

Lung Health Survey of Andhra Pradesh State Road Transport Corporation (APSRTC) Employees

Objectives of the Health Survey: Regular exposure to high levels of vehicular air pollutants is likely to predispose road transport workers (bus drivers, conductors and garage workers) to a high risk of respiratory illnesses. Through the APSRTC study, we tried to examine the lung health status of APSRTC Employees with reference to prevalence of Respiratory Symptoms, status of lung functions using Peak Flow Meter and Spirometer, risk factors associated with respiratory symptoms and to study the association between lung health and other disease parameters.

Planning and Execution of the Survey:

- A questionnaire was designed by CRF to capture basic information and lung health parameters of the APSRTC employees.
- Training of field workers to administer the health questionnaire, to check blood pressure and to perform lung function testing was provided by CRF team.
- Phase I: All people underwent questionnaire administration and measurement of Blood Pressure and Peak Flow rate values.
- Phase II: Those having some respiratory symptom and/or poor lung function measurement on Peak Flow metry underwent a detailed evaluation of their lung health using Spirometry.
- Blood Pressure, height and weight was measured in all people.

7154 APSRTC employees at 19 Bus Depot locations in the state of Andhra Pradesh were surveyed between 15th Sept 2010 and 11th Nov 2010

Key findings:-

1. Road transport workers have a high prevalence of respiratory symptoms with significantly greater values amongst office based workers and garage workers when compared to drivers and conductors. 27% of all the RTC employees had at least one respiratory symptom during the previous 3 months. Prevalence of rhinitis/rhino-sinusitis, cough, wheeze, breathlessness and chest pain/ tightness were 14.7%, 10.5%, 8.3%, 7.9% and 5.6% respectively. Prevalence of respiratory symptoms were significantly higher in office workers (34.9%) as compared to drivers (24.2%; $p < 0.0001$), conductors (25.4%; $p < 0.0001$); and garage workers (30.0%; $p < 0.05$).
2. PEF values < 80% predicted is a better predictor of OAD and SAO than presence of respiratory symptoms. We recommended use of PFM as a screening tool for OAD in large epidemiological studies.

