

Faut-il isoler les malades?

Non!

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Qu'entend-on par isolement?

- Version Epidémie:
 - Cohorting des malades ET du personnel
 - Dépistage
- Version Endémie « SARM »: chambre seule et folklore à l'entrée...

Table 1. Standard Infection-Control Practices Compared with Enhanced Infection-Control Strategies for Patients in an Adult Oncology Unit*

Standard infection control

Inpatient surveillance: perianal cultures on admission and weekly
Handwashing before and after patient contact
Contact isolation for VRE-infected and VRE-colonized patients
Gown and glove use for *direct patient contact* with VRE-infected and VRE-colonized patients
Consultation with infectious diseases specialists for patients with persistent fever

Enhanced infection control

Inpatient surveillance: perianal cultures on admission and weekly
Handwashing before and after contact with the patient
Contact isolation for VRE-colonized and VRE-infected patients
Gown and glove use *on entry of rooms* of VRE-infected and VRE-colonized patients
Consultation with infectious disease specialists when infection is first suspected, with special emphasis on reducing all use of antimicrobial agents
Systematic recommendation by infectious disease specialists to discontinue empirical vancomycin use after 72 hours
Systematic recommendation by infectious disease specialists to use oral metronidazole rather than oral vancomycin for *Clostridium difficile* colitis
Spatial separation of patients into three cohorts: VRE positive, VRE negative, and VRE unknown
VRE-unknown patients housed on a separate unit until results of perianal culture become known
Surveillance perianal cultures taken for oncology inpatients housed off the oncology unit†
Gown and glove use on entry of rooms of VRE-unknown patients
Assignment of staff cohorts; nurses and nursing assistants assigned to VRE-positive patients or VRE-negative and VRE-unknown patients
Patient orientation about VRE with an explanatory brochure
Monitoring compliance by observational studies
Environmental cultures taken in VRE-positive patient rooms before and after patient discharge and room disinfection

* VRE = vancomycin-resistant enterococci.

† Surveillance perianal cultures were performed on oncology patients housed in units other than the oncology unit to reduce the number of patients with unknown VRE status.

5 mesures

+

10 mesures

=

15 mesures



Réduction
pas éradication

Vancomycin-resistant enterococci in intensive-care hospital settings: Transmission dynamics, persistence, and the impact of infection control programs

(nosocomial infections/mathematical models)

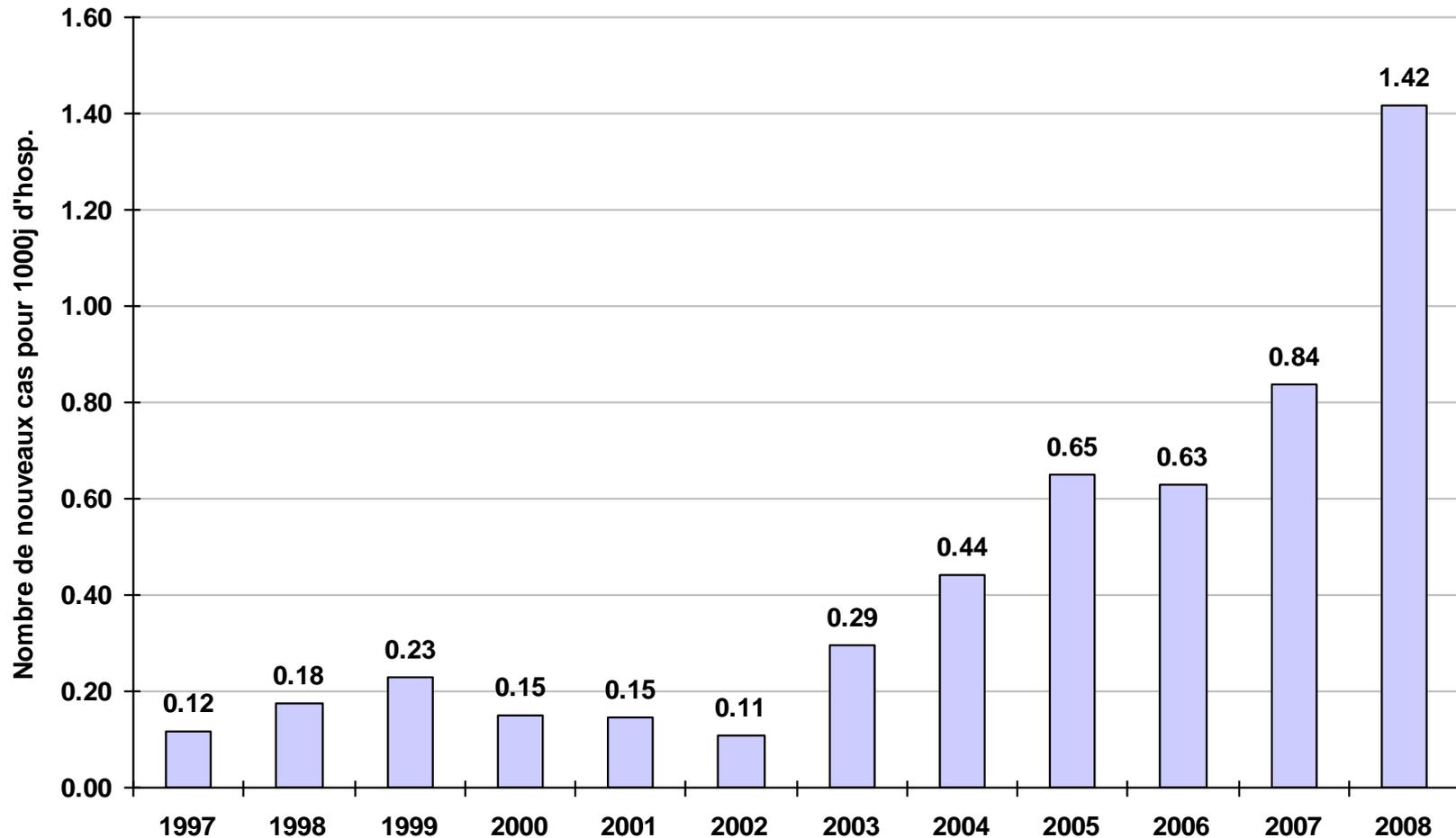
DAREN J. AUSTIN^{†‡}, MARC J. M. BONTEN^{†§}, ROBERT A. WEINSTEIN[¶], SARAH SLAUGHTER^{||},
AND ROY M. ANDERSON[‡]

HCWs COHORTING

« If half of nursing contacts are cohorted (i.e., 50% of nurses return to the same patient for the next contact), then transmission will be reduced by up to half (depending on the nursing ratio). If the HCW-patient ratio is very high (e.g., one-to-one nursing), then the majority of nursing contacts can be cohorted (perhaps as much as 80%) and transmission reduced accordingly. »

Quelle est la situation en pratique?

Evolution annuelle des entérobactéries BLSE à l'hôpital Henri Mondor

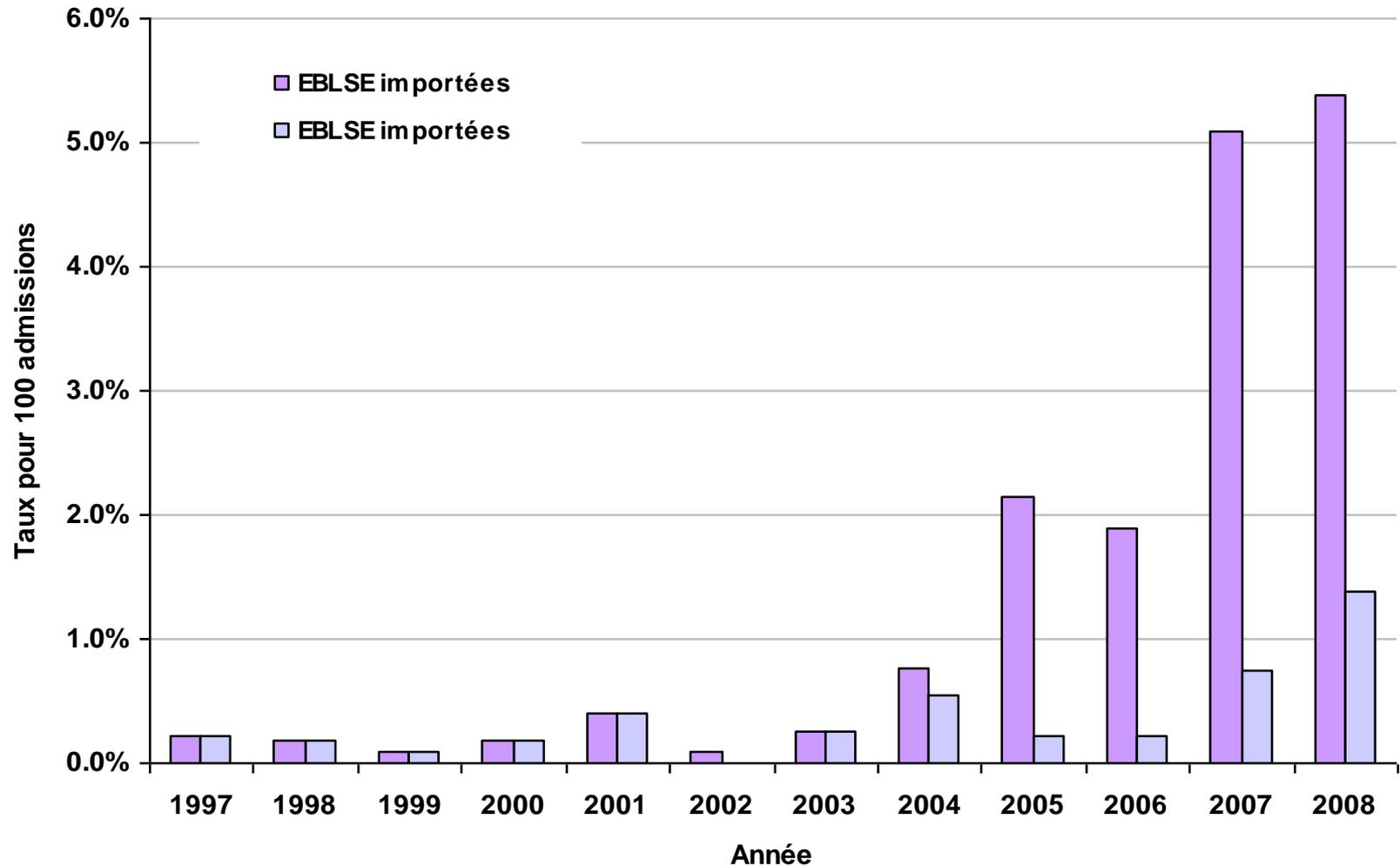


Isoler qui?

- Porteurs versus Colonisés versus Infectés
- Problème du dépistage:
 - Qualité du dépistage, faux négatifs

Dépistage?

EBLSE: avec et sans dépistage...

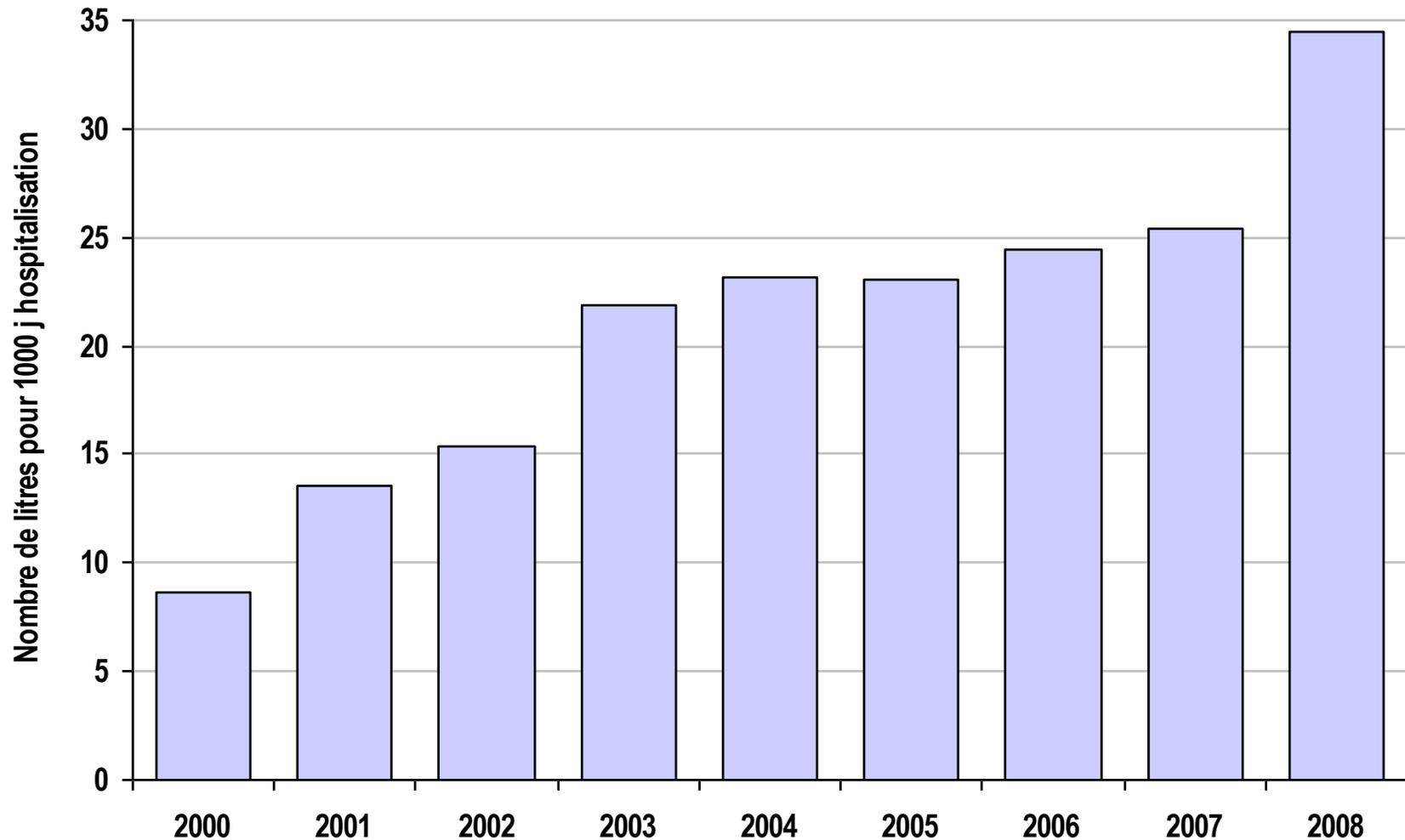


Isoler, pourquoi?

- Mode de transmission:
 - Aérienne? Gouttelettes?
 - Manuportée?
- Réservoirs de germes:
 - Patients: tube digestif, urines « réservoirs fermés »
 - Environnement ?
- Quels sont les soins à risque?

Amélioration de l'hygiène des mains

Evolution de la consommation annuelle de SHA dans le groupe hospitalier



Rôle de l'environnement Splashing!



Patients successifs dans une chambre contaminée...

Hota et al. ICHE 2009

Les soins à risque

- Évidemment: le lavage des mains...
- Les toilettes des patients, notamment en réanimation:
 - Lavabo contaminé
 - Environnement proche du malade contaminé
 - Cuvettes contaminées...

Effets adverses de l'isolement

- Mauvaise surveillance des patients
 - Stelfox et al. JAMA
- « Mauvais » comportement lors des soins dans la chambre:
 - Gants tous azimuts
 - Hygiène des mains réduite
 - Dissémination dans l'environnement
- Vigilance diminuée chez les voisins:
 - Kew Lai et al. ICHE 1998

Safety of patients isolated for infection control

Stelfox et al. JAMA 2003

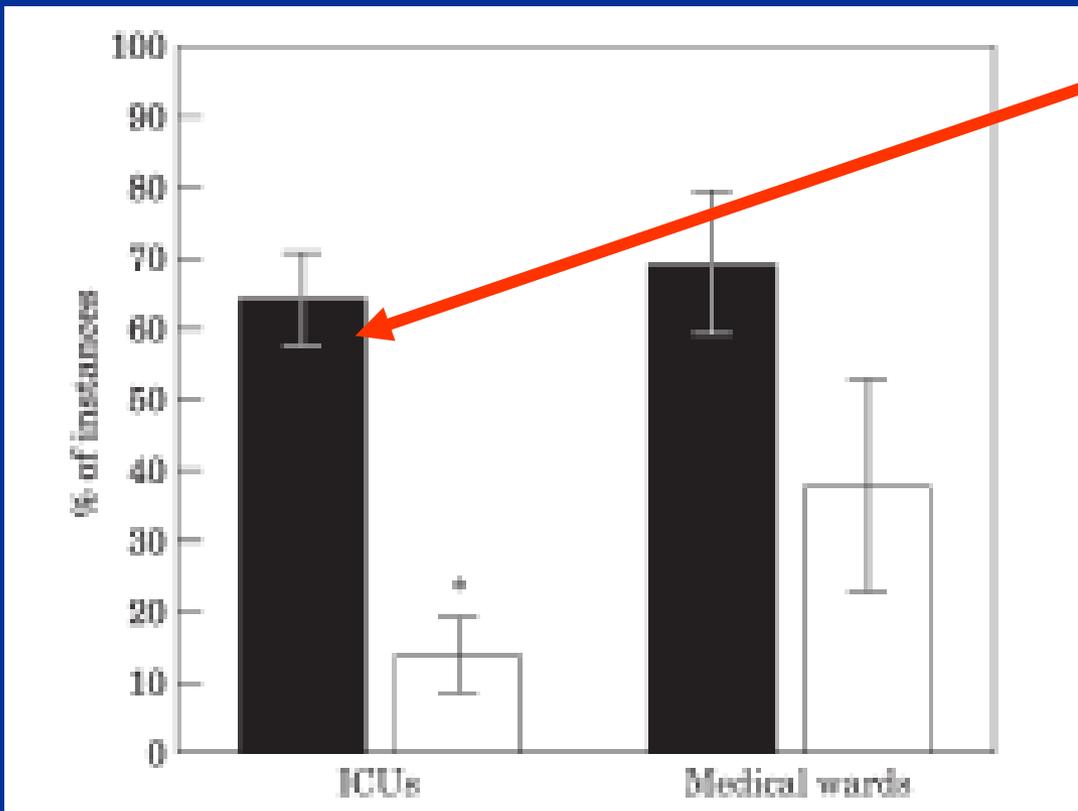
Table 2. Common Process-of-Care Measures

Measures	General Cohort		Congestive Heart Failure Cohort		Isolated Patients vs Control Patients*	
	Isolated Patients (n = 78)	Control Patients (n = 156)	Isolated Patients (n = 72)	Control Patients (n = 144)	Test Statistic (95% CI)†	P Value
No. of daily vital signs expected	3.2	3.1	4.7	4.2	0.32 (0.11 to 0.53)	.003
No. of daily vital signs recorded	2.6	3.0	6.2	6.3	-0.21 (-0.54 to 0.12)	.21
Vital signs incompletely recorded, %	10	8	19	10	1.92 (1.61 to 2.30)	<.001
Days with no vital signs recorded, %	6	1	5	1	2.55 (1.14 to 5.69)	.02
Vital signs with respiratory rate of 20/min, %	41	39	43	36	1.07 (0.93 to 1.23)	.34
Days with vital signs not recorded as ordered, %	58	41	43	21	2.76 (2.17 to 3.51)	<.001
Days with no nursing narrative notes, %	11	11	17	9	1.77 (1.40 to 2.24)	<.001
Days with no physician progress notes, %	43	24	7	2	2.91 (1.90 to 4.47)	<.001

Abbreviation: CI, confidence interval.
 *Comparisons between isolated and control patients are adjusted for study cohort and patient demographic, hospital, and clinical characteristics.
 †β Coefficients are reported for absolute differences in vital signs expected and recorded; odds ratios are reported for the remaining measures.

Éliminer les freins à l'observance de l'hygiène des mains

- Éliminer l'usage inapproprié des gants



% d'opp. d'hygiène des mains potentiellement manquées

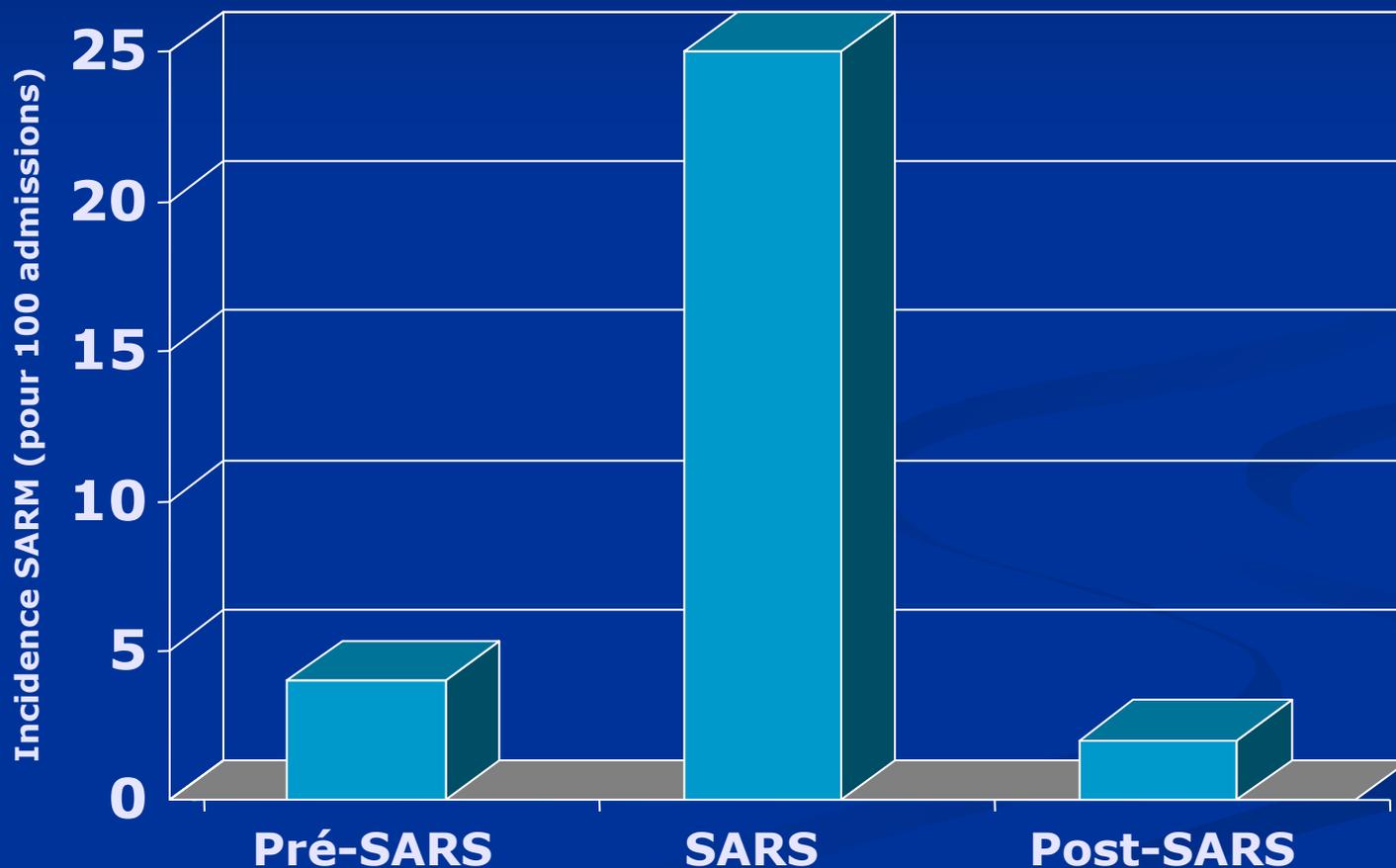
Increase in MRSA acquisition rate and change in pathogen pattern associated with an outbreak of severe acute respiratory syndrome.

Yap et al. Clin Infect Dis. 2004 Aug 15

- Outbreak of SARS
- In a 22-bed ICU, Hong Kong
- From 12 March to 31 May 2003, when only patients with SARS were admitted
- Upgrading of infection control precautions, which included the wearing of gloves and gowns all the time
- Extensive use of steroids
- Change in antibiotic prescribing practices

Increase in MRSA acquisition rate and change in pathogen pattern associated with an outbreak of severe acute respiratory syndrome.

Yap et al. Clin Infect Dis. 2004 Aug 15



Kew Lai et al.

Failure to eradicate VRE in a university hospital and the cost of barrier precautions. ICHE 1998

...Hand washing following interaction with patients who were not in isolation was 51% vs 100% for patients in isolation....

Conclusion

- On a tout à gagner (y compris pour les BLSE endémiques) à enfin :
 - Mettre en application les précautions standard
 - Soins exposant aux liquides biologiques
...mesures barrière en conséquence
 - Repérer les soins à risque et améliorer les pratiques dans ces situations