Introduction
Regional and rural Australian communities have primary health challenges. Health screening provides a means of providing public health information and sampling the local community’s common physical health parameters for blood pressure, diabetes, obesity and asthma. Project aims were (1) provide an opportunity for Year 2 medical students an interaction in a rural community, conduct basic health screening, provide basic public health, and service referral information (2) collect physical health screening information to provide a snapshot of community health. This is part of a larger Health Check project involving two other rural South Australian communities.

Background
Body Mass Index (BMI), a screening tool is a measure of relative body fat based on height and weight. It is calculated as weight (kg) divided by height squared (m^2). High BMI is associated with increased risk of hypertension, coronary artery disease, diabetes, and some cancers. Waist circumference has been directly correlated to changes in abdominal fat thus is used as an indicator of potential risk of developing chronic diseases such as heart disease, Type 2 diabetes and high blood pressure. A waist measurement of 94 cm or more (for men) or 80 cm or more (for women) is an indicator of increased health risk.

Blood pressure (SBP) is a measure of the pressure of the blood in the arteries as it is pumped around the body by the heart. High BP (hypertension), defined as systolic pressure above 140mmHg and a diastolic pressure above 90mmHg, increases risk of heart attack, stroke, heart failure and kidney disease.

According to the Diabetes Australia, diabetes contributed 5.5% of the total burden of disease in Australia in 2003. It is thus important to identify those at risk of developing diabetes or those who have but are unaware that they have diabetes. One screening tool is a random finger-prick plasma glucose test (RFPG), which measures a participant’s non-fasting plasma glucose levels. If the RFPG is above 5.5mmol/L, the individual should be referred to a GP to undertake further testing.

Peak Flow Rate (PFR) is the maximum flow rate generated by a forceful expiration after inhalation, reflecting effort and strength and air flow through the trachea and bronchi. PFR is dependent on technique and patient effort, thus clear instructions and demonstrations are necessary. A PFR measurement can indicate necessity to maintain or adjust treatment plans for asthma.

Methods
On the third of September 2014 between the hours of 8am and 6pm a “Health Check Pit Stop” was conducted at the REX Fitness Centre in Tanunda, South Australia. Radio, Facebook posts, posters around the centre and an article in the local newspaper were the mediums used to promote this event within the community. Participants were not actively recruited, instead volunteered to be part of the study after reading the provided information sheet and signing the consent form after approaching the pit stop.

Participants undertook basic health screening measurements in a private consulting room, overseen by a registered nurse from the community. Height was measured with an industrial tape measure against a wall. Weight was measured using calibrated digital scales. Hip and waist measurements were taken using an inelastic tape measure in centimeters. Blood pressure was measured using a manual sphygmomanometer and stethoscope after the participant was seated and resting for five minutes prior. RFPG was measured using Freestyle Freedom Lite machine (Abbott Laboratories, Doncaster, Australia). Peak flow was measured three times using a Peak-Flow-Meter by Vitalograph, then averaged to produce more accurate results. General demographics were also recorded including gender, date of birth, marital status, employment status, smoking status and quality of life. Results were analyzed using Microsoft Excel.

Results

**BMI**
Mean BMI for males and females was 25.8 (Cl±1.85) and 26.7 (Cl±1.71) respectively. Overall, 41% of participants were overweight and 19% obese.

**Blood Pressure**
Mean blood pressure for males and females was 134/76 mmHg (Cl±1.85) and 128/75 mmHg (Cl±1.53) respectively. Of the participants 54% were pre-hypertensive and 20% hypertensive.

**Waist Circumference**
Mean waist circumference for males and female was 94.6cm (CI±7.3) and 87.3cm (CI±5) respectively. Percent of males waist range in the study was 94 cm was 42% and females above 80cm was 60%.

**Random Finger Prick Plasma Glucose**
Mean score for males and females was 5.3 mmol/L (Cl±0.9) and 5.1 mmol/L (Cl±0.6) respectively. Only 22% were within the ‘normal’ range 5.5 – 11.0 mmol/L.

Discussion
It is widely acknowledged that Australians living in rural and remote areas have poorer health status and face greater health risk factors when compared to those living in major cities. Factors such as obesity, high blood pressure and high waist to hip ratios are generally those concerned when examining physical health. The findings of this study were in line with previous research for both males and females.

Though the results of this study were in line with previous research, the study had its limitations. As the Pit Stop was conducted at a sports centre, it could be said that the demographics and measurements of the people involved in the study were not an accurate representation of the people living in the Barossa. Also, our findings suggested the majority of participants had an elevated BP, but this may have been due to recent high intensity exercise rather than cardiovascular disease.

For future such studies, it would be advisable to hold the pit stops at variable sites and have longer screening periods in order sample a larger proportion of the population and to gain a more accurate representation of the Barossa region. Researchers undertaking the screening should also have further training to become more consistent in taking measurements and equipment used should also be standardized.

References
5. Peak Flow Meter—a Simple, Practical, Effective Unusual Method for the Measurement of Exhaled Air Flow Rate. a Method of measuring exhaled air flow rate. a Method of measuring exhaled air flow rate. a Method of measuring exhaled air flow rate. a Method of measuring exhaled air flow rate.
9. Peak Flow Meter—a Simple, Practical, Effective Unusual Method for the Measurement of Exhaled Air Flow Rate. a Method of measuring exhaled air flow rate. a Method of measuring exhaled air flow rate. a Method of measuring exhaled air flow rate. a Method of measuring exhaled air flow rate.