

RESPIRATORY MEDICINE SERVICES

CHAPTER 10

Respiratory physicians deal with the diagnosis, assessment and medical therapy of all non-traumatic illness affecting the thorax and respiratory system. This includes airway disease (mostly asthma and COPD), lung and pleural malignancy, other pleural disease, respiratory infectious diseases (including TB), interstitial lung disease, pulmonary vascular disease, respiratory failure, toxic inhalations (including occupational respiratory disease), and respiratory complications of systemic diseases. Most respiratory physicians also manage sleep-related breathing disorders and some manage other sleep disorders.

Many respiratory illnesses are chronic diseases that follow either a progressive or a relapsing course. Most are managed outside hospital, by respiratory physicians in cooperation with GPs, for the majority of their course. However, many patients with respiratory disease require admission to hospital, including sometimes to intensive care, during episodes of acute deterioration. On most occasions the need for admission to hospital arises relatively urgently. Most respiratory admissions in adults are for the management of asthma, COPD and pneumonia.

The majority of in-patients with respiratory illnesses are admitted through the emergency department of each hospital. Respiratory Services are available in all SWSAHS hospitals, although the role delineation of each service varies. There is very little inter-hospital transfer of patients with nearly all patients with respiratory illness managed in the hospital they initially enter.

In 2002/03 there were 5,987 inpatient separations provided across SWSAHS, which accounted for 35,565 beddays. Respiratory patients occupy approximately 115 beds daily in SWSAHS hospitals on average. The Area is overall 86% self sufficient in the provision of inpatient respiratory medical services for its adult residents. 93% of bed-days for SWS residents are provided within the public sector. Most outflows are to adjacent hospitals (Auburn, Westmead, Concord and RPA) with 44% of outflows from the Bankstown LGA. Projections indicate that the requirement for inpatient beds will increase. The demand for rehabilitation and other non-inpatient services will also increase.

In 2006, at a planned 85% occupancy, assuming no changes in flow, there will be a need for approximately 121 beds for adult patients in SWSAHS hospitals. The demand for respiratory medical services is forecast to increase by 18.0% to 2006 and by a further 12.8% to 2011.

Current Service Provision

Bankstown Hospital

Bankstown Hospital respiratory physicians provide an on-call and on-take service for patients with respiratory illness requiring in-patient care and consultation on referred in-patients. One ward is designated as a respiratory ward. In 2002/03, there were 1,672 separations and the average LOS was 6.1 days (7.2 days excluding day only) for adult patients with respiratory illness, excluding lung cancer and mesothelioma.

Fairfield Hospital

In Fairfield Hospital most respiratory patients are managed by general physicians. In 2002/03, there were 776 separations, average LOS was 5.7 days (6.5 days excluding day only) for adult patients with respiratory illness, excluding lung cancer and mesothelioma.

Liverpool Hospital

Liverpool Hospital, respiratory physicians undertake in-patient care for a substantial (but unknown) proportion of respiratory patients and consultation on referred in-patients. A further substantial number of patients with respiratory illness are managed by general physicians. A medical ward has been designated as a respiratory ward and is developing a plan for enhanced respiratory in-patient care. In 2002/03, there were 1,547 separations, average LOS was 7.3 days (8.0 days excluding day only) for adult patients with respiratory illness, excluding lung cancer and mesothelioma.

Campbelltown and Camden Hospitals

At Campbelltown (and Camden) Hospital all patients are admitted under general physicians but most respiratory patients are transferred to the care of the respiratory physician on the next working day. In 2002/03, there were a total of 1,117 separations at Campbelltown with an average LOS of 5.7 days (6.0 days excluding day only) and in Camden, 429 separations with an average LOS of 2.7 days (4.2 days excluding day only) for adult patients with respiratory illness, excluding lung cancer and mesothelioma. The shorter length of stay for Camden reflects a large percentage of day only cases and the casemix of the patients.

Bowral Hospital

All respiratory patients in Bowral, are admitted under the care of a general physician, one of whom has an interest in respiratory medicine. In 2002/03, there were a total of 446 separations; average LOS was 4.7 days (5.9 days excluding day only) for adult patients with respiratory illness, excluding lung cancer and mesothelioma.

Day Only procedures

Bronchoscopies and pleural biopsies are performed on in-patients and on patients admitted for a day only procedure at Bankstown, Liverpool, Campbelltown and Bowral Hospitals.

A private respiratory laboratory is available at rooms co-located on the Bankstown Hospital site. A business case has been completed recommending establishment of public laboratories in SWSAHS.

In addition, a business case has been completed to develop a sleep disorders and respiratory failure service consisting of a clinic and a laboratory at Liverpool Hospital. There is opportunity to develop expertise in this growing field.

Ambulatory care is involved in the care of respiratory patients in some sectors. In Bankstown sector, Ambulatory Care services deliver parenteral anti-coagulation and intravenous antibiotics to patients with thromboembolism and respiratory infection, respectively. This is less commonly done in other sectors. In Macarthur sector, Ambulatory care service undertake domiciliary care of some patients who would otherwise be admitted to hospital.

The Area's tuberculosis service is located at Liverpool Hospital. The service is responsible for the diagnosis and management of referred patients with suspected or proven tuberculosis. In addition it is responsible for the public health and occupational health aspects of TB control including contact tracing and surveillance for TB among contacts (of active cases), refugees, migrants, health care worker and other high-risk groups. The service has linkages to the Public Health Unit and the AIDS and Infectious Diseases Branch at the DOH. There were 21,936 non-inpatient occasions of service in the Chest Clinic Cost Centre in 2002/03, representing a 5.4% increase from 2001/02 (Performance Indicator Reports).

Non Inpatients

A post-emergency (adult) Asthma Clinic is operating at Liverpool Hospital. Most non-inpatient medical care is provided by consultants in their rooms. This includes VMOs and part-time Staff Specialists with private rooms. In addition, there is a post-emergency Asthma Clinic at Liverpool Hospital and some ward follow-up patients are seen in the Chest Clinic at Liverpool. There is also a Staff Specialist out-patient clinic at Bankstown Hospital.

Pulmonary rehabilitation services are available in each of the health services, based on the hospital site. Patients are enrolled in exercise-based pulmonary rehabilitation programs. In all sectors a physiotherapist has been designated (part time) to run the service.

A substantial component of home nursing support for patients with chronic lung disease is provided by primary health nurses.

Chronic and complex care

Respiratory Liaison Nurses in each sector (except Macarthur) provide discharge care planning and (mainly in Wingecarribee) care planning, for patients with COPD. The main tasks involve assessment, referral for pulmonary rehabilitation, patient education, smoking cessation interventions and communication with GPs about hospital care. In Macarthur, the CCC program is closely linked with Ambulatory Care. In Fairfield, the Fairfield Division of General Practice jointly funds the position. The Liaison Nurse provides assessment, care planning and follow up of patients in the community. The service includes supporting General Practice with 3+ Asthma plans.

Home respiratory appliances program

All SWS residents who meet financial eligibility criteria have access to domiciliary oxygen and domiciliary CPAP devices, when these are prescribed in accordance with medical guidelines. A small number of patients also receive more complex respiratory assistance (bi-level positive airway pressure or home ventilators) through this scheme. A similar, but separately funded system, provides these resources for the first one month after hospital discharge (or longer for terminal care patients).

Research and Teaching

Research within the Department of Respiratory Medicine at Liverpool is undertaken in collaboration with the Woolcock Institute of Medical Research, the Children's Hospital at Westmead and the Centenary Institute for Cancer Medicine and Cell Biology.

The major fields of research are tuberculosis and asthma. Extension of previous work is occurring on the incidence of tuberculosis in refugees to examine the incidence in another group of migrants to Australia: those who were placed on a tuberculosis undertaking by immigration authorities. This research will examine the effectiveness and efficiency of current approaches to TB prevention and control in migrants. In addition, case control study, nested within the previously identified refugee cohort, to examine risk factors for the onset of tuberculosis in individuals who have been previously infected is being conducted. This research focuses on potential genetic risk factors.

The major current project in the field of asthma is the Childhood Asthma Prevention Study. This is a randomised controlled trial of two interventions for the prevention of asthma, implemented from birth in children at high risk by virtue of a positive family history. Recruitment was completed in 2000 and follow-up is ongoing. Five year follow-up will be completed March 2005.

Clinical research on COPD and bronchiectasis is in various stages of planning and will be assisted with the commissioning of a respiratory function laboratory.

There are plans to develop respiratory research at Bankstown Hospital.

Members of the Respiratory Department play an active role in teaching medical students both at the Liverpool campus and the UNSW campus and also participate in programs for training basic and advanced trainee registrars. The Department co-hosted (with the Woolcock Institute of Medical Research) a visiting Respiratory Fellow, from Singapore for 12 months last year and again this year co-hosting a PhD student from Vietnam, again with the Woolcock Institute.

Major Equipment

The provision of both respiratory laboratories and sleep disorders and respiratory failure laboratories across the Area will improve the provision of respiratory medicine and assist in improving the recruitment and training of junior medical staff. When the respiratory function laboratory commences operations, it will become a focus for additional research activity for example for Chronic Obstructive Pulmonary Disease.

RECOMMENDATIONS

- An Area-wide respiratory medicine service be established with Liverpool, Campbelltown and Bankstown developed as the major sites for comprehensive respiratory medicine services.
- Liverpool Hospital provide level 6 respiratory medicine services with ready access to patients cared for in all other Area hospitals for:-
 - Tuberculosis service;
 - Interventional bronchoscopy service;
 - Invasive radiological service;
 - Respiratory function laboratory;
 - Sleep laboratory and CPAP/BiPAP service;
 - Thoracic oncology (linked to other hospitals); and
 - Asthma clinic.
- An Academic Centre be established at Liverpool and an additional senior Academic Respiratory Medicine Physician appointed.
- The following components of care delivery be available at Bankstown and Campbelltown, with ready access to patients from Camden & Wingecarribee:-
 - Invasive radiological service;
 - Respiratory function laboratory;
 - Sleep laboratory; and
 - Asthma clinic.
- Respiratory Medicine physicians be appointed to Campbelltown and Fairfield with cross appointment to Bankstown or Liverpool.
- The home respiratory appliance service be centralised and linked to home nursing support.
- Access for non-inpatient asthma services, pulmonary rehabilitation patients, TB service and expansion of smoking cessation be assisted by an Area Respiratory CNC.
- Private practice-style outpatient facilities with procedure rooms be developed across the Area.