Ministry of Health

EPIDEMIOLOGICAL BULLETIN SEYCHELLES

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Editorial

In previous issues of the Bulletin we have highlighted the epidemiological transition and the growing problem of overweight and obesity as one of the most important factors contributing to the changing pattern of morbidity and mortality. In Bulletin 4 we noted the high prevalence of excess weight in school children. Here we provide some background information on nutrition and characteristics of the patients seen by the nutritionists to reinforce the message that non-communicable diseases are the epidemics of today.

However, we also need to remind ourselves that infectious and parasitic conditions still occur widely. Intestinal parasitic infections have declined over the years: the prevalence of hookworm in children fell from 24% in the first systematic national survey carried out in 1956 to 1.5% in 1998 when the last survey was done. But, as shown in this Bulletin, infections persist and, as might be expected, there are indications of geographical differences in infection rates.

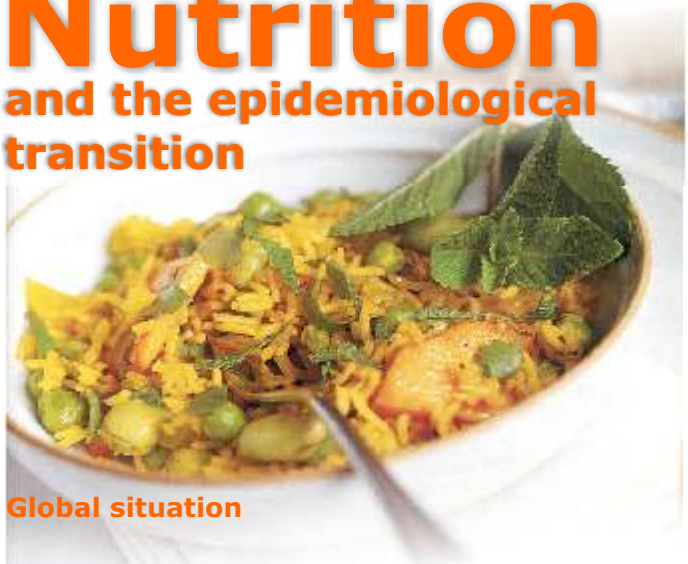
We also present statistics from the blood transfusion services and note the challenges in ensuring adequate supplies. There are also concerns about the indications for blood transfusions and whether existing guidelines are adequate. We are aware that this issue is being addressed within the context of the prevention of transmission of HIV, HTLV-1 and other infections.

The information presented in this issue is based on service statistics rather than on epidemiological studies. The shortcomings and gaps are clearly obvious, and the recent exercise to review the Health Information System, with the participation of the WHO consultant, took note of the weaknesses in data collection, many of which are illustrated here. These include incomplete collection of data, inconsistent (and at times conflicting) reporting of the same statistics by different units, changing the type and range of information collected without consideration of comparability.

While collection of service statistics will improve following this review, it is also important to carry out surveys to get a measure of the prevalence of, for example, intestinal parasites, in the population. Surveys need not be complicated and past experience, again in the case of intestinal parasites, has shown how readily health workers get involved and how well the population respond.

Conrad Shamlaye
Special Advisor to The Minister of Health

Nutrition
and the epidemiological transition



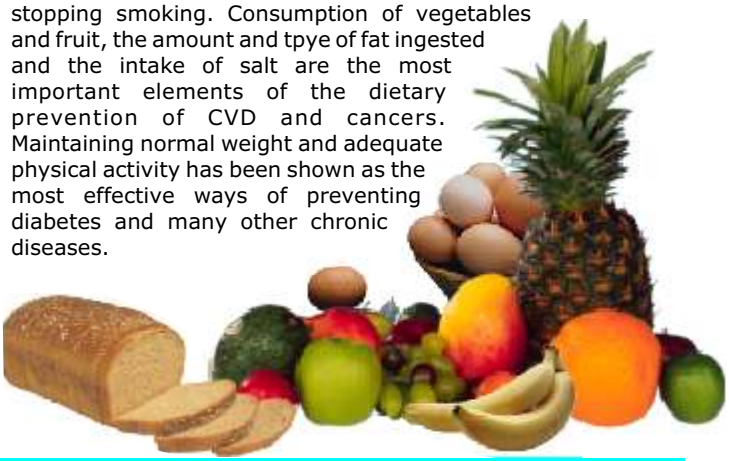
Global situation

Nutrition transition and increasingly sedentary behaviour is occurring at a much faster pace in developing countries than was the case for developed[1]. People worldwide are consuming more foods that are energy-dense high in sugar and/or saturated fats or excessively salty.

Chronic diseases are becoming the most important burden of diseases, particularly among middle-high income level countries. This epidemiological transition is characterized by non-communicable diseases (NCD), such as cardiovascular diseases (CVD), diabetes, obesity, cancer and respiratory diseases, and, according to WHO[1] accounts for 59% of the 56.5 million deaths annually and 45.9% of the global burden of diseases. Conservative estimates show that by 2020, three out of four deaths worldwide will be due to NCD [2].

The scientific evidence is strong that a change in dietary habits and physical activity can powerfully influence several risk factors in the population associated with NCD. More than one billion adults worldwide are overweight, and at least 300 million of these are clinically obese. CVD kill about 12 million people annually.

Up to 80% of cases of coronary heart diseases, 90% of diabetes type-2 cases and one-third of cancers can be avoided by changing to a healthier diet, increasing physical activity and stopping smoking. Consumption of vegetables and fruit, the amount and tpye of fat ingested and the intake of salt are the most important elements of the dietary prevention of CVD and cancers. Maintaining normal weight and adequate physical activity has been shown as the most effective ways of preventing diabetes and many other chronic diseases.



Nutrition and the epidemiological transition

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Obesity in Seychelles

The main nutritional problems facing Seychelles today are chronic in the form of cardiovascular diseases, cancers and diabetes; many of them directly linked to obesity. Obesity is now a massive and pervasive risk factor in our morbidity statistics. According to the [1]Seychelles Heart Study (SHS) II, 30% of the adult population is overweight and 10% is obese. There is apprehension as to how much such prevalence has grown ten years after the SHS a result which will be revealed upon completion of the next SHS. Childhood obesity is also a major concern. According to School Health Program results (2003), 16.6% and 3.8% of Seychellois children aged 5.4 to 15.6 years are overweight and obese respectively. Figure 1, presents the dramatic increase in the prevalence of childhood overweight / obesity between 1998 and 2003.

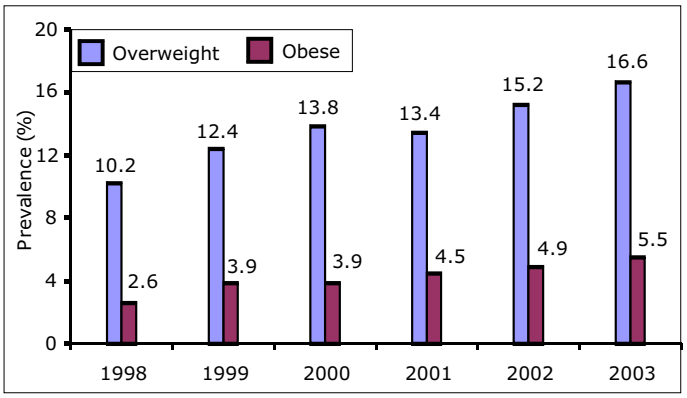


Figure 1: Prevalence of overweight and obesity in children

Dietary changes and increasing physical inactivity are considered as the crucial contributory factors that explain this rise.

Management of obesity

The Nutrition Unit (NU) is one of the bodies combating obesity in Seychelles. Endeavours of the NU have been geared mainly towards public education and dietary treatment, the latter being offered through the five weekly nutrition out-patient clinics conducted by staff of NU. One of these clinics targets overweight/ obese children specifically, while the remaining three clinics see clients suffering from a host of nutrition-related conditions including overweight/ obesity. Clients attending these clinics are self-referred, referred by health professionals or by parents/ guardians in the case of children.

Figure 2 presents the number of overweight and obese clients who were seen in the clinics during 2001 and 2003. The decreasing trend shown does not really indicate a decrease in the number of clients seen in the clinics. Instead, it represents a variation in the way data was collected. For 2001 and 2002, all clients that were seen by nutrition personnel, be it in the clinic or in sessions conducted outside the clinics e.g. Heart Health Club, were included in the statistics. However, since 2003 only clients who were seen in the clinics were included in the statistics; which explains why the values for 2003 are much smaller. What can also be deduced from Figure 2 is that the majority of clients seen in the clinics are overweight/ obese. Since the beginning of this year, a total of 309 clients had been seen in the clinics, 63% of these clients were overweight or obese.

Analysis of obesity cases

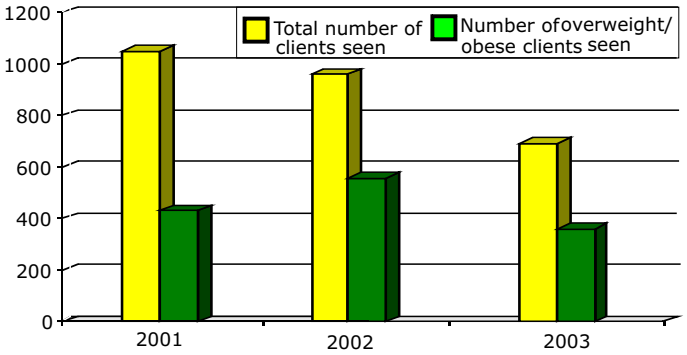


Figure 2: Clients seen in NU during 2001 to 2003

Recently, NU analyzed data on the record cards of 40 of its overweight/ obese clients, pulled out at random. According to the analysis, 75% of clients suffered from other conditions such as cardiovascular diseases, diabetes, back/ knee pain and respiratory diseases. The average number of follow-up appointments given to these clients was five, over a period of at least five months. Despite the fact that most of the clients claimed to have made one or more changes to their diet, only 30% of them engaged in a form of physical activity. This clearly shows the necessity for NU to incorporate an exercise program in its clinics. While an encouraging 60% of clients wanted to lose weight, 40% of such clients showed no interest in losing weight. Interestingly, motivated clients were mostly those who were self-referred.

Figure 3 presents the total amount of weight loss achieved. Although only 65% of clients managed to lose weight, most of these clients lost more than 3% of their total body weights.

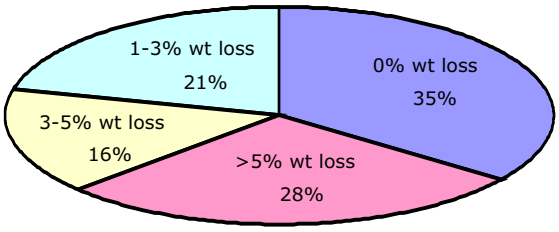


Figure 3: % weight (wt) loss

Weight loss was brought about mainly by reducing rice portions, increasing vegetable intake, eating three daily meals, cutting back on fried snacks, reducing oil in cooking and drinking less high-calorie drinks.

Recommendations

This analysis shows a need for urgent actions to prevent and control obesity particularly in the area of physical activity, public education and policy formulation. It depicts the need to update the NU's record card, establish a database for NU and carry out regular analysis.

References

1. Bovet P, Perret F, Shamlaye C, Paccaud F: The Seychelles Heart Study II. Seychelles Medical & Dental Journal, 1997; 5 (1): 8-24.

2. Bovet P, Madeleine G, Padayachy D: School health Program- results in 2003 and perspective since 1998: February 2004.

Article written by Miss Christina Esther, Clinical Nutritionist.

BLOOD DONATION

BLOOD DONATION

The Global situation

According to WHO, every year, more than 80 million units of blood are collected worldwide. Yet, only 38% of the blood collected comes from the developing countries, which account for 82% of the world population [1]. In the African Region, barely 2.5 million units of blood are collected each year, as measured against an estimated annual need of about 15 million units. However, a recent WHO survey shows that out of 178 countries, only 39 have 100% voluntary and unpaid blood donation.

Among the low and medium Human Development Index countries, 89% rely on family replacement donations (where a member of the patient's family has to replace the units of blood given to the patient) and paid donations. In those countries, the sero prevalence for transfusion-transmissible infections (HIV, hepatitis B and C and syphilis) in blood donors is much higher than in countries with full voluntary, unpaid donations.

Situation in Seychelles

Figure 4, presents the type of donations in Seychelles from January 2002 to December 2003. Out of 2,631 blood donations collected during this period, (54%) was from voluntary/non-remunerated donations, while 46% were from family replacement. In 2001, the WHO Regional Committee for Africa, at its fifty-first session in Brazzaville, adopted the Regional Strategy for Blood Safety. One of the targets set under the strategy is that all countries of the Region should achieve at least 80% rate of recruitment of voluntary non-remunerated blood donors by the year 2012.

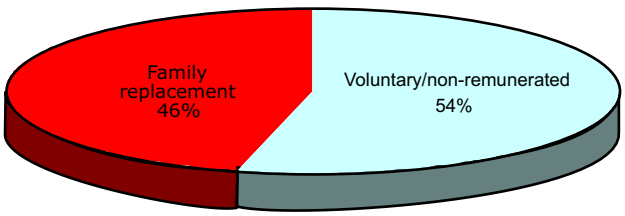


Fig. 4: Type of blood donations (2002-2003)

At the moment, only 10 countries in the African Region have a system whereby blood samples can be taken only from voluntary non-remunerated donors, while a total of 14 countries have, so far, achieved the 80% target of recruitment of voluntary, non-remunerated donors.

Blood donations are collected from people who are regular donors (every 3 months) as well as from people who respond to single donation campaigns such as in workplaces. There is a difference of pattern of age groups as shown in Figure 5, with the tendency that among older age groups are more regular donors.

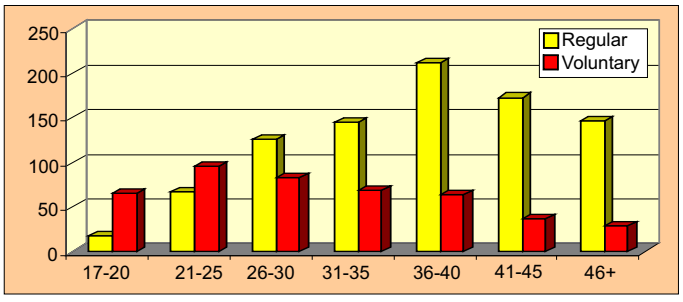


Fig. 5: Blood donations by type and age-groups

Figure 5, shows the age-group distribution of the donors by type of donation and age groups. Seventy six percent of the regular donors were in the age group 31 and above, while the voluntary donors were mainly among young age groups (17-30 years old).

Out of 2,199 blood units (450 ml) provided to the different wards at the Victoria Hospital from 2002-2003 (Figure 6), 27.5% was for female surgical ward (Hermitte Ward), 20% for male surgical ward (D'offay Ward) and 15% to Intensive Care Unit (ICU).

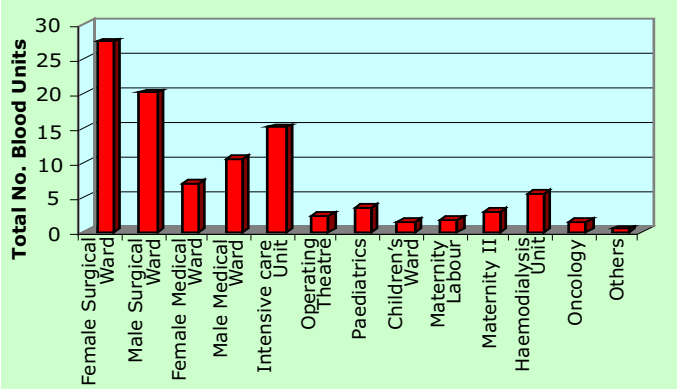


Fig. 6: Blood transfused by units, Victoria Hospital (2002-2003)

Out of 2,631 blood units tested from 2002-2003, 3 (0.11%) were HIV positives, 9 (0.34%) positives to HTLV-1, 2 (0.04%) positives to HBsAG, 8 (0.30%) positives to TPHA and none were positives for HCV.

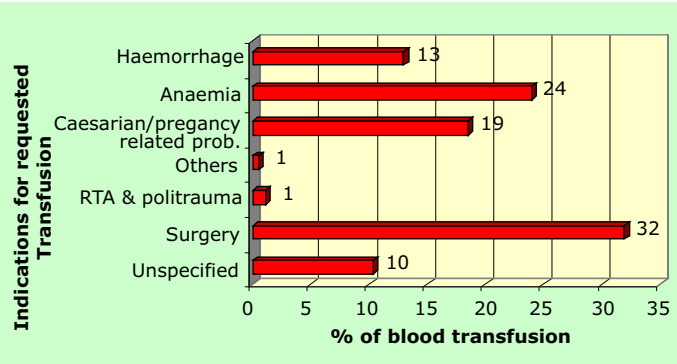


Fig. 7: Indications for blood transfusion

Figure 7, shows that 32% of the indications for requested blood transfusion were surgery, 24% anaemia and 19% pregnancies related problems among other causes.

There is no doubt that efforts have been made to ensure a safe blood transfusion system in Seychelles. However there is a need to formulate the National blood transfusion policy and strategies which will include the promotion of voluntary non-remunerated donation, retention of low-risk blood donors, the establishment of quality systems, the judicious use of blood products and the allocation of adequate budget specifically to blood transfusion services to ensure enough blood to respond to the current and future demand donations to save women, men and children whose their survival depend for donation.

Reference:
1.WHO Blood Safety and voluntary donations- Fact Sheet No279, June 04

Article written by Miss Justina Hollanda

Laboratory Results of Parasitic Infections

Intestinal parasitic infections are distributed virtually throughout the world. Amoebiasis, ascariasis, hookworm infection and trichuriasis are among the ten most common infections in the world [1]. Although mortality from these infections is low, complications are not uncommon and many cases need hospital care, due to diarrhoea, blood loss, malabsorption, impaired school and work capacity among others. The control of intestinal parasitic infections has proved a useful entry point for other primary health care activities, such as health education, child care and nutrition.

Figure 8, presents the percentage of positive tests of stool samples collected from out-patients from different health facilities from the different regions of the country from January to June 2004. Out of 2,447 stool samples analysed during the first six months of the current year the positivity rate was 10%. La Digue (27%), Praslin (17%) and South Mahé (14%) were the regions with higher positive rates.

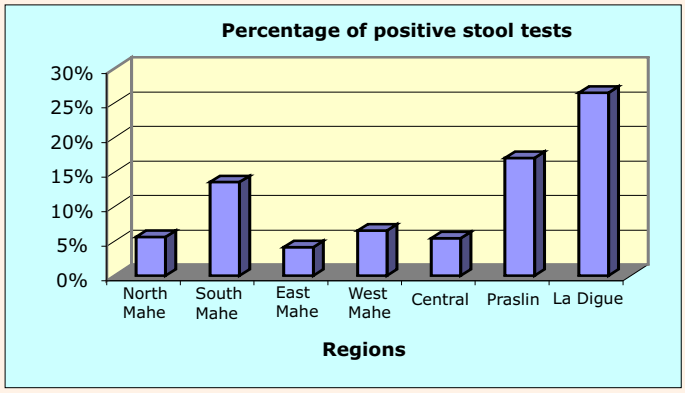
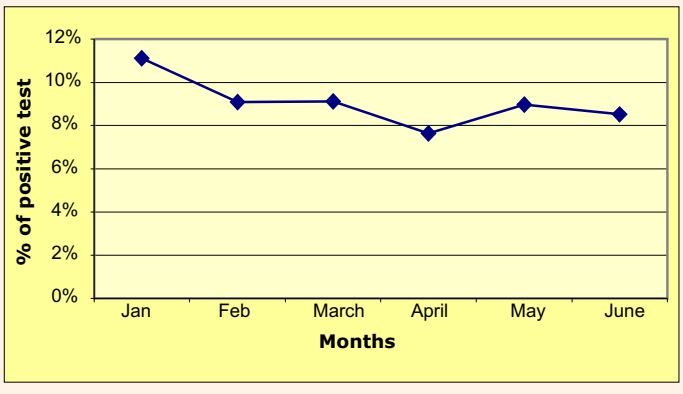


Figure 8.: % of positive test results (N=2,447)(Jan-June 2004)

Out of 108 positive stool results from samples collected from out-patients attending health care facilities from January to June 2004, from 5 regions, 39% were among people aged more than 25 years old, while 28% among children below 5 years. The most common diagnosed parasites were, *Giardia intestinalis* (37%), round worms (21%), *Strongyloides* (19%), *Entamoeba histolytica* (19%) among others (4%).

Figure 9, shows the distribution of positive stools by month from January to June 2004 in the 7 regions, with exception of the Silhouete Island. There is a need to continue to assess the seasonal variations of the parasitic infection by regions.



Since the transmission and persistence of intestinal parasitic infections are influenced by human behaviour and culture, appropriate health educations measures should be implemented at all levels of programme implementation, particularly among school children.

Reference:
1.WHO Prevention & control of intestinal parasitic infections, Technical report Series 749.

(Article written by Mr. David Amedee)

CONFERENCES & MEETINGS

18-23. Oct. 2004	Global Training Network Vaccine Quality	Cape Town South Africa
01-26. Nov. 2004	Medicine Information Services Seminar	Cape Town, South Africa
30 Nov.-03. Dec. 2004	Midwives - Taking the lead in peri-natal care in the 21st century	Jo'Burg, South Africa

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