

# **What to conclude from national MRSA regulations in Europe?**

**Smilja Kalenic, W. Popp**

# BACKGROUND

- November 2008 – meeting of the representatives of 12 European national infection prevention societies in Berlin
  - One of the topics: MRSA policies in members' countries
  - Based on the presentations on the meeting, tables were produced
  - Data in the tables were rechecked by the respective national representatives

# AUTHORS

- A.Asensio
- O.Assadian
- A.Blok
- S.Brussafero
- B. Cookson
- T.de Rooter
- A.Eastaway
- P. Elstrom
- R.Gallagher
- B.G.Iversen
- B.Jens
- A.Jul-Jorgensen
- S.Kalenic
- W.Koller
- A.Kramer
- D.Langesen
- M.Licker
- K.Mannerquist
- B.Nussbaum
- W.Popp
- G.Schreinerova
- E.Tvenstrup Jensen
- L.Ummels
- K.-D.Zastrow
- P. Hartemann
- P. Parnaix

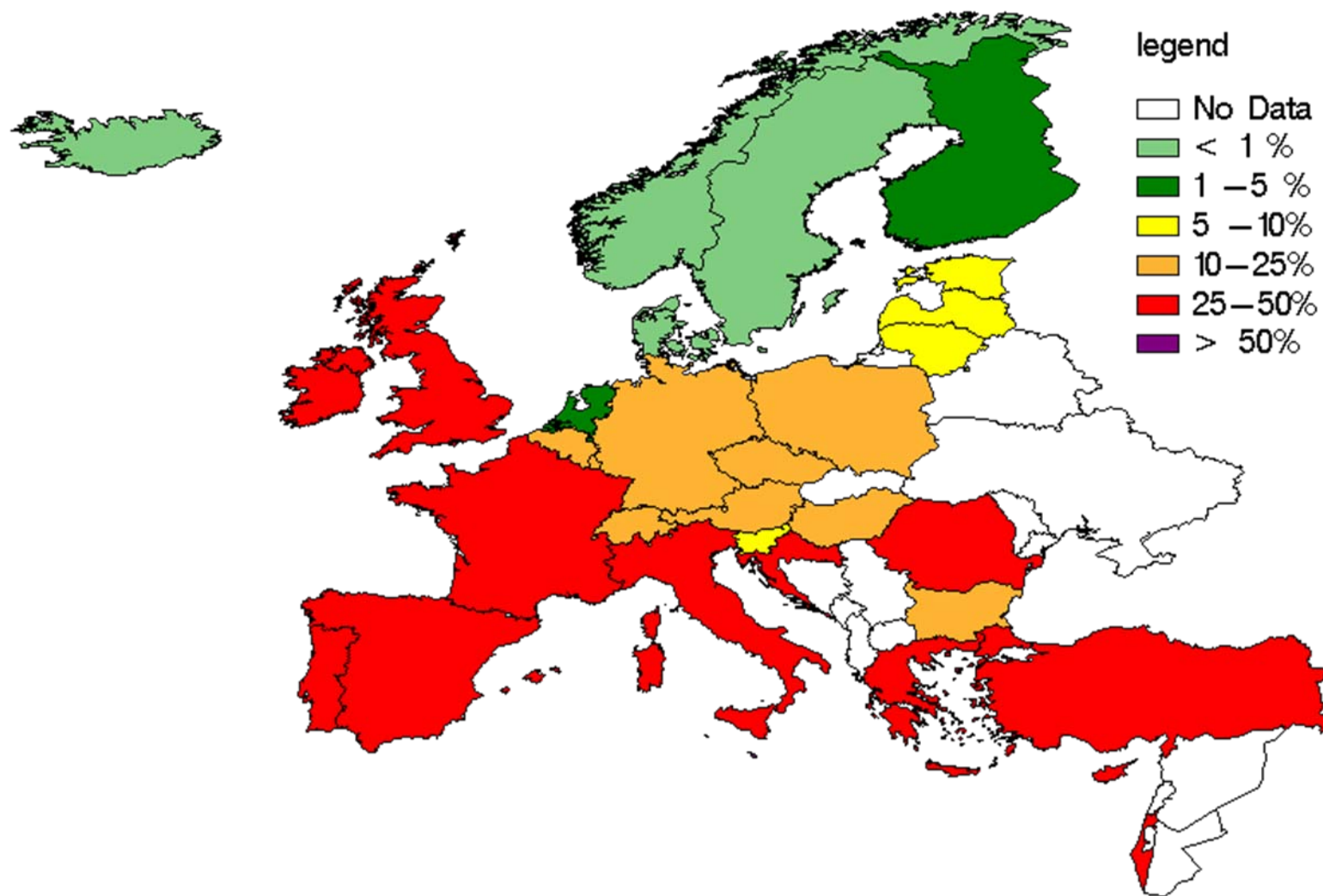
# AIM

- To compare existing guidelines
  - National/regional if national do not exist
- To identify the differences in guidelines between low and high MRSA incidence countries
- To conclude what policy could be successful
- To implement successful policies in own countries, if possible

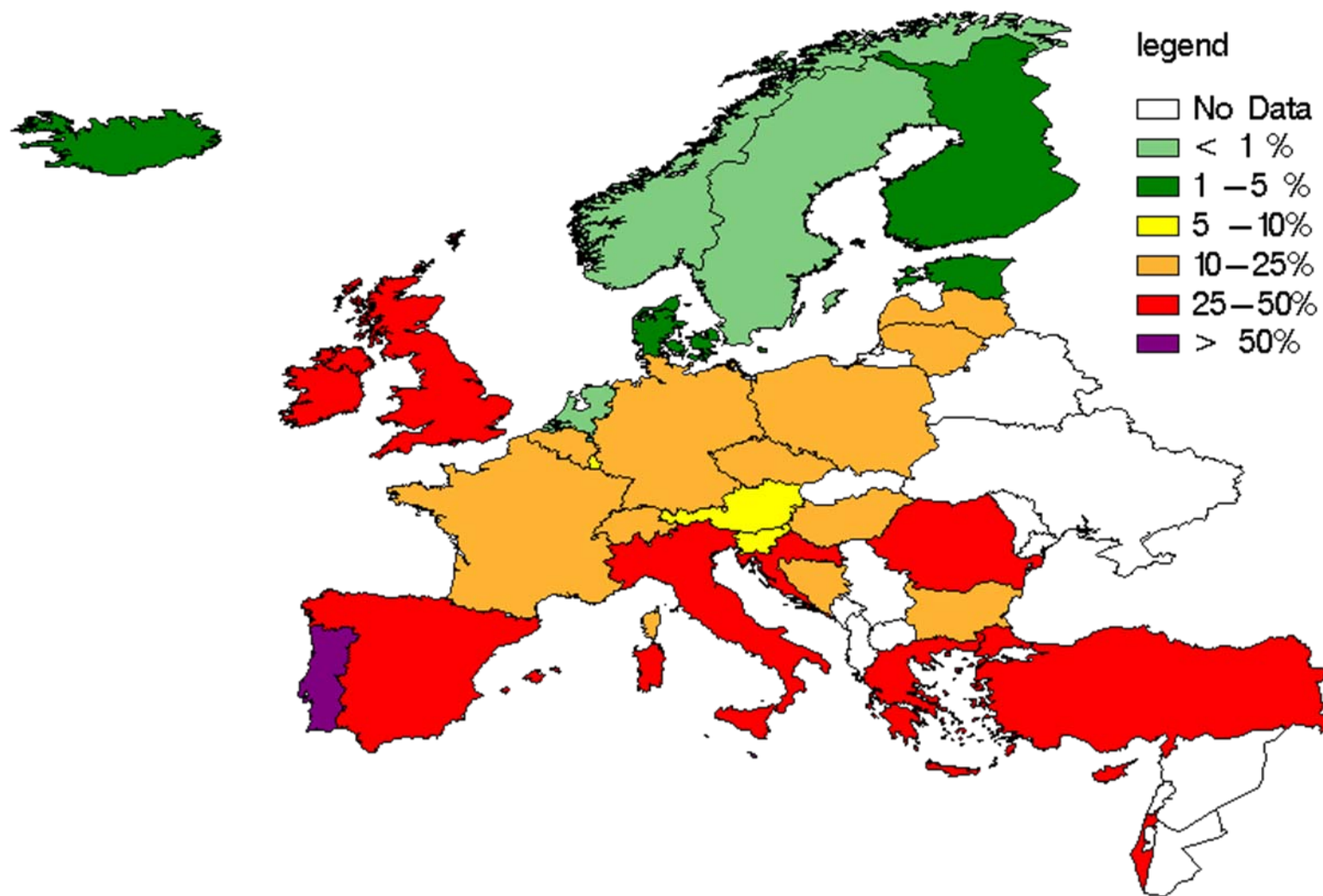
# What all guidelines have

- MRSA-positive patients have to have same care as MRSA-negative patients
- Hand hygiene as well as use of alcohol in hand hygiene is most important
- Environmental cleaning and/or disinfection has to be routinely performed
- Use of personal protective equipment (PPE) while working with MRSA positive patients

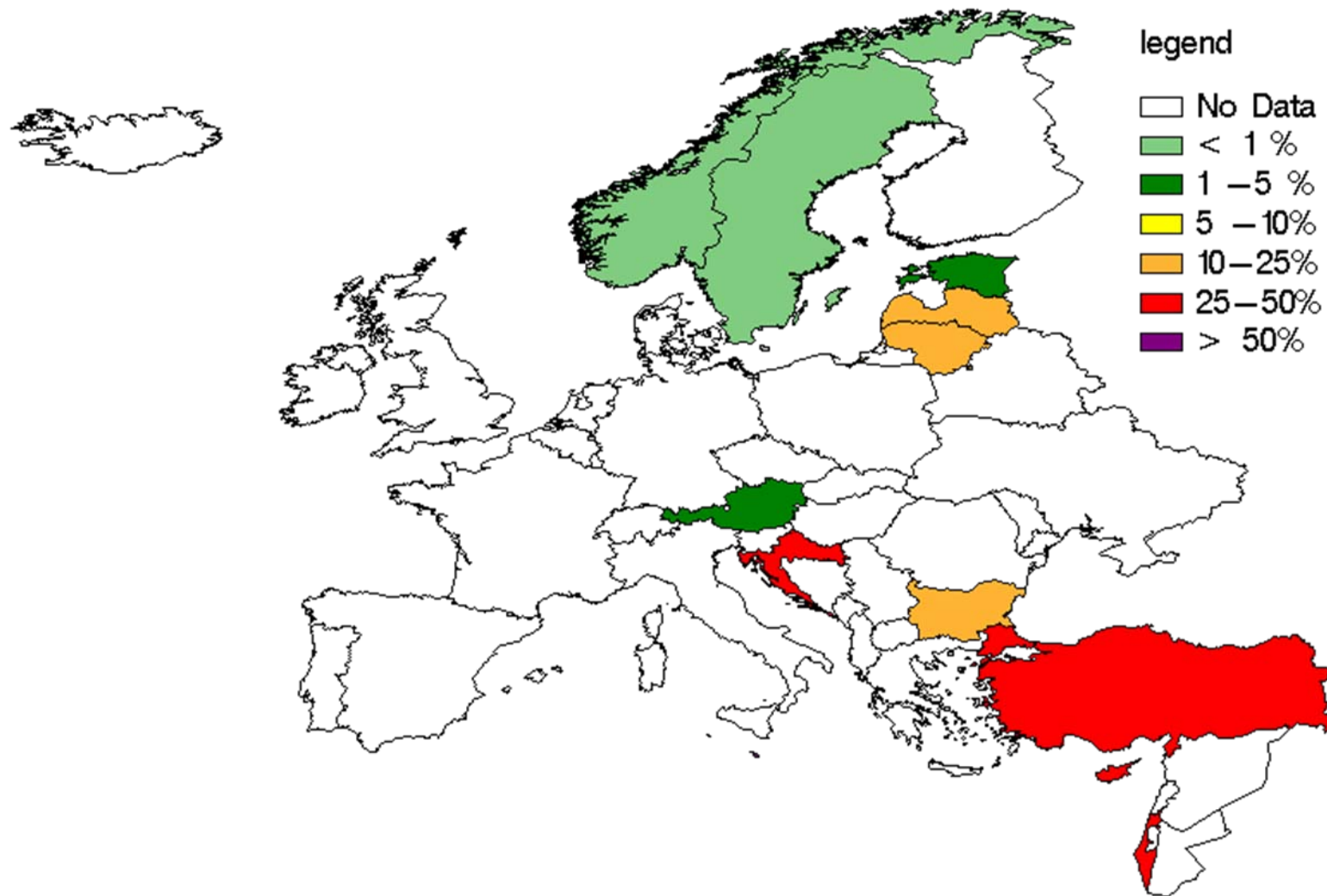
Proportion of MRSA isolates in participating countries in 2007  
(c) EARSS



Proportion of MRSA isolates in participating countries in 2008  
(c) EARSS



Proportion of MRSA isolates in participating countries in 2009  
(c) EARSS



**Table 1. General country data relating to guidelines and proportion of MRSA/total S.aureus causing bloodstream infections**

COUNTRY	NO*	SW“	NL	DEN	AU	CZ	GER#	BE	FR	ESP	UK	IT	HR
First issue	1999-2004	1970	1980	1994, 2006	1999, 2003	2006	1999, 2004 2005	1993, 2003 2005 (NH)	1999	2008	1995	2005	2008
Last revision	2008	2006	2008	2008	2006/2007		2008	Ongoing: Hospitals and NHs	2009	-	2006	-	-
Proportion of MRSA (EARSS 2008)	0.6	0.7	0.7	2.3	8.2	14.2	19.5	20.6	24.5	26.6	30.7	33.5	35.4

NO=Norway, SW=Sweden, NL=The Netherlands, DEN=Denmark, AU=Austria, CZ=Czech Republic, GER=Germany, BE=Belgium, FR=France, ESP=Spain, UK=United Kingdom, IT=Italy, HR=Croatia

+ Yes; -No; empty NO DATA; \*infection notifiable since 1995, colonization since 2005; “notifiable since 2000; #notifiable since 2005

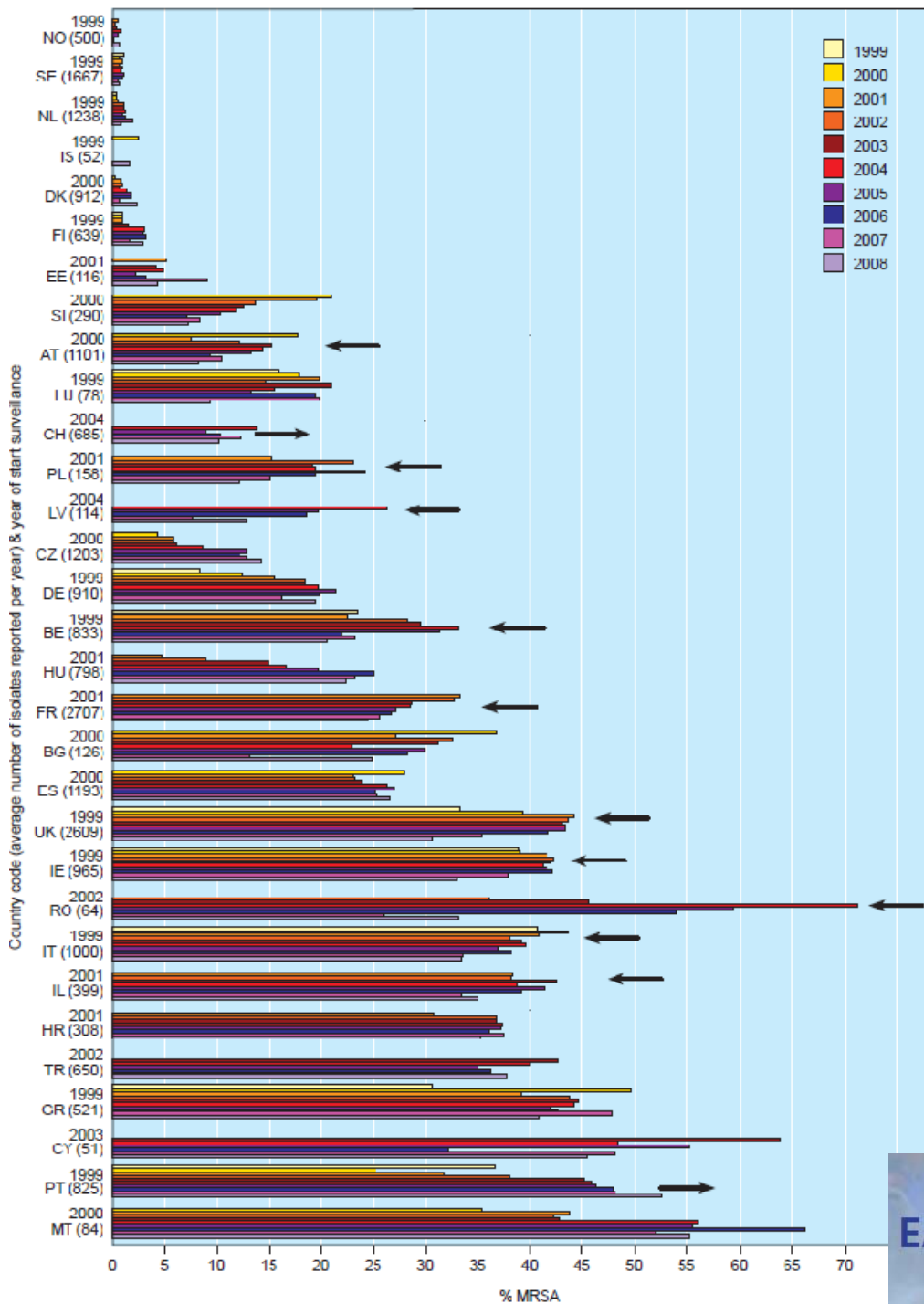
# Conclusions from Table 1.

## **LOW INCIDENCE**

- 4/4 had guidelines before 2000
- 2/4 have MRSA infections notifiable
- 4/4 had last revision recently

## **HIGHER INCIDENCE**

- 5/9 had guidelines before 2000
- 1/9 have MRSA infections notifiable
- 5/9 had last revision recently



**Table 2. Screening and isolation policies in hospitals**

COUNTRY	NO	SW	NL	DEN	AU	CZ	GER	BE	FR	ESP	UK	IT	HR
Screening	Risk categories	Risk categories	Four risk categories	Risk groups	Defined risk groups	Risk categories	Specific patients	Defined risk groups	Targeted approach	Voluntary	Risk groups*	Risk groups	Defined risk groups
Isolation: Single room	+	+	+	+									
Single room or cohorting					+	+	+	+	+	+	+	+	+
Gloves	+	+	+	+	+	+	+	+	+	+	+	+	+
Gowns	+	+	+	+	+	+	+	+	+	+	+	+	+
Masks	+**	+#	+**	+	+	+#	+	+	+###	+**	+#	+#	+
Proportion of MRSA (EARSS 2008)	0.6	0.7	0.7	2.3	8.2	14.2	19.5	20.6	24.5	26.6	30.7	33.5	35.4

See Table One for country names

+ Yes; -No; empty NO DATA; \*All elective surgical pts by 1/4/09, \*\*surgical masks, #risk assessment

# Conclusions from table 2.

## LOW INCIDENCE

- 4/4 recommended only single room for isolation purpose
- 2/4 had surgical masks
- 1/4 had masks only in risk circumstances

## HIGHER INCIDENCE

- 0/9 recommended only single room
- BUT
- 9/9 recommended single room or if not possible, cohorting of patients
  - 4/9 had masks only after risk assessment

**Table 3. MRSA in Nursing Home**

COUNTRY	NO*	SW**	NL	DEN#	A U	CZ	GER	BE	FR	ESP	UK	IT	HR*
Guideline: None Separate In general guideline	+	+	+	+	+	-	+	+	+	-	+	-	+
Screening	+	+	+(outbreak)	+(outbreak)	+		+(outbreak)	+	-		+(prior to hosp. adm.)		-
Isolation: YES/NO Single room Single room or cohorting Gloves Gowns Masks Cleaning/disinfection	+ + + + + + Daily	+ + + + - Point dis.	+*** + + +(surgical) Daily	+&+ + - Daily and dis-char	+ + + + +		+*** + + + Only high risk	+*** + + + +	- +if possible +## +## +## Not specific		NS + + + - +		+*** + + + +
Proportion of MRSA (EARSS 2008)	0.6	0.7	0.7	2.3	8 .2	14.2	19.5	20.6	24.5	26.6	30.7	33.5	35.4

+ Yes; -No; empty NO DATA; \* Surveillance recommended, \*\*Tracking of cases; #Surveillance recommended since 2006; \*\*\*if risk factor identified; & if clinical infection can not be contained; ## for close contact; NS not stated

# Conclusions from Table 3.

## **LOW INCIDENCE**

- 4/4 have guidelines
- 2/4 have separate guidelines
- 4/4 have screening recommendation

## **HIGHER INCIDENCE**

- 6/9 have guidelines
- 4/9 have separate guidelines
- 4/9 have screening recommendation

**Table 4. MRSA in General practice and Home care**

COUNTRY	NO	SW	NL	DEN	A U	C Z	GE R	BE	FR	ES P	UK	IT	HR
Patient visit	Standard pre-cautions	Basic pre-cautions	Standard pre-cautions	At the end of the day				Guidelines actually developing	National Guidelines (2004, revised 2006)		End of day for dressing advised		Standard pre-cautions
Home care	Standard pre-cautions	Track cases	Single room	Treatment and care in patient bedroom					Standard precautions		End of day if possible, use of protective clothing		Standard pre-cautions
Proportion of MRSA (EARSS 2008)	0.6	0.7	0.7	2.3	8 .2	1 4 .2	19.5	20.6	24.5	26.6	30.7	33.5	35.4

See Table One for country names

+ Yes; -No; empty NO DATA

# Conclusions from Table 4.

## **LOW INCIDENCE**

- 4/4 have recommendations for general practice
- 4/4 have recommendations for home care

## **HIGHER INCIDENCE**

- 4/9 have recommendations for general practice
- 3/9 have recommendations for home care

**Table 5. MRSA carrier decolonisation**

COUNTRY	NO	SW	NL	DEN	AU	CZ	GER	BE	FR	ESP	UK	IT	HR
Staff	+	Individual approach	+	+	+	Individual approach	(+)	+	If possibly associated with an outbreak among patients	Individual approach	+	+	+
Patients	+	Individual approach	+	+	+	Before risk procedure	(+)	+	+ for targeted at risk situations	+	+	+ in high risk wards	+
NH residents	+	-	+	+				+	-		+		+
At home: patients	+*	-	+	+		-			-		+**		-
At home: Family members	+*	-	+	+		-			-		-		-
Proportion of MRSA (EARSS 2008)	0.6	0.7	0.7	2.3	8.2	14.2	19.5	20.6	24.5	26.6	30.7	33.5	35.4

See Table One for country names

+ Yes; -No; empty NO DATA; \*if clinically indicated or working/patient in home care/health care institution; \*\*only if clinically indicated; NH= Nursing home

# Conclusions from Table 5.

## LOW INCIDENCE

- 3/4 recommend decolonisation in all carriers (home patients and contacts in special conditions)
- Sweden individual approach

## HIGHER INCIDENCE

- 8/9 recommend decolonisation of some carrier groups

**Table 6. MRSA in policy, insurance and legally**

COUNTRY	NO	SW	NL	DEN	AU	CZ	GER	BE	FR	ESP	UK	IT	HR
Cost reimbursement	+	+		-	In part	-	In part	+	-		-	+	+
Staff sick leave/medical suspension	Sick leave	Sick leave		Can work after start of decolonisation	Case to case basis		Medical suspension	Sick leave only if infection	Sick leave for treatment of staff connected with patient transmission or in chronic carriage	Medical suspension	Medical suspension		Can work after start of decolonisation
Legal issue		no			possible	possible	possible	possible	possible	possible	possible		possible
Proportion of MRSA (EARSS 2008)	0.6	0.7	0.7	2.3	8.2	14.2	19.5	20.6	24.5	26.6	30.7	33.5	35.4

See Table One for country names

+ Yes; -No; empty NO DATA

**CONCLUSIONS:**  
**WHAT ARE SUCCESSFULL**  
**POLICIES**  
**TO CONTROL MRSA?**

1. **Have** national/regional guideline for MRSA control and **update it**

- for hospitals **and**
- for nursing homes **and**
- for general practice **and**
- for home care

2. Have MRSA infections/colonisations **notifiable**
3. Isolate MRSA positive patients in **single room**
4. Perform MRSA **screening** in hospitals and in nursing homes (by risk categories?)
5. **Decolonize** MRSA positive patients/persons (? Sweden does not)

# DISCUSSION POINTS

- Is methodology used in this survey giving us right answers?
- Would it be more appropriate to use audits to check implementation of guidelines?
- What other indicators of guideline implementation could be used?

# DISCUSSION POINTS

Humphreys H. National guidelines for the control and prevention of methicillin-resistant *Staphylococcus aureus* –what do they tell us? Clin Microbiol Infect 2007;13:846-853:

„It is ironic that the country with very low MRSA prevalence rates, i.e., The Netherlands, has the simplest set of guidelines..., in which the strength of the evidence is not assessed. The Dutch success in the control of MRSA could be related to the clarity of their guidelines, which may result in better compliance... However, it is more likely that the Dutch success is a result of the backing and resources allocated to this issue in The Netherlands by national agencies and the Dutch government over many years.“