MISS FLORENCE NIGHTINGALE

'The Passionate Statistician'

PEGGY NUTTALL considers Florence Nightingale's love for nurses and statistical tables and the good use she put this to in her Model Forms for the hospital statistics.

ON the day in June, 1860 when *The Times* carried an advertisement inviting "women desirous of being trained as Hospital Nurses" to apply to Mrs Wardoper at St Thomas' Hospital, Florence Nightingale's thoughts and energies were elsewhere.

With her friend and ally, Dr William Farr, compiler of statistics for the Registrar General, she was busy planning the programme for the International Statistical Congress which was to be held in London that summer. Miss Nightingale's scheme for model hospital statistics was to be the principal theme for discussion. Her Model Forms had been drawn up and printed, an explanatory memorandum had been prepared and were being sent to every member of the Congress.

Despite the classical nature of her education Florence Nightingale, from childhood, had been fascinated by figures and statistical tables. During her family's travels in Europe she had, kept detailed accounts of each day's journeys, the miles covered and times of arrival and departure. Throughout her time in the Crimea she had been appalled by the statistical carelessness which prevailed in military hospitals. Even the number of deaths was not accurately recorded. "At Scutari", she wrote, "three separate registers were kept. First the adjutant's daily head-roll of soildiers' burials—on which it may be presumed that no one was entered who was not buried, although it is quite possible that some were buried who were not entered. Second, the medical officers' returns, in regard to which it is quite certain that hundreds of men were buried who had never appeared on it. Third, the return never appeared on it. Fourth, the return made in the orderly room, which is only remarkable as giving a totally different account of deaths from either of the others."

On her return to England her examination of hospital statistical returns showed her a complete absence of scientific co-ordination. There was no overall plan and each hospital followed its own classification of disease and nomenclature. Her remarkably extensive knowledge of the hospitals of Europe—"I have visited all the hospitals in London, Dublin and Edinburgh as well as many county hospitals; all the hospitals in Paris, the hospitals in Berlin and many others in Germany, at Lyon, Rome, Alexandria, Constatinople, Brussels; also the war hospitals of the French and Sardinians"—had bred in her an abiding passion for hospital plans and a suspicion that design might have a direct effect on mortality and morbidity rates. "The first duty of a hospital is that it shall do the patient no harm", she wrote, having been made only too well aware of nosocomial infections while in the Crimea. But she knew that she had to prove her point and that, above all, she needed facts— and figures.

Natural Allies

It was inevitable that she and William Farr came together and each saw in the other a natural ally. His access, as complier of statistics for the registrar general, to what material there was and his training as a doctor of medicine, showed him at once the immense possibility of her ideas Already her evidence in Notes on Matters Affecting the Health Efficiency and Hospital Administration of the British Army ran to a thousand closely printed pages of tables and statistics. Dr Farr's interest lay beyond that of the British army; he was concerned with the whole population. Miss Nightingale set to work on her Model Forms together with a standard list of classes and diseases. Their general adoption would 'enable us to ascertain the relative mortality in different hospitals, as well as of different injuries and diseases and the same and of different ages, the relative frequency of different injuries and diseases and by classes which enter hospitals in different countries and in different districts of the same countries.'

The Congress of the summer of 1860 was a great success. Miss Nightingale worked and planned most carefully. She gave a series of breakfast parties for all the delegates. She wrote innumerable notes for the staff: "Take care that the breakfast cream is not turned", "Put Dr X's big book where he can see it when he is drinking his tea". She became extremely irritated at what she saw of official organisation of the Congress. She found it inefficient. However, her careful planning ensured that her Model Forms were thoroughly examined and approved. As a result the whole Congress passed a resolution that her Model Forms be conveyed to all governments represented.

Flushed with this success, and doubtless mindful of her own words 'reports are not self-executive', Miss Nightingale immediately set to work. She had printed large quantities of her Model Forms and distributed them around the country. She managed to get several articles published in the French medical journals and sent them many forms on request. The London Hospital adopted her forms. Guy's printed a statistical analysis of patients from 1854-1860, St Thomas' from 1857 to 1860 and Barts for 1860. Delegates from the London hospitals met and agreed that all the metropolitan hospitals should adopt a single uniform system of registration of patients and publish their statistics annually.

Her next move was to draw attention to her Model Forms in a paper read at the social science congress in Dublin in 1861 and to have the forms incorporated in new editions of her Notes on Hospitals. The returns

from the hospitals which had adopted her scheme were published in the *Journal* of the Statistical Society of September, 1862. Caught up in all this activity it is not surprising that she had little time for the affairs of the newly founded Nightingale School, for, by now, her attention was turned to the possibilities of an extension of the scope of the census of 1861.

There were two directions in which she wanted to extend the scope of the census questions. One was to enumerate the numbers of sick and infirm on the census day—as was already done in Ireland. The second was to include full information on the social and sanitary conditions of people by including questions about housing. The Irish had already done this.

Miss Nightingale pulled every string she had. Dr Farr needed no persuasion, he was at her feet. She importuned everyone she knew, the Home Secretary, Lord Shaftesbury and Lord Grey. But it was all in vain. Her proposals were out-voted in both Houses. The census forms were to remain as they had been.

Not to be completely beaten she turned her attention to the colonies and the dependencies The Secretary for the Colonies gave her full permission to include her question. This resulted in the collection of some very curious information. But the Secretary for India's agreement and acceptance set her on her life's work with India, a country she never visited but on which she bacame an acknowledged authority.

Figures, Figures All Along

Throughout her long life Florence Nightingale used figures. She collected them, she sifted them and above all she analysed them. She knew that without hard facts she could achieve nothing. Even with her statistical tables she sometimes had to note 'I lost' in the margin. Without her figures and tables she knew she had no chance.

The imagination baulks at the thought of Miss Nightingale with a computer, and a couple of word processors. But surely those of us who call ourselves spiritual heirs would immediately attack the curious figures that are required even today by the DHSS, aggregating together 'Deaths and Discharges.'

Bibliography

Baly, M. *Nursing and Social Change.* London : Heinemann, 1973.

Cook, E.T. *The Life of Florence Nightingale.* London : Macmillan. 1913.

Nightingale, F. *Notes on Hospitals.* London : Longman, 1859.

Nightingale, F. *Proceedings of the International Statistical Congress.* Hants : Eyre and Spottiswoode, 1861.

Nightingale. F. *Hospital Statistics and Hospital Plans,* London : John W. Parker, Son, and Bourme, 1862.

Nightingale, F. *Report of the Royal Commission on the Sanitary State of the Army in India.* Hants : Eyre and Spottiswoode, 1863.

Nightingale, F. *Proposal for Improved Statistics of Surgical Operations.* Southall and Edwards, 1863.

Nightingale, F. *Sanitary Statistics of Native Colonial Schools and Hospitals.* Hants : Eyre and Spottiswoode, 1863.

Nightingale, F. *Report of the Committee on Cubic Space of Metropolitan Workhouse.* In : Bluebook, 1867. Spottiswoode, 1867.

Seymer, L.R. *Selected Writings of Florence Nightingale.* New York : Macmillan, 1954.

Strachey, *Eminent Victorians.* London : Chatto ond Windus, 1918.

Thompson, J.D., Golden. G. *The Hospital : A social and Architectural History.* Yale : Yale University Press, 1975.