Physical Restraints in Intensive Care In Europe PRICE

Investigators:

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Physical Restraints in Intensive Care in Europe

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American Journal of Nursing February 199

Myth Vs. evidence

Myth #1:

- Restraining intubated patients will prevent self-extubation.

Evidence:

- In a 12 month study in a general ICU of intubated patients, found self-extubation occured despite of sedation and restraints.
- Those who self extubated were restrained, sedated, or both.
- Critical care nursing clinics of North America, Physical restraints of elderly patients in critical care. Eileen B. Wilson, March 1996

Myth Vs. Evidence

Myth #2:

- Restrained patients have a longer hospital stay.

Evidence:

- Restrained patients were hospitalized twice as long as those who were not restrained, the mortality increased in those patients who were restrained.

Heart and Lung, Restrained Patients: An Important Issue for Critical Care Nursing. Linda M. Janelli, RNC,Ed Jan/Feb 1993

Myth Vs. Evidence

Myth #3:

- Increased awareness can result in change in restraint practice.

Evidence: Simply increasing the staff's knowledge about the risks associated with restraint use and introducing appropriate alternatives can change behavior.

Critical Care Nurse, Juanita Reigle August 1997

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- Purpose:
- Little data available in European ICU's
- Extent and Criteria
- Influencing practice: staffing, culture, diagnosis of patient, ventilation
- The violent patient
- Types of restraints used
- Development of guidelines/policy

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- The Last Resort- The use of Physical Restraints in Medical Emergencies
- New England Journal of Medicine Oct, 1999
- In surgical ICU patients: a study of the effects of physical restraints and sedation on the incidence of self-extubation
- American Journal Medical Quality Sep-Oct 2000
- Decreasing unplanned extubations in the surgical intensive care unit
- American Journal of Surgery Dec 1995
- Restrained patients: an important issue for critical care nursing
- Heart and Lung Jan-Feb 1993

ESICM Barcelona Nursing pro-con debate physical restraint findings:

Vast range of usage.

Few represented countries had clear guidelines/policies

Many nurses feel ethically challenged

Evidence based- sedation use causes prolonged intubation?

Issues raised during conference :

- Use of physical restraint in ICU varies across Europe
- Varied reasons for and against the use of physical restraint
- It is possible that use is more likely to be governed by Socialisation and cultural attitude than clinical evidence

Socialisation and Culture

Restraint practice may be more of a cultural phenomenon

Patients with similar levels of agitation are managed with physical restraint in some countries and without physical restraint in others

Martin, B.Mathison, L. 2005 Use of physical restraints in Adult Critical Care: A bicultural study. *American Journal of Critical Care;*14: 133 - 142

Nurse:Patient ratios

Martin & Mathison (2005)

Observational study in 5 ICUs

  – 3 USA, 2 Norway

- 50 patients in each country
  – 1 observation at night, 1 in the day- on each pt
- 39 incidents of restraint in U.S., none in Norway
- Norway – higher sedation rates, N:P ratio 1.05:1, patients had higher NEMs scores
- U.S. – Pts significantly more awake (SAS), less morphine, N:P ratio 0.65:1, 7 episodes of unplanned removal of invasive devices
- No LOS recorded

Martin & Mathison Am J Crit Care; 14: 133-42

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Research Questions:

- What is extent of PR use in Europe
- Are there differences between countries
- Differences between units in same country
- What are reasons for PR
- What methods are used
- Relationship between nurse: patient ratio
- Relationship between sedation/use of PR

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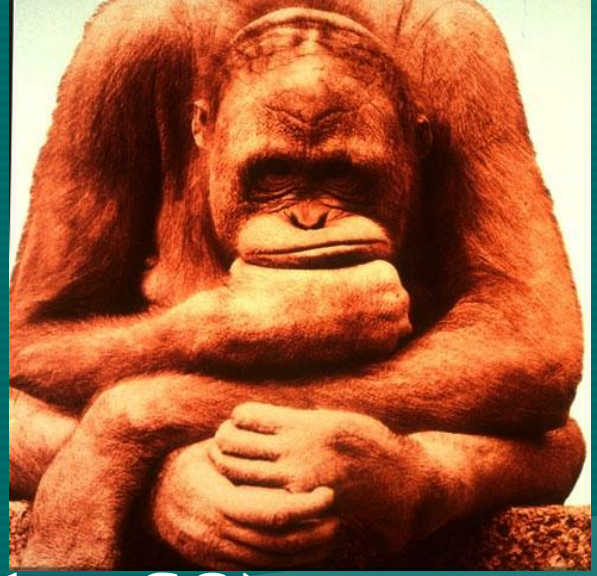
- Methodology
- A prospective, descriptive survey of the prevalence of PR use in European ICU's
- Recorded on 2 separate days- weekday/weekend
- Inclusion criteria- All adult patients in ICU
- Exclusion criteria- less than 18 years of age
- Number of patients restrained, reasoning, type, effectiveness, effect on patient, length of time restraint used.

Sedation Problems



* respiratory depression
* haemodynamic effects (e.g. low BP, low CO)
* gastrointestinal effects (e.g. ileus, constipation)
* long-acting, cumulative - renal/liver dysfunction
* withdrawal ---> agitation
* tolerance
* cost

Data collection sheet

The Use of Physical Restraints in European ICUs

EUROPEAN SOCIETY OF INTENSIVE CARE MEDICINE

Name of ICU _____ Country _____ Name of data collector _____

Usual nurse:patient ratio 1:1, 1:2, 1:3, 1:4* *(please circle the appropriate ratio)

Average admissions/month _____ Number ICU beds _____ Date _____ The unit has a Physical restraint policy? Y/N

Please record for all patients - if no restraint is in use record 'none' under type of restraint and leave the rest blank

Patient Number	Type of restraint	Limbs restrained	Position of patient (i)	Position of patient (ii)	Reason for restraint	Pt behaviour causing restraint	Alternative measures used	Length of time pt. restrained	Restraint successful?
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									

EUROPEAN SOCIETY OF INTENSIVE CARE

Data Collection sheet

Codes for responses

Please record the code number of the most appropriate response in the column for each restrained patient.

EUROPEAN SOCIETY OF INTENSIVE CARE MEDICINE

Type of restraint
1- padded gloves
2- gauze/cotton pad
3- crepe bandage
4- sheet
5- commercial wrist straps
6- other
7- none

Limbs restrained
1- one hand only
2- both hands
3- torso
4- one leg
5- both legs
6- other

Position of patient (i)
1- in bed restrained to guard rails
2- in bed restrained to bed frame
3- in chair restrained to back of chair
4- in chair restrained to arms of chair
5- other (please comment)

Position of patient (ii)
1 - is optimal for patient stability and/or recovery
2 - is not optimal for pt stability and/or recovery
3 - varies

Reason for restraints
1- prevent the pt from falling
2- prevent falling from chair
3- pt is pulling out tubes/
4- pt wanders off unit
5- pt is dangerous to self
6- reason for restraint is unclear
7- prevent self-extubation
8 - other

Patient behaviour causing restraint
1- confusion
2- drowsiness
3- restlessness
4- hallucination
5- disorientation
6- delirious from fever
7- physically unstable on feet
8- aggressive/dangerous to others
9- other (please comment)
Please note - more than one descriptor may be used

Other measures used
1- sedative drugs
2- continuous restraint by staff
3- verbal reassurance by staff
4- other (please comment)
5- none

Length of time restrained
1- this shift only
2- 1 day
3- 1-2 days
4- more than 2 days
5- more than 5 days

Restraint successful?
1- yes
2- no
3- partially

Sedation (pleased add dose)
1 - benzodiazepine
2 - opiates
3 - propofol
4 - ketamine
5 - isofluorane
6 - haloperidol
7 - chlorpromazine
8- other (please state)

IF you have a physical restraint policy or guidelines, please send a copy with the form.

*(please circle the appropriate ratio)

Please return the data collection form to:
by email

Julie Benbenishty
email address - data_processing@ethics.org.il
Sheila Adam
email address - sheila.adam@virgin.net
sheila.adam@uclh.org

or by post to

Sheila Adam
Chair, Nursing Section ESICM
ICU, The Middlesex Hospital
Mortimer St
Londo W1T 3AA

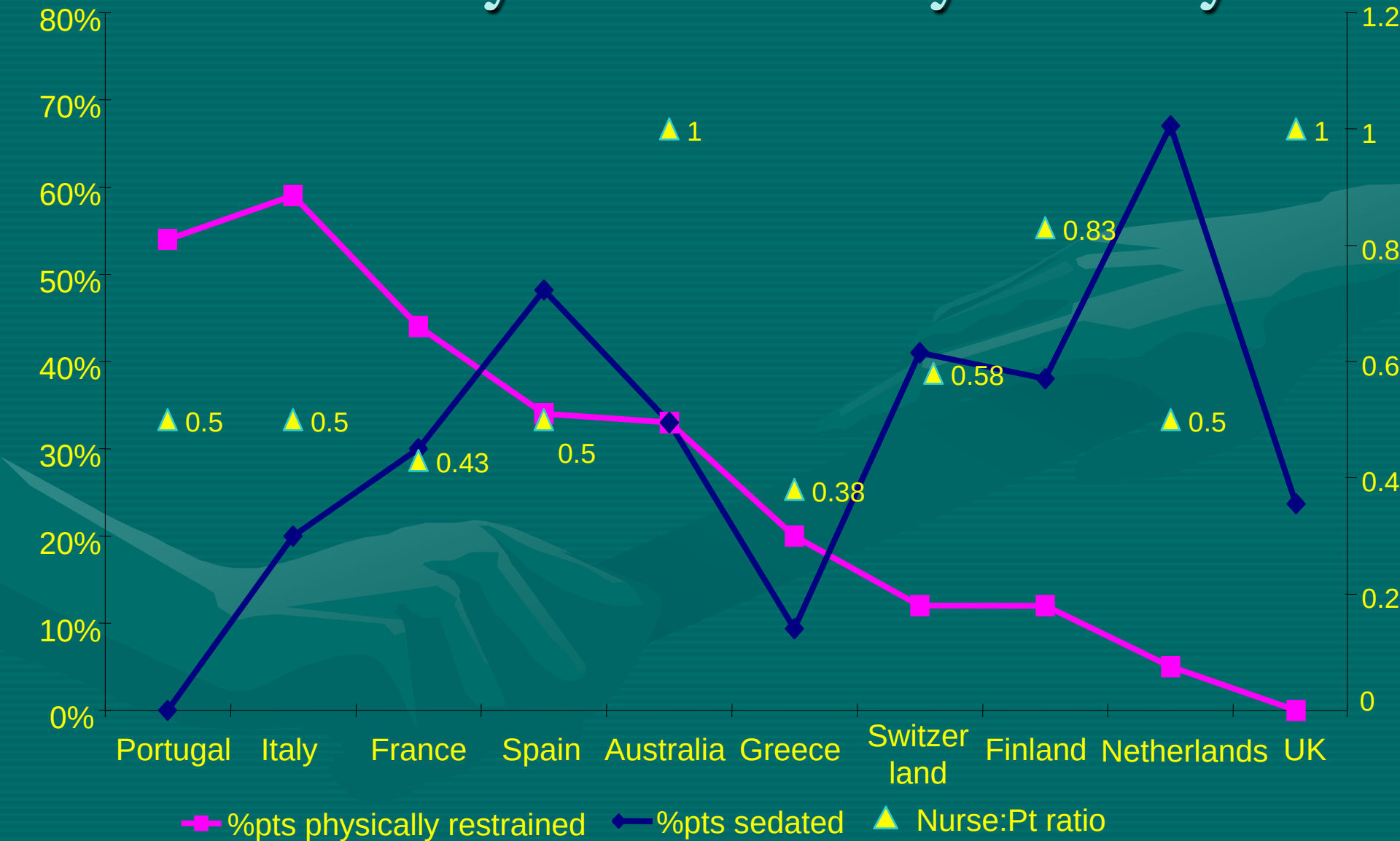
Results

- 34 general ICUs participated from 9 European countries and 1 participated from Australia
- 750 patients were included with detail of physical and sedative restraint in 545 patients
- Average size of ICU=14 beds (range 4 –24)
- Average number of admissions/month = 63 (range 15-143)

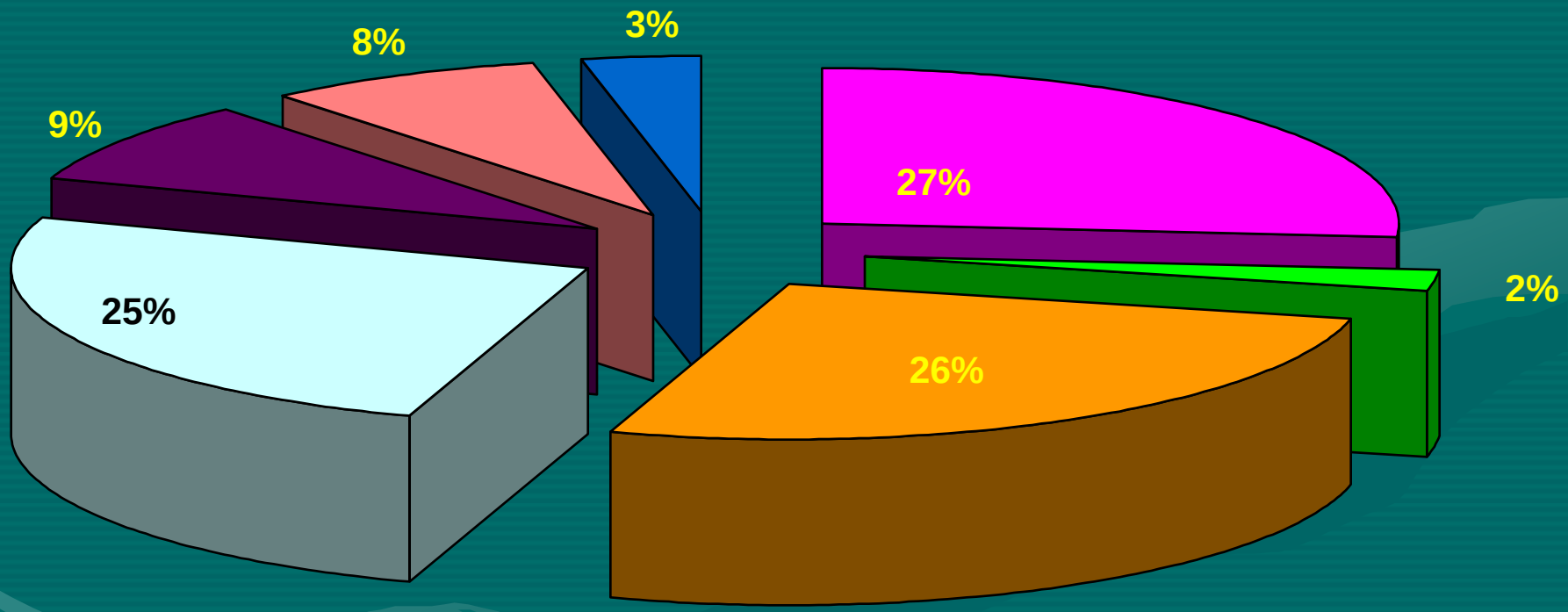
Countries involved

- Portugal
- Italy
- France
- Spain
- Australia
- Greece
- Switzerland
- Finland
- Netherlands
- Israel

% of patients physically and chemically restrained by country

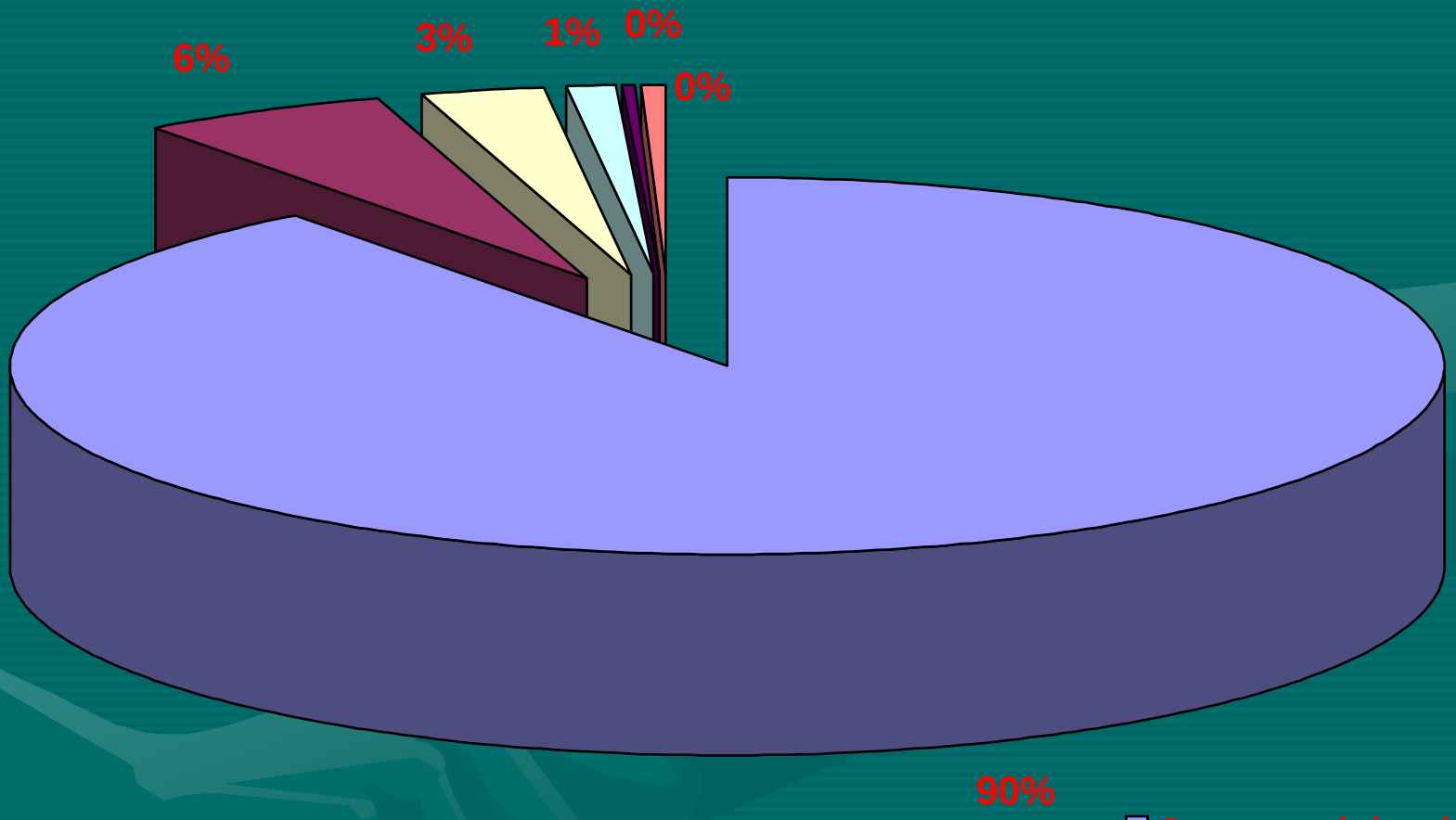


Reasons for use of physical restraint

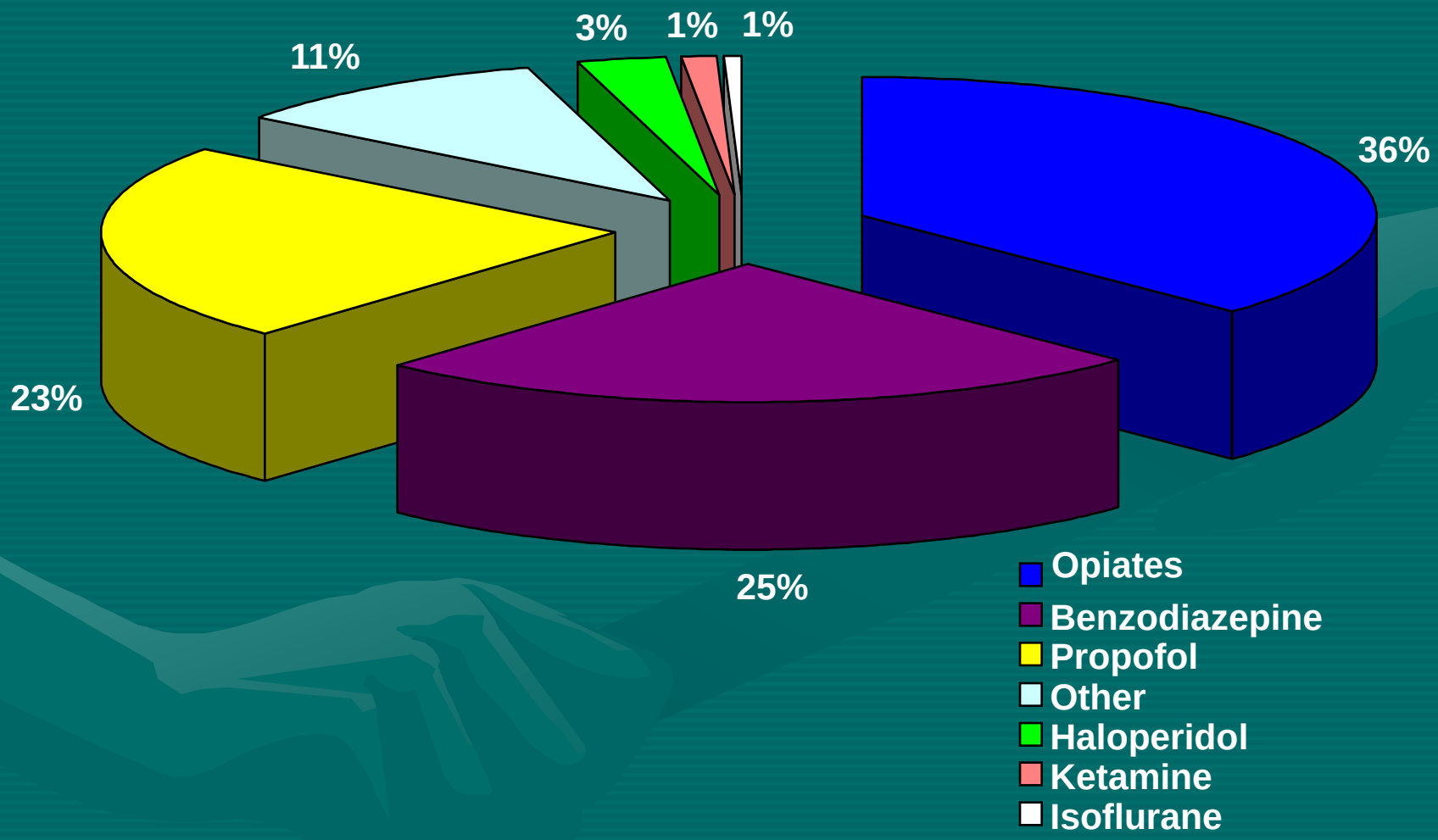


- To prevent self-extubation
- Reason for restraint is unclear
- To prevent the pt from falling
- Patient is dangerous to self
- To prevent falling from chair
- Other
- Patient is pulling out tubes

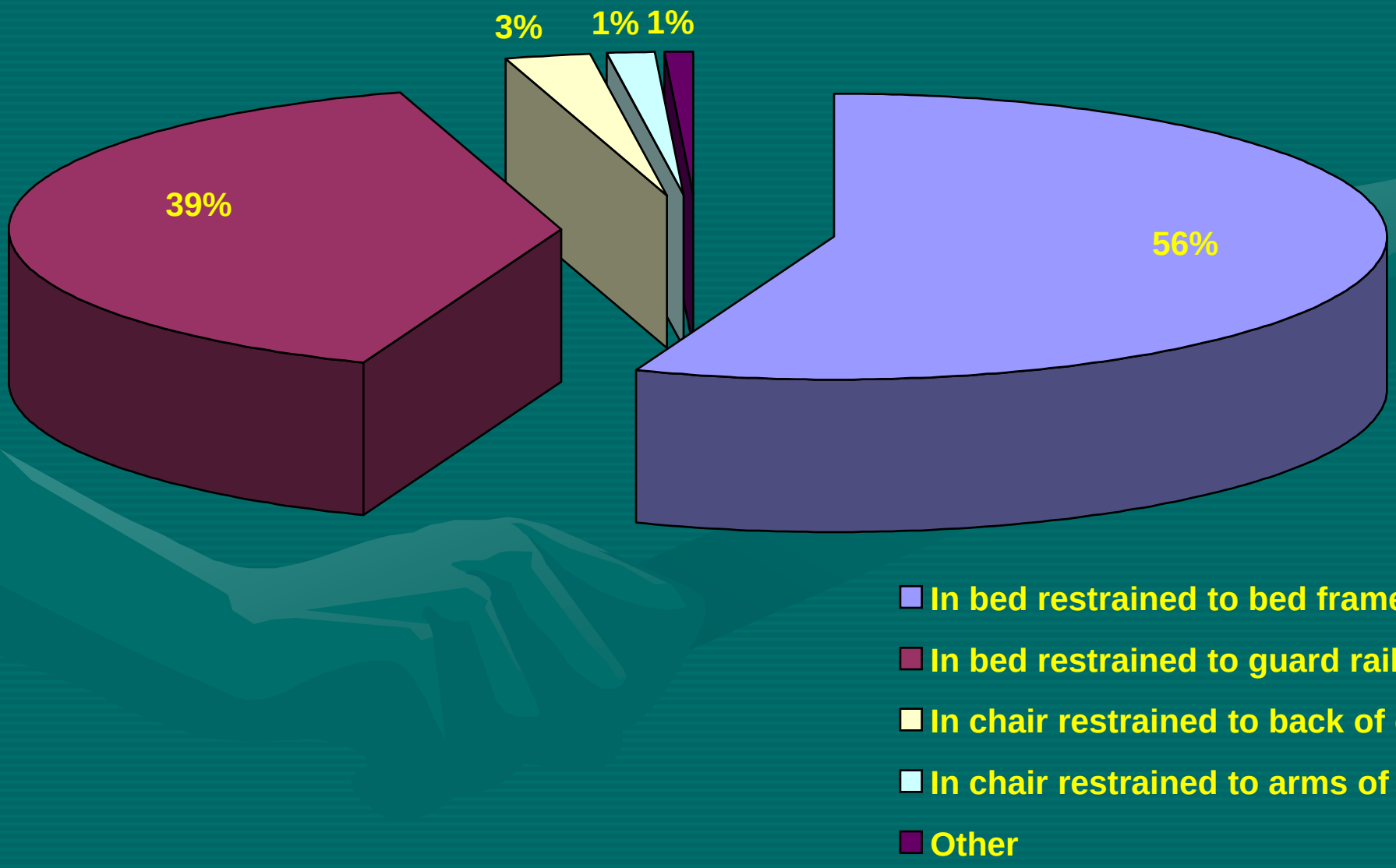
Types of physical restraint used



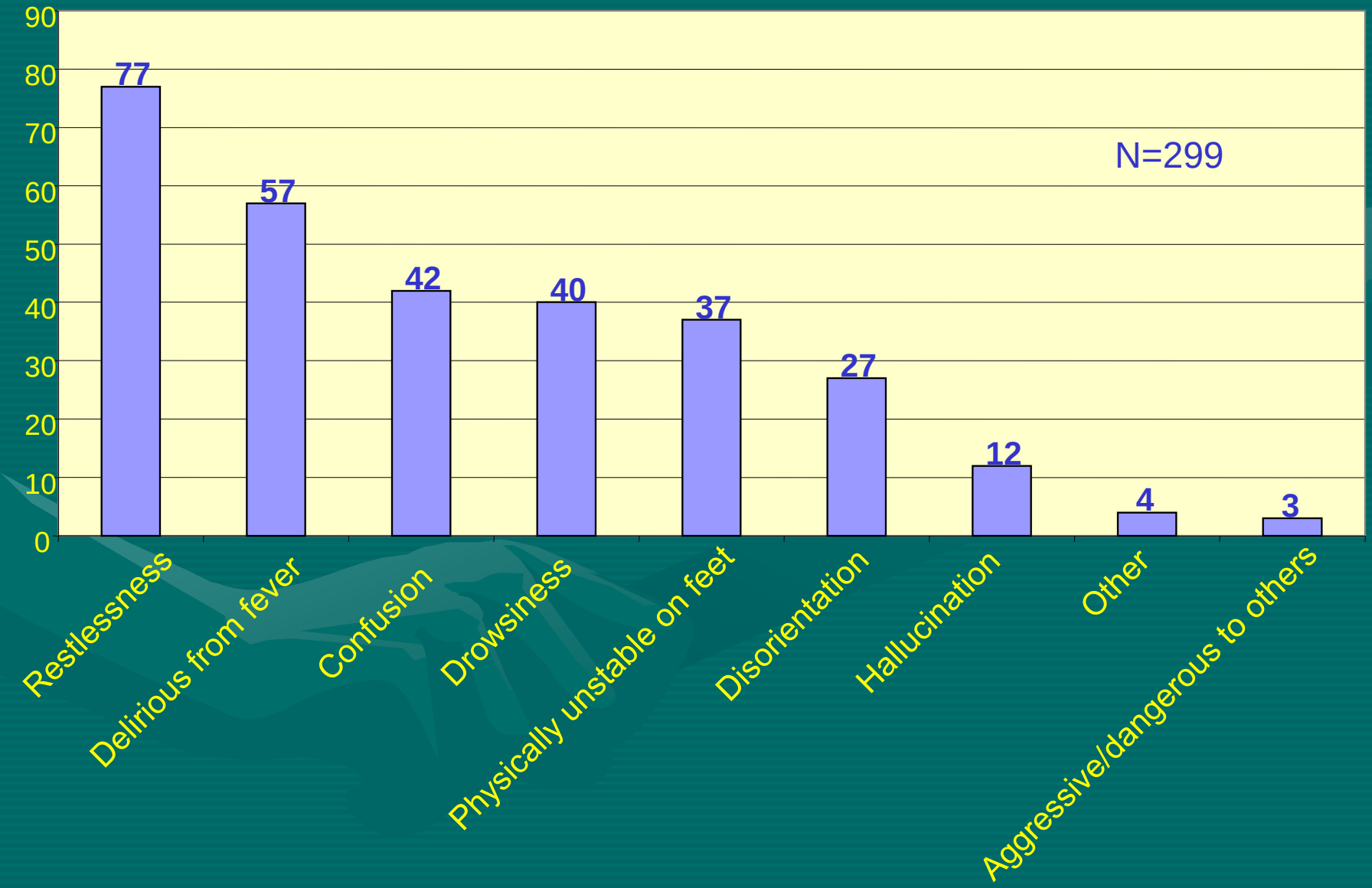
Types of sedatives used



Where patients are restrained



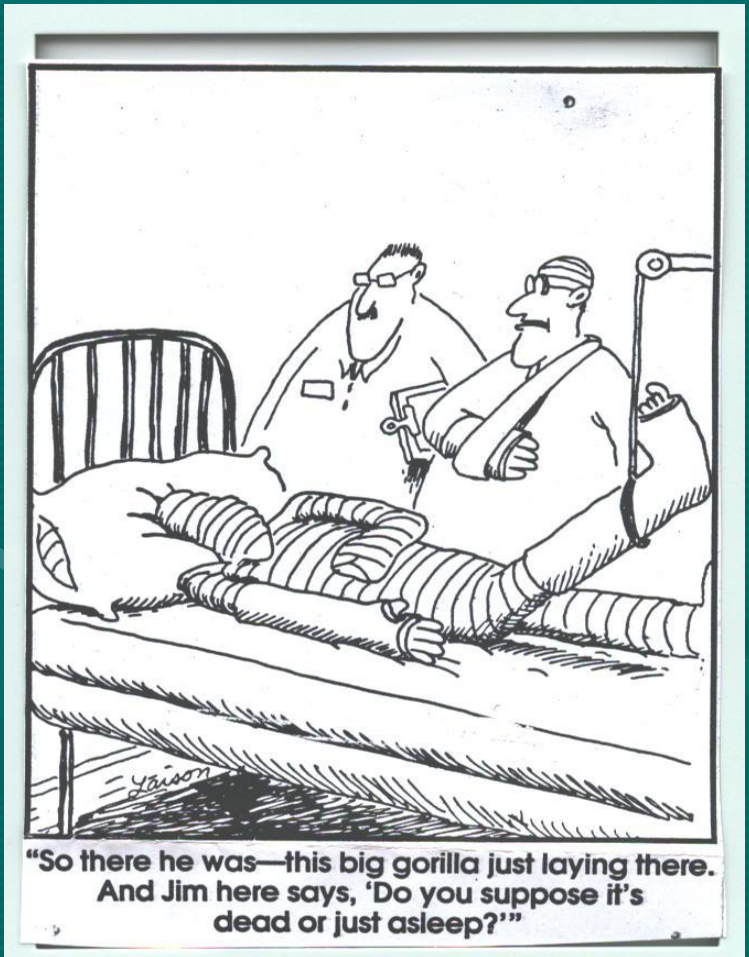
Patient behaviour requiring restraint



Summary

- Majority of patents were restrained to the bed
- Sedation drugs- Opiates, Benzodiazepines, Profofol
- Commercial bought wrist straps were used
- Most common reason for restraining- restlessness
- The more sedative drugs were used, less restraints were used

CONCLUSION



First major study into European ICU physical restraints

Intensive Critical Care Nursing 2010 Oct;26(5):241-5.

Physical restraint use in intensive care units across Europe: the PRICE study.

Benbenbishty J, Adam S, Endacott R.

Reasons for Use of Physical Restraint

1) Restraining intubated patients will prevent unplanned invasive device removal

- In a study comparing physical restraint use in 100 patients in Norway and the US.
- Physical restraint use only occured in the US.
- Unplanned device removal occurred only in the US

- Martin, B; Mathisen, L.2005 **USE OF PHYSICAL RESTRAINTS IN ADULT CRITICAL CARE: A BICULTURAL STUDY***American Journal of Critical Care;* Mar 2005; 14, 133 -142

Detrimental effects of Physical restraint

- Restrained patients have a longer hospital stay.

  Evidence:

- Restrained patients were hospitalized twice as long as those who were not restrained, the mortality increased in those patients who were restrained.

- **Heart and Lung**, Restrained Patients: An Important Issue for Critical Care Nursing. Linda M. Janelli, RNC,Ed Jan/Feb 1993

PRICE – Research Objectives

Primary objective :

- To gather descriptive data on the incidence of, and the reasons for physical restraint use in adult ICUs in Europe.

Secondary objectives :

- to determine differences between European countries in
  - the use of physical restraints,
  - reasons for use,
  - type of restraints used
  - policies for use.
- to describe any relationship between nurse: patient ratio and the use of physical restraint

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Methodology

- Prospective, descriptive multi-national European survey of physical restraint use in adult intensive care patients.
- Point prevalence study of restrained patients on one weekday and one weekend day
  - Inclusion criteria- All adult patients in ICU
  - Exclusion criteria - less than 18 years of age