Introduction:
Infections caused by Multi Resistant Bacteria are a major health problem, especially in ICUs, and it may be associated with high mortality rates. Colonization precedes infection in most instances; therefore it may be a marker of a poor outcome. We tried to determine the impact of colonization on mortality at 28 and 90 days in a population of patients admitted to one medical and one surgical ICU in the same institution.

Methods:
Medical records review over three years 2016-2018 of all patients admitted to one surgical et one medical ICU at Hotel Dieu de France Hospital staying more than 24h. Colonization to resistant bacteria was defined as MRSA, ESBL, MDR, and VRE. All patient received a nasal and rectal screen on ICU admission, in intubated patients tracheal aspirate was considered as colonization in the absence of clinical respiratory tract infection. Demographics, APACHE, SOFA, immunosupression, Charleston comorbidity index, length of stay, mechanical ventilation, hospitalization and antibiotic use in the previous 3 month were collected. Mortality at 28 and 90 days was assessed through medical records or phone call. Pearson Chi-Square was calculated for the association of colonization and mortality at 28 and 90 days, and subsequently odd ratio was estimated.

Results:
1337 patients fulfilled our study criteria. 413 or 53.3% were colonized, 28 patients or 2.8% of the population had MRSA on nasal screen. Rectal swab identified 44.5% of ESBL, 3% of MDR and 4.8% of VRE. Mortality at 28 and 90 days were 19% and 30% respectively. No significant difference was found between either nasal or rectal or any colonization and mortality at 28 and 90 days. Odd ratio for 28 days mortality in colonized patient was calculated to 0.98 (CI:0.74-1.29) and for 90 days mortality 1.09 (CI:0.85-1.39).

Conclusion:
In this study we concluded that colonization with resistant bacteria is not a risk factor for mortality at 28 and 90 days.