

# Gambaran spirometri, foto toraks dan keluhan respirasi petugas Gerbang Tol Jagorawi di Jakarta Timur = Gambaran spirometri foto toraks dan keluhan respirasi petugas Gerbang Tol di Jakarta Timur / Herman Darmawan

Herman Darmawan, author

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## Abstrak

### **ABSTRAK**

Background research : Air pollution due to road traffic is a serious health hazard and thus the collector toll who are continuously exposed to pollutant, may be at an increased risk. Types of main pollutants in the outdoor air pollution will significantly influence lung function. This study determined the factors that affect spirometry lung function, chest x-ray, and respiratory symptoms of collector toll working in the area of Jagorawi toll in East Jakarta. Methods: This study is a cross sectional study was conducted among collector toll of Jagorawi toll in East Jakarta in the period of December 2012 with total sampling method. This study has assessed respiratory clinical symptoms using questionnaires of Pneumobile Project Indonesia, examined spirometry, and chest x-ray. Results: A total of 129 subjects were included in this study. Most of them are men (71,3%), aged 40 to 49 years (48,8%), were over weight (46,5%), active smokers (55%), most of them have worked 15 to 19 years, did not use masker properly (65,9%), and had abnormal chest x-ray (3,9%). Results of spirometry examination showed mild restriction in 12 subjects (9,3%), mild obstruction in 2 subjects (1,6%). There are significant association between age and period of working with spirometry abnormalities ( $p < 0,05$ ), but no significant association found between nutritional status, smoking history, chest x-ray, using of masker, place of working with spirometry of collector toll ( $p > 0,05$ ). There is significant association between respiratory clinical symptoms with mild lung restriction ( $p < 0,05$ ). There are significant association between age and smoking history with respiratory clinical symptoms ( $p < 0,05$ ). There is significant association between period of working with chest x-ray abnormalities. Conclusion: This study showed that there are significant association between age and period of working with spirometry abnormalities ( $p < 0,05$ ), but no significant association found between nutritional status, smoking history, chest x-ray abnormalities, using of masker, place of working with spirometry abnormalities of collector toll ( $p > 0,05$ ).

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### **ABSTRACT**

Latar belakang penelitian: Petugas gerbang tol merupakan profesi yang mempunyai risiko sangat besar untuk terpajan zat-zat polutan yang berasal dari asap kendaraan bermotor yang akan memberikan efek berupa penurunan fungsi paru dan keluhan respirasi. Penelitian ini bertujuan untuk mengetahui gambaran spirometri, foto toraks dan keluhan respirasi pada petugas gerbang tol Jagorawi di Jakarta Timur. Metode penelitian : Penelitian ini dilakukan di wilayah Tol Jagorawi di Jakarta Timur bulan Desember 2012 dengan desain uji potong lintang. Pengambilan sampel menggunakan total sampling melalui kuesioner, pemeriksaan spirometri, foto toraks PA. Hasil : Seratus dua puluh Sembilan subjek diikutkan dalam penelitian ini, laki-laki (71,3%) terbanyak usia 40-49 tahun yaitu 63 orang (48,8%), berat badan lebih 60 orang (46.5%) , perokok aktif 71 orang (55%) dengan IB ringan 41 orang (31,8%), bekerja selama 15-19 tahun sebanyak 46

orang (30,7%). Prevalens kelainan spirometri sebanyak 14 orang (10,9%) yaitu restriksi ringan 12 orang (9,3%) dan obstruksi ringan didapatkan pada 2 orang (1,6 %). Penggunaan APD masker buruk (65,9%), kelainan foto toraks (3,9%), keluhan respirasi (10,1%). Secara statistik terdapat hubungan bermakna antara usia, masa kerja dengan kelainan obstruksi. Terdapat hubungan bermakna antara usia, masa kerja dengan kelainan restriksi. Terdapat hubungan bermakna antara keluhan respirasi dan indeks brinkman dengan kelainan restriksi. Terdapat hubungan bermakna antara masa kerja dengan kelainan foto toraks. Terdapat hubungan bermakna antara kebiasaan merokok dan usia dengan keluhan respirasi. Kesimpulan : Penelitian ini menunjukkan terdapat hubungan bermakna antara usia, masa kerja dengan kelainan obstruksi. Hubungan bermakna antara usia, masa kerja dengan kelainan restriksi. Hubungan bermakna antara keluhan respirasi dan indeks brinkman dengan kelainan restriksi. Hubungan bermakna antara masa kerja dengan kelainan foto toraks. Hubungan bermakna antara kebiasaan merokok dan usia dengan keluhan respirasi.