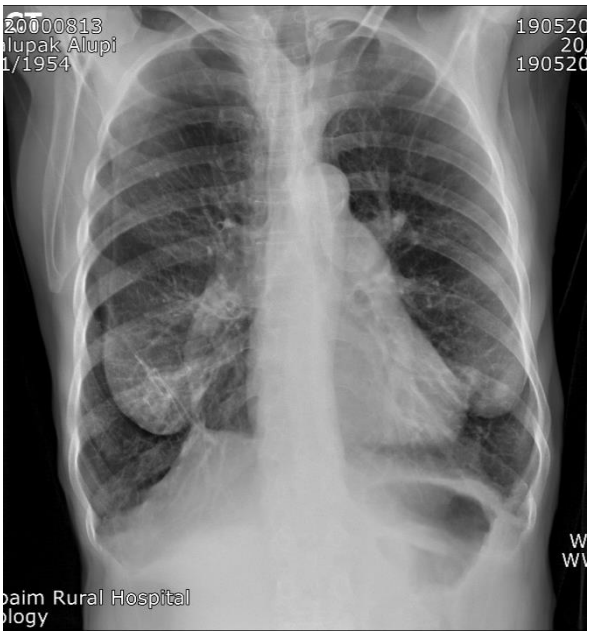
Passive smoking

In Australia most acquired lung conditions are attributed to chronic cigarette smoking. Similarly the highland population in PNG greatly suffer commonly severe respiratory conditions, although the provoking poison is not cigarettes. Nearly every Engan Man and Merri, over the age of 50 has symptoms of COPD secondary to biomass/organic smoke. The average Engan family only has one house, which could be simultaneously home to 3 to 4 generations (due to early pregnancy rates rather than long life expectancy) and has a fire going 24hrs a day. The fire is for cooking, for heat and to help waterproof the thatched ceiling. Therefore, the average 50-year-old has a 50 hut/year smoking history.



Similar to Australian cigarette smokers, after a great enough amount of smoke they start to display symptoms. Worsening shortness of breath, decreased exercise tolerance, chronic cough (a lot of people have concurrent TB) and they are predisposed infectious exacerbations of their COPD. However, unlike their cigarette induced brothers they have, anecdotally, much higher rates of Cor Pulmonalae. Although we have no ability to quantifiably diagnose the pulmonary pressures, the clinical signs are very distinct in the PNG population. Minimal cardiac disease is seen otherwise in Engans, however in those with Chronic COPD, pitting lower limb oedema, a raised JVP, hepatomegaly is frequently accompanying with the large barrel chest and reduced air entry of COPD. There is no doubt a paper to be written on quantifying the severity and the incidence of Cor Pulmonalae in the highlands.

Treatment for PNG is very limited, with the use of inhaled medicines a recent revelation, most rural hospitals still only have oral salbutamol. At Kompiam, patients are started on an antibiotic (frequently Chloramphenicol), a beclomethasone inhaler and a salbutamol inhaler, and depending on severity given oral/IV steroids. The extent of their heart failure is treated accordingly, with diuresis and eventually, the initiation of an ACEI, the only treatment available to us. There is no step up in therapy, at diagnosis maximum therapy is started immediately, if the individual patient's blood pressure allows.

I have been amazed by these elderly Engans mainly by their ability to compensate and persist. After working with COPD patients in the Australia setting, I often struggle to believe the feats that these people with severe disease achieve on a daily basis. They often present after walking to Hospital, hiking up and down substantial mountains and vallys from their home village. Their blood oxygen saturations frequently sit in the 70s, clinically asymptomatic, without any great increase in their work of breathing. They continue to live their life, despite the altitude and the frequent exertion required. Perhaps, contrary to my thinking, the unchanging low oxygen concentration and frequent daily exercise allow them to continue to live their lives.

The old are not the only one who face the ill effects of the cook-house smoke, with young children's respiratory infections often attributed to living in the permanent smog. Evidence that living in a

smoke house increases the risk of respiratory infections in children, as far as I know, is not established, however there is evidence regarding passive cigarette smoking causing increased risk. Regardless of the evidence, families are more inclined to attempt to change their house for the newborn child than for grandpa. Therefore, the hospital uses nearly all respiratory tract infections as an opportunity to counsel the community on the dangers of smoke houses and encourage building a house for cooking and another for general use and sleeping.