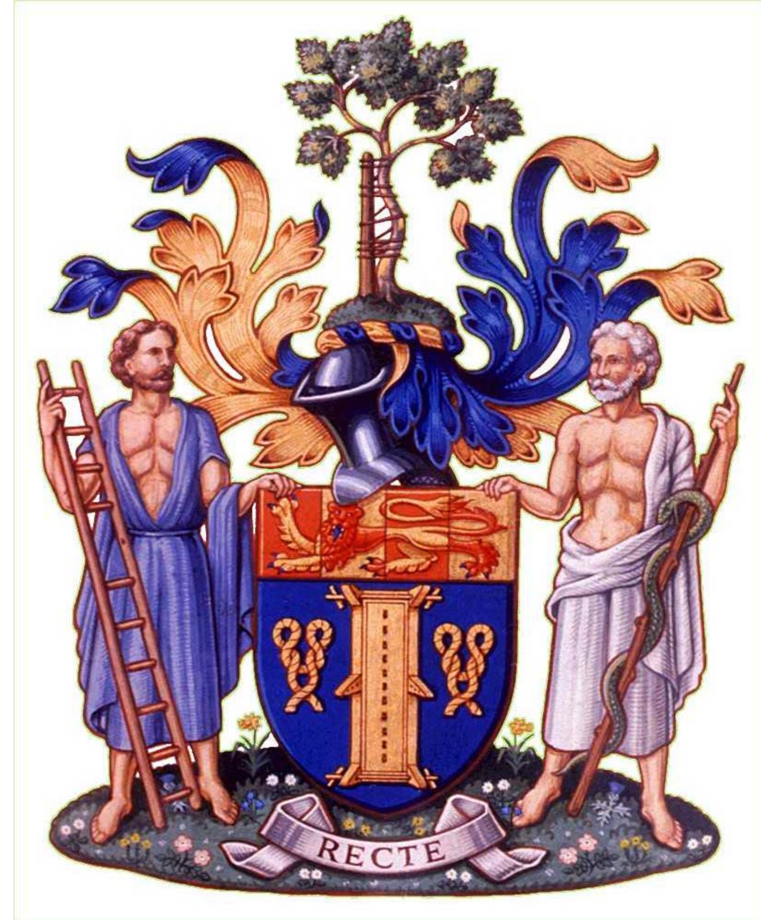
British Orthopaedic Association



Prof Keith Willett

John Radcliffe Hospital, Oxford

Chairman BOA Trauma Group

- **Standards of Care for *index injuries* against which to audit hospital performance**

- **Regional system of trauma organisation to audit that trauma care performance and develop local access, treatment, bypass and transfer protocols to achieve those standards**

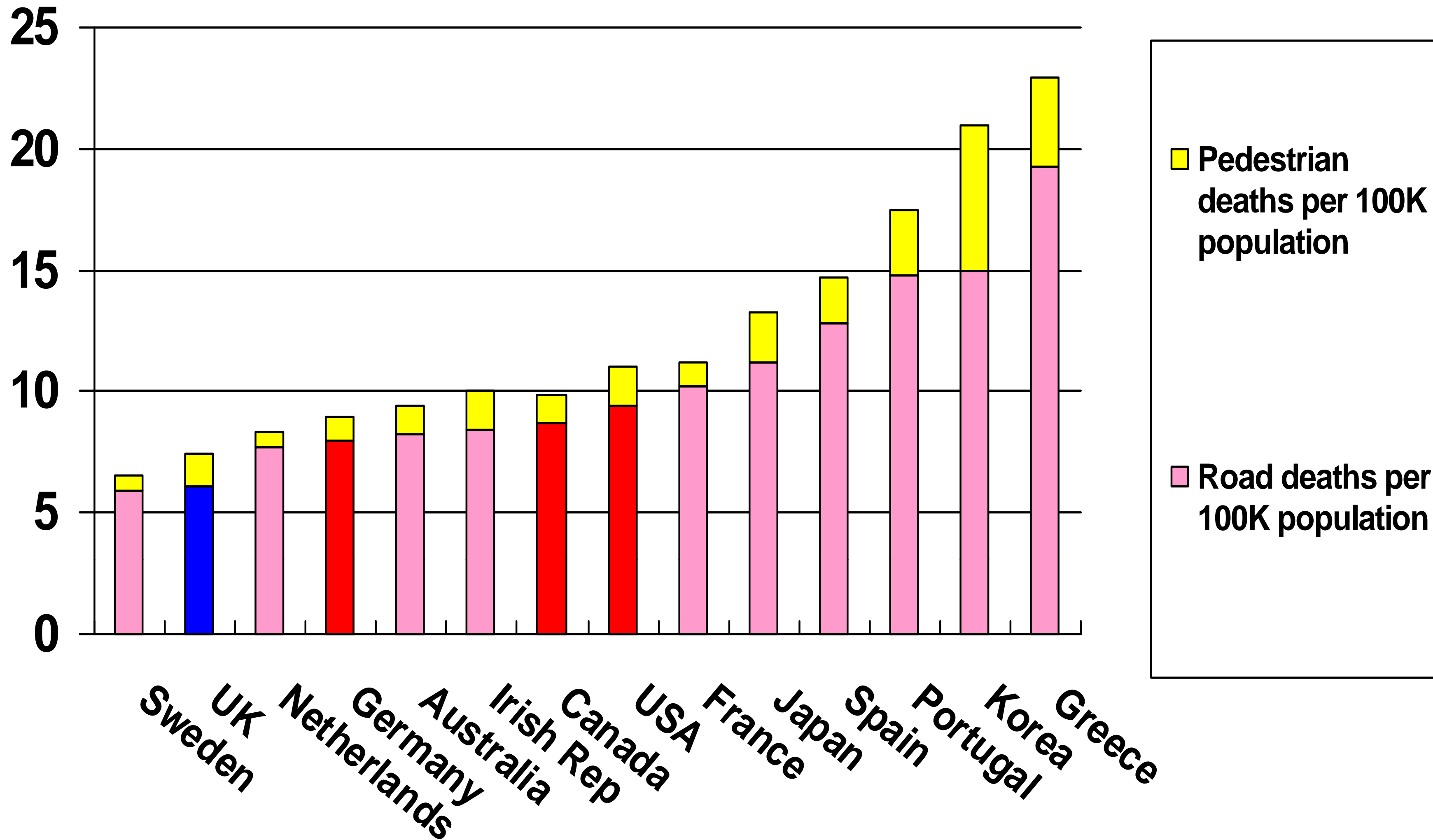
Better Care for the Severely Injured

A Joint Report from
The Royal College of Surgeons of England
and the British Orthopaedic Association

July 2000

Review date 2003

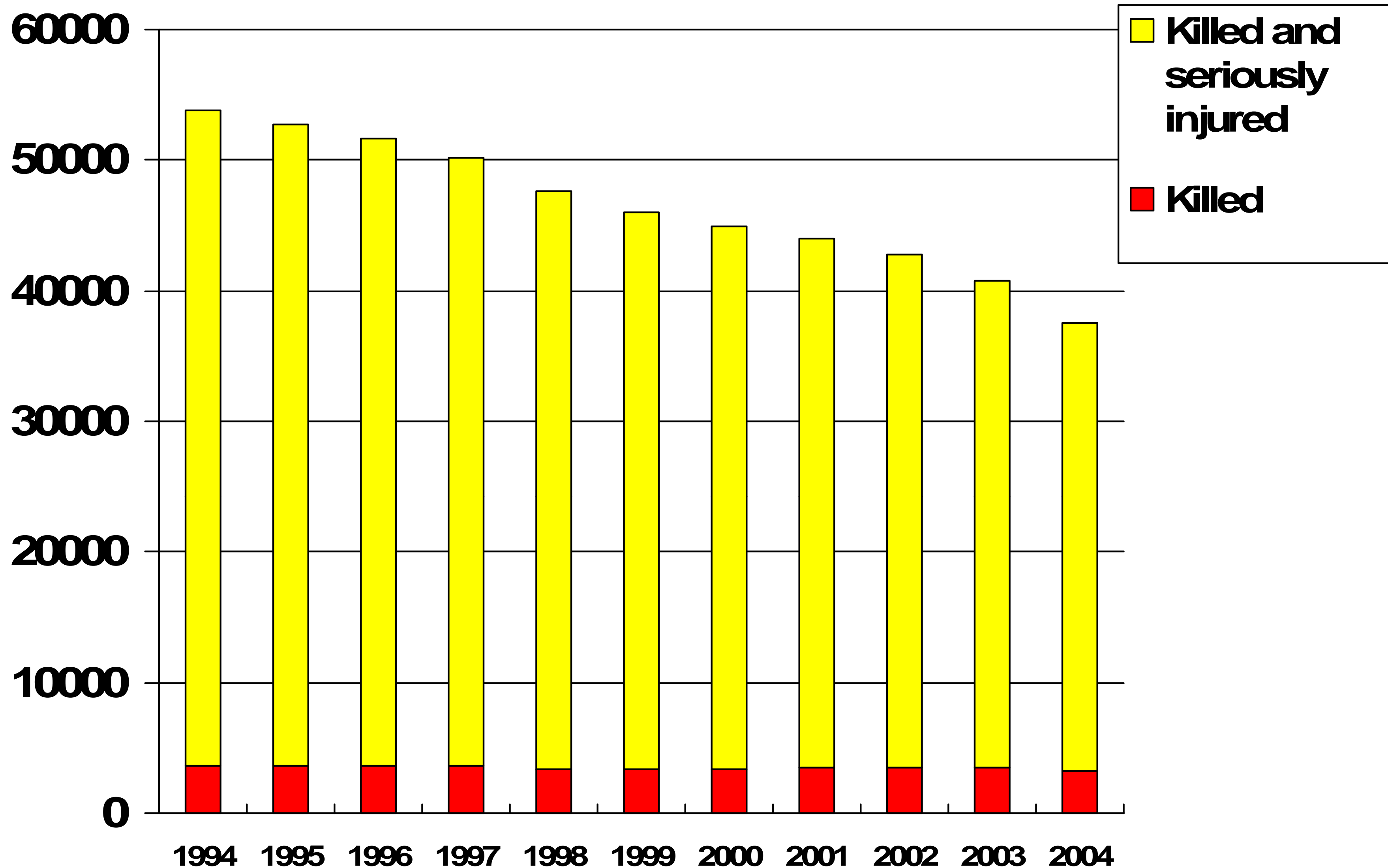
International road death rate comparative statistics



Population density: UK 243, USA 30, Sweden 20 $sqkm^{-1}$

Decline in UK road crash deaths and serious injury rate

the last decade - 1994-2004



My response to this NCEPOD report

- **Strongly support findings, conclusion and recommendations:** ***further data and expert opinion***

- **Sad**[text covered by banner]

. . . . ev[text covered by banner]**gress and in some areas worse than p**[text covered by banner]

MUST EFFECT CHANGE

  - **Senior input in trauma team**
  - **Head injury management**
  - **Role of the local hospital**
  - **Timeliness and transfers**
  - **Limitations of the report**
  - **Key solutions, implementations and commissioning**

Offer prioritisation and pragmatism

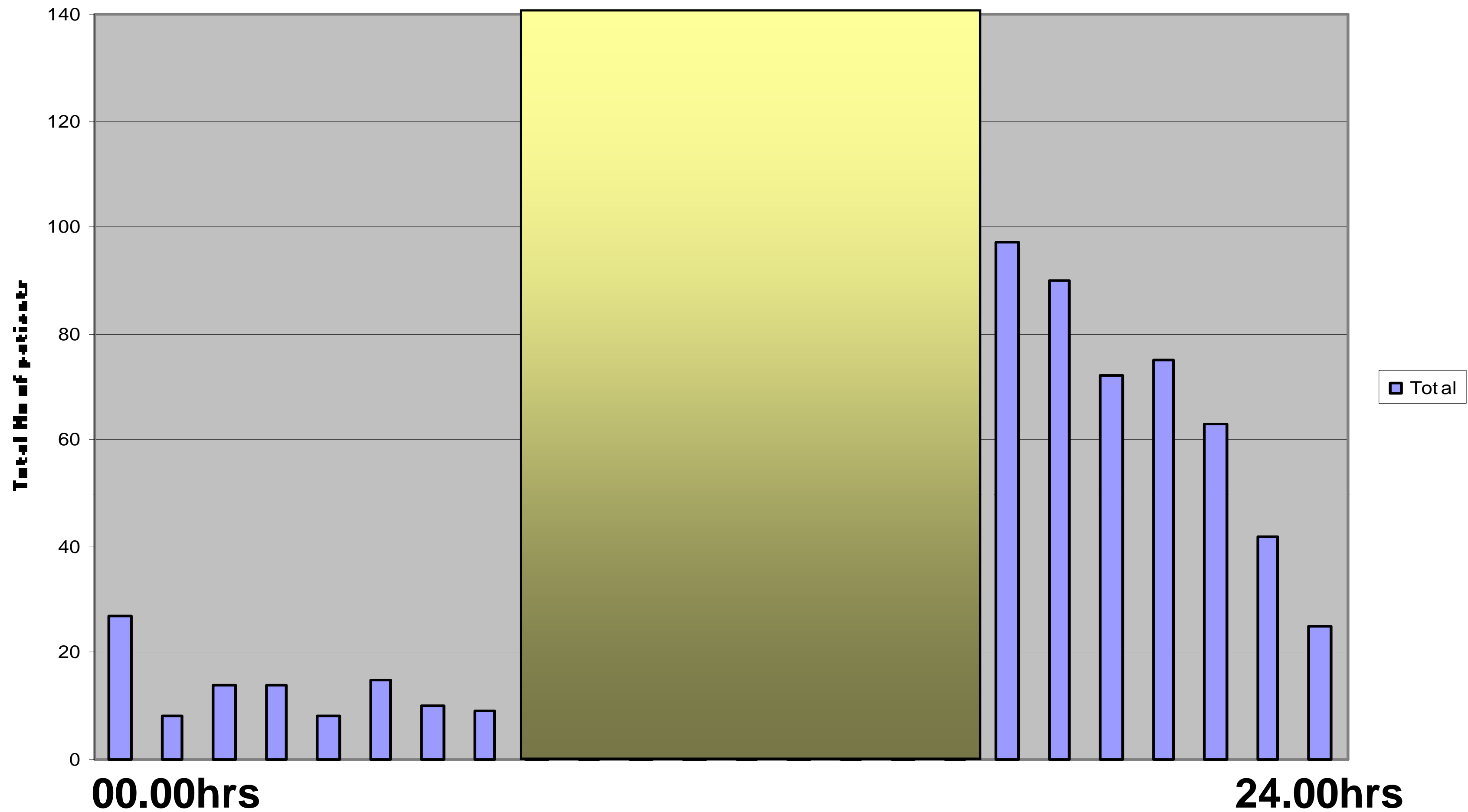
- Airway - pre-hospital solution
- Local trauma team decisive - senior input
- Rapid triage – transfer
  - CT scan availability
  - Receiving regional unit/system responsibility
  - Over-riding clinical priority
  - Transfer/retrieval expertise
- Repatriation – rehabilitation

What are the key recommendations?

. . . . strategy for commissioning

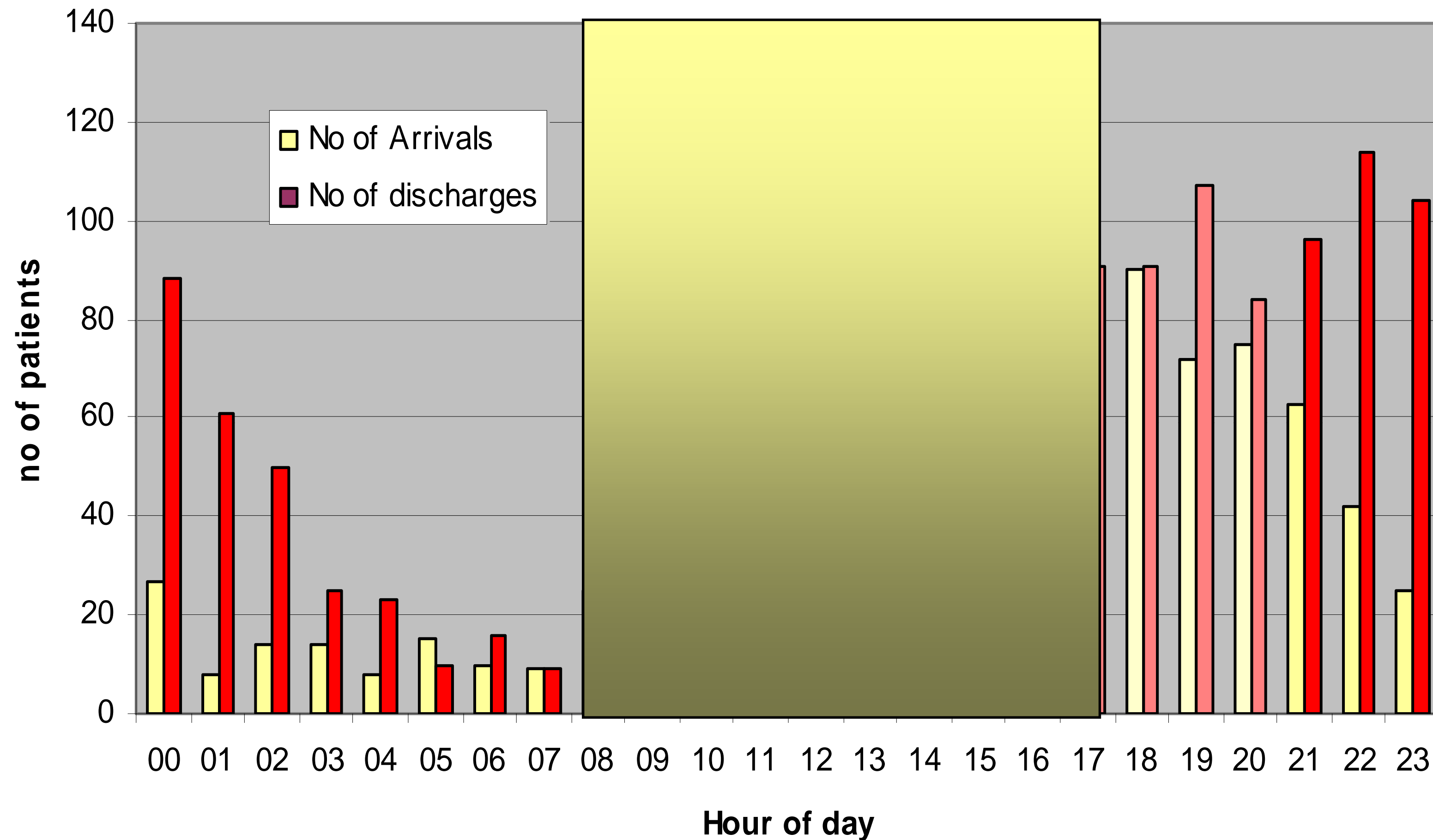
A consultant must be the trauma team leader

. . . . during the normal working week (?)



(85% of surgery is musculoskeletal)

Timing of Trauma Care



. . . . . a popular change?

Casualty surgeons start 24-hour shifts

NICHOLAS TIMMINS
Health Services Correspondent

TRAUMA surgeons in Oxford today start working 24-hour shifts to cover emergencies in a move that could become a

Scheme cuts junior doctors' long hours

24-hour surgeons will boost patient welfare

by Martin Leaver, health correspondent

A pioneering hospital admissions scheme is set to improve patient care and cut other 24 hours.
The consultant will carry out the immediate assess- hand and spinal injuries, will form a second tier of on-call consultants under the enced junior doctor, but a consultant-led trauma team.
"The most important time

top surgeons 24-hour call for victims

PATIENT care should improve and junior doctors' hours fall

By MARTIN LEAVER

Casualty unit gets 24-hour surgeons

By David Fletcher
Health Services
Correspondent

TRAUMA surgeons are to

The thin end of a very damaging wedge . . .

. . . the most outlandish idea yet ! **BMA NEWS 1994**

Battle lines drawn over resident care

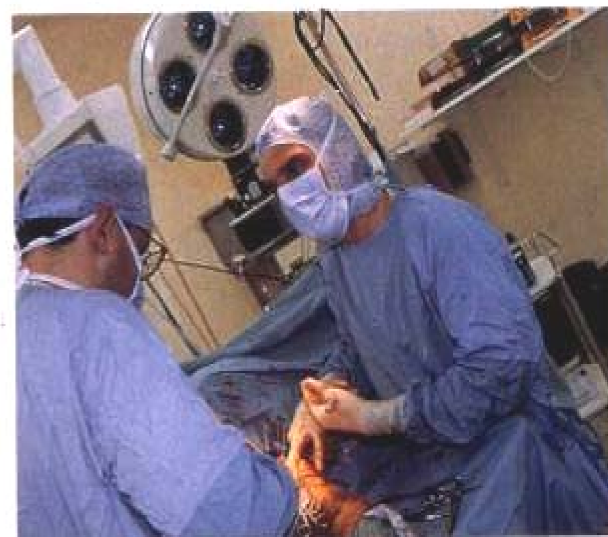
Doctors fear the few resident consultants providing 24-hour cover in some hospitals are the thin end of a very damaging wedge. Michael Hann reports.

Five years of rapid change may have have hardened consultants to outlandish ideas — but what many would view as the most outlandish yet is becoming a reality in some hospitals.

With increasing pressure on hospitals to cut junior doctors' hours and worries about the standard of emergency care provided out-of-hours by unsupervised juniors, 24-hour resident consultant cover is gaining a foothold in accident and emergency departments.

behind the move towards resident consultants has been the need to improve 24-hour care, Conference of Royal Colleges' chairman Professor Sir Leslie Turnberg believes care during normal hours may suffer as a result.

'If a consultant is to be in at night you then have the problem of having suffi-



SMOOTH OPERATOR: Keith Willett (right), director of trauma at the John Radcliffe Hospital, Oxford.

So what is the standard?

1. ***There must be a Consultant to lead the trauma team in all units receiving seriously injured patients***

Head injury management

- **62% had neurotrauma**
- **In this report 493 of 795 (ISS ≥16) had head injury**
- **114 had neuro-critical intervention**
  - **66 surgery**
  - **48 intracranial pressure monitoring**

. . . . so what should the standard of care be?

All patients with severe head injury should be transferred to a neurosurgical/critical care centre irrespective of the requirement for surgical intervention

. . . . so what should the standard of care be?

- ***All patients with severe head injury should be transferred to a neurosurgical/critical care centre irrespective of the requirement for surgical intervention***

- **20 – 25% (114) had neuro-critical intervention**
  - **66 surgery**
  - **48 intracranial pressure monitoring**

- **278 had GCS on arrival $\leq$12 *but less than half needed neuro-critical care (other injuries)***
- ***NCEPOD excluded all patients with isolated moderate head injury (AIS 3:* ISS 9)**

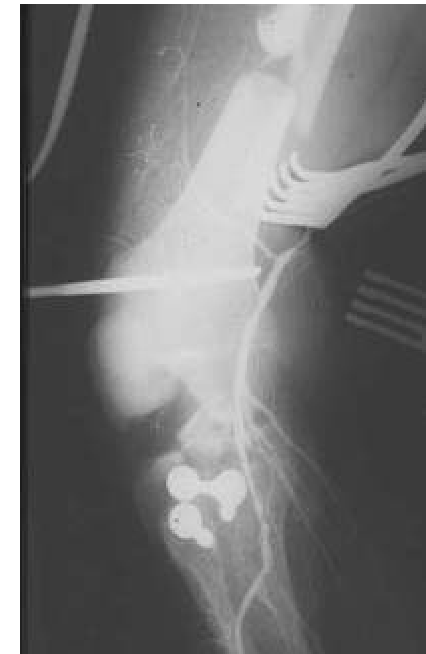
. . . . overwhelmed

. . . so what should the standards of care be?

- *All patients with severe head injury should be transferred to a neurosurgical/critical care centre irrespective of the requirement for surgical intervention*

- **Optimise the local receiving unit for triage, critical resuscitation and rapid dispatch**

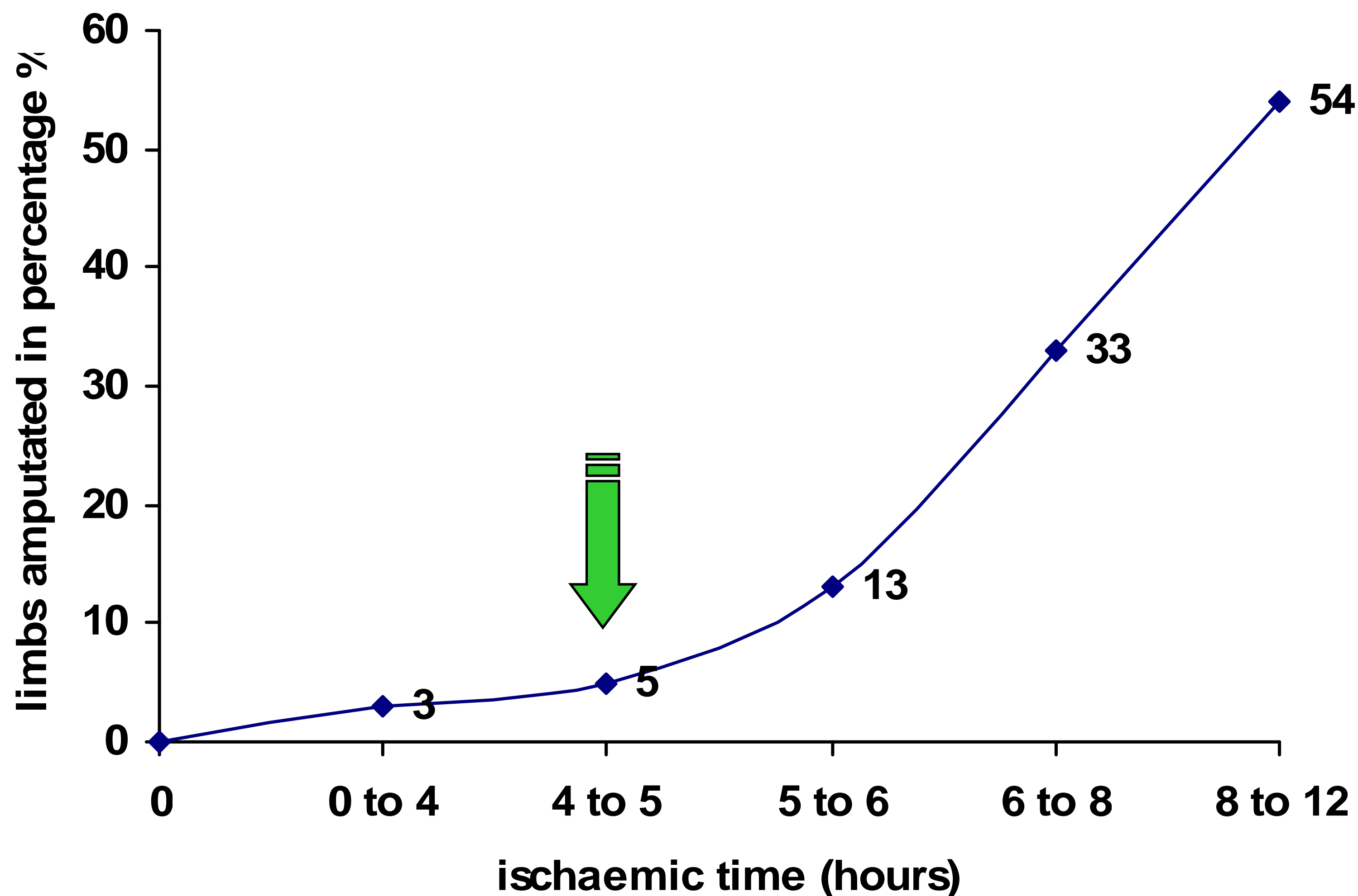
  - ***Consultant-led trauma team***
  - *Time to CT less than 1 hour (radiographer)*
  - ***Time to craniotomy/neurosurgery/ICP monitor of less than 4 hours***
  - ***Vascular injury, interventional radiology, etc.***



. . . . . the role of the local hospital (trauma team)

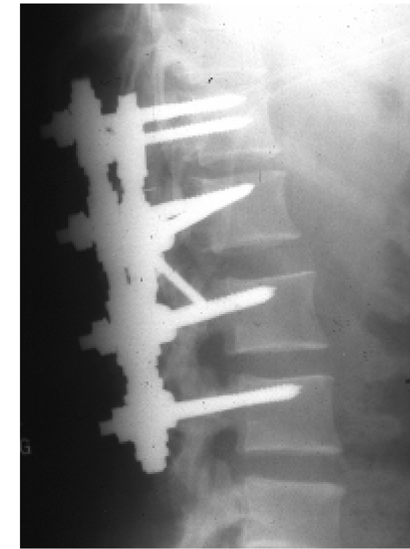
Risk of limb amputation with delay to surgery

meta-analysis 21 studies 1574 pts ***Willett et al 2006***



. . . so what should the standards of care be?

Optimise the local receiving unit for triage, critical resuscitation and rapid dispatch



- **Transfers:**

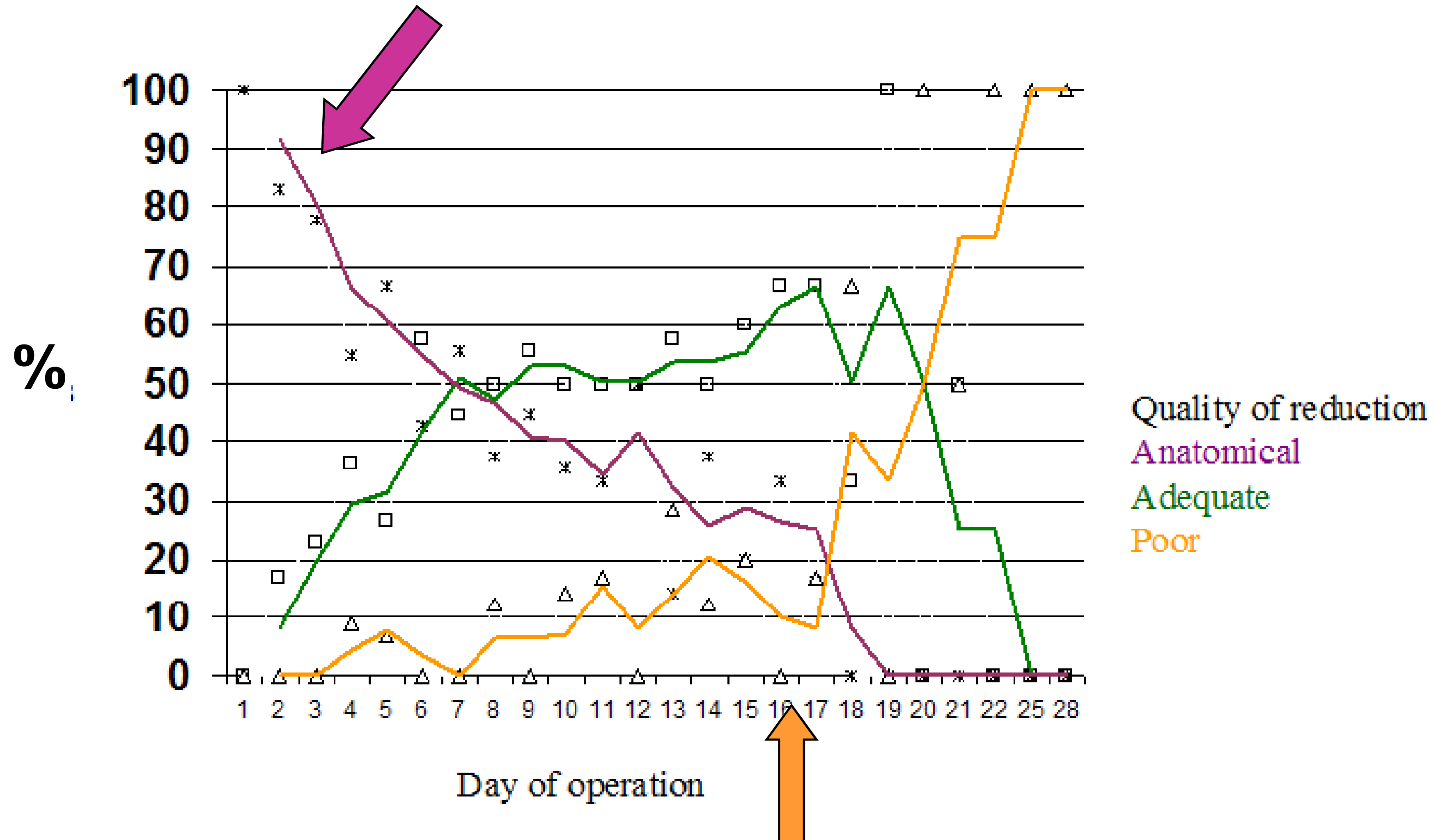
NCEPOD (194) major underestimate:

- **only those within 72 hours**
- **"specialist management" of injuries**
- 62% neurosurgery
- 10% burns and plastics
- 4% cardiothoracic
- 3% PICU

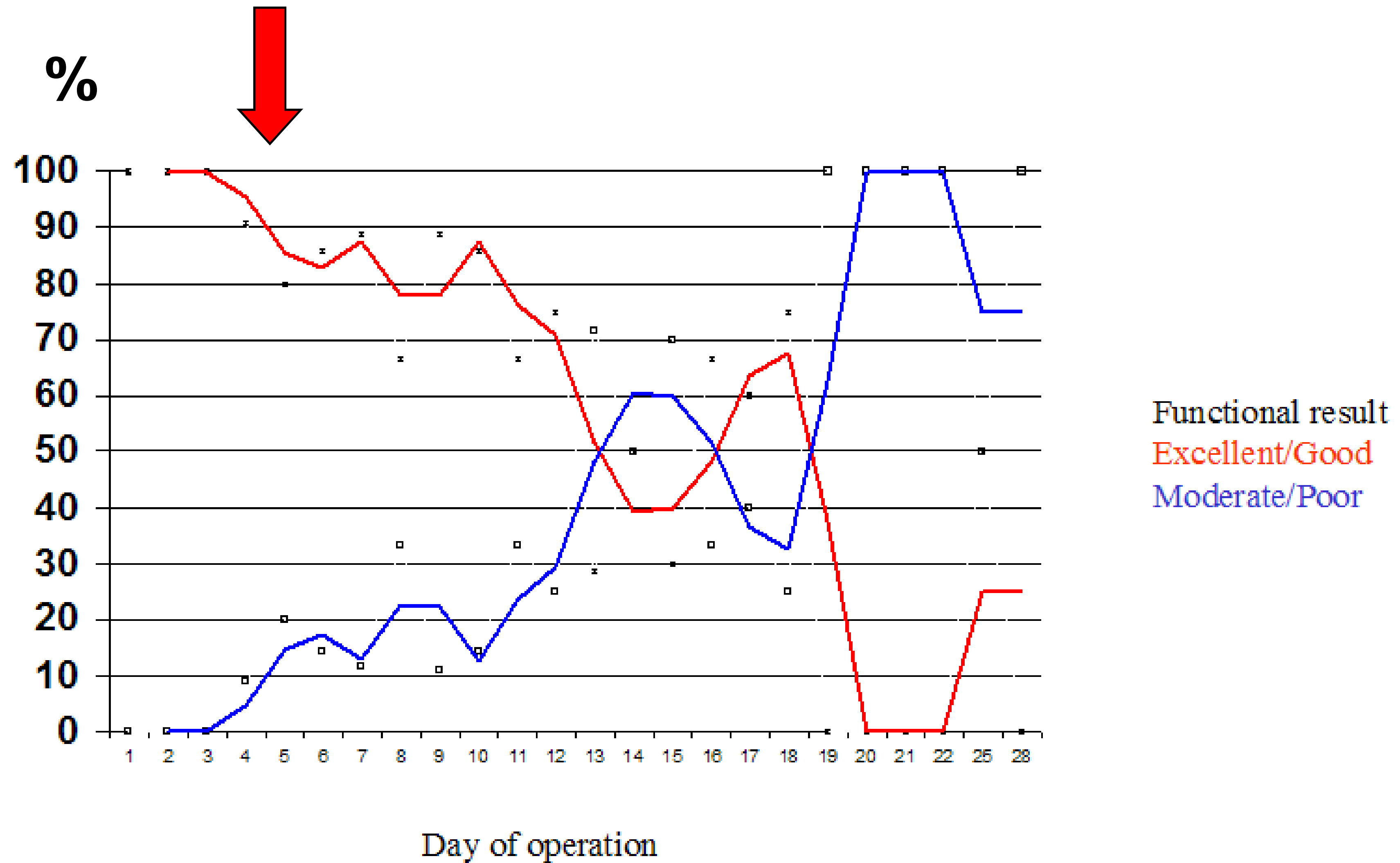
Omits most complex pelvis and acetabulum
unstable spinal injuries
open and complex fractures

need urgent primary not emergency surgery

Quality of reduction – complex acetabular (hip socket) fractures



2 year functional outcome – complex acetabular fractures



. . . so what should the standards of care be?

Optimise the local receiving unit for triage, critical resuscitation and rapid dispatch

. . . and how should the transfer be secured?

1. **Charge the regional receiving unit with the responsibility for achieving the definitive standard and the patient placement**
   - override their local patient priorities
   - facilitate prompt quality transfers
   - retrieval teams, valid role of helicopter
   - priority repatriation / rehabilitation pathways
2. **Working through regional trauma system (locally sensitive protocols) developed from auditing of key standards**

My response to this NCEPOD report

- **BOA strongly support findings, conclusion and recommendations:** ***data and expert opinion***

MUST EFFECT CHANGE

- – **trauma team**
- – **Regional**
- – **Role of the local hosp**
- – **Timeliness and transfers**

- – **Reports Limitation: NO ACTION PLAN**

My response to this NCEPOD report

Expertly inform commissioning:

Regional Trauma System Executive

1. Each acute hospital – Trauma Committee
2. Local solutions and service changes
3. Pre-hospital protocols (urban, rural, NHS facilities)
4. Inter-hospital and bypass procedures
5. Monitoring and development based on analysis of TARN returns for commissioned standards

. . . what are the priorities and which are feasible?

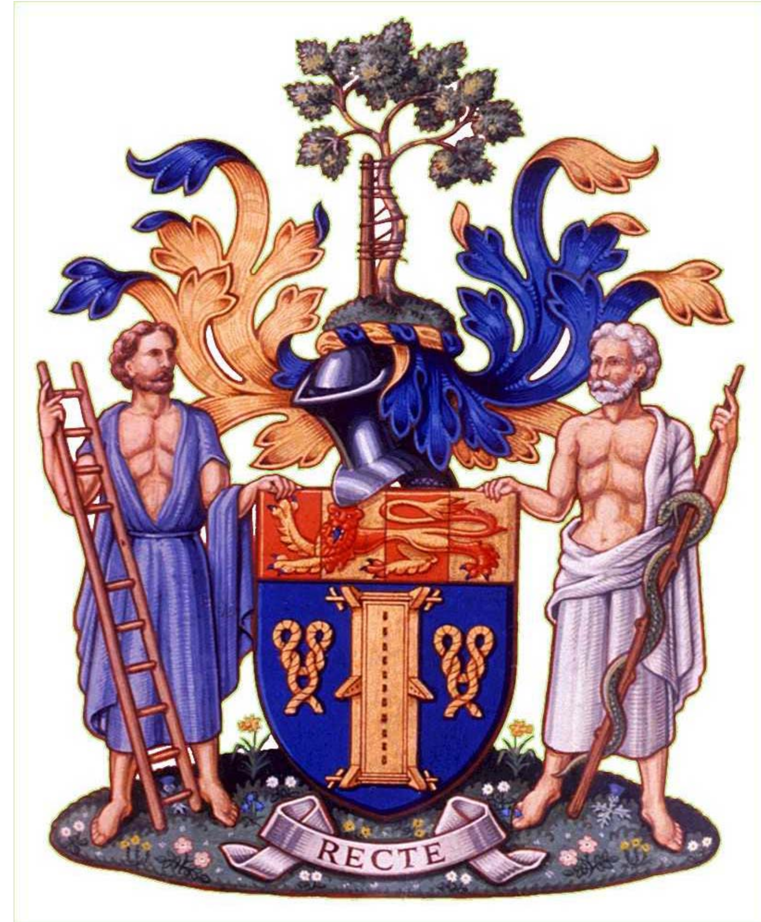
What standards of care to commission?

KEY STANDARDS to COMMISSION

48 NEC ecommendations:

- 5 organisational
- 6 prehospital care
- 6 hospital reception
- 2 airway breathing
- 6 circulation management
- 7 (+)head injury
- 7 (+) paediatric care
- 5 (+) transfers
- 4 service organisation

thank you



Prof Keith Willett

John Radcliffe Hospital, Oxford

Chairman BOA Trauma Group