The Systematic Collection of Patient Data in a Centre for Child and Adolescent Psychiatry

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Computerisation of case records has been slow to take place in child psychiatry, partly because of the amount of detailed and sometimes complex information required. A program for storing case records has been developed and it has proved of great value in epidemiological work, for example, regarding patient age structures and family compositions.

In adult psychiatry, work is being done to improve the organisation of case records and the elicitation of patient information (Lieff, 1987). In child and adolescent psychiatry the standardisation of case records and their computerised processing are as yet being exploited in only a limited way, because much elementary information about children and adolescents (e.g. composition of the family) is complicated. Moreover, it is necessary to include a large quantity of detailed data on development and on the child's parents.

Some initiatives have been developed (Thorley, 1982; Looney *et al*, 1984; Wong, 1987). The American Academy of Child and Adolescent Psychiatry has a Database Committee which has started developing a standard case record, presently being used in approximately 20 centres.

This article reports on the development of standardised, computerised case records, in a large centre for child and adolescent psychiatry. Its purpose is to improve clinical work and to create better conditions for scientific research.

In many institutions case records are often incomplete, even with respect to such things as demographic data. At times there are so many lacunae in the collected information that adequate patient care cannot be provided, and scientific research is limited. This is true even of the simplest forms of research, which are aimed at gaining insight into elementary data (referral age, classification, and length of treatment) of patients in an institution. A databank makes possible the determination of, for example, any shifts occurring in the patient population (e.g. Roghmann *et al*, 1982), and allows proper evaluation and follow-up work.

Development of computerised case records

The core information

In child psychiatric research widely diverse information is collected from various informants. The selection of data is largely determined by the questions which one seeks to answer with the help of the databank. Various possibilities have been described in the literature: the information collected might serve as a basis for policy decisions (Snyderman *et al*, 1979), or for diagnosis and classification (McDermott & Hale, 1982). One can also designate as core information the data necessary for selecting different forms of treatment, where minimum criteria are stipulated on which the choice for a certain treatment is to be based (Cohen, 1979). No reliable system for this approach has, to our knowledge, been developed for child and adolescent psychiatry. Nor is it likely to be developed in the future, as, in general, the decision algorithms cannot be unambiguously formulated.

Given the amount of data available, it is necessary to record only a selection of the data, such as the living situation of the child and the background and development of the problem.

Standardisation of the case records

A study group in the Academic Centre for Child and Adolescent Psychiatry Curium (the Netherlands) has been working on the development of a standard case record, to be used in both the out-patient clinic and the residential clinic. Approximately 200 children and adolescents are examined at the out-patient clinic each year, a number of whom are also treated. Fifty-four in-patients are also treated, during an average stay of 20 months.

We assume that the collection of information can offer material for research, in particular hypothesis-generating research, into a child and adolescent psychiatric population. In addition, the computerisation of standard case records offers the possibility of producing standard reports on individual children.

The standard case record is only a part of the complete patient records: there is a written component which includes, for example, the qualitative information and the impressions of the clinician.

The bases for developing the standard case record were:

(a) that only information would be collected as is, in principle, also collected for the 'routine' child and adolescent psychiatric examination

(b) that the databank must be complete, i.e. that it must be possible to obtain standard information in *every* case

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(c) that the demands made on the time of the child, the family and the staff can be reduced by structuring the interview, which also ensures that important points are explicitly covered

(d) that the emotional burden for the child and the family must not be allowed to become too great.

The databank is *not* intended for clinical decision making based on computer-processed information.

With regard to the use of the information, regulations were drawn up which were submitted to the Medical Ethics Committee of the Medical School of Leyden University for review.

The selection of the data

The information gathered for the standard case record falls into four categories:

(a) demographic data and psychiatric history

(b) elementary anamnestic, test and diagnostic information (including history of pregnancy and parturition, functional development, diagnosis)

(c) functioning of child and family

(d) other (temporary) information, in conjunction with specific research projects.

Staff attitudes

There were, on the one hand, problems of a 'technical' nature which inevitably accompany greatly increased use of the computer. On the other hand there were doubts about the relevance of the standardised databank and about the value of the standard report generated by the computer, and these doubts led to incomplete or inaccurate information being recorded. The method used by psychiatrists with a psychodynamic orientation in particular entails collecting only that information which seems relevant for one specific child or family, and on the basis of associative considerations, intuition and tentative suppositions.

However, the introduction of the standard report was on the whole assessed positively by the staff, and it conferred reliability and accessibility to the information. A number of members of staff viewed the introduction of computerisation as an impossible or senseless form of "application of a high technology tool to a low technology specialty" (Looney *et al*, 1984).

The description of family composition

Developing a form on which the basic information about the composition of the patient's family could be entered proved more difficult than was expected. The forms used for this purpose at various academic departments for child and adolescent psychiatry in the Netherlands proved insufficient; one drawback, among others, was that they could not accommodate the numerous forms of non-traditional family structures. In keeping with the approach used by Kellam *et al* (1977), we chose a method of describing the family structure in terms of the relation between the child and each adult present. Kellam *et al* found ten

different types of relation, although not all ten proved useful for Dutch households (it is, for example, very unusual for relatives like a grandmother or an aunt to be part of the family household). Another problem is that Kellam *et al* used 'stepmother' and 'stepfather' as the only differentiations from natural parents. We use the terms 'biological', 'adoptive', 'foster' and 'step' to describe biological or adoptive parents and their partners living in the family home. If a child resides elsewhere (e.g. with relatives or in an institution) information is collected about the nature and degree of responsibility for the child assumed by the parent figures concerned. In this case we differentiate on the basis of the responsibility of the parent figure rather than the child's current place of residence.

Parents who bear primary responsibility for the welfare of the child are designated as parents providing primary care. The parent figures, or the institution, who, with the consent of the parents providing care, also care for the child, are termed "parent figures providing secondary care". This distinction is important if a child resides in an institution or with another family. In addition to the items mentioned above, information is also collected on:

(a) the nature of the changes which took place in the composition of the family (e.g. divorce or death of one of the parents)

(b) the time that the change took place

(c) the frequency of any contact between the child and the parent figure who is no longer part of the family household.

Another complicated matter is that regarding the 'types' of siblings a child can have. There are 26 possibilities where the sibling can be:

(1) a biological child, (2) an adopted child, or (3) a foster child of the two parent figures providing the primary care for the enrolled patient

(4) a biological child, (5) an adopted child, or (6) a foster child of the mother figure providing primary care for the enrolled patient

(7) a biological child, (8) an adopted child, or (9) a foster child of the father figure providing primary care for the patient

(10) a biological child, (11) an adopted child, or (12) a foster child of the mother figure providing secondary care for the patient

(13) a biological child, (14) an adopted child, or (15) a foster child of the father figure providing secondary care for the patient

(16) a biological child, (17) an adopted child, or (18) a foster child of the biological parent(s) no longer providing care for the patient

(19) a biological child, (20) an adopted child, or (21) a foster child of the adoptive parent(s) no longer providing care for the patient

(22) a biological child, (23) an adopted child, or (24) a foster child of the foster parents) no longer providing care for the patient

(25) a biological child of the step-parent no longer providing care for the patient

(26) a biological child of the co-parent no longer providing care for the patient

These are not 'academic' possibilities, but are drawn from practical experience.

The demographic data now being collected, using specially drawn-up forms, on the parent(s), the patient, and the parents no longer providing care (if applicable) include: age, education, occupation, job situation/source of income, date of marriage/living together/divorce/death, nationality and ethnological particulars. (A copy of this set of forms and the instructions are available from the first author on written request.)

The standard case record includes a number of items of information about the family in which the child lives. In addition to the relation between the child and the adults present, it also specifies the nature of changes which may have taken place in the composition of the family and the age of the child at the time of the changes. These data are incorporated into a summary description in the computer report. For scientific research it is also desirable to summarise this information in descriptions which are clearly related to practice and free of unnecessary detail. Kellam *et al* (1977) have investigated the construction of descriptive indices in the context of epidemiological research, but their approach has received little following among child psychiatrists. A well differentiated registration system allows comparison of family structures.

An illustration of use: the description of family composition

The data on the 267 children examined in the Curium out-patient clinic for child and adolescent psychiatry during January 1987 to July 1988 were used to produce summary descriptions of family composition. We describe below the correlation between these indices and the sex and the age of the child, as well as (when applicable) the relation to the length of the time between the child's loss of a parent and his/her referral. What must be emphasised is that the information is offered as an illustration; it is not our intention to present an exhaustive treatment of the subject.

The following two classifications of family composition were initially chosen for use in the study. Classification A is the simplest description, based only on the number of parent figures present (providing primary care):

A-I   two-parent families; 199 (74%) of the children come from this type of family
A-II   one-parent families, which count for 53 (20%)
A-III institutions, which provide primary care for 15 (6%) of the children in the group studied.

Classification B is according to type of parent figure. Distinctions are limited to those between biological, adoptive and foster/host parents in the following categories:

B-I   families with two biological parents (152 children; 57%)
B-II   two-parent families with one biological parent (27; 10%)
B-III   families with two adoptive parents (11; 4%)
B-IV   other two-parent families: foster-families, host families, relatives (9; 3%)

B-V   one-parent families with a biological parent (50; 19%)
B-VI   other one-parent families (3; 1%)
B-VII   institutions (15; 6%).

Further differentiation of these classifications can be made in the case of the one-parent families (category A-II, or B-V and B-VI) and two-parent families with one biological parent (category B-II) by taking into consideration the cause of the loss of a (biological) parent, namely divorce or death. It is known that the effects of losing a parent through divorce differ in a number of respects from the effects of losing a parent through death. Extensive research has been done on how both divorce or the death of a parent affect the development of children (e.g. Van Eerdewegh *et al*, 1985). The sex of the parent providing primary care seems to be of less importance (Steinhausen *et al*, 1987). By taking into account the cause of the loss of the parent figure, we arrive at the following subcategories in classification B:

B-II-A two-parent families with one biological parent after the death of a biological parent (2 children; 1%)
B-II-B two-parent families with one biological parent after the divorce of the biological parents (25; 9%)
B-V-A   one-parent families with a biological parent after the death of a biological parent (3; 1%)
B-V-B   one-parent families with a biological parent after the divorce of the biological parents (42; 16%)
B-V-C   one-parent families with an unmarried single mother (5; 2%).

However, such differentiation leads to small numbers in the subcategories.

Another differentiation can be obtained by including in the description the age of the child at the time he or she lost a parent. In this case a distinction is made between a loss before or after the age of six. The information was not available for five children who were examined only very briefly by a screening consultant. Adding these data to classification B yields the following subcategories:

B-II-A two-parent families with one biological parent, and the child *younger* than six at the time he/she lost a parent through divorce or death (17 children; 6%)
B-II-B two-parent families with one biological parent, and the child *older* than six at the time he/she lost a parent through divorce or death (9; 3%)
B-V-A   one-parent families with a biological parent, and the child *younger* than six at the time he/she lost a parent through divorce or death (23; 9%)
B-V-B   one-parent families with a biological parent, and the child *older* than six at the time he/she lost a parent through divorce or death (18; 7%)
B-V-C   one parent families with an unmarried single mother (5; 2%).

Results

The ratio of boys and girls was nearly the same in the first two categories of classification A (70% v. 30%), but differed

in the case of children referred by an institution (33% boys and 67% girls).

In classification B, of the patients who came from a family with two biological parents, 72% were boys and 28% were girls. The greatest deviations from this relation were found not only among children referred by an institution but also among those in the care of foster-parents, host families or relatives: 44% boys and 56% girls. From families with adoptive parents relatively more boys were referred: 82% boys and 18% girls.

Of the children from a family with two biological parents, 20% were younger than six years old, 55% between 6 and 12, and 25% older than 12. The distribution is similar for the children of adoptive parents, but those from other kinds of families were as a rule older. Of the children from institutions, 55% were older than 12, while 50% of the children in the care of foster-parents or host families were above the age of 12. In the remaining categories nearly 40% of the children were older than 12 at the time of referral.

The difference between the various categories of classification B with regard to both boy:girl ratios and age at referral constitutes an argument for using this more detailed classification for further research.

When the categories B-II and B-V were split into the subcategories based on age, as above, there appeared to be almost no differences in the boy:girl ratio and only a slight difference with regard to age at referral between the subgroups (children from families with one biological parent who lost a parent before their sixth year were slightly younger). The distribution was clearly varied, however, in the case of the interval between the time of the loss and referral. The intervening period was as a rule shortest for children from one-parent families who lost a parent after they were six years old: 11 of the 18 children were referred within two years of the loss, four after two to four years. The spread was greatest among children from single-parent families who lost a parent before their sixth year: five of the 23 children were referred within two years, six after two to four years, six after four to six years, and six after six years. Children from two-parent families with one biological parent were in general referred later: eight of the 26 children were enrolled four to six years after the loss, 14 children after six or more years. In this group there was nearly no difference between children who lost a parent before and after the age of six with regard to the interval preceding referral.

Discussion

Although definitive conclusions cannot yet be drawn, these results indicate that the number of parents, the kind of parenthood and (when applicable) the age at which a child lost a parent, should all be included in a summary description.

Research publications in child psychiatry have paid virtually no attention to such family relations; information of this sort is often not even included in the description of the research group. However, this information is indispensable. Nearly all decisions made in child and adolescent psychiatry take into account the specific details of family composition. In view of the relatively large number of patients from 'incomplete' families it is necessary to make these notions explicit and to test their validity. This is particularly true for epidemiological research, research into diagnostic categories, and the relation between diagnosis and treatment. From epidemiological research in the Netherlands it appears that approximately 7% of patients come from one-parent families (Verhulst *et al*, 1985). Of the children referred to Curium, more than 20% are from one-parent families. The ratio of boys to girls up to the age of 10 is approximately 3:1; after that the ratio quickly moves in the direction of 1:1. No clear explanation has been given for this change. Our data indicate that this change in sex ratio is largely dependent on the composition of the child's family. For children from families with two biological parents, the ratio of boys to girls up to the age of ten is 2.8:1, for older children it is 2.5:1. A greater shift takes place in the other groups. If all the children who have lost a parent through divorce or death are taken together, the ratio of boys to girls is 2:1 up to the age of ten, and 1.4:1 after that. If we limit ourselves to patients from families with two biological parents and from 'incomplete' families, it appears that up to the age of ten, 72% of the girls come from 'complete' families and that after the age of ten this figure drops to just 50%. The corresponding figures for boys are 78% and 67%. The relative increase in the number of girls with psychiatric disorders in early adolescence could be partly explained by the fact that the emotional problems of girls from divorced families make their appearance relatively later than those of boys (Kalter *et al*, 1985). This explanation presupposes that among children above the age of ten, girls with psychiatric problems are more often from 'incomplete' families than boys. Our data support this supposition. There is, however, no epidemiological information on this point. Psychiatric problems in children arise relatively often under the influence of environmental factors (probably more often than in adults). For example, there is the clinical impression that depression occurs relatively often among children from incomplete families.

Findings of this kind are also significant for scientific research into diagnostic categories in child and adolescent psychiatry, such as examining symptoms in terms of the internal construct validity of diagnostic categories for various groups of children. Consideration should also be given to a critical assessment of the relation between diagnosis and treatment indications. One of the most important

variables in this connection is the composition of the family.

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Acute Blocking of Naloxone-Precipitated Opiate Withdrawal Symptoms by Methohexitone

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In a double-blind placebo-controlled trial of 18 patients, methohexitone blocked objective signs of opiate withdrawal caused by a bolus injection of naloxone. Furthermore, in continuing the naloxone therapy for 48 hours, no withdrawal signs appeared. Levels of withdrawal distress returned to normal levels within six days. This approach can be regarded as an effective and well tolerated withdrawal therapy with low drop-out rates.

Since Wilker *et al* (1953) demonstrated that an opiate antagonist can precipitate an abstinence syndrome in opiate-dependent subjects, opiate antagonists have been tried as therapeutic agents (Resnick *et al*, 1977; Charney *et al*, 1986) in opiate detoxification treatment. Recently Hendrie (1985) showed that high