A substantial increase in meropenem use was recently observed in the five Quebec university teaching hospitals. In 2010, the Therapeutic Drug Management Program was mandated to describe the use of meropenem and to make recommendations to promote optimal use.

METHODS - The study population was identified through the pharmacy databases. All patients who received at least one dose of meropenem between April 1st, 2009 and March 31st, 2010 were retrieved. Medical records were reviewed for indication, dosing recommendations, resistance data, comorbidities, concomitant antibiotic use, etc.

RESULTS - 2454 adults and 202 pediatric patients received meropenem during the study period. 1199 (48.7 %) and 170 (84 %) of adult and pediatric prescriptions were respectively written by an infectious diseases physician. Multiple comorbidities were observed in both adults and children (≥ 2 comorbidities in 66 % and 54 %, respectively). More than a third of the patients were in a critical care unit. Most frequent indications in adult and pediatric population were respectively respiratory tract (41 %) and wound infections (53 %). However, this non conformity rate for both groups can be reduced if we use dosing recommendations suggested by other sources.

CONCLUSION - Meropenem was most commonly prescribed for severely ill patients. Poor compliance with dosing recommendations in many diagnoses was observed, with higher dosing generally used. Interventions to correct dosing and to use for appropriate indication would improve the utilization of meropenem as well as reduce costs.