The child health card — a cornerstone of preventive and promotive paediatrics

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Summary

When properly used, the child health card is a relatively cheap and effective measure in the promotion of health and in the early detection and prevention of disease in infants and children. It serves as a record of birth data, growth in mass, immunization, neurological development and episodes of illness; it can also facilitate advantageous family spacing. At present the card is not achieving its full potential in southern Africa. We suggest the active promotion of its benefits to the public and especially to potential mothers via school education.

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It has been projected that the paediatric population of South Africa will total 21 million by the year 2000.[1] Providing health care for these children within the constraints of a limited health budget requires that increased attention be given to instruments of preventive and promotive paediatrics. One such instrument is the 'child health card'.

The concept of a special health and weight chart was first promoted by David Morley in 1962 following 3 years of experience in the village of Ilesha in Nigeria.[2] Since then child health cards have been successfully introduced throughout the developing world and now form one of the cornerstones of preventive and promotive paediatrics.

In the RSA a card known as the preschool record card was introduced in the municipal area of Cape Town in 1971. It was designed by Dr Isobel Robertson and Professor J. D. L. Hansen and its 'road to health' percentiles were based upon the well-known Harvard standards. At present a similar card is in use in the Western Cape Health Region, the Port Elizabeth area, Ciskei, Transkei, Durban and parts of the Transvaal. Recently the Child Health Co-ordinating Committee of the Western Cape undertook to design a new card which is now in use in the Western Cape Health Region.

Although the card has achieved some success in southern Africa as a record of immunization and mass during the first 6 months of life, it has yet to achieve its full potential as a home-based medical record and a means of communication between the various health services as well as between the health services and parents. It seems unlikely to do this unless it and its aims are more actively promoted by all doctors and health professionals involved in the care of children in southern Africa. Differences in design between cards in use in different parts of the country should not stand in the way of more active promotion of the card.

With this in mind we would like to outline briefly the aims of the child health card and the manner in which it can be used as a record system and as a means of promoting health, and in both preventing and detecting disease in young children and infants.

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The child health card

Description

The card is made of sturdy cardboard, 30 x 21 cm, folding to a size of 10 x 21 cm. It is given to the mother at her child's birth and is thereafter kept by her. It is issued in a strong polythene or plastic cover to protect it from the vicissitudes of family life and should accompany the child on all visits to any health worker. Irrespective of precise details of design, most cards may be conveniently divided into 5 sections:

1. An area occupying the whole inner surface on which is printed a graph, its two axes representing mass (vertical axis) and age in months (horizontal axis) up to the age of 5 years. On this graph is filled in the desirable 'road to health'. An unnecessary expense would result from having to print separate cards for boys and girls and it is suggested that the upper border of this 'road to health' be the 50th percentile of the reference value for boys and the lower border the 3rd percentile for girls.[3] Alternatively, the upper and lower borders may be constructed from mean values for males and females. In addition many designs have a 'marasmus' line — 60% of the 50th percentile. Whatever method is adopted it is important that international reference standards be used, preferably those of the US Child Health Examination Survey.[4]
2. A panel giving perinatal data such as the date and manner of birth, birth mass, gestational age and the Apgar count, noting any reasons for special concern, such as respiratory distress or neonatal hyperbilirubinaemia.
3. A panel giving personal details such as name and address and the name of the relevant local clinic, together with hospital and clinic folder numbers. Details of siblings and other family members may also be noted here.
4. A panel giving details of immunization and the dates on which the immunizations were given.
5. A panel in which brief medical notes and comments may be made.

Other features which may be incorporated in any of the above areas, most often on the 'road to health', include length and head circumference, haemoglobin value and easily recognizable milestones. In addition, a section will often be devoted to particular local problems such as tuberculosis, bilharzia or malaria, where notes may be made of skin test results, the use of prophylaxis or the initiation of treatment.

Function of the card

It must be emphasized that while the recording of mass and immunization status represents an important function of the card, it can be used for other purposes, for instance:

A record of gain in mass. 'Of all the measurements that can be made on children in the developing countries, weighing is most likely to be useful and its cost-benefit value is very high.'[5] Although a single record of mass and the determination of its percentile is important, it is of far more value to have available a record of the velocity of gain in mass: a child whose mass falls on the 30th percentile may in fact have recently suffered an acute loss of mass (Fig. 1), while a child whose mass falls on the 3rd percentile may in fact be progressing satisfactorily. The regular recording of mass on the card means that a record of gain in mass is immediately available to all health workers whether in a hospital or clinic setting or in the home. Even in sophisticated hospital record systems, percentile charts are often lost or microfilmed.

Failure to achieve the expected gain in mass may be one of the earliest signs of disease. This is true not only of Third World diseases such as kwashiorkor, marasmus and tuberculosis (Fig. 2), but also of diseases such as urinary tract infection.

At the same time the concept of gain in mass is one easily understood by mothers and easily linked to health. By this means regular clinic attendance may be encouraged and both mother and child brought under the preventive and promotive influence of the clinic network. Any child failing to gain mass adequately should be referred for evaluation.

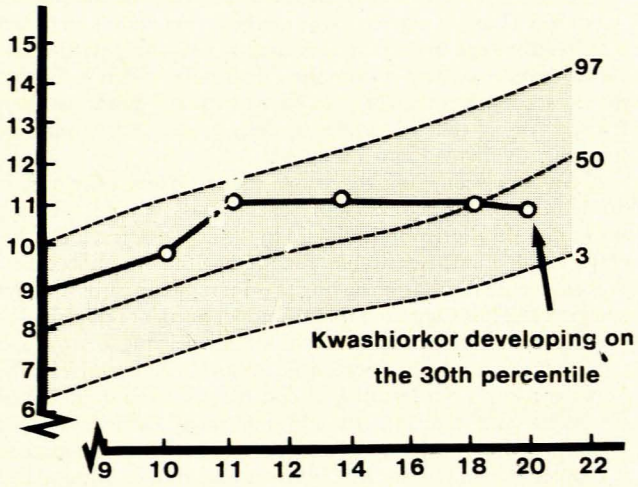

Fig. 1. Development of kwashiorkor in a child whose mass lies on the 30th percentile of mass for age.

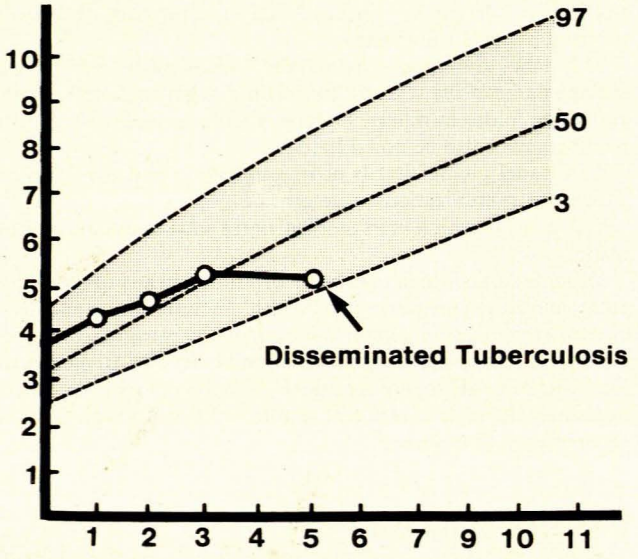

Fig. 2. A fall in the velocity of gain in mass preceding the development of disseminated tuberculosis.

A record of immunization. Although immunization is one of the foundations of preventive paediatrics, mothers will often have an imprecise knowledge of their child's immunization status. Such information will then be available only in the form of clinic record cards to which other health workers have limited access. The child health card makes the information immediately available and may enable any health worker to motivate a mother to complete her child's immunization. It also aids medical staff in the differential diagnosis of infectious diseases against which the child may have been immunized.

A record of neurological development. It is seldom that parents with more than one child will be able to recall when their children sat or walked unaided, or spoke, for the first time. A note on the card of milestones as they occur establishes a permanent record which may lead to early referral of children for evaluation. Similarly the results of simple hearing and vision testing and, when necessary, head circumference may be recorded.

Promotion of family planning. Family planning may be promoted by the child health card which enables health workers to point out to parents the health status of their first child and to suggest that the next pregnancy be postponed until the present child has attained a certain mass which could be indicated on the 'road to health',[6] rather than to advise mothers to prevent further pregnancies at all costs. Ebrahim[7] has described how the mean birth interval for a particular community can easily be calculated. This figure is used to record on the child's graph the 'vulnerable month' when conception is likely to occur. The health worker can then begin a dialogue on child spacing with the parents.[7] Pregnancy spacing in this fashion will enable the present child to have a better start in life before having to compete with a younger sibling; it will also reduce the birth rate.

A home-based medical record. A home-based medical record system has several advantages, not the least of which is that the mother is made a partner in the health care of her child. In cases where both hospital and home-based records have been kept, fewer home-based records than hospital records have been lost.[8] In some developing countries (in Transkei, for example) no other outpatient records are kept. In this case more space may be provided by stapling additional cards, 10 x 21 cm, to the existing card.

When patients move from one area to another, or from one doctor or hospital to another, a home-based record such as the child health card may prove invaluable. The record of growth and medical notes, however brief, may help avoid the unnecessary repetition of investigations and expedite the diagnosis of diseases such as tuberculosis. Time-consuming attempts to communicate with other doctors and institutions may thus be avoided.

Conclusion

The child health card is thus a powerful weapon for the improvement of child health in southern Africa. At present it is either not being used at all or it is not achieving its full potential. Its active promotion by the numerous bodies interested in child health in southern Africa is therefore required. We suggest that not only the medical press should be involved, but also the lay press and if possible radio and television. It is particularly important that mothers and prospective mothers be reached, and perhaps the most appropriate way to do this would be through school education.

Finally, we would like to emphasize that while the child health card was originally to be used by the socially deprived children of the Third World, it holds many potential advantages for all children, including those served by private practitioners.

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REFERENCES

1. Department of Census. *Census Report.* Pretoria: Government Printer, 1970.
2. Cuthbertson WFJ, Morley D. A health and weight chart for children from birth to five. *West Afr Med J* 1962; **11:** 237.
3. World Health Organization. *A Growth Chart for International Use in Maternal and Child Health Care.* Geneva: WHO, 1978: 15.
4. US Department of Health, Education and Welfare, National Center for Health Statistics. *NCH's Growth Charts 1976.* Monthly Vital Statistics Report 1976; **25:** No. 3 (suppl).
5. Morley D, Woodland M. *See How They Grow.* London: Macmillan, 1979: 43.
6. Rohde JE. Pregnancy spacing by child weight. *Lancet* 1975; **i:** 853.
7. Ebrahim GJ. Child health and family planning. *J Trop Pediatr* 1983; **29:** 66-67.
8. Stephens B, Gowers P, Kennedy I. Patient-retained health records in a rural health care system. *J Trop Med Hyg* 1977; **80:** 244.

Fisiologiese gevare van die gebruik van *Cannabis sativa*

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Summary

The increasing use of *Cannabis sativa* (dagga) raises the question whether it could cause physical harm to the user. The earlier belief that cannabis could be used effectively in the treatment of various illnesses contributes to the tendency of cannabis users to reject the possibility that it may be harmful to their health. Scientific research, however, indicates that cannabis has no medicinal value. On the contrary, it may cause serious physical damage.

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Die siening dat *Cannabis sativa* vir die behandeling van verskillende siektetoestande gebruik kan word, is reeds vir eeue aan die mens bekend. Veral in die Ooste is daar onwrikbaar geglo aan die mediese of helende waarde van cannabis. Keiser Shen Nung van China het reeds in 2737 v.C. 'n monografie gepubliseer waarin hy die mediese gebruike van cannabis uiteengesit het.[1] Volgens hierdie geskrif was cannabis veral nuttig by die behandeling van sekere ginekologiese probleme, jig, rumatiek, malaria, beri-beri, hardlywigheid, asma en skeelhoofpyn. In Indië het die siening weer bestaan dat cannabis effektief gebruik kan word by die behandeling van gastroïntestinale probleme, slymvliesontsteking, moegheid en uitputting.[2]

Voorstanders van die gebruik van cannabis beweer gewoonlik dat dit nie psigies nadelig is nie en dat daar ook nie bewyse bestaan dat dit enige nadelige fisiologiese gevolge het nie. Bloomquist[3] verwerp hierdie standpunt en wys daarop dat daar al heelwat navorsing gedoen is wat bewys dat die gebruik van cannabis fisiologiese nadele kan inhou. Reeds so vroeg soos 1824 is al verklaar dat ganja gevaarlik vir die gesondheid is. In 1894 het die Indian Hemp Drugs Commission[4,5] se verslag vermeld dat die matige gebruik van cannabis of ganja, soos dit in Indië bekend staan, nie gevaarlik is nie, maar dat oormatige gebruik wel die gestel kan verswak en derhalwe 'n groter vatbaarheid vir siektes veroorsaak.

Grinspoon[6] sluit hom hierby aan deur te sê dat die matige gebruik van marijuana nie gevaarlik is nie. Hy is egter van mening dat die langdurige gebruik van die potenter tipes wel die individu se fisieke en psigiese vermoëns sal aantas. Die swakker tipes cannabis soos bv. marijuana word nie in die Ooste as potent genoeg beskou om fisieke of gesondheidsprobleme te veroorsaak nie. In dié verband kan daarop gewys word dat 60 - 170 g hasjisj gelykstaande is aan 20 - 30 marijuana-sigarette. In die VSA gebruik die gereelde rokers maar ongeveer 6 - 10 marijuana-sigarette per dag. Die cannabis-gebruiker moet hom egter nie deur die potentheid van die produk laat mislei nie. Volgens Jones en Stone[7] kan proefpersone nie tussen sigarette wat 4,5 mg tetrahidrokannabinool bevat en sigarette sonder hierdie stof onderskei nie. Dit dui daarop dat 'n persoon wel 'n veel potenter middel kan gebruik sonder dat hy daarvan bewus is.

Brill[8] wys daarop dat die rook van twee marijuana-sigarette voldoende is om 'n reaksie van die outonomiese senuweestelsel te veroorsaak wat die pupille, hartslag, bloeddruk en blaasfunksionering beïnvloed asook die ritme van die breingolwe versteur. Die onvermoë van navorsers om wetenskaplike bewyse voor te lê wat die nuttigheid van cannabis vir die mediese wetenskap bevestig, is vir die Wêreld Gesondheidsorganisasie[2] genoegsame aanduiding dat dit nie vir die behandeling van siektetoestande gebruik behoort te word nie. As die effek van cannabis op die liggaam in ag geneem word, moet daar ook benadruk word dat cannabis nie vrylik beskikbaar behoort te wees nie. Wat wel noodsaaklik is, is dat medici en sielkundiges wat met die behandeling van die cannabis-gebruiker gemoeid is of voorligting t.o.v. geestes- en fisieke gesondheid moet gee, vertroud moet wees met die moontlike gevare wat die gebruik van cannabis kan inhou.

Die brein

Reuben[9] beweer dat die fisiologiese gevare wat aan die gebruik van cannabis verbonde is, nie so ernstig is soos dié wat met die

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