CONFÉRENCES RÉANIMATION PRÉHOSPITALIÈRE

Val de Grace, 04/12/2018

TOUR DU MONDE EN TRAUMA SYSTEME

Tobias Gauss

SAR Beaujon, HUPNVS, APHP

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Aucun conflit a déclarer

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Qu’est ce que c’est un Trauma Système?

Quels sont les Trauma Systèmes opérationnels?

Quels sont les éléments d’un Trauma Système?

Quels défis et perspectives?

Qu’est ce que c’est un TRAUMA SYSTÈME?

Une ORGANISATION de SOIN qui donne la meilleure chance de SURVIE et de DEVENIR a long terme au patient traumatisé grave.


the world
arctic ocean
north america
CANADA
MEXICO
north pacific ocean
north atlantic ocean
south america
BRAZIL
south pacific ocean
asia
RUSSIA
CHINA
INDIA
JAPAN
TAIWAN
PHILIPPINES
INDONESIA
AUSTRALIA
NEW ZEALAND
antarctica
traumabase.eu
TRENAU


THE WORLD ACCORDING TO AMERICANS
MORE AMERICA!!
santa!!
uninhabited
AMERICA!!!!1
WE'RE#1!!!!!
MORE AMERICA!!
cruise ships go here
bombs go here
COMMUNISTS
pussies
evil-doers!!
tvs and cameras
they make our stuff
more evil-doers
call centers
they do our laundry and lawns
coffee comes from here i think
zoo animals come from here
kangaroos
cold!


DUST OFF

1958 TRAUMA CENTER BALTIMORE

R Adams Cowley
1917-1991

1966 Chicago COOK COUNTY

1969 HEMS

1972 FIRST EMS, Maryland

National Study Center for Trauma and EMS

1986 EMS law

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The New England
Journal of Medicine

Volume 331 OCTOBER 27, 1994 Number 17

IMMEDIATE VERSUS DELAYED FLUID RESUSCITATION FOR HYPOTENSIVE PATIENTS WITH PENETRATING TORSO INJURIES

WILLIAM H. BICKELL, M.D., MATTHEW J. WALL, JR., M.D., PAUL E. PEPE, M.D., R. RUSSELL MARTIN, M.D., VICTORIA F. GINGER, M.S.N., MARY K. ALLEN, B.A., AND KENNETH L. MATTOX, M.D.

Abstract *Background.* Fluid resuscitation may be detrimental when given before bleeding is controlled in patients with trauma. The purpose of this study was to determine the effects of delaying fluid resuscitation until the

Results. Among the 289 patients who received delayed fluid resuscitation, 203 (70 percent) survived and were discharged from the hospital, as compared with 193 of the 309 patients (62 percent) who received immediate

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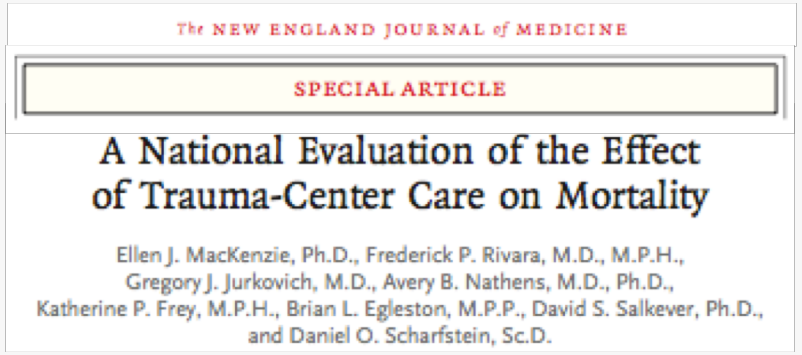
Elément central: Trauma Center

- **Effet Trauma Center**

  McKenzie et al. NEJM 2006



The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

A National Evaluation of the Effect of Trauma-Center Care on Mortality

Ellen J. MacKenzie, Ph.D., Frederick P. Rivara, M.D., M.P.H., Gregory J. Jurkovich, M.D., Avery B. Nathens, M.D., Ph.D., Katherine P. Frey, M.P.H., Brian L. Egleston, M.P.P., David S. Salkever, Ph.D., and Daniel O. Scharfstein, Sc.D.

- **Effet volume (nb de traumatisés par an)**

  Nathens et al. JAMA 2001

Table 4. Adjusted Case Fatality Rates and Relative Risks of Death after Treatment in a Trauma Center as Compared with Treatment in a Non–Trauma Center.*

Variable	Weighted No. of Patients	Death in Hospital	Death within 30 Days after Injury	Death within 90 Days after Injury	Death within 365 Days after Injury
Overall population	15,009				
Trauma center (%)		7.6	7.6	8.7	10.4
Non–trauma center (%)		9.5	10.0	11.4	13.8
Relative risk (95% CI)		0.80 (0.66–0.98)	0.76 (0.58–1.00)	0.77 (0.60–0.98)	0.75 (0.60–0.95)

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Elément central: Trauma Center

SYSTÈME EXCLUSIF

?RISQUE CENTRALISATION?


JEVER
Krombacher
Bitburger
BINDING
Köstritzer
EICHBAUM
OETTINGER

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ASSISTANCE PUBLIQUE HÔPITAUX DE PARIS

1993

http://www.traumaregister-dgu.de/

Société de chirurgie traumatologique et orthopédique
(*Deutsche Gesellschaft für Unfallchirurgie, DGU*)

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2004 Le réseau

Deutsches Traumanetzwerk, TNW

Objectif: même probabilité de survie après trauma grave sur le territoire, 35000 patients ISS >15/an

Inhomogénéités survie et qualité et devenir fonctionnel constatées par données registre

Décision stratégique:

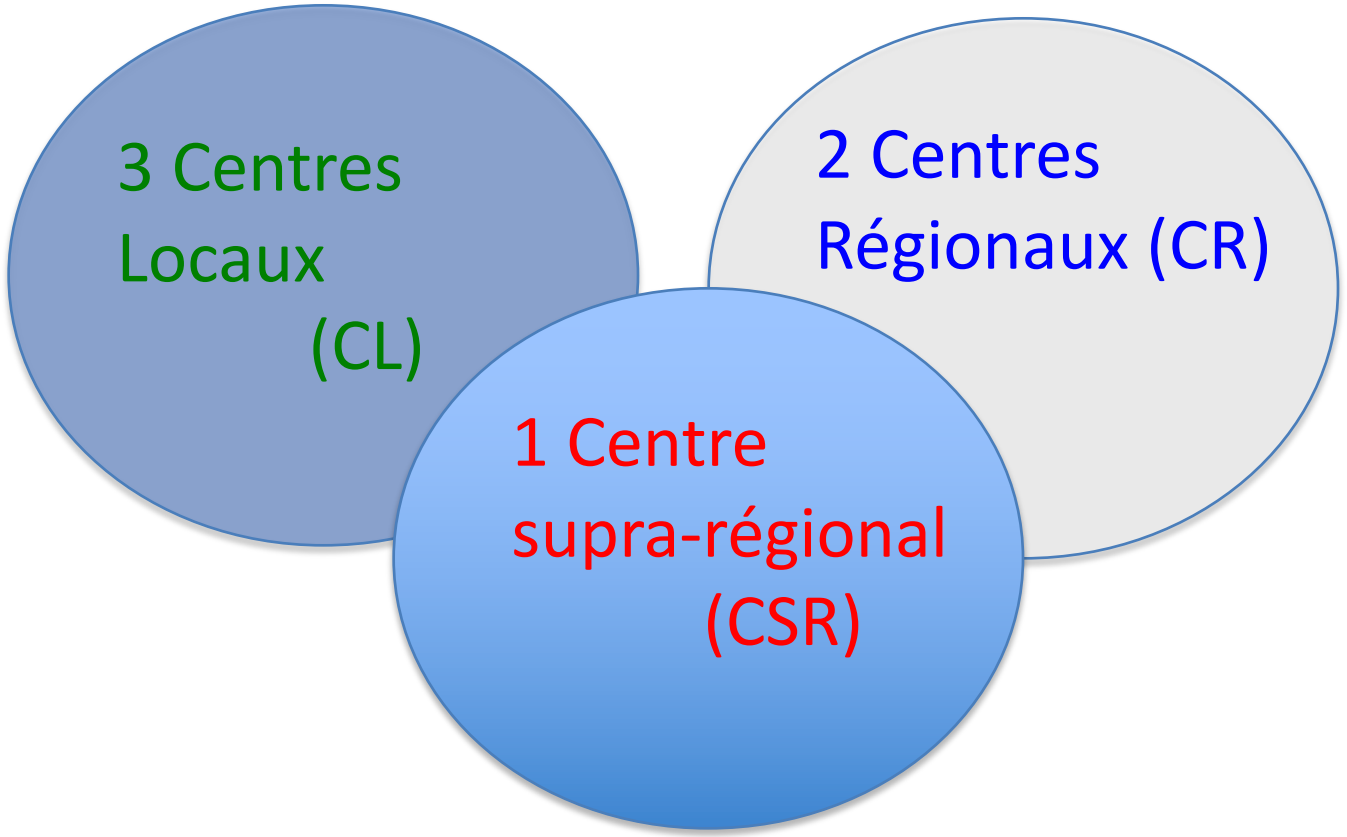
SYSTÈME INTEGRATIF

Compétence/Couverture

vs

Excellence et Centralisation

Le réseau



Réellement par

14 CL
8 CR
4 CSR

Niveau de compétence et plateau technique défini pour chaque niveau par référentiel national

traumabase.eu

2004 -2013
La certification

Homogénisation, *benchmarking*, critères de qualité procès et prise en charge,….

Réalisé par un institut extérieur, évaluateurs formés par DGU

Renouvellement tous les trois ans,

Oblige de répondre au cahier de charge, obligation du non-refus, critères de transfert secondaire, procédure payé par centre

Supervision COPIL national, conseil consultatif national, arbitrage

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S3 Polytrauma Richtlinie

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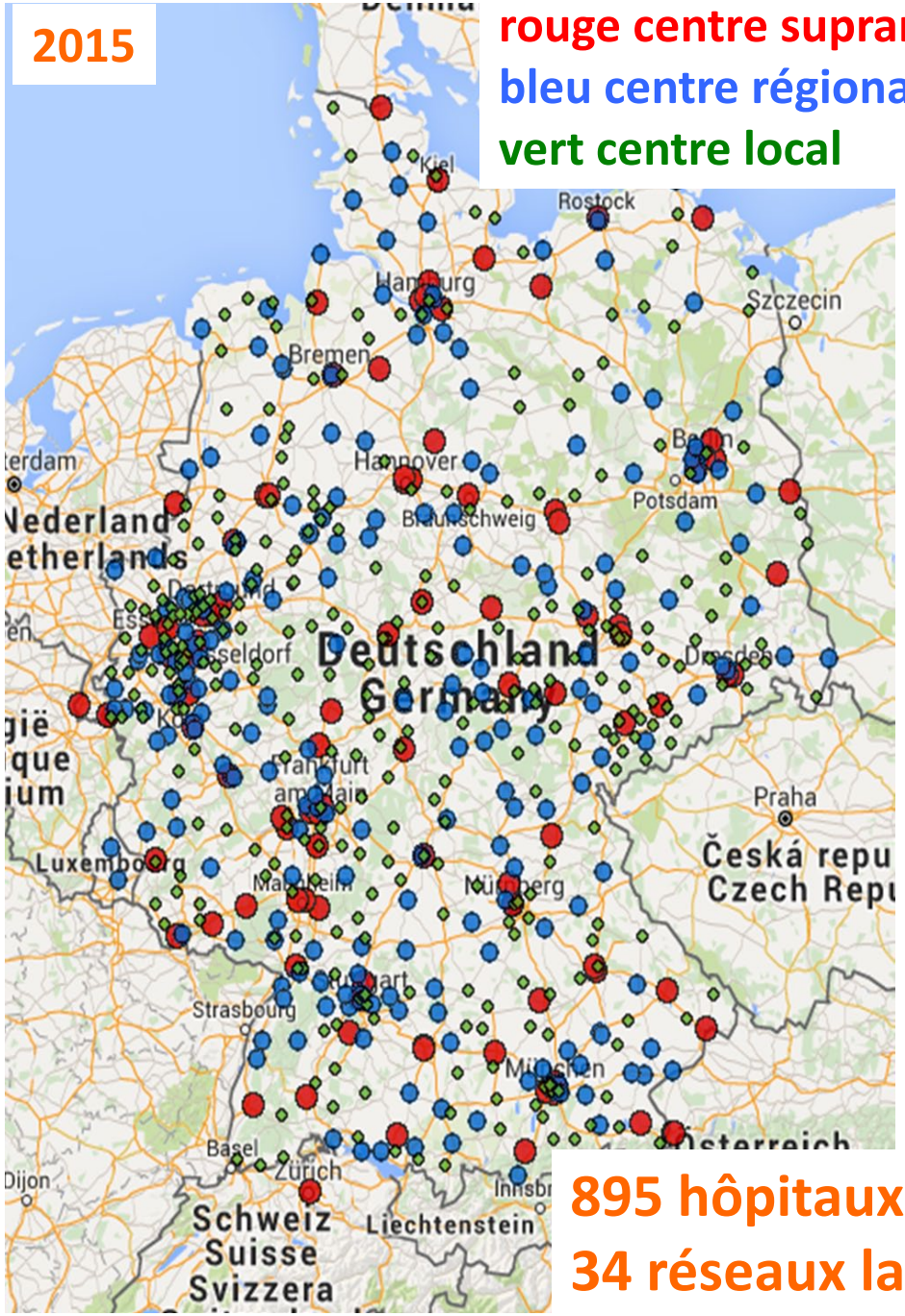
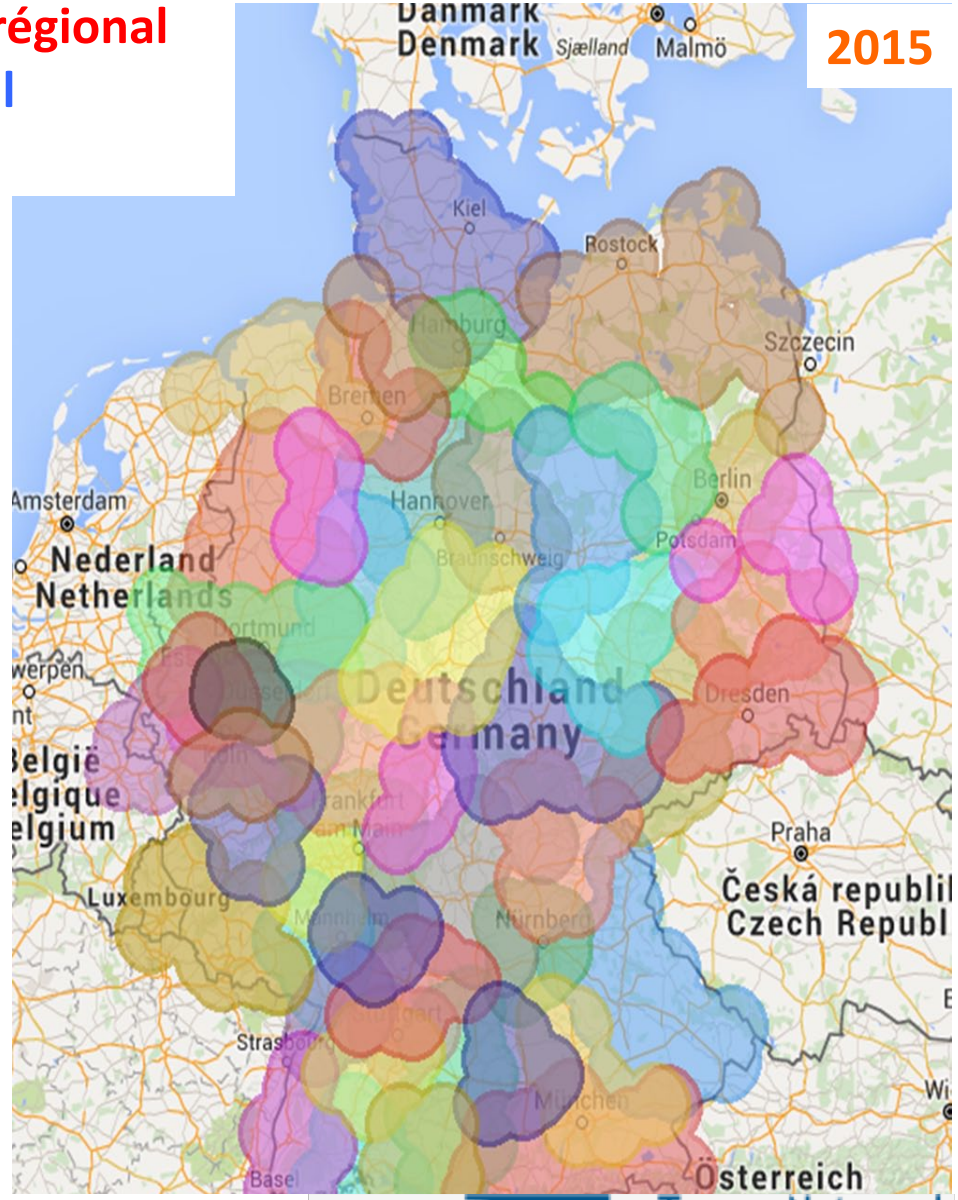
2015

rouge centre suprarégional

bleu centre régional

vert centre local





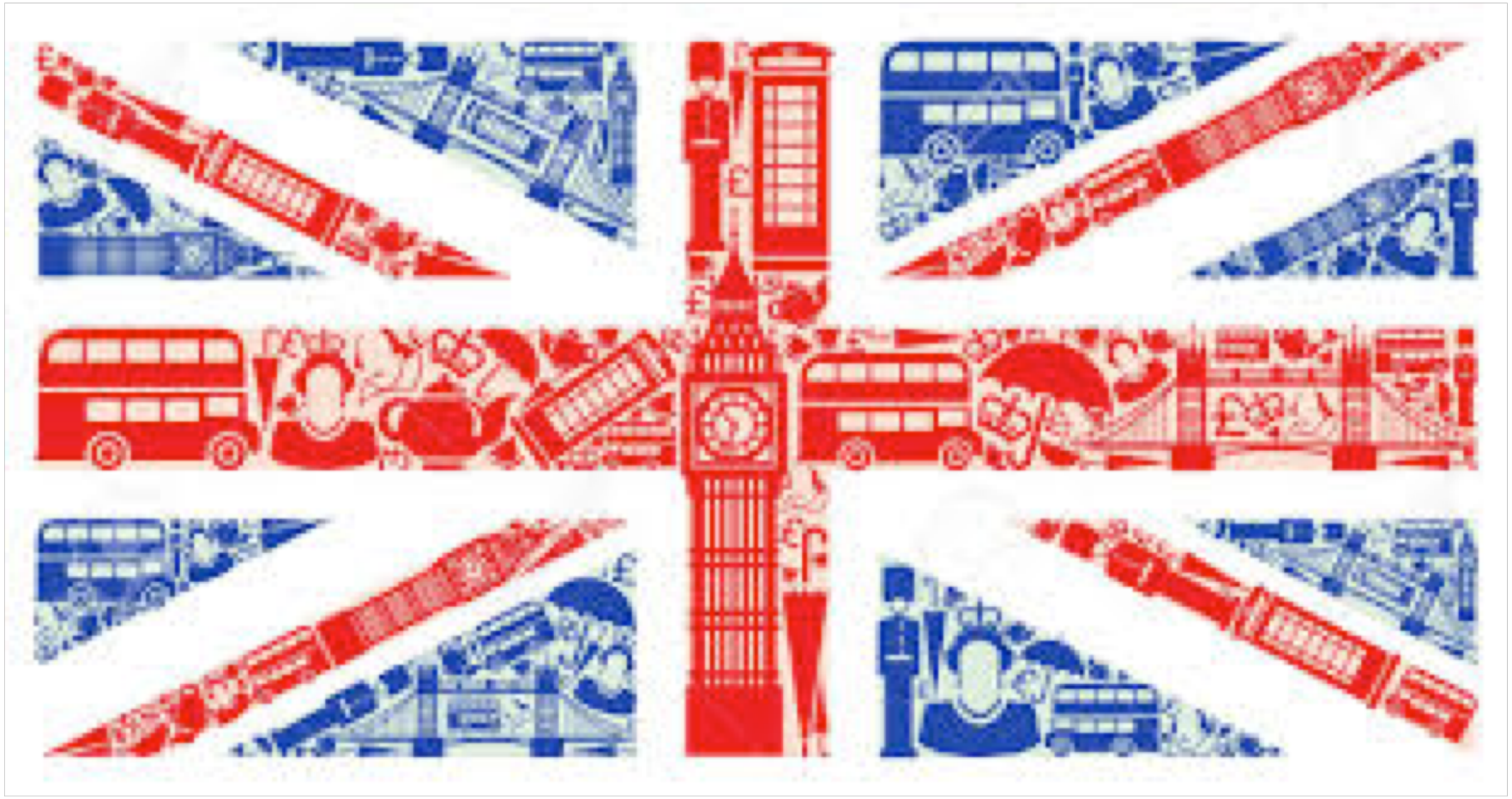
2015

895 hôpitaux

34 réseaux labélisés

AUC

TraumaNetzwerk DGU®



1986

BRITISH MEDICAL JOURNAL VOLUME 296 7 MAY 1988 1305

For Debate

Retrospective study of 1000 deaths from injury in England and Wales

I D ANDERSON, M WOODFORD, F T DE DOMBAL, MILES IRVING

Abstract

One thousand consecutive deaths from injury in 11 coroner's districts in England and Wales were reviewed by four independent assessors, who studied necropsy reports to identify deaths in hospital that might have been preventable. Of 514 patients admitted to hospital alive, 102 deaths (20%) were judged by all four assessors to have been potentially preventable. When those cases in which three out of four assessors considered that the death was preventable were added the total rose to 170 (33%). Nearly two thirds of all non-central nervous system deaths were judged to have been preventable. The median age of the 170 patients whose deaths were preventable was 41, and the mean Injury Severity Score was 29. Further analysis suggested that the preventable deaths were principally the result of failure to stop bleeding and prevent hypoxia and the absence of, or delay in, surgical treatment.

The results closely parallel those from similar studies from the United States and suggest that there are serious deficiencies in the services for managing severe injury in England and Wales. Debate is needed now on how to correct these deficiencies. In particular, the place of trauma centres must be considered.

Introduction

In England and Wales injury remains the main single cause of death in both sexes between 15 and 34 years of age, exceeding the combined deaths from heart disease and cancer. It is the third commonest cause of death in all ages.[1] Since the end of the second world war committees have deliberated on how best to provide services for injured patients and have recommended differing solutions. Some of these have been implemented, and the creation of the specialty of accident and emergency medicine has had a major impact. Consultants in this specialty have now been placed in charge of most accident and emergency departments in the United Kingdom and the result has been a noticeable rise in the standard of care of patients attending these departments.[2]

Despite the undoubted benefits from accident and emergency medicine the results of studies in the United States suggest that the way most severely injured patients are managed still leaves much to be desired. These studies have led to the establishment of specialised units known as trauma centres. Such centres have round the clock cover by experienced surgeons and anaesthetists able to carry out major surgical procedures such as aortic cross clamping and hepatic venous bypass within minutes of a patient being admitted.

Trunkey and his colleagues studied two adjacent counties in the USA with different systems of trauma care to ascertain whether there were differences in outcome in the management of severely injured patients.[3] They showed that in the county in which the patients were taken to the nearest of 31 departments offering an emergency service the outcome was appreciably worse than in the adjacent county where all severely injured patients were taken to only one hospital with a trauma centre able to respond immediately to the needs of the severely injured. The improved outcome in the latter hospital arose from a combination of earlier recognition of life threatening injuries and the prompt institution of treatment by experienced surgeons and anaesthetists. The result of this study was the widespread, though not universal, establishment of trauma centres. The results of follow up studies show that where such centres have been established the results of treatment of severely injured patients have greatly improved.[4-6]

Because of different circumstances in the UK, in particular the lower incidence of serious personal assaults particularly with firearms, many have doubted whether the same problems exist. In view of the uncertainty and the lack of statistical information, the Royal College of Surgeons, through its Commission on the Provision of Surgical Services, established a working party to study the standard of care in the management of major injuries and to make recommendations.

The college funded a research assistant (MW) to enable a two part study of the outcome of major injury to be carried out. We report the first part, a retrospective study of deaths from injury. The commission decided to publish the results of the retrospective study now to stimulate debate about the management of injured patients in general and the role of trauma centres in particular.

Materials and methods

A retrospective study was carried out from the end of 1986 of 1000 consecutive deaths after injury in 11 coroner's districts in England and Wales. Deaths occurring after fracture of the neck of the femur in patients over age 65 were excluded. The coroner's districts were chosen to encompass metropolitan and provincial cities with and without universities, suburbs, towns, and rural areas (table I). One hundred deaths were studied in each of nine districts and 50 deaths in each of two smaller districts. The districts

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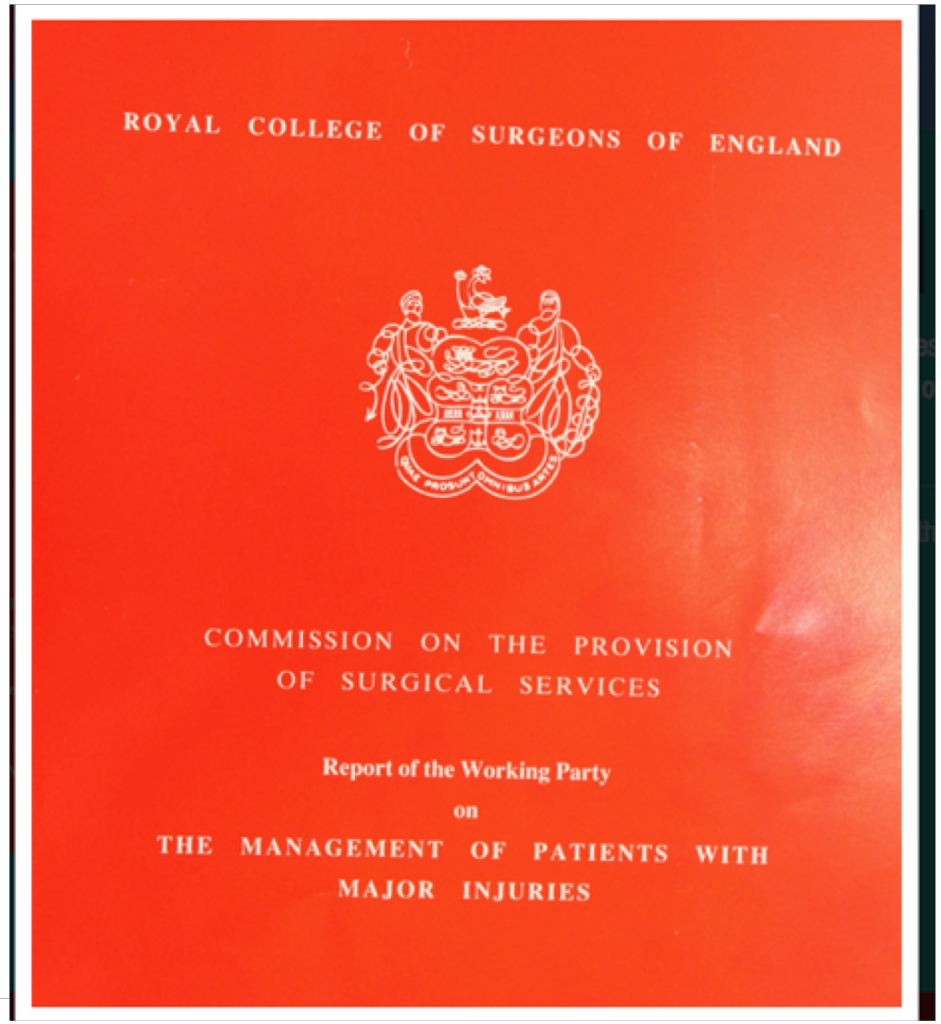
I D ANDERSON, FRCS, North Western Regional Health Authority research fellow
M WOODFORD, AEMRS, Royal College of Surgeons research assistant
MILES IRVING, FRCS, professor of surgery, chairman of RCS Working Party
Clinical Information Sciences Unit, Leeds
F T DE DOMBAL, FRCS, reader in clinical information sciences

Members of the Royal College of Surgeons working party on the management of major injuries: M Irving (chairman), B McKibbin, R Scott, J Rayne, P J F Baskett, M Prophet (DHSS observer), B H Cummins, I R Haywood, Sir David Innes Williams, P S London, D H Wilson, F T de Dombal, C Duncan, S Westaby.

Correspondence to: Professor Irving.

1988



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TARN

THE TRAUMA AUDIT & RESEARCH NETWORK

1993

Assessment of Trauma Severity

Logistic regression modelling' – 'weights' those parameters that predict survival.

Anatomical Injury **ISS**

Physiological Measure **GCS**

Age / Gender

Probability of survival of individual patients

Case mix standardised comparisons of actual and predicted outcome