

The air-ambulance: Orkney's experience

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SUMMARY. The paramount problem for the delivery of the medical services in the Orkneys has been that of effective transport. The development of an efficient air-ambulance service has had a major impact on medical care. The service started in 1934, but was abolished at the outset of the Second World War and did not recommence until 1967. This paper examines the evolution of the air-ambulance service in the Orkney Islands, and describes alternative proposals for the use of aircraft in this region.

Introduction

UNLIKE the other groups of Scottish islands, the Orkney archipelago comprises a large number of small islands. By far the largest and most populous island in the group is Mainland; it has a population of approximately 12,750 people whereas the other inhabited islands have tiny populations (Table 1).

Mainland is connected to the islands of South Ronaldsay and Burray by causeways built during the Second World War. Communication between Mainland and the other inhabited south isles, Hoy, Flotta and Graemsay, and the northern isles of North Ronaldsay, Westray, Papa Westray, Eday, Stronsay, Sanday, Shapinsay, Rousay, Egilsay and Wyre is by steamer, small boats or, more recently, by a local air service.

The county town, Kirkwall, on Mainland, lies nearer to Norway than to London. There is a small hospital in Kirkwall staffed by one consultant surgeon and two house officers; the local general practitioners act as anaesthetists, obstetricians, physicians, geriatricians and radiologists. Difficult medical cases are, in general, referred to the larger hospitals in Aberdeen, some 130 miles away.

The air-ambulance service

The development of the island air-ambulance service was a major factor in altering the character of general practice in all the Scottish Islands, as it meant a less

isolated medical service. Patients could be transferred between islands and from the islands to mainland Scotland. It became easier for general practitioners to obtain the assistance of colleagues in other islands, which led to more effective specialist services in the main island townships of Kirkwall in the Orkney Isles, Stornoway in the Hebrides and Lerwick in the Shetland Isles. The air-ambulance made attending regional centres such as Aberdeen easier and more comfortable for patients than the conventional, slower journey by boat: for example, the St Ola steamer took four to five hours to sail between Kirkwall and Wick via Thurso whereas the plane took only 35 minutes; furthermore, patients often became more ill as a result of the sea journey alone, the Pentland Firth being notorious for its stormy seas.¹

The advent of the air services changed the outlook of islanders: they were no longer prepared to spend their entire lives on their island of birth. There was increased travel both to other islands and to the rest of the UK. As the islands became less isolated and herd immunity increased, so the medical problems, which had hitherto

Table 1. Population of the inhabited Orkney Islands, 1971.

Burray	209
Eday	179
Egilsay	39
Flotta	73
Graemsay	39
Hoy	419
Mainland	12,747
North Ronaldsay	134
Papa Westray	106
Rousay	181
Sanday	592
Shapinsay	346
South Ronaldsay	776
Stronsay	436
Westray	735
Wyre	36
Copinsay, Gairsay, Grimbister, Papa Stronsay, Pentland Skerries, Sule Skerry, Swona	30
Total population of County of Orkney	17,077

Source: Registrar General, 1971.

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often been the result of imported epidemics, more closely paralleled those of the rest of the UK.²

The air services to the Orkney Islands were introduced by aviation pioneers such as Captain Fresson, whose company, Highland Airways Limited, having procured landing sites on most of the islands, started a commercial service in 1933 to carry newspapers and mail.³⁻⁵

The first patient to be conveyed by air was transferred from Kirkwall to Inverness in July 1933. The proposal for an inter-island air-ambulance service for the Orkneys came some months later; it appears to have been first suggested anonymously following a businessman's charter flight from Sanday.⁶ The service became operational in November 1934 and was later expanded in order to carry patients requiring urgent treatment to Aberdeen. This first air-ambulance service was short-lived as, with the outbreak of the Second World War, radio facilities were withdrawn by the Air Ministry and the island airstrips were deliberately made nonfunctional by building cairns over them.

In August 1937, Highland Airways Limited and Northern and Scottish Airways Limited were amalgamated into one company, known as Scottish Airways Limited. Ten years later on 1 February 1947, Scottish Airways was nationalized, becoming a Scottish Division in British European Airways (BEA). This ruined the air-ambulance service: services, which had been commercially viable under the auspices of Highland Airways using small, economical Dragon aircraft, were now served by expensive and unreliable restored Junkers aircraft. When, in March 1947, Dr Bannerman, the Medical Officer of Health for the Orkneys, was told by BEA that they had no suitable plane available to evacuate a seven-year-old patient with appendicitis, a steamer had to be despatched to Westray to bring the child to Kirkwall—a sailing time of six hours compared with flying time of 15 minutes. In 1948 Captain Fresson, outspokenly hostile to the nationalized corporation, was ignominiously dismissed.⁷⁻⁹

With the nationalization of the air services in the UK there came the collapse of the scheduled Orkney Inter-Island Air Services. The County Councillor for the island of Eday immediately agitated for its reinstatement,¹⁰ but although talks were held and sympathetic noises emanated from the Ministry of Civil Aviation, restoration of the service was discounted on the grounds of expense.

It was not until 1965 that an inter-island air service for the Orkneys was reviewed seriously. In February of that year the matter was discussed at a meeting between the Highland Transport Board and Loganair Limited. The scheduled service was recommenced by Loganair in September 1967. Initially this service operated between Mainland (Orkney) and Stronsay, Sanday and North Ronaldsay, but it was later extended to include Westray and Papa Westray. At the same time, Loganair was commissioned to make ambulance flights between the

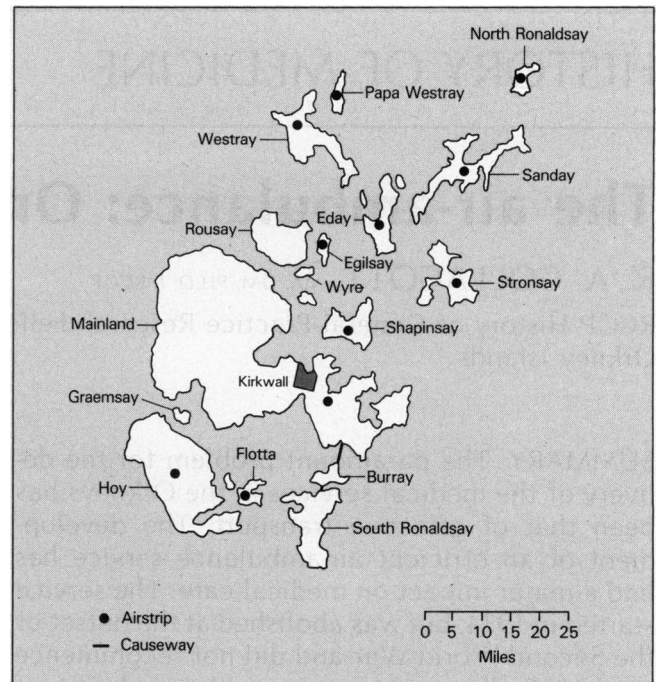


Figure 1. Map of Orkneys showing islands with airstrips.

Table 2. Number of air-ambulance flights in the Orkneys, 1974–81.

	Outer isles to Kirkwall	Kirkwall to Aberdeen	Others	Total
1974	67	66	9	142
1975	56	75	9	140
1976	75	76	9	160
1977	80	92	10	182
1978	88	114	14	216
1979	76	80	4	160
1980*	71	32	10	113
1981	72	76	13	161
Total				1,274

*Incomplete data.

Source: Cromarty JJ, personal communication, 1982.

outer isles of Orkney Mainland.¹¹ In 1973, Loganair took over the provision of ambulance flights throughout Scotland from BEA.^{12,13}

The present air-ambulance service works in two ways. For appointments at outpatient departments, patients book their own seats on scheduled flights; the major part of their fare is paid for them, through the Scottish Ambulance Service, on presentation of a special form (SAS 7) signed by their doctor. For urgent air-ambulance flights, the doctor concerned contacts the operator, who provides a Britten–Norman Islander aircraft fitted with a stretcher. Patients on these flights are accompanied to their destination by a nurse from Balfour Hospital, Kirkwall. The islands with airstrips suitable for use by the air-ambulance are shown in Figure 1. In the eight years from 1974–81, Loganair made 1,274 flights for the air-ambulance service in the Orkneys (Table 2).

Flying-doctor service

A further proposal on the use of aircraft in the Orkneys was for a 'flying-doctor' service for the north isles. In 1968, the general medical practitioner on the island of Westray suggested how this might be accomplished (G. W. Mears. Proposals for medical services for the North Isles of Orkney submitted to the Scottish Home and Health Department).¹⁴ The SHHD put forward a plan to the Executive Council for Orkney and the Local Medical Committee, as follows:

'We have been giving some preliminary thought, in the Department, to the possible advantages of a flying-doctor service . . . The 10 outer islands which now have resident doctors might be served by a group of doctors working from a central location, probably Kirkwall, by air transport. They would be exclusively "island doctors", with no patients on Mainland, and would hold regular and frequent consulting sessions on the islands, as well as making domiciliary visits in the usual way. In case of urgent request for a home visit, the doctor, if not already on the island, would be flown there in a very short time. (It is understood that the furthest island from Kirkwall is only some 18 minutes flying time distant.) The visiting doctor would of course work in close co-operation with the district nurses resident on the islands.'

M. A. Hamilton in a letter to Dr G. W. Mears,
1 May 1969

In the original scheme it was envisaged that the islands of Flotta, Papa Westray, Westray, North Ronaldsay, Eday, Rousay, Shapinsay, Hoy, Sanday and Stronsay might be served in this way.^{15,16}

This scheme met with bitter opposition in the local press. The County Councillor for the island of Sanday said that the flying doctor might not be able to land because of bad weather.^{17,18} Marwick¹⁹ pointed out that to deprive communities of their resident doctor would break the 'family-doctor link'—the doctor's understanding of his patients and their medical and psychological background. The Secretary of the Orkney Council for Social Service believed that depopulation of the outer isles would be encouraged. The Hospital Board pointed out that with such a service the inclination would be to 'play safe' and bring patients to Kirkwall so that they could be kept under observation.²⁰ The possibility of a flying-doctor service in the Orkneys caused alarm further north, Shetland islanders fearing that the service might later be extended to them.²¹

Orkney Executive Council rejected the proposal, since:

'It was felt that, apart from his profession, a doctor played an important role in the life of an island community, and that all the efforts in providing light industries which have been and are being made to stem depopulation of the islands, particularly of young people, would be defeated, should resident doctors ever be removed.'

E. Hooker. Minutes of Orkney
Executive Council, 1969.

In 1969, it was proposed that since the Scottish Secretary, Mr William Ross, had 'noted a general consensus of opinion against proceeding meantime with long-term planning for a centrally based medical service for the island' the whole question should be dropped (G. F. Balfour in a letter to Dr G. W. Mears, 28 October 1969).

Conclusion

The air-ambulance has provided an efficient and reliable service in the Orkney Islands for the past 16 years. General practitioners on the small islands no longer work in relative isolation, but are now able to refer patients with ease to hospitals both within the Orkney Islands and in Aberdeen for specialist treatment. The air-ambulance is a reliable, comfortable and speedy system of transport—a considerable improvement over the former reliance on boats.

The proposals for a flying-doctor service to the outer islands were rejected perhaps as a result of the innate conservatism of the islanders, who were anxious to maintain resident doctors in these tiny communities. The rejection might not be irrevocable if the population of the outer islands continues to decline and consequent changes in the organization of primary medical care bring about a better use of scarce resources. Meanwhile there is no doubting the islanders' appreciation of the air-ambulance service.

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