



# Pittsburgh Regional Healthcare Initiative

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## ***First quarter 2004 NNIS data confirm***

# **Central line bloodstream infection rate steady**

During the first quarter of 2004, Southwestern Pennsylvania's CLAB rate remained steady at 2.4 infections per 1000 line days.<sup>1</sup> Since the region began collecting the data in the third quarter of 2001, the reported CLAB rate has decreased around 45% since collective reporting began in 2001.<sup>2</sup>

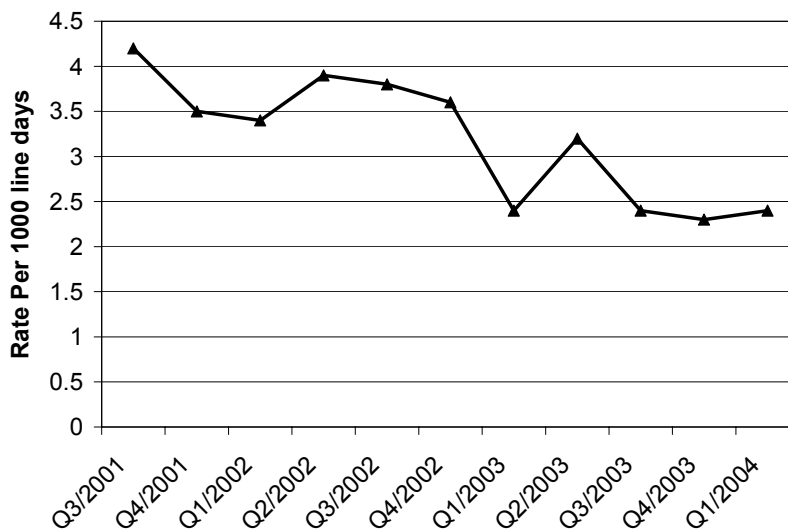
PRHI hospital partners continue to place special emphasis to on reducing these infections. Across the region, infection control professionals and others have led the way through 1) introduction of **insertion kits**, to ensure that every item needed for safe insertion is at the ready when a practitioner places a line; 2) **procedure notes** in patients' charts, which act as a "checklist" of recommended practice; and 3) **observations** to gain better understanding of current practices during line insertion and dressing maintenance.

## ***Interpreting the data***

What accounts for a regional decline in CLABs? Of the 28 hospitals reporting data this quarter, 10 posted declines that were statistically significant. Two hospitals had statistically significant increases in their CLAB rate.

The strength of a regional coalition like PRHI lies in learning together about how to eliminate these infections. We hope future quarterly reports confirm even greater reductions in these rates.

Quarter/Year	# CLABs	# of Hospitals Submitting	Rate per 1000 line days
Q3/2001	121	27	4.2
Q4/2001	101	28	3.5
Q1/2002	106	27	3.4
Q2/2002	111	27	3.9
Q3/2002	113	27	3.8
Q4/2002	100	25	3.6
Q1/2003	58	23	2.4
Q2/2003	76	24	3.2
Q3/2003	64	23	2.4
Q4/2003	61	26	2.3
Q1/2004	69	28	2.4



1 A central line day is a day in which a patient is exposed to one or more central/umbilical lines. CLAB rates are computed as (infections/line days x1000). Days of exposure to central line devices ('central line days') comprise the most important risk factor for infection and, therefore, where possible, are used as denominator for rate calculation.

2 Infection control professionals from the PRHI hospitals submit data to the Centers for Disease Control and Prevention quarterly.

**First quarter 2004 NNIS data show little regional improvement in antibiotic-resistant infection**

**MRSA\*: the current condition**



Is our region winning the war against antibiotic-resistant infections? The meaning of these reported numbers is not clear.

Hospitals across the community report MRSA infections (ventilator-associated pneumonias, primary bloodstream infections, and certain surgical site infections) according to CDC definitions. However, interpretation of these definitions vary, and detection can be difficult.

- ✧ Regional rates vary.
- ✧ It is not yet clear whether the baseline is reliable.
- ✧ Measurable regional improvement has not occurred.

These data point to the need for renewed community focus on understanding the prevalence of MRSA infections and their devastating implication for patients, and renewing the call to eradicate all MRSA infections.

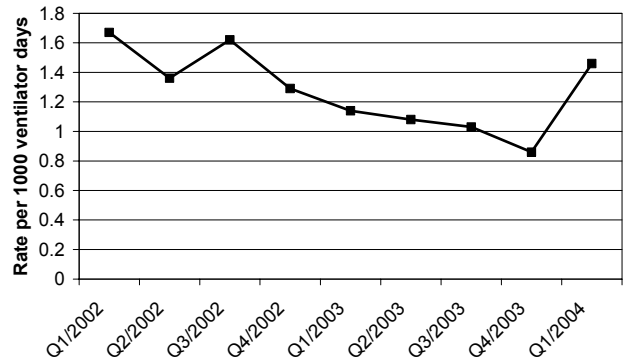
At the VA Pittsburgh Healthcare System's pilot unit, a reliable MRSA baseline was established two years ago. Since then, with stunning success, the unit has been able to all-but-eradicate MRSA infections in the subject unit (*chart, top right*).

The challenge to our region could not be

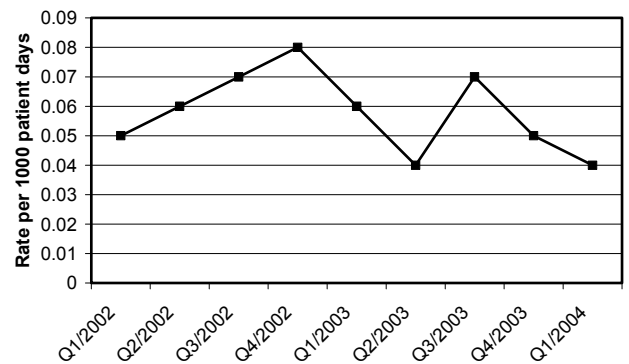
clearer. PRHI partners will need to renew their focus on a key goal for patients: eradicating MRSA in Southwestern Pennsylvania.

Site	Qtr/Year	# Infections	Rate
Hip	Q1/2002	3	0.35
	Q2/2002	4	0.5
	Q3/2002	5	0.66
	Q4/2002	7	0.83
	Q1/2003	3	0.43
	Q2/2003	4	0.70
	Q3/2003	3	0.39
	Q4/2003	3	0.42
	Q1/2004	5	0.64
Knee	Q1/2002	3	0.22
	Q2/2002	4	0.34
	Q3/2002	2	0.18
	Q4/2002	1	0.09
	Q1/2003	2	0.18
	Q2/2003	3	0.32
	Q3/2003	3	0.3
	Q4/2003	2	0.18
	Q1/2004	3	0.24
Cardiac	Q1/2002	6	0.44
	Q2/2002	5	0.37
	Q3/2002	10	0.73
	Q4/2002	7	0.56
	Q1/2003	2	0.21
	Q2/2003	4	0.42
	Q3/2003	2	0.18
	Q4/2003	5	0.49
	Q1/2004	3	0.31

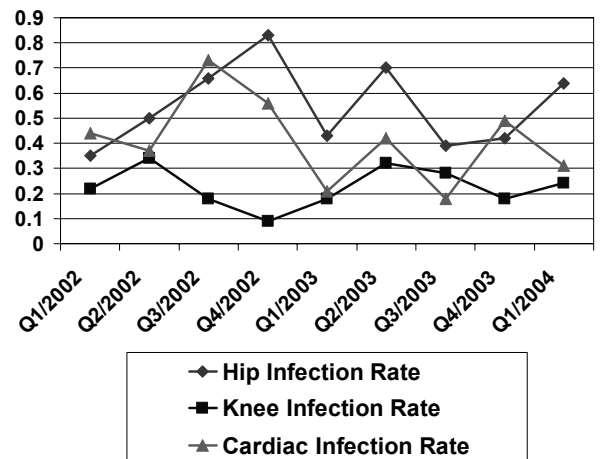
Reported ventilator-associated pneumonia rates



Reported primary bloodstream infections



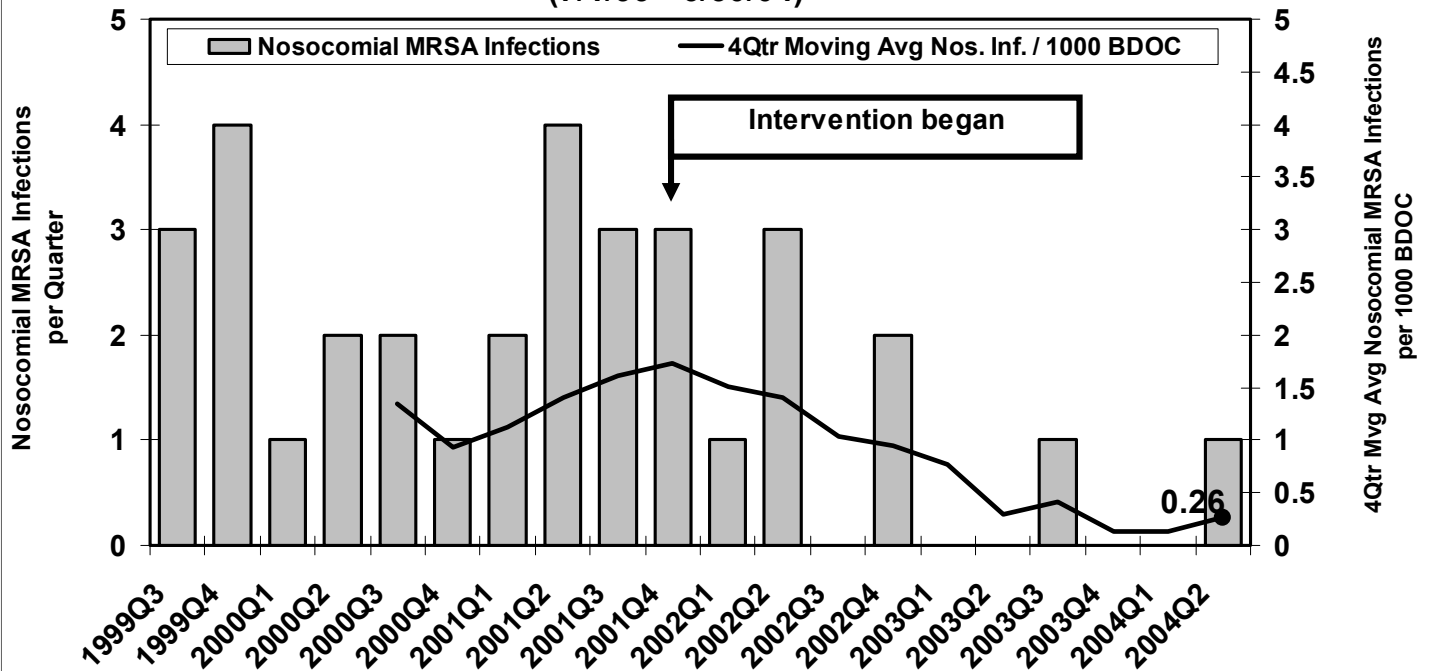
Surgical site infections- Rate per 100 procedures



\* MRSA: methicillin-resistant *Staphylococcus aureus*

## Wipe out MRSA? *It can be done*

**VAPHS 4-West Inpatient Surgery:  
Nosocomial MRSA Infections are Decreasing  
(7/1/99 - 6/30/04)**



*The chart, above, shows MRSA infection rates at the VA/CDC/PRHI pilot study unit at the VA Pittsburgh Healthcare System’s main hospital. After two years of implementing the Perfecting Patient Care System™, the unit has virtually wiped out MRSA infections. The effort will soon be rolled out hospital-wide. The VA work has been highlighted in PRHI newsletters, available online at <http://prhi.org/wpapers.cfm>.*

