This study was carried out during the period 1415/1416H, with an aim to investigate the epidemic and antibiotic sensitivity caused by Klebsiella pneumoniae strains in paediatric and nursery wards at maternity and children Hospital, Makkah, using blood, urine, Throat swabs and Miscellaneous samples. A total of 20051 samples were examined and bacterial growth were observed in (37%) out of which (9.5%) belonged to K.pneumoniae strains. The percentage of K.pneumoniae development for blood, urine, Throat swabs and miscellaneous samples were (12.2%, 13.9%, and 6%) respectively. The highest percentage 13.6%, 13.9% found in external nursery (48.9%) followed by internal nursery

In blood culture samples, the percentage of K pneumoniae strains isolated from external nursery, internal nursery and pediatric were (18%, 20% and 5.7%) respectively, and the percentage of hospital acquired bacteraemia was more than early or community acquired bacteraemia. The mortality rate in bacteraemia were (37.9%, and 5%) at external nursery, internal nursery and, 50% paediatric respectively. The use of central venous catheters and length of hospital stay before the infection were the most importance risk factors for bacteraemia in external nursery on the other hand the length of hospital stay before the infection and low birth weight were the most important in Internal nursery. In urine samples, urinary tract infections caused by K pneumoniae strains in pediatric were more in female than male. By using disc diffusion method the effect of 1 Q antibiotics were tested on the K.pneumoniae strains isolated from blood the results showed that Imipenem was the most effective antibiotic since not asingle strain was resistant to these antibiotic. On the contrary a (98%) resistance to the antibiotic Ampicillin was observed in these strains. The strains isolated from external nursery and Internal nursery showed high resistance to Gentamicin which represented (60% and 77.6%) respectively. MIC of antibiotics to all K pneumoniae strains was estimated by using 9 popular antibiotics against K pneumoniae infections. The results of MICs decreased in case of Amikacin, Cefoxitin, Cefotaxime