patients in their clinic population. In contrast, mainstream general practice may experience problems in identifying eligible Aboriginal and Torres Strait Islander people. General practitioners and practice staff should ask all patients whether they identify as being of Aboriginal and Torres Strait Islander origin by asking the National Standard Identification question ‘Are you of Aboriginal or Torres Strait Islander origin?’\textsuperscript{14,15}

Once indigenous people are correctly identified and registered with Medicare Australia they are then eligible to access the co-payment assistance. Pharmacists will be reimbursed for the co-payment the patient no longer pays. General practices will be funded through the Practice Incentives Program Indigenous Health Incentive.\textsuperscript{12}

\textbf{Conclusion}

Outcomes in chronic disease will be suboptimal if the patient does not have access to treatment. There are several initiatives which aim to improve the access of Aboriginal and Torres Strait Islander people to PBS medicines. The Indigenous Chronic Disease Package will reduce the cost of prescriptions for patients with chronic disease. This has the potential to help to close the gap in health between Aboriginal and Torres Strait Islander people and other Australians.

\textbf{References}


\textit{Conflict of interest: none declared}

\section*{Medicinal mishap}

\textbf{Mismanagement of dental infection}

\textit{Prepared by Ricky Kumar, Advanced trainee, Paul Sambrook, Director, and Alastair Goss, Professor and emeritus consultant, Oral and Maxillofacial Surgery, The Royal Adelaide Hospital}

\textbf{Case}

A 25-year-old man with schizophrenia presented as an emergency with severe pain and swelling of his left jaw and neck. He was febrile (38.9°C) and could only open his jaw 5 mm. Swallowing was difficult and he was dehydrated.

The patient had a history of toothache for three years. For the past two years he had experienced facial swellings. He had attended several medical clinics and received a range of antibiotics, mainly amoxycillin, but also erythromycin, tetracycline, metronidazole and amoxyccin with clavulanic acid. He had no recollection of ever being given a referral or being told that he must seek dental advice.

Two weeks before presentation the patient developed trismus and difficulty in swallowing. He went to an emergency
department and was given oral analgesia and amoxycillin with clavulanic acid before being discharged without arranged follow-up. The patient briefly improved, but re-presented a few days later so he was admitted for intravenous amoxycillin and metronidazole. He improved and was discharged with advice to ‘next time’ go to a hospital with an oral and maxillofacial service. On presentation, the clinical diagnosis was Ludwig’s angina or a spreading neck infection from an acute dental cause. Direct endoscopic examination of the oropharynx showed an extension of the swelling into the lateral oropharynx, a deviation of the uvula and marked swelling with imminent supraglottic obstruction. An orthopantomograph (Fig. 1) was taken with an oral and maxillofacial surgeon present and the patient was intubated before being placed in a CT scanner (Fig. 2). The left mandibular second molar and six other decayed teeth were removed. Copious amounts of pus were drained intra-orally and via a skin incision. Microbiological swabs for culture and sensitivity were taken before starting empirical intravenous cefalotin and metronidazole. Culture and sensitivity showed that the bacteria were resistant to the penicillins and tetracyclines, but sensitive to the cephalosporins and metronidazole. The patient was in intensive care for 48 hours and remained in hospital for a further three days. On review at six months he had fully recovered and had attended the local government dental clinic.

Comment
The principles of managing infection, such as, remove the cause, drain the pus and support the host, have been known since the time of Hippocrates. The advent of antibiotics changed the management of life-threatening infections. However, the inappropriate use of antibiotics and increasing resistance have seen the return of severe spreading infections from common causes. The case reported is not exceptional, but represents the daily or weekly workload of specialist units at major metropolitan hospitals. In the past ten years we have treated over 1000 similar cases and have had three fatalities. One patient died of airway obstruction, another died of septicaemia caused by bacteria with multiple resistances to antibiotics and the third died from cerebral infection with a background of community-acquired methicillin-resistant Staphylococcus aureus. All these cases could have been prevented by timely dental intervention. Antibiotics may temporarily alleviate symptoms, but in the medium to long term the delay in treatment due to the use of antibiotics makes the condition worse.

Recommendation
Dental pain and swelling is a dental problem which should be treated by a dentist. If the patient presents to a doctor they should be referred to a dentist. Access to affordable and timely dental services is crucial.

A patient who presents with upper neck swelling, difficulty in swallowing and who cannot open their jaw 2 cm, no longer just has a dental problem but has an airway problem. Their airway should be secured before transfer to a hospital with the appropriate surgical, medical and anaesthetic facilities. Do not simply prescribe antibiotics for dental infections. Emphasise the need for dental treatment as soon as possible.

References