

MEDICAL FAMILY REGISTERS.

As an earnest of the sincerity of the opinions I have emphatically expressed, in this Review and elsewhere,¹ on the importance of Medical Family Registers, I have made arrangements to initiate the practice of compiling them through the offer of substantial prizes, open to competition among all members of the medical profession. The prizes will be awarded to those candidates who shall best succeed in defining vividly, completely, and concisely the characteristics (medical and other) of the various members of their respective families, and in illustrating the presence or absence of hereditary influences. The total value of the prizes will be £500, and I have made independent provision to meet the considerable cost and time both of conducting the examination and of subsequently working out the results. My present object is to invite helpful criticism, in order that the conditions of competition may be well discussed before they are finally settled, probably early in next October. The Registers will be asked for within (say) six months of the date of publication of the conditions.

It will be sufficient if I describe a few leading points of the scheme, which I may mention was drafted after consultation with my friend, Mr. Simon, lately President of the College of Surgeons, whose wide experience at the Board of Health in former years, and in numerous more recent trusts of high importance, rendered his advice peculiarly valuable. The draft was then submitted to a few eminent medical men of varied attainments, and has met with their general approval in nearly all cases, and with warm approval in many. Doubt was expressed by two or three as to the value of the result being likely to correspond with the largeness of the effort, but they showed full sympathy with my object. These opinions were mostly verbal, and I hardly know whether I am at this moment justified in quoting the names of the persons who expressed them; but I have not that hesitation as regards the following gentlemen, from whom I received letters in which permission was granted me to do so. I give their names alphabetically:—Dr. Beddoe, F.R.S., the well-known anthropological statist; Dr. Matthew Duncan, F.R.S., whose statistics on fertility, &c., form a classical work; Sir William Gull, F.R.S., who is a powerful advocate of medical family records;² Dr. Ogle,

(1) *Fortnightly Review*, January 1, 1882, p. 31; and March 1, 1882, p. 332; also *Inquiries into Human Faculty*, pp. 40, 336.

(2) Address on the Collective Investigation of Disease. Published in *British Medical Journal*, January 27, 1883, p. 143.

the superintendent of the Statistical Department; Dr. Ord; Dr. B. W. Richardson, F.R.S., the well-known sanitarian; and Dr. Wilks, F.R.S.

Those who are acquainted with the world of medical science will, I am sure, be satisfied that a scheme which meets with the general approval of such men as these deserves consideration.

The use of Medical Family Records has been amply recognised by the leading members of the profession, and need not be insisted on here. Briefly, their scientific value lies in discovering the diseases (or disease-tendencies) that are hereditarily interchangeable, and, therefore, fundamentally the same, and in the effects produced by the hereditary union of different varieties of disease-tendencies; while their value to the practitioner lies in the information they give him of hereditary immunity in his patient from some forms of disease and liability to others, enabling him to judge where he may give liberty and where he should restrict, and with a minimum of interference to stave off the approach of serious malady.

My own interest in them relates to all that can throw light on the physiological causes of the rise and decay of families, and, consequently, on that of races. Some diseases are persistently hereditary, and others are not. They are variously found in different varieties or sub-races of men, and these have various other attributes including various degrees of fertility. We cannot as yet foretell, but we may hope hereafter to do so in a general way, which are the families naturally fated to decay and which to thrive, which are those who will die out and which will be prolific and fill the vacant space.

If it were possible to obtain the medical registers of numerous families for several generations, it would be a task of no great difficulty to sort them into statistical groups, and to compare their fortunes. Thus we might compare families in which none, one, two, three, or more of the eight great-grandparents were phthisical. Similarly for other diseases, temperaments, and faculties. So, again, for notable mixtures of race, especially between the British, the Low Dutch, and the Norman-French, which are those of which the English nation is principally composed. Or again, we might take groups of large and of small families, and compare their progenitors.

I do not see how it is possible to deal adequately with any portion of this large and most important inquiry into the causes upon which the future evolution of humanity depends, until we possess what we are now deficient in, a large number of complete medical, or I should rather say, anthropological family registers, regarding men simply as live stock, and showing the whole produce of the unions of different varieties of them.

The difficulty is to obtain these registers. Most men and women

shrink from having their hereditary worth recorded. There may be family diseases of which they hardly dare to speak, except on rare occasions, and then in whispered hints or obscure phrases, as though timidity of utterance could hush thoughts, and as though what they fondly suppose to be locked-up domestic secrets may not be bruited about with exaggeration among the surrounding gossips. It seems to me ignoble that a man should be such a coward as to hesitate to inform himself fully of his hereditary liabilities, and unfair that a parent should deliberately refuse to register such family hereditary facts as may serve to direct the future of his children, and which they may hereafter be very desirous of knowing. Parents may refrain from doing so through kind motives; but there is no real kindness in the end.

Moralise as we may, the difficulty remains. Men and women generally will not now record their family secrets of disease, and without knowing them we can make no progress in the direction I have mentioned. What is to be done?

Let us consider. The writers of medical histories must be medical men. Why should they not write *their own* family histories, including those of their wives and children? No one understands the use of these histories better than they. They have less foolish timidity about medical facts than laymen; they are accustomed to read and write anonymous cases. Why should not they be tempted, by an appeal to their scientific zeal, backed by the offer of considerable prizes, to write about themselves, at their best, and in great multitudes?

One of the most valuable forms of register might be supplied by many of the 23,000 men, or thereabouts, of whom the medical profession is composed; it would reach upwards to the grandparents of each writer and of his wife, it would pass down through all their uncles and aunts, and brothers and sisters, it would include their two selves and would end with their children. Such a register would cover four generations and would contain, on a rough average, as many as thirty persons. I reckon the number in this way. On the side of the man there are four grandparents, two parents, an average of three uncles or aunts, and himself, making a total of thirteen persons; similarly, there is another set of thirteen for the wife and her relatives in the same degrees; lastly, we may allow to the married pair an average of four children.

The inquiries I wish to set in motion by means of these prizes are undertakings in which many relatives will gladly join. The investigation is by no means wholly medical, and its successful pursuit, even so far as it is so, requires many half-forgotten memories to be reawakened before the proper clues can be found to the desired information. It involves much pleasant correspondence with

early friends who had long dropped out of sight, and it creates an agreeable bond of interest with relations living at a distance. The memories of ladies are full of personal matters, dates, and other details, and they are most helpful in family inquiries, which usually are of much interest to them. Whatever may be the medical results, the facts incidentally obtained in the course of the inquiry will form a separate document much prized by all the family.

The characteristics on which information is desired regarding each member of the family are somewhat as follows:—

1. *Race*.—The race of the grandparents should be mentioned if it admits of such definition as Highland or Lowland-Scotch, Welsh, Cornish, Irish, Huguenot or other refugee, or Jewish. If any grandparent was descended from ancestry long resident in the same place, the place should be mentioned.

2. *Conditions of life*.—Town or country; school; occupation or profession at various periods. If married, age and date of marriage of the person and his wife (or her husband), and number of children.

3. *Form and feature*.—Height, weight, &c., at various ages; colour of hair and eyes, complexion, brief description of general appearance. Malformations, if any. Statement as to the existence of portraits at various ages.

4. *Health*.—Date of birth, diseases and accidents, outline of medical life-history of deceased members of the family, and the causes of their deaths. Ages at death. When the life of a member has been insured at ordinary rates the fact should be mentioned, and his age when the insurance was made.

5. *Vigour*.—Amount of work performed both bodily and mentally: (a) habitually, (b) occasionally, under severe pressure. Measurements of muscular force and quickness of limb.

6. *Sensation*.—Keeness or imperfections of sight and of other senses; dexterity.

7. *Artistic capacities*.

8. *Intellect*, measured, (a) relatively, as by competitive successes or failures in youth, (b) absolutely, by the quality of the work done.

9. *Character*, as indicated by non-professional pursuits, by authenticated anecdotes, by public tributes to public services.

10. *Unclassed*.

An analysis of the medical history and other characteristics of the family would form an Appendix, to be divided into three parts. (I.) Concerning those on the candidate's side of the family. (II.) Concerning those on the side of the wife. (III.) Concerning their children.

The experience gained by medical men in making exhaustive records of their own families will, I trust, develop the art of making

them, and teach them how to do so in the most effective manner for others. I have a hope that these prizes may be a first step in introducing a custom of keeping medical family records, and that doctors will hereafter be not unfrequently called upon to draw them up for the satisfaction of the patients themselves, and, of course, at their expense.

It is important to offer the prizes under conditions that should entail the least publicity; for instance, by desiring the registers to be sent anonymously, but bearing a motto for future identification when called for. The examiners would select the best registers, judging them by their apparent merits, and would publish their mottoes in the medical newspapers, inviting the authors to communicate their names, together with such additional documents as might, in their opinion, best show the trustworthiness of their statements. The examiners would then reconsider the selected registers, together with the mass of supplementary information, and make their final awards.

Before publishing the names of the prizemen, the mottoes of the selected registers would be erased and new ones substituted, and they would be re-catalogued interspersedly among the rest, taking care to keep them undistinguished by any special mark. The selected candidates would be privately informed of the change of motto, and all their supplementary documents would be returned to them. Thus, only the authors of some fifty selected memoirs would be obliged to disclose their names to *any one*, and these only to a few examiners, acting in the same confidential way as the medical advisers of insurance offices. It would perhaps be advisable, for the sake of authenticity and the power of making further inquiries, to invite candidates to send their names in sealed envelopes bearing their mottoes, not to be opened until after the prizes had been awarded, and even to induce them to do so by the offer of a small percentage of additional marks.

As regards the probable trustworthiness of the information received, I am perfectly aware that a modern De Foe or Swift might write an interesting romance, and make a register apparently true to life, wholly out of his own head; but De Foes and Swifts are not common, and such persons would be very sure to find better occupation than that. Moreover, they could not gain a prize without committing a downright fraud. Able men are generally above petty tricks, and there will be abundant internal evidence in every register to show whether the writer be able or not. It is almost needless to remark, that every statistician worthy of the name is wary and slow to accept startling conclusions without much indirect confirmation. What I expect to gain from these inquiries are suggestions rather than proofs. If I find strong indications of certain results, I shall

have still to test them either by instituting more minute inquiries from those authors whose names were known to me, or by appealing afresh to trustworthy members of the medical profession to supply me with similar cases from the families of their patients. What I fear most is, that the registers sent by many of the candidates will afford internal evidence of being little trustworthy, not through deliberate intent, but owing to the incapacity of the writers to state their cases clearly, and to support their statements with judiciously selected data.

Strict limitations would be placed on the space allotted to the life-history of each individual on the register, as prolixity in such a large number of documents would be intolerable; a couple of pages of MS. seems quite enough for each. Equally strict rules will apply to the shape (say copy-book size) and arrangement of the MS., because in every large collection uniformity becomes exceedingly important. It would enable each register to be kept on a shelf, side by side with the others, and to be taken down when required, opened, and referred to with the minimum of trouble. Legible handwriting will be called for. Defaulters under these heads will be punished by more or less serious loss of marks.

I propose that the examination should be conducted principally by, say, two medical men, graduates in honour at English universities, or of equivalent standing, and by an assistant. The medical men whom I have already named have kindly promised their assistance, should I require it, in selecting suitable examiners, whose honorarium I propose to base more or less on the scale of the fees given to the examiners for the Civil Service. I should, however, consider that the final award of the prizes rested with myself. I feel it advisable to act in this unfettered manner, being assured that hard-and-fast rules concerning the mode of conducting so novel an examination would lead to entanglements. I have not the slightest doubt that by comparatively little labour the field of ultimate selection will be greatly narrowed, and that after comparing the marks of the examiners, and hearing their opinions and making some further careful inquiries, it will be possible to do substantial justice in the end.

The general principles on which the examination marks might be adjudged, appear to regard—(1) the general style of the register—that is, the clearness, conciseness, and precision of the statements in it, and the judgment with which plain facts are adduced to corroborate them. (2) The number of generations included in the register, each to be treated as exhaustively as may be. (3) The style of the appendix. (4) The number of individuals in the family who are described in the register.

It appears to me that prizes should be awarded to the best of those

who have done well in the whole of the subjects, (1), (2), and (3); but that an additional award should be made to those of the prizemen who deserve it under the heading (4). Thus the prizes would be given for excellence of work, with additional awards for quantity of work. I am disposed to distribute the £500 somewhat in the following way: £300 in ten prizes of £30, and £200 in supplementary awards, and partly in smaller prizes, according to the results of the examination. But I am perfectly open to suggestions as to any other way of distributing the £500 which may be thought calculated to produce a fuller and better response.

It may be thought proper for me to hand in advance the necessary funds to the safe keeping of some institution, and to frame alternative arrangements for the conduct of the examination and the custody of the registers, in case I myself should be incapacitated from acting when the time arrived.

I should hope that the examination would be completed after some three months' labour of myself and the examiners. The prizes being allotted and done with, it will remain to work up the results. In the progress of the examination much familiarity with the contents of the registers will have been obtained, and several points will have suggested themselves for inquiry which I shall make it my business gradually to work out. The statistical meal will be a large one; I gloat over it in anticipation, and know that it will take long to digest. I cannot doubt that new ideas will be derived from a careful study of so unique a collection, enough I hope to justify to myself the cost and time spent upon it. When I shall have done with this collection, its ultimate destination will probably be as a gift to some appropriate medical or anthropological institution. It will then be in the form of anonymous documents, bearing mottoes, but with no other mark by which any one of them could be distinguished. Such private notes as I shall have made of the names of the writers will be kept separate and will not be divulged, so that their incognitos shall be respected. Due precautions will throughout be taken that no idle or improper use is made of the registers.

Considering that prizes for essays usually attract numerous competitors, although the pains taken in working for them are rather barren of result, except to the winners, I conclude that similar prizes leading to inquiries beneficial in every case, and from many points of view, ought to attract yet more numerous candidates, and to result in producing shelves full of family histories of unprecedented completeness and concentration, and of extreme value for a long time to come to medical and anthropological investigators.

I should be most obliged for helpful suggestions from any person who will consider the question seriously.

FRANCIS GALTON.