NICU – Nosocomial infections Providence-Košice One year after the project

Goals, Problems ,Results

Presented by Peter KRCHO MD,PhD

NICU Faculty Hospital Košice Slovakia

NICU WIHRI Brown University Providence Rhode Island USA

krcho@upjs.sk

http://www.aiha.com/english/partners/kosice/chart.htm

Who worked on our results

- International team - Prof Cashore, Prof. Morley, Prof Sinclair, Prof Avery, Prof Sinbruner, Prof Wilkinson, Prof Oh, Dr Rubin, Dr Stonestreet, Prof Rennie, Prof Issacs, Prof Polin, Prof Bloom, Prof Taylor, Prof Heymann, Prof Clyman, Prof Carr, Gagnon, Kennedy,Dabek, Greiner, Di Mario and lot of others…..
- Slovak Team -Doc Lukačin, Dr Boszormenyi, Dr Frič, Dr Ilgová, Dr Ilašová, Dr Krcho,Dr Šprlaková, Hikkerová, Hudaková, Greškovitsová, Peľová, Ondrejková, Bazarová and lot of others…..

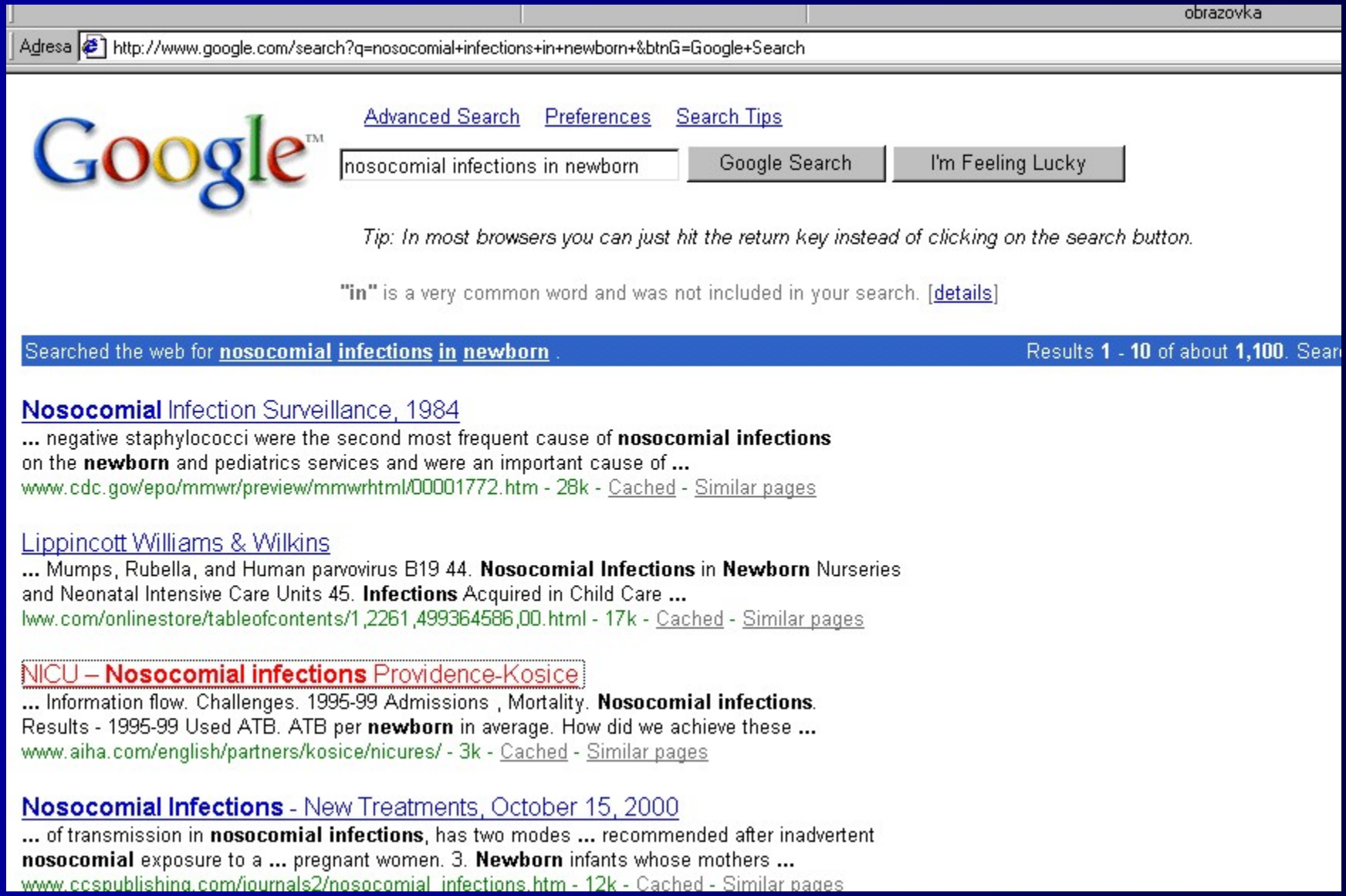
http://www.aiha.com/english/partners/kosice/chart.htm

Goals...

- NI in NICU – specific problem

  NI in NICU ≠ NI in PICU
- Resources of the infections
- What could be done with the same equipment
- What we need for the future

About us in www...



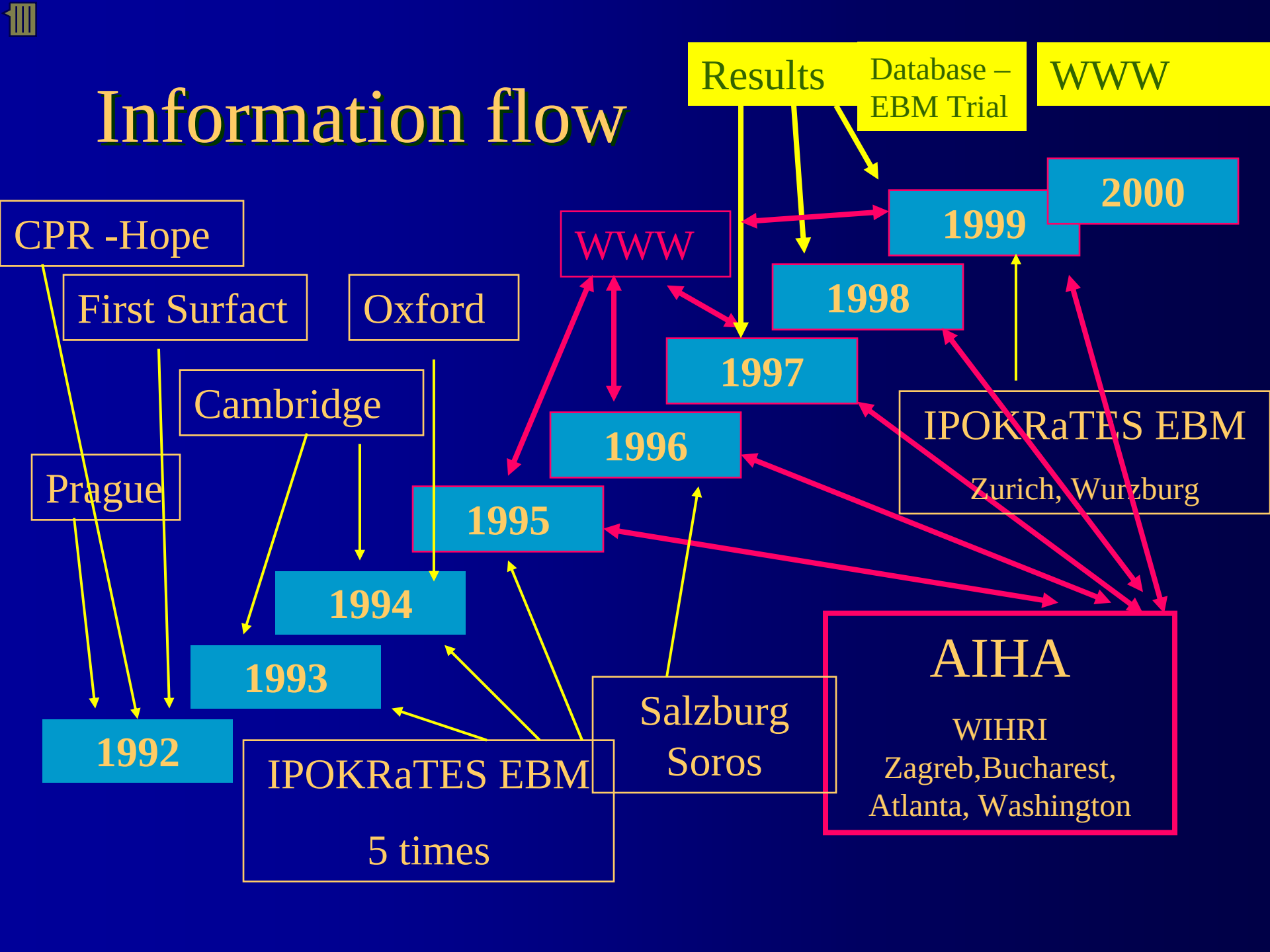
Fundamental steps – from 1992

- Antibiotic policies Prof Morley,

  Prof J Rennie Cambridge 1993,1994,
  Prof Wilkinson Prof Issacs Oxford, Prof Polin Philadelphia
  Presented in Slovakia 1994
  Published in Slovakia 1995
  Renewal by WIHRI Prof Cashore 1995 –1999

http://www.aiha.com/english/partners/kosice/chart.htm

Information flow

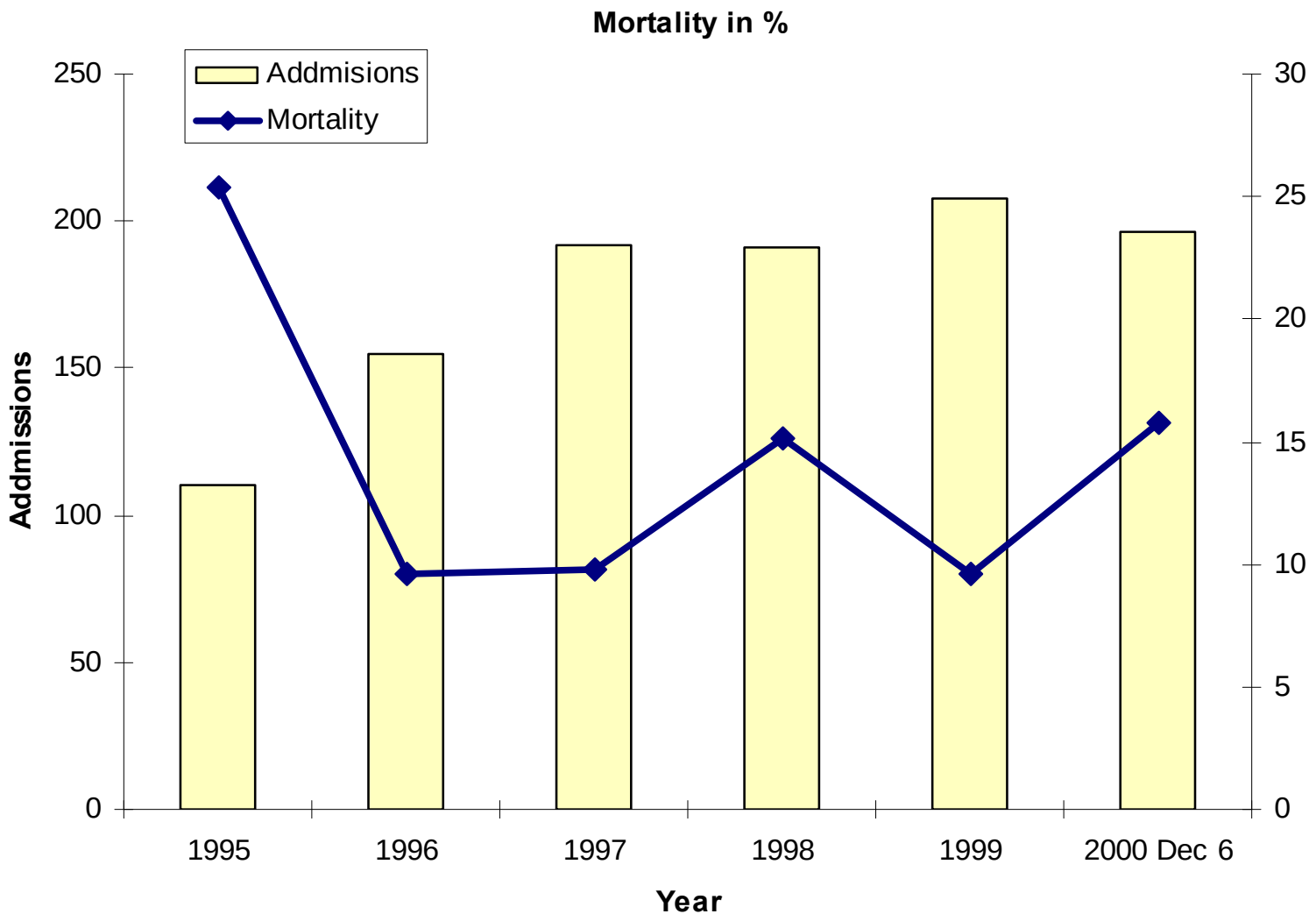


We would like

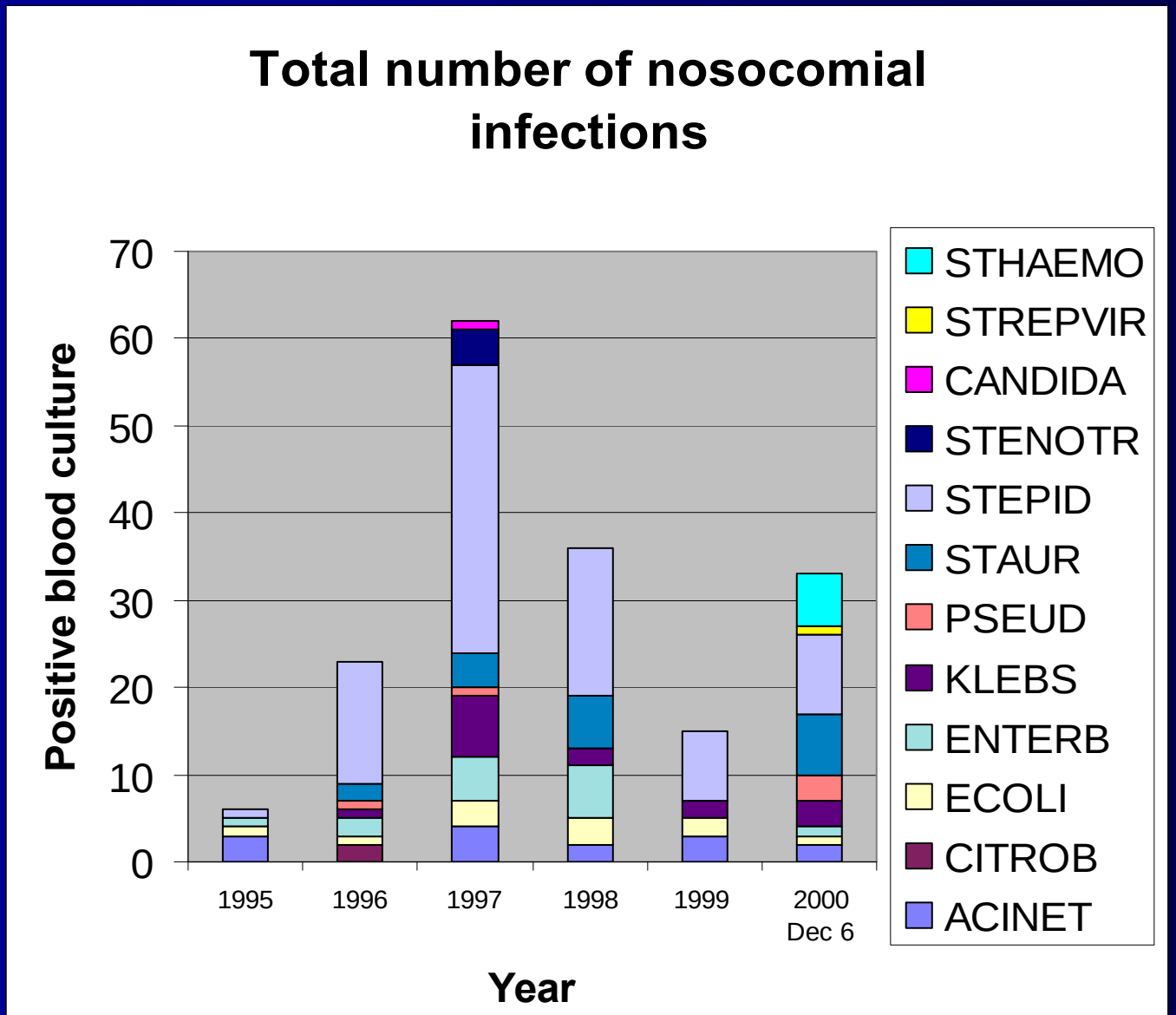
- ⇩ nosocomial infection
- ⇩ mortality
- ⇩ morbidity
- ⇩ antibiotics
- ⇧ TPN then ⇩ TPN
- ⇧ number of patients
- ⇧ more experiences for team
- ⇧ regionalisation



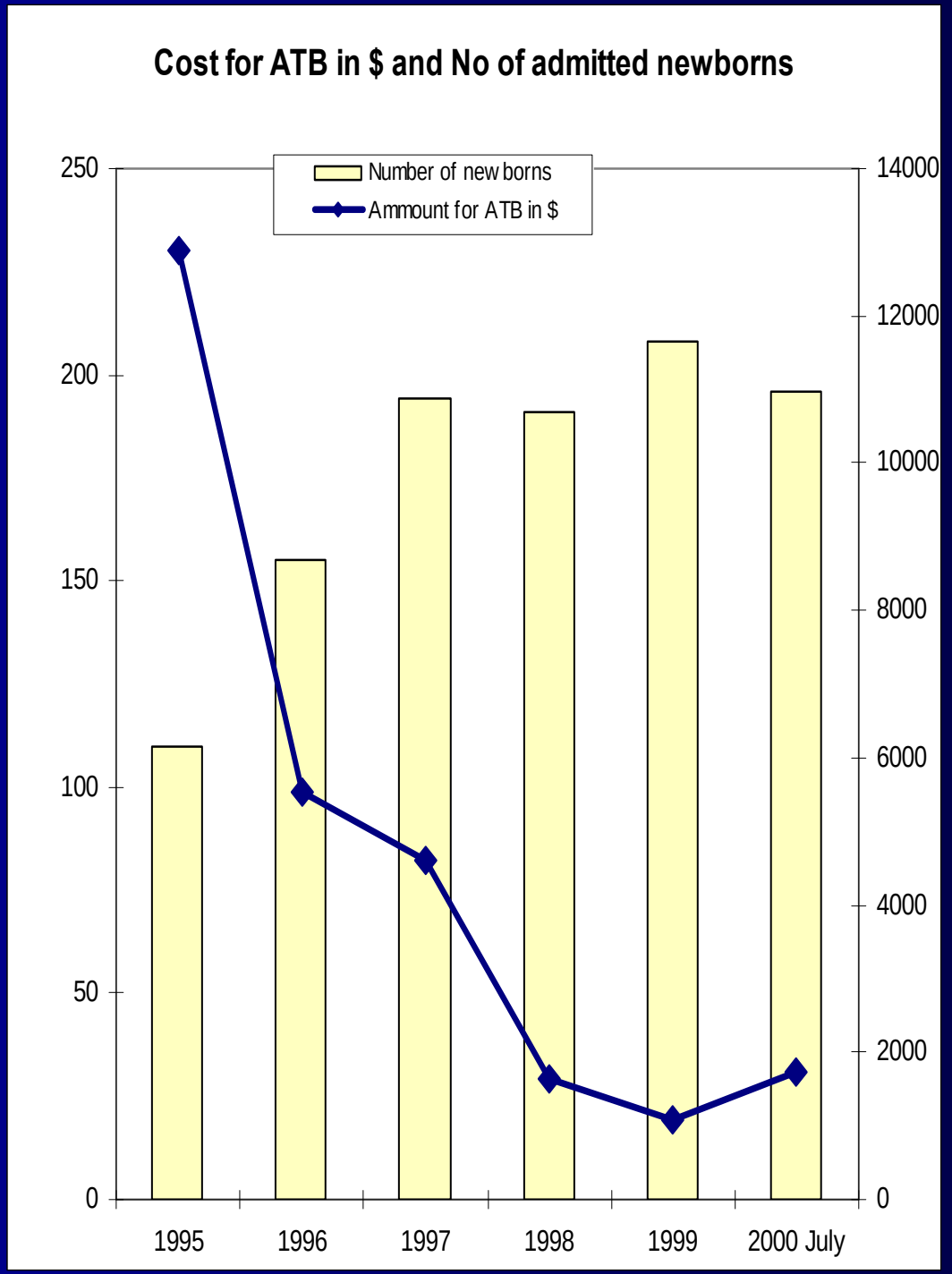
Addmissions/Mortality



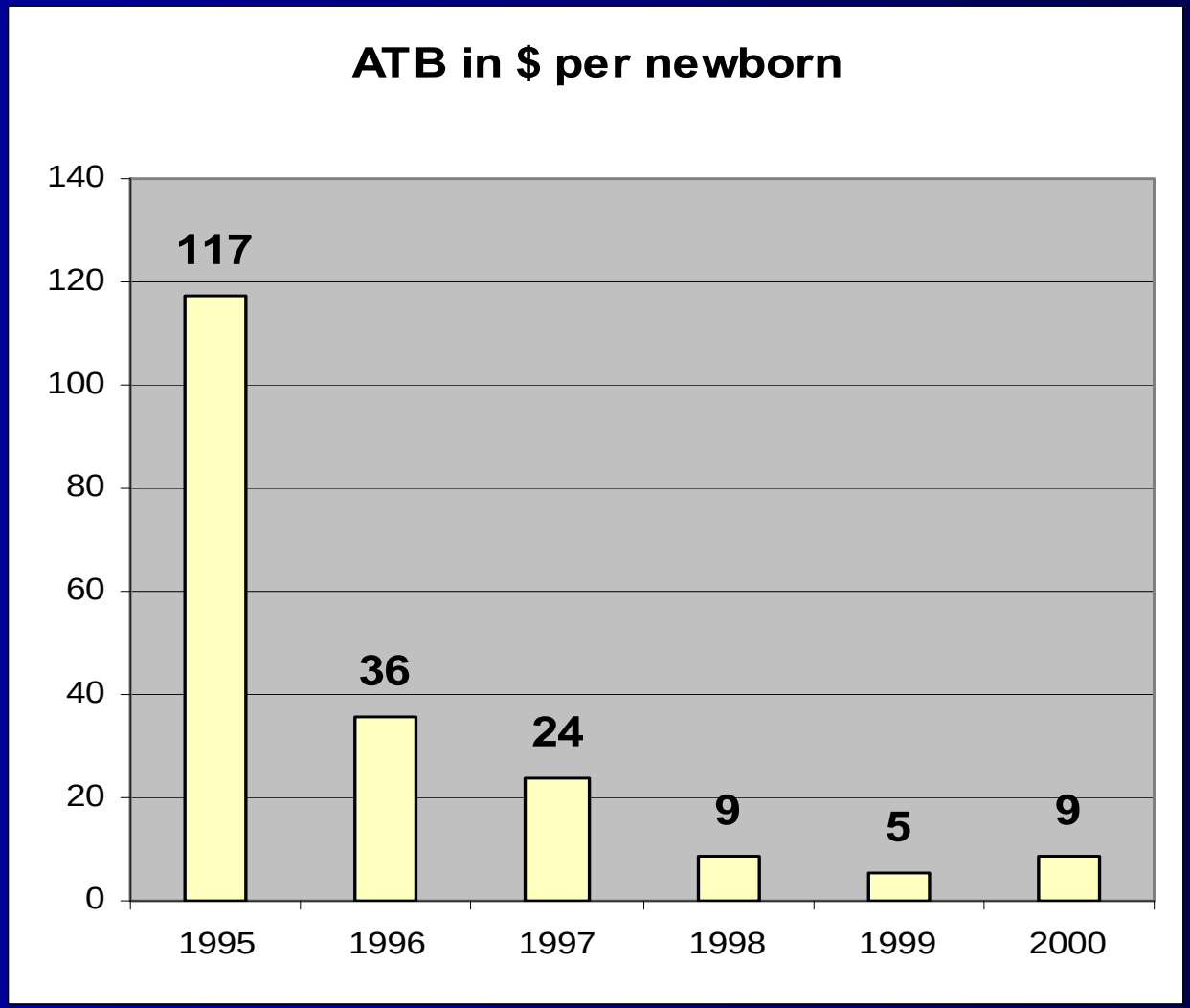
Nosocomial infections



Results - 1995-00 Used ATB



ATB per newborn in average

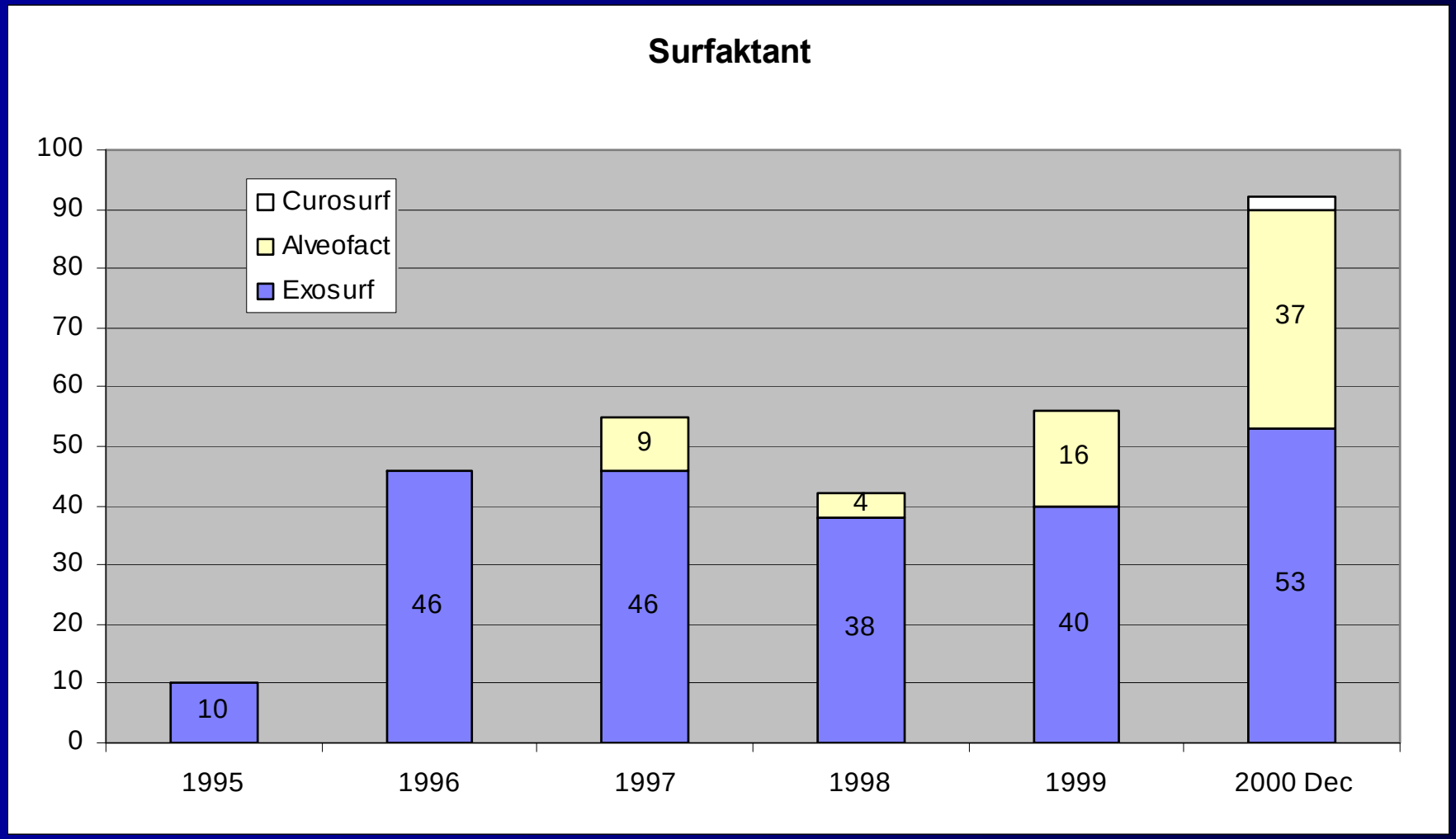


How did we achieve these results?

- early resuscitation
- surfactant treatment
- appropriate management of the PDA - indomethacin, bedside ultrasound
- short inspiration times, higher RR
- we changed the ATB policies
- more catheters
- more discussion

http://www.aiha.com/english/partners/kosice/chart.htm

Surfactant


Surfaktant
100
90
80
70
60
50
40
30
20
10
0
Curosurf
Alveofact
Exosurf
10
46
46
9
38
4
40
16
53
37
1995
1996
1997
1998
1999
2000 Dec

How did we achieve these results?

- more blood cultures
- BACTEC
- in severe infections exchange transfusions (artery & vein)
- as soon as possible we stop ATB
- more TPN in first days
- better care about TPN
- hand washing

http://www.aiha.com/english/partners/kosice/chart.htm

Early surfactant (26w-710g)



Longer UPV – more nosocomial inf.



Exchange trans.still neccessary...



Just 16 hours after...



No other serious problems...



Going home after 3 m- 2430g

Exchange transfusions (artery & vein)

- When to release?
- Neccessary volume to exchange (80-160ml)?
- How to continue the ATB treatment?
- Give or not to give i.v. IG after exchange?
- Multicentric randomised study needed...

Mistakes of our care in last...or back steps

- Too much volume, FFP, IG. (50-60/kg)
- Too much and too often ATB changes
- Not enough skills for arterial access
- Destruction of the perif. veins, not venous access
- Negative blood cultures –when to take
- Not enough surfactant and late...later extubation more CLD
- Equipment – increase of NI with more changes !!

General ideas...

- Maximal control on the beginning
- Surfactant ASAP, Indocin i.v., Blood culture always, exact volume management

- LATER
- Less is sometimes more (volume, caloric input)

How did we achieve these results?

- if caloric input is just enough we stop PN ASAP because of high nosocomial infection rate
- improving infection control
- more seminars for other hospitals
- PC’s could save time for other work
- Internet access – Cochrane Library

http://www.aiha.com/english/partners/kosice/chart.htm

We would like to continue...

- E mail communications
- Videoconferences
- Grant writing - participation in multicentric trials – database
- Team building

Our dance is just beginning...

http://www.aiha.com/english/partners/kosice/chart.htm

Needs...

- NICU – need of neonatal profesionals for centers
- Resources of NI – i.v, ventil.tubes, humidif, HANDS
- More effort for the right diagnosis
- More skills, more Surfactant, better transport, more equipment-concentration, regionalisation IU .

Resources from the www...

- www.google.com
- Nosocomial Infections in Newborn
- Open Medical Club
- www.neonatology.sk under construction

First steps – BW 540g GA 28 week, case presented in Washington DC AIHA Annual Conference Nov 1999

