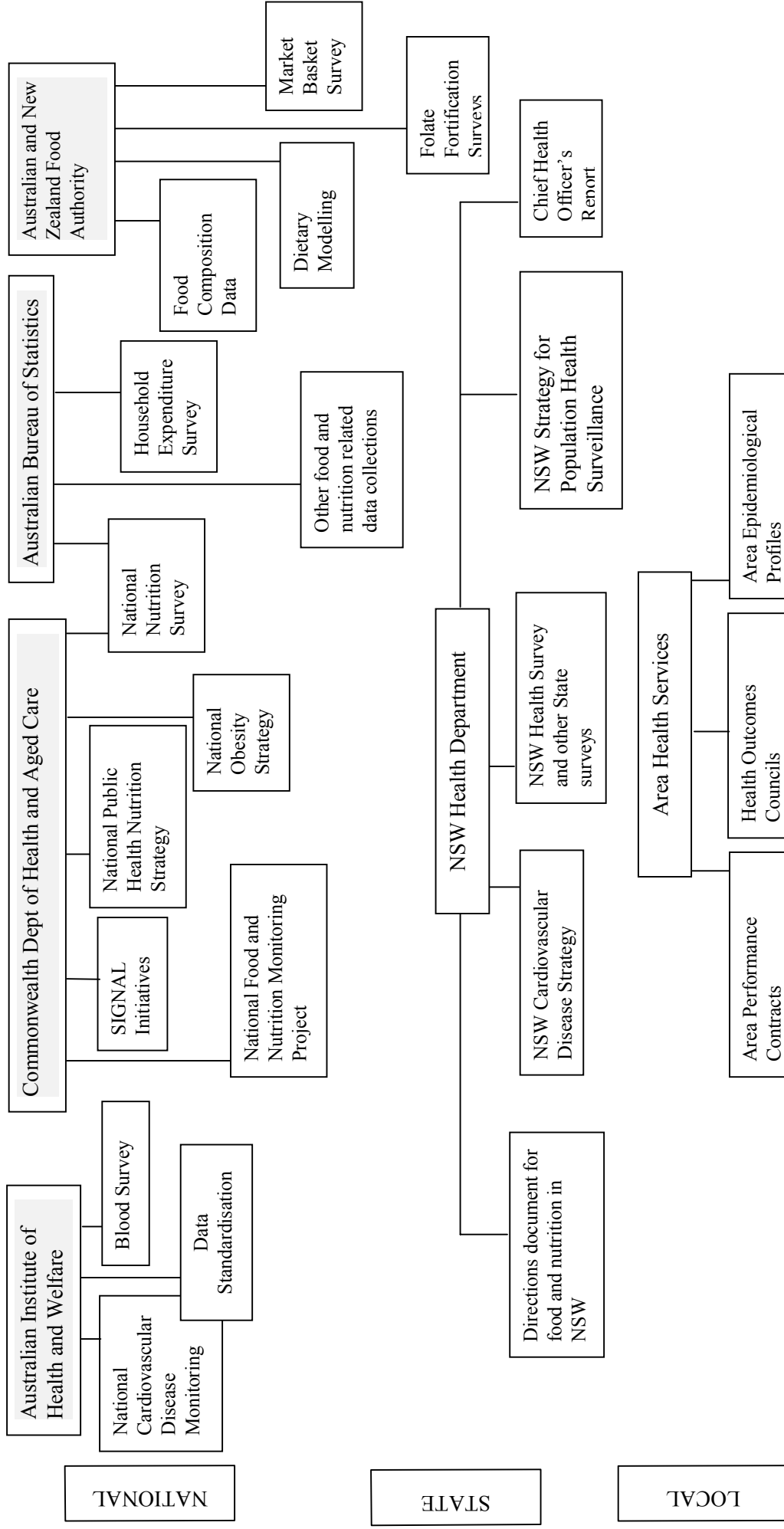


Figure 1.3: Some current examples of initiatives that will benefit from a planned approach to nutrition monitoring in NSW



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## Chapter 2: Recommendations for specific monitoring initiatives in NSW

### 2.1 What is the best way to ensure support for future nutrition monitoring initiatives in NSW?

#### 2.1.1 *The establishment of a mechanism for decision-making regarding food and nutrition monitoring in NSW*

During the life of the NSW Food and Nutrition Monitoring Project, the Project team and the NSW Health Department Advisory Group to the Project were the core decision-making groups for nutrition monitoring in NSW. Beyond the life of the Project, no established group will take responsibility for implementation of *Recommendations for Food and Nutrition Monitoring in NSW*. The NSW Health Department needs to consider ways to address the support of the implementation of the document, for example a working party to make decisions regarding future monitoring initiatives and to provide the State-based forum for discussion of issues relevant to national nutrition monitoring (refer to Chapter 3).

#### 2.1.2 *The establishment of an ongoing strategic partnership to support nutrition monitoring*

To ensure that future nutrition monitoring initiatives in NSW are relevant, timely and effective, the NSW Health Department could consider establishing a partnership with a group which has expertise in nutritional epidemiology and nutrition monitoring.

Establishing formal links between the practice of ‘public health epidemiology’ (in government health departments and their regional offshoots), and ‘research epidemiology’ (in universities and other research organisations) has been recommended as a method of:

- effectively utilising the methodological expertise which is too often isolated in universities,
- linking relevant research and policy development, and
- establishing a mechanism for quickly initiating research on questions that arise through surveillance (Kaldor 1997).

Such a partnership would:

- provide the flexibility necessary to cope with changing demands and expectations for nutrition information in NSW,
- furnish an expert group with sufficient ‘critical mass’ to address nutrition monitoring needs as they arise,
- prevent the dissipation of expertise, and support capacity building and corporate memory for nutrition monitoring in NSW,

- support a long-term arrangement which is essential for ongoing data collection, analysis, dissemination and future planning of monitoring initiatives,
- provide an alternative to the current practice of tendering for individual projects, which is an inefficient mechanism for a process which needs to be coordinated, flexible, innovative and both responsive and pro-active, and
- establish a capacity to respond to special requests for data analysis, including the statistical support required for such analysis.

During the development of *Recommendations for Food and Nutrition Monitoring in NSW*, the Project team was called upon to support several major initiatives relevant to nutrition monitoring in NSW. These included:

- development of the request for analysis of NSW data from the National Nutrition Survey,
- development of nutrition questions for the NSW Health Survey,
- analysis of the nutrition questions from the NSW Health Survey,
- technical advice regarding the analysis of the nutrition questions from the NSW Health Promotion Survey,
- development of nutrition questions for the Drug and Alcohol Schools' Survey,
- development of State-wide nutrition indicators for the NSW Health Department's Model Area Performance Contract,
- assisting in preparation and review of nutrition section of the 1997 Chief Health Officer's Report,
- answering many requests from Area Health personnel for help with nutrition monitoring (short questionnaires, data analysis, etc.).

The number and type of requests made during this one year period was not unusual. In the past, some support was provided for such requests by the Department of Public Health and Community Medicine, University of Sydney but the capacity to respond was limited. The proposed strategic partnership would ensure timely availability of the necessary capacity to respond to these types of requests.

Such a partnership could be established by providing a basic level of core funding to an existing department, for example, for a five year period, which would become the NSW Food and Nutrition Monitoring Unit. This funding would need to be allocated through the NSW Health Department tendering process. A precedent for longer-term funding arrangements has been set by the triennial funding of non-government organisations by the NSW Health Department.

## **2.2 What are the main nutrition monitoring initiatives which require support for implementation or development in NSW?**

### **2.2.1 Validation of self-reported heights and weights from the NSW Health Survey**

The NSW Health Survey includes information on self-reported weights and heights in order to determine weight status of the NSW population. However, previous research has highlighted

the limitations of self-reported weight and height data, including considerable misclassification of weight status, with the extent of misclassification varying between population subgroups, over time and with the conditions under which people self-report the information. It is particularly important to validate self-reported data taken from telephone interviews (the method used in the NSW Health Survey) as this may vary from data collected in face-to-face interviews (National Health Survey - validation study ABS 4359.0 1998) and/or when respondents know their weights and heights will later be measured (National Heart Foundation Risk Factor Prevalence Surveys - validation study Waters 1993).

As part of the work of the NSW Food and Nutrition Monitoring Project on monitoring of overweight and obesity (refer to Chapter 6 and NSW HD 2000), a detailed proposal was developed for the measurement of weights and heights on a sub sample of respondents from the NSW Health Survey. This validation study was subsequently conducted (Flood et al 1999). The results give some indication of the validity of self-reported weight and height data in telephone surveys and will therefore be of interest for all users of the NSW Health Survey and others planning telephone surveys that include such self-reported data. However, because the survey was conducted on a small sample with a low response rate in one Area Health Service, further investigation of this issue would be worthwhile before drawing conclusions. In addition, such validation studies need to be repeated at regular intervals as the relationship between self-reported and measured values is likely to change over time.

### **2.2.2 Analysis and dissemination of National Nutrition Survey data for NSW**

The 1995 National Nutrition Survey (NNS) is the most comprehensive nutrition survey of the Australian population ever undertaken and provides:

- the first nationally representative data on the food and nutrient intakes of Australians since the 1983 and 1985 National Dietary Surveys,
- the first data on food and nutrient intakes for many population subgroups including young children, young adults, older people and rural Australians,
- an opportunity to link the nutrition data from the NNS with National Health Survey data on socio-economic status, self-reported health status and use of health services.

The NNS NSW sample is sufficiently large for some analyses by age and sex, and by metropolitan/rural areas. There are three national NNS publications, but these only contain limited State information. The Australian Bureau of Statistics (ABS) are responsible for the analysis and presentation of NNS data for national purposes and have produced a set of State tabulations for particular issues not included in the national publications. These have been provided to States as paper copies of data tables - no official reports with summaries or interpretation of data are planned.

The NSW Food and Nutrition Monitoring Project identified the NNS information most relevant to NSW priorities (refer to Chapter 5 and Appendix 3). Together with the three national publications, the State tabulations provide NSW with approximately one third of the data identified in the definition of NSW priorities. Thus, there is a substantial amount of useful data available regarding NSW priorities which has not been analysed.

Chapter 5 contains a detailed discussion of the need for analysis and dissemination of NSW NNS data beyond what has been prepared by the ABS, including options for conducting this analysis and dissemination of the results.

### **2.2.3 Short modules for use in population-based surveys of children and adolescents**

Short questions included in population-based surveys can provide useful information about food habits on a regular basis. Recommendations for nutrition-related questions for use in population-based surveys in NSW have been made as part of the work of the NSW Food and Nutrition Monitoring Project (refer to Chapter 4 and Hewitt et al 1998). It is essential that such questions be appropriately tested for their validity so that users of the information can be confident of the results and their interpretation for particular population subgroups. There has been limited validation of food and nutrition-related questionnaires and no validation of short sets of diet questions for use with children and adolescents in population-based surveys in Australia. The major food sources of selected nutrients of concern in the diets of children differ from those of adults. Further, children's attention to what they have consumed, their ability to recall what they have eaten and to average dietary intake to report 'usual' consumption, is different to that of adults. Thus, questions and methods developed for adults are not directly relevant to children and adolescents.

The development of such questions and their subsequent validation is timely and would provide important information for users of the NSW Health Survey and for others conducting population-based surveys involving children and adolescents, such as the school-based surveys conducted by the NSW Health Department.

### **2.2.4 Production and dissemination of the first update of Food and Nutrition in New South Wales - a catalogue of data**

*Food and Nutrition in New South Wales - a catalogue of data* (Stickney et al 1994) was the first comprehensive collation of information about the food and nutrition situation in NSW, and essentially the first step in the development of recommendations for food and nutrition monitoring in NSW. The production of this publication, funded by the NSW Health Department, was a substantial undertaking. Updating of the catalogue in its current form would not be an efficient method of disseminating the food and nutrition information which has become available since 1994. The production of short reports updating specific aspects of the food and nutrition situation in NSW would be a more feasible and user-friendly option.

Topics for short reports should be chosen based on:

- current requirements for nutrition data for policy and program planning and evaluation,
- the types of data which have become available since the last update.

The topics most relevant for the first update of the NSW Food and Nutrition Catalogue would be the consumption of core food groups (fruits, vegetables, breads and cereals) and the prevalence of overweight and obesity.

This would involve appropriate analysis and presentation of NSW data which have been collected since the production of the 1994 NSW Food and Nutrition Catalogue (including data from the 1995 National Nutrition Survey, the 1994 NSW Health Promotion Survey, the 1996 NSW School Survey and the NSW Health Survey).

Such an update in compilation of existing data would be useful for many purposes, for example, it would provide information relevant to the State-wide promotion of fruits and vegetables and confirm trends in overweight and obesity in NSW.

### **2.2.5 Options for improving our understanding of the retail food supply in NSW**

#### *2.2.5.1 A NSW Food Supply Project*

The Queensland Food Supply Project was conducted in 1995-96 to 'describe the Queensland food system and identify the major factors that influence food availability, price, quality and variety, with particular emphasis on rural and remote areas' (Hughes et al 1997). Specific objectives were to:

- describe the food system in Queensland,
- define strategies to address factors that impact upon the food supply and identify where they should be implemented, and
- identify areas for investigation/intervention which could be best achieved by government working collaboratively with industry, other States, Territories and/or Commonwealth agencies.

The project included identification of major distributors and wholesalers, and measurement of price, range, quality and access to foods across rural and remote Queensland. Information was collected through a range of activities, including:

- collection and review of relevant literature,
- collection of demographic, economic and health statistics,
- field trips to over 50 Queensland communities and consultations with over 250 community leaders, health professionals, food producers, wholesalers and retailers, transport operators, government representatives, and consumers across rural and remote Queensland,
- creation of a retail food database containing over 550 food retail establishments in Queensland,
- community surveys on price, quality, quantity, range and access to foods in retail food outlets,
- inputs from and intersectoral steering committee, and
- a workshop with food and transport industry representatives.

Recommendations were made for a food system strategy in Queensland, including implications for public health nutrition policy formulation and implementation.

At the time of compilation of data for *Food and Nutrition in New South Wales - a catalogue of data* (Stickney et al 1994), the information available about the food retail sector in NSW was limited, particularly for rural and remote areas of NSW where problems of limited access

are likely to be greatest. Conducting a project in NSW, using the same methodology as the Queensland Food Supply Project, would provide a detailed analysis of the NSW food retail system, including price, availability, quality, quantity and access to food in retail food outlets, and the factors which influence the retail food supply. This would:

- update, and improve, the food retail data from the NSW Food and Nutrition Catalogue,
- provide information which would be relatively comparable to the Queensland study (given the time difference between the two studies), and
- support the development of NSW policies and programs relevant to the food retail system.

#### 2.2.5.2 *Use of scanning retail sales data for nutrition monitoring*

As part of the work of the National Food and Nutrition Monitoring Unit of the AIHW, an assessment was made of the potential to use scanned retail sales data for nutrition monitoring purposes. A report was produced based on a study using retail sales records for 12 stores in Melbourne in 1993-94 (Watson et al 1995), and included discussion of issues such as:

- access to data,
- data management,
- data quality,
- constraints on data interpretation,
- contribution of scan data to nutrition monitoring, and the
- cost-effectiveness of scan data for monitoring.

The authors concluded that:

- access to data from a representative sample of stores would best be negotiated through the Australian Supermarket Institute or with a major company which has outlets throughout Australia,
- there were issues relating to data management, quality, analysis and interpretation which would need to be taken into account if scan data were used for nutrition monitoring, but that,

scan data:

- have the potential to provide information which is not available on a regular basis from other existing data sources currently used for nutrition monitoring,
- are useful for provision of regular, up-to-date information about shifts in the cost, availability and relative market share of specific food products of nutritional interest, such as polyunsaturated and monounsaturated fat spread, whole and reduced-fat milks and fortified and unfortified breakfast cereals,
- have the potential to be used for local and regional as well as national level monitoring,
- have limited potential for monitoring socio-demographic differentials in food product sales, and
- are likely to be a relatively cost-effective source of data for nutrition monitoring.

There are currently no plans at the national level to investigate brand scan data further, or to establish a national system for collation, analysis and interpretation of brand scan data for monitoring purposes. The establishment of such a system in NSW, however, has the potential to provide valuable information about sales of food products relevant to current State nutrition

priorities, such as breads and cereals. Funding of such a system is therefore one option for updating and improving the currently available food retail data for NSW.

### **2.2.6 Growth monitoring of children in vulnerable population sub-groups**

Growth is a sensitive indicator of nutritional status early in life. Growth stunting and wasting are uncommon in the general population, and so there would be little point to monitoring the growth of all children. However, malnutrition that can be detected by growth monitoring is more common in vulnerable groups such as Aborigines, and those of low socioeconomic status. Growth monitoring in sentinel areas would enable us to identify, track and address rates of malnutrition amongst these vulnerable groups in NSW. Timely feedback of data to relevant community workers and representatives is a well-documented and effective intervention as well as a monitoring process.

The development of a system for monitoring growth among nutritionally vulnerable children in NSW, as an outcome measure of childhood nutritional status, is needed to contribute to improved nutrition programs that target growth. Steps would include:

- consultation and literature review to identify the major purposes of a growth monitoring system, the users and potential users of growth data, what should be measured, among whom, where (sentinel communities in NSW appropriate for such growth monitoring), how, and who would be responsible for data collection, and
- development of a model for analysis and feedback of results which will contribute to better nutrition interventions.

## **2.3 Other nutrition monitoring initiatives which require support in NSW**

### **2.3.1 Improved documentation of trends in the incidence of neural tube defects and Wernicke's encephalopathy**

Two important questions relating to the impact of current Australian food fortification initiatives are:

- what effect has the mandatory thiamine enrichment of bread-making flour had on the incidence of Wernicke's encephalopathy, and
- what effect will the fortification of the food supply with folate have on the prevention of neural tube defects (Coles-Rutishauser and Lester 1995).

Documentation of trends in the incidence of these conditions in NSW and many other States and Territories is currently inadequate (Bower et al 1993, Ma and Truswell 1995, Wood 1998). Improvements in the NSW monitoring of these conditions is therefore essential to contribute to national statistics in order to answer these questions.

### **2.3.2 Studies of food insecurity among disadvantaged groups**

Recommendations for monitoring food insecurity as part of the NSW Health Survey have been made in Chapter 4 of this document and the accompanying report on questions for use in population-based surveys in NSW (Hewitt et al 1998). However, only limited questions can be used in general health surveys of this kind, and telephone methodology tends to exclude the most socio-economically disadvantaged groups, as they are the most likely to be without a phone, to be transient and/or to be living in temporary accommodation.

To provide an adequate picture of the extent of food insecurity in NSW, including an assessment of those groups most at risk, a more detailed investigation is required. The best method would be sentinel site studies in selected areas which have a high proportion of residents from subgroups of the population most at risk of food insecurity, including Aboriginals, people of low socio-economic status and the elderly. Some information about the elderly population will be provided by the Blue Mountains Eye Study, but this data will need appropriate analysis, dissemination and repeat measurements which are not part of the current plans for this survey. Thus, specific funding will be needed to adequately assess food insecurity in NSW.

### **2.3.3 Improved collation and dissemination of data on the initiation and duration of breastfeeding**

Monitoring of trends in breastfeeding rates has been identified as a priority at the national level (CDHHCS 1993, Nutbeam et al 1993, Coles-Rutishauser and Lester 1995) and specific funds have recently been allocated to improve national breastfeeding monitoring as part of the Commonwealth's National Food and Nutrition Monitoring Project. At a minimum, a monitoring system should include the collection of data on full and partial breastfeeding at the time of hospital discharge, and at 3 and 6 months postpartum.

Monitoring of breastfeeding initiation rates and duration has been somewhat haphazard in most Australian States, including NSW. Data about patterns of pregnancy care services and pregnancy outcomes are collected for every birth in NSW via the NSW Midwives Data Collection. This data collection provides a precedent for the gathering and collation of hospital data about mothers and babies in NSW. The most consistent data about the duration of breastfeeding has been collected by the Victorian Department of Community Services and Health, compiled on an annual basis by staff at Maternal and Child Health Centres (Lester 1994).

Questions about breastfeeding were included in the 1989-90 National Health Survey (NHS), but these provided only limited data on the prevalence and duration of breastfeeding. More extensive data were collected in the 1995 NHS, but these will not provide estimates at the Area Health Service level, or for specific subgroups of the population such as Aboriginals, and the NHS occurs only at five yearly intervals. Recommendations have been made for inclusion of the 1995 NHS questions in the NSW Health Survey at three yearly intervals (refer to Chapter 4), but the inclusion of these questions is not guaranteed.

In NSW, better information on the initiation and duration of breastfeeding is needed to allow monitoring of progress towards national breastfeeding targets. The National Food and Nutrition Monitoring Project will assess the quality and relevance of data gathered in the most recent NHS and on that basis will seek consensus between States and Territories on the best questions for monitoring breastfeeding incidence and duration. NSW should participate actively in this process. In addition, NSW Health could investigate the feasibility of using current NSW collections which include breastfeeding data to improve information about the prevalence and duration of breastfeeding in NSW.

#### **2.3.4 Development, piloting and validation of a feasible monitoring system for the assessment of the food supply in child care centres**

A checklist was developed as part of the *Caring for Children* package (Bunney and Williams 1996) which can be applied to menus in child care centres to give guidance on the food provided. This checklist is widely used by nutritionists, health workers and child care centres in NSW, but it has several limitations:

- there is no standard method recommended for collection of data about the foods provided by the centres, i.e., the data to which the checklist is applied varies,
- more detailed instructions are required to ensure that the criteria are used consistently by different users - to prevent misclassification errors,
- there are no recommendations for standard collation of data from several centres, analysis and interpretation of data for reporting on progress at the Area or State level,
- there has been no validation of a standard method which includes instructions about data collection, application of the checklist, collation, analysis and interpretation of the data.

A project to design a feasible monitoring system for child care centres, including development of a comprehensive method for application of the *Caring for Children* criteria, and the pilot testing and validation of this method would ensure that currently available and widely used methods were standardised, and that the interpretation of the data they provided was clear and consistent.

#### **2.3.5 Continued funding of the development of a method for assessing the adequacy of menus in NSW Healthcare Facilities**

A Menu Assessment Tool for Healthcare Facilities was developed as the first stage in a NSW Health Department Project designed to answer the question, 'Are menus in NSW healthcare facilities meeting the nutritional requirements of the clients and patients?'

Stages of the project were development, testing, documentation and dissemination. The manual version of the assessment tool was disseminated in 1999 (NSW HD1999). The computerised version is on hold pending developments with CBORD conversion to Windows version, and assessment of demand for a computerised version. Funding of the next stages of this project will be required to ensure that the tool is integrated into a useable method, that the method is accepted and adopted by those who assess menus in healthcare facilities, and that the data are appropriately collated, analysed and disseminated.

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## Chapter 3: National networking to enhance NSW Food and Nutrition Monitoring

### 3.1 What is the most efficient method of national networking for food and nutrition monitoring?

#### 3.1.1 Need for coordination

There are structural and organisational links between the national, State and local levels of the health system and each can support the others in the development and implementation of monitoring initiatives. To date, however, the cooperation between these three levels with regard to monitoring initiatives has been somewhat haphazard, resulting in duplication of effort, incompatibility of survey methods and vastly different ‘stages’ of development of monitoring systems in each of the States and Territories. Thus, there is a need for a forum to encourage discussion of food and nutrition monitoring issues which are relevant to all three levels of the health system. In particular, national networking between all of the States and Territories is required to ensure that State level monitoring is efficient, standardised and useful.

#### 3.1.2 The National Public Health Partnership

The National Public Health Partnership (NPHP) has been set up to identify ways that national, State and local government responsibilities in public health services, policies, research etc can be made more consistent, coordinated and collaborative. The Partnership provides considerable capacity to manage issues such as strategy development and coordinated implementation of the National Food and Nutrition Policy and plans to provide a vehicle for coordination of health information (refer to the introduction of this document for more information on the NPHP).

#### 3.1.3 SIGNAL

A national partnership of the key government stakeholders in food and nutrition has been established as the first step in the development of a National Public Health Nutrition Strategy (Catford et al 1997). This strategy will form the basis of the government health sector’s response to Phase 2 of the implementation of Australia’s Food and Nutrition Policy. The **Strategic Inter Governmental Nutrition Alliance (SIGNAL)**, consists of representatives from the Commonwealth Department of Health and Aged Care, State and Territory Health Departments, the Australian Institute of Health and Welfare (AIHW), the Australia and New Zealand Food Authority (ANZFA) and the National Health and Medical Research Council (NHMRC). SIGNAL reports to the NPHP (Catford et al 1997). SIGNAL will provide a useful forum for discussion of, advocacy for and development of the monitoring initiatives in Section 3.2. Use of this forum to discuss monitoring initiatives would also maximise the

contribution of the States and Territories to national monitoring enterprises, for instance, some of the work of this NSW Food and Nutrition Monitoring Project and the Queensland Health Monitoring Project would be useful in considering State-specific roles, responsibilities and comparability of methods.

### **3.1.4 The National Food and Nutrition Monitoring Project**

The Commonwealth Department of Health and Aged Care has awarded a contract to Dr. Geoff Marks, Nutrition Program, University of Queensland, with involvement from Dr. Karen Webb, Department of Public Health and Community Medicine, University of Sydney for the development and management of Australia's food and nutrition monitoring and surveillance system. This is a major initiative that will form the basis of ongoing monitoring and surveillance activities in Australia. Major elements involve: analysis and reporting on existing national data sources, including the 1995 National Nutrition Survey; developing standardised approaches to the collection, analysis, and reporting of food and nutrition data; collation and analysis of data to address specific nutrition policy issues; and developing strategies for effective dissemination and application of information to decision making. The project will complement and benefit state-level efforts in nutrition monitoring, by working towards a consistent approach to nutrition information with consideration for various user needs.

This project will be a valuable partner in national networking of monitoring initiatives.

## **3.2 What are the main issues which require networking at the national level to enhance NSW Food and Nutrition Monitoring?**

### **3.2.1 Better analysis and dissemination of national data collections**

#### *3.2.1.1 The National Nutrition Survey*

The 1995 National Nutrition Survey (NNS) provides the best information available on the food and nutrient intakes of the Australian population. In order for this information to be useful for monitoring purposes, the survey must be repeated at regular intervals. It is possible that the NNS will be repeated, but federal commitment to such an endeavour is uncertain and is tied to future political and health system change. Nutrition representatives from the States and Territories of Australia therefore have a role in:

- advocating for future National Nutrition Surveys to occur,
- ensuring a forum and process for discussion of content, methodology, analysis, presentation and interpretation of data, and
- gaining commitment at the federal level for adequate resources to conduct data analysis and interpretation for States and Territories.

#### *3.2.1.2 The Household Expenditure Survey*

The ABS *Household Expenditure Survey (HES)* (ABS 6535.0) is conducted periodically and provides information on average weekly expenditure on broad level items (e.g., housing, food and beverages, transport etc), as well as medium and fine level items (over 100 food categories at the fine level). Differences in household expenditure between States, household income deciles, and rural and urban residence are also published. The main limitations of the data are that:

- the food categories cannot be disaggregated sufficiently to assess expenditure on more and less nutritious foods within groups, and
- the quantities of food purchased are not identified, so that differences in expenditure do not necessarily indicate differences in food consumption, and may reflect only the purchase of more or less expensive varieties of the same commodities.

If data about the quantities of food purchased (and more specific foods types), as well as the amount of money spent on food, were collected as part of the HES, this would provide information about differentials in household food acquisition and expenditure, and the price of foods, in rural and urban areas. Such changes in the HES methodology would be a cost-effective way of obtaining such information (Coles-Rutishauser and Lester 1995). Thus, there is a need for networking at the national and State level to advocate for improvements in the HES survey methodology to maximise the value of the data for nutrition monitoring purposes.

### 3.2.1.3 *The National Aboriginal and Torres Strait Islander Survey*

The 1994 *National Aboriginal and Torres Strait Islander Survey (NATSIS)* included short questions on intake of foods high in sugar and fat, food security and breastfeeding (ABS 4190.0 1994). However, there is uncertainty about the validity of the nutrition questions used.

Measured heights and weights were collected, but:

- the information about overweight and obesity presented in a major publication from this survey is difficult to interpret as adolescents and adults were grouped together using adult BMI categories (ABS 4190.0 1994), and
- there was no presentation of data about the weight status of children 5-12 years of age.

Liaison at the national and State levels is needed to discuss:

- methodology and analysis of future surveys involving Aboriginal and Torres Strait Islander people, and
- the possibility of further analysis and presentation of the data on overweight and obesity from the 1994 survey.

### 3.2.1.4 *Surveys of food prices*

The ABS publications *Consumer Price Index* (ABS 6401.0) and *Average Retail Prices of Selected Items, Eight Capital Cities* (ABS 6403.0) provide regular information about food prices for metropolitan areas in Australia. There is currently no coordinated and regular data collection about the price of foods in rural and remote areas of Australia, where transport and other costs have a greater impact on prices (Coles-Rutishauser and Lester 1995).

There is a need for State and national support for an expanded collection of retail price information outside metropolitan areas for foods of nutritional interest, including expansion of the sampling for the *Consumer Price Index* and *Average Retail Prices of Selected Items, Eight Capital Cities*.

### 3.2.1.5 *Surveys of food retail outlets and food service outlets*

Information about the number and turnover of selected food retail outlets, cafes and restaurants is available periodically from the ABS, the latest publication being *Retailing in Australia* (ABS 8613.0 1993). Information is not collected from institutional food service outlets such as child care centres, schools and hospitals, nor does it provide any indication as to the types of foods sold or the promotion and pricing of foods.

BIS Shrapnel produce regular summaries of food retail and food service data for Australia, aimed mainly at retailers, food service providers and food manufacturers.

The Queensland Food Supply Project was conducted in 1995-96 to 'describe the Queensland food system and identify the major factors that influence food availability, price, quality and variety, with particular emphasis on rural and remote areas' (Hughes et al 1997). This study provides a model for assessment of the food supply in NSW.

Retail brand scan data has the potential to provide timely information on trends in cost, availability, and sales of specific food products - data which are not available on a regular basis from other existing data sources currently used for nutrition monitoring.

Recommendations for NSW have been made in Chapter 2 regarding:

- replication of the Queensland Food Supply Survey in NSW,
- collation and analysis of State-wide brand scan data from retail outlets, and
- monitoring food services in NSW, including child care centres and healthcare facilities.

In addition to these recommendations, State and national liaison and discussion are needed in relation to:

- improving current data collections about food retail outlets,
- improvement, use and dissemination of current summaries of food retail and food service data, and
- the possibility of a national system for collation, analysis and interpretation of brand scan data.

### **3.2.2 Continued development of standard measures for indicators relevant to food and nutrition**

#### *3.2.2.1 General*

Recommendations have been made in Chapter 4 for short modules, i.e., sets of questions or scales, for use in population-based surveys in NSW and NSW Health Areas. These are 'interim' recommendations, based on the best available information at the time of publication. They do not replace the need for continuing research and development, at the national level, regarding the best short modules for nutrition monitoring. Commissioning methods-oriented research of this nature is best done at the national level, to ensure comparability between national surveys and those conducted in different States and Territories of Australia.

#### *3.2.2.2 Monitoring food habits and intakes in ethnic population groups*

In Australia, to date, little work has been done to develop short sets of diet-related questions for use with ethnic populations. Thus, methods are not available to measure food habits of ethnic groups in population-based surveys (refer to Chapter 4 and Hewitt et al 1998). Some of the questions which have been recommended for inclusion in the NSW Health Survey, are likely to be as valid for the main ethnic subgroups as they are for the general population of NSW, for example, those relating to fruit, vegetable, bread and cereal intake. However, questions about food habits relating to fat intake may not be appropriate for use with ethnic groups, because main sources of fat in their diets differ considerably from the general Australian population.

Five of the main language groups represented in NSW are Arabic, Chinese, Italian, Greek and Vietnamese populations. Together, those who speak these languages at home account for approximately 10% of the NSW population (NSW HD 1996). Although the traditional diets of these ethnic groups have some nutritional advantages over the Australian way of eating, acculturation to Australian eating habits will tend to increase the risk of diet-related chronic diseases such as cardiovascular disease among ethnic groups.

There is a need for the development and validation of questions that reflect the food habits and nutrient intakes of groups such as the Chinese, Greek and Vietnamese populations. Data from previous studies of the dietary intake of these groups could be used to develop short sets of questions. For other groups, developmental work will need to be undertaken initially, in order to identify relevant food habits and appropriate questions (refer to Hewitt et al 1998 for more information).

The development and validation of short questionnaires for ethnic groups is a national, as well as a State priority and should be coordinated at the national level (Coles-Rutishauser and Lester 1995).

### 3.2.2.3 *Monitoring food habits and intakes in Aboriginal and Torres Strait Islander populations*

At present, the 1994 *National Aboriginal and Torres Strait Islander Survey* (ABS 4190.0 1994) provides the only questions for use in population-based surveys that specifically monitor the food habits and food intakes of Aboriginal and Torres Strait Islander populations. These questions aim to categorise the population broadly with respect to fat and sugar intake. Questions were also included in this survey on breastfeeding initiation and duration. How well these questions perform in different settings and geographic locations is not known (refer to Chapter 4 and Hewitt et al 1998).

There is a need for further development and validation of questions for use in population-based surveys that assess breastfeeding initiation and duration, as well as the food habits and intakes, of Aboriginal and Torres Strait Islander populations. The differences in dietary intake between sub-groups of this population (e.g., Torres Strait Islanders compared with mainland Aboriginal people, those living in the Top End compared with those living in the southern Australian states, and rural compared with urban Aboriginal populations) need to be considered in the development of such questions.

As with questions for ethnic populations, the development and validation of questions for use with indigenous populations is relevant at the national, as well as State level, and should therefore be coordinated nationally (Coles-Rutishauser and Lester 1995).

### **3.2.3 *Developmental work for monitoring overweight and obesity***

The AIHW and the NHMRC are currently in the process of developing standards and methods for monitoring overweight and obesity as part of the implementation phase of the documents - *Outline of a national monitoring system for cardiovascular disease* (Bennett et al 1995) and *Acting on Australia's Weight - A strategic plan for the prevention of overweight and obesity* (NHMRC 1997). Recommendations made in Chapter 6 of this document may be of interest to these groups. The NSW Health Department should maintain involvement with the national planning process to ensure compatibility between State and national initiatives.

Priorities should include the assessment of trends in weight status, particularly among vulnerable groups. The target groups identified at the national level do not include people from non-English speaking backgrounds, people of low socio-economic status or older people. The NSW Health Department should therefore advocate for the monitoring of overweight and obesity in these at-risk population sub-groups at the national level.

### **3.2.4 *Assessment of nutrition-related biochemical indices***

The AIHW, in their *Outline of a national monitoring system for cardiovascular disease* (Bennett et al 1995) recommended that the National Nutrition Survey (NNS) be converted into a continuous data collection which includes blood sampling. The National Heart Foundation (NHF) Risk Factor Prevalence Surveys of 1980, 1983 and 1989 provide the only

national data collections of blood samples in recent years. There are no plans for the NHF Risk Factor Prevalence Surveys to be repeated and the 1995 National Nutrition Survey did not include blood measurements. Given the lack of current information about the cholesterol levels of the Australian population, the AIHW plans to recommend that a survey be conducted which includes the collection of blood samples as well as some physical measurements. Although blood cholesterol is of particular interest, such a survey has the potential to provide information for monitoring purposes on other nutrition-related biochemical indices such as iron and folate status. These are of particular concern among specific subgroups of the population and because of current advertising and/or fortification programs.

The NSW Health Department should advocate for this survey to be conducted and for the inclusion of analyses for measurements of interest, such as folate levels, haemoglobin concentrations, iron stores, total cholesterol, high density lipoprotein cholesterol (HDL), and low density lipoprotein cholesterol (LDL). Other physical measurements collected as part of this survey are likely to include blood pressure and measured weight and height which will contribute monitoring data for NSW.

State and Territory assistance with the conduct of such a survey may increase the likelihood of the survey occurring. Assistance might involve, for example, the inclusion of data collection into regional staff responsibilities and/or the ‘piggy-backing’ of blood collection onto existing State-wide surveys.

The repeated collection of blood samples on a representative sample of the Australian population, including appropriate analysis and dissemination of the results, is essential for a comprehensive food and nutrition monitoring system at both the national and State levels. Discussion at the national level, involving representatives from all States and Territories, is needed to ensure that such data collection occurs and that it provides the most appropriate data in relation to current nutrition priorities.

### **3.3 Other issues which require networking at the national level to enhance NSW Food and Nutrition Monitoring**

Other issues currently on the monitoring agenda at the national level, and which NSW should support, are the **assessment of the effectiveness of folate fortification of foods** and the **development of new food safety reporting mechanisms**.

Monitoring of sodium intakes is another identified priority. Given that most of the sodium in the diets of Australians comes from processed foods, the best way to monitor the **sodium intake of the population** is by tracking the sodium content of processed foods and their relative market share. Nutrient composition data are compiled and updated at the national level and thus, advocacy for improved tracking of the sodium content of processed foods should be directed towards the Commonwealth. Monitoring the relative market share of processed foods high in sodium could be accomplished by using brand scan data (refer to Section 3.2.1.5).

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## **Chapter 4: Short modules for measuring key aspects of food habits and food intakes in population-based surveys in NSW**

### **4.1 Why make recommendations for short modules for monitoring nutrition issues in population-based surveys?**

The need has been widely recognised for standard short methods to assess food intake and food habits of various population groups in Australia. *A guide to instruments for monitoring food intake, food habits and dietary change* was developed by the Food and Nutrition Monitoring Unit of the AIHW to encourage debate on the topic (Coles-Rutishauser 1996). This document presents instruments used for measuring particular indicators. It also summarises the issues that need to be addressed in the development of standard questions. The document does not provide recommendations as to which instruments should be used for each indicator. The report states that “information about the repeatability and validity of most instruments in current use is lacking” and recommendations can not be made confidently until the results of current validation studies are available.

The NSW Health Department and NSW Health Areas need to monitor progress toward the achievement of nutrition goals and targets. Population-based surveys are a cost-effective and timely way of monitoring selected food habits and food intakes relevant to current policy initiatives. It is unlikely that any ‘single topic’ surveys will be conducted on a regular basis in NSW in the near future. It is therefore important to include nutrition questions in population surveys of risk factors, fitness and other health issues which sample representative groups of the NSW population. These types of surveys are conducted regularly but when nutrition topics are included, there is little consistency in the questions used. This limits the comparability of data (Stickney et al 1994, Coles-Rutishauser 1996). The use of standard instruments by those conducting population-based surveys will help ensure comparability of results from State, regional and local surveys and will assist in monitoring progress over time toward nutrition goals and targets.

### **4.2 Why is it important to monitor key aspects of food habits and food intakes in NSW**

- To provide information on the prevalence of, and trends in, selected food habits and food intakes;
- To provide information for policy and program development;
- To assess the impact of intervention ;
- To monitor progress towards the achievement of nutrition goals and targets;
- To provide information relevant to Area Performance Contracts.

### 4.3 Modules for use in the NSW Health Survey and other surveys of the general adult population in NSW

Short questionnaires are not intended to replace periodic population dietary surveys, but they are useful for tracking selected food habits and food intakes. Recommendations for diet-related questions for use in population-based surveys in NSW were made as part of the work of the NSW Food and Nutrition Monitoring Project. Recommended questions, the rationale for their selection and relevant indicators are described in detail in a separate report - *Measuring key aspects of food habits and food intakes in population-based surveys in NSW: recommendations for short modules* (Hewitt et al 1998).

The detailed report (Hewitt et al 1998) was designed for:

- The **NSW Health Department** including the Sun Exposure, Nutrition and Physical Activity Policy Unit; Health Promotion Branch; Research and Clinical Policy Branch and the Epidemiology and Surveillance Branch,
- **Area Health Personnel** including Health Promotion and Public Health Unit personnel, Community Nutritionists, and Health Outcomes Councils, and
- **Public Health and Nutrition researchers** and anyone else who needs to use nutrition data.

Recommendations were made, in the first instance, regarding questions for use in the NSW Health Survey. The questions would also be appropriate for use in other surveys in NSW.

The recommendations included:

- short modules for inclusion in the annual 'core' component of the NSW Health Survey
  - weight status
  - core food group intake (fruit, vegetables, breads and cereals)
  - fat intake
- supplementary modules for periodic inclusion in future NSW surveys
  - breastfeeding and other infant feeding practices;
  - food security, barriers to dietary change and meal patterns;
  - food habits related to intake of saturated fat, calcium and iron;
  - core food group intake as assessed in the 1996 Tasmanian Food and Nutrition Study;

### 4.4 Nutrition issues and methods for use in short modules

#### 4.4.1 Children and adolescents

Children's attention to what they have consumed, their ability to recall what they have eaten and to average dietary intake to report 'usual' consumption, is different to that of adults. Thus, questions and methods developed for adults are not directly relevant to children and adolescents.

Observation methods to obtain accurate dietary assessments of children avoid errors of recall (Simons-Morton and Baranowski 1991), but these methods are expensive and time-consuming and are not appropriate for large-scale studies. Some form of self-report is therefore required to assess children's diets. Self-reported information necessarily reflects cognitive processes which differ at different stages of childhood and adolescence (Baranowski and Domel 1994).

Age and respondent capability are important reasons for designing different dietary interview methods (Frank 1994). There is a rapid increase in the capability of children to respond to eating behaviour inquiries beginning at 7-8 years of age. Frank (1977, 1991) proposes that by 10-12 years of age, children can self-report their own diets. This capability plateaus throughout adolescence into adulthood until about age 60-70 years.

The consensus is that children's ability to accurately describe foods they consume is improved by using prompts (such as visual aids), probes and adequate instruction (Baranowski et al 1986, Jenner et al 1989, Karvetti and Knutts 1992, Persson and Carlgren 1984). Telephone surveys are limiting since visual prompts are not a possibility. However, probing questions, such as questions about food eaten around certain daily events, may be a useful alternative.

The *Youth Risk Behaviour Survey* (YRBS), a national survey conducted among high school students (aged 15-18 years) in the USA in 1993, included a short module on weight status and food habits (Kann et al 1995). The survey used a self-administered questionnaire conducted in the classroom during a regular class period. These questions are not recommended for use in Australia because the types of foods included and/or the wording of the questions are not appropriate for Australian diets.

There has been limited validation of food and nutrition-related **questionnaires** and no validation of **short sets of diet questions** for use with children and adolescents in population-based surveys in Australia. Recommendations for the **development** of short questions for use with Australian children are made in Chapter 2 of this report (refer to Section 2.2.3).

#### **4.4.2 Ethnic population groups**

In Australia, to date, little work has been done to develop short sets of diet-related questions for use with ethnic populations. Thus, methods are failing to assess food and nutrient issues of current public health interest among ethnic groups. Some questions recommended for inclusion in the NSW Health Survey are likely to be as valid for the main ethnic subgroups as they are for the general population of NSW, for example, those relating to fruit, vegetable, bread and cereal intake. However, questions about food habits relating to fat intake may not be appropriate for use with ethnic groups, because main sources of fat in their diets differ considerably from the general Australian population.

There is a need for the development and validation of questions that reflect the food habits and nutrient intakes of groups such as Chinese, Greek and Vietnamese populations. Data from previous studies of the dietary intake of these groups could be used to develop short sets of questions (Hsu-Hage et al 1995, Ireland et al 1994, Mitchell 1995). For other groups, such as the Arabic and Italian populations, developmental work will need to be undertaken to identify relevant food habits and appropriate questions.