

CONCLUSION

Modest improvements have occurred in some chemical levels for parameters of water quality in swimming pools. Since the introduction of the NSW Department of Health's Public Swimming and Spa Pool Guidelines 1996 greater emphasis has been placed on maintaining disinfection at a level that will assist in the removal of disease-causing organisms.

Pool operators not meeting requirements of the 1996 Guidelines were given on the spot advice to rectify problems identified in the survey. Failures in chemical levels for parameters alone do not necessarily mean a health risk to the public. Where failures were identified, additional factors were considered such as number of bathers, and type and method of disinfection. If the pool was assessed as a public health risk it would be closed until problems were rectified. In this survey, none of the pools required closure.

The Mid Western Public Health Unit will be working with pool operators during the 2001–2002 summer season to ensure that appropriate maintenance and monitoring occurs. With regard to chemical levels for

parameters of water quality, an emphasis will be placed on chlorine and pH levels, as these are considered the greatest risk to public health if not maintained appropriately.

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DEVELOPMENT OF A CHILD AND YOUTH HEALTH REPORT CARD FOR CENTRAL SYDNEY, 2000

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This article describes how the first Child and Youth Report Card for the Central Sydney Area Health Service (CSAHS) was developed. The purpose of the Report Card is to contribute to the improvement of child and youth health outcomes through supporting service planning by providing regular information on the status of child and youth health in CSAHS to managers, planners, health professionals and other relevant stakeholders in child and youth health.

BACKGROUND

Over the past decade there has been an increased focus nationally and internationally on useful ways of monitoring child and youth health for the purpose of informing service planning.^{1–3} The emphasis is moving from using information that is available and easy to collect for routine reporting, to information that is more helpful to service planning and service delivery, and for monitoring health outcomes.

The Strategic Plan *Health Gain for Children and Youth in Central Sydney* marked a first attempt in the CSAHS to determine priority issues for children and youth.⁴ It used the *Health Goals and Targets for Australian Children*

and Youth as a basis for the plan.⁵ 'High priority' health issues were ascertained by analysing information on:

- prevalence
- severity of a condition
- community concern for the issue
- efficacy of available interventions.

METHODS

To establish the Report Card, it was necessary to determine the information that would be useful to include. In order to build on the work undertaken for the Strategic Plan—and to improve our understanding of indicators—Mahmic, Alperstein and Ward undertook a survey of 36 national and international 'experts' in child and youth health (unpublished data). 'Experts' were health professionals who had expertise in both child health and public health. The response rate was 72 per cent (26 respondents).

A questionnaire requested the experts to rate the importance of monitoring 135 health, social and educational issues for the population as a whole and for the socioeconomically disadvantaged, and also to rate how frequently the data should be collected (annually or every five years, etc.). The list of 135 issues was developed from the Strategic Plan as well as from the national and international literature on the monitoring of child health and indicators. The responses were analysed for agreement by the experts at two levels of concordance—75 per cent and 90 per

TABLE 1 SUMMARY OF INDICATORS RATED AS ESSENTIAL TO COLLECT FOR THE WHOLE POPULATION, AND FOR THE SOCIOECONOMICALLY DISADVANTAGED, AT 75 PER CENT AGREEMENT

Indicators	Essential for the population as a whole	Essential for the socioeconomically disadvantaged
INFANTS (0–1 years)	No. (%)	No. (%)
Mortality		
Infant	26 (100)	21 (81)
Perinatal	25 (96)	21 (81)
Sudden Infant Death Syndrome	25 (96)	-
Unintentional injury	24 (92)	20 (77)
Drowning	23 (88)	-
Traffic related	23 (88)	-
Morbidity, Disability and Developmental		
Physical abuse	26 (100)	21 (81)
Pertussis cases	25 (96)	20 (77)
Sexual abuse	24 (92)	-
Birth defects (overall)	24 (92)	-
Prematurity	23 (88)	21 (81)
Unintentional injury	23 (88)	-
Low birthweight	23 (88)	23 (88)
Neural tube defects	23 (88)	-
Measles	23 (88)	-
Haemophilus influenza type B	23 (88)	-
Traffic-related injuries	22 (85)	-
Breastfeeding at three months	22 (85)	20 (77)
Burns and scalds	21 (81)	-
Congenital rubella	21 (81)	-
Falls	20 (77)	-
Neglect	20 (77)	-
CHILDREN (1–9 years)		
Mortality		
Unintentional injury	25 (96)	21 (81)
Poisoning	25 (96)	-
Drowning	24 (92)	-
Traffic related	24 (92)	20 (77)
Falls	22 (85)	-
Morbidity, Disability and Developmental		
Physical abuse	26 (100)	21 (81)
Sexual abuse	25 (96)	20 (77)
Measles	24 (92)	20 (77)
Pertussis	24 (92)	-
Fully immunised at age two years	24 (92)	20 (77)
Unintentional injury	23 (88)	-
Fully immunised at school entry	23 (88)	20 (77)
Traffic-related injuries	22 (85)	-
Poisoning	21 (81)	-
Disability (all cases)	21 (81)	-
Burns and scalds	20 (77)	-
Emotional abuse	20 (77)	-
Neglect	20 (77)	-
ADOLESCENTS (10–18 years)		
Mortality		
Unintentional injury	26 (100)	20 (77)
Suicide	26 (100)	-
Traffic related	25 (96)	20 (77)
Poisoning	23 (88)	-
Morbidity, Disability and Developmental		
Unintentional injury (all cases)	24 (92)	-
Tobacco consumption rates	24 (92)	20 (77)
Alcohol consumption rates	23 (88)	-
Sexually Transmitted Diseases	23 (88)	-
HIV–AIDS	23 (88)	-
Self-inflicted injuries	22 (85)	-
Disability (all cases)	22 (85)	-
Teenage births	22 (85)	-
Physical abuse	22 (85)	-
Sexual abuse	22 (85)	-
Traffic-related injuries	21 (81)	-
Other substance abuse	20 (77)	20 (77)
SOCIAL AND EDUCATION		
Families below poverty line	24 (92)	23 (88)
High school retention rate	24 (92)	24 (92)
Children in foster care	23 (88)	21 (81)
Unemployment rate	23 (88)	23 (88)
Youths in juvenile justice	22 (85)	23 (88)
Overall homeless rate	21 (81)	-
Youth homeless rate	21 (81)	20 (77)
Family homeless rate	20 (77)	-

TABLE 2

SUMMARY OF HEALTH STATUS OF CHILDREN AND YOUTH IN CSAHS COMPARED TO NSW

Health goal or target	Rate compared to NSW	Rate compared to NSW	Rate compared to NSW
Reduce preventable premature mortality	Worse ☹☹☹ Perinatal mortality Falls deaths Poisoning deaths	Similar ☹☹ Infant mortality (+) Burns deaths (+)	Better ☺☺☺☺☺☺ SIDS deaths Drowning deaths Total unintentional deaths Traffic deaths AIDS deaths Suicide 10–19
Reduce the effect of disability	Worse ☹☹ Asthma hospitalisations Traffic-related injury	Similar ☹☹ Low birth-weight (-) Prematurity (-)	Better ☺☺☺☺☺☺☺☺ Neural tube defects Birth defects overall Drowning hospitalisations Unintentional injury hospitalisations Burns hospitalisations Falls hospitalisations Poisons hospitalisations Sensorineural hearing loss
Reduce the effect of vaccine-preventable disease	Worse	Similar ☹☹☹ Measles (+) Influenza type B (+) Immunisation Coverage (+)	Better ☺ Pertussis
Reduce the effect of conditions occurring in adulthood that have their origins in childhood or adolescence	Worse ☹☹☹☹ Male smoking prevalence Hepatitis C 15–19 years Hepatitis B 0–19 years Gonorrhoea 0–19 years	Similar ☹☹☹ Dental disease (-) Syphilis 0–19 years (-) Breastfeeding at discharge from hospital (-)	Better ☺☺☺ Maternal smoking in pregnancy Female smoking prevalence AIDS
Enhance family and social functioning	Worse ☹☹☹☹ Self harm 10–14 Homelessness Youth crime High school retention	Similar ☹☹☹☹ Divorce (-) Youth unemployment (-) Child abuse and neglect (-) Basic skills test performance (-)	Better ☺☺ Teenage births Self harm 15–19
TOTAL SCORE	Worse 13 ☹	Similar 14 ☹	Better 20 ☺

cent. The results were collated using both the 75 per cent and 90 per cent levels of concordance that the information was important to collect for the population as a whole and the socioeconomically disadvantaged, and the 75 per cent level of concordance for how frequently the data should be collected.

The feasibility of collecting information from a range of sources was assessed by reviewing sources of health information and consulting with other sectors including housing, education, community services, juvenile justice, NSW Roads and Traffic Authority and Australian Hearing Services. Representatives from Aboriginal and some Non-English Speaking Background (NESB) groups in the health sector were also consulted to ascertain the importance and the cultural sensitivity of reporting certain types of information.

To establish ways that we could best present the information to suit a wide readership, we reviewed a range of local, national and international reports monitoring child health.¹⁻³

Finally, a draft of a near complete version of the Report Card was evaluated using a semi-structured, qualitative, self-administered questionnaire. The questionnaire was distributed to local service planners and managers of the sectors involved. The questionnaire covered content, the format to be used for data presentation, and the potential use of the various sections of the Report Card.

RESULTS

At the 75 per cent level of agreement, 64 indicators were rated as essential to monitor for the population as a whole, and 25 indicator were rated as essential to monitor for the

TABLE 3

TWO EXAMPLES TO ILLUSTRATE THE USE OF INDICATORS FOR TARGET SETTING AND SERVICE PLANNING

Health Issue	Indicator	Data Source	Current Level CSAHS	Current Level NSW	Current level Aboriginal & Torres Strait Islander	Current level OSB or LSAH not English	Target 2003	Future trend	Past trend	Relevant programs required
Antenatal										
Maternal smoking in pregnancy rate	% mothers that smoked during pregnancy	MDC (HOIST) Epidemiology and Surveillance Branch, NSW Dept. of Health	(1998) N=591; 8.9%	N=16881; 19.7%	N(5y)=204 53.4%	Overseas born N(5y)=975 6.1%				
Youth-Workforce										
Traffic-related injuries	Rate of traffic-related injury by age group (0-20 years) (and road user type) and n per year	NSW Provisional Road Traffic Accident Database, Road and Traffic Authority, NSW	(1998) N=479 43.2/ 10000	N=6362 35.6/ 10000						

socioeconomically disadvantaged group (Table 1). At the 90 per cent level of agreement, experts rated 24 indicators as essential to monitor for the population as a whole, compared with only one indicator for the socioeconomically disadvantaged group—high school retention rate (Table 1). In relation to periodicity of data collection at the 75 per cent level of concordance, annual collection was nominated for nearly all of the indicators except breast feeding at three months where only 46 per cent supported collecting this information.

The following criteria were used to discern what was included on the Report Card:

- 75 per cent agreement by experts that the issue was important to collect for the general population;
- ‘high priority’ issues from the CSAHS ‘Strategic Plan’;
- state or national child health priorities;
- issues where recent developments had changed the opportunity for health gain (for example, where new technology has improved early detection for congenital sensorineural hearing loss).

We divided the Report Card into three sections, using the framework of the Health Goals and Targets for Australian Children and Youth:

- Section One included a comparison of the health status of children and youth in CSAHS with NSW using the *Health Goals and Targets for Australian Children and Youth* framework (Table 2).

- Section Two included graphs and tables of the health and social issues, presented by life stage: that is, antenatal, birth, pre-school, primary school to youth-workforce, comparing CSAHS and NSW.
- Section Three (Table 3) presented indicators in the life stage format and in such a manner as to facilitate target setting and service planning.

Information was presented on sub-populations of Aboriginal and Torres Strait Islander, and some ethnic groups, and by local government authority (LGA) where possible, depending on the availability of information and the population numbers. Where numerator data were small, we presented five-year mean rates.

The Report Card described the intended periodicity of data collection (Table 4). Approximately half the indicators could be collected annually, since they were part of regular statewide data collections. However, about 20 per cent of the indicators will be available through the NSW Child Health Survey. Approximately 30 per cent of indicators would only be available by initiating specific research or surveillance (Table 4).

There was a sixty per cent (19 of 32) response rate for the evaluation survey. Seventeen respondents were from the health sector. Several managers commented positively on the Report Card as a ‘great reference document’, providing an ‘overview of youth issues’, established ‘a baseline of health status from which to measure improvements’ and as a document ‘useful in

TABLE 4
PERIODICITY OF COLLECTION AND PUBLICATION OF DATA BY HEALTH ISSUE

Health Issues	Annually	About every five years	Child Health Survey
Antenatal			
Tobacco smoking in pregnancy	✓		
Birth			
Low birthweight	✓		
Prematurity	✓		
Perinatal mortality	✓		
Infant mortality	✓		
SIDS behaviours			✓
SIDS rate	✓		
Neural tube defects		✓	
Birth defects (overall)	✓		
Breastfeeding	✓		✓
Exposure to smoking at home			✓
Early childhood–pre-school			
Sensorineural hearing loss	✓		
Measles	✓		
Pertussis	✓		
Influenza type B	✓		
Immunisation Coverage	✓		
Drowning		✓	
Asthma	✓		
Inactivity		✓	
Primary School			
Immunisation coverage	✓		
Emotional–behavioural problems			✓
Dental disease	✓		
Unintentional injury	✓		
Burns		✓	
Falls		✓	
Poisoning		✓	
Exposure to harmful ultraviolet light			✓
Youth–Workforce			
Traffic-related injury	✓		
Tobacco consumption		✓	
Hazardous alcohol use		✓	
Regular condom use		✓	
Teenage births	✓		
AIDS	✓		
Hepatitis C		✓	
Hepatitis B		✓	
Syphilis		✓	
Gonorrhoea		✓	
Depression			✓
Self harm	✓		
Suicide		✓	
SOCIAL, EDUCATIONAL AND ECONOMIC ISSUES			
Whole of life			
Home ownership by family type		✓	
Overcrowded housing (public)	✓		
Domestic violence rates	✓		
Social support			✓
Social capital			✓
Birth–Preschool–Early childhood			
Divorce		✓	
Child abuse or neglect	✓		
Types of out of home care placements	✓		
Number placed in out of home care	✓		
Attendance pre-school–child care		✓	
Primary School			
Basic skills levels	✓		
Absence levels	✓		
English language proficiency by ethnicity		✓	
Youth–workforce			
High school retention	✓		
Post compulsory school age transition	✓		
Homelessness	✓		
Youth labour force status		✓	
Youth occupational profile		✓	
Youth unemployment		✓	
Youth crime	✓		

planning service delivery'. They found the most useful section to be Section 2. Suggested changes were to provide more breakdown of information by sub-groups and regions, and to invest in ways to make the Report Card more user friendly, such as providing summaries of each section. Recommended indicators to include in future Report Cards included social capital, local data collections and service delivery data. Changes were made where possible to improve the presentation of the Report Card and to investigate other information sources. Recommendations for future Report Cards were developed.

DISCUSSION

The issues that were selected for inclusion in the Report Card represent a combination of a comprehensive view of child and youth population health, opportunities for health gain, child health priorities, expert opinion and relevance to service planning.

Overall, the unpublished research by Mahmic, Alperstein and Ward revealed an unexpected disparity between expert ratings of indicators as essential to monitor for the general population, compared to the low socioeconomic sub-group. The method used to ascertain expert opinion meant that experts relied more on personal opinion rather than published literature to rate important indicators. Some experts commented that they did not rate indicators for the low socioeconomic subgroup highly because they were aware that these data were not available in Australia. It is for this reason that we were unable to report health issues by socioeconomic status.

The feasibility of collecting population-based information for some selected health and social issues, such as mental health and homelessness was poor. The main barrier to accessing important information in the health sector was lack of available information, whereas in the case of other sectors, a range of barriers emerged, including:

- limited resources;
- timeliness of our request in relation to their work agenda;

- privacy of information;
- lack of reliable information on people 0–20 years at the area health service level.

Managers and planners from other sectors and non-health organisations were very positive about collating information from multiple sources onto one monitoring system. However, it was difficult to manage data collection from the wide range of organisations, due to data availability, data aggregation and the need to contact a range of people within the same organisation to negotiate release of data.

It is expected that as more population-based child health information becomes available through improved monitoring and stronger ties with other sectors, a range of currently unreported indicators can be presented.

CONCLUSION

This was the first Child and Youth Report Card for CSAHS. As such, it will be refined and modified over time. The development of the Report Card was a valuable exercise, which not only brought together a range of previously unrelated information sources into the one report, but also has the potential to reinforce the process of evidence-based planning of child and youth health services in CSAHS, and improved inter-agency collaboration.

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