

Medical support by a team of doctors to offshore paramedics

J.C. PHILLIPS, MRCP

Co-ordinator of Medical Services, Offshore Medical Support, Aberdeen

SUMMARY. *The experience of one team of doctors supporting offshore paramedics in the North Sea is described. During 1985 all cases for which radio advice from a doctor was sought by offshore paramedics and all cases referred for examination by a doctor were analysed. Of the 743 cases 528 (71%) were referred for examination by a doctor and for 215 (29%) the offshore paramedics sought radio advice only. Injury formed the largest category of disorder for both groups of cases. The majority of patients referred for examination were seen in the doctor's surgery and following examination over half were cared for at home by their own general practitioner.*

Introduction

SINCE the mid-1960s production of oil and gas has employed a large workforce in the remote environment of the North Sea. By 1984 this workforce stood at 31 300 although less than half were employed offshore at any one time.¹

The National Health Service does not extend beyond the low water mark and so medical services offshore are the responsibility of the operating companies. Each worksite must have a medical presence and the first line of primary care is provided by offshore paramedics. These paramedics must either be registered or enrolled nurses or holders of a certificate of competency in first aid and be trained in the use of mechanical artificial respiration equipment. The offshore paramedic must manage the initial care of all medical emergencies. In addition he must treat minor conditions and perform a counselling role in the absence of other professionals.

Access to a qualified medical practitioner to advise on the administration of prescription only and controlled drugs is a statutory requirement.² Beyond this basic requirement the operating companies employ medical practitioners to provide general advice to the offshore paramedics, to receive medical evacuees, to escort patients ashore and to provide a link with the National Health Service. This role has fallen mainly to general practitioners working at major centres serving the North Sea. Aberdeen caters for the northern sector and Great Yarmouth for the southern sector.

This paper reports an analysis of the work carried out by one team of doctors supporting offshore paramedics in the northern sector.

Method

One general practitioner from each of four group practices in Aberdeen, and the author, constitute a team providing support for a major proportion of the offshore paramedics in the northern sector of the North Sea, that is north of 56°N. An on-call system operates on a rota basis providing a minimum of two doctors on call in any 24-hour period.

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During 1985 details of all cases for which radio advice from a doctor was sought by offshore paramedics and of all cases referred for examination by a doctor were recorded. Each case was classified using the classification of the Royal College of General Practitioners.³ The location of the consultation with the doctor and where the patient was sent after the consultation were recorded for all cases referred for examination by a doctor.

The offshore population varied from day to day though an estimate of 8000 at any one time has been obtained by consulting both the operating companies and the published figures of the Grampian Regional Council Department of Physical Planning.⁴

Results

A total of 743 cases were studied over the year. For 215 cases the offshore paramedics sought radio advice only (29%) and 528 cases were referred for examination by the doctor (71%). The mean number of patients referred per month was 44 and a mean of 55 work sites were covered by the team each month.

A comparison has been made of the broad classes of disorder found in the cases for which radio advice was sought and in those where the patient was examined by a doctor (Table 1). Injuries formed the largest category both for cases where radio advice only was sought (63%) and where examination by a doctor took place (42%). The description of injuries over the radio by the offshore paramedics determines the subsequent manage-

Table 1. Classification of diseases and problems for the 743 cases studied in 1985.

Classification	Number of cases	
	Radio advice only (n = 215)	Referred for doctor examination (n = 531) ^a
Infectious and parasitic diseases	15	26
Endocrine, nutritional and metabolic diseases	2	3
Mental disorders	1	13
Diseases of nervous system	—	4
Diseases of eye	1	16
Diseases of ear	—	10
Cardiovascular diseases	1	5
Cerebrovascular diseases	—	2
Peripheral vascular diseases	4	8
Diseases of respiratory system	10	57
Diseases of digestive system	5	37
Diseases of genitourinary system	12	12
Diseases of skin and subcutaneous tissue	5	19
Diseases of musculoskeletal system and connective tissue	12	56
Symptoms, signs and ill-defined conditions	12	34
Injury and poisoning	135	224
Deaths	—	5

^a528 patients were referred but three had two problems identified.

Table 2. Comparison of the number of cases for which radio advice only was sought and for which doctor examination was felt necessary for certain types of injury.

	Number of cases	
	Radio advice only	Referred for doctor examination
<i>Sprains</i>		
Shoulder/elbow	1	8
Wrist/hand/finger	—	4
Knee	1	10
Ankle	6	8
Neck	2	6
Back	3	27
Other	—	4
Total	13	67
Superficial injury/abrasion		
Bruise/contusion	1	10
	5	20
Total	6	30
Dislocations		
Laceration/tendon injury hand	5	1
Amputation	12	9
Crush injury	8	—
	28	22
Total	53	32
Fractures of lower arm, hand and finger		
	11	25

ment by the doctors. It must be decided whether the doctor should see the patient or whether the patient should be referred directly to the hospital accident and emergency department. A comparison between groups of injuries for which radio advice only was sought and for which doctor examination was felt necessary is shown in Table 2. It can be seen that certain groups of injury are handled in a specific manner.

Of the 528 patients referred for examination 476 (90%) were seen in the doctor's surgery and 42 (8%) were seen at the heliport. In 10 cases (2%) the paramedic requested the doctor to attend the patient offshore — in five cases to certify death, in four to escort serious injuries including three head injuries ashore, and in one to escort a case of status asthmaticus ashore.

Following examination by the doctor 306 patients (58%) were cared for at home by their own general practitioner, 198 (37%) were referred to hospital, 19 (4%) were told they could return to work and five (1%) were fatalities. Of the 198 patients referred to hospital 148 (75%) were cases of injury referred to the accident and emergency department.

Discussion

The Medical Advisory Committee of the United Kingdom Offshore Operators Association provides guidelines for the standards of fitness for offshore work.⁵ Health screening is almost universal for offshore workers and helps to prevent the employment of those with potentially high risk medical problems. The offshore paramedic therefore has to deal with the wide variety of diseases and problems that might be expected to occur in a screened working population of young and middle-aged men. Few women work offshore.

The offshore paramedic does not normally devote all his

working time to medical problems and his other duties are often of an administrative nature. However, he treats all minor illnesses and injuries at the work site and these outnumber the problems for which doctor support is requested (personal observation).

Radio advice from a general practitioner is sought when the offshore paramedic needs to discuss patient management or when a serious condition needs immediate hospital referral and intervention by the doctor would not add to the care of the patient. In this case the doctor contacts the hospital staff to inform them of the patient's condition and estimated time of arrival. This study showed that the number of cases referred for doctor examination greatly exceeded those for which radio advice alone was given. Many offshore paramedics have considerable experience and this may account for the relative infrequency with which radio advice is sought.

One offshore site has a doctor present at all times and here fewer referrals are made. The cost effectiveness of having a doctor on site depends on the size and type of the operation and the distance from more sophisticated medical facilities.

Efficient referrals depend on good communication between the offshore paramedic and the doctor. Patient stabilization before departure is essential because in-flight procedures are difficult and flying time may be as long as three hours.

The number of referrals to doctors found in this study may be considered high. However, as the general view is that all offshore personnel must be capable of responding quickly to emergencies and as there is no light work on work sites it may be difficult for some patients to be kept offshore. The offshore paramedics' ability to diagnose and treat conditions is related to their training and influences their decision to hold cases offshore or to refer.

The Health and Safety Executive is currently reviewing the training needs of the offshore paramedic which must be tailored to the wide variety of illness and injury encountered in the remote offshore environment. The number of medical evacuations should be kept to a minimum through good training and adequate doctor support.

References

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Address for correspondence

Dr J.C. Phillips, Offshore Medical Support, 12 Sunnybank Road, Aberdeen AB2 3NG.