INJURIES IN THE AGED

BY

A. J. FISHER

From the Medical Research Council Industrial Injuries and Burns Research Unit, Birmingham Accident Hospital

Persons over 65 years of age now comprise 11 per cent. of the population. This proportion is rising; 50 years ago it was 5 per cent., and it is estimated that in 50 years' time it will be 17 per cent. (Logan, 1953). Correspondingly, the medical and surgical needs of the elderly are demanding increasing attention. It is common to find one-third of the beds in accident wards occupied by these people, and it therefore seemed profitable to define more precisely what kinds of injuries are chiefly concerned, how they happen, and what are their results in mortality, duration of stay in hospital, and resettlement problems.

PATIENTS

Two main sources of information have been studied: general statistics for the whole of Birmingham, and details of cases treated at the Birmingham Accident Hospital. The general statistics were derived from an analysis of all in-patients aged 65 or more, who were discharged during 1952 from Birmingham hospitals and resided within the city boundary. From the Accident Hospital, details were obtained directly from the case-notes of in-patients over 65. A sample was also taken of all new attendances at the hospital (both in-patients and out-patients).

The total number of Birmingham residents over 65 years receiving in-patient treatment for injuries in the year was 849, of whom 491 were treated at the Accident Hospital.

SAMPLE OF ALL ELDERLY PATIENTS COMING TO THE ACCIDENT HOSPITAL.—A 6-month sample, taking alternate months, showed that approximately 2,400 of all patients (50,620) who attended the Accident Hospital for the first time in 1952 were over 65 years of age. Of these, 604 (including 491 Birmingham residents) were admitted as in-patients, 183 remaining

for one day only. The following analyses are based on 500 cases selected at random from the original 6-month sample.

38 per cent. of persons in this group were under the age of 70 and 30 per cent. were over 75 years. Lacerations, contusions, and strains accounted for 41 per cent. of the injuries and fractures for a further 39 per cent. Less than 2 per cent. were cases of osteo-arthritis, either caused or aggravated by trauma (Fig. 1).

FIG. 1.—Distribution according to diagnosis of sample of all patients over 65 years of age admitted to the Accident Hospital in 1952, expressed as percentages of total sample.

Of the fractures, 48 per cent. were of the upper and 39 per cent. of the lower limbs (Table I, overleaf). Fractured radius and ulna (including Colles fractures) constituted 30 per cent. of all fractures, and fractured femurs 16 per cent. As will be shown later the

TABLE I

SITES OF FRACTURES IN THE ELDERLY (SAMPLE OF ALL BIRMINGHAM ACCIDENT HOSPITAL ADMISSIONS, INCLUDING OUTPATIENTS)

Site	No. of Patients	Percentage of all Fractures
Upper Limb ..		
Colles and wrist ..	38	19.2
Radius and ulna ..	22	11.1
Hands and fingers ..	17	8.6
Humerus ..	18	9.1
Total ..	95	48.0
Lower Limb ..		
Femur ..	32	16.2
Tibia and fibula ..	15	7.6
Feet and toes ..	6	3.0
Ankle ..	20	10.1
Patella ..	4	2.0
Total ..	77	38.9
Trunk and Head		
Ribs and sternum ..	10	5.1
Head and face ..	4	2.0
Clavicle ..	2	1.0
Pelvis ..	2	1.0
Total ..	18	9.1
Others ..	8	4.0
Total ..	198	100

lower-limb fractures, though less in numbers, are much more important in mortality and in causing confinement to bed and inconvenience at home.

Division of the accidents by circumstance of occurrence (Table II) revealed a preponderance of domestic accidents (57 per cent.) with road and transport accounting for 25 per cent. and industrial accidents for 13 per cent. Two-thirds of all the injuries were due to falls and in only thirty of the 123 road accidents was the patient knocked down by a moving vehicle. Of the twenty burns, seventeen were domestic and three industrial. As in a previous survey (Colebrook and Colebrook, 1951) domestic burns were more frequent among women than men.

In the analysis of treatment times (Table III, opposite) patients were divided into three categories:

- (1) Attended casualty department once;
- (2) Attended out-patients department more than once;
- (3) In-patients.

Fractures had the longest period of out-patient treatment (11 weeks), and lacerations the shortest (2 weeks), apart from one patient with concussion. Strains and dislocations had mean out-patient treatment times of 8 and 9 weeks respectively, during which time many of the patients were attending the rehabilitation department. The mean treatment time for all injuries treated only in out-patients was 7 weeks. In all treatment times, those dying were not included, since this would give misleading values. Of the 89 in-patients, 59 (66 per cent.) returned as out-patients. The remainder included six fatalities in hospital and 24 persons who were transferred either to other institutions or to their general practitioners. One case of burns attended out-patients for 32 weeks; 47 fractures averaged 18 weeks, and the remaining eleven cases less than 2 weeks.

All Birmingham In-patients.—The records of all Birmingham hospitals included 849 patients over 65 years old who were discharged from the wards during 1952, after treatment for injuries. These cases comprise almost all the severe injuries occurring among the 104,297 persons over 65 years of age resident in the City (Census 1951, 1954). Their diagnoses, recorded according to the International Statistical Classification of Diseases and Causes of Death (W.H.O., 1948) were grouped for convenience as in Table IV, opposite. Fractures were by far the most common cause of admission, accounting for about two-thirds of the cases, and among them fractured femurs were the most frequent and

TABLE II

CIRCUMSTANCES OF ACCIDENTS IN THE ELDERLY (SAMPLE OF ALL BIRMINGHAM ACCIDENT HOSPITAL ADMISSIONS INCLUDING OUTPATIENTS)

Accidents	Industrial	Domestic	Road or Transport	Other	Total	
					No.	Per cent.
Fell on stairs or steps ..	1	40	1	1	43	8.6
Other falls ..	13	182	82	5	282	56.4
Hit by falling weight ..	10	5	0	1	15	3.0
Cut by tools, etc. ..	15	13	0	1	29	5.8
Knocked down by vehicle ..	0	0	30	0	30	6.0
Burned or scalded ..	3	17	0	0	20	4.0
Trapped or crushed ..	11	1	0	0	14	2.8
Strained (lifting heavy weights) ..	4	2	3	0	9	1.8
Foreign body ..	2	3	0	1	6	1.2
Others ..	7	22	5	18	52	10.4
Total ..	66	285	123	26	500	100.0
Percentage ..	13.2	57.0	24.6	5.2		

TABLE III
ANALYSIS OF SAMPLE OF ALL ADMISSIONS, BY DIAGNOSIS, AND TYPE AND DURATION OF TREATMENT

Diagnosis	Out-Patients			In-Patients					Total	
	No. attending Once only	No. attending More than Once	Mean Duration of Treatment (wks)	No.	Mean Duration of Stay (days)	No. re-attending as Out-patients	Mean Duration of Out-patient Treatment (wks)	No. of Deaths	No.	Per cent.
Fracture	4	126	11	68	29	47	18	8	198	39.6
Laceration	19	59	2	10	17	6	4	0	88	17.6
Contusion	33	39	4	2	11	1	2	0	74	14.8
Strain	16	34	8	1	4	1	4	0	51	10.2
Burn	4	15	5	1	112	1	32	0	20	4.0
Osteo-arthritis	6	10	5	1	1	1	2	0	17	3.4
Sepsis	0	12	3	0	0	0	0	0	12	2.4
Dislocation	2	9	9	0	0	0	0	0	11	2.2
Concussion	0	1	1	3	1	0	0	0	4	0.8
Others	16	6	3	3	6	2	5	2	25	5.0
Total	100	311	7	89	25	59	15	10	500	100.0
Percentage	20	62		18					100	

TABLE IV
DIAGNOSES, HOSPITAL STAY, AND MORTALITY OF ALL BIRMINGHAM IN-PATIENTS

International Statistical Classification	Diagnosis	No. of Patients	Mean Age (yrs)	Mean Duration In-patient Stay (days)	No. of Deaths	Case Mortality (per cent.)	Deaths as percentage of all Deaths due to Injury
800-4 850-6	Head injury	126	73.8	7	11	8.7	12.2
805-6	Fractured vertebral column	15	72.7	19	1	6.7	1.1
807-9	Fracture of pelvis and trunk	52	73.4	16	7	13.5	7.8
810-8	Fracture of upper limbs	113	73.1	9	2	1.8	2.2
820-9	Fracture of lower limbs	340	75.9	47	45	13.2	50.0
830-48	Dislocation, strain	33	75.4	5	0	0	0
870-929	Laceration, contusion, superficial injury	94	73.3	8	7	7.4	7.8
930-6 960-79	Foreign body and poisoning	35	71.2	8	6	17.1	6.7
940-9	Burn	24	73.4	39	8	33.3	8.9
985-98	Other or unspecified	17	75.8	3	3	17.6	3.3
Total		849	74.5	24.7	90	10.6	100.0

caused the longest stays in hospital. Burns, though less numerous, showed a long in-patient treatment time and had the highest case mortality. The mean age for all diagnoses (74.5 years) was roughly the same for all types of injury.

Among the 849 patients there were ninety deaths (a case mortality of 10.6 per cent.). The case mortality of fractured lower limbs (13 per cent.) was lower than that for burns (33 per cent.), but 50 per cent. of all accidental deaths were caused by the former (44 per cent. fractured femurs; 6 per cent. fractured tibia and fibula) as opposed to 9 per cent. due to burns. Bull and Fisher (1954) have recently reported a case mortality of 44 per cent. for 144 elderly patients admitted to a burns unit over a period of 10 years. For England and Wales in 1953,

deaths caused by fractured lower limbs and burns represented 15 and 5 per cent. respectively of all deaths, while accidental deaths (other than suicides) increased from 0.4 per 1,000 for the 65-69 age group to 5.7 per 1,000 for persons over 85 years (Registrar-General, 1953). The corresponding figures for Birmingham (excluding cases not admitted to hospital) were 0.2 and 8.3 respectively.

The mean survival time showed considerable variation (Table V, overleaf). Thus the 17 days average for fatal head injuries ranged from 3 days for fractured skulls to 25 days for other head injuries. The longest mean time was 77 days for fractured femurs.

In Table VI (overleaf) the relationship between age and treatment time for the Birmingham in-patients is

TABLE V
PERIODS OF SURVIVAL OF BIRMINGHAM IN-PATIENTS
SUSTAINING FATAL ACCIDENTS

Diagnosis	No. of Patients	Mean Age (yrs)	Mean Interval before Death (days)
Head injury ..	11	75.5	17
Fracture of trunk ..	8	78.5	18
Upper limb fracture ..	2	85.5	62
Fractured femur ..	40	80.7	77
Other lower limb fracture (tibia and fibula) ..	5	84.8	11
Laceration, contusion, superficial injury, etc.	7	77.6	8
Burn ..	8	75.5	25
Poisoning and others ..	9	74.0	5

TABLE VI
LENGTH OF IN-PATIENT TREATMENT FOR ALL
BIRMINGHAM PATIENTS*

Age Group (yrs)	All Birmingham Patients		All Birmingham Patients with Fractured Femurs	
	No.	Mean Duration of Stay (days)	No.	Mean Duration of Stay (days)
65-69	201	21	43	59
70-74	201	20	42	50
75-79	198	22	57	52
80-84	113	38	47	75
85+	46	43	24	61
Total ..	759	25	213	59

* Patients who died are excluded.

considered (excluding deaths). Up to the age of 79 years the average stay in bed remained constant at 21 days. There was then a steady increase to an average healing time of 43 days for persons over 85. Mean stays for fractured femurs were far in excess of the overall values, and did not increase with age. A similar analysis of the Birmingham Accident Hospital in-patients confirmed these findings.

The total number of bed days for the one year's treatment of injuries in the elderly for all Birmingham hospitals, was 22,615 (including deaths); from this it can be estimated that 62 beds were occupied per day, 43 of them by patients with fractured femurs. Of the 42 beds occupied per day in Birmingham Accident Hospital by patients over 65 years, 30 were in use for patients with fractured femurs.

To relate the in-patient figures to the population of Birmingham, the numbers in each 5-year group were compared with the 1951 census (Fig. 2).

FIG. 2.—All accidents to persons over 65 years of age requiring in-patient treatment at Birmingham hospitals in 1952, related to population at risk.

There were almost twice as many females as males in the in-patient figures, whereas in the population at large the ratio was only 1.4 : 1. The excess of female in-patients increased steadily with age. For males a gradual increase in incidence for 65-84 years was followed by an abrupt rise after 85 years. Though the number of accidents on the road in this group is not great and is exceeded by females of the same age, the population in which they occur is very small.

Monthly admission rates showed a fairly even incidence from March to November followed by a period about 25 per cent. above the average from December to February. This winter peak is largely due to an increase in the number of road accidents, particularly falls on slippery surfaces.

Analysis of the Most Frequent Limb Fractures.—An estimate of the total number of certain types of fracture (femur, radius and ulna, and ankle) treated at the Birmingham Accident Hospital in 1952 is given in Table VII. All those who sustained a

TABLE VII
PATIENTS WITH FRACTURES OF FEMUR, RADIUS AND ULNA, AND ANKLE (BIRMINGHAM ACCIDENT HOSPITAL IN-PATIENTS AND SAMPLE TOTAL ADMISSIONS)

Site of Fracture	No. of Cases during Year	No. attending Out-patients only	In-patients staying One Day only	In-patients staying More than One Day	Mean Duration of Stay (days)	In-patients with Other Associated Injuries	Deaths
Femur ..	204	0	0	204	61	12	47
Radius and ulna (inc. Colles) ..	302	240	41	12	23	8	1
Ankle ..	124	86	12	26	21	4	0

fractured femur were admitted as in-patients, compared with only one-fifth of those with fractured radius and ulna, and one-third of those with fractured ankle. Two-thirds of the in-patients with fractured radius and ulna and one-third of the in-patients with fractured ankle stayed only one day for reduction under anaesthesia. The only death associated with fractured radius and ulna occurred in a man of 78 who also had compound fractures of the tibia, fibula, and humerus.

Patients sustaining more than one of these three types of fracture are classified in Table VII according to that judged to be the most serious. Thus, seven patients with fractured femur, radius and ulna were included under femur, and two with fractures of radius, ulna, and ankle were classified under ankle. Apart from the seven with fractured femur just mentioned, there were three who also had a fractured pelvis (two of whom died) and two with other fractures. Three of the eight patients with fractured radius and ulna also had fractured tibia and fibula, and one died after 2 days in hospital. A further three patients had fractured pelvis, and two had fractured humerus. All four of the patients with fractured ankle and additional injuries also had fractures of the upper limbs.

The circumstances of each accident were noted in order to determine the main causes of these arm, leg and ankle injuries; it was found that 69 per cent. of the fractures of the femur had been caused by domestic falls (*e.g.* downstairs, out of bed, over obstacles on the floor, and from windows). About two-thirds of the fractures of the radius and ulna, and one-half of the fractures of the ankle resulted from similar accidents. 23 per cent. of the fractures of the femur were sustained on the road, but only five patients had been knocked down by a moving vehicle; 33 per cent. of the fractures of the radius, ulna, and ankle occurred on the road, and in approximately one-third of each group the patients had been knocked down.

The mean stay in hospital of patients with these injuries did not increase markedly with age. The fractures of radius and ulna showed a diminishing duration of in-patient treatment with age, but this may have been due to selective admission. The case mortality for fractures of the femur increased with age (Table VIII), but the mean in-patient stay before death was variable.

TABLE VIII
MORTALITY AMONGST ALL BIRMINGHAM IN-PATIENTS
WITH FRACTURED FEMURS

Age Group (yrs)	Mean Age (yrs)	No. of Deaths	No. of Patients	Mortality (Per cent.)	Mean Interval before Death (days)
65-69	68	2	45	4.4	22
70-74	71.4	8	51	15.7	104*
75-79	77.5	6	62	9.7	41
80-84	82.7	13	60	21.7	42
85+	88.8	11	35	31.4	19

* Another patient survived for 1,305 days.

SOCIAL PROBLEMS

About one-third (30.7 per cent.) of the in-patients at the Accident Hospital required the Almoner's assistance. Four main groups were encountered:

- (1) Accommodation and domestic help.
- (2) Financial aid.
- (3) Home nursing equipment.
- (4) Occupational adjustment.

(1) **TROUBLE OVER DISCHARGE HOME.**—This was due either to housing difficulties or to lack of suitable help in the home. Such patients were classified as follows:

- (a) *Moderate Domestic Difficulties.*—Ultimately, most of these were suitably accommodated with friends or relations (32 per cent.).
- (b) *Serious Domestic Difficulties.*—Those which prevented return home on discharge (34 per cent.).
- (c) *Transferred to Infirmary or Nursing Home.*—This was mainly because the patient required further nursing treatment, and not because of social circumstances (4 per cent.).
- (d) *Convalescence.*—These patients went for short periods of convalescence before returning home (6.5 per cent.).
- (e) *Domestic Assistance.*—These patients returned home with the assistance of a home-help or district nurse (7.5 per cent.).

(2) **FINANCIAL DIFFICULTIES.**—These patients fell into two categories:

- (a) Concerning the National Assistance Board or Ministry of National Insurance (6 per cent.).
- (b) Concerning compensation as a result of the accident (1.5 per cent.).

(3) **EQUIPMENT.**—These patients needed such things as wheel chairs and other home-nursing equipment (4 per cent.).

(4) **OCCUPATIONAL ADJUSTMENT.**—This was sometimes required because the patient was unable to return to his pre-accident employment, and had to make arrangements to do some other suitable light work (4 per cent.).

Of the 184 social problems referred to the Almoners, 107 concerned patients with fractured femurs. Other fractures, especially those of the lower limb (apart from femur) were the most frequent sources of difficulties. The proportions of patients of each diagnosis receiving assistance are shown in Table IX. Often the illness of some other member of the family, or the inability to deal with minor nursing problems, necessitated a further stay away from home. As the patients were not ill enough to require hospital attention, and could not remain as in-patients occupying beds, a period of convalescence offered the ideal solution.

Specific cases illustrate the problems encountered:

1(a).—An old lady of 73 had a home to return to, but had no-one to attend to her; she could not go home until the necessary supervision was obtained. She was almost blind and had fallen at home, fracturing her pelvis and wrist; she lived in a 6-roomed house with lodgers, for whom there was a court order for eviction, and her relatives were hoping to use the lodgers' rooms. It was arranged that she should go home to live on the ground floor with a woman lodger who was at home all day, and her daughter visited daily and did the shopping.

1(b).—A widow of 84, living with her unmarried second son, fell at home and sustained a pertrochanteric fracture of the femur. The patient was in hospital for 22 days and her injury was treated with a Neufeldt-Capener nail plate. She could not return to her own home, where her son was out all day. Her family of three sons and two daughters was disunited, both the

daughters and the eldest son refusing to look after the patient, whom they described as very determined and difficult. The youngest son could not accommodate her unless absolutely necessary, because he was a prison warder, living next door to the prison, and felt these were not ideal surroundings for his mother; but ultimately, disgusted with the rest of the family, he took his mother to live with him, and his wife, who was a district nurse, managed with the aid of a home help.

1(c).—An old lady of 76 fell out of bed and fractured the upper shaft of her femur, for which she remained in hospital 173 days. About 3 months before this accident, a daughter-in-law had persuaded the patient to give up her home to go and live with her husband and herself, but now this daughter-in-law, who for health reasons could not do any lifting, did not want the patient back, and described her as "difficult". Another daughter-in-law also refused to have the patient, and they requested that a chronic bed should be applied for. When traction was removed, the leg refractured. Finally an infirmary bed was obtained and the patient was transferred.

DISCUSSION

The findings of this survey support the belief of Sheldon (1948) in "the great importance in old people of the effects of falls and accidents, because of the severe injuries that may follow; in some cases a fall may precipitate a general break-up of the old person". In recent years the treatment and after care of the chronically ill elderly patient has been investigated (Thomson, 1949; Lowe and McKeown, 1949, 1950 a and b; Lowe (1950); McKeown and

TABLE IX
SOCIAL PROBLEMS AMONG ELDERLY IN-PATIENTS WITH DIFFERENT INJURIES
(BIRMINGHAM ACCIDENT HOSPITAL)

Diagnosis	Social Problem										
	Dom. I	Dom. II	Infirm-ary	Conval-escence	Home Help and District Nurse	Finance	Compensation	Home Nursing Equip-ment	Occupational Adjust-ment	In-patients only	All Patients
Head injury	1	4	—	1	—	—	—	1	1	8	45
Fractured pelvis, trunk etc. ..	4	4	1	—	1	2	—	—	—	12	39
Fractured upper limb	5	1	—	1	—	1	2	—	1	11	69
Fractured femur	36	38	5	6	10	4	1	6	1	107	203
Other lower limb fractures ..	7	8	—	2	3	3	—	1	1	25	85
Dislocation and strain	—	—	—	—	—	—	—	—	2	2	23
Laceration, contusion, super- ficial injury	2	2	2	1	—	—	—	—	—	7	86
Burn	2	3	—	—	—	—	—	—	—	5	21
Other accidents	2	1	—	—	—	—	—	—	1	4	9
Others	0	1	—	1	—	1	—	—	—	3	15
Total	59	62	8	12	14	11	3	8	7	184	604

Lowe (1950); Amulree and others, 1951; Graham, 1954), but little attention has been given to accidental injuries which incapacitate an elderly person, who may hitherto have been living a normal life.

It is not unduly surprising to find that domestic accidents are numerically more important than any other type, for elderly people spend much time at home. Of 2,909 domestic accidents studied by Castle (1950), 291 (10 per cent.) occurred in people over the age of 65. The difference in incidence between males and females is very striking, since 58 of the accidents happened to men and 233 to women. In contrast, the road accident lists in the United Kingdom (Ministry of Transport, 1954) show that 13,120 men and 10,666 women were injured. Of these, 850 men and 485 women died; the high number of fatal road accidents among men over 80, is confirmed by the records of Birmingham male in-patients. Industrial accidents have relatively little importance among people over 65, but although the rate of these accidents does not rise substantially with age, the severity and mortality increases (King and Speakman, 1953).

There are more women than men over 65 in the population, but this does not account for the excess of accidents. The approximate numbers of domestic accidents are 13 per 1,000 population for men and 43 for women, showing the greater susceptibility of females to this type of accident. Poor housing accommodation and overcrowding are responsible for many falls, but many are preventable; securing loose rugs to the floor, covering uneven floorboards, and wearing suitable shoes, would all help. The road accidents per 1,000 population remain almost steady at 2.3 for women, but for men they rise from 3.9 for the 60-79 year age group, to 4.4 for the 80+ age group. The fact that amongst men, mortality due to road accidents, after correction for population, is twice that for women, may be due to men being more often out of doors. Impaired sensory reactions, diminished agility, and physical frailty increase the tendency of these elderly people to fall; poor eyesight and hearing, and a slowed reaction time often warn them of danger when it is too late.

It is commonly assumed that the power of healing diminishes with advancing age. Studies such as those of Lecomte du Noüy (1916) tending to support this may not be relevant to common injuries. Lecomte du Noüy inferred that healing of epithelium across a skin defect was slower with increasing age, but, as Elman (1952) points out, after trauma, or operations following trauma, the common need is for a return of tensile strength between tissues. However, it is thought that impaired

vascularity of tissues often retards or prevents normal healing, especially in the upper and lower extremities, and injuries in these parts do not heal so well in the aged as in the young. Fractures are the particular problem here, and in association with a deficient blood supply the bone becomes brittle and is more liable to break.

The present findings on the importance of fractures of the femur and the radius and ulna are in agreement with a recent symposium on fractures in the aged. The opinion was expressed that in patients over 70 years of age the fracture was of secondary importance compared with the complications arising from a long period in bed, and emphasis was placed on the necessity for early mobilization, to re-establish as full a function of the limb as possible, as well as the side-effects of a long stay in bed. For this reason, internal fixation was advocated as being an efficient method of relieving pain, provided the operation could be shown to be safe for the patient (Evans, 1953).

Infection is a particularly important complication of trauma and operations, since on the whole, the resistance of old people to infection is lower. This has now been to some extent offset by the introduction of chemotherapy as well as aseptic technique, but it still remains a major hazard.

For many old people recovery is uneventful, and with a sympathetic home background they have no difficulties on returning to their families. Others, in spite of the precautions taken, develop bed sores or pulmonary complications, or become irrational and incontinent, and require constant nursing after the original injury is healed. These patients' problems are rather social than medical. The family attitude varies widely: some have a strong sense of loyalty, and regardless of financial straits and poor home conditions, will do their utmost to look after the patient. Others are willing to take care of the patient, but find it impossible in practice. A few try to evade their responsibilities entirely.

SUMMARY

(1) A sample of 500 patients over 65 years of age admitted to an Accident Hospital has been studied.

(2) 849 in-patients discharged from Birmingham hospitals in 1952 after treatment for injuries have been analysed with respect to type of injury, duration of treatment, and mortality. Accident frequency related to population enabled comparisons of mortality to be made between England and Wales and Birmingham.

(3) More than half the accidents sustained by the elderly occur in their homes, women being more

susceptible than men. Falls are the commonest cause of injury.

(4) The incidence of road accidents reported in the United Kingdom and in Birmingham is higher for males than females. Two-thirds of the fatal road accidents among the elderly in the United Kingdom happened to men.

(5) Approximately 60 per cent. of the injuries requiring treatment in hospital were fractures.

(6) Patients with fractured femurs have the longest average duration of stay in hospital.

(7) 44 per cent. of all the accidental deaths were due to fractured femurs, though the highest case mortality for any one diagnosis was 33 per cent. for burns.

(8) About one-third of the elderly in-patients at the Accident Hospital had social problems on discharge, mostly concerning accommodation and home help.

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