

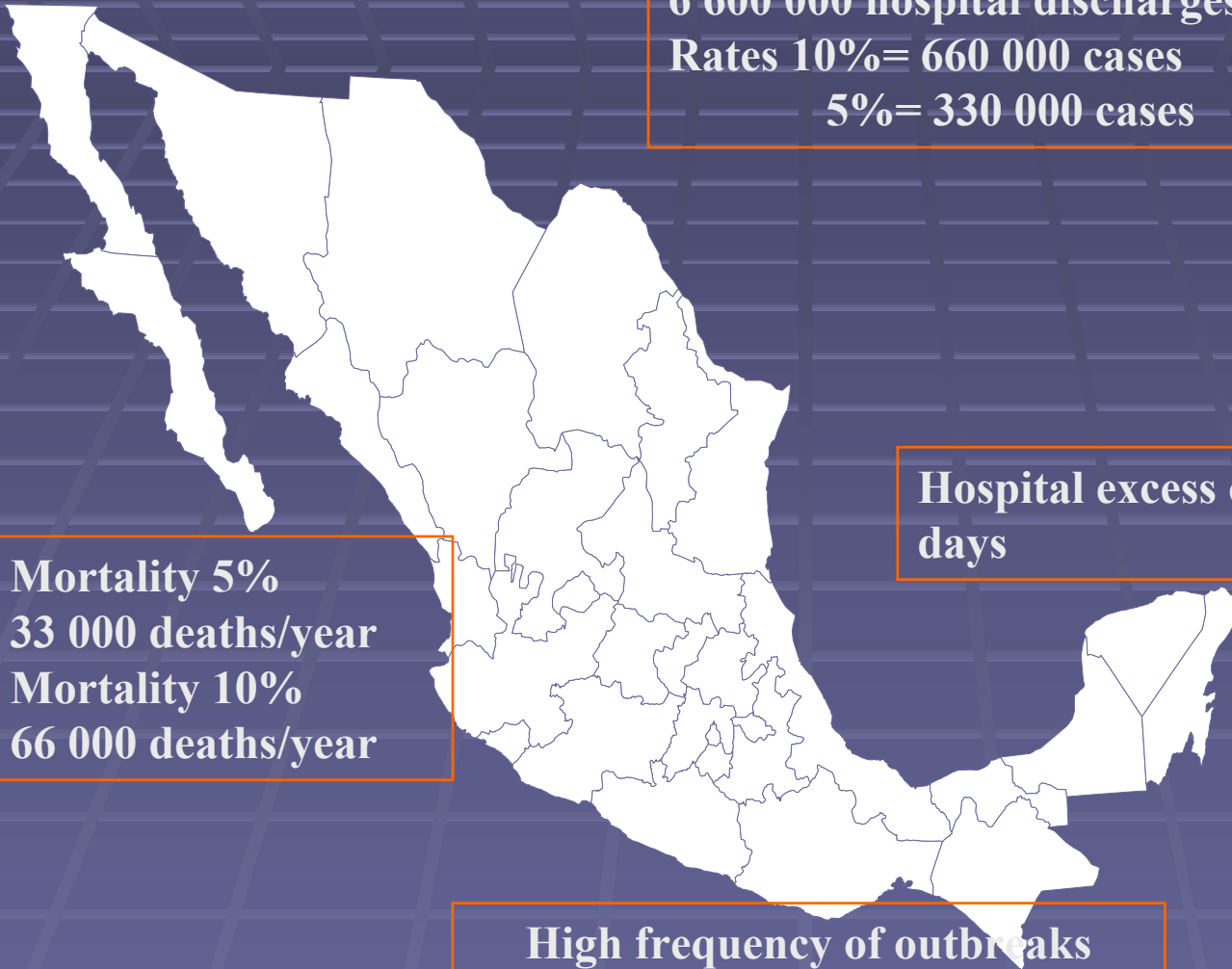
Nosocomial Infections in Mexico

M . Sigfrido R angel-Frausto

M exico C ity , M exico

Infection Control Program in Mexico

- Infection Control Committee 1970's
- National guidelines 1995
- Special Software 1995
- Training 1995
- Two phases
 - 131 Hospitals 1995-1998 *Ministry of Health*
 - 220 Hospitals 1998-2005 *IMSS (HMO)*
 - Private hospitals



6 600 000 hospital discharges/year
Rates 10%= 660 000 cases
5%= 330 000 cases

Hospital excess of stay =3 300 000 bed-days

Mortality 5%
33 000 deaths/year
Mortality 10%
66 000 deaths/year

High frequency of outbreaks

Mortality rate in Mexico, 2000 (per/ 100,000 habitants)

	Number	Rate
Cardiovascular	63,609	69.4
Neoplasias	48,222	52.6
Accidentes	35,567	38.0
Diabetes mellitus	33,316	36.4
NOSOCOMIAL INFECTIONS	33,000	35.1
Enf. Vascular cerebral	23,400	25.5
Enf. Hepáticas	21,245	23.2
Neumonía, influenza	19,717	21.5
Homicidios, violencia	15,615	17.0
BLOODSTREAM	13,200	14.1

Profile of nosocomial infections in Mexico

Hospital network for infection control

In order to know the microbiology support a simple questionnaire was sent to each participant hospital

Results:



From 131 hospitals



86% have a microbiology laboratory

- 90% perform urine and faringeal cultures
- 88% perform wound cultures
- 85% perform fecal cultures
- 82% perform blood cultures
- 30% perform cerebral spinal fluid culture
- 27% perform sputum culture for TB
- 88% perform antibiotic suceptibilities

Profile of nosocomial infections in Mexico

NOSOCOMIAL OUTBREAKS IN MEXICO 2004

TYPE	OUTBREAKS	%	CASES	MEAN	DEATHS	M RATE
Bloodstream	37	11.6	199	5.38	33	16.6
Surgical site	30	9.46	166	5.53	4	2.4
Sepsis	27	8.52	154	5.7	27	17.5
Diaharrea	25	7.89	125	5	1	0.8
Cath related BSI	24	7.57	119	4.96	3	2.52
Pneumonia	23	7.26	115	5	46	40
UTI	23	7.26	83	3.61	5	6.02
Surgical site superficial	15	4.73	63	4.2	0	0
Soft tissue infections	9	2.84	33	3.67	2	6.06
Others	104	32.8	467	4.49	28	6
TOTAL	317	100	1524	4.81	149	9.78

Profile of nosocomial infections in Mexico

MICROORGANISMS RESPONSIBLE FOR OUTBREAKS MEXICO 2004

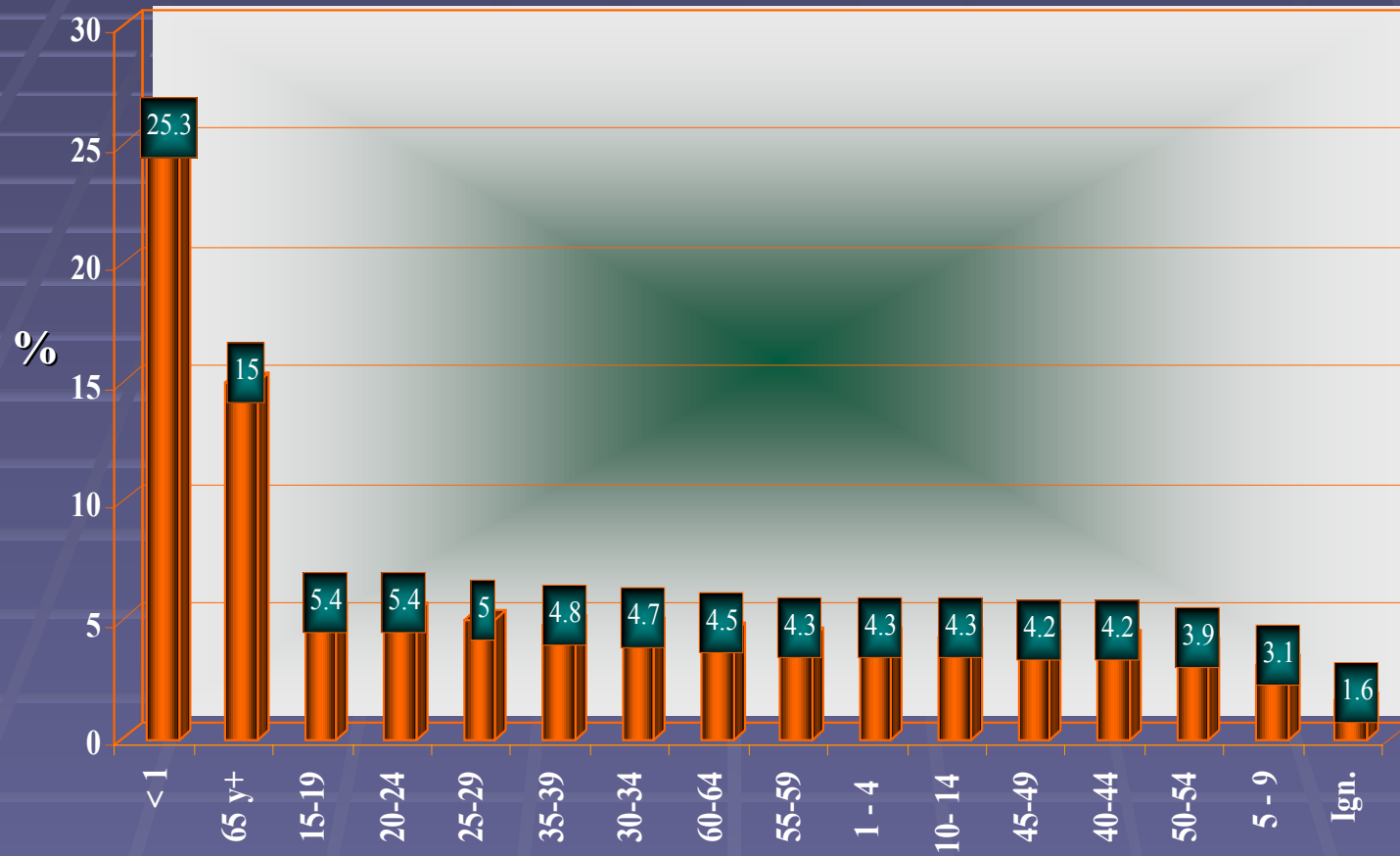
Site	Microorganism	%
Pneumonia	<i>Pseudomonas spp</i>	15%
	<i>P. aeruginosa</i>	26%
	<i>Klebsiella pnemoniae</i>	15%
Surgical site infections	<i>E. cloacae</i>	10%
	<i>E. coli</i>	32%
	<i>P. aeruginosa</i>	21%
Surgical site infections (deep)	<i>E. coli</i>	25%
	<i>S. aureus</i>	25%
	<i>P. aeruginosa</i>	10%
Urinary tract infections	<i>E. coli</i>	42%
	<i>S. aureus</i>	12%
	<i>Klebsiella pnemoniae</i>	8%
	<i>E. cloacae</i>	8%

INCIDENCE RATES, MORTALITY , 2000-2004

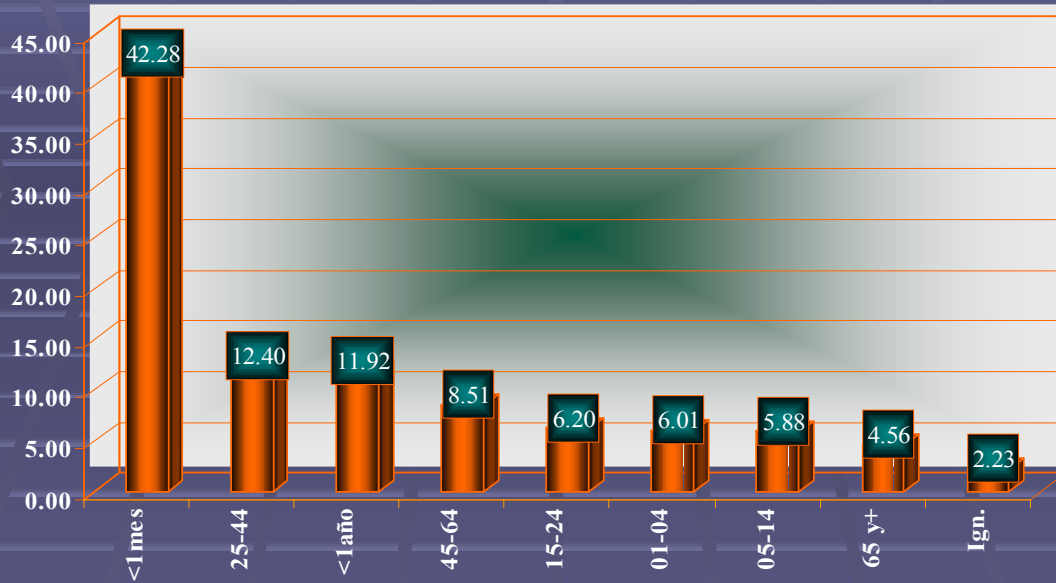
SITE OF INFECTION	INCIDENCE NI/ 1000 DISCHARGES		MORTALITY per 100		LETALITY per 100	
	2000	2004	2000	2004	2000	2004
Pneumonia	7.06	5.7	13.0	19.8	9.6	13.0
Urinary tract infections	6.15	4.38	4.7	6.6	3.3	3.7
Deep surgical wound infection	3.88	3.73	2.4	3.13	3.0	3.4
Surigcal wound infection	3.79	4.07	0.8	1.06	1.04	1.2
Bloodstream infections	5.03	2.93	9.4	10.8	12.4	14.9

En el indicador se incluyen defunciones con antecedentes de IN / pacientes con IN

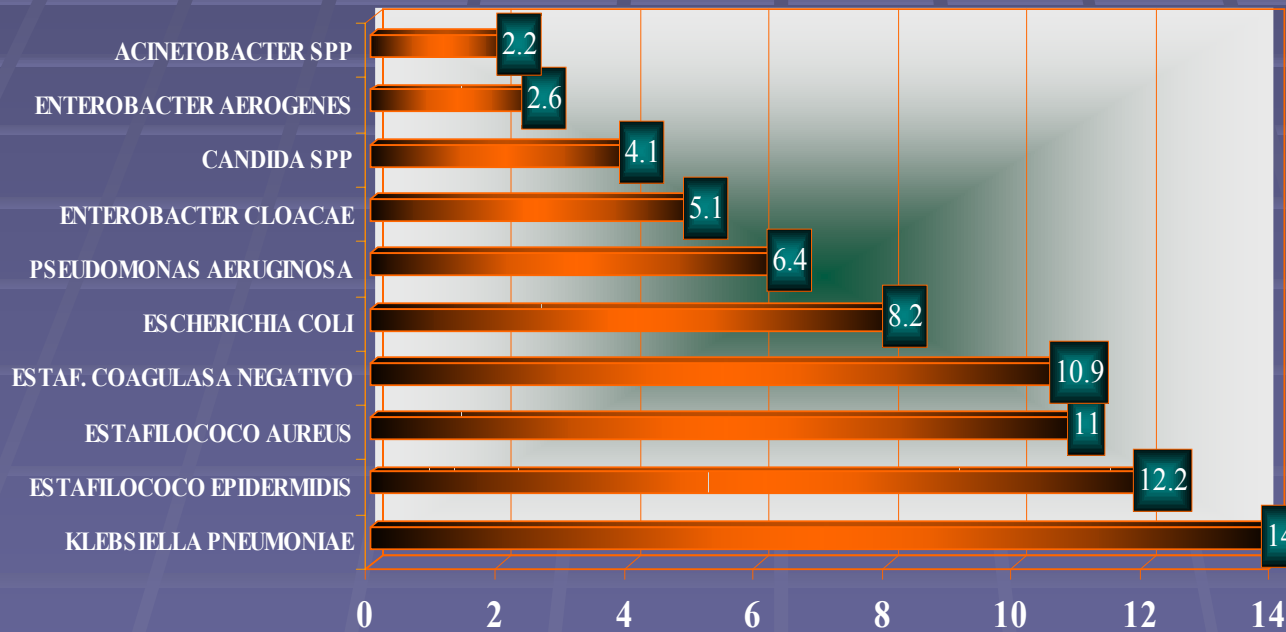
Nosocomial Infections by age, Mexico 2004



Bloodstream infections México 2000-2004



age



microorganisms

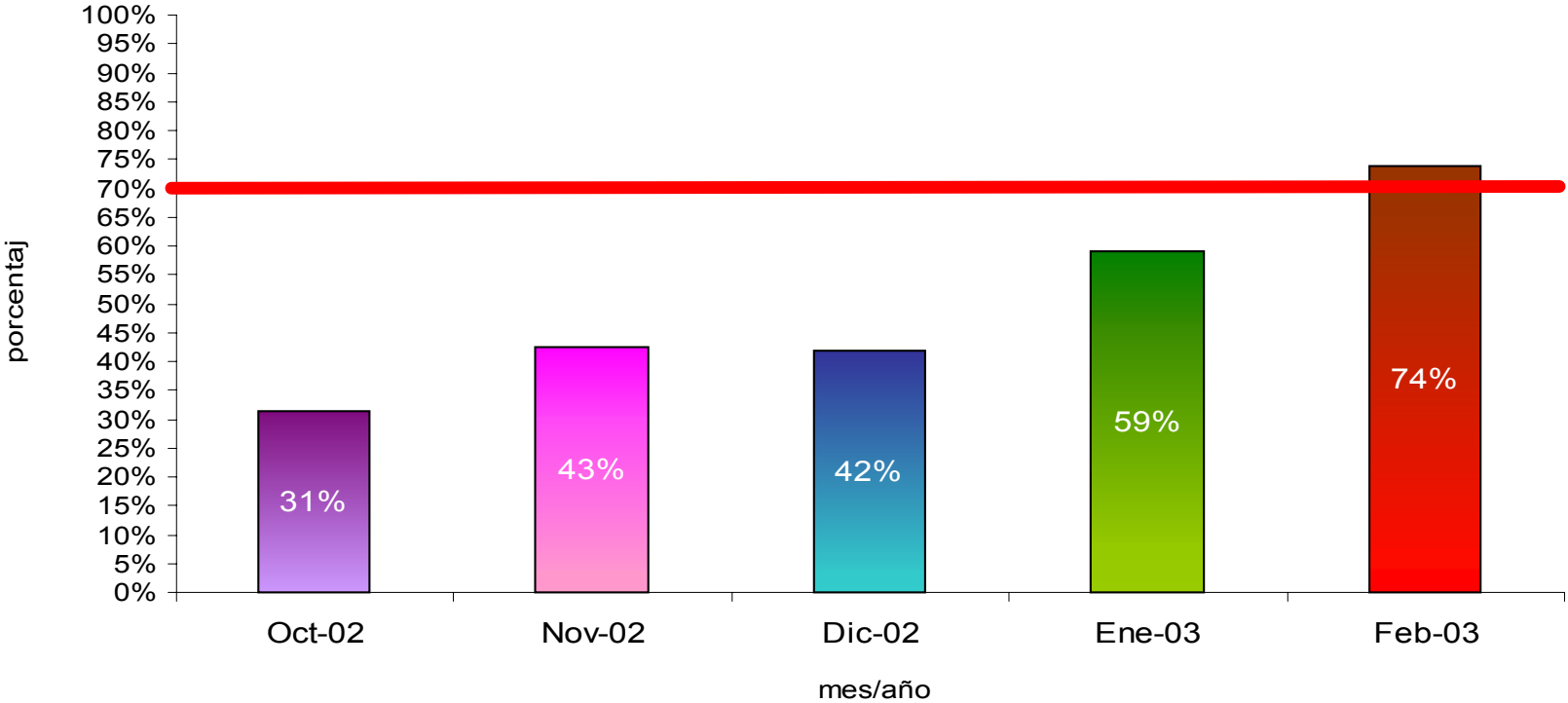
Nosocomial Infections

- Problems
 - Information on rates
 - No validation of surveillance activities
 - No timely interventions
 - No use of information

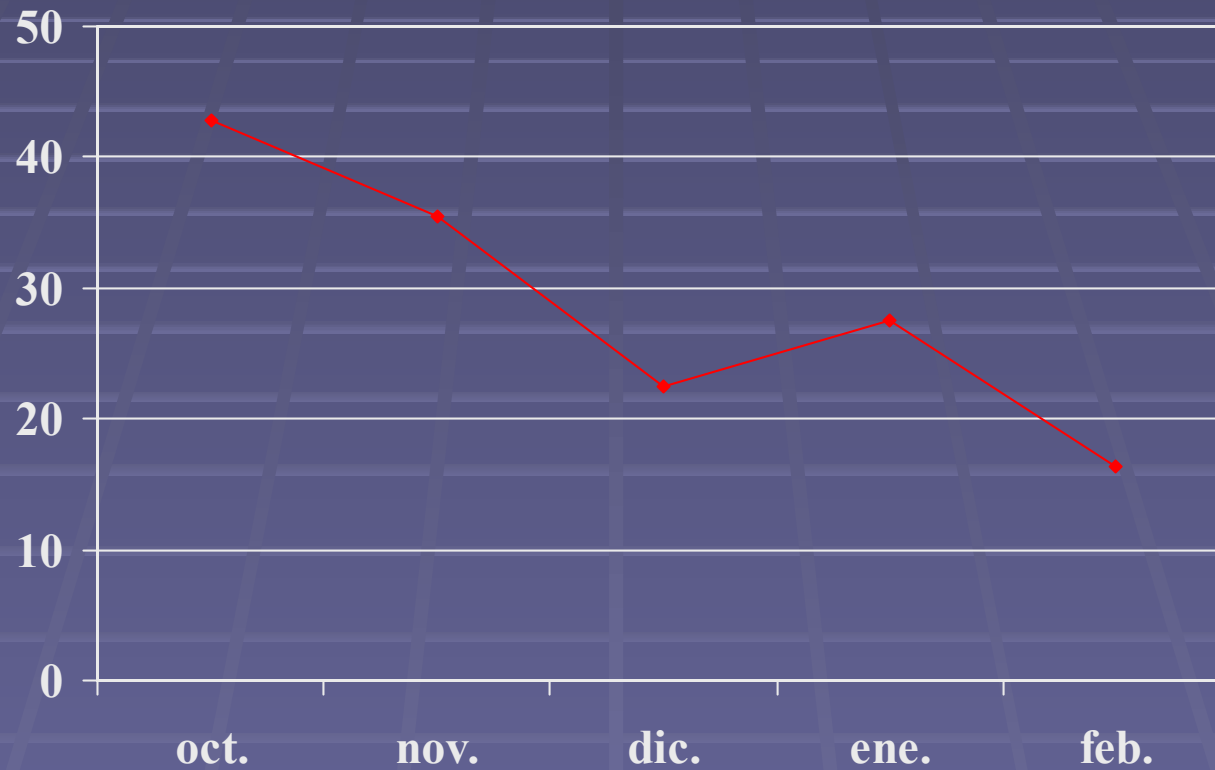
Mexico

- Random evaluation of control activities
 - ICU
 - Hand washing
 - Catheter management
 - Urinary catheter
 - Patients in ventilators
 - Focus in control

**IMSS - UCI :
HANDWASHING COMPLIANCE**



NOSOCOMIAL INFECTION IN ICU-IMSS



Conclusions

- Surveillance activities
 - High degree variation among /cities/type of hospitals
 - Mostly passive moving to active with CDC definitions
 - Moving to problem-specific
 - Lack infrastructure for IC
 - Not enough microbiology labs
 - Not infection control practitioner
- High prevalence of resistance organisms
 - Prophylactic antibiotics given not according recommendations
 - High percentage of therapeutic antibiotics with no apparent reason
 - High mortality associated with wrong prescription

New Approach

- Accreditation systems
 - Pushing to develop IC policies
 - Develop infrastructure for IC
 - Supervision of IC activities
 - Evidence of surveillance and control