

# Methicillin Resistant Staphylococcus Aureus (MRSA) Screening in a Cohort of 233 Hemodialysis Patients: 2012 - 2016 Outcomes

Fedorowsky Rina R.N , Muhammad Khaskiya R.N, Atsy Ibrahim R.N, Halutzi Bela R.N, Korzetz Asher M.D

## Introduction:

MRSA blood stream infection (BSI) is highly pathogenic among hemodialysis (HD) patients. Nasal carriers of MRSA have a high incidence of hospitalization and a subsequent high mortality rate due to MRSA BSI especially in those patients with a central vein catheter (CVC).

## Methods:

Out of 233 HD patients screened for nasal MRSA carriage between 2012-2015, 26% (60/233) were HD patients with CVC.

Nasal bacterial cultures were taken once a year in all patients and twice a year in those patients with a CVC.

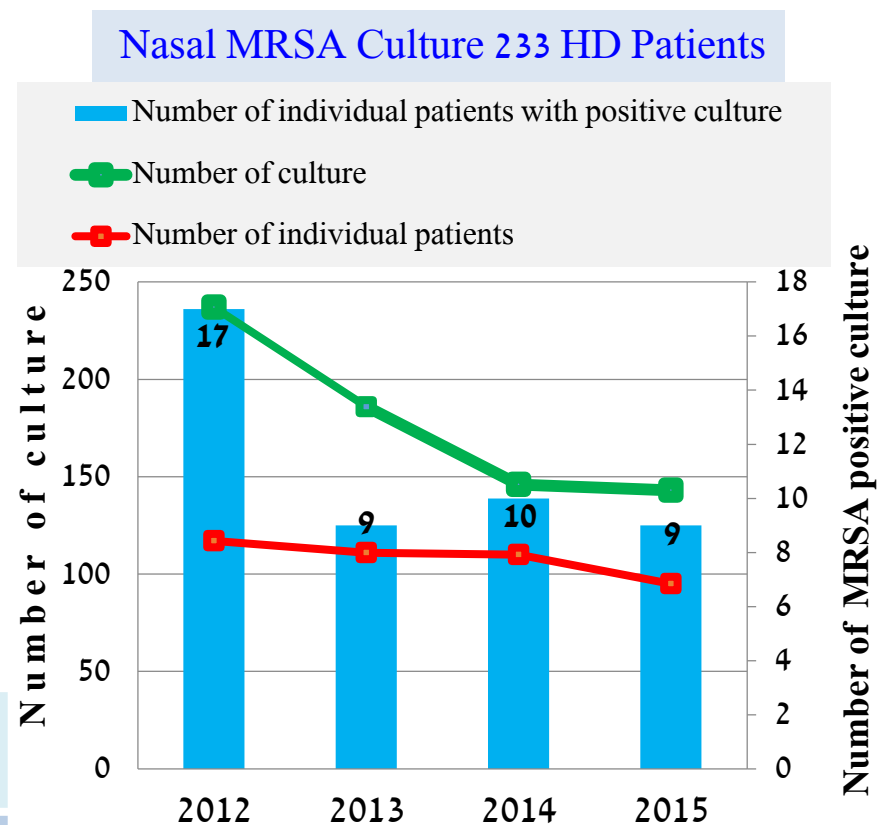
Patients with a single positive MRSA culture were placed in strict contact isolation and were given nasal Mupirocin ointment twice a day for 5 days. Two weeks after completing the therapy, nasal cultures were taken.

Patient remained MRSA positive, was given whole body chlorhexidine 2% washing and Mupirocin nasal ointment for another 5 days.

The incidence of BSI rates was monitored from 1 Jan 2012 to 1 Jan 2017.

## Results:

- Overall MRSA nasal carriers patients was 16% (37/233)
- MRSA nasal carriers patients with CVC was 30% (19/60)
- MRSA nasal carriers without CVC was 10.4% (18/173)
- Successful MRSA decolonization was 73% (27/37) of HD patients.
- Most of the Persistent nasal MRSA carriers were patients with CVC (6/10)
- BSI incidence decreased from 5.1 episodes (2012) to 2.5 episode per 100/patients month (2016)



## BSI Rate per 100/patients month

2016	2015	2014	2013	2012	Access
0.5	0	0.7	0.3	0.6	GRAFT FISTULA
2.5	3.9	3.6	4.76	5.1	CVC

## Conclusions:

MRSA nasal carriage in HD patients with CVC is very high and most of the persistent nasal MRSA carriers are patients with CVC