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Experience with the Vancomycin Resistant Enterococcus (VRE) Outbreak in Caritas Medical Centre
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Introduction

Since June 2011, an outbreak of VRE has occurred in CMC. A quality improvement program (QIP) had been implemented and the outbreak was controlled successfully. The lessons learned from this outbreak provide valuable source of information for VRE management in local situation.

Objectives

(1) To control VRE outbreak through a comprehensive program (2) To understand the epidemiology and characteristics of VRE

Methodology

A QIP was implemented after the detection of outbreak: 1. Early case identification by active surveillance 2. Enhancement IC precautions for VRE patients 3.Enhancement of environmental hygiene 4. Quality improvement of 5 targeted basic care procedures (HH, nasopharyngeal tube feeding, perineum care, incontinence care and urinary catheter care) 5. Enhancement of staff communication Information obtained from VRE patients was analyzed: Total 118 VRE patients were identified and epidemiological information was referenced to guard the management.

Result

1. The QIP has successfully controlled the VRE outbreak. At the peak, there were 27 cases in January 2012, the case number down to 1 case in June 2012 and then no more case was detected for months thereafter. 2. Epidemiological information: Total 118 VRE patients were identified by clinical isolates or through active screening to over 6,000 patients with exposure history. a.118 VRE patients -- 14 (11.9%) clinical cases, 104 (88.1%) carriers; VRE isolates from: Urine (10), Blood (2), Bile (1), Peritoneal dialysis fluid (1) and rectal swab (104) b. Positive rate of contacts (finding from the first 23 cases) -- Primary contact: 16 positive out of the 108 contacts: 15%; Secondary contact: 1 positive out of the 20 contacts: 5% c. Clearance of VRE -- i. 55 cases had documented permanent VRE clearance (defined as 4 or more VRE negative results over the period of 6 months or more): Range 8-230 days; mean 67.2 days; median 45 days; 90 percentile 155.4 days. ii. 4 cases have carrier the VRE for

more than 300 days. iii. 11 cases recurred after transient VRE clearance. Conclusion: The fundamental IC measures are important elements in the control of outbreak. Moreover, by studying the epidemiology of the VRE outbreak and their character, it lets us understand more about VRE in our local situation and this can help us to control VRE outbreak more effectively in future.