1 Introduction

The purpose of this report is to contribute to the development of a national food and nutrition monitoring system in Australia—in particular, to inform future data collection and the development of indicators. Through collating data relevant to the new Dietary Guidelines for Australian Adults (NHMRC 2003), this report highlights existing statistical measures that have been used to report on food and nutrition (for reference in indicator development) as well as gaps in data collection to date. The report also provides a comparison with existing food and nutrition measures and published data from a selected number of other countries.

1.1 Reporting against the Dietary Guidelines for Australian Adults

The National Health and Medical Research Council's Dietary Guidelines for Australian Adults (the dietary guidelines; see Box 1) are a key statement of Australia's policy goals and directions for supporting better nutritional outcomes for the population. The dietary guidelines focus on food consumption patterns and practices, and population nutritional status, and providing information on these areas has been highlighted as an essential component of a food and nutrition monitoring system (Lester 1994:272).

Box 1: Dietary guidelines for Australian adults

Enjoy a wide variety of nutritious foods

Eat plenty of vegetables, legumes and fruits

Eat plenty of cereals (including breads, rice, pasta and noodles), preferably wholegrain

Include lean meat, fish, poultry and/or alternatives

Include milks, yoghurts, cheeses and/or alternatives: reduced fat varieties should be chosen, where possible

Drink plenty of water

and take care to:

Limit saturated fat and moderate total fat intake

Choose foods low in salt

Limit your alcohol intake if you choose to drink

Consume only moderate amounts of sugars and foods containing added sugars

Prevent weight gain: be physically active and eat according to your energy needs

Care for your food: prepare and store it safely

Encourage and support breastfeeding

Source: NHMRC 2003.

Statistical measures previously published as part of nutrition monitoring activities, both in Australia and overseas, are presented in this report (see Table 1). This list of measures is not intended to be a definitive set, but rather to highlight existing data, and gaps in data availability, in order to contribute to other action relating to food and nutrition monitoring. This report follows on from and expands on the set of statistical measures reported in *Key Food and Nutrition Data for Australia 1990–1999* (Marks et al. 2001a), which were aligned to the 1992 dietary guidelines (NHMRC 1992), and includes measures recommended by other reports as appropriate for monitoring nutrition in Australia (e.g. Gill et al. 2004, AIHW 2004a). The measures presented here are aligned to the revised dietary guidelines and incorporate relevant new data.

There are some divergences from the dietary guidelines in this report, which should be noted. First, no measures have been specifically included for the first guideline, 'Enjoy a wide variety of nutritious foods'. It has been presumed that the key measures relevant to food diversity are encompassed within those relating to other guidelines. Second, this report includes two other priority nutrition issues—food security and folate—which have been highlighted in other reports as important aspects to monitor (particularly, Marks et al. 2001a, SIGNAL 2001, Gill et al. 2004) and for which data are available.

1.2 Food and nutrition monitoring in Australia

This report is designed to facilitate the development of Australian indicators for food and nutrition and inform future nutrition-related data collection—processes that will require appropriate consultation as part of the creation of a national food and nutrition monitoring system. Work towards this goal is already underway: in 2005, the Australian Government, in conjunction with the Strategic Inter-Governmental Nutrition Alliance (SIGNAL), funded the development of a framework and business case for an ongoing monitoring system for food and nutrition, within a broader chronic disease monitoring framework (Masters et al. 2005). This report also draws on previous work relating to food and nutrition monitoring conducted by the Australian Food and Nutrition Monitoring Unit (AFNMU) and, prior to this, by the AIHW (e.g. Lester 1994).

This report focuses on the development of indicators for food and nutrition because of their importance in public health as a tool to monitor progress towards goals (Webb et al. 2001:xii). Instituting regular reporting against a consistent set of indicators would help minimise gaps in nutrition-related data collection and provide a framework for publishing and disseminating relevant data. In particular, the development of such indicators would provide data to inform nutrition-related interventions and monitor their impact.

Some countries with established indicators for monitoring food and nutrition include the European Union (EU), the United States of America (USA) and Canada. In particular, the provisional indicators developed for the EU as part of a government-funded project (Sjöström et al. 2003) provide a useful summary of comprehensive

indicators for public health nutrition. However, it should be noted that they cover broader issues than those in this report, which are focused on food supply, food intake and nutritional status (based on the dietary guidelines).

Data presented in the report

By compiling statistical measures that have been previously published, this report provides a summary of existing measures used to report on food and nutrition, as well as a status report for monitoring relevant to the dietary guidelines. As the report is structured around the Dietary Guidelines for Australian Adults, only data sources relating to adults have been included. In addition, while many states and territories are actively collecting data relevant to food and nutrition monitoring, e.g. through computer-assisted telephone interviewing (CATI), this report will focus on nutrition data collection at the national level.

The main national data sources relevant to nutrition monitoring in Australia, in relation to reporting against the dietary guidelines, are the 1995 National Nutrition Survey (NNS), apparent consumption data, and the ongoing National Health Survey (NHS). These data sources are diverse in nature, but the data collected are complementary. Data from the 1995 NNS focus on food intakes of the survey population, apparent consumption on the food available for consumption (i.e. the food supply) and the NHS has a section with short questions regarding usual intakes, food choice and food security. Additional data sources include the 1989 Risk Factor Prevalence Survey (RFPS), the 1999–2000 AusDiab Study, the 2000 National Physical Activity Survey (NPAS), the 2004 National Drug Strategy Household Survey (NDSHS) and the data collected through OzFoodNet. Details of national data sources have been outlined in Appendix 1.

1.3 International data

Relevant statistical measures for selected countries have been presented for each section to provide further information relevant to the development of indicators in Australia. The selected countries are New Zealand, Canada, Japan, France, the USA and the United Kingdom (UK). The measures presented are those relevant to the Australian dietary guidelines.

The countries reviewed were selected based on their general comparability to Australia. They are all countries of the Organisation for Economic Cooperation and Development (OECD), and criteria such as region, state of economic development, food supply and availability of data were considered in their selection. Details on the data sources for these countries are presented in Appendix 1. Published data for the measures outlined in the report are presented in Appendix 2, with the exception of those from the USA National Health and Nutrition Examination Survey (NHANES)[1]. These data are generally not directly comparable because of differences in definitions

[1] Data from the NHANES are available free of charge on the Internet.

and age groups, but have been presented for reference. The data presented were sourced by direct request and through the Internet, including from the World Health Organization website as part of the Global Infobase Surveillance of Risk Factors country profiles (WHO 2005). Every effort has been made to identify and present all relevant and freely available data.

Table 1: Measures included in the report

Dietary guideline	Measures	National data sources
Eat plenty of vegetables, legumes and fruits	Apparent per capita consumption of fruit	Apparent consumption data, annually to 1998–99
	Apparent per capita consumption of vegetables (including legumes)	Apparent consumption data, annually to 1998–99
	Average daily intake of fruit among adults	NNS, 1995
	Average daily intake of vegetables among adults	NNS, 1995
	Average daily intake of legumes among adults	NNS, 1995
	Proportion of adults usually consuming 4 serves or more of vegetables per day	NHS, 2001
	Proportion of adults usually consuming 2 serves or more of fruit per day	NHS, 2001
Eat plenty of cereals (including breads, rice, pasta and noodles), preferably wholegrain	Apparent per capita consumption of grain products (cereals)	Apparent consumption data, annually to 1998–99
	Average daily intake of cereals among adults	NNS, 1995
	Average daily intake of fibre among adults	NNS, 1995
Include lean meat, fish, poultry and/or alternatives	Apparent per capita consumption of meat and meat products, poultry, seafood, nuts and eggs	Apparent consumption data, annually to 1998–99
	Average intakes of meat and meat dishes, fish, poultry and alternatives among adults	NNS, 1995
	Apparent per capita consumption of iron	Apparent consumption data, annually to 1997–98
	Average iron intake among adults	NNS, 1995
	Proportion of adults with iron deficiency	NRFPS, 1989
Include milks, yoghurts, cheeses and/or alternatives	Apparent per capita consumption of milk and milk products	Apparent consumption data, annually to 1998–99
	Average intakes of milk products and dishes among adults	NNS, 1995
	Apparent per capita consumption of calcium	Apparent consumption data, annually to 1997–98
	Average calcium intake among adults	NNS, 1995
Drink plenty of water	Average daily intakes: total moisture and non-alcoholic fluids among adults	NNS, 1995
Limit saturated fat and moderate total fat intake	Proportion of people consuming whole cow's milk	NHS, 2001
	Average daily intake of fat	NNS, 1995
	Average contribution of total fat as a proportion of energy intake	NNS, 1995
	Average contribution of saturated fat as a proportion of energy intake	NNS, 1995

(continued)

Table 1 (continued): Measures included in the report

Dietary guideline	Measures	National data sources
Choose foods low in salt	Proportion of people who regularly add salt to food after it is cooked	NHS, 2001
Limit your alcohol intake if you choose to drink	Apparent per capita consumption of alcohol	Apparent consumption data, annual
	Average daily alcohol intake among adults	NNS, 1995
	Proportion of adults who consume alcohol at risky or high-risk levels	NDSHS, 2004
Consume only moderate amounts of sugars and foods containing added sugars	Apparent per capita consumption of sugars	Apparent consumption data, annually to 1998–99
	Average daily sugar intake among adults	NNS, 1995
	Proportion of total energy intake from sugars	NNS, 1995
Prevent weight gain: be physically active and eat according to your energy needs	Average energy intake among adults	NNS, 1995
	Average ratio of energy intake to basal metabolic rate for adults	NNS, 1995
	Proportion of adults who are insufficiently active	NPAS, 2000
	Proportion of adults who are overweight or obese (BMI)	AusDiab, 1999–2000
	Proportion of adults who are abdominally obese (waist circumference)	AusDiab, 1999–2000
Care for your food: prepare and store it safely	Notification of foodborne illness received by Australian health authorities for selected foods	OzFoodNet, 2003
	Notification of foodborne illness received by Australian health authorities, by setting where the outbreak occurred	OzFoodNet, 2003
Encourage and support breastfeeding	Per cent ever breastfed	NHS, 2001
	Per cent breastfeeding at 6 and 12 months of age	NHS, 2001
	Per cent fully breastfeeding at 3 and 6 months of age	NHS, 2001
Other nutritional issues: food security	Proportion of people who ran out of food and did not have enough money to buy more in the last 12 months	NHS, 2001
Other nutritional issues: folate	Apparent per capita consumption of folate	Apparent consumption data, annually to 1997–98
	Proportion of women of child-bearing age (18–49 years of age) who intentionally use folate-fortified foods, drinks or supplements	NHS, 2001
	Average folate intake among adults	NNS, 1995

AusDiab Australian Diabetes, Obesity and Lifestyle Study
NHS National Health Survey
NNS National Nutrition Survey
NDSHS National Drug Strategy Household Survey
NPAS National Physical Activity Survey
RFPS Risk Factor Prevalence Survey