10 Expenditure by Northern Territory Health Services

10.1 Introduction

The Northern Territory (NT) constitutes a very large land mass, approximately 17% of the nation, with a small, widely dispersed population which is only 1% of the national population. Of the NT population, 29% identify as Aboriginal and/or Torres Strait Islander, 70% of whom live in remote and very remote communities. Average life expectancy for Indigenous Territorians is approximately 20 years less than for other Territory citizens. Furthermore, the burden of disease experienced by Indigenous Territorians is significantly higher than that experienced by other Territory citizens. The NT population is younger than the total Australian population, with approximately 4% being aged over 65 years. The Indigenous population is particularly young, with 38% being aged under 15 years. This presents Territory Health Services (THS) with a unique challenge in the delivery of effective health services.

Public health services within the NT are known as Health Development. Health Development works to focus the health system on strategies that increase people's capacity for healthy living through prevention, promotion and protection strategies against disease. This is achieved by working with individuals and communities in the development and delivery of services and by changing attitudes and behaviours harmful to health.

Health Development services include:

- Alcohol and Other Drugs
- Disease Control
- Environmental Health
- Health Promotion.

Health services in the Territory are delivered through two networks.

Top End Service Network provides health services to a population in excess of 152,000 across an area totalling 614,000 square kilometres. Public health programs are delivered by the Health Development team, along with health teams that operate through 52 service outlets. These service outlets comprise Community Health Centres and hospitals located in and around Darwin, East Arnhem and Katherine.

Central Australian Service Network provides health services to about 45,000 residents, including an Indigenous population of 15,000, across an area totalling in excess of 1.1 million square kilometres. Health services are also extended to people who live in adjoining areas of Western Australia and South Australia. Health Development, along with the health teams that operate through 43 service outlets, deliver the public health programs. The service outlets comprise Community Health Centres and hospitals located in the Alice Springs Urban, Alice Springs Rural and Barkly districts.

Due to the unique circumstances of the Northern Territory, including a relative lack of general practitioners in rural and remote areas, public health programs are often delivered

by health centre workers. These include district medical officers, community health nurses and Indigenous health workers, as well as specialised public health workers whose role is then to support these generalist community health teams.

10.2 Overview of results

Total expenditure on core public health activities by THS for 2000–01 was estimated as $37.6 million (Table 10.1), or approximately 8.4% of total health expenditure by THS. Nearly 70% of the expenditure was directed towards three health activities. These were:

- *Selected health promotion* (25.6%)
- *Communicable disease control* (24.1)
- *Organised immunisation* (19.0%).

In addition, the NT allocated $13.4 million to 'Public health-related activities' (Table 10.1).

The NT faces the unique challenge of delivering effective public health programs to populations as small as 50 people located in remote and very remote communities. The high costs attributed to the provision of public health programs in the NT include the high cost of transporting health professionals to the many rural and remote communities. Some communities are only accessible by air or rely on the existing infrastructure and resources provided by Community Health to provide public health programs, hence their inclusion.

Other contributing factors to the high cost of public health programs is that the widely dispersed population in the NT includes 29% of Territorians who identify as Indigenous. This group experiences a significantly increased burden of disease, and decreased life expectancy rates; approximately 70% live in remote areas. These challenging circumstances along with the age structure of the NT population do not allow for economies of scale to be utilised.

Table 10.1: Expenditure on public health activities, Northern Territory, 2000–01

Activity	Total expenditure ($ million)	Proportion of total core public health expenditure (%)
Communicable disease control	9.1	24.1
Selected health promotion	9.6	25.6
Organised immunisation	7.2	19.0
Environmental health	3.6	9.5
Food standards and hygiene	1.0	2.7
Breast cancer screening	0.9	2.5
Cervical screening	2.0	5.4
Prevention of hazardous and harmful drug use	3.6	9.7
Public health research	0.6	1.5
Total core public health	**37.6**	**100.0**
Public health-related activities	13.4	..

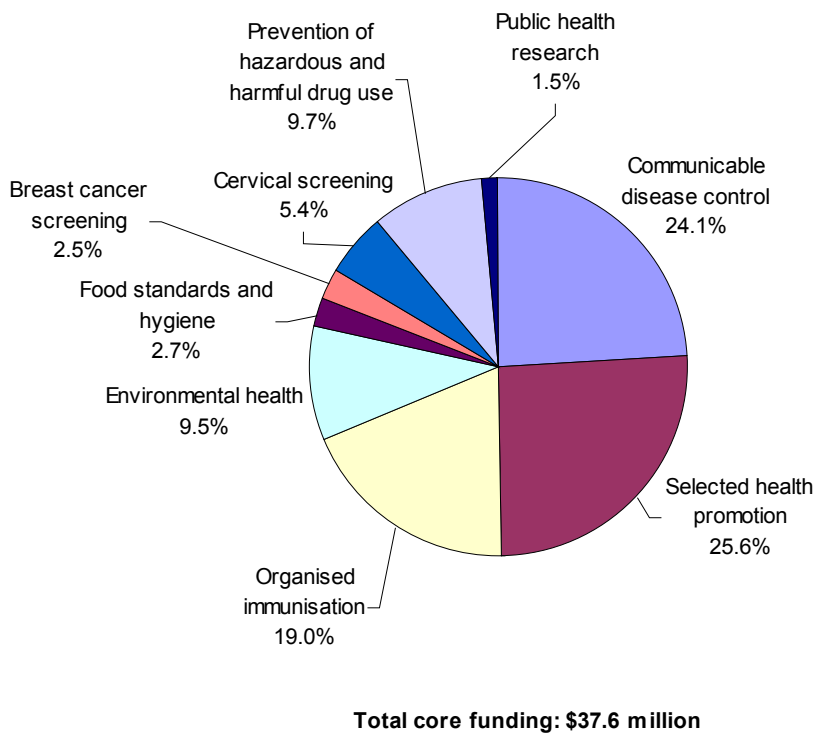

Figure 10.1: Expenditure on core public health activities, Northern Territory, 2000–01

10.3 Comparison with 1999–00 results

In order to compare the 1999–00 estimates of funding and expenditure with those in this report, it is necessary to express the expenditures in both periods in constant price terms. This has been achieved (Table 10.2 below) by revaluing the 1999–00 expenditure estimates in 2000–01 prices by using an ABS chain price index for final consumption expenditure by the Northern Territory Government and local authorities on 'Hospital and nursing home services' (see Section 11.2).

Total core public health expenditure was $37.6 million in 2000–01. This was a decrease of 8.1% in real terms. This downturn in expenditure was largely due to a decline in the reported expenditure on *Prevention of hazardous and harmful drug use*, which declined in constant price terms from $6.7 million in 1999–00 to $3.1 million in 2000–01. This decline was due to a change in government funding arrangements. During 2000–01 the NT Government changed the funding arrangements for the *Prevention of hazardous and harmful drugs use* services. Rather than funds being channelled through the Health Department, other government departments were directly funded to provide services. Consequently, this variation reflects the decrease in funding to the Health Department, and not an actual decrease in expenditure on this vital service.

Table 10.2: Expenditure on core public health activities, Northern Territory, constant (2000–01) prices[(a)]

Activity	1999–00 ($ million)	2000–01 ($ million)	Growth rate (%)
Communicable disease control	8.9	9.1	2.2
Selected health promotion	10.2	9.6	–5.9
Organised immunisation	6.5	7.2	10.8
Environmental health	3.8	3.6	–5.3
Food standards and hygiene	1.0	1.0	—
Breast cancer screening	1.1	0.9	–18.2
Cervical screening	2.2	2.0	–9.1
Prevention of hazardous and harmful drug use	6.7	3.6	–46.3
Public health research	0.4	0.6	50.0
Total core public health	**40.9**	**37.6**	**–8.1**

(a) Expenditure for 1999–00 has been revalued in 2000–01 prices using an ABS chain price index for final domestic expenditure by the Northern Territory Government and local government authorities on 'Hospital and nursing homes services' (see Section 11.2).

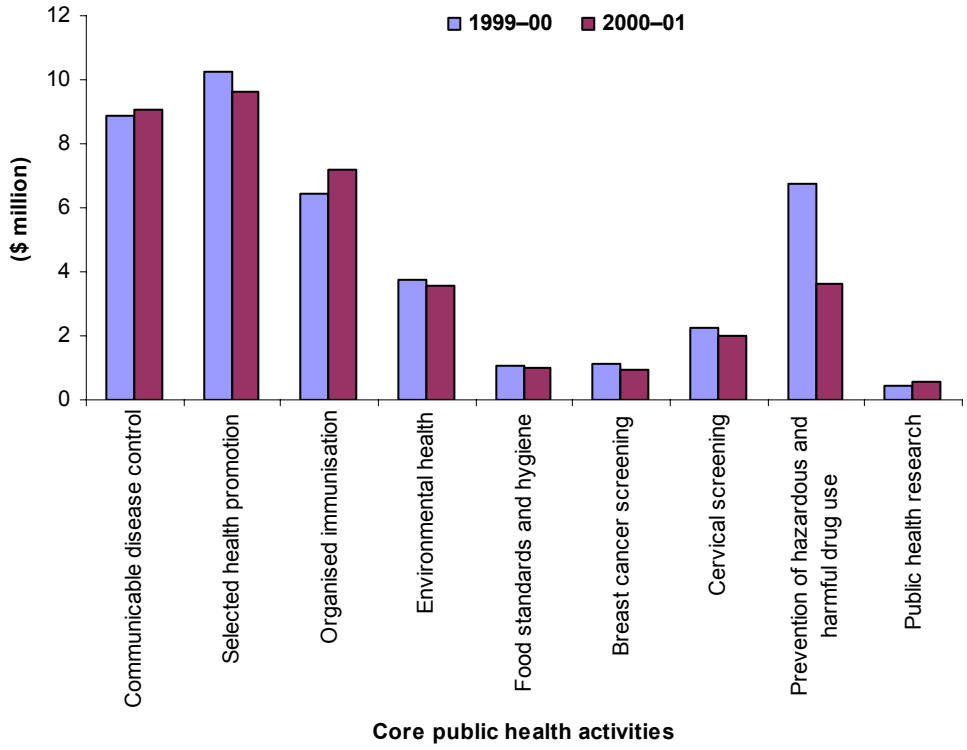

Figure 10.2: Expenditure on core public health activities, Northern Territory, constant (2000–01) prices

10.4 Expenditure on public health activities

This section of the report looks at the Northern Territory's level of activity in relation to each of the core public health categories and the 'Public health-related activity'. It discusses in more detail the particular programs within each of the health activities and their related expenditure.

Communicable disease control

The Centre for Disease Control (CDC) provides services to prevent, monitor and control communicable diseases in the Northern Territory. Program activities are coordinated through disease control units in each health district. Regional CDC units work with urban and remote primary health care providers to enhance the provision of clinical services, contact tracing, community screening and professional education.

Total expenditure for *Communicable disease control* by THS in 2000–01 was $9.1 million (Table 10.3). This was 24.1% of total core public health expenditure (Table 10.1). The major components are discussed below.

HIV/AIDS, hepatitis C and STIs

Funding is provided for a range of program activities. The AIDS/STD Program works towards the prevention of STIs and blood-borne viruses such as HIV and hepatitis C. In urban areas, Clinic 34 provides specialised clinical services in these areas. Screening and clinical services are provided for tuberculosis (TB), leprosy and STIs, including human HIV and hepatitis C.

Needle and syringe programs

The Needle and Syringe Program (NSP) provides sterile injecting equipment to minimise the risk of the transmission of blood-borne viruses through injection drug use. Information and referrals are provided through most centres. Equipment is distributed through community based organisations which are funded by THS, Clinic 34, district disease control units and some public hospitals.

Where possible, expenditure was separately identified for the Needle and Syringe Program and was estimated at $97,000 (Table 10.3). However, this reported amount does not fully reflect all expenditure for these programs as the majority of expenditure for the Program is recorded as *Other communicable disease control*.

Other communicable disease control services

A community paediatric unit develops and evaluates policies for paediatric communicable and non-communicable diseases, focusing on prevention and early detection. It provides specialist paediatric input into disease control policies as well as paediatric expertise in education, training and research for CDC.

In addition, during 2000–01 the CDC organised the formal health screening of and disease control measures for 1,863 East Timorese evacuees brought to Australia for safe haven, including the provision of TB diagnosis and management. Staff also participated in an assessment of the TB situation in East Timor in October, and subsequently in provision of intensive technical support for the National TB Program in East Timor (funded by AusAID).

Table 10.3: Expenditure on *Communicable disease control*, Northern Territory, 2000–01 ($ million)

Category	Expenditure
HIV/AIDS, hepatitis C and sexually transmitted infections	3.8
Needle and syringe programs	0.1
Other communicable disease control	5.1
Total	**9.1**

Selected health promotion

Total expenditure for *Selected health promotion* by THS in 2000–01 was $9.6 million (Table 10.1). This was 25.6% of total core public health expenditure. Community-initiated health-promotion projects, some supported by incentive funds, focused on nutrition, mental health, health promotion activities, screening and male health programs.

Nutrition

Food and nutrition services focus on maternal and child health, food supply and healthy lifestyle through Remote Stores Project, Community Nutrition Worker Program, Growth Assessment and Action Program, nutrition education in schools and food and nutrition monitoring.

Mental health awareness and suicide prevention

This included expenditure for the implementation of activities associated with the NT Youth Suicide Prevention Strategy. The Life Promotion Program employs Life Promotion Officers in both the Top End and Central Australia.

The Life Promotion Program focuses on support for individuals, families and communities to empower them to reduce self-harm and suicide in their community. It is establishing and consolidating a comprehensive life-promoting community network as an essential infrastructure to prevent and reduce suicide.

Using a community development model and collaborative partnerships, it promotes the physical, emotional, spiritual and socio-cultural wellbeing of individuals, families and communities through community responsibility. It promotes community responsibility through community initiatives. This builds community capacity to maintain ownership of life-promoting initiatives.

Other health promotion

Within THS there are a number of programs that provide health promotion type activities that cover a range of health issues, which are not specific to one existing category but promote a range of health care services. These programs include Aboriginal Hearing Health, Women and Men's Health, Child Health, and Growth Action and Assessment. Women's health promotion programs promote the delivery of sensitive, relevant and holistic programs to ensure the health and wellbeing of Territory women. Programs provide advice on the provision of medical, counselling and support services for women.

Screening programs

THS provides screening programs such as the Well Women's Check, Healthy School Aged Kids Services, Growth Assessment and Action, Child Health Screening, Aboriginal Hearing Health, Men's Health and school dental screenings.

Male Health Policy Unit

This unit provides a central coordinating role across THS programs and with non-government organisations in terms of prioritising needs in male health, determining strategy directions, providing policy advice, and monitoring and evaluating male health programs. It seeks to foster a better understanding by:

- the identification, analysis and research of key male health issues
- providing policy advice, analysis and information and
- contributing to a male health research agenda.

The Male Health Policy Unit is involved in developing data and resources on male health, communicating knowledge and promoting further discussion on male health through publications and various other media, and through workshops and conferences, as well as training and professional development. It works to build and strengthen networks of individuals and organisations concerned with researching male health.

Organised immunisation

Total expenditure for *Organised immunisation* by THS in 2000–01 was $7.2 million (Table 10.4). This was 19% of total core public health expenditure (Table 10.1).

The Centre for Disease Control (CDC) provides oversight of immunisation programs in the Northern Territory. Program activities are coordinated through Disease Control Units in each health district.

The immunisation unit within CDC seeks to:

- improve immunisation coverage rates for adults and children
- develop sustainable processes for the timely generation of high quality data for transmission to the Australian Childhood Immunisation Register
- implement the new NT Childhood and Adult Vaccination Schedules in line with the new Australian Standard Vaccination Schedule.

The regional CDC units work with urban and remote primary health care providers to enhance the provision of clinical services, contact tracing, community screening and professional education. Special surveillance programs monitor invasive Hib disease, enteric disease, measles, malaria, TB, influenza, invasive pneumococcal disease, adverse reactions following immunisation and vaccine use.

Table 10.4: Expenditure for *Organised immunisation*, Northern Territory Health Services 2000–01, ($ million)

Category	Expenditure
Organised childhood immunisation	1.0
Organised pneumococcal and influenza immunisation	0.5
All other organised immunisation	5.6
Total	**7.2**

Environmental health

Total expenditure for *Environmental health* by THS in 2000–01 was $3.6 million (Table 10.1). This was 9.5% of total core public health expenditure.

Environmental health is comprised of several discrete services:

- Aboriginal and General Community Environmental Health
- Environmental Health Standards
- Environmental Planning, Sanitation and Waste Management
- Food Safety
- Radiation Health
- Poisons.

A centralised policy unit in Darwin is responsible for legislative and policy development activities for all of the above service areas.

Environmental Health Operational Units

These units provide a range of environmental health services and programs and are located in all regional centres. These units provide services for the enhancement of environmental health standards in urban and rural areas and remote Indigenous communities. This includes responding to environmental health complaints as well as the provision of education and expert advice on:

- food safety
- disease control
- effluent disposal
- water surveillance
- inspection of public accommodation
- environmental health assessments of remote communities
- environmental planning
- waste management.

Radiation Health

Radiation Health services are provided to minimise the health impact of radiation on the population. These services ensure that radioactive materials and devices are used in a responsible manner according to sound scientific practice and appropriate legislative controls.

Medical Entomology

Services provided by Medical Entomology aim to reduce the impact of biting insects on the people of the Northern Territory. Activities include:

- insecticide and engineering programs for mosquito control
- mosquito surveillance programs in the major towns
- guidelines and advice on both large- and small-scale developments
- a public inquiry service
- a public mosquito awareness service
- incidental research on biting insects and mosquito-borne viruses.

Medical Entomology works with:

- the Disease Control Branch on mosquito-borne disease surveillance
- the Darwin City Council in a mosquito engineering program
- the Parks and Wildlife Commission in rectifying mosquito breeding sites on its land
- LGAs and environmental health officers in the various towns throughout the Territory on mosquito surveillance and control
- the general public for inquiries
- the Department of Lands, Planning and Environment on land development comment
- consultants and developers for development and planning advice to prevent new mosquito problems. The main community link is through mosquito public awareness programs and the Mosquito Control Advisory Committee which provides public feedback and information dissemination.

Food standards and hygiene

Total expenditure on *Food standards and hygiene* by THS in 2000–01 was $1.0 million (Table 10.1). This was 2.7% of total core public health expenditure.

Environmental Health has a policy unit that is responsible for legislative and policy development activities related to food safety issues.

Operational environmental health units are located in all major town centres. By means of these units, food safety services are provided for the enhancement of environmental health standards in urban and rural areas and remote Indigenous communities.

The delivery of *Food standards and hygiene* services within the Territory included:

- the FoodSafe Food Handler Program
- the Healthy Choices Award. This award recognises premises that:
  - undertake food safety training and hygienic practices
  - provide non-smoking areas
  - encourage responsible drinking
  - offer nutritionally sound meal choices.

Breast cancer screening

Total expenditure for *Breast cancer screening* by THS in 2000–01 was $0.9 million (Table 10.1), or 2.5% of total core public health expenditure.

BreastScreen NT provides breast screening services and assessment of screen-detected abnormalities for women 40 years and over. This is part of a national program funded under the Territory/Australian Government PHOFA. The target group is women aged 50 to 69 years. Screening and assessment centres are located in Darwin and Alice Springs, and a relocatable screening unit visits Katherine, Tennant Creek and Nhulunbuy.

Small population numbers, combined with the remoteness of the Northern Territory, do not permit economies of scale to be achieved. The Northern Territory does not have a resident radiologist with the necessary expertise to read these X-rays. Throughout the year a radiologist is flown in to perform assessments and to read X-rays. This results in considerably higher screening costs per capita than for other jurisdictions.

Cervical screening

Total expenditure for *Cervical screening* by THS in 2000–01 was $2.0 million (Table 10.1). This was 5.4% of total core public health expenditure.

The Women's Cancer Prevention Program provides public health cervical screening services, administers the Pap Smear Register and works with culturally and linguistically diverse women through the bilingual educator program. This program is part of a national program funded under the PHOFAs. The Remote Areas Well Women's Screening Program provides cervical screening coverage in remote and rural areas within the Territory.

The NT Cervical Screening Program:

- encourages all eligible women in the target age group of 20–69 years to enter and remain in the screening program
- provides information to women from culturally and linguistically diverse backgrounds
- provides recall and reminder systems to ensure adequate follow-up of screen-detected abnormalities
- ensures optimal quality of Pap smears by adequate training of Pap smear takers
- operates the Pap Smear Register.

It should be noted that the majority of cervical screening is undertaken by GPs and funded through Medicare. This expenditure is recorded by the Australian Government and included in the national and Australian Government estimates of expenditure on *Cervical screening*.

Prevention of hazardous and harmful drug use

Total expenditure for the *Prevention of hazardous and harmful drug use* by THS in 2000–01 was $3.6 million (Table 10.5). This was 9.6% of total core public health expenditure (Table 10.1).

The Alcohol and Other Drugs Program (AODP) develops and coordinates strategies to address the harmful effects of substance use in the Territory. AODP incorporates Tobacco Action Project, Public Behaviours Program, National Drug Strategy and Living With Alcohol and is responsible for policy and program development, research and evaluation for the whole of the Territory.

The program aims to:

- minimise the incidence and prevalence of substance misuse through community education
- minimise rates of antisocial behaviour, related to alcohol and other substance misuse
- minimise the rates of premature death, disease and injury resulting from alcohol, tobacco and other substance misuse
- increase the capacity among individuals, families, communities and services to cope with substance issues.

Alcohol

AODP incorporates the Living With Alcohol Program, a Territory initiative designed specifically to reduce alcohol-related harm.

Program expenditure included:

- 'living with alcohol' projects providing diversionary and education options
- the completion of a report on alcohol usage by Indigenous people
- the commencement of the Public Behaviour Program which includes night patrols and wardens' schemes. The Public Behaviour Program supports local activities aimed at reducing antisocial behaviour resulting from public drinking and substance use.

Tobacco

The Tobacco Action Project (TAP) operates as part of AODP and addresses smoking issues. Project priorities are young people, Indigenous people, smokers and protecting people from environmental tobacco smoke.

Program expenditure covered a range of activities including:

- a 24-hour counselling service
- health promotion grants covering 28 schools
- distribution of Choose Yourself campaign kits containing activity plans to supplement the magazine, video and web site promotions
- public education including local materials to address Indigenous smoking, including support for health workers working on 'no smoking' initiatives.

Mixed

AODP administers a special allocation that supports local activities aimed at reducing antisocial behaviours resulting from public drinking and substance abuse. The program is responsible for the National Drug Strategy component of the PHOFA with the Australian Government. This focuses largely on issues related to tobacco, cannabis and petrol sniffing.

Table 10.5: Expenditure on *Prevention of hazardous and harmful drug use*, Northern Territory, 2000–01 ($ million)

Category	Expenditure
Alcohol	1.5
Tobacco	0.5
Illicit and other drugs of dependence	0.6
Mixed	1.1
Total	**3.6**

Public health research

Total expenditure for *Public health research* by THS in 2000–01 was estimated at $0.6 million (Table 10.1). This represents 1.5% of total core public health expenditure.

Expenditure on 'Public health-related activities'

Total expenditure for 'Public health-related activities' by THS in 2000–01 was estimated at $13.4 million (Table 10.1).

Public health-related activities for the Northern Territory included:

- drug and alcohol activities that were designated as treatment services
- drug and alcohol supply reduction
- services primarily of a welfare nature (e.g. night shelters)
- sexual and domestic violence programs
- reproductive health and family planning programs
- other maternal and child health services
- public health activities associated with East Timorese evacuees.

11 Technical notes

11.1 Definitions used in the 2000–01 collection

Communicable disease control

This category includes all activities associated with the development and implementation of programs to prevent the spread of communicable diseases.

Expenditure on *Communicable disease control* is recorded using three sub-categories:

- *HIV/AIDS, hepatitis C and sexually transmitted infections*
- *Needle and syringe programs*
- *Other communicable disease control*.

The public health component of the HIV/AIDS, hepatitis C and STI strategies includes all activities associated with the development and implementation of prevention and education programs to prevent the spread of HIV/AIDS, hepatitis C and sexually transmitted infections.

HIV/AIDS, hepatitis C and sexually transmitted infections

Inclusions

- implementation of health-promotion strategies aimed at increasing safe behaviour among at-risk populations including people living with HIV/AIDS (including through community sector agencies)
- provision of sexual health services to at-risk populations to reduce prevalence of sexually transmitted infections, including testing for sexually transmitted infections (including HIV and hepatitis C), pre-test counselling for all sexually transmitted infections (including HIV), broad-based screening programs and contact tracing
- sexually transmitted infections, including genital herpes, hepatitis B and C, human papilloma virus, chlamydia, gonorrhoea and syphilis
- reorientation of Indigenous health programs
- consultation with community sector agencies regarding program priorities and delivery
- promotion of access to culturally appropriate services
- minimisation of the risk of transmission through occupational and non-occupational exposure through prophylaxis
- support of targeted training to ensure provision of best practice sexual health services for at-risk populations
- surveillance
- development of and participation in relevant committees

- counselling and peer support programs immediately following diagnosis which promote safe sex practices and inform patients and carers about how to live with HIV/AIDS, hepatitis C and sexually transmitted infections
- provision of high-quality data to health professionals to improve service delivery
- participation in or initiation of research to establish data to inform service provision
- funding to NGOs (for example hepatitis councils, HIV/AIDS councils)
- support of volunteer programs through access to training
- diagnostic services.

Exclusions

- treatment for sexually transmitted infections
- pharmaceuticals
- HIV testing following diagnosis
- specialist GPs for primary management of HIV/AIDS
- access to HIV treatments and viral load testing
- outpatient and ambulatory services
- dental health services
- welfare and housing referral services
- admitted patient services
- mental health services including care for people with dementia
- community and home-based care services
- palliative and respite care services
- maternity services.

Needle and syringe programs

Needle and syringe programs aim to reduce and prevent the transmission and spread of infectious diseases to individuals and the broader community through the provision of sterile injecting and disposal equipment, education, consultation and referral processes.

Inclusions

- education and training of the labour force
- provision of safe injecting equipment, including the cost of equipment, transport and staff to deliver the service
- administration of the program, including identifying new sites, negotiating services costs, addressing public concerns and policy development
- negotiation with pharmacies to support initiatives
- consultation with community agencies operating needle and syringe program sites.

Other communicable disease control

This sub-category includes all other communicable disease control activities not assigned to the *HIV/AIDS, hepatitis C and sexually transmitted infections* or *Needle and syringe programs* sub-categories as defined above.

Inclusions

- surveillance systems, screenings, recording, notification and reporting systems
- case response, contact tracing, investigation and disease outbreak planning and management
- policy and support services specifically related to communicable disease control programs (within programs)
- provision and administration of vaccines for the management of disease outbreaks
- provision of advice and education on all other communicable diseases
- initial counselling for people tested
- funding to NGOs for the provision of operating prevention programs
- human quarantine-related services.

Exclusions

- clinical and treatment services for communicable disease infections including sexually transmitted infections
- provision and administration of vaccines for immunisation programs as defined in the *Organised immunisation* activity
- referral, treatment and associated counselling for communicable disease infections
- staff screening programs, staff immunisation and staff education
- infection control activities in hospitals
- funding to NGOs for the provision of treatment-based programs.

Selected health promotion

This category includes those activities fostering healthy lifestyle and a healthy social environment overall, and health promotion activities targeted at health risk factors which lead to injuries, skin cancer and cardiovascular disease (for example diet, inactivity) that are delivered on a population-wide basis. The underlying criterion for the inclusion of health promotion programs within this category was that they are population health programs promoting health and wellbeing.

The *Selected health promotion* programs are:

- healthy settings (for example municipal health planning)
- public health nutrition
- exercise and physical activity
- personal hygiene
- mental health awareness promotion
- sun exposure and protection

- injury prevention including suicide prevention and female genital mutilation.

Inclusions

- state government funding for health promotion councils or NGOs (for example skin cancer foundations)
- organised population programs, or programs with a population focus (for example Healthy Cities and Healthy Schools programs)
- development, administration, implementation and evaluation of policy, programs, guidelines and legislation
- development and maintenance of health promotion databases (including data collection), where they can be separated from 'non-public health' databases
- health sector input to cross-sector health education
- organised population health screening of heart disease risk factors.

Exclusions

- opportunistic screening activities for heart disease risk factors (stress, blood pressure, cholesterol)
- information programs on management of specific diseases post-diagnosis (for example asthma, diabetes)
- community nurse activity (for example ad hoc talking to schools about nutrition)
- individual counselling including health education on an ad hoc basis
- compliance with safety codes and maintenance of healthy environments
- treatment for stress or other mental health disorders (for example anxiety)
- school education ad hoc and school dental services
- well baby clinics, domiciliary care and home nursing services
- neighbourhood watch programs
- occupational health and safety education (included under 'Public health-related activities')
- population health programs directed at domestic, family and general violence
- population health programs providing a safe sexual health message—these are included in the *Communicable disease control* category
- public health education campaigns and school health education programs funded outside the health sector
- health promotion activities that are associated with core public health categories—these are classified in the relevant categories (for example safe drinking programs should be classified in the *Prevention of hazardous and harmful drug use* category).

Organised immunisation

This category includes immunisation clinics, school immunisation programs, immunisation education, public awareness, immunisation databases and information systems.

Expenditure on *Organised immunisation* was recorded using three sub-categories:

- *Organised childhood immunisation* (as defined by the National Health and Medical Research Council Schedule/Australian Standard Vaccination Schedule)
- *Organised pneumococcal and influenza immunisation*—the target groups for pneumococcal immunisation are Indigenous people over 50 years and high-risk Indigenous younger people aged 15–49 years. Influenza vaccine is available free to all Australians 65 years of age and over, Indigenous people over 50 years and high-risk Indigenous younger people aged 15–19 years.
- *All other organised immunisation* (for example tetanus)—as opposed to ad hoc or opportunistic immunisation.

Inclusions

- promotion, distribution, provision and administration of vaccines as listed
- immunisation clinics and school immunisation programs
- immunisation education and public awareness
- immunisation databases and information systems
- staff vaccination programs where part of *Organised immunisation* and
- NHMRC schedule for all tetanus immunisation.

Exclusions

- immunisation after possible infection or on detection of illness (for example rabies vaccine)—this expenditure should be included in the *Communicable disease control* expenditure category.

Environmental health

This category relates to health protection education (for example safe chemical storage, water pollutants), expert advice on specific issues, development of standards, risk management and public health aspects of environmental health protection. The costs of monitoring and regulating are to be included where costs are borne by a regulatory agency and principally have a public health focus (for example radiation safety, and pharmaceutical regulation and safety).

Environmental health includes the following characteristics:

- vector/rodent control
- chemical regulation and safety
- radiation safety and control
- public health aspects of water quality control and fluoridation
- Legionella control
- public health input to contaminated sites and unhealthy land
- public health aspects of water environment control
- public health input to hazardous materials management
- public health aspects of waste water and solid waste
- public health input to disaster management

- public health contribution to environmental sampling, health impact statements and risk assessment.

Inclusions

- development, review and administration of legislation, policy and/or regulations
- health protection education (for example safe chemical storage, water pollutants) and expert advice on specific issues
- response to health complaints and investigation of breaches of legislation and disease outbreaks
- surveillance, inspections and investigations to maintain standards (for example water quality testing, sampling)
- expert advice and provision of professional and technical support services on specific issues
- administration of relevant legislation, such as the licensing of operators or conducting pest control examinations
- maintenance of related databases (for example issuing radiation licenses, and national notification of agricultural, veterinary and industrial chemicals and pesticides)
- regulation and management of water fluoridation (includes addition of fluoride to water supplies)
- public health component of assessment, remediation and management of contaminated land
- public health input to land development applications
- public health input to emergency management and disaster response management, including planning and emergency response teams
- public health contribution to environmental sampling, health impact statements and risk assessment
- public health input to control activities for vectors/rodents (for example landfill, spraying, baiting, eradication)—to be included only if undertaken by regulatory agency
- poisons regulation
- pharmaceutical and therapeutic goods regulation
- human remains regulation
- public health input to air and noise pollution control
- training of environmental health workers.

Exclusions

- costs borne by private or government industry in complying with regulations and legislation such as public health and environmental health acts
- hospital infection control
- treatment for infections (for example Ross River fever or encephalitis treatment)
- workplace testing or monitoring

- installation and maintenance of systems (for example waste disposal, storm water pollution and air-conditioning units)
- management of land development applications
- compliance with regulation which protects water courses and national parks
- recycling programs
- infectious waste control (for example medical wastes and sharps) and disposal
- environmental health protection research (included under *Public health research*).

Food standards and hygiene

This category includes the development, review and implementation of food standards, regulations and legislation as well as the testing of food by the regulatory agency.

Inclusions

- development, review and implementation of food standards, regulations and legislation
- surveillance (including inspections), monitoring and enforcement of food standards (including food premises registers)
- testing of food by regulatory agency
- education such as food safety awareness campaigns for suppliers and/or consumers
- training and education for food handlers (including LGAs)
- education and advice on food standards/requirements (for example for food premises).

Exclusions

- compliance costs of industry associated with food regulations (for example labelling and safe food handling practices)
- testing of food by industry.

Breast cancer screening

This category relates to expenditure for *Breast cancer screening* and includes expenditure for the complete breast cancer screening pathway through organised programs.

The breast cancer screening pathway includes the following characteristics:

- recruitment
- screen taking
- screen reading
- assessment (this includes fine needle biopsy)
- core biopsy
- open biopsy
- service management
- program management.

Inclusions

- organised breast cancer screening programs (for example state BreastScreen programs, rural access programs), including coordination, provision of screens and assessment services
- development, review and implementation of breast screening policy, and program management
- management of breast cancer/screening registers
- state government funding to NGOs (for example cancer councils) for breast screening services
- education and risk awareness for women and target groups on benefits of screening
- counselling before diagnosis.

Exclusions

- follow-up counselling and/or treatment after diagnosis
- public health laboratory services (if not a result of breast cancer screening program)
- diagnosis costs if lump not detected as part of organised breast cancer screening programs
- workforce development and training if administered outside breast cancer screening programs
- breast cancer screening research (included under *Public health research*).

Cervical screening

This category relates to organised cervical screening programs.

Inclusions

- organised cervical screening programs (for example state cervical screening programs, rural access programs), including coordination, provision of screens and assessment services
- management of cervical/Pap smear registers (for example cervical cytology register)
- development, review and implementation of cervical screening policy, and program management (monitoring and evaluation)
- education and risk awareness for women and target groups on the benefits of screening
- initial counselling before Pap smear
- counselling and/or treatment for screen-detected abnormalities
- public health laboratory services (collection, cytology of smears and reporting)
- cervical screening financed by Medicare (this includes the GP consultation, the collection of the sample and the cytology of smears)—data provided by the Australian Government.

Exclusions

- public health workforce education and training (if administered elsewhere)
- counselling and/or treatment for patients diagnosed with malignant carcinoma (the differences between abnormalities and malignant carcinomas are described in Appendix A of *Cervical Screening in Australia 1997–98* (AIHW 2000).

Prevention of hazardous and harmful drug use

This category includes activities targeted at the general population with the aim of reducing the overuse or abuse of alcohol, tobacco, illicit and other drugs of dependence, and mixed drugs. The Australian Standard Classification of Drugs of Concern includes analgesics, sedatives and hypnotics, stimulants and hallucinogens, anabolic agents and selected hormones, antidepressants and antipsychotics, and also miscellaneous drugs of concern.

Expenditure is to be reported for each sub-category as below, the aggregate of which will be total expenditure on *Prevention of hazardous and harmful drug use*:

- Alcohol
- Tobacco
- Illicit and other drugs of dependence
- Mixed.

Alcohol

Inclusions

- alcohol regulation, labelling, control and licensing (including policing the regulation of alcohol in communities)
- health promotion strategies to encourage appropriate use of alcohol
- counselling of individuals where public health advice is given rather than the treatment of an addiction.

Exclusions

- any anti-alcohol programs with treatment of individuals as the major focus
- activities designated as treatment services
- services considered primarily of a welfare services nature (for example night shelters)
- services considered to be almost entirely providing accommodation and food services (for example halfway houses).

Tobacco

Inclusions

- tobacco control in the workplace and enclosed places
- policies relating to smoke-free eating places and other public facilities
- labelling of warnings on cigarette packets, advertising bans
- quit smoking programs

- counselling of individuals where public health advice is given rather than the treatment of an addiction
- smoking prevention strategies for children and youth
- prevention of tobacco sales to children and youth.

Exclusions

- activities designated as treatment services.

Illicit and other drugs of dependence

Inclusions

- illicit drugs/substances control; harm minimisation; methadone treatment; public health input to prohibition, enforcement and legislation activities; control of misuse of prescription drugs and other drugs of dependence
- counselling of individuals with problems with illicit or other drugs of dependence such as prescription drugs or glue sniffing, where public health advice is given rather than the treatment of an addiction.

Exclusions

- any anti-drug and alcohol programs with treatment of individuals as the major focus
- activities designated as treatment services
- services considered primarily of a welfare services nature (for example night shelters)
- services considered to be almost entirely providing accommodation and food services (for example halfway houses).

Mixed

Inclusions

- counselling of individuals where public health advice is given rather than the treatment of an addiction
- health promotion strategies to improve behaviour
- public health activities with regard to poly drug use.

Exclusions

- any anti-drug and alcohol programs with treatment of individuals as the major focus
- activities designated as treatment services
- services considered primarily of a welfare services nature (for example night shelters)
- services considered to be almost entirely providing accommodation and food services (for example halfway houses).

Public health research

Definition of research and development:

> R and D is defined according to the OECD standard as comprising creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications.
>
> An R and D activity is characterised by originality. It has investigation as a primary objective, the outcome of which is new knowledge, with or without a specific application, or new or improved materials, product, devices, processes or services. R and D ends when work is no longer primarily investigative (ABS 1998:4).

Inclusions

- *Communicable disease control* research
- *Selected health promotion* research
- *Organised immunisation* research
- *Environmental health* research
- *Food standards and hygiene* research
- *Breast cancer screening* research
- *Cervical screening* research
- *Prevention of hazardous and harmful drug use* research
- research which cannot be allocated to one of the above categories.

Exclusions

- public health evaluations.

'Public health-related activities'

This is not a core public health category and therefore the figures reported under this heading were not included in the aggregate figures for 1999–00 and 2000–01. The collection and reporting of this type of expenditure information is voluntary for each jurisdiction. This enables jurisdictions to include those expenditure items which are not part of core public health but are considered to be public health-related and important to that jurisdiction.

Examples of 'Public health-related activities':

- drug and alcohol activities that are designated as treatment services
- reduction of the drug and alcohol supply
- those services primarily relating to the welfare services nature of drug and alcohol expenditure (for example night shelters)
- occupational health and safety regulation and education
- regulation of health facilities and services
- control of dangerous animals and licensing of pets
- sexual and domestic violence programs

- dental health services
- well baby clinics
- reproductive health and family planning
- other maternal and child health services.

11.2 Deflators

Deflation of current price estimates of public health expenditure to constant prices shows changes in volumes of public health services. These measures are expressed in dollar values, using the values of the reference year (in this publication 2000–01). This process is undertaken using chain price indexes derived by the Australian Bureau of Statistics.

The chain price indexes published in the ABS national accounts are annually re-weighted Laspeyres chain price indexes and are calculated at such a detailed level, that the ABS considers them analogous to measures of pure price change. For this publication, chain price indexes for general governmental final consumption expenditure on 'Hospital and nursing home care' by state/territory and local governments have been used to revalue the 1999–00 expenditure estimates in 2000–01 prices and derive constant price estimates of public health expenditure. These price indexes have been used as there are no specific deflators available for public health expenditure.

The index numbers used in deriving the constant price estimates of expenditure for each jurisdiction are set out in the table below.

Table 11.1: General government final consumption expenditure—chain price index referenced to 2000–01

State and local—hospitals and nursing homes	1999–00	2000–01
New South Wales	96.79	100.00
Victoria	96.75	100.00
Queensland	96.76	100.00
Western Australia	96.62	100.00
South Australia	96.79	100.00
Tasmania	96.89	100.00
Australian Capital Territory	96.92	100.00
Northern Territory	96.68	100.00
Australia	96.76	100.00

Note: These are annually-reweighted Laspeyres chain price indexes.

Source: Unpublished ABS data.

11.3 Jurisdictions' technical notes

Australian Government

Methodology used to estimate the Medicare component of cervical screening

Cervical screening expenditure funded through Medicare is provided for both screening and diagnostic

purposes. It is allocated to either *Cervical screening* or 'Public health-related activities'. The method used to estimate these expenditures is outlined below.

Cervical screening

The methodology used to estimate the Medicare component of *Cervical screening* is consistent with that used in the two previous reports and is derived using the following assumptions:

- of the three cervical cytology items listed in the Medicare Benefits Schedule (73053, 73055 and 73057), only item 73053 (women showing no symptoms, signs or recent history suggestive of cervical neoplasia) relates to core public health expenditures
- benefits paid for 73055 and 73057 are related to 'Public health-related activities'
- where a consultation that involved the taking of a Pap smear also involved one or more other medical procedures, the related benefits should be apportioned equally across all the procedures involved and only that proportion related to the taking of the smear should be allocated to the public health activity category.

The third assumption is based on information provided by the Bettering the Evaluation and Care of Health (BEACH) study. That study showed that there were often other issues that were dealt with during the course of a consultation where a Pap smear was taken. Consequently, a factor of 0.68 was applied to the total benefits paid relating to GP consultations where a Pap smear was performed. This factor was based on BEACH data relating to consultations where a Pap smear was the primary reason of encounter.

'Public health-related activities'

'Public health-related' expenditure on cervical pathology is made up of:

- the two excluded Medicare cervical cytology items (items 73055 and 73057)
- the full benefit paid for the GP consultations associated with the excluded items
- those parts of the GP consultations associated with item 73053 that were not included in the estimate of expenditure on the core public health activity *Cervical screening*.

New South Wales health authorities

Data collection methods

Health services in New South Wales operate within specific geographic areas of the state. They each play major roles in:

- planning, delivering and coordinating local services
- managing resources
- setting and maintaining the balance between treatment and prevention services within their geographic area.

Consequently, the recording of expenditure is not centralised as each health service has a separate budget and its own information and accounting systems.

In 1999–00 the public health expenditure collection was incorporated in the New South Wales Program and Product Data Collection. This is a major collection that also includes the Hospital Cost Data Collection, the Unaudited Annual Return and the National Mental Health Survey.

Seventeen health services, the New South Wales Health Department and the Children's Hospital at Westmead reported data using a set of 24 public health sub-programs. The data were then aggregated centrally and analysed at state level. The sub-programs were later mapped to the core categories required for this publication. The public health expenditure included activity-specific, program-wide and agency wide expenditures. These were distributed to individual health activities according to their levels of direct expenditure, except for a few activities, which received no agency-wide expenditure.

As for 1999–00, the expenditure for the 2000–01 financial year was reported on an accrual accounting basis.

Victorian health authorities

Data collection methods

As most of the public health outputs are delivered by agencies funded by the Department of Human Services (DHS), the collection of the health expenditure data was sourced from the department's centralised generalised ledger.

The steps involved in the data collection are summarised below:

- downloading of expenditure on health activities from the department's general ledger. The flexible structure of the ledger enabled data to be sorted by activities or outputs, which in turn facilitated further classification into nine core public health activities and the 'Public health-related activity'
- manual categorisation, sorting each activity against its description
- verification to ensure the integrity of data collected
- reconciliation to ensure that reliable data were included in this report. It was determined that only functions that were funded or provided directly by the Public Health Division would be included in the data collection.

As for 1999–00, the expenditure for the 2000–01 financial year was reported on an accrual accounting basis. The relevant share of the DHS central corporate expenditure was apportioned across the ten health activities based on the proportion of activity expenditure.

Queensland Health

Since the 1999–00 Budget, Queensland Health has been required to report financial information to Queensland Treasury under the Managing for Outcomes framework, which identified the total cost of outputs. In order to provide this information, all Queensland Health's cost centres were allocated by percentage across outputs. Queensland Health uses a state-wide decision support system to produce output operating reports that identify total public health expenditure for Queensland Health.

The Managing for Outcomes framework is a process that Queensland Health uses to report total public health expenditure. However, additional analysis using cost centre service types is required to allocate the total public health output expenditure to the National Public Health Expenditure Project (NPHEP) activities. Any service types that do not match to the NPHEP categories are included under 'Public health-related activities'.

During a review of the expenditure collected through the above process, minor adjustments were required to be made to the expenditure reported. The adjustments were required mainly because of inappropriate mapping to service types. A review of the service types will be conducted to avoid this requirement in future collections.

As for 1999–00, expenditure for the 2000–01 financial year was reported on an accrual accounting basis.

Western Australian Health

Data collection methods

The primary source of public health expenditure data is the Western Australian Department of Health's Oracle financial system. Oracle supports a hierarchical cost centre structure that allows the mapping of expenditure against each of the core public health activities. For most of the state-wide public health programs each of the cost centres is matched to one of the core public health categories. Where cost centres relate to more than one category the expenditure was allocated across the relevant categories on the basis of advice from the cost centre manager. Overhead expenses for the Public Health Division were apportioned across the public health activities based on a model incorporating both staffing levels and expenditure.

A collection instrument was sent to each of the 32 metropolitan and rural health services for completion. The collection instrument consisted of a collection manual, based on the NPHEP Collection Manual, and a spreadsheet for completion by the health service. The completed spreadsheets were reviewed for consistency and the results used to compile the separate expenditure listings for public health units and for health services.

Public health expenditure data for the Office of Aboriginal Health was extracted from the Office's contract management system. Contract expenditure was allocated across the public health activities on the basis of the contracted service description.

The Western Australian expenditure estimates do not include:

- expenditure by LGAs (though payments to LGAs for public health activities from the Health portfolio are included)
- general pathology testing, dental health or Red Cross Blood Transfusion Service expenditure.

South Australian Department of Human Services

Data collection methods

Information was provided by state government departments, metropolitan and regional health units and other health-related government-funded organisations.

Data were collected using a combination of automated and manual processes.

Expenditure was extracted from the centralised DHS general ledger, the major source being the Public and Environmental Health cost centres. The DHS cost centres were mapped to the core public health categories as defined for this project. This accounted for $35 million or 58% of the total core public health expenditure collected from within the health sector.

The second part of the collection involved writing to external organisations (including public hospitals, community health centres and non-health state government departments that undertake public health activities), detailing the aims and expectations for the 2000–01 collection. A total of 45 metropolitan organisations and 7 regional health services were included in the collection.

A collection spreadsheet and instructions were then emailed to contact people from these external organisations. Meetings were arranged where necessary, usually with the larger organisations. This type of face-to-face contact often saved a significant amount of time and confusion.

As for 1999–00, all organisations involved in the collection were asked to report their 2000–01 financial data on an accrual accounting basis.

Tasmanian health authorities

Data collection methods

All expenditures by the Tasmanian Department of Health and Human Resources (DHHS) that fit within the definitions of core public health activities have been included. However, this report does not include expenditure by other state government agencies and LGAs that is attributable to public health.

While the DHHS' finance reporting system is centralised and this enables the smooth collection of expenditure data, the following should be noted:

- the 2000–01 data supplied for Tasmania are from cash-based accounting systems, creating the possibility of carry-over expenditure between reporting periods; however, this is likely to be of minimal impact
- expenditures by LGAs are not included
- expenditure estimates are total expenditure, not net expenditure

- program-wide and agency-wide expenditures have been allocated proportionately across NPHEP categories using the proportion of expenditure by cost centre.

The Department's finance system cost centre structure is such that in most cases the core public health categories are easily identified; however, some cost centres contained two or more categories, or only a proportion of the total expenditure was attributable to public and environmental health. In such cases, consultation with the cost centre managers was undertaken to obtain the portion of cost centre expenditure attributable to the core public health categories.

As for 1999–00, expenditure by DHHS for 2000–01 was recorded on a cash accounting basis and therefore includes any capital outlays in the reporting period.

Australian Capital Territory health authorities

Data collection methods

The ACT Department of Health and Community Care has a central accounting function that operates on a full accrual accounting basis.

The broad steps involved in collecting and processing the 2000–01 data are summarised below:

- initially, those cost centres that were within the department's chart of accounts and showed expenditure on public health activities were identified
- managers of cost centres included in the collection were advised of the core public health definitions and were asked to allocate their costs to each of the public health expenditure activities
- expenditure of the Healthpact statutory authority was then combined with the above.

Information technology expenditure was allocated on a cost centre basis under the public health activity. Agency-wide expenditure such as costs relating to finance and human resources was allocated across the nine core public health activities on the basis of full-time equivalent staff numbers.

As for 1999–00, expenditure for the 2000–01 financial year was reported on an accrual accounting basis.

Northern Territory Health Services

Data collection methods

Territory Health Services (THS) stores all available health information in a central repository known as SHILO (data warehouse). Business Objects provided an annual expenditure universe which was then converted into the statistical analytical software package SAS for analysis, comparison and storage.

Total expenditure by cost centre code for each public health program area was identified and input into a data collection module. Expenditure information for each cost centre code was provided in the collection tool to the relevant program directors according to the methodology recorded for the 1999–00 collection. Program directors advised of any changes

to allocations across the core public health categories, comments and final validation of expenditure and program description information.

As for 1999–00, expenditure by THS is recorded on a cash basis and includes capital outlays in the reporting period.