T4 CDC laboratory protocol for detecting carbapenem-resistant or carbapenemase-producing Klebsiella spp. and E. coli from rectal swabs

STEP 1 Day One	Aseptically, place one 10-µg ertapenem or meropenem disc in 5 ml trypticase soy broth (TSB). Immediately inoculate the broth with the rectal swab. Incubate overnight at 35 ± 2ºC, ambient air.
STEP 2 Day Two	Vortex incubated broth culture and subculture 100 µl onto a MacConkey agar plate and streak for isolation. Incubate overnight at 35 ± 2ºC, ambient air.
STEP 3 Day Three	Examine the MacConkey agar for lactose-fermenting (pink-red) colonies. More than one colony morphology may represent different species of Enterobacteriaceae. It may be necessary to subculture representative colonies of each morphology type to non-selective media for isolation and/or for susceptibility testing. Screen representative isolated colonies using a phenotypic test for carbapenemase production, such as the modified Hodge test (MHT) or test for carbapenem susceptibility using a standardized method and follow the CLSI guidelines for identification of carbapenemase-producing Enterobacteriaceae.
STEP 4 Day Four	For CRE and/or MHT-positive isolates, perform species-level identification.

Source: 2012 CRE Toolkit—Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE)