ORS = oral rehydration salts

### 10.5.3 Treatment

Mothers of children with diarrhoea were asked about what was done to treat the illness. Table 10.7 shows their responses, by background characteristics.

About one-third of the 65 children with diarrhoea were taken to a health facility, with more than double the proportion of boys taken to a facility ( 47 percent) as girls ( 22 percent). Seventy percent received ORT or increased fluids. There were some differences by gender, probably due to health facility exposure: ORS packets or pre-packed liquids were given preferentially to boys (received by 32 percent of boys vs 15 percent of girls), while recommended home fluids were more often given to girls ( 43 percent, vs 17 percent of boys). Antibiotics were given only to boys.
The proportion of younger children (aged less than 24 months) taken to a health facility ( 39 percent) was higher than that of older children aged $24-59$ months ( 31 percent). However, a greater proportion of older children ( 75 percent) received appropriate treatment (ORT or increased fluids) than did younger children ( 65 percent).

## Table 10.7: Diarrhoea treatment

Among children under age 5 who had diarrhoea in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given oral rehydration therapy (ORT), the percentage given increased fluids, the percentage given ORT or increased fluids, and the percentage who were given other treatments, by background characteristics, Nauru 2007

| Background characteristic | Percentage of children with diarrhoea for whom advice or treatment was sought from a health facility or provider ${ }^{1}$ | Oral rehydration therapy (ORT) |  |  |  |  | Other treatments |  |  | No treatment | Number of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ORS packets or prepackaged liquid | Recommended home fluids (RHF) | Either ORS or RHF | Increased fluids | ORT or increased fluids | Anti- biotic drugs | Home remedy/ other | Missing |  |  |
| Age in months |  |  |  |  |  |  |  |  |  |  |  |
| <24 | (38.8) | (24.7) | (30.8) | (52.0) | (38.3) | (64.8) | (7.4) | (28.3) | (3.6) | (24.2) | 29 |
| 24-59 | (30.7) | (22.3) | (29.6) | (51.9) | (50.0) | (74.5) | (0.0) | (16.3) | (7.6) | (17.8) | 36 |
| Sex |  |  |  |  |  |  |  |  |  |  |  |
| Male | (47.2) | (32.1) | (17.0) | (46.1) | (39.5) | (68.2) | (6.7) | (25.6) | (4.7) | (20.4) | 32 |
| Female | (21.9) | (14.9) | (42.7) | (57.6) | (49.9) | (72.2) | (0.0) | (17.8) | (6.9) | (20.9) | 33 |
| Total | 34.3 | 23.3 | 30.1 | 52.0 | 44.8 | 70.2 | 3.3 | 21.6 | 5.8 | 20.6 | 65 |

${ }^{1}$ Excludes pharmacy, shop and traditional practitioner.

### 10.5.4 Feeding

Mothers are encouraged to continue normal feeding of children with diarrhoea and to increase the amount of fluids. These practices help reduce dehydration and minimise the adverse consequences of diarrhoea on the child's nutritional status. Mothers of children with recent diarrhoea were asked whether they gave the child less, the same amount, or more fluids and food than usual. Table 10.8 shows the percent distribution of feeding practices for the 65 children under five who had diarrhoea in the two weeks preceding the DHS, by background characteristics.

In total, 45 percent of children were given more liquids than usual, while the majority received either the same amount ( 27 percent), somewhat less ( 9 percent) or even much less ( 13 percent) than usual. Responses were undetermined for 7 percent.

Regarding the amount of food offered, 22 percent were given the same amount as usual, 21 percent were given more, 24 percent somewhat less, and 25 percent much less than usual. One child received no food at all during their illness. For 6 percent the response was missing or 'don't know'.

Broken down by sex and age group, the proportion of girls ( 50 percent) and older children ( 50 percent) who were offered more liquids was greater than that of boys ( 40 percent) and younger children (38 percent). In particular, the proportion of younger children offered somewhat (14 percent) or much ( 20 percent) less in the way of liquids exceeded the proportion of older children ( 4 percent received somewhat less, and 8 percent received much less).

While younger children were more likely than older children to receive less food when affected by diarrhoea (and, accordingly, older children were more likely than younger children to receive more food), the gender association with food was the inverse of the association with liquids: 30 percent of boys with recent diarrhoea received more food than usual, but only 13 percent of girls.

In summary, 36 percent of affected children received the recommended liquid and food regime. This was the case for both boys and girls, and more likely for older (39 percent) than younger (32 percent) children.

Allowing for ORT as a valid replacement for an increase in liquids (in line with UNICEF's multiple luster indicator 35), 69 percent of affected children were appropriately managed; older children were more likely to be managed appropriately ( 71 percent) than were younger children (65 percent), and more girls ( 72 percent) received appropriate treatment than did boys (65 percent).

## Table 10.8: Feeding practices during diarrhoea

Percent distribution of children under age 5 who had diarrhoea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, the percentage of children given increased fluids and continued feeding during the diarrhoea episode, and the percentage of children who continued feeding and were given ORT and/or increased fluids during the episode of diarrhoea, by background characteristics, Nauru 2007

| Background characteristic | Amount of liquids offered |  |  |  |  | Total | Amount of food offered |  |  |  |  |  | Total | Percentage given increased fluids and continued feeding ${ }^{1,2}$ | Percentage who continued feeding and were given ORT and/or increased fluids ${ }^{3}$ | Number of children with diarrhoea |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | More | $\begin{aligned} & \text { Same } \\ & \text { as } \\ & \text { usual } \end{aligned}$ | Some what | $\begin{aligned} & \text { Much } \\ & \text { less } \end{aligned}$ | Don't know/ missing |  | More | $\begin{aligned} & \text { Same } \\ & \text { as } \\ & \text { usual } \end{aligned}$ | Somewhat less | Much less | Never gave food | Don't know/ missing |  |  |  |  |
| Age in months |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <24 | (38.3) | (24.0) | (13.7 | (20.4) | (3.6) | 100.0 | (17.2) | (21.3) | (26.6) | (28.5) | (2.8) | (3.6) | 100.0 | (32.1) | (64.8) | 29 |
| 24-59 | (50.0) | (28.5) | (4.3) | (7.5) | (9.7) | 100.0 | (24.2) | (23.3) | (22.3) | (22.6) | (0.0) | (7.6) | 100.0 | (38.5) | (71.3) | 36 |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | (39.5) | (30.1) | (9.1) | (14.3) | (7.1) | 100.0 | (29.6) | (25.8) | (20.8) | (16.5) | (2.5) | (4.7) | 100.0 | (35.8) | (64.5) | 32 |
| Female | (49.9) | (23.1) | (7.9) | (12.2) | (6.9) | 100.0 | (12.9) | (19.2) | (27.4) | (33.5) | (0.0) | (6.9) | 100.0 | (35.5) | (72.2) | 33 |
| Total | 44.8 | 26.5 | 8.5 | 13.2 | 7.0 | 100.0 | 21.1 | 22.4 | 24.2 | 25.2 | 1.2 | 5.8 | 100.0 | 35.7 | 68.4 | 65 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases. Total includes 5 children with missing information on amount of liquids and food offered who are not shown
.
${ }^{2}$ Continue feeding practices includes children who were given more, same as usual, or somewhat less food during the diarrhoea episode.
${ }^{3}$ Equivalent to UNICEF MICS Indicator 35 .

### 10.6 DISPOSAL OF CHILDREN'S STOOL

If human faeces are left uncontained, disease may spread by direct human or animal contact with the faeces. Proper disposal of children's stools is therefore extremely important in preventing the spread of disease. Table 10.9 presents information on the disposal of children's stools by mothers of youngest children under age 5 , by background characteristics.

Of the 190 mothers in the sample, less than half ( 48 percent) disposed of their youngest child's stools safely. This proportion generally increased with the child's age and household wealth, albeit not consistently: the highest wealth quintile had the lowest frequency ( 39 percent) of safe disposal.

Looking at different disposal methods, stools and/or nappies (diapers) were most commonly disposed of by being 'thrown into garbage' ( 43 percent). Not surprisingly this method decreased for older children, from 72 percent for children below 6 months to 7 percent for children 36-47 months. It is less common in households with improved, non-shared toilet facilities ( 40 percent) than in households with non-improved or shared toilet facilities ( 49 percent). However, analysed by household wealth, it is most common in the richest quintile ( 54 percent), perhaps due to the availability of nappies.

The second-most common practice ( 25 percent) was 'child used toilet or latrine', which increased among older children, is not influenced by the type of toilet facility, and is least common (17 percent) in the wealthiest quintile.
Table 10.9: Disposal of children's stools
Percent distribution of youngest children under age 5 living with the mother by the manner of disposal of the child's last faecal matter, and percentage of children whose stools are disposed of safely, according to background characteristics, Nauru 2007

| Background characteristic | Manner of disposal of children's stools |  |  |  |  |  |  |  |  | Percentage of children whose stools are disposed of safely | Number of mothers |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Child used toilet or latrine | Put/rinsed into toilet or latrine | Buried | Put/rinsed into drain or ditch | $\begin{gathered} \text { Thrown } \\ \text { into } \\ \text { garbage } \\ \hline \end{gathered}$ | Rinsed away | Other | Missing | Total |  |  |
| Age in months |  |  |  |  |  |  |  |  |  |  |  |
| <6 | (10.4) | (6.7) | (4.9) | (2.9) | (72.0) | (0.0) | (2.9) | (0.0) | 100.0 | 22.1 | 27 |
| 6-11 | (8.5) | (10.6) | (0.0) | (5.9) | (63.6) | (5.6) | (3.2) | (2.5) | 100.0 | 19.1 | 36 |
| 12-23 | (5.6) | (10.6) | (6.3) | (9.1) | (63.8) | (2.4) | (0.0) | (2.2) | 100.0 | 22.4 | 41 |
| 24-35 | (36.7) | (27.2) | (4.0) | (0.0) | (25.3) | (6.7) | (0.0) | (0.0) | 100.0 | 67.9 | 40 |
| 36-47 | (51.6) | (32.2) | (2.8) | (0.0) | (7.1) | (0.0) | (6.2) | (0.0) | 100.0 | 86.7 | 29 |
| 48-59 | * | * | * | * | * | * | * | * | 100.0 | * | 17 |
| Toilet facility |  |  |  |  |  |  |  |  |  |  |  |
| Improved, not shared ${ }^{1}$ | 25.1 | 20.1 | 4.2 | 3.3 | 39.7 | 4.1 | 2.8 | 0.7 | 100.0 | 49.4 | 136 |
| Non-improved or shared | 25.3 | 15.2 | 3.5 | 4.0 | 48.7 | 0.0 | 1.5 | 1.8 | 100.0 | 44.0 | 51 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | (26.1) | (13.5) | (2.5) | (8.7) | (36.4) | (7.7) | (2.4) | (2.8) | 100.0 | (42.0) | 33 |
| Second | (20.3) | (18.9) | (3.9) | (2.7) | (46.7) | (5.3) | (0.0) | (2.2) | 100.0 | (43.1) | 41 |
| Middle | (29.1) | (16.4) | (8.1) | (3.0) | (39.1) | (0.0) | (4.4) | (0.0) | 100.0 | (53.6) | 44 |
| Fourth | (33.0) | (26.8) | (0.0) | (2.4) | (35.3) | (0.0) | (2.4) | (0.0) | 100.0 | (59.9) | 33 |
| Highest | (16.8) | (18.1) | (4.2) | (1.4) | (54.3) | (2.6) | (2.6) | (0.0) | 100.0 | (39.1) | 38 |
| Total | 24.9 | 18.6 | 4.0 | 3.5 | 42.6 | 3.0 | 2.4 | 1.0 | 100.0 | 47.5 | 189 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases. Total includes nine mothers with missing information on the type of toiet facility and who are not shown
${ }^{1}$ Non-shared facilities include the following: flush or pour flush into a piped sewer system/septic tankpit latrine; ventilated, improved pit (VIP) latine; pit latrine with a slab; and a composting toilet.

### 10.7 KEY RESULTS

The following major findings can be drawn from the discussion relating to child health in Nauru:

1. A child's birth weight and size is an important indicator of its vulnerability to childhood illnesses and chances of survival. The 2007 NDHS results show that a large proportion of children in Nauru ( 27 percent) are of low birth weight. Low birth weight is more common among later children (i.e. birth order 4 or 5), among mothers who smoke cigarettes, and among children from households in the poorest wealth quintile.
2. Universal immunisation of children against vaccine-preventable diseases is crucial to reducing infant and child mortality and also important for monitoring and evaluation of immunisation programmes. About 86 percent of all children were fully vaccinated, with each single vaccination given to more than 90 percent. However, the proportion that had received each single vaccination decreased among older children.
3. The 2007 NDHS indicates that 16 percent of children under age 5 years showed symptoms of acute respiratory infection (ARI) at some time in the two weeks preceding the survey. ARI is more common among male children and children from households in the poorest wealth quintile.
4. Among children under age 5,35 percent were reported to have had a fever in the two weeks preceding the survey. Fevers were more common among male children and those children living in poorer households.
5. Overall, one in five children under age 5 was reported to have had diarrhoea in the two weeks preceding the survey. The prevalence of diarrhoea was highest for children aged 12-23 months. More than 34 percent of mothers with children who experienced diarrhoea sought treatment and advice from a health facility. The majority of women aged 15-49 who gave birth in the five years preceding the survey reported knowledge of ORS packages or pre-packaged liquids.
6. Among youngest children living with their mother, only about half ( 48 percent) had their stool disposed of safely. The most common practice (which is considered unsafe) consisted of disposing of stool (presumably nappies) in the garbage (43 percent).

## CHAPTER 11 NUTRITION OF ADULTS AND CHILDREN

This chapter examines the nutritional status of men, women and children by assessing their anthropometric measurements, infant and child feeding practices, micronutrient intakes (of women and children), food consumption patterns of mothers, and the consequences of inadequate nutrition.

The prevalence of anaemia from haemoglobin testing of women and children are also discussed in this chapter. Haemoglobin testing was done by taking a finger-prick drop of blood from participants and using a portable HemoCue photometer to obtain the results. Consent was asked from a parent or guardian before taking blood from children.

Survey participants were invited to have their weight and height measured. These measurements were then used to calculate indicators of nutritional status, including body mass index (BMI), an indicator of thinness and fatness, and short stature. Low BMI $\left(<18.5 \mathrm{~kg} / \mathrm{m}^{2}\right)$ can be used as an indicator of chronic energy deficiency (CED) and the degrees of severity are defined as follows:

- mild CED is BMI $17-18.5 \mathrm{~kg} / \mathrm{m}^{2}$
- moderate CED is BMI $16.0-16.9 \mathrm{~kg} / \mathrm{m}^{2}$
- severe CED is $\mathrm{BMI}<16.0 \mathrm{~kg} / \mathrm{m}^{2}$

CED is an indicator of chronic malnutrition, which can impact negatively on productivity levels among adults, and is a risk factor for childhood morbidity and mortality. The causes of malnutrition include not eating enough nutritious food, poor food choices and feeding practices, parasitic infections, poor sanitation and other socio-cultural factors that influence food choices and feeding practices. Women and children are most at risk. Women with CED are more likely to give birth to low weight babies who are more likely to experience poor health outcomes.

Short stature in women (defined as height $<145 \mathrm{~cm}$ ) can be used to identify women with an increased risk of poor delivery outcomes. Short stature is associated with small pelvic size, which makes delivery difficult. The risk of delivering low birth weight babies is higher for shorter women.

High BMI ( $>25.00 \mathrm{~kg} / \mathrm{m}^{2}$ ) on the other hand is an indicator of overweight (BMI $25.0-29.9 \mathrm{~kg} / \mathrm{m}^{2}$ ) and obesity ( $\mathrm{BMI}>30 \mathrm{~kg} / \mathrm{m}^{2}$ ), which is associated with an increased risk of developing of noncommunicable diseases such as diabetes, heart diseases and some cancers.

### 11.1 NUTRITIONAL STATUS OF MEN

Table 11.1 presents the percentage of Nauruan men aged $15-49$ with specific BMI levels by background characteristics. Overall, the mean BMI was $31.6 \mathrm{~kg} / \mathrm{m}^{2}$, which is classified as obese ( $>30 \mathrm{~kg} / \mathrm{m}^{2}$ ). The 2004 STEPS survey ${ }^{7}$ showed the mean BMI for males aged $15+$ years was $31.6 \mathrm{~kg} / \mathrm{m}^{2}$, so it appears that the mean BMI among men has stabilised since 2004.

[^5]Table 11.1: Nutritional status of men
Among men aged 15-49, mean body mass index (BMI), and the percentage with specific BMI levels, by background characteristics, Nauru 2007

| Background characteristic | Body Mass Index (BMI) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Normal | Thin |  |  | Overweight/obese |  |  | Number ofmen |
|  | Mean BMI | $\begin{gathered} \hline 18.5-24.9 \text { (Total } \\ \text { normal) } \end{gathered}$ | $\begin{gathered} <18.5 \\ \text { (Total thin) } \end{gathered}$ | $\begin{gathered} \text { 17.0-18.4 } \\ \text { (Mildly thin) } \end{gathered}$ | <17 (Moderately and severely thin) | $>=25.0$ (Total overweight or obese) | 25.0-29.9 (Over weight) | $\begin{aligned} & >=30.0 \\ & \text { (Obese) } \end{aligned}$ |  |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 25.4 | 56.9 | 3.8 | 2.6 | 1.2 | 39.3 | 26.0 | 13.3 | 58 |
| 20-29 | 30.5 | 18.8 | 0.7 | 0.7 | 0.0 | 80.4 | 39.7 | 40.7 | 111 |
| 30-39 | 35.5 | 10.3 | 0.0 | 0.0 | 0.0 | 89.7 | 15.5 | 74.1 | 78 |
| 40-49 | (35.3) | (5.6) | (0.0) | (0.0) | (0.0) | (94.4) | (16.3) | (78.1) | 49 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 32.9 | 23.0 | 3.5 | 3.5 | 0.0 | 73.5 | 18.7 | 54.8 | 43 |
| Second | 31.9 | 20.7 | 0.0 | 0.0 | 0.0 | 79.3 | 30.8 | 48.5 | 64 |
| Middle | 30.3 | 18.2 | 1.2 | 0.0 | 1.2 | 80.6 | 34.4 | 46.2 | 59 |
| Fourth | 30.7 | 29.6 | 0.0 | 0.0 | 0.0 | 70.4 | 26.3 | 44.1 | 64 |
| Highest | 32.4 | 18.2 | 1.3 | 1.3 | 0.0 | 80.5 | 21.7 | 58.7 | 65 |
| Total 15-49 | 31.6 | 21.9 | 1.0 | 0.8 | 0.2 | 77.1 | 26.8 | 50.3 | 296 |
| 50+ | (32.0) | (11.0) | (0.0) | (0.0) | (0.0) | (89.0) | (34.8) | (54.2) | 40 |
| Total men 15+ | 31.6 | 20.6 | 0.9 | 0.7 | 0.2 | 78.5 | 27.7 | 50.8 | 336 |

[^6]Notes: An asterisk indicates that a tigure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases.
BMI is expressed as the ratio of weight in kiograms to the square of height in meters (kg/m2).

Overall, the prevalence of men who were overweight or obese was 77.1 percent, with 26.8 percent being overweight and 50.3 percent classified as obese (Fig. 11.1). The total prevalence of men with normal BMI was 21.9percent.
Overweight and obesity was detected as early as ages 20-29 years for men. The total prevalence of men classified as overweight or obese increased from 73.5 percent among men living in the least wealthy households ( 18.7 percent being overweight and 54.8 percent being obese) to 80.5 percent among those living in the wealthiest households ( 21.7 percent being overweight and 58.7 percent being obese).

Figure 11.1: Percentage of men 15-149 years by BMI category


Results show that BMI increases with age for Nauruan men. In Table 11.1 and Figure 11.2, 39.3 percent of men in the 15-19 age group were overweight or obese, of which 26 percent were overweight and 13.3 percent were obese, compared with 89.7 percent of men in the $30-39$ age group ( 15.5 percent of whom were overweight and 74.2 percent of whom were obese).

Figure 11.2: Percentage of Nauruan men by BMI category and age


There is little indication of CED among adult men, with less than 1 percent of adult men classified as thin.

### 11.2 NUTRITIONAL STATUS OF WOMEN

Table 11.2 presents the nutritional status of women aged 15-49 by height, BMI and background characteristics. Height and weight were used as indicators of nutritional status among women who were not pregnant or had given birth in the two months preceding the survey.

Table 11.2: Nutritional status of women
Among women aged 15-49, the percentage less than 145 cm tall, mean body mass index (BMI), and the percentage with specific BMI levels, by background characteristics, Nauru 2007

| Background characteristic | Height |  |  | Body Mass Index (BMI) ${ }^{1}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage below 145 cm | Number of women | Mean BMI | Normal <br> 18.524.9 <br> (Total normal) | Thin |  | Overweight/obese |  |  | Number of women |
|  |  |  |  |  | <18.5 <br> (Total <br> thin) | $\begin{gathered} 17.0- \\ 18.4 \\ \text { (Mildly } \\ \text { thin) } \\ \hline \end{gathered}$ | $>=25.0$ <br> (Total overweight or obese) | $\begin{gathered} 25.0- \\ 29.9 \\ \text { (Over- } \\ \text { weight) } \\ \hline \end{gathered}$ | $\begin{gathered} >=30.0 \\ \text { (Obese) } \end{gathered}$ |  |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 1.1 | 117 | 26.3 | 47.2 | 1.9 | 1.9 | 50.9 | 34.3 | 16.5 | 108 |
| 20-29 | 1.9 | 219 | 30.9 | 18.3 | 1.1 | 1.1 | 80.6 | 27.6 | 53.0 | 186 |
| 30-39 | 0.2 | 145 | 36.2 | 7.7 | 0.0 | 0.0 | 92.3 | 17.3 | 75.0 | 129 |
| 40-49 | 1.9 | 125 | 35.7 | 8.0 | 0.0 | 0.0 | 92.0 | 16.7 | 75.3 | 122 |
| Education |  |  |  |  |  |  |  |  |  |  |
| Less than secondary | * | 12 | * | * | * | * | * | * | * | 10 |
| Secondary | 1.3 | 544 | 32.4 | 18.0 | 0.9 | 0.9 | 81.1 | 24.0 | 57.1 | 489 |
| More than secondary | 0.0 | 49 | (31.8) | (29.1) | (0.0) | (0.0) | (70.9) | (23.5) | (47.4) | 47 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 2.3 | 125 | 31.4 | 28.4 | 2.3 | 2.3 | 69.3 | 19.8 | 49.6 | 113 |
| Second | 2.0 | 119 | 33.4 | 12.3 | 1.5 | 1.5 | 86.2 | 21.0 | 65.2 | 109 |
| Middle | 0.0 | 128 | 32.1 | 18.0 | 0.0 | 0.0 | 82.0 | 30.3 | 51.7 | 109 |
| Fourth | 1.7 | 116 | 33.4 | 17.3 | 0.0 | 0.0 | 82.7 | 19.7 | 63.0 | 105 |
| Highest | 0.8 | 118 | 31.5 | 19.5 | 0.0 | 0.0 | 80.5 | 29.4 | 51.1 | 110 |
| Total | 1.3 | 606 | 32.3 | 19.2 | 0.8 | 0.8 | 80.1 | 24.1 | 56.0 | 546 |

Notes: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases. BMI is expressed as the ratio of weight in kilograms to the square of height in meters $\left(\mathrm{kg} / \mathrm{m}^{2}\right)$.
${ }^{1}$ Excludes pregnant women and women with a birth in the preceding two months.

## Height

Overall, only 1.3 percent of women were of short stature, observed mostly in women living in the least and second wealthy households ( 2.3 percent and 2.0 percent, respectively) and among women in their 20s (1.9 percent) and forties (1.9 percent).

## Body mass index

The results show that the mean BMI for Nauruan women aged 15-49 at the time of the survey was $32.3 \mathrm{~kg} / \mathrm{m}^{2}$, which is classified as obese ( $>30 \mathrm{~kg} / \mathrm{m}^{2}$ ), indicating that overall, Nauruan women aged $15-49$ were obese ( $>30 \mathrm{~kg} / \mathrm{m} 2$ ). The mean BMI for women was slightly higher than the mean BMI for men $\left(31.6 \mathrm{~kg} / \mathrm{m}^{2}\right)$.

The total prevalence of women identified as overweight or obese was 80.1 percent, with 24.1 percent being overweight and 56 percent being obese. The mean BMI among women aged $15-64$ in the 2004 STEPwise approach to surveillance survey (STEPS) was $32.5 \mathrm{~kg} / \mathrm{m}^{2}$.

BMI was observed to increase with age, from a mean BMI of 26.3 percent among women aged $15-19$ to 35.7 percent among women aged 45-49. Figure 3 shows that the proportion of women classified as obese increases with age, similar to the trend observed in adult men. The total prevalence of women classified as overweight or obese increased from 50.9 percent ( 34.4 percent overweight, 16.5 percent obese) among those aged $15-19$ to 92 percent ( 16.7 percent overweight, 75.3 percent obese) among those aged $40-49$. In contrast, the overweight category increased with the younger age groups and then declined as women reached older ages.

Figure 11.3: Percentage of Nauruan women by BMI and age


The total prevalence of women who were overweight or obese increased from 69.3 percent (19.8 percent overweight, 49.6 percent obese) among women who lived in the least wealthy households to 80.5 percent ( 29.4 percent overweight, 51.1 percent obese) among those who live in the wealthiest households.

Less than 50 percent of women were classified as having a BMI within the normal range $\mathrm{kg} / \mathrm{m}^{2}$ : ranging from 47.2 percent for women in the 15-29 age group, to just 8 percent for women in the 40-49 age group. Less than 1 percent of women were classified as mildly thin (identified as $17-18.5 \mathrm{~kg} / \mathrm{m}^{2}$ ), an indicator of mild CED.

### 11.3 NUTRITIONAL STATUS OF CHILDREN

The nutritional status of children is an important indicator of children's health and well-being. Poor nutrition in children under age 5 years is associated with an increased risk of morbidity and mortality. Usually there is a catch-up growth in older childhood or adolescence in children who experience growth retardation under age 3 years.
Poor nutrition in children is related to maternal malnutrition, low birth weight, inadequate breastfeeding and weaning diets, and high levels of infectious disease morbidity. Improvements in the nutritional status of children will reduce severity of common childhood illnesses and reduce the risk of death. Malnutrition in children leads to short stature in adults which is associated with reduced productivity and increased obstetrics risks for women.

In the 2007 NDHS, the nutritional status of children was assessed using weight and height measurements that were taken by standardised methods. Weight was measured using a digital scale that was accurate to the nearest 100 g , and height was measured using a portable measuring
board that was accurate to the nearest 1 mm . Children under age 2 years were measured lying down, and older children were measured standing upright.

Three anthropometric measurements were calculated from the weight and height measurements.

1. Height-for-age reflects achieved linear growth and deficits, which indicate long-term cumulative inadequate nutrition and poor health. Low height-for-age, or stunting, is frequently associated with poor overall economic conditions, which result in long-term, inadequate calorie intake and/or repeated exposure to illness, and other adverse conditions. Height-for-age is the recommended indicator that best reflects failure of a child to reach their linear growth potential. This indicator changes slowly over time and does not vary by season.
2. Weight-for-height reflects body weight relative to height. Low weight-for-height, or wasting, indicates a loss of weight or an insufficient weight gain relative to height. Wasting is generally associated with recent or ongoing severe weight loss. Weight loss in children resulting in low weight-for-height is usually due to recent illness and/or insufficient calorie intake (caused by food shortage, weaning practices or other events). This indicator can vary by season depending on the availability of food and the incidence of acute morbidity in the child population.
3. Weight-for-age is an indicator of body mass relative to chronological age. Weight-forage is primarily a composite of weight-for-height and height-for-age, and fails to distinguish tall, thin children from short, well-proportioned children. Because it is influenced by both the height and the weight of the child, it is more difficult to interpret. Low weight-for-age, or underweight, can be used as a general indicator of child health and mortality risk.
These indices were calculated by comparing the weight and height measurements, or combinations of these measurements, with WHO international growth references. These references are based on the observation that well-nourished child populations from different countries and ethnic groups have similar growth potential at least to 7 years of age. Environmental factors such as infectious diseases, inadequate and unsafe diet, poverty and socioeconomic status, rather than genetic predisposition, account for any deviations from the references. ${ }^{8}$

The anthropometric indicators of children's nutritional status used in this survey are expressed as standard deviations (SD), the deviations of the individual anthropometric measurements from the median value of the WHO growth references for that child's height or age, divided by the SD for the reference population. Children who were more than 2 SD below the reference median of the international growth reference for their age or height ( $<2 \mathrm{SD}$ ) were considered undernourished, and those more than $<3$ SD below were graded as severely undernourished.

Table 11.3 presents the overall nutritional status of Nauruan children less than age 5 years. The overall prevalence of stunting or low height-for-age (an indicator of chronic malnutrition) was significantly high ( 24.0 percent), compared with wasting ( 1.0 percent), or low weight-for-height (an indicator of a recent episode of illness or inadequate calorie intake), and 4.8 percent for underweight or low weight-for-age (a general indicator of children's health).

[^7]Table 11.3: Nutritional status of children
Percentage of children under age 5 years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-forage, by background characteristics, Nauru 2007

| Background characteristic | Height-for-age |  |  | Weight-for-height |  |  |  | Weight-for-age |  |  |  | Number of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentag e below -3 SD | Percentage below-2 SD ${ }^{1}$ | Mean Zscore (SD) | Percentage below-3 SD | Percentage below -2 SD ${ }^{1}$ | Percentage above +2 SD | $\begin{aligned} & \text { Mean Z- } \\ & \text { score (SD) } \end{aligned}$ | Percentage below-3 SD | Percentage below - 2 SD | Percentage above +2 SD | Mean Zscore (SD) |  |
| Age in months |  |  |  |  |  |  |  |  |  |  |  |  |
| <6 | (0.0) | (3.4) | 0.4 | (0.0) | (0.0) | (4.2) | 0.3 | (0.0) | (0.0) | (0.0) | 0.1 | 24 |
| 6-8 | * | * | 1.1 | * | * | * | 0.2 | * | * | * | 0.6 | 15 |
| 9-11 | * | * | 0.6 | * | * | * | 0.1 | * | * | * | 0.3 | 13 |
| 12-17 | (11.7) | (17.3) | 1.2 | (0.0) | (2.8) | (10.2) | 0.4 | (0.0) | (5.6) | (1.7) | 0.3 | 27 |
| 18-23 | (0.0) | (15.4) | 0.5 | (0.0) | (6.0) | (9.3) | 0.1 | (0.0) | (1.7) | (9.3) | 0.1 | 23 |
| 24-35 | 10.3 | 31.6 | 1.5 | 1.2 | 1.2 | 0.0 | 0.3 | 1.2 | 3.1 | 1.9 | 0.6 | 51 |
| 36-47 | 11.4 | 28.4 | 1.5 | 0.0 | 0.0 | 2.6 | 0.3 | 0.0 | 7.1 | 0.0 | 0.6 | 63 |
| 48-59 | 7.2 | 26.7 | 1.5 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 2.5 | 0.0 | 0.8 | 51 |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 9.3 | 22.1 | 1.1 | 0.5 | 2.2 | 4.6 | 0.2 | 1.8 | 6.9 | 2.2 | 0.5 | 126 |
| Female | 7.0 | 25.8 | 1.3 | 0.0 | 0.0 | 1.3 | 0.4 | 0.0 | 2.9 | 0.5 | 0.5 | 141 |
| Birth interval in months ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| First birth ${ }^{3}$ | 6.8 | 16.9 | 0.9 | 1.0 | 3.2 | 0.0 | 0.1 | 1.0 | 3.7 | 0.0 | 0.5 | 61 |
| <24 | 8.0 | 30.3 | 1.4 | 0.0 | 0.0 | 2.1 | 0.4 | 0.0 | 5.7 | 2.1 | 0.6 | 66 |
| 24-47 | 5.8 | 22.2 | 1.2 | 0.0 | 0.0 | 3.1 | 0.3 | 2.0 | 6.6 | 2.7 | 0.5 | 81 |
| 48+ | (11.5) | (24.5) | 1.2) | (0.0) | (2.5) | (3.3) | 0.3 | (0.0) | (5.0) | (0.0) | 0.4 | 30 |
| Mother's nutritional status |  |  |  |  |  |  |  |  |  |  |  |  |
| Normal (BMI 18.5-24.9) | (8.1) | (25.3) | 1.4 | (0.0) | (0.0) | (1.5) | 0.4 | (0.0) | (2.4) | (1.5) | 0.5 | 32 |
| Overwieght/obese (BMI >= 25) | 6.9 | 21.5 | 1.1 | 0.3 | 1.4 | 2.2 | 0.3 | 1.1 | 6.0 | 1.5 | 0.5 | 200 |
| Mother's education ${ }^{4}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than secondary | * | * | 0.9 | * | * | * | 0.0 | * | * | * | 0.5 | 3 |
| Secondary | 7.5 | 24.4 | 1.2 | 0.3 | 1.2 | 2.2 | 0.3 | 1.0 | 5.4 | 1.6 | 0.5 | 225 |
| More than secondary | * | * | 0.9 | * | * | * | 0.1 | * | * | * | 0.5 | 8 |

Table 11.3 (continued)

| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lowest | 18.8 | 52.2 | 2.0 | 0.0 | 0.0 | 2.0 | 0.3 | 3.4 | 6.7 | 0.0 | 1.0 | 49 |
| Second | 5.4 | 18.7 | 1.0 | 1.1 | 3.6 | 3.0 | 0.2 | 1.1 | 1.8 | 0.0 | 0.4 | 55 |
| Middle | 9.4 | 21.2 | 1.1 | 0.0 | 1.4 | 4.2 | 0.1 | 0.0 | 6.8 | 4.1 | 0.5 | 56 |
| Fourth | 4.1 | 11.9 | 0.9 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 6.8 | 0.0 | 0.3 | 47 |
| Highest | 3.8 | 18.0 | 1.1 | 0.0 | 0.0 | 4.2 | 0.5 | 0.0 | 2.5 | 2.1 | 0.3 | 60 |
| Total | 8.1 | 24.0 | 1.2 | 0.2 | 1.0 | 2.8 | 0.3 | 0.8 | 4.8 | 1.3 | 0.5 | 267 |

Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation (SD) units from the median of the WHO Child Growth Standards. Total includes six children with missing information on size at birth and six women with missing nutritional status information who are not shown separately.
Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
${ }^{1}$ Includes children who are below -3 standard deviations (SD) from the International Reference Population median,
${ }^{2}$ and excludes children whose mothers were not interviewed.
${ }^{3}$ First-born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval
${ }^{4}$ Includes children whose mothers are deceased.

## Stunting in children

Low height-for-age, or stunted growth, reflects a failure to reach linear growth potential as a result of suboptimal health and/or nutritional conditions. On a population level, high level of stunting is associated with poor socioeconomic conditions and a high risk of frequent and early exposure to adverse conditions such as illness and/or inappropriate feeding practices. Childhood stunting leads to significant reduction in adult size. One of the main consequences of small adult size is reduced work capacity, which in turn has an impact on economic productivity. Maternal size is associated with specific reproductive outcomes. Short stature in women places an increased risk of delivery complications because of the pelvic size is small. Small maternal size also increases the risk of giving birth to low weight babies who themselves have an increased risk of becoming small sized adults.

Table 11.3 presents the prevalence of low height-for-age or stunting in children less than 5 years of age by gender, birth interval and maternal characteristics.

Overall, the mean Z-score for height-for-age was 1.2 , which was above zero, the expected value of the reference distribution. This shows that on average, Nauruan children under 5 were achieving their linear growth potential when compared to the WHO international growth references.

Overall, 24 percent of children under 5 were stunted (identified as $<-2$ SD below the mean) and 8.5 percent were severely stunted (identified as $<-3$ SD below the mean). Figure 4 shows that stunting appears to peak among children aged 3 . The prevalence of stunting was slightly higher among girls ( 25.8 percent) than among boys ( 22.1 percent), whereas, slightly more boys ( 9.3 percent) were severely stunted (identified as -3 SD below the mean) than girls ( 7 percent). Children who were born less than 24 months apart were more likely to be stunted ( 30.3 percent) than those who were born 24-47 months apart ( 22.2 percent) or first-born children ( 16.9 percent). Children in the least wealthy households were more likely to be severely stunted (18.8 percent) than children in the wealthiest households ( 3.8 percent).

Figure 11.4: Prevalence of stunting among children under age 5 years, Nauru 2007


The relationship between maternal nutritional status and stunting was based on limited data from mothers who were classified as overweight or obese. The mean Z-score (SD) for these mothers was 1.1. The results show that 21.5 percent of children born to these mothers were identified as stunted (below -2SD) and less than 10 percent were severely stunted ( 6.9 percent).

Likewise, the relationship between stunting and educational level of mother is unclear because most of the mothers surveyed had secondary school as the highest education achievement.

## Wasting in children

Low weight-for-height or wasting or thinness indicates, in most cases, a recent or severe weight loss that is often associated with acute starvation and/or a severe illness. Wasting may also be the result of chronic unfavourable living conditions.

Table 11.3 presents the prevalence of wasting among children less than age 5 years. Overall, the prevalence of wasting in children was very low, with 1.0 percent below -2SD and less than 1.0 percent as severely wasted (at 0.2 percent below -3 SD ). The mean Z-score for weight for height was 0.3 , which was slightly above zero, the expected reference value that would indicate that on average, Nauruan children were achieving their growth potential.

Boys were more likely to be wasted (with 2.2 percent below -2SD) than girls (with 0.0 percent below-2SD).

There was no relationship between educational level, maternal nutritional status and household wealth, and wasting in children. An inadequate number of survey participants contributed to the limitation of available data.

High weight-for-height can be considered an adequate indicator of obesity because the majority of individuals with high weight-for-height tend to be obese. The overall prevalence of childhood obesity ( $>2 \mathrm{SD}$ ) was 2.8 percent. Boys were more likely to be obese (with 4.6 percent above +2 SD ) than girls (with 1.3 percent above +2 SD ).

## Underweight in children

Table 11.3 presents the prevalence of low weight-for-age or underweight children.
Overall, 4.8 percent of children were underweight (identified as a percentage below -2SD from the mean Z-score) and 1.3 percent were well nourished (identified as +2 SD above the mean Z-score). The overall mean Z-score for weight-for-age was 0.5 , which is slightly above 0 - the expected reference value. These results seemed to indicate that on average, Nauruan children were achieving their expected body weight relative to their chronological age.

Boys were more likely to be underweight (with 6.9 percent below -2 SD ) than girls ( 2.9 percent below-2 SD).

### 11.4 INFANT AND YOUNG CHILD FEEDING PRACTICES

The survival, growth, development, health and nutritional status of children are closely linked to infant and young child feeding practices. The nutritional status of the mother during pregnancy and lactation also has as important impact on the health and nutritional status of the child. Exclusive breastfeeding is the recommended and most appropriate way to feed new-born babies until they are 6 months old. Breast milk provides optimal nutrition for the growing child by reducing exposure to environmental pathogens as well as offering protection from environmental contamination such as poor water quality.

WHO and UNICEF recommend that solid food should be given only after 6 months of age and that breastfeeding should continue into the second year of life. Prolonged breastfeeding also increases duration of postpartum infertility, thus breastfeeding acts as a natural contraceptive, impacting on the mother's fertility health and length of birth intervals.

### 11.4.1 Initial breastfeeding

Both the mother and child benefit from early initiation of breastfeeding. The suckling actions of the baby on the breast release the hormone oxytocin, which increases uterine contractions and improves the expulsion of the placenta, and reduces the risk of haemorrhage following delivery. The infant benefits from the first breast milk called colostrum, which is rich in nutrients and immunoglobulin that help protect against infections.

Table 11.4: Initial breastfeeding
Percentage of children born in the five years preceding the survey who were ever breastfed, and for the last children born in the five years preceding the survey ever breastfed, the percentage who started breastfeeding within one hour and within one day of birth, and the percentage who received a prelacteal feed, by background characteristics, Nauru 2007

| Background characteristic | Breastfeeding among children born in last five years |  | Among last-born children ever breastfed |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage ever breastfed | Number of children born in last five years | Percentage who started breastfeeding within 1 hour of birth | Percentage who started breastfeeding within 1 day of birth ${ }^{1}$ | Percentage who received a pre-lacteal feed ${ }^{2}$ | Number of last-born children ever breastfed |
| Sex |  |  |  |  |  |  |
| Male | 95.1 | 159 | 75.2 | 86.3 | 14.5 | 101 |
| Female | 94.2 | 163 | 77.7 | 94.1 | 16.8 | 93 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 91.7 | 61 | (84.0) | (87.2) | (15.0) | 34 |
| Second | 97.2 | 69 | (73.3) | (89.1) | (6.2) | 41 |
| Middle | 96.7 | 69 | (74.6) | (91.8) | (10.6) | 46 |
| Fourth | 88.7 | 60 | (70.0) | (89.8) | (25.6) | 34 |
| Highest | 98.4 | 63 | (80.6) | (91.7) | (23.0) | 39 |
| Total | 94.7 | 322 | 76.4 | 90.1 | 15.6 | 194 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
Table is based on births in the last five years whether the children are living or dead at the time of interview.
Total includes one child with missing information on place of delivery who is not shown separately.
${ }^{1}$ Includes children who started breastfeeding within one hour of birth.
${ }^{2}$ Children given something other than breast milk during the first three days of life.

Table 11.4 presents the prevalence of children born in the five years preceding the survey who were ever breastfed and the time of initiation of breastfeeding. Overall, among children born in the five years prior to the survey, the prevalence of those who were ever breastfed was 94.7 percent with 76.4 percent of these starting breastfeeding within one hour of birth. About nine out of ten of these children ( 90.1 percent) were reported to have started breastfeeding within one day of birth. An overall 15.6 percent of children were also given something other than breast milk during the first three days of life.

Girls were more likely to be given breast milk earlier ( 77.7 percent within one hour of birth, increasing to 94.1 percent within one day of birth) than boys ( 75.2 percent within one hour of birth, increasing to 86.3 percent within one day of birth). This could be related to the small sample size for last-born children ever breastfed.

Children born to mothers in wealthy households were more likely to be breastfed ( 98.4 percent) than those born in poorer households ( 91.7 percent).

### 11.4.2 Age of breastfeeding

One of the indicators of breastfeeding children is the percentage of children less than age 6 months who were exclusively breastfed. Due to the very low numbers of children in the survey, it was difficult to determine with a fair degree of certainty the prevalence of children who met WHO and UNICEF recommendations for exclusive breastfeeding for six months.

Table 11.5 presents the prevalence of children less than 3 years old who are currently breastfed and/or receiving complementary foods at the time of the survey. Even with the limited number of children in the survey, the results show that 2.8 percent of the total 28 children surveyed from birth to five months of age were not breastfed at all. About 67.2 percent were exclusively breastfed, with 3.8 percent consuming plain water, 11.9 percent consuming other liquids, 8.6 percent consuming other milk, and 5.7 percent consuming complementary foods in addition to breast milk.

It was unclear when the introduction of complementary foods took place. The percentage of children consuming complementary foods as well as breast milk increased from 5.7 percent among the $0-5$ months age group, to 67.7 percent in the $12-17$ month age group. About seven in ten children were exclusively breastfed, although this amount dropped dramatically to less than 1.0 percent.

Figure 11.5 shows the relationship between changes in exclusive breastfeeding prevalence corresponding to rapid increase in the introduction of complementary foods.

Figure 11.5: Breastfeeding status by age


The percentage of all children who were breastfed at the time of the survey was 97.2 percent for the $0-5$ month age group, dropping to 53 percent for the $24-35$ month age group.

The percentage of children using a bottle with a nibble at the time of the survey was 18.7 percent for the $0-5$ month age group, increasing to 37.4 percent for the $12-17$ month age group before tapering down to 21.1 percent for the 24-35 month age group.

Table 11.5: Breastfeeding status by age
Percent distribution of youngest children under age 3 years who are living with their mother by breastfeeding status and the percentage currently breastfeeding; and the percentage of all children under age 3 years using a bottle with a nipple, according to age in months, Nauru 2007

| Age in months | Percent distribution of youngest children under three living with their mother by breastfeeding status |  |  |  |  |  |  | Percentage currently breastfeeding | Number of youngest child under three years | Percentage using a bottle with a nipple ${ }^{1}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Breastfeeding and consuming: |  |  |  |  |  |  |  |  |  |  |
|  | Not breastfeeding | Exclusively breastfed | Plain water only | Nonmilk liquids/ juice | Other milk | Complementary foods | Total |  |  |  |  |
| 0-5 | (2.8) | (67.2) | (3.8) | (11.9) | (8.6) | (5.7) | 100.0 | (97.2) | 27 | (18.7) | 28 |
| 6-8 | * | * | * | * | * | * | 100.0 | * | 21 | * | 23 |
| 9-11 | * | * | * | * | * | * | 100.0 | * | 15 | * | 16 |
| 12-17 | (32.3) | (0.0) | (0.0) | (0.0) | (0.0) | (67.7) | 100.0 | (67.7) | 24 | (37.4) | 26 |
| 18-23 | (35.1) | (0.0) | (0.0) | (0.0) | (0.0) | (64.9) | 100.0 | (64.9) | 17 | (35.3) | 26 |
| 24-35 | 47.0 | 0.0 | 0.0 | 0.0 | 0.0 | 53.0 | 100.0 | 53.0 | 40 | 21.1 | 66 |
| 12-23 | 33.5 | 0.0 | 0.0 | 0.0 | 0.0 | 66.5 | 100.0 | 66.5 | 41 | 36.4 | 51 |
| 6-9 | (31.1) | (4.4) | (0.0) | (0.0) | (0.0) | (64.5) | 100.0 | (68.9) | 31 | (55.0) | 32 |
| 20-23 | * | * | * | * | * | * | 100.0 | * | 10 | * | 17 |

Notes: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
Breastfeeding status refers to a 24 -hour period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, non-milk liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages should total 100 percent. Thus, children who receive breast milk and non-milk liquids and who do not receive complementary foods are classified in the non-milk liquid category even though they may also get plain water. Any children who get complementary foods are classified in that category as long as they are breastfeeding as well.
${ }^{1}$ Based on all children under age 3 years

### 11.4.3 Duration and frequency of breastfeeding

Table 11.6 presents the median duration of any breastfeeding, exclusive breastfeeding and predominantly breastfeeding among children born in the three years preceding the survey, and the mean number of feeds per day/night by background characteristics.

WHO and UNICEF recommended exclusive breastfeeding for the first six months and continued breastfeeding for at least 24 months. The mean duration of any breastfeeding among Nauruan children born in the three years preceding the survey was 18.6 months. The mean duration for exclusive breastfeeding was 3.3 months and 4.0 months for predominantly breastfeeding. Clearly, Nauruan children did not meet WHO and UNICEF recommendations for exclusive breastfeeding for six months and continued breastfeeding into the second year of life with the introduction of complementary foods.

Table 11.6: Median duration and frequency of breastfeeding
Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, percentage of breastfeeding children under six months living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and mean number of feeds (day/night), by background characteristics, Nauru 2007

| Background characteristic | Median duration (months) of breastfeeding among children born in the last three years ${ }^{1}$ |  |  | Frequency of breastfeeding among children under 6 months ${ }^{2}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Any breastfeeding | Exclusive breastfeeding | Predominant breastfeeding 3 | Percentage breastfed 6+ times in last 24 hours | Mean number of day feeds | Mean number of night feeds | Number of children |
| Sex |  |  |  |  |  |  |  |
| Male | 14.6 | 3.1 | 3.2 | 100.0 | 5.7 | 4.3 | 9 |
| Female | 21.8 | 3.7 | 4.9 | 100.0 | 5.8 | 4.8 | 15 |
| Mother's education |  |  |  |  |  |  |  |
| Less than secondary | 10.5 | 5.5 | 5.5 | - | - | - | 0 |
| Secondary | 19.2 | 3.5 | 4.2 | 100.0 | 5.8 | 4.7 | 23 |
| More than secondary | 5.9 | 1.6 | 1.6 | 100.0 | 3.0 | 3.0 | 1 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 10.2 | 3.5 | 3.5 | 100.0 | 3.5 | 7.2 | 2 |
| Second | 8.6 | 5.7 | 5.7 | 100.0 | 6.0 | 4.6 | 10 |
| Middle | 21.0 | 2.4 | 3.6 | 100.0 | 6.5 | 2.2 | 2 |
| Fourth | 8.6 | 0.6 | 4.4 | 100.0 | 6.9 | 5.2 | 6 |
| Highest | 6.0 | 1.9 | 2.3 | 100.0 | 4.0 | 3.8 | 4 |
| Total | 18.6 | 3.3 | 4.0 | 100.0 | 5.7 | 4.6 | 23 |
| Mean for all children | 19.3 | 4.1 | 5.0 | - | - | - | - |

Note: Median and mean durations are based on current status. Includes children living and deceased at the time of the survey.
na = not applicable
${ }^{1}$ It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding
${ }^{2}$ Excludes children without a valid answer on the number of times breastfed.
${ }^{3}$ Either exclusively breastfed or received breast milk and plain water, and/or non-milk liquids only.

It is also recommended that babies be breastfed or fed on demand approximately 8-12 times every 24 hours. Overall, the mean number of feeds presented in Table 11.6 was 10.3 times every 24 hours.

The median duration of breastfeeding among children born in Nauru in the last three years was higher for female children, with mothers having less or no education and among children living in the middle wealth households.

### 11.4.4 Types of complementary food consumed by children

UNICEF and WHO recommend introducing solid food to infants from the age of 6 months because the nutritional requirements of the child will not be adequately met by breast milk alone. In the transition to eating the family diet, children from the age of 6 months should be fed small quantities of solid and semi-solid foods (complementary foods) throughout the day. The risk of malnutrition during this transition period is very high due to improper and unsafe food handling practices.

Mothers whose youngest child is under 3 years of age were asked about the types of foods and liquids consumed by the child in the day or night preceding the interview. The results are presented in Table 11.7.

## Liquids

Overall 13.6 percent of breastfeeding children consumed infant formula, 44.2 percent consumed other milk, and 61.3 percent consumed other liquids. Among breastfed children aged $6-23$ months, 17.5 percent were fed infant formula, 57.7 percent consumed other milk, and 67.0 percent consumed other liquids.

Non-breastfed children were more likely to consume all other types of liquids and milks than breastfed children. The most commonly consumed liquid was 'other liquids' that do not include water.

## Solids or semi-solid foods

It is not clear from the survey when the introduction of semi-solid and solid foods took place as the data are not stratified by age or gender. Foods made from grains (energy rich foods that include rice) were consumed by 93.6 percent of breastfed children aged 6-23 months, by 71.5 percent of all breastfed children, and 96.6 percent of all non-breastfed children.

Protein-rich foods such as meat, fish, poultry and eggs were the second most commonly consumed solid or semi-solid foods by 79.6 percent of children aged $6-23$ months, by 60.7 percent of all children and 87.7 percent of all non-breastfed children. Vitamin A-rich foods such as pawpaw and pumpkin were next, consumed by 68 percent of children aged $6-23$ months, by 52.4 percent of all children, and by 70.1 percent of all non-breastfed children. These foods are very soft when cooked and thus are easily mashed to the right consistency.

Other commonly consumed foods include those made from other fruits and vegetables and fortified baby foods.

The percentage of non-breastfed children consuming any solid or semi-solids foods was slightly higher ( 98.3 percent) than those who were breastfed ( 73.5 percent).

A high percentage of non-breastfed children consumed high fat foods ( 74.7 percent) as well as sugary foods ( 49.4 percent), while 48.9 percent of all breastfed children consumed high fat foods and 33.1 percent consumed sugary foods. Over consumption of high fat and high sugar foods can contribute to overweight and obesity.

The best way to determine the nutrient adequacy of the diet is to undertake a comprehensive nutrition survey, using standard tools such as a comprehensive 24 -hour diet recall tool. Even though the information collected in this survey was useful in estimating the nutritional status of children, additional research is needed to confirm these results.
Table 11.7: Foods and liquids consumed by children in the day or night preceding the interview
Percentage of youngest children under age 3 years who are living with their mother, by food type consumed in the day or night preceding the interview, according to breastfeeding status and age, Nauru 2007

| Age in months | Liquids |  |  | Solid or semi-solid foods |  |  |  |  |  |  |  | Any solid or semisolid food | Food made with oil, fat and butter | Sugary foods | Number of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Infant formula | Other milk | Other liquids ${ }^{2}$ | Fortified baby foods | Food made from grains ${ }^{3}$ | Fruits and vegetables rich in vitamin A | Other fruits and vegetables | Food made from roots and tubers | Food made from legumes and nuts |  | Cheese, yogurt, other milk product |  |  |  |  |
| BREASTFED CHILDREN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6-23 | 17.5 | 57.7 | 67.7 | 28.3 | 93.6 | 68.0 | 37.4 | 24.1 | 9.2 | 79.6 | 19.1 | 97.4 | 58.7 | 46.3 | 52 |
| Total | 13.6 | 44.2 | 61.3 | 17.4 | 71.5 | 52.4 | 28.9 | 18.9 | 10.3 | 60.7 | 15.4 | 73.5 | 48.9 | 33.1 | 100 |
| NON-BREASTFED CHILDREN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | (25.3) | (76.7) | (90.8) | (23.7) | (96.6) | (70.1) | (36.1) | (18.3) | (6.2) | (87.7) | (12.9) | (98.3) | (74.7) | (49.4) | 44 |

Notes: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
Breastreeding status and food consumed refer to a 24 -hour" period (yesterday and last night).
1Other mik includes fresh, tinned and powdered cow or other animal milk.
${ }^{2}$ I Includes fortified baby food.
${ }^{4}$ Includes pumpkin, red or yellow yams or squash, carrots, sweet potatoes, dark green leafy vegetables, mangoes, papayas, and other locally grown fruits and vegetables that are rich in vitamin A.

### 11.4.5 Feeding practices according to the IYCF recommendations

The WHO Global Strategy on Infant and Young Child Feeding (IYCF) ${ }^{9}$ recommends the timely introduction of solid and/or semi-solid foods from age 6 months, increasing the amount and variety of foods and frequency of feeding as the child gets older, while maintaining frequent breastfeeding as best practice. These guidelines have been established by WHO.

Mothers with children aged 6-23 months living with them were asked about the kinds of foods and drinks they fed their children and how often children ate the food in the previous day or night. The list of foods in the questionnaire was categorised into seven groups. The minimum standards were defined with respect to food diversity (i.e. the number of food groups consumed) and feeding frequency (i.e. the number of times the child was fed), as well the consumption of breast milk or other milks or milk products. Breastfed children aged 6-8 months were considered to have met the minimum nutritional requirements if they consumed foods from at least three food groups ${ }^{10}$ as well as breast milk at least twice a day and at least three times per day for children aged 9-23 months. Non-breastfed children were considered to have met the minimum nutritional requirements if they consumed milk or milk products plus foods from at least four food groups (including milk products), and were fed at least four times per day.

Table 11.8 shows the percentage of children who were fed according to IYCF practices.
Among breastfed children aged 6-23 months, the total percentage who met the minimum IYCF requirements was 45.8 percent, compared with 20.7 percent of non-breastfed children and 37.7 percent of all children. Among non-breastfed children, 81.1 percent met the minimum requirements of consuming foods from $4+$ food groups, although they may not be have been eating enough of these foods because only 24.6 percent of them were eating them $4+$ times or more. A similar pattern was observed among all children; that is, although 80.8 percent were eating foods from $3+$ or $4+$ food groups, only 43.2 percent were meeting the minimum frequency of consumption of these foods. So all children appear to be meeting the requirements in terms of variety but may be in not enough quantities to ensure adequate nutrition for optimum health.

[^8]Table 11.8: Infant and young child feeding (IYCF) practices
Percentage of youngest children aged 6-23 months living with their mother who are fed according to three IYCF feeding practices based on number of food groups and times they are fed during the day or night preceding the survey by breastfeeding status and background characteristics, Nauru 2007

| Background characteristic | Among breastfed children 6-23 months, percentage fed: |  |  |  | Among non-breastfed children 6-23 months, percentage fed: |  |  |  |  | Among all children 6-23 months, percentage fed: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $3+$ food groups ${ }^{1}$ | Minimum times or more ${ }^{2}$ | Both 3+ food groups and minimum times or more | $\begin{gathered} \text { Number } \\ \text { of } \\ \text { breastfed } \\ \text { children } \\ 5-23 \\ \text { months } \end{gathered}$ | $\begin{aligned} & \text { Milk or } \\ & \text { milk } \\ & \text { products }^{3} \end{aligned}$ | 4+ food groups | 4+ times or more | With 3 IYCF practices ${ }^{4}$ | Number of nonbreastfed children 6-23 months | Breastmilk or milk products ${ }^{3}$ | $3+$ or 4+ food groups ${ }^{5}$ | Minimum times or more ${ }^{6}$ | With all 3 IYCF practices | Number of all children 6-23 months |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | (79.0) | (45.1) | (37.7) | 28 | * | * | * | * | 16 | (94.8) | (85.1) | (35.9) | (31.3) | 45 |
| Female | (82.6) | (60.0) | (55.2) | 24 | * | * | * | * | 8 | (97.0) | (74.8) | (53.2) | (46.6) | 32 |
| Total | 80.6 | 52.0 | 45.8 | 52 | 86.6 | 81.1 | 24.6 | 20.7 | 25 | 95.7 | 80.8 | 43.2 | 37.7 | 77 | ${ }^{1}$ Food groups: a) infant formula, milk other than breast milk, cheese, yogurt or other milk products; b) foods made from grains, roots and tubers, includi fruits and vegetables; e) eggs; f) meat, poultry, fish and shellfish (and organ meats); g) legumes and nuts; h) foods made with oil, fat or butter.

${ }^{2}$ At least twice a day for breastfed infants aged 6-8 months and at least three times a day for breastfed children aged 9-23 months.
${ }^{3}$ Includes commercial infant formula, fresh, tinned and powdered animal milk, and cheese, yogurt and other milk products.
${ }^{4}$ Non-breastfed children aged 6-23 months are considered to be fed with a minimum standard of three IYCF practices if they receive other milk or milk products and are fed at least the minimum number of times per day with at least the minimum number of food
${ }_{5} 3+$ food groups for breastfed children and $4+$ food groups for non-breastfed children.
${ }^{6}$ Fed solid or semi-solid food at least twice a day for infants aged 6-8 months, $3+$ times for other breastfed children, and $4+$ times for non-breastfed children.

### 11.5 FOOD CONSUMPTION PATTERNS OF WOMEN

The nutritional status of the mother during pregnancy and lactation has an important impact on the health and nutritional status of her child.

Table 11.9 presents the types of food consumed by mothers with young children in the day or night preceding the interview by background characteristics.

Overall, the most commonly consumed liquids mothers consumed were tea and coffee ( 86.7 percent), followed by milk ( 67 percent) and other liquids ( 66 percent).

The most commonly consumed solid or semi-solid food items by all mothers were foods made from grains ( 98.1 percent), followed by meat/fish/seafood/poultry/eggs ( 78.5 percent) and vitamin A-rich such as fruits and vegetables ( 76.9 percent). The diet of mothers consisted mostly of rice and fish.

The results showed that 86 percent of women were also consuming foods high in fat, and 55.8 percent were consuming high sugar foods. This has contributed to the high prevalence of obesity as shown in Table 11.1 Less than 50 percent of women were consuming other fruits and vegetables. The diet may be lacking in essential nutrients even though the energy content may be adequate. More research is needed to determine the nutritional status of women, especially of mothers.

Cheese and yoghurt and foods made from legumes (such as peas and dried beans) were the least consumed food groups.
Table 11.9: Foods consumed by mothers in the day or night preceding the interview
Among mothers aged 15-49 with a child under age 3 years living with them, the percentage who consumed specific types of foods in the day or night preceding the interview, by background characteristics, Nauru 2007

| Background characteristic | Liquids |  |  | Solid or semi-solid foods |  |  |  |  |  |  |  | Foods made with oil/ fat/ butter | Sugary foods | Number <br> of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Milk | Tea/ coffee | Other liquids | Foods made from grains | Foods made from roots/ tubers | Foods made from legumes | Meat/ fish/ shellfish/ poultry/ eggs | Cheesel yogurt | Vitamin A rich fruits/ vegetables ${ }^{1}$ | Other fruits/ vegetables | Other solid or semisolid food |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | * | * | * | * | * | * | * | * | * | * | * | * | * | 10 |
| 20-29 | 62.7 | 84.3 | 69.7 | 96.9 | 22.5 | 15.0 | 94.6 | 20.2 | 77.0 | 37.8 | 51.1 | 87.3 | 57.8 | 88 |
| 30-39 | (71.9) | (88.6) | (62.4) | (100.0) | (26.1) | (10.3) | (100.0) | (28.6) | (71.7) | (49.0) | (50.2) | (81.3) | (49.3) | 35 |
| 40-49 | * | * | * | * | * | * | * | * | * | * | * | * | * | 11 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | * | * | * | * |  | * | * | * | * | * | * | * | * | 26 |
| Second | (63.9) | (85.0) | (65.9) | (97.4) | (26.2) | (19.4) | (95.2) | (23.8) | (79.6) | (39.2) | (46.5) | (87.9) | (47.2) | 37 |
| Middle | (56.5) | (88.2) | (67.5) | (96.6) | (18.4) | (15.5) | (93.0) | (18.5) | (72.0) | (42.1) | (54.5) | (85.6) | (58.4) | 29 |
| Fourth | * | * | * | * | * | * | * | * | * | * | * | * | * | 21 |
| Highest | (72.6) | (89.2) | (64.3) | (97.5) | (17.1) | (5.8) | (100.0) | (14.5) | (78.6) | (50.2) | (45.1) | (84.3) | (61.5) | 31 |
| Total | 67.4 | 86.7 | 66.0 | 98.1 | 24.2 | 15.4 | 96.7 | 21.7 | 76.9 | 41.0 | 51.5 | 86.0 | 55.8 | 144 |

Notes: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.

Foods consumed in the last " 24 -hour" period (yesterday and last night).
Includes [list fruits and vegetables included in the questionnaire such a

### 11.6 MICRONUTRIENT INTAKES

### 11.6.1 Micronutrient intakes among children

Micronutrient deficiencies are a consequence of malnutrition. Malnutrition is a key indicator of child health, and contributes to child morbidity and mortality. The causes of malnutrition include not eating enough nutritious foods, poor feeding practices, parasitic infections, poor sanitation, and other socio-cultural factors that influence feeding practices. Vitamin and mineral deficiencies are also consequences of malnutrition. Vitamin A and iron status were the key micronutrients that were selected as indicators for this survey.

Vitamin A is an essential vitamin for keeping tissue cells in a healthy condition and protecting the body against infections, and is important for health eyes and eyesight. It has two forms. Retinol, which is readily absorbed by the body and found in breast milk, fatty fish, eggs, milk and milk products; and carotene, which is a provitamin because it must be converted into vitamin A by the liver before it can be used. Carotene is found in green leafy vegetables, red and yellow fruits such as papaya, pandanus and pumpkin.
Iron is key mineral essential for proper brain function. Low iron intake can also contribute to iron deficiency anaemia. Young children are at the highest risk for iron deficiency anaemia because they have very high requirements due to their rapid growth.

Mothers were asked whether they fed their children vitamin A-rich and iron-rich foods the day or night before the survey. They were also asked whether their children had received vitamin A or iron supplements in the six months before the survey. The results are presented in Table 11.10.

Overall, 90.6 percent of children were reported to have consumed foods rich in vitamin A in the last 24 hours during the survey. More than eight in ten children consumed foods rich in iron in the last 24 hours during the time of the survey. Non-breastfed children and children in the highest wealth households consumed more vitamin A-rich foods.

Uptake of supplements and de-worming programmes appear to be very low, which could be because these programmes are not considered a priority.

Micronutrient deficiency problems among young children less then 2 years of age is a serious concern that needs to be addressed. Some strategies for consideration may include dietary diversification through the promotion of locally grown foods, micronutrient supplementation, food fortification, and prevention and control of parasitic infections. It is unlikely that any one strategy will address this problem; an integrated multi-pronged approach is needed.

Table 11.10: Micronutrient intake among children
Among youngest children aged 6-35 months who were living with their mother, the percentage who consumed vitamin $A$-rich and iron-rich foods in the day or night preceding the survey, and among all children aged 6-59 months, the percentage who were given vitamin $A$ supplements in the six months preceding the survey, who were given iron supplements in the last seven days, and who were given de-worming medication in the six months preceding the survey, by background characteristics, Nauru 2007.

|  | Among youngest children aged 6-35 months <br> living with the mother |  |  | Among all children aged 6-59 months |
| :--- | :---: | :---: | :---: | :---: | :---: |

Notes: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
Information on vitamin A and iron supplements and de-worming medication is based on the mother's recall.
Total includes four children aged 6-35 months and 36 children aged 6-59 months with missing information on breastfeeding status who are not shown separately
na $=$ not applicable
${ }^{1}$ Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A, and red palm oil [if data are collected]
${ }^{2}$ Includes meat (including organ meat).
${ }^{3}$ De-worming for intestinal parasites is commonly done for helminthes and for schistosomiasis.

### 11.6.2 Micronutrient intakes of mothers

Table 11.11 presents the micronutrient intake patterns of mothers with young children.
Overall, a high percentage ( 98.8 percent) of mothers with a child under age 3 years were reported to have consumed vitamin A-rich foods, about 97 percent consumed iron-rich foods, and vitamin A supplements were provided to 7.2 percent of mothers postpartum as a matter of protocol. Given the very low percentage of women who reported to have suffered from night blindness during last
pregnancy, and the very high consumption of vitamin A-rich foods, it is unlikely that vitamin A deficiency is a problem. Further studies are required to adequately determine the extent of the problem. It could be that although the consumption of vitamin A-rich foods is high, other factors such as infections may be limiting the absorption of this vitamin.

### 11.7 ANAEMIA

Iron deficiency anaemia is a global public health problem and is the most common form of micronutrient deficiency in the world. Anaemia in developing countries is mainly due to the inadequate absorption of dietary iron, and the consequent iron deficiency leads to reduced production of haemoglobin and anaemia. In pregnant women, folate deficiency also plays a role in causing anaemia but to a lesser extent than iron deficiency. Iron deficiency anaemia is more common in young children and women of reproductive age, especially pregnant and breastfeeding mothers. These population subgroups are more susceptible to anaemia because of their increased iron needs due to growth, pregnancy and lactation. Women of reproductive age also have increased iron losses from menstrual blood flow.

The 2007 NDHS directly measured haemoglobin levels of all ever-married women aged 15-49 years and their children under age 5years. Hemocue instruments, which are portable haemoglobinometers, were used to measure the haemoglobin level of consenting survey participants in their homes. Those identified with severe anaemia were referred to their local health centre for treatment.
Table 11.11: Micronutrient intake among mothers
Among women aged 15-49 with a child under age 3 years living with her, the percentage of women who consumed vitamin A-rich and iron-rich foods in the 24 hours preceding the survey; among women aged 15-49 with a child born in the last five years, the percentage who received a vitamin A dose in the first two months after the birth of the last child; among mothers aged 15-49 who, during the pregnancy of the last child born in the five years prior to the survey, the percentage who suffered from night blindness, the percentage who took iron tablets or syrup for a specific number of days, and the percentage who took de-worming medication; and among women aged 15-49 with a child born in the last five years, who live in households that were tested for iodised salt, the percentage who live in households with adequately iodised salt, by background characteristics, Nauru 2007

| Background characteristic | Among women with a child under age 3 years living with her |  |  | Among women with a child born in the last five years |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Percentage who received vitamin A dose postpartum ${ }^{3}$ | Percen suffere blindne pregnancy | ge who night during f last birth | Number of days women took iron tablets or syrup during pregnancy of last birth |  |  |  |  | Percentage of women who took deworming medication during pregnancy of last birth ${ }^{5}$ | Number of women |
|  | Percentage consumed vitamin Arich foods ${ }^{1}$ | Percentage consumed iron-rich foods ${ }^{2}$ | Number of women |  | Reported | Adjusted ${ }^{4}$ | None | <60 | 60-89 | 90+ | Don't know/ missing |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | * | * | 10 | * | * | * | * | * | * | * | * | 0.0 | 13 |
| 20-29 | 98.0 | 94.6 | 88 | 9.5 | 8.5 | 5.7 | 57.3 | 19.8 | 0.6 | 2.3 | 20.0 | 3.1 | 120 |
| 30-39 | (100.0) | (100.0) | 35 | 4.1 | 16.9 | 4.8 | 67.2 | 5.7 | 1.3 | 1.3 | 24.5 | 4.2 | 61 |
| 40-49 | * | + | 11 | * | * | * | * | * | * | * | * | 0.0 | 12 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | * | * | 26 | (2.1) | (19.5) | (14.4) | (59.2) | (12.8) | (2.1) | (0.0) | (26.0) | (9.4) | 38 |
| Second | (95.2) | (95.2) | 37 | (8.4) | (5.5) | (3.6) | (63.1) | (16.7) | (0.0) | (7.9) | (12.3) | (2.3) | 42 |
| Middle | 100.0 | 93.0 | 29 | 7.5 | 15.7 | 8.2 | 57.7 | 14.1 | 1.6 | 0.0 | 26.7 | 0.0 | 48 |
| Fourth | * | * | 21 | 11.2 | 5.8 | 0.0 | 56.6 | 19.3 | 0.0 | 4.8 | 19.3 | 2.1 | 37 |
| Highest | 100.0 | 100.0 | 31 | 6.4 | 13.9 | 4.9 | 69.4 | 10.8 | 0.0 | 0.0 | 19.7 | 2.4 | 40 |
| Total | 98.8 | 96.7 | 144 | 7.2 | 12.1 | 6.2 | 61.2 | 14.7 | 0.7 | 2.5 | 20.9 | 3.1 | 205 |

Notes: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A, and red palm oil [if data are collected]. ${ }^{2}$ Includes meat (and organ meat), fish, poultry and eggs.
Women who reported night blindness but did not report difficulty with vision during the day.
${ }^{5}$ De-worming for intestinal parasites is commonly done for helminthes and for schistosomiasis.

### 11.7.1 Prevalence of anaemia in children

Iron anaemia impairs mental capacity, motor development and behaviours of children. Iron deficiency predisposes people to diseases through reduced immune functions. The apathy associated with anaemia in young children adversely affects their cognitive and social development. Children born to mothers who are iron deficient have reduced iron stores that may not be corrected by breastfeeding leading to early onset of anaemia. Low birth weight babies are born with reduced iron stores and have additional requirements for catch up growth. These additional iron requirements cannot be met by breast milk and if iron supplements are not provided for these babies, they will have an increased risk of early onset of anaemia.
Table 11.12 presents the prevalence of anaemia in children aged $6-59$ months by background characteristics.

Overall, 51.1 percent of all children were confirmed to be anaemic, with 24.6 percent considered to be mildly anaemic (identified as having a haemoglobin level of $10-10.9 \mathrm{~g} / \mathrm{dl}$ ), 25.6 percent as being moderately anaemic ( $7-9.9 \mathrm{~g} / \mathrm{dl}$ ), and about 1.0 percent as severely anaemic ( $<7 \mathrm{~g} / \mathrm{dl}$ ). This is consistent with what can be expected when although 85.2 percent of children consumed ironrich foods (Table 11.8), very few were given iron supplements or received de-worming medication. Also, consumption of vitamin C-rich foods, such and fruits and vegetables, was low (Table 11.13) and vitamin $C$ enhances iron absorption.

## Table 11.12: Prevalence of anaemia in children

Percentage of children aged 6-59 months classified as having anaemia, by background characteristics, Nauru 2007

| Background characteristic | Anaemia status by haemoglobin level |  |  | Any anaemia | Number of children |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hline \text { Mild (10.0- } \\ 10.9 \mathrm{~g} / \mathrm{dl}) \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Moderate }(7.0- \\ 9.9 \mathrm{~g} / \mathrm{dl}) \\ \hline \end{gathered}$ | $\begin{gathered} \text { Severe (below } \\ 7.0 \mathrm{~g} / \mathrm{dl}) \end{gathered}$ |  |  |
| Age in months |  |  |  |  |  |
| 6-8 | * | * | * | * | 16 |
| 9-11 | * | * | * | * | 11 |
| 12-17 | (27.2) | (56.5) | (0.0) | (83.7) | 28 |
| 18-23 | (31.9) | (49.2) | (0.0) | (81.1) | 23 |
| 24-35 | 29.9 | 17.0 | 4.0 | 50.8 | 58 |
| 36-47 | 27.3 | 13.0 | 0.0 | 40.3 | 65 |
| 48-59 | 14.3 | 7.0 | 0.0 | 21.3 | 54 |
| Sex |  |  |  |  |  |
| Male | 26.7 | 30.6 | 0.0 | 57.2 | 124 |
| Female | 22.6 | 20.9 | 1.8 | 45.3 | 131 |
| Wealth quintile |  |  |  |  |  |
| Lowest | (15.7) | (35.5) | (0.0) | (51.3) | 46 |
| Second | 18.7 | 32.2 | 0.0 | 51.0 | 48 |
| Middle | 29.0 | 22.3 | 1.3 | 52.5 | 60 |
| Fourth | 30.2 | 15.1 | 1.7 | 47.1 | 45 |
| Highest | 27.7 | 23.7 | 1.4 | 52.8 | 56 |
| Total | 24.6 | 25.6 | 0.9 | 51.1 | 255 |

Notes: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
Table is based on children who slept in the household the night before the interview. Prevalence of anaemia, based on haemoglobin levels, is adjusted for altitude using formulas in CDC, 1998. Haemoglobin in grams per deciliter (g/dl).

### 11.7.2 Prevalence of anaemia among women.

The fatigue resulting from anaemia impairs work performance and endurance, even for tasks that require only moderate levels of activity. Thus, anaemia can result in reduced household productivity especially where tasks require high levels of effort.
Severe anaemia in pregnancy has been shown to increase risk of maternal mortality, low birth weight, increased risk of preterm and low birth weight, and subsequent risk of infant anaemia.

Factors contributing to iron deficiency anaemia include inadequate dietary intake, poor absorption and smoking.

Table 11.13 presents the prevalence of anaemia in women.
The results show that 34.2 percent of women aged 15-49 years were identified as anaemic, of this, one in four women were mildly anaemic, 7.3 percent were moderately anaemic, and 1.4 percent were severely anaemic.

Younger women aged 15-19 were more likely to be anaemic ( 45.5 percent) than women aged 40-49 (35.9 percent). Women aged 30-39 were the least likely to be anaemic ( 21.4 percent).

Figure 11.6: Prevalence of anaemia among Nauruan women


Although the results show that pregnant women were found to be more anaemic ( 44.1 percent), this could be related to the small number of pregnant women at the time of the survey. Women who smoke have a higher prevalence of anaemia ( 36.9 percent) compared with non-smokers (31.2 percent).

Prevalence of anaemia decreases with increasing wealth, from 46 percent among women in poorer households to 30.2 percent among women in wealthier households.
As observed among children, although 96.7 percent of mothers consumed iron-rich foods (Table 11.11), very few were given iron supplements or received de-worming medication. Also, consumption of vitamin C-rich foods such as fruits and vegetables were low (Table1 11.11), and vitamin $C$ enhances iron absorption.

It is unlikely that any single strategy will address the issue of micronutrient deficiencies.

Table 11.13: Prevalence of anaemia in women
Percentage of women aged 15-49 with anaemia, by background characteristics, Nauru 2007

| Background characteristic | Anaemia status by haemoglobin level |  |  | Any anaemia | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mild anaemia (g/dl) | Moderate anaemia (g/dl) | Severe anaemia (g/dl) |  |  |
| Age |  |  |  |  |  |
| 15-19 | 34.3 | 8.1 | 3.1 | 45.5 | 116 |
| 20-29 | 26.6 | 8.7 | 0.4 | 35.7 | 219 |
| 30-39 | 17.1 | 4.4 | 0.0 | 21.4 | 143 |
| 40-49 | 25.3 | 7.5 | 3.1 | 35.9 | 127 |
| Number of children ever born |  |  |  |  |  |
| 0 | 24.9 | 7.5 | 1.5 | 33.9 | 237 |
| 1 | 28.6 | 2.3 | 1.1 | 32.0 | 71 |
| 2-3 | 27.6 | 9.9 | 2.3 | 39.8 | 131 |
| 4-5 | 21.5 | 6.7 | 1.1 | 29.2 | 92 |
| $6+$ | 26.3 | 7.8 | 0.0 | 34.1 | 74 |
| Maternity status |  |  |  |  |  |
| Pregnant | (27.5) | (16.6) | (0.0) | (44.1) | 49 |
| Breastfeeding | 32.8 | 8.9 | 0.0 | 41.6 | 102 |
| Neither | 23.7 | 6.0 | 1.8 | 31.5 | 454 |
| Smoking status |  |  |  |  |  |
| Smokes cigarettes/tobacco | 27.1 | 8.5 | 1.3 | 36.9 | 323 |
| Does not smoke | 23.7 | 6.0 | 1.4 | 31.2 | 281 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 34.2 | 9.0 | 2.8 | 46.0 | 125 |
| Second | 26.0 | 6.3 | 3.4 | 35.6 | 119 |
| Middle | 26.5 | 5.8 | 0.0 | 32.4 | 128 |
| Fourth | 20.3 | 6.0 | 0.0 | 26.3 | 116 |
| Highest | 20.0 | 9.5 | 0.7 | 30.2 | 117 |
| Total | 25.6 | 7.3 | 1.4 | 34.2 | 604 |

Notes: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases.
Prevalence is adjusted for altitude and for smoking status if known using formulas in CDC, 1998.

### 11.8 KEY RESULTS

Below are the main findings of the nutritional status of men, women and their children identified in the 2007 NDHS according to their anthropometric status, infant and child feeding practices, micronutrient intakes (of women and children), food consumption patterns (of mothers) and the consequences of inadequate nutrition.

1. The prevalence of men who were overweight or obese was 77.1 percent, implying that about eight in ten men were reported to be overweight or obese. Overweight and obese was detected as early as ages 20-29 years.
2. More women than men were classified as overweight or obese ( 80 percent), as opposed to77 percent of men. About half the number of women aged 15-49 were already overweight or obese. The prevalence increased with age, with almost every woman categorised as overweight or obese.
3. The results indicate that 4.8 percent of children were underweight. Male children were more likely to be underweight ( 6.9 percent) compared with female children ( 2.9 percent).
4. The majority of children born in the five years preceding the survey were ever breastfed ( 94.7 percent). Children born to mothers in wealthy households were more likely to be breastfed ( 98.4 percent) than those born in poorer households ( 91.7 percent). About
67.2 percent of children began breastfeeding at ages $0-5$ years. The mean duration of breastfeeding among children born in the last three years was 18.6 months.
5. Among breastfed children aged $6-23$ months, 45.8 percent met the minimum IYCF requirements. The IYCF recommends the timely introduction of solid and/or semi-solid foods from age 6 months.
6. The most commonly consumed solid or semi-solid foods among mothers aged 15-49 who had a child under age 3 years living with them, were foods made from grains ( 98 percent), followed by meat, fish/seafood, poultry and eggs ( 78.5 percent). Among youngest children aged 6-35 months living with their mother, 90.9 percent consumed foods rich in vitamin A in the last 24 hours.
7. The results show that half the number of children aged $6-59$ months were identified as anaemic, which was common among children aged 18-23 months and children living in the fourth wealthy quintile. One in three women aged 15-49 were also reported to have any anaemia during the survey.

## Chapter 12 HIV AND AIDS RELATED KNOWLEDGE, ATTITUDE AND BEHAVIOURS

Acquired immune deficiency syndrome (AIDS) is caused by the human immunodeficiency virus (HIV), which depresses the immune system, making the body susceptible to and unable to recover from other opportunistic diseases that lead to death through secondary infections. The predominant mode of HIV transmission is through heterosexual contact, followed in magnitude by prenatal transmission, in which a mother passes the virus to her child during pregnancy, delivery or breastfeeding. Other modes of transmission include infected blood products and unsafe injections.

This chapter presents information on the level of awareness of HIV and AIDS, knowledge of HIV transmission and prevention, attitudes towards people living with HIV and AIDS, and sexual behaviour of Nauruans aged 15-49 (findings for men aged 50+ are also included). Coverage of HIV testing, self-reported prevalence of STIs and related symptoms, and medical injections is also included. This chapter focuses on HIV and AIDS knowledge and patterns of sexual activity among young people aged $15-24$ years, because young adults are considered to be a higher risk population and, subsequently, an important target group for HIV prevention efforts. The final section of the chapter focuses on perceptions of abstinence and faithfulness.

Overall, 611 women and 311 men aged 15-49 participated in this component of the 2007 NDHS. An additional 43 men aged 50 and over also participated. It should be noted that components of this chapter do not include all participants, and are restricted on the basis of sexual behaviour and other factors.

Findings presented in the tables are reported in association with background characteristics, including age group, marital status, education and wealth quintile. All percentages in tables have been weighted to be proportional to the age and sex structure of the Nauruan adult population.

No statistical tests have been performed on the data, therefore comparisons between population subgroups should not be considered to represent statistically significant differences. No comments or comparisons have been made for population subgroups with sample sizes of less than 50 respondents.

### 12.1 KNOWLEDGE OF AIDS

The 2007 NDHS collected information on knowledge of and behaviour related to HIV and AIDS. All eligible respondents were provided with some information about HIV and AIDS and asked whether they had heard of HIV or the disease known as AIDS prior to the interview.

Table 12.1 shows the proportion of women and men who reported that they had heard of HIV or AIDS, by age group, marital status, level of education and wealth quintile.

Overall, 73 percent of women and 83 percent of men aged 15-49 reported that they had heard of HIV and AIDS. There was a trend towards increased awareness with increased aged. Figure 12.1 shows the proportions of women and men who had heard of HIV and AIDS by age group. Awareness was highest for women aged 40-49 years ( 80.8 percent) and men aged $30-39$ years (94.1 percent).

Figure 12.1: Percentage of women and men aged 15-49 who reported that they have heard of AIDS by sex and age group, Nauru 2007


For men, awareness of HIV and AIDS was higher for those who reported that they were married or living with a partner ( 91 percent), than for those who had never married ( 72 percent). This trend was not seen among women.

Awareness of AIDS was almost universal for women who reported having a post-secondary education ( 96 percent) compared with women who completed only secondary school ( 72 percent).

Higher proportions of people from the highest wealth quintile reported having heard of AIDS than those from the lowest wealth quintile. For men, the vast majority from the highest quintile were aware of AIDS ( 97 percent) compared with men from the lowest wealth quintile ( 70 percent). About 84 percent of women from the highest wealth quintile were aware of AIDS compared with 66 percent within the lowest wealth quintile.

Table 12.1: Knowledge of AIDS
Percentage of women and men aged 15-49 who have heard of AIDS, by background characteristics, Nauru 2007

| Background characteristic | Women |  | Men |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Have heard of AIDS | Number of respondents | Have heard of AIDS | Number of respondents |
| Age |  |  |  |  |
| 15-24 | 68.6 | 247 | 72.0 | 117 |
| 15-19 | 68.6 | 117 | 61.6 | 60 |
| 20-24 | 68.6 | 131 | 82.8 | 57 |
| 25-29 | 66.2 | 96 | 90.2 | 56 |
| 30-39 | 78.5 | 146 | 94.1 | 87 |
| 40-49 | 80.8 | 128 | 82.3 | 51 |
| Marital status |  |  |  |  |
| Never married | 73.3 | 186 | 71.8 | 119 |
| Ever had sex | 73.3 | 122 | 77.9 | 98 |
| Never had sex | 73.4 | 64 | * | 21 |
| Married/living together | 72.4 | 386 | 90.7 | 183 |
| Divorced/separated/widowed | 77.9 | 46 | * | 9 |
| Education |  |  |  |  |
| Less than secondary | * | 13 | * | 20 |
| Secondary | 72.0 | 555 | 82.5 | 270 |
| More than secondary | 95.5 | 50 | * | 21 |
| Wealth quintile |  |  |  |  |
| Lowest | 65.9 | 127 | 70.7 | 45 |
| Second | 71.3 | 126 | 83.5 | 67 |
| Middle | 71.3 | 129 | 80.1 | 64 |
| Fourth | 74.2 | 116 | 79.6 | 64 |
| Highest | 83.4 | 119 | 96.6 | 72 |
| Total 15-49 | 73.1 | 618 | 83.2 | 311 |
| 50+ | na | na | 95.8 | 43 |
| Total men 15+ | na | na | 84.7 | 354 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
na = not applicable

### 12.2 KNOWLEDGE OF HIV PREVENTION METHODS

HIV education in Nauru focuses on three methods for preventing transmission of HIV through sexual contact: sexual abstinence, mutual monogamy and condom use.

Respondents who reported that they had heard of HIV or AIDS were asked three questions on how to reduce the risk of acquiring HIV: a) using a condom correctly every time a person has sexual intercourse, b) having one mutually monogamous sex partner who is not infected with HIV, and c) abstaining from sexual intercourse. Table 12.2 shows the proportions of women and men who correctly responded to each of these questions by their background characteristics. The table also shows the proportions of women and men who acknowledged that both using condoms and limiting sexual intercourse to one uninfected partner can reduce the risk of getting HIV. These proportions are presented as whole of population estimates, so people who had not heard of AIDS were included in the denominators of the proportions (i.e. were considered to have incorrectly answered these questions).

Knowledge of HIV prevention methods also increased with age for both sexes. Figure 12.2 shows the proportions of people who acknowledge each of the HIV prevention methods by sex of respondent. Knowledge of each method, and for combined knowledge of using condoms and limiting sex to one uninfected partner, was higher for men than for women (Fig. 12.2).

Figure 12.2: Percentage of women and men 15-49 years with knowledge of HIV prevention methods by sex, Nauru 2007


For young adults, a higher proportion of women and men aged 20-24 correctly answered each question compared with those aged 15-19 (Table 12.2).

For men, knowledge of HIV prevention was consistently higher for all three questions for those who were married or living with a partner compared with those men who had never married.
The percentage of men and women in the lowest wealth quintile who correctly answered the three questions was consistently lower compared than those in the other wealth quintiles.

## Table 12.2: Knowledge of HIV prevention methods

Percentage of women and men aged 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they ourse, by having one sex partner who is

| Background characteristic | Women |  |  |  |  | Men |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who say HIV can be prevented by |  |  |  |  | Percentage who say HIV can be prevented by |  |  |  |  |
|  | Using condoms ${ }^{1}$ | Limiting sexual intercourse to one uninfected partner ${ }^{2}$ | Using condoms and limiting sexual intercourse to one uninfected partner ${ }^{1,2}$ | Abstaining from sexual intercourse | Number <br> of women | Using condoms ${ }^{1}$ | Limiting sexual intercourse to one uninfected partner ${ }^{2}$ | Using condoms and limiting sexual intercourse to one uninfected partner ${ }^{1,2}$ | Abstaining from sexual intercourse | Number of men |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-24 | 46.8 | 44.8 | 35.9 | 45.8 | 247 | 58.0 | 63.4 | 52.1 | 55.7 | 117 |
| 15-19 | 40.1 | 40.4 | 29.9 | 38.1 | 117 | 48.5 | 56.1 | 45.1 | 46.4 | 60 |
| 20-24 | 52.8 | 48.7 | 41.2 | 52.7 | 131 | 68.0 | 70.9 | 59.3 | 65.4 | 57 |
| 25-29 | 58.3 | 52.4 | 49.1 | 53.3 | 96 | 74.8 | 72.4 | 63.6 | 75.7 | 56 |
| 30-39 | 61.6 | 62.1 | 53.9 | 58.2 | 146 | 82.8 | 77.7 | 69.7 | 72.4 | 87 |
| 40-49 | 66.5 | 67.5 | 58.9 | 66.1 | 128 | 49.8 | 59.4 | 42.7 | 62.3 | 51 |
| Marital status |  |  |  |  |  |  |  |  |  |  |
| Never married | 54.4 | 51.1 | 44.3 | 49.6 | 186 | 54.7 | 62.3 | 48.6 | 55.4 | 119 |
| Ever had sex | 56.6 | 50.5 | 45.0 | 49.1 | 122 | 60.4 | 68.8 | 54.8 | 60.5 | 98 |
| Never had sex | 50.1 | 52.3 | 43.0 | 50.4 | 64 | 28.3 | 32.3 | 19.7 | 31.5 | 21 |
| Married/living together | 56.0 | 56.3 | 48.3 | 55.8 | 386 | 74.4 | 71.7 | 62.9 | 71.2 | 183 |
| Divorced/separated/widowed | (64.9) | (56.5) | (46.8) | (58.2) | 46 | * | * | * | * | 9 |
| Education |  |  |  |  |  |  |  |  |  |  |
| Less than secondary | * | * | * | * | 13 | * | * | * | * | 20 |
| Secondary | 54.9 | 53.4 | 46.1 | 52.5 | 555 | 67.2 | 67.8 | 58.0 | 65.4 | 270 |
| More than secondary | 78.7 | 79.4 | 64.2 | 79.9 | 50 | * | * | * | * | 21 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 49.3 | 40.3 | 37.8 | 44.8 | 127 | (52.8) | (56.0) | (48.6) | (52.0) | 45 |
| Second | 55.1 | 57.6 | 49.1 | 51.7 | 126 | 64.8 | 64.0 | 54.5 | 69.7 | 67 |
| Middle | 55.1 | 54.9 | 47.5 | 57.3 | 129 | 65.4 | 68.3 | 56.0 | 62.3 | 64 |
| Fourth | 61.7 | 54.2 | 47.8 | 57.8 | 116 | 66.9 | 64.6 | 56.2 | 59.2 | 64 |
| Highest | 60.4 | 67.7 | 53.3 | 59.4 | 119 | 78.1 | 83.8 | 68.7 | 76.7 | 72 |
| Total 15-49 | 56.2 | 54.8 | 47.0 | 54.1 | 618 | 66.7 | 68.4 | 57.6 | 65.1 | 311 |
| 50+ | na | na | na | na | 0 | (79.8) | (87.5) | (74.8) | (75.1) | 43 |
| Total men 15+ | na | na | na | na | 0 | 68.3 | 70.7 | 59.7 | 66.3 | 354 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ U Sing condomms every time they have sexual intercourse.
${ }^{2}$ Parner who has no other partners.

### 12.3 REJECTION OF MISCONCEPTIONS ABOUT HIV AND AIDS, AND COMPREHENSIVE KNOWLEDGE ABOUT HIV AND AIDS

Common misconceptions about HIV have included the belief that people infected with HIV always appear unwell; and that the virus can be transmitted by witchcraft or other supernatural means, through mosquito bites, or by sharing food with someone who has HIV. Incorrect beliefs about the disease and its transmission could reduce people's motivation to use sexual protection, and could result in increased stigma towards people with HIV. ${ }^{11}$

The prevalence of people with a comprehensive knowledge of HIV and AIDS is important for determining the progression towards whole of population awareness of key facts on the transmission and prevention of HIV and AIDS..$^{12}$ The indicator used to measure comprehensive knowledge of HIV and AIDS was built from several individual indicators reported earlier in this chapter, and has been defined as the percentage of respondents aged 15-49 who: a) agreed that people can reduce the chance of getting the AIDS virus by using a condom every time they have sex; b) agreed that people can reduce the chance of getting the AIDS virus by having sex with just one partner who is not infected and who has no other partners; c) agreed that people cannot get the AIDS virus from sharing food with a person who has AIDS; d) agreed that a healthy-looking person can have the AIDS virus; and e) rejected the two most common local misconceptions about AIDS transmission or prevention.
Table 12.3.1 shows the proportion of women who correctly answered the four questions on the transmission of HIV, and the proportion found to have a comprehensive knowledge of HIV and AIDS by age group, marital status, education level and wealth quintile.

Although knowledge levels differed among the four transmission questions, knowledge was highest for knowing that the AIDS virus cannot be transmitted by supernatural means ( 55.3 percent) and a healthy-looking person could have the AIDS virus ( 49.8 percent).
One-third of women were aware that the AIDS virus cannot be transmitted by mosquito bites ( 35.8 percent) and less than half knew that a person cannot become infected by sharing food with a person who has the AIDS virus ( 43.9 percent).

Less than one-quarter of women ( 22.7 percent) correctly acknowledged that a healthy-looking person could have the AIDS virus, and that the HIV virus cannot be transmitted by supernatural means or mosquito bites.

Fewer than one in five women aged 15-49 years were found to have a comprehensive knowledge of AIDS ( 18.3 percent). Comprehensive knowledge was lowest for women aged 15-19 ( 7.6 percent) and highest for women aged 30-39 ( 23.0 percent).
Higher proportions of women who were married and/or living with a partner (47.2 percent) correctly rejected the misconception that HIV can be transmitted by sharing food than did women who had never married ( 35.9 percent). However this trend was not apparent for the other three misconception questions.

Higher proportions of women with a post-secondary education correctly answered all four questions than women with only a secondary education. Knowledge in the post-secondary education group was particularly high for rejecting transmission by supernatural means ( 82.2 percent) and knowing that a healthy-looking person could have the AIDS virus (76.7 percent).

[^9]Low numbers of women from the lowest wealth quintile correctly answered all four questions or had a comprehensive knowledge of AIDS, compared with women from all other wealth quintiles.

## Table 12.3.1: Comprehensive knowledge about AIDS — Women

Percentage of women aged 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly rejected local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS by background characteristics, Nauru 2007

|  |  | Percentage of respondents who say that: |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases.
${ }^{1}$ Two most common local misconceptions are that HIV can be transmitted by supernatural means and witchcraft, and by mosquito bites.
${ }^{2}$ Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Table 12.3 .2 shows the proportions of men who correctly responded to the four questions on transmission of HIV, and who were found to have a comprehensive knowledge of HIV and AIDS by age group, marital status, level of education and wealth quintile.
For all men aged 15 and above, knowledge was highest for knowing that a healthy-looking person could be infected with HIV ( 61.4 percent) and that HIV cannot be transmitted by supernatural means ( 59.3 percent). Higher proportions of men aged 15-49 correctly answered both of these questions compared with women in the same age group. Figure 12.3.1 shows the comparative proportions of women and men aged 15-49 who correctly answered these four questions.

Figure 12.3.1: Percentage of women and men aged 15-49 with knowledge about the transmission of HIV by sex, Nauru 2007


One-third of men aged 15-49 (32.2 percent) were aware that the AIDS virus cannot be transmitted by mosquito bites and two in five men ( 41.3 percent) knew that a person cannot become infected by sharing food with a person who has the AIDS virus.

Overall, less than one-quarter of men aged 15-49 (22.2 percent) correctly acknowledged that a healthy-looking person can have the AIDS virus, and that the AIDS virus cannot be transmitted by supernatural means or mosquito bites.

Less than one in five men ( 16.9 percent) aged 15-49 have a comprehensive knowledge of AIDS. The proportion of males with a comprehensive knowledge of AIDS increases with age group.

A higher proportion of men who were married or living with a partner correctly answered all four questions and were found to have a comprehensive knowledge of AIDS compared with those who had never married.

Higher proportions of men from the highest wealth quintile correctly answered all four questions compared with men from the four other wealth quintiles.

Figure 12.3.2: Percentage of women and men aged 15-49 who have a comprehensive knowledge of HIV by six and age group, Nauru 2007


Table 12.3.2: Comprehensive knowledge about AIDS: Men
Percentage of men aged 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS by background characteristics, Nauru 2007

| Background characteristic | Percentage of respondents who say that: |  |  |  | Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions ${ }^{1}$ | Percentage with a comprehensive knowledge about AIDS ${ }^{2}$ | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A healthylooking person can have the AIDS virus | AIDS cannot be transmitted by mosquito bites | AIDS cannot be transmitted by supernatural means | A person cannot become infected by sharing food with a person who has AIDS |  |  |  |
| Age |  |  |  |  |  |  |  |
| 15-24 | 45.7 | 22.5 | 48.9 | 29.8 | 12.6 | 9.6 | 117 |
| 15-19 | 36.4 | 16.5 | 34.0 | 25.3 | 7.8 | 7.8 | 60 |
| 20-24 | 55.4 | 28.9 | 64.4 | 34.6 | 17.6 | 11.5 | 57 |
| 25-29 | 67.8 | 33.7 | 54.4 | 47.1 | 18.8 | 12.9 | 56 |
| 30-39 | 63.2 | 32.5 | 71.6 | 52.9 | 26.4 | 23.9 | 87 |
| 40-49 | 69.7 | 48.1 | 65.6 | 47.0 | 40.9 | 26.3 | 51 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 49.6 | 24.5 | 47.6 | 31.4 | 16.0 | 12.5 | 119 |
| Ever had sex | 57.4 | 27.5 | 50.9 | 37.0 | 19.4 | 15.2 | 98 |
| Never had sex | * | * | * | * | * | * | 21 |
| Married/living together | 64.4 | 36.4 | 65.7 | 48.5 | 26.5 | 19.8 | 183 |
| Divorced/separated/widowed | * | * | * | * | * | * | 9 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | (39.1) | (27.8) | (46.4) | (29.3) | (16.1) | (16.1) | 45 |
| Second | 61.8 | 27.1 | 58.8 | 36.1 | 19.2 | 11.5 | 67 |
| Middle | 56.8 | 29.1 | 58.1 | 38.0 | 18.5 | 11.5 | 64 |
| Fourth | 46.5 | 28.9 | 54.3 | 40.9 | 18.0 | 11.7 | 64 |
| Highest | 79.9 | 42.4 | 72.1 | 61.0 | 35.8 | 31.9 | 72 |
| Total 15-49 | 58.5 | 31.5 | 59.0 | 42.2 | 22.2 | 16.9 | 311 |
| 50+ | (82.8) | (36.9) | (61.4) | (34.5) | (27.3) | (23.9) | 43 |
| Total men 15+ | 61.4 | 32.2 | 59.3 | 41.3 | 22.8 | 17.8 | 354 |

[^10]
### 12.4 KNOWLEDGE ABOUT THE PREVENTION OF MOTHER-TOCHILD HIV TRANSMISSION

It is important for adults to know that HIV can be transmitted from mother to child, and that drugs are available that can reduce the risk of mother-to-child transmission (MTCT) from occurring. The 2007 NDHS assessed respondents' knowledge about whether women who have HIV and AIDS can pass the virus onto their babies during pregnancy, childbirth or breastfeeding, and prevention of MTCT through anti-retroviral therapy and by avoiding breastfeeding.

Survey respondents were first asked if HIV can be transmitted from a mother to a child. Those who acknowledged this were then asked whether the virus can be transmitted during pregnancy, during delivery, and/or during breastfeeding. Respondents were also asked if there are any special drugs that a doctor or nurse can give to a pregnant woman who is infected with HIV to reduce the risk of transmission to the baby.

Table 12.4 shows the proportions of women and men who knew that HIV can be transmitted by breastfeeding and that risk of HIV transmission can be reduced by the mother taking special drugs during pregnancy by age group, marital status, level of education and wealth quintile.

No statistics were provided on the proportions of women and men who knew that HIV can be passed from mother to baby and more specifically through pregnancy and delivery.

Similar proportions of women ( 40.2 percent) and men ( 39.3 percent) reported that HIV can be transmitted by breastfeeding. In contrast, higher proportions of women ( 16.2 percent) than men ( 8.4 percent) were aware that the risk of HIV transmission can be reduced by the mother taking special drugs during pregnancy.

Combined knowledge that HIV can be transmitted by breastfeeding and that risk of HIV transmission can be reduced by the mother taking special drugs during pregnancy, was low for women ( 11.9 percent) and men ( 8.4 percent) aged 15-49.

Figure 12.4 shows the proportions of women and men who had knowledge of MTCT of HIV by sex.

Figure 12.4: Percentage of women and men with knowledge of prevention of mother-to-child transmission of HIV, by sex and age group, Nauru 2007


The number of women who correctly answered each question on MTCT increased with age. Knowledge of reduced transmission by the mother taking special drugs during pregnancy was particularly low ( 5.5 percent) for young women aged 15-19 years.

For men, those who knew that HIV can be transmitted by breastfeeding was highest for men aged 20-24, while there was no definite age trend for knowledge of prevention through drug therapy during pregnancy.

Higher proportions of women with post-secondary education were aware of MTCT through breastfeeding and prevention through antiretroviral therapy compared with women with only a secondary education. However, the proportions who answered both questions correctly were similar for both groups.
Table 12.4 Knowledge of prevention of mother-to-child transmission of HIV
Percentage of women and men who know that HIV can be transmitted from mother to child by breastfeeding and that the risk of mother-to-child transmission (MTCT) of HIV can be reduced by the mother taking special drugs during pregnancy, by background characteristics, Nauru 2007

| Background characteristic | Women |  |  |  | Men |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HIV can be transmitted by breastfeeding | Risk of MTCT can be reduced by mother taking special drugs during pregnancy | HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy | Number of women | HIV can be transmitted by breastfeeding | Risk of MTCT can be reduced by mother taking special drugs during pregnancy | HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy | Number of men |
| Age |  |  |  |  |  |  |  |  |
| 15-24 | 38.2 | 11.7 | 9.4 | 247 | 35.8 | 9.1 | 9.1 | 117 |
| 15-19 | 34.8 | 5.5 | 5.5 | 117 | 23.5 | 4.6 | 4.6 | 60 |
| 20-24 | 41.3 | 17.3 | 12.9 | 131 | 48.5 | 13.7 | 13.7 | 57 |
| 25-29 | 29.9 | 18.6 | 8.6 | 96 | 36.8 | 3.2 | 2.0 | 56 |
| 30-39 | 40.4 | 19.8 | 14.7 | 146 | 40.8 | 10.3 | 9.4 | 87 |
| 40-49 | 51.6 | 19.0 | 15.8 | 128 | 47.5 | 9.3 | 4.8 | 51 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 43.1 | 12.5 | 10.4 | 186 | 33.6 | 9.8 | 9.8 | 119 |
| Ever had sex | 41.8 | 15.1 | 11.9 | 122 | 35.3 | 9.1 | 9.1 | 98 |
| Never had sex | 45.5 | 7.5 | 7.5 | 64 | * | * | * | 21 |
| Married/living together | 37.7 | 17.5 | 13.0 | 386 | 42.3 | 7.9 | 5.8 | 183 |
| Divorced/separated/widowed | (49.4) | (20.4) | (8.3) | 46 | * | * | * | 9 |
| Currently pregnant |  |  |  |  |  |  |  |  |
| Pregnant | (24.0) | (15.2) | (5.2) | 49 | na | na | na | na |
| Not pregnant or not sure | 41.6 | 16.3 | 12.4 | 569 | na | na | na | na |
| Education |  |  |  |  |  |  |  |  |
| Less than secondary | * | * | * | 13 | 60.6 | 0.0 | 0.0 | 20 |
| Secondary | 39.8 | 15.7 | 11.9 | 555 | 36.7 | 7.5 | 6.1 | 270 |
| More than secondary | 54.4 | 26.5 | 13.9 | 50 | * | * | * | 21 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 41.5 | 13.8 | 11.5 | 127 | (46.9) | (0.0) | (0.0) | 45 |
| Second | 40.9 | 17.0 | 13.8 | 126 | 36.2 | 12.8 | 9.9 | 67 |
| Middle | 36.8 | 15.8 | 9.7 | 129 | 35.6 | 3.9 | 2.2 | 64 |
| Fourth | 41.0 | 16.5 | 13.3 | 116 | 47.8 | 11.3 | 11.3 | 64 |
| Highest | 41.1 | 18.2 | 11.0 | 119 | 32.9 | 11.0 | 9.9 | 72 |
| Total 15-49 | 40.2 | 16.2 | 11.9 | 618 | 39.3 | 8.4 | 7.2 | 311 |
| $50+$ | na | na | na | na | (65.8) | (27.0) | (25.0) | 43 |
| Total men 15+ | na | na | na | na | 42.5 | 10.6 | 9.3 | 354 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases.
na $=$ not taplicable

### 12.5 STIGMA ASSOCIATED WITH AND ATTITUDES TOWARD HIV AND AIDS

Respondents who had ever heard of HIV and AIDS were asked four questions to measure attitudes towards people living with HIV and AIDS: willingness to care for a family member with AIDS in the respondent's home, willingness to buy vegetables from a shopkeeper who has AIDS, whether a female teacher with the AIDS virus - and is not sick - should be allowed to continue teaching, and preference to keep secret that a family member is infected with the HIV virus.

Table 12.5 .1 shows the proportions of women who have accepting attitudes for each of the four questions and for all four questions by age group, marital status, level of education and wealth quintile.

Accepting attitudes were highest for willing to care for a family member ( 65.9 percent) and would not want to keep secret that a family member has the AIDS virus (47 percent), and were lowest for buying fresh vegetables from a shop keeper with the AIDS virus ( 27.9 percent) and a female teacher with the AIDS virus should be able to continue teaching ( 29 percent).

Less than one in ten ( 9.3 percent) women aged 15-49 gave accepting responses to all four statements.

The proportions of women with accepting attitudes for each of the four questions and for all four questions increased with age group.

Higher proportions of women who were married and/or living with a partner ( 52.6 percent) reported that they would not want to keep secret that a family member was infected with the AIDS virus compared with women who had never been married ( 34.6 percent).

Women with a post-secondary education were more likely to report that they would buy fresh vegetables from a shop keeper with the AIDS virus ( 40.9 percent) and that a female teacher with the AIDS virus should be able to continue teaching ( 42 percent). This is in contrast to women who completed only secondary school and who reported that they would buy fresh vegetables from a shop keeper with the AIDS virus ( 26.6 percent) and that a female teacher with the AIDS virus should be able to continue teaching ( 27.7 percent).

Willingness to care for a family member who has the AIDS virus was more commonly expressed by women from the two highest wealth quintiles compared with those from the two lowest wealth quintiles.

Table 12.5.1: Accepting attitudes toward those living with HIV and AIDS — Women
The percentage of women aged 15-49 who have heard of AIDS, and the percentage expressing specific accepting attitudes toward people with AIDS, by background characteristics, Nauru 2007

| Background characteristic | Percentage of respondents who: |  |  |  | Percentage expressing acceptance attitudes on all four indicators | Number of respondents who have heard of AIDS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Are willing to care for a family member with the AIDS virus in respondent's home | Would buy fresh vegetables from shopkeeper who has the AIDS virus | Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching | Would not want to keep secret that a family member was infected with the AIDS virus |  |  |
| Age |  |  |  |  |  |  |
| 15-24 | 61.3 | 19.6 | 20.7 | 37.4 | 5.0 | 170 |
| 15-19 | 58.6 | 14.0 | 16.4 | 37.8 | 2.6 | 80 |
| 20-24 | 63.8 | 24.7 | 24.5 | 37.0 | 7.2 | 90 |
| 25-29 | 64.4 | 32.7 | 42.2 | 37.4 | 7.6 | 64 |
| 30-39 | 70.9 | 32.9 | 29.4 | 52.7 | 11.6 | 115 |
| 40-49 | 68.8 | 32.9 | 34.2 | 62.4 | 14.8 | 103 |
| Marital status |  |  |  |  |  |  |
| Never married | 65.4 | 24.6 | 24.9 | 34.6 | 7.8 | 136 |
| Ever had sex | 68.3 | 26.8 | 23.9 | 29.8 | 8.5 | 90 |
| Never had sex | 59.7 | 20.3 | 26.9 | 43.8 | 6.5 | 47 |
| Married/living together | 67.6 | 27.3 | 29.7 | 52.6 | 9.8 | 279 |
| Divorced/separated/widowed | (54.6) | (45.3) | (39.5) | (50.1) | (10.9) | 36 |
| Education |  |  |  |  |  |  |
| Less than secondary | * | * | * | * | * | 4 |
| Secondary | 65.5 | 26.6 | 27.7 | 46.6 | 8.4 | 400 |
| More than secondary | (71.3) | (40.9) | (42.0) | (49.2) | (17.7) | 48 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 58.6 | 29.2 | 22.7 | 40.2 | 5.3 | 84 |
| Second | 59.9 | 26.6 | 37.5 | 50.6 | 16.3 | 90 |
| Middle | 65.2 | 23.3 | 24.1 | 45.0 | 5.4 | 92 |
| Fourth | 74.0 | 27.6 | 25.7 | 58.4 | 9.5 | 86 |
| Highest | 71.2 | 32.5 | 34.2 | 41.5 | 9.8 | 99 |
| Total 15-49 | 65.9 | 27.9 | 29.0 | 47.0 | 9.3 | 452 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.

Table 12.5.2 shows the proportions of men with accepting attitudes on the four questions and for all four questions by age group, marital status, level of education and wealth quintile.

Attitudes of men towards those with AIDS differed by question. Responses were highest for willing to care for a family member ( 65.7 percent) and would not want to keep secret that a family member had the AIDS virus ( 45.1 percent), and lowest for would buy fresh vegetables from a shop keeper with the AIDS virus ( 26.4 percent) and a female teacher with the AIDS virus should be able to continue teaching ( 20.2 percent).
Figure 12.5 shows that similar proportions of women and men aged 15-49 years expressed accepting attitudes for each of the four questions.

Figure 12.5: Percentage of women and men aged 15-49 with accepting attitudes to those living with HIV and AIDS by sex, Nauru 2007


Only one in fifteen men aged 15-49 (6.4 percent) had accepting attitudes with regard to all four statements.

The proportions of men with accepting attitudes for each of the four questions increased with age group.

Higher proportions of men who were married and/or living with a partner ( 25.3 percent) agreed that a female teacher with the AIDS virus and is not sick should be able to keep teaching compared with men who had never been married (11.9 percent).

Table 12.5.2: Accepting attitudes toward those living with HIV and AIDS: Men
The percentage of men aged 15-49 who have heard of HIV and AIDS, the percentage expressing specific accepting attitudes toward people with HIV and AIDS, by background characteristics, Nauru 2007

| Background characteristic | Percentage of respondents who: |  |  |  | Percentage expressing acceptance attitudes on all four indicators | Number of respondents who have heard of AIDS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Are willing to care for a family member with the AIDS virus in the respondent's home | Would buy fresh vegetables from shopkeeper who has the AIDS virus | Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching | Would not want to keep secret that a family member got infected with the AIDS virus |  |  |
| Age |  |  |  |  |  |  |
| 15-24 | 59.1 | 20.9 | 9.9 | 37.2 | 3.2 | 84 |
| 15-19 | (49.7) | (15.4) | (6.3) | (37.0) | (2.3) | 37 |
| 20-24 | (66.3) | (25.2) | (12.8) | (37.3) | (3.9) | 47 |
| 25-29 | (77.2) | (28.8) | (20.5) | (45.6) | (4.6) | 51 |
| 30-39 | 63.5 | 24.6 | 23.9 | 47.7 | 5.5 | 82 |
| 40-49 | (69.7) | (38.2) | (33.2) | (55.1) | (16.6) | 42 |
| Marital status |  |  |  |  |  |  |
| Never married | 63.3 | 23.7 | 11.9 | 46.7 | 3.8 | 86 |
| Ever had sex | 66.8 | 26.0 | 13.3 | 44.5 | 4.3 | 77 |
| Never had sex | * | * | * | * | * | 9 |
| Married/living together | 66.9 | 28.9 | 25.3 | 43.4 | 7.9 | 166 |
| Divorced/separated/widowed | * | * | * | * | * | 7 |
| Education |  |  |  |  |  |  |
| Less than secondary | * | * | * | * | * | 15 |
| Secondary | 65.0 | 24.6 | 19.2 | 41.6 | 5.0 | 222 |
| More than secondary | * | * | * | * | * | 21 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 32.3 | 16.2 | 14.3 | 52.3 | 1.2 | 32 |
| Second | 62.1 | 33.1 | 23.1 | 46.5 | 9.6 | 56 |
| Middle | 63.8 | 18.4 | 12.2 | 35.9 | 1.3 | 51 |
| Fourth | 70.1 | 24.5 | 22.4 | 48.4 | 7.2 | 51 |
| Highest | 82.3 | 33.1 | 24.9 | 44.9 | 9.2 | 69 |
| Total 15-49 | 65.7 | 26.4 | 20.2 | 45.1 | 6.4 | 259 |
| 50+ | (68.3) | (35.2) | (46.7) | (62.5) | (21.4) | 41 |
| Total men 15+ | 66.1 | 27.6 | 23.8 | 47.4 | 8.4 | 300 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.

### 12.6 ATTITUDES ABOUT NEGOTIATING SAFER SEX

Monitoring people's attitudes about safer sex practices is important to help evaluate initiatives to reduce unsafe practices. Table 12.6 shows the proportions of women and men who responded that if a husband has a sexually transmitted disease, his wife is justified in refusing to have sexual intercourse with him, by age group, marital status, level of education and wealth quintile.

Overall, nearly nine in ten women ( 86.5 percent) and eight in ten men ( 78.3 percent) agreed that a wife is justified in refusing to have sexual intercourse with her husband if he has a sexually transmitted disease.

Lower proportions of both women and men aged 15-24 responded that a wife is justified to refuse sex with her husband if he has a sexually transmitted disease, compared with women and men aged 25-49.

Lower proportions of people who had never married responded that a wife is justified to refuse sex with her husband if he has a sexually transmitted disease, compared with those who had ever been married.

For women, those with a post-secondary education ( 95.2 percent) were more likely to respond that a wife is justified to refuse sex with her husband compared with those with a secondary education only ( 86.2 percent).

Table 12.6: Attitudes toward negotiating safer sexual relations with husband

Percentage of women and men aged 15-49 who believe that if a husband has a sexually transmitted disease, his wife is justified in refusing to have sexual intercourse with him, by background characteristics, Nauru 2007

| Background characteristic | Women |  | Men |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Refusing to have sexual intercourse | Number of women | Refusing to have sexual intercourse | Number of men |
| Age |  |  |  |  |
| 15-24 | 81.0 | 247 | 77.8 | 117 |
| 15-19 | 81.3 | 117 | 75.9 | 60 |
| 20-24 | 80.7 | 131 | 79.8 | 57 |
| 25-29 | 92.8 | 96 | 84.4 | 56 |
| 30-39 | 89.8 | 146 | 78.7 | 87 |
| 40-49 | 88.7 | 128 | 71.9 | 51 |
| Marital status |  |  |  |  |
| Never married | 80.9 | 186 | 73.2 | 119 |
| Ever had sex | 82.5 | 122 | 71.8 | 98 |
| Never had sex | 77.8 | 64 | * | 21 |
| Married/living together | 88.8 | 386 | 81.5 | 183 |
| Divorced/separated/widowed | (90.4) | 46 | * | 9 |
| Education |  |  |  |  |
| Less than secondary | * | 13 | * | 20 |
| Secondary | 86.2 | 555 | 79.6 | 270 |
| More than secondary | 95.2 | 50 | * | 21 |
| Total 15-49 | 86.5 | 618 | 78.3 | 311 |
| 50+ | na | 0 | (93.6) | 43 |
| Total men 15+ | na | 0 | 80.1 | 354 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases
na $=$ not applicable

### 12.7 MULTIPLE SEXUAL PARTNERS AND HIGHER-RISK SEX

Sexual behaviours that place people at greater risk of acquiring HIV and other STIs include unprotected vaginal and anal sex with two or more partners. ${ }^{13}$ Higher risk sex involves having sex with a person who is neither a spouse nor a cohabiting partner. In order to assess indicators on multiple sexual partners and higher risk sex, the 2007 NDHS included questions that ask both women and men age 15-49 years who had sexual intercourse in the past 12 months, the number of partners they have, those who had higher-risk sexual intercourse in the past 12 months and whether the condom was used or not.

[^11]Table 12.7.1 shows the proportions of women who reported having two or more sexual partners and higher-risk sex among those who reported having sex in the past 12 months, by age group, marital status and education level.

The prevalence of reporting two or more partners in the last 12 months decreased with age group, from 28.5 percent for women aged $15-19$ to 5.6 percent for women aged 40-49. A similar trend was shown for women who had higher-risk sex, decreasing from 45.4 percent for women aged 15-19 to 5.2 percent for those aged 40-49.

Overall, only 4.6 percent of women who reported having two or more partners in the last 12 months reported using a condom the last time they had sex. For women who reported having higher-risk sex in the last 12 months, 8.6 percent reported using a condom during their last sexual intercourse.

The average number of sex partners in a lifetime was highest for women aged 25-29 (9.8 partners).

Overall, the mean number of partners in a lifetime was higher for women who had never married ( 8.5 partners) compared with women who were married or living with a partner ( 6.4 partners).

## Table 12.7.1 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months - Women

Among women aged 15-49 who had sexual intercourse in the past 12 months, the percentage who had intercourse with more than one partner, and the percentage who had higher-risk sex in the past 12 months; and among those having more than one partner in the past 12 months, the percentage reporting that that they used a condom at last sexual intercourse; and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse; and the mean number of sexual partners during her lifetime for women who ever had sexual intercourse, by background characteristics, Nauru 2007

| Background characteristic | Among respondents who had sexual intercourse in the past 12 months: |  |  | Among respondents who had 2+ partners in the past 12 months: |  | Among respondents who had higher risk intercourse in the past 12 months: 1 |  | Among respondents who ever had sexual intercourse |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who had 2+ partners in the past 12 months | Percentage who had higher-risk intercourse in the past 12 months ${ }^{1}$ | Number | Percentage who reported using a condom during last sexual intercourse | Number | Percentage who reported using a condom at last higherrisk intercourse 1 | Number | Mean <br> number of sexual partners in lifetime | Number |
| Age |  |  |  |  |  |  |  |  |  |
| 15-24 | 16.7 | 45.4 | 153 | 8.2 | 25 | 9.6 | 71 | 6.6 | 161 |
| 15-19 | 28.5 | 70.2 | 54 | * | * | (6.3) | 38 | 6.4 | 54 |
| 20-24 | 10.2 | 32.0 | 99 | * | * | (13.3) | 33 | 6.7 | 107 |
| 25-29 | 10.5 | 21.5 | 76 | * | * | * | 16 | 9.8 | 86 |
| 30-39 | 5.9 | 9.9 | 125 | * | * | * | 12 | 7.7 | 121 |
| 40-49 | 5.6 | 5.2 | 74 | * | * | * | 4 | 6.3 | 95 |
| Marital status |  |  |  |  |  |  |  |  |  |
| Never married | 36.4 | 100.0 | 79 | 4.1 | 29 | 9.9 | 80 | 8.5 | 104 |
| Married or living together | 2.6 | 2.3 | 327 | * | 9 | * | 8 | 6.4 | 322 |
| Divorced/separated/ widowed | * | * | 21 | * | 8 | * | 15 | 12.6 | 37 |
| Education |  |  |  |  |  |  |  |  |  |
| Less than secondary | * | * | 10 | - | 0 | * | 4 | 9.7 | 10 |
| Secondary | 10.6 | 22.4 | 380 | 5.2 | 40 | * | 87 | 7.4 | 411 |
| More than secondary | (13.1) | (35.4) | 37 | 0.0 | 5 | * | 13 | 7.1 | 42 |
| Total 15-49 | 10.5 | 23.9 | 427 | 4.6 | 45 | 8.6 | 103 | 7.4 | 463 |

[^12]Table 12.7.2 shows the proportions of men who reported having two or more sexual partners and higher-risk sex among those who reported having sex in the past 12 months, by age group, marital status and education level.

One-third of sexually active men aged 15-49 (35.7 percent) reported having two or more sexual partners in the last 12 months. The prevalence of two of more sexual partners in the last 12 months was highest for men aged 15-24 ( 53.3 percent).

Over half of men aged 15-49 (51.5 percent) reported having higher-risk sex in the last 12 months. The reported prevalence of higher risk sex was particularly high for males aged 15-24 (80.0 percent).

Higher proportions of men who had never married (61.1 percent) reported having two or more sexual partners in the last 12 months compared with men who were married or living with a partner ( 23 percent).

One in ten males aged 15-49 years ( 10.2 percent) who reported having two or more sexual partners in the past 12 months indicated they used a condom the last time they had last sexual intercourse.

One in seven males aged 15-49 years ( 14.4 percent) who reported having higher risk sex in the past 12 months also reported that they used a condom the last time they had sex.

For men aged 15-49 years who had ever had sexual intercourse, the average number of partners was 15.2.

Figure 12.6: Percentage of people who reported having two or more partners in the last 12 months, by sex and age group, Nauru 2007

Table 12.7.2: Multiple sexual partners and higher-risk sexual intercourse in the past 12 months — Men
The percentage of men aged 15-49 who had sexual intercourse in the past 12 months, the percentage who had intercourse with more than one partner, and the percentage who had higher-risk sex in the past 12 months; and the percentage having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; and the percentage of those having higher-risk sex in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse; and the mean number of sexual partners during his lifetime for men who ever had sex, by background characteristics, Nauru 2007

| Background characteristic | Among respondents who had sexual intercourse in the past 12 months: |  |  | Among respondents who had $2+$ partners in the past 12 months: |  | Among respondents who had higher-risk sex in the past 12 months: |  | Among respondents who ever had sex |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who had $2+$ partners in the past 12 months | Percentage who had higher-risk sex in the past 12 months ${ }^{1}$ | Number | Percentage who reported using a condom at last sexual intercourse | Number | Percentage who reported using a condom at last higher-risk intercourse ${ }^{1}$ | Number | Mean number of sexual partners in lifetime | Number |
| Age |  |  |  |  |  |  |  |  |  |
| 15-24 | 53.3 | 80.0 | 75 | (16.7) | 40 | 16.7 | 60 | 10.2 | 72 |
| 15-19 | (49.5) | (95.7) | 30 | * | 15 | (8.3) | 29 | 7.9 | 32 |
| 20-24 | (55.9) | (69.5) | 45 | (23.3) | 25 | (24.5) | 31 | 12.0 | 40 |
| 25-29 | 20.3 | 41.5 | 39 | * | 8 | * | 16 | 16.9 | 30 |
| 30-39 | 24.4 | 30.9 | 61 | * | 15 | * | 19 | 18.9 | 49 |
| 40-49 | (34.8) | (36.8) | 33 | * | 11 | * | 12 | 21.2 | 21 |
| Marital status |  |  |  |  |  |  |  |  |  |
| Never married | 61.1 | 100.0 | 68 | 13.5 | 41 | 17.3 | 68 | 12.0 | 67 |
| Married or living together | 23.0 | 26.7 | 136 | 6.4 | 31 | 10.5 | 36 | 17.1 | 101 |
| Divorced/separated/widowed | 37.3 | 73.3 | 5 | 0.0 | 2 | 0.0 | 4 | 20.9 | 5 |
| Education |  |  |  |  |  |  |  |  |  |
| Less than secondary | 33.3 | 80.7 | 11 | 0.0 | 4 | 7.5 | 9 | 13.5 | 14 |
| Secondary | 38.2 | 52.0 | 181 | 9.8 | 69 | 12.8 | 94 | 14.6 | 145 |
| More than secondary | 10.1 | 26.7 | 17 | 48.7 | 2 | 62.3 | 4 | 23.1 | 13 |
| Total 15-49 | 35.7 | 51.5 | 209 | 10.2 | 75 | 14.4 | 108 | 15.2 | 172 |
| 50+ | 23.8 | 23.8 | 22 | 27.5 | 5 | 27.5 | 5 | 15.7 | 26 |
| Total men 15+ | 34.6 | 48.9 | 231 | 11.3 | 80 | 15.0 | 113 | 15.3 | 199 |

Note: An asterisk indicates that a tigure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases.

[^13]
### 12.8 PAYMENT FOR SEXUAL INTERCOURSE

Sex workers are at a higher risk of acquiring HIV because of their increased number of sexual partners, including non-regular partners, and increased frequency of sexual intercourse. Men who have sexual intercourse with sex workers are at higher risk of acquiring the HIV virus if they do not use condoms. ${ }^{14}$ Male respondents were asked whether they have paid anyone in exchange for having sex in the past 12 months preceding the survey. Table 12.8 presents the percentage of men aged 15 and over who paid for sex in the 12-month period preceding the survey.

The only age group who reported paying for sex was males aged $25-29$ years ( 2.0 percent). These men also reported being married or living with a partner.

Table 12.8: Payment for sexual intercourse and condom use at last paid sexual intercourse - Men

Percentage of men aged 15-49 who paid for sex in the past 12 months, by background characteristics, Nauru 2007

|  | Paid for sex in the past 12 months |  |
| :--- | :---: | :---: |
| Background characteristic | Percentage who <br> paid for sex | No. of men |
| Age | 0.0 | 117 |
| 15-24 | 0.0 | 60 |
| $15-19$ | 0.0 | 57 |
| $20-24$ | 2.0 | 56 |
| $25-29$ | 0.0 | 87 |
| 30-39 | 0.0 | 51 |
| 40-49 |  |  |
| Marital status | 0.0 | 119 |
| Never married | 0.6 | 183 |
| Married or living together | $*$ | 9 |
| Divorced/separated/widowed |  |  |
| Wealth quintile | $(0.0)$ | 45 |
| Lowest | 0.0 | 67 |
| Second | 1.7 | 64 |
| Middle | 0.0 | 64 |
| Fourth | 0.0 | 72 |
| Highest | 0.4 | 311 |
| Total 15-49 | $0.0)$ | 43 |
| 50+ | 0.3 | 354 |
| Total men 15+ |  |  |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted
cases. Figures in parentheses are based on 25-49 unweighted cases.

### 12.9 HIV TESTING

It is important for people to know their HIV status in order to avoid infecting others and to enable them to seek appropriate treatment if infected. All participants were asked if they knew where to go if they wanted to have an HIV test and if they have ever had an HIV test.

[^14]Tables 12.9.1 and 12.9.2 show the proportions of women and men who:

- reported ever being tested
- reported ever being tested and received their results
- reported being tested in the last 12 months
- reported being tested and received their results
- knew where to go to get an HIV test.

Two in five women aged 15-49 (41.9 percent) reported that they knew where to go to get an HIV test.

Overall, one in eight women reported that they had ever been tested for HIV (12.1 percent) and one in ten reported that they had received their results ( 10.2 percent).

The proportions of women who reported that they knew where to go to get an HIV test increased with age group, from one-third aged 15-24 (35 percent) to nearly half of all women aged 40-49 (48.9 percent).

The percentage of women who had ever had an HIV test, and those who had ever had a test and knew their results increased with age for those aged 15-39.

Lower proportions of women who had never married reported ever having an HIV test (7.6 percent) compared with women who were married and/or living with a partner (13.2 percent). A similar trend was shown for ever being tested and receiving results, with 6.5 percent for women who never married compared with 11.9 percent who were married and/or living with a partner.

Women with a post-secondary education ( 68.1 percent) were more likely to report that they knew where to get an HIV test compared with women who had only completed secondary education (40.1 percent). In addition, one-third of women with a post-secondary education (36.7 percent) reported ever being tested compared with one in ten women with only a secondary education (10.1 percent).

Women from the lowest wealth quintile were less likely to report they had ever had a test for HIV compared with women from other wealth quintiles.

## Table 12.9.1 Coverage of prior HIV testing - Women

Percentage of women aged 15-49 who knew where to get an HIV test, percentage distribution of women aged 15-49 by testing status and by whether they received the results of the last test, the percentage of women ever tested, and the percentage of women aged 15-49 who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Nauru 2007

| Background characteristic | Percentage who know where to get an HIV test | Percentage ever tested | Percentage ever tested and received results | Tested in the past 12 months and received results | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  |  |
| 15-24 | 35.0 | 8.7 | 7.7 | 4.2 | 247 |
| 15-19 | 29.2 | 1.8 | 0.7 | 0.7 | 117 |
| 20-24 | 40.2 | 14.8 | 13.9 | 7.4 | 131 |
| 25-29 | 40.8 | 16.5 | 16.2 | 6.1 | 96 |
| 30-39 | 48.1 | 16.6 | 14.2 | 2.3 | 146 |
| 40-49 | 48.9 | 10.2 | 5.8 | 0.7 | 128 |
| Marital status |  |  |  |  |  |
| Never married | 39.7 | 7.6 | 6.5 | 3.7 | 186 |
| Ever had sex | 40.6 | 11.0 | 9.3 | 5.0 | 122 |
| Never had sex | 37.8 | 1.2 | 1.2 | 1.2 | 64 |
| Married/living together | 41.8 | 13.2 | 11.9 | 3.1 | 386 |
| Divorced/separated/widowed | (51.7) | (20.4) | (10.2) | (4.3) | 46 |
| Education |  |  |  |  |  |
| Less than secondary | 15.1 | * | 0.0 | * | 13 |
| Secondary | 40.1 | 10.1 | 8.7 | 2.8 | 555 |
| More than secondary | 68.1 | 36.7 | 28.9 | 9.7 | 50 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 29.3 | 7.6 | 7.0 | 3.8 | 127 |
| Second | 47.9 | 12.8 | 8.7 | 3.2 | 126 |
| Middle | 40.2 | 10.6 | 10.1 | 4.5 | 129 |
| Fourth | 41.8 | 18.7 | 16.3 | 2.5 | 116 |
| Highest | 50.8 | 11.2 | 9.2 | 2.6 | 119 |
| Total 15-49 | 41.9 | 12.1 | 10.2 | 3.3 | 618 |

Overall, higher proportions of men ( 53.4 percent) than women (41.9 percent) reported they knew where to go to get an HIV test.

For men, one in six reported that they had ever been tested for HIV (15.6 percent) and one in ten reported that they had received their results (10.3 percent).

The proportion of men who reported they knew where to go to get an HIV test increased with age for men. Only 45 percent of men aged 15-24 reported that they knew where to get a test, compared with more than two-thirds of men aged 30-39 (69.8 percent).

The percentage of men who had ever had an HIV test, and those who had ever had a test and knew their results also increased with age for those aged 15-39.

Men from the highest wealth quintile were more likely to report they knew where to go for a test, have ever been tested, and ever had a test and received results, compared with men from other wealth quintiles.

## Table 12.9.2 Coverage of prior HIV testing - Men

Percentage of men aged 15-49 who know where to get an HIV test, percentage distribution of men aged 15-49 by testing status and by whether they received the results of the last test, the percentage of men ever tested, and the percentage of men aged 15-49 who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Nauru 2007

| Background characteristic | Percentage who know where to get an HIV test | Percentage ever tested | Percentage ever tested and received results | Tested in the past 12 months and received results | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  |  |
| 15-24 | 44.7 | 5.6 | 5.2 | 3.6 | 117 |
| 15-19 | 40.2 | 4.2 | 4.2 | 4.2 | 60 |
| 20-24 | 49.4 | 7.1 | 6.3 | 2.9 | 57 |
| 25-29 | 54.8 | 20.9 | 10.7 | 1.6 | 56 |
| 30-39 | 69.8 | 26.9 | 17.9 | 4.3 | 87 |
| 40-49 | 44.0 | 13.2 | 8.7 | 2.2 | 51 |
| Marital status |  |  |  |  |  |
| Never married | 49.3 | 11.7 | 10.4 | 5.8 | 119 |
| Ever had sex | 54.9 | 14.2 | 12.6 | 7.1 | 98 |
| Never had sex | 23.1 | * | 0.0 | * | 21 |
| Married/living together | 56.2 | 17.3 | 10.5 | 1.4 | 183 |
| Divorced/separated/widowed | 52.9 | * | 5.2 | * | 9 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 30.8 | (11.8) | 8.7 | (2.5) | 45 |
| Second | 46.4 | 13.0 | 6.2 | 0.7 | 67 |
| Middle | 49.7 | 13.7 | 10.0 | 4.6 | 64 |
| Fourth | 57.6 | 13.5 | 7.7 | 2.0 | 64 |
| Highest | 74.0 | 23.9 | 18.0 | 5.9 | 72 |
| Total 15-49 | 53.4 | 15.6 | 10.3 | 3.2 | 311 |
| 50+ | 67.4 | 0 | 0 | 0 | 43 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.

### 12.10 PREGNANT WOMEN COUNSELLED AND TESTED FOR HIV

Antenatal women need to know their HIV status in order to seek treatment and avoid MTCT if infected.

Of the 116 women who reported giving birth in the two years preceding the survey, 4.4 percent reported that they had received HIV counselling during antenatal care, 7.3 percent reported that they had been offered and accepted an HIV test during antenatal care and received the results from their test, 1.7 percent reported that they had been counselled, offered and accepted an HIV test during antenatal care and received the results from their test.

Due to the small numbers in subgroups for background characteristics, comparisons have not been made.

Table 12.10: Pregnant women counselled and tested for HIV
Among all women aged 15-49 who gave birth in the two years preceding the survey, the percentage who received HIV counselling during antenatal care for their most recent birth, and the percentage who accepted an offer of HIV testing by whether they received their test results, according to background characteristics, Nauru 2007

| Background characteristic | Percentage who received HIV counselling during antenatal care ${ }^{1}$ | Percentage who were offered and accepted an HIV test during antenatal care and who: |  | Percentage who were counselled, were offered and accepted an HIV test, and who received results ${ }^{2}$ | Number of women who gave birth in the last two years ${ }^{3}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Received results | Did not receive results |  |  |
| Age |  |  |  |  |  |
| 15-24 | 4.7 | 3.8 | 0.0 | 2.0 | 58 |
| 25-29 | (3.5) | (7.0) | (0.0) | (3.5) | 22 |
| 30-39 | (5.6) | (10.7) | (0.0) | (0.0) | 28 |
| 40-49 | * | * | * | * | 8 |
| Education |  |  |  |  |  |
| Less than secondary | * | * | * | * | 2 |
| Secondary | 4.8 | 7.9 | 0.0 | 1.8 | 107 |
| More than secondary | * | * | * | * | 7 |
| Total 15-49 | 4.4 | 7.3 | 1.4 | 1.7 | 116 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ In this context, 'counselled' means that someone talked with the respondent about all three of the following topics: a) babies getting the AIDS virus from their mother, b) preventing the virus, and c) getting tested for the virus.
${ }^{2}$ Only women who were offered the test are included here; women who were either required or asked for the test are excluded from the numerator of this measure.
${ }^{3}$ Denominator for percentages includes women who did not receive antenatal care for their last birth in the past two years.

### 12.11 SEXUALLY TRANSMITTED INFECTION PREVALENCE AND SYMPTOMS

STIs can cause acute illness, infertility, long-term disability, and even death if not diagnosed and treated appropriately. Second Generation Surveillance surveys ${ }^{15}$ in six Pacific Island countries in 2004-2005 showed a high prevalence of STIs among pregnant women, whom are considered to be representative of the general population in countries with low incidences of HIV. Chlamydia was the most prevalent STI, with prevalence ranging from $7.3-40.7$ percent for women aged less than 25 years from the six countries. Three percent of pregnant women overall had seropositivity for syphilis (includes previous and current infections) and 1.7 percent of women had gonorrhoea. These findings highlight the importance of awareness of STIs in Pacific Island countries.

The 2007 NDHS included questions to help estimate the prevalence of STIs and symptoms of STIs for women and men who reported having sexual intercourse in the 12 months prior to the survey. All respondents who ever had sex were asked if they had had an STI or symptoms of an STI (including bad-smelling and/or abnormal genital discharge and genital sore or ulcer) in the 12 months preceding the survey.

Table 12.13 presents the proportions of women aged $15-49$ and the proportion of men aged 15 years and older who reported having had an STI and/or symptoms of an STI in the past 12 months, by age group, marital status and education level.

Overall, only 2.3 percent of women and 1.3 percent of men reported that they were diagnosed with an STI in the previous 12 months. However, the prevalence of symptoms for STIs in the previous 12 months was much higher for both sexes.

[^15]For women, abnormal genital discharge was the most prevalent STI symptom, with 13.6 percent of women aged 15-49 reporting having this symptom in the previous 12 months.

Approximately 3.0 percent of women and men reported having a genital sore or ulceration in the previous 12 months.
Table 12.11: Self-reported prevalence of sexually transmitted infections (STIs) and STI symptoms
The percentage of women and men aged 15-49 who ever had sexual intercourse, the percentage reporting having an STI and/or symptoms of an STI in the past 12 months, by background characteristics, Nauru 2007

| Background characteristic | Women |  |  |  |  | Men |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | STI | Bad- smelling/ abnormal genital discharge | Genital sore/ulcer | STI/genital discharge/ sore or ulcer | Number of respondents who ever had sexual intercourse | STI | Bad -smelling/ abnormal genital discharge | Genital sorefulcer | STI/genital discharge/ sore or ulcer | Number of respondents who ever had sexual intercourse |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-24 | 3.5 | 16.9 | 3.4 | 20.2 | 185 | 1.4 | 3.2 | 3.6 | 6.0 | 97 |
| 15-19 | 0.0 | 15.2 | 1.2 | 16.4 | 63 | (0.0) | (3.8) | (2.2) | (6.0) | 40 |
| 20-24 | 5.3 | 17.9 | 4.5 | 22.1 | 122 | 2.4 | 2.8 | 4.5 | 6.1 | 57 |
| 25-29 | 1.7 | 19.1 | 3.5 | 19.1 | 96 | 1.2 | 1.2 | 1.2 | 1.2 | 56 |
| 30-39 | 2.6 | 9.6 | 4.2 | 14.3 | 145 | 2.0 | 2.0 | 5.2 | 7.1 | 87 |
| 40-49 | 0.8 | 9.1 | 2.1 | 11.6 | 128 | (0.0) | (2.9) | (3.8) | (6.7) | 50 |
| Marital status |  |  |  |  |  |  |  |  |  |  |
| Never married | 2.4 | 12.5 | 1.7 | 14.6 | 122 | 0.5 | 2.2 | 4.0 | 5.6 | 98 |
| Married or living together | 2.2 | 13.5 | 3.7 | 17.0 | 386 | 1.3 | 2.1 | 3.6 | 5.3 | 183 |
| Divorced/separated/ widowed | (2.7) | (16.9) | (4.4) | (16.9) | 46 | 10.4 | 10.4 | 0.0 | 10.4 | 9 |
| Education |  |  |  |  |  |  |  |  |  |  |
| Less than secondary | * | * | * | * | 12 | * | * | * | * | 20 |
| Secondary | 2.3 | 13.4 | 2.8 | 16.5 | 497 | 1.0 | 2.2 | 3.8 | 5.4 | 249 |
| More than secondary | (2.8) | (14.9) | (7.3) | (16.6) | 46 | * | * | * | * | 21 |
| Total 15-49 | 2.3 | 13.6 | 3.3 | 16.5 | 554 | 1.3 | 2.4 | 3.6 | 5.5 | 290 |
| 50+ | na | na | na | na | na | (0.0) | (0.0) | (0.0) | (0.0) | 43 |
| Total men $15+$ | na | na | na | na | na | 1.1 | 2.1 | 3.2 | 4.8 | 333 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases.
na $=$ not applicable

### 12.12 PREVALENCE OF MEDICAL INJECTIONS

The use of clean, unused syringes and needles is an important public health measure for preventing the transmission of blood-borne infections, including HIV. The 2007 NDHS asked respondents to recall information on medical injections in the last 12 months. Respondents who reported having at least one medical injection in the last 12 months were asked how many injections they had and whether syringe and needle for the last injection were taken from a new unopened packet.

Approximately one-fifth of 618 women ( 18.2 percent) and one-quarter of 311 men ( 22.4 percent) aged 15-49 reported that they had received a medical injection in the previous 12 months.

The average number of injections was 0.8 for women and 0.6 for men.
The majority of the 112 women who had a medical injection reported that the syringe and needle were taken from a new unopened package ( 93.7 percent). In contrast, only two-thirds of men aged 15-49 reported that the syringe and needle were taken from a new unopened package.

Table 12.12 Prevalence of medical injections
Percentage of women and men aged 15-49 who received at least one medical injection in the last 12 months, the average number of medical injections per person in the last 12 months; and among those who received a medical injection, the percentage of last medical injections for which the syringe and needle were taken from a new unopened package, by age, Nauru 2007

| Age | Women |  |  |  |  | Men |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who received a medical injection in the last 12 months | Average number of medical injections per person in the last 12 months | Number of respondents | For last injection, syringe and needle taken from a new, unopened package | Number of respondents receiving medical injections in the last 12 months | Percentage who received a medical injection in the last 12 months | Average number of medical injections per person in the last 12 months | Number of respondents | For last injection, syringe and needle taken from a new, unopened package | Number of respondents receiving medical injections in the last 12 months |
| 15-24 | 19.4 | 0.6 | 247 | 96.7 | 48 | 23.7 | 0.6 | 117 | (59.6) | 28 |
| 25-29 | 22.2 | 0.6 | 96 | * | 21 | 20.5 | 0.5 | 56 | * | 12 |
| 30-39 | 15.3 | 1.2 | 146 | * | 22 | 20.3 | 0.6 | 87 | * | 18 |
| 40-49 | 16.1 | 0.6 | 128 | * | 21 | 25.5 | 0.8 | 51 | * | 13 |
| Total 15-49 | 18.2 | 0.8 | 618 | 93.7 | 112 | 22.5 | 0.6 | 311 | 67.5 | 70 |
| Total men 15+ | na | na | na | na | na | 22.4 | 0.7 | 354 | 68.9 | 79 |

Notes: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
Medical injections are those given by a doctor, nurse, pharmacist, dentist or other health worker.
$n a=$ not applicable.

### 12.13 COMPREHENSIVE KNOWLEDGE ABOUT AIDS AND CONDOM SOURCES AMONG YOUTH

Knowledge of HIV transmission is important for young people in order to avoid placing themselves at risk of contracting this infection through high-risk behavours. Comprehensive knowledge about AIDS was defined as knowing that:

- people can reduce their chances of acquiring the AIDS virus if condoms are used consistently during sexual intercourse or by having just one uninfected faithful partner,
- a healthy-looking person can have the AIDS virus, and
- HIV cannot be transmitted by mosquito bites, supernatural means, or by sharing foods with a person infected with the virus.
Table 12.13 shows the proportions of young women and men who had a comprehensive knowledge of HIV and who knew of a recognised condom source.

Of the 247 women aged 15-24, only one in eight were found to have a comprehensive knowledge of AIDS, while over half reported that they knew of a condom source ( 58.8 percent).

Of the 117 men aged $15-24$, one in ten were found to have a comprehensive knowledge of AIDS while more than two-thirds reported that they knew of a condom source ( 69.8 percent).

Higher proportions of young women and men aged 20-24 were found to have a comprehensive knowledge of AIDS than those aged 15-19.

Young women and men aged 20-24 were also more likely to know where to source condoms compared with those aged 15-19.

Table 12.13: Comprehensive knowledge about AIDS and of a source of condoms among youth Percentage of young women and young men aged 15-24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by background characteristics, Nauru 2007

| Background characteristic | Women |  |  | Men |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage with comprehensive knowledge of AIDS ${ }^{1}$ | Percentage who know a condom source ${ }^{2}$ | Number of respondents | Percentage with comprehensive knowledge of AIDS ${ }^{1}$ | Percentage who know a condom source ${ }^{2}$ | Number of respondents |
| Age |  |  |  |  |  |  |
| 15-19 | 7.6 | 49.5 | 117 | 7.8 | 62.4 | 60 |
| 20-24 | 18.4 | 67.2 | 131 | 11.5 | 77.4 | 57 |
| Marital status |  |  |  |  |  |  |
| Never married | 11.3 | 55.2 | 143 | 11.6 | 66.2 | 84 |
| Ever had sex | 11.3 | 54.3 | 81 | 15.2 | 72.6 | 64 |
| Never had sex | 11.3 | 56.3 | 62 | * | * | 20 |
| Ever married | 16.1 | 63.9 | 104 | (4.6) | (78.8) | 33 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | (12.7) | 57.3 | 49 | * | * | 14 |
| Second | 17.3 | 55.5 | 53 | (5.5) | (64.5) | 29 |
| Middle | 9.8 | 58.5 | 54 | * | * | 18 |
| Fourth | 17.4 | 58.0 | 44 | (2.8) | (73.6) | 29 |
| Highest | (9.8) | 65.3 | 48 | (24.7) | (76.8) | 27 |
| Total | 13.3 | 58.8 | 247 | 9.6 | 69.8 | 117 |

[^16]
### 12.14 AGE AT FIRST SEXUAL INTERCOURSE AMONG YOUTH

Early engagement in sexual behaviour is an indication of early exposure to the risk of early pregnancy (especially for young women) and the risk of acquiring HIV and STIs for both sexes.

Because HIV transmission occurs predominantly through heterosexual intercourse between an infected and non-infected person, age at first intercourse marks the time at which most individuals are first exposed to the risk of acquiring HIV. Early pregnancy can contribute to high levels of fertility, and maternal, infant and child death in the country.

Table 12.14 shows the percentage of young women and men who reported having sexual intercourse younger than 15 and 18 years of age, by background characteristics.

The prevalence of sexual intercourse before age 15 was two times higher for young men ( 31.3 percent) than for women ( 14.8 percent). Young men were also more likely to have had sex before age 18 ( 76.1 percent) than young women ( 64.2 percent).

For young women, those who had ever married ( 23.5 percent) were more likely to report that they had sex before age 15 compared with those who had never married ( 8.6 percent).

There was a trend towards increased likelihood of sex before age 15 for women who did not know where to source a condom compared with those who reported that they did know of a condom source.

Table 12.14: Age at first sexual intercourse among youth
Percentage of young women and young men aged 15-24 who had sexual intercourse before age 15 and percentage of young women and young men aged 18-24 who had sexual intercourse before age 18, by background characteristics, Nauru 2007

| Background characteristic | Women |  |  |  | Men |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who had sexual intercourse before age 15 | Numbe of women (15-24) | Percentage who had sexual intercourse before age 18 | Number of women (18-24) | Percentage who had sexual intercourse before age 15 | Number of men (15-24) | Percentage who had sexual intercourse before age 18 | Number of men (18-24) |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 14.9 | 117 | na | na | 34.8 | 60 | na | na |
| 20-24 | 14.8 | 131 | 65.8 | 131 | 27.6 | 57 | 80.1 | 57 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 8.6 | 143 | 53.2 | 91 | 30.9 | 84 | (78.7) | 48 |
| Ever married | 23.5 | 104 | 74.7 | 95 | (32.3) | 33 | (72.1) | 31 |
| Knows condom source ${ }^{1}$ |  |  |  |  |  |  |  |  |
| Yes | 12.4 | 146 | 61.3 | 123 | 34.8 | 82 | 80.1 | 61 |
| No | 18.3 | 102 | 69.7 | 63 | (23.2) | 35 | * | 19 |
| Total | 14.8 | 247 | 64.2 | 187 | 31.3 | 117 | 76.1 | 79 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases. na $=$ not available
${ }^{1}$ For this table, the following responses are not considered to be a source for condoms: friends, family members and home.

### 12.15 CONDOM USE AT FIRST SEXUAL INTERCOURSE AMONG YOUTH

The 2007 NDHS included a question to estimate the extent to which condoms were used at first sexual intercourse among young women and men aged 15-24. The results are presented in Table 12.17 .

Overall, one in ten young women and one in fourteen young men reported using a condom at first intercourse. There were no definite age trends apparent for condom use at first sex for either sex.

Condom use at first sex was nearly three times higher for young women who knew where to source condoms ( 14.2 percent) compared with those who did not where to source condoms (5.4 percent).

Table 12.15 Condom use at first sexual intercourse among youth
Among young women and young men aged 15-24 who have ever had sexual intercourse, percentage who used a condom the first time they had sexual intercourse, by background characteristics, Nauru 2007

| Background characteristic | Women |  | Men |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Percentage who used a condom at first sexual intercourse | Number of women who have ever had sexual intercourse | Percentage who used a condom at first sexual intercourse | Number of men who have ever had sexual intercourse |
| Age |  |  |  |  |
| 15-19 | 12.6 | 63 | (5.4) | 40 |
| 20-24 | 9.7 | 122 | 8.3 | 57 |
| Marital status |  |  |  |  |
| Never married | 10.8 | 81 | 6.4 | 64 |
| Ever married | 10.6 | 104 | (8.3) | 33 |
| Knows condom source1 |  |  |  |  |
| Yes | 14.2 | 111 | 6.1 | 72 |
| No | 5.4 | 75 | (10.0) | 24 |
| Total | 10.7 | 185 | 7.1 | 97 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ For this table, the following responses are not considered to be a source for condoms: friends, family members and home.

### 12.16. PREMARITAL SEXUAL INTERCOURSE AND CONDOM USE

Premarital sexual intercourse in this report has been defined as a sexual relationship reported among never married women and men. The survey asked young unmarried respondents about condom use at last sexual intercourse.

Table 12.16 shows the proportions of never married women and men aged 15-24 who reported:

- never having had sexual intercourse,
- having had sexual intercourse in the last 12 months, and
- condom use during the last sexual intercourse for those who reported having sex in the last 12 months.
A higher proportion of young men ( 59.8 percent) than women (42.8 percent) reported having had sexual intercourse in the last 12 months.

One in seven young men (14.7 percent) who reported having sex in the last 12 months also reported using a condom at last sex, compared with one in ten young women ( 9.6 percent).
Table 12.16: Premarital sexual intercourse and condom use during premarital sexual intercourse among youth
Among never-married women and men aged 15-24, the percentage who have never had sexual intercourse, the percentage who had sexual intercourse in the past 12 months, and, among those who had premarital sexual intercourse in the past 12 months, the percentage who used a condom at last sexual intercourse, by background characteristics, Nauru 2007

| Background characteristic | Women |  |  |  |  | Men |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who have never had sexual intercourse | Percentage who had sexual intercourse in past 12 months | Number of nevermarried women | Percentage who used condom at last sexual intercourse | Number of never married women who have had sexual intercourse in the past 12 months | Percentage who have never had sexual intercourse | Percentage who had sexual intercourse in the past 12 months | Number of nevermarried men | Percentage who used condom at last sexual intercourse | Number of never married men who have had sexual intercourse in the past 12 months |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 57.5 | 36.9 | 93 | (6.9) | 34 | 36.5 | 52.1 | 53 | 8.6 | 28 |
| 20-24 | 17.0 | 53.8 | 50 | (13.0) | 27 | (2.3) | (73.2) | 31 | * | 22 |
| Knows condom source ${ }^{1}$ |  |  |  |  |  |  |  |  |  |  |
| Yes | 44.2 | 43.4 | 79 | (10.1) | 34 | 16.8 | 67.2 | 56 | (17.4) | 37 |
| No | 42.3 | 42.2 | 64 | (8.8) | 27 | 38.5 | (45.2) | 28 | * | 13 |
| Total | 43.3 | 42.8 | 143 | 9.6 | 61 | 24.1 | 59.8 | 84 | 14.7 | 50 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ For this table, the following responses are not considered to be a source for condoms: friends, family members and home.

### 12.17 HIGHER-RISK SEX AMONG YOUTH

Young adults are at increased risk of engaging in temporary sexual relationships that can expose them to STIs and HIV infection. Higher-risk sex is defined as having sex with two or more partners in the last 12 months. Condom use among young adults plays an important role in the prevention of transmission of HIV and other STIs, as well as unwanted pregnancies. Knowledge of a reliable condom source is an important requirement for consistent condom use (Tables 12.17.1 and 12.17.2).

Overall, about half of women aged 15-24 (45.4 percent) who had sexual intercourse in the past 12 months reported having higher-risk intercourse. A very low proportion of this group reported using a condom ( 9.8 percent).

A higher proportion of young women aged 15-19 (70.2 percent) had higher-risk intercourse in the past 12 months as compared with other age groups. All never married women interviewed reported having higher risk intercourse while about one in every ten reported using a condom at the last higher-risk intercourse.

Table 12.17.1: Higher-risk sexual intercourse among youth and condom use at last higher-risk intercourse in the past 12 months Women

Among young women aged 15-24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months, and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, by background characteristics, Nauru 2007

|  | Respondents 15-24 who had <br> sexual intercourse in the <br> past 12 months: | Respondents 15-24 who had <br> higher risk intercourse in the <br> past 12 months: |  |
| :--- | :---: | :---: | :---: |
| Percentage who <br> had higher-risk <br> intercourse in <br> the past 12 <br> months ${ }^{1}$ | Number of <br> respondents | Percentage who <br> reported using a <br> condom at last <br> higher-risk <br> intercourse ${ }^{1}$ | Number of <br> respondents |
| characteristic | 70.2 | 54 |  |
| Age | $*$ | 20 | $(6.3)$ |
| 15-19 | $(64.5)$ | 34 | $*$ |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent.
${ }^{2}$ For this table, the following responses are not considered to be a source for condoms: friends, family members and home.

In contrast, the majority of men aged 15-24 ( 80 percent) who had sexual intercourse in the past 12 months reported having higher-risk intercourse. About one in five used a condom. This is in contrast to 45 percent of women aged 15-49 who had sexual intercourse in the past 12 months.

Table 12.17.2: Higher-risk sexual intercourse among youth, and condom use at last higher-risk intercourse in the past 12 months - Men

Among young men aged 15-24, the percentage who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months; and among those having higher-risk intercourse in the past 12 months, the percentage reporting that used a condom at last higher-risk intercourse, by background characteristics, Nauru 2007

|  | Respondents 15-24 who had sexual <br> intercourse in the <br> past 12 months: | Respondents 15-24 who had higher <br> risk intercourse in the <br> past 12 months: |  |
| :--- | :---: | :---: | :---: |
|  | Percentage who <br> had higher-risk <br> intercourse in <br> the past <br> 12 months ${ }^{1}$ | Number of <br> respondents | Percentage who <br> reported using <br> a condom at <br> last higher-risk <br> intercourse ${ }^{1}$ |
| Background <br> characteristic | Number of <br> respondents |  |  |
| Age | $(95.7)$ | 30 |  |
| 15-19 | $*$ | 18 | 8.3 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent.
${ }^{2}$ For this table, the following responses are not considered to be a source for condoms: friends, family members and home.

### 12.18 ALCOHOL USE AND SEX AMONG YOUTH

Engaging in sex under the influence of alcohol can impair judgment, compromise power relations, and increase risky sexual behaviour. Respondents who had sex in the past 12 months were asked if they had sexual intercourse when they were 'drunk', and whether they or their partner had been 'drunk' when they had sexual intercourse in the last 12 months. Table 12.18 presents the findings for these questions for women and men aged 15-24 by background characteristics.

The prevalence of women and men having had sex in the last 12 months when they were drunk was twice as high for young men ( 32.3 percent) as it was for young women ( 15.1 percent). These proportions were higher when respondents were asked if they or their partner were drunk during sexual intercourse in the last 12 months.

Young men aged 20-24 were more likely to have had sex when they were drunk in the last 12 months ( 48.3 percent) than younger men aged $15-19$ years ( 17.0 percent).

A higher proportion of young women who had never married reported having sex when they or their partner were 'drunk' compared with ever married respondents.

Table 12.18: Alcohol use and sexual intercourse among youth
Among all young women and young men aged 15-24, the percentage who had sexual intercourse in the past 12 months while they were drunk and the percentage who had sexual intercourse in the past 12 months while being drunk or with a partner was drunk, by background characteristics, Nauru 2007

| Background characteristic | Women |  |  | Men |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who had sexual intercourse in the past 12 months when drunk | Percentage who had sexual intercourse in the past 12 months when drunk or with a partner who was drunk | Number of respondents | Percentage who had sexual intercourse in the past 12 months when drunk | Percentage who had sexual intercourse in the past 12 months when drunk or with a partner who was drunk | Number of respondents |
| Age |  |  |  |  |  |  |
| 15-19 | 10.3 | 15.4 | 117 | 17.0 | 21.5 | 60 |
| 15-17 | 5.5 | 11.1 | 61 | (14.2) | (21.3) | 38 |
| 18-19 | 15.5 | 20.0 | 56 | , | * | 22 |
| 20-24 | 12.6 | 14.9 | 131 | 48.3 | 49.8 | 57 |
| 20-22 | 13.5 | 16.1 | 82 | (48.9) | (51.4) | 37 |
| 23-24 | 11.1 | 12.7 | 49 | * | * | 21 |
| Marital status |  |  |  |  |  |  |
| Never married | 16.6 | 20.7 | 143 | 34.9 | 38.0 | 84 |
| Ever married | 4.6 | 7.5 | 104 | (25.9) | (28.6) | 33 |
| Knows condom source ${ }^{1}$ |  |  |  |  |  |  |
| Yes | 13.1 | 16.8 | 146 | 38.0 | 41.9 | 82 |
| No | 9.3 | 12.7 | 102 | 19.2 | 20.3 | 35 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | (13.3) | (15.0) | 49 | * | * | 14 |
| Second | 8.7 | 11.7 | 53 | 24.8 | 27.5 | 29 |
| Middle | 14.5 | 19.1 | 54 | * | * | 18 |
| Fourth | 13.4 | 17.4 | 44 | (22.8) | (29.4) | 29 |
| Highest | (7.7) | (12.4) | 48 | (51.6) | (54.9) | 27 |
| Total 15-24 | 11.5 | 15.1 | 247 | 32.3 | 35.4 | 117 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ For this table, the following responses are not considered to be a source for condoms: friends, family members and home.

### 12.19 RECENT HIV TESTING AMONG YOUTH

Table 12.19 shows the proportions of sexually active young women and men aged 15-24 who reported having an HIV test in the last 12 months, by age group, marital status and knowledge of where to source condoms.

Among youth who had been sexually active in the last 12 months, 1 in 17 women and 1 in 22 men reported having had an HIV test in the past 12 months.

For young women, 1 in 10 who knew where to source condoms reported they had an HIV test in the last 12 months, while none of the 61 women who did not know where to source condoms were tested.

## Table 12.19: Recent HIV tests among youth

Among young women and young men aged 15-24 who have had sexual intercourse in the past 12 months, the percentage who have had an HIV test in the past 12 months and received the results of the test, by background characteristics, Nauru 2007

|  | Women |  | Men |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Percentage who <br> have been tested <br> for HIV and <br> received results <br> in the past <br> 12 months | Number of <br> women | Percentage who <br> have been tested <br> for HIV and <br> received results in <br> the past <br> 12 months |  | | Number of |
| :---: |
| mackground |
| characteristic |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ For this table, the following responses are not considered to be a source for condoms: friends, family members and home.

### 12.20 PERCEPTIONS AND BELIEFS ABOUT ABSTINENCE AND FAITHFULNESS

Figure 12.7 shows the proportions of women and men aged 15-49 years who agreed with a number of statements on abstinence and faithfulness.

Higher proportions of men ( 54.9 percent) than women ( 42.5 percent) agreed that young men should wait until they are married to have sexual intercourse.

Two-thirds of women ( 69.6 percent) and men ( 67.4 percent) agreed that young women should wait until they are married to have sexual intercourse.

Most women ( 86.6 percent) and men ( 84.8 percent) agreed that married men should only have sex with their wives. In contrast, only one-quarter of women ( 26.1 percent) and one-third of men ( 36.4 percent) reported that most married men they knew only had sex with their wives.

The majority of women ( 92.3 percent) and men ( 88.9 percent) agreed that married women should only have sex with their husbands. However, less than one-half of women ( 48.8 percent) and men (39.5 percent) reported that most married women they knew only had sex with their husbands.

Figure 12.7: Perceptions and beliefs about abstinence and faithfulness, Nauru 2007


### 12.21 WOMEN AND MEN SEEKING TREATMENT FOR STIS

Figure 12.8 shows the proportions of women and men aged 15-49 who reported that they had an STI or had symptoms of an STI in the last 12 months and had sought advice or treatment.

Of the 91 women who reported having an STI or symptoms of an STI in the last 12 months, nearly two-thirds reported that they did not seek any advice or treatment. Of those who went for treatment, the majority obtained advice and/or treatment from a clinic or hospital, or from a private doctor or other health professional.

Figure 12.8: Women with an STI or symptoms of an STI, by source of advice and treatment


## STI treatments and/or advice

### 12.22 ABSTINENCE, BEING FAITHFUL AND CONDOM USE AMONG YOUNG WOMEN AND MEN

Figure 12.9 shows information on sexual abstinence, number of sexual partners, and condom use for young women and men aged 15-24.

The proportion of youth who reported never having had sex was higher for women than for men. For youth aged 15-19, less than one-half of women reported never having had sex (45.9 percent) compared with one-third of men ( 32.7 percent). Among youth aged 20-24, 6.5 percent of women reported never having had sex compared with only 1.2 percent of men.

A lower proportion of women aged 15-19 (8.1 percent) reported that they have had sex but not in the last 12 months, compared with men in that same age group ( 16.6 percent).

Very few young people who reported having had sex in the last 12 months also reported not using a condom the last time they had sex. This finding was consistent for young people who reported having only one partner and for those with more than one partner in the last 12 months.

Figure 12.9: Abstinence, being faithful and condom use among young women and men, Nauru 2007


### 12.23 KEY RESULTS

Overall, 73 percent of women and 83 percent of men aged 15-49 reported that they had heard of HIV and AIDS. The proportions of women and men with knowledge of HIV and AIDS increased with age.

Knowledge of preventing the sexual transmission of HIV was consistently higher for men than for women. However, just under one-half of women and nearly one-third of men did not know or acknowledge that using condoms correctly, limiting sexual intercourse to one uninfected partner, and abstaining from sexual intercourse are methods of preventing the sexual transmission of HIV.

Misconceptions about the transmission of HIV through other non-sexual means were widespread for both women and men. Knowledge was lowest for transmission through mosquito bites and sharing food with a person who has AIDS, for both sexes. Significant proportions of respondents did not acknowledge that a healthy-looking person could have the AIDS virus and that AIDS cannot be transmitted by supernatural means.

In concurrence with findings on knowledge of transmission and misconceptions, accepting attitudes toward those living with HIV were generally not widespread.

While nearly two-thirds of women and men agreed that they would be willing to care for a family member with the AIDS virus in their own home, less than one-half of people reported that they would want to keep it secret that a family member was infected with HIV and AIDS.

Comprehensive knowledge of HIV and AIDS was limited, with only 18.3 percent of women and 16.9 percent of men aged 15-49 correctly answering the five questions used to assess their knowledge. Knowledge was particularly poor among young people aged 15-19, with less than 8.0 percent of women and men in this age group assessed as having a comprehensive knowledge.

The majority of Nauruans had positive attitudes towards negotiating safer sex, with 86.6 percent of women and 78.3 percent of men agreeing that a woman is justified in refusing to have sex with her husband if he has a sexually transmitted disease.

One in ten women ( 10.5 percent) and one-third of men ( 35.7 percent) who reported having had sex in the last 12 months also indicated they had two or more partners in the last 12 months. Of these, less than 5.0 percent of women and 10.0 percent of men had used a condom at last sex.

Payment for sex among men was very uncommon in Nauru, with only two men indicating that they had paid for sex in the last 12 months.

Overall, 3.0 percent of women and 3.0 percent men reported they had been tested for HIV in the last 12 months and had received their results. Approximately one in ten women and men had ever been tested for HIV and received their results.

Of the 116 women who had given birth in the previous two years, only 1.7 percent reported that they had been counselled, offered and accepted an HIV test and received the results.

While only 2.3 percent of women and 1.3 percent of men reported that they were diagnosed with an STI in the last 12 months, the proportions reporting STI symptoms were much greater. Overall, 13.6 percent of women reported having an offensive smelling and/or abnormal genital discharge (the most common symptom) and 5.5 percent of men reported having a genital discharge, sore or ulcer in the last 12 months.

One in seven women and one in three men aged 15-24 reported that they had sex before age 15 . Condom use at first sex was also very low with 14.2 percent of women and 6.1 percent of men.

One-third of men and one in ten women aged 15-24 reported that they had sex when drunk in the last 12 months.

These findings indicate opportunities for:

- increasing the level of knowledge of transmission and misconceptions for HIV and STIs within the community, particularly among young adults aged $15-24$;
- promoting safe sex and the use of condoms; and
- increasing the proportions of people who seek medical treatment for symptoms of STIs and who know their HIV status.


[^0]:    ${ }^{1}$ Based on either a written record or the mother's recall.

[^1]:    ${ }^{1}$ Where the sum of the children (or other analysed entities, e.g. mothers) across the different categories in a differentiated analysis of a background variable is greater than the reported total in the bottom line (here: 323 children by birth order vs 322 ), the former count has been used. All counts are potentially modified through statistical weighting.
    ${ }^{2}$ In this chapter the term 'poor mother' refers to mothers belonging to households in the lowest wealth quintile.
    ${ }^{3}$ The questions asked were 'Do you currently smoke cigarettes?' and ‘Do you currently smoke or use any other type of tobacco?'
    ${ }^{4}$ In this chapter the term 'young mother' refers to mothers younger than age 20 at the time of delivery.

[^2]:    ${ }^{5}$ The 2007 NDHS questionnaire also asked for other providers, but because there are no other healthcare providers in Nauru, all health system contacts can be assumed to concern health facilities.

[^3]:    ${ }^{6}$ The sum of 100 percent is coincident.

[^4]:    Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
    ${ }^{1}$ See Table 2.7 for definition of categories.
    ${ }^{2}$ See Table 2.8 for definition of categories.

[^5]:    ${ }^{7}$ World Health Organization. 2006. Nauru STEPS 2004 report. Western Pacific Regional Office.

[^6]:    Notes: An asterisk indicates that a figure is based on fewer than 25 unveighted cases. Figures in parentheses are based on $25-49$ unweighted cases.

[^7]:    ${ }^{8}$. WHO. 1997. WHO Global Database on Child Growth and Malnutrition.

[^8]:    ${ }^{9}$ WHO and UNICEF 2003.
    ${ }^{10}$ Food groups used in the assessment of minimum standard of feeding practices include: infant formula, milk other than breast milk, cheese, yogurt or other milk products; foods made from grains, roots and tubers, including porridge and fortified baby food from grains; fruits and vegetables rich in vitamin A; other fruits and vegetables; eggs; meat, poultry, fish and shellfish (and organ meats); beans, peas and nuts; and foods made with oil, fat or butter.

[^9]:    ${ }^{11}$ UNAIDS/07.12E/JC1318E. Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on construction of core indicators. 2008 reporting.
    ${ }^{12}$ UNAIDS/07.15E/JC1338E. A framework for monitoring and evaluating HIV prevention programs for most-at-risk populations.

[^10]:    Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases.
    ${ }^{1}$ The two most common local misconceptions are that: HIV can be transmitted by a) supernatural means and witchcraft, and b) mosquito bites.
    ${ }^{2}$ Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

[^11]:    ${ }^{13}$ World Health Organization 2006. Second Generation Surveys of HIV, other STIs and risk behaviours in six Pacific Island countries (2004-2005).

[^12]:    Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on $25-49$ unweighted cases
    ${ }^{1}$ Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent.

[^13]:    ${ }^{1}$ Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent.

[^14]:    ${ }^{14}$ UNAIDS/07.12E/JC1318E. Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on construction of core indicators: 2008 reporting.

[^15]:    ${ }^{15}$ World Health Organization. 2006. Second Generation Surveys of HIV, other STIs and risk behaviours in 6 Pacific Island Countries (2004-2005).

[^16]:    Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases. Figures in parentheses are based on 25-49 unweighted cases.
    ${ }^{1}$ Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention. The components of comprehensive knowledge are presented in Tables 13.2, 13.3.1, and 13.3.2.
    ${ }^{2}$ For this table, the following responses are not considered to be sources for condoms: friends, family members and home.

