URBAN CLINICS LUSAKA

J. L. Noak, M. B., Ch. B. (Leeds) D.C.H. (Lon.)

Medical Officer in Charge of Health Education,

Ministry of Health, Lusaka

THERE are five large urban clinics in Lusaka (urban and peri-urban population 150,000 in 1966)[1]. These clinics are open from 8 a.m. to 4 p.m. on weekdays and from 8 a.m. to 10 a.m. on Sundays. They are extremely overworked as is the outpatient department of Lusaka Central Hospital to which clinic patients are referred.

SURVEY

For six weeks during December 1965 and January 1966 a survey was conducted to see exactly what work the clinics and outpatient department were doing, with a view to planning future work.

The survey was necessary because the official clinic returns are based on the patient's complaint and not on the diagnosis.

METHOD

A team of one doctor and one university student worked at each clinic in turn. One patient in ten was examined until all five clinics and outpatients had been covered on every day of the week except Sunday. Although each clinic was visited on every day of the week, the visits were not on consecutive days.

The patients were completely unselected, every tenth one being taken at the registry, interviewed and sent to the Doctor for examination.

The patient was examined by the Doctor and a record made of the diagnosis, and if necessary of a second diagnosis (e.g. a child with an upper respriatory infection needing treatment for conjuctivitis was noted as suffering from both diseases).

The diagnosis was made on one clinical examination alone, i.e. if a patient with upper abdominal pain was found to be suffering from a lower lobe pneumonia he was recorded as a case of pneumonia. The diagnosis of "abdominal pain" was only made when no likely cause was suggested.

All possible precautions were taken to ensure that every tenth patient was in fact examined. :

On three occasions the total number of patients entering the clinic was counted, and it was twice found that one in ten patients had been examined. The third time a mistake in the system of giving forms was discovered; one in twelve had been examined and the numbers were corrected for that clinic (clinic 4).

In all, 1,302 patients were examined at the clinics and 286 at the outpatients department.

The survey took place in the rainy season. In the dry season the relative frequencies of the differetn diseases would not have been the same, and the otat numbers would probably have been considrably larger.

The following picture emerged in the clinics:-

1. Numbers: During four weeks of the survey, 52,300 attendances were made at clinics plus those made at twenty Sunday sessions of two hours each.

This means that on an average every man, woman and child in the Lusaka area attended clinic four times a year.

Of these 1,920 were first attendances. (3.7 %).

The figures also show that if of 53,000 attendances only 1,920 were first attendances, then many people visited clinics very often.

2. Age and sex: of the 1,302 patients examined, 720 (55 %) were over the age of six years and 579 (45 %) were under this age.

Fifty per cent of the patients were males and 49 % were females (1 % unrecorded). In the 1963 census, the population of Lusaka area was 56,150 males (56 %) and 44,100 females (44 %)[2].

3. Travelling distances and transport: The distance a patient had to travel was measured as the round trip "as the crow flies".

Sixty one per cent travelled less than one mile to visit the clinic, 5 % between one and two miles, and 28 % up to six miles. Only 2% travelled more than nine miles, i.e. lived outside a radius of 4½ miles of the clinic. These figures are substantially different from those of Fendall[3] who found at a health centre in Kenya that only 40 % of patients travelled less than 10 miles.

Most of these patients (90 %) walked to and from clinic, 4.5 % cycled and 4 % paid for some kind of transport, e.g. hitch-hike, bus or taxi (1.5 %unrecorded)

4. Income: In an attempt to find out what kind of a home they came from, the patient was asked what was the work of the man of the house. (No attempt was made to assess accurately the family income or the number of dependants).

As can be seen from Table 1, 42 % came from families where the man was either unemployed or a labourer or a domestic servant or a farmer, i.e. where there might be thought to be chronic shortage of money, (less than 250/- per month) 37 % were traders, artisans (e.g. painters) or drivers, and less than 1 % could by any stretch of the imagination, be called professional.

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Clinic record form

N.B. Blank entry means no response. O should be entered if the reply is zero.

Row	Item
1–4	Patient number
5	Rain: O = none; 1 = rain
6	Clinic: 1 = Chilenje; 2 = Kabwata; 3 = Kamwala; 4 = Chinika: 5 = Matero 6 = Outpatients Dept of Hospital.
7	Attendance: Numbers up to 5; 6 = many.
8	Sex. 1 = male; 2 = female.
9–12	AGE Years (nearest year) Months if under 1 year)
13	Language: 1 = English; 2 = Chinyanja; 3 = Bemba; 4 = Tonga; 5 = Other
14–15	Employment: 1 = farmer: 2 = unemployed; 3 = domestic; 4 = artisan; 5 = professional; 6 = teacher; 7 = clerk; 8 = trader; 9 = driver; 10 = police: 11 = labourer; 12 = other.
16	How far: (nearest mile) 0, 1. . . . . . . 9+
17	Means of transport: I = car; 2 = bus; 3 = taxi; 4 = walking; 5 = carried: 6 = bicycle; 7 = other.
18	Cost of transport: (nearest shilling); 0, 1 . . . . . 9+
19–20	Diagnosis I:
21–22	Diagnosis II:
23	How may investigations:
24	X-rays 1 = X-ray
25	How sick: 1 = fit, 2 = off work
26	One or repeated visits: 1; 2 = daily or repeated
27	Referred to hospital for: 1 = investigation ; 2 = advice; 3 = surgical admission 4 = medical; 5 = children's medical; 6 = isolation 7 = maternity; 8 = other.
28	Referred from which clinics: as row 6
29	Reason for attending outpatients, if not referred: 1 = nearer than clinic 2 = "to be examined" 3 = "for X-ray" 4 = "employer sent me" 5 = "police form" 6. = other
30–32	

1. Anaemia	11. Muscle Pains	21. Welfare
2. Burns	12. Pneum. & Bronch.	22. Gynaecology
3. Bilharzia	13. Sepsis	23. Other Infections
4. Diarrheoa	14. Scabies	24. O. B.
5. Dyspepsia	15. Syphilis	25. Measles
6. Eyes	16. Trauma	26. Nervous
7. Surg. act.	17. Urethra disch.	27. Cold surgery
8. Malaria	18. U.R.I.	28. Dysuria
9. Maternity	19. Whoop. cough	29. Post-op
10. Malnut.	20. Antenatal	30. Unclassified

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Table 1

Occupation	No. examined	%	Probable mean income (shillings per month)
Trader, driver and Artisan	464	35	336
Labourer	353	27	220
Clerk, Primary School Teachers	180	14	528
Domestic Servant or Farmer	126	10	98
Police Constable or Sargeant	70	5	490
Unemployed	67	5	—
Professional	12	1	—
Unknown (some unrecorded, some patients did not know)	35	3	— Source Govt. Pay Scales (4)

Note: although there is a minimum wage for domestic servants according to a large number of employers do not pay this and domestic servants still receive a very low wage.

5. Language: Only 12% understood English easily enough to converse in it; 69% spoke Chinyanja but not English; 7% understood Bemba but neither English nor Chinyanja; 4% spoke only other languages (8% unrecorded). This is important when considering instruction or health education.

6. Disease incidence: The percentage of patients suffering from different diseases was remarkably similar in all clinics. As the disease incidence amongst outpatients at Lusaka General Hospital was quite different from that in the clinics it had not been included in this report. The figures in Table II are percentages for all clinics together.

As can be seen from Table II, the commonest complaints were Acute Respiratory infection approximately 27% (U.R.I. 20% ,measles, whooping cough and acute chest infections 7%) Diarrhoea 12%, Sepsis 9% and Trauma 9% 6% suffered from eye conditions

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(mostly acute conjunctivitis). 12 per cent attended for ante-natal examination or infant welfare. Under the heading "Unclassified" sixteen different diseases were noted, the commonest being urticarial rashes.

7. Degree of Disability: Twenty per cent were considered unfit for work or school, regardless of age.)

8. Airborne Infections: It was noted that 354 attendances, i.e. 27% of attendances, were made for airborne infectious diseases, (U.R.I., measles, T.B., whooping cough and "other infectious diseases") As the patients spend a considerable time queuing to get their cards, waiting to be seen by the Medical Assistant sorting patients and waiting for treatment, the cross infection rate must be very large. This rate could be reduced by reducing the time spent by patients in clinic.

9. Preventable Disease: (a) Infective Enteritis—most of the cases of diarrhoea were gastro enteritis which responded to treatment with fluids with or without sulphonamides. As would be expected, this was much more common in children under six years old than in older people—children 106 cases, older people 44 cases; i.e. approximate 18% of the child attendances were for diarrhoea as compared with approximately 6% of the over six age group. :

(b) Sepsis was usually septic skin spots, often associate with scabies.

(c) Whooping Cough—accounted for only 1% of attendances. This is an unusually small number of cases and gives a false picture of the incidence of this disease over a year.

(d) Conjunctivitis—was often associated with running noses. Almost all patients wiped their eyes and noses repeatedly on a dirty cloth.

(e) Malnutrition—six per cent of the children under six years of age had gross malnutrition, i.e. showed three or more of the following signs:- muscle wasting, hair changes, gross underweight, oedema or skin pigmentation.(Davidson and Noak[5] in their survey conducted in Lusaka found that 17% of the children under the age of 5 were judged clinically to suffer from malnutrition. These children were weighed and measured. The cases recorded here were not weighed and are only cases of gross malnutrition).

The presumed income of the parents of 36 patients with malnutrition seen at clinics and 4 seen at O.P.D. were recorded. There seems to be some slight correlation between malnutrition and presumed income. Of the 40 cases seen, 14 came from the houses of labourers and unemployed, 11 from houses of artisans, traders and drivers; only 2 came from houses of clerks and primary school teachers. But it should be noted that police. earning about 490/- per month produced 4 cases and domestic servants and farmers, earning only 98/- pcr month produced only 3 cases. See Table III.

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Table 11

Disease distribution in 1,302 attendances at five Lusaka Clinics

	Over 6 years		Under 6 years		Total	
	No.	%	No.	%	No.	%
Upper Respiratory	87	6.7	171	13	258	19.7
Antenatal and Welfare	82	6.3	76	5.8	158	12.1
Diarrhoea	44	3.4	106	8.2	150	11.6
Sepsis	50	3.8	71	5.5	121	9.3
Truama	100	7.7	19	1.5	119	9.2
Unclassified	46	3.5	33	2.6	79	6.1
Eye Conditions	39	3	34	2.6	73	5.6
Muscle Pains	59	4.5	5	less than 0.5	64	4.9
Measles	9	0.7	43	3.2	52	3.9
Abdominal Pains & gastritis	37	2.8	10	0.8	47	3.6
Bronchitis & Pneumonia	24	1.9	12	0.9	36	2.8
Gross Malnutrition	—	—	36	2.8	36	2.8
Gynaecological	32	2.5	—	—	32	2.5
Scabies	14	1.1	16	1.2	30	2.3
Presumed Malaria	15	1.1	14	1.1	29	2.2
Proved T.B.	21	1.6	4	less than 0.5	25	1.9
Dysuria	18	1.4	4	less than 0.5	22	1.7
Bilharzia (School haemotobium)	19	1.5	1	less than 0.5	20	1.5
Burns	5	less than 0.5	7	0.5	12	0.9
Urethral discharge	11	0.8	—	—	11	0.8
Whooping Cough	1	less than 0.5	10	0.8	11	0.8
Other Infectious Diseases	5	less than 0.5	—	—	5	less than 0.5
Functional Disease	4	less than 0.5	—	—	4	0.5
Gross Clinical Anaemia	3	less than 0.5	1	less than 0.5	4	less than 0.5
Requiring Surgery	2	less than 0.5	2	less than 0.5	4	less than o.5
Post Operative	2	les than 0.5	—	—	2	less than 0.5
Unrecorded	1	less than 0.5	7	0.5	8	0.6

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Table 3

Employment of man of house	Cases of Malnutrition No.	%	% of this wage in sample	Aprox. mean wage in shillings per month
Labourer	13	32	27	220
Artisan etc.	11	27	35	336
Police	4	10	5	490
Domestic or Farmer	3	8	10	98
Clerk or Teacher	2	5	14	528
Unemployed	1	3	5	—
Professional	0	0	1	—
Unknown	6	15	3	—

(f) Scabies—was much more common than would appear from these figures as only wide spread scabies was included in the diagnosis. it was not concentrated in any one township or compound.

(g) Other preventable diseases—although T.B., malaria and bilharzia are preventable they have not been included in this list because their prevention depends far more on public health measures than on what the individual patient can do.

Venereal Disease has also not been included, but of course it is preventable.

COMMENT

A very large number of attendances are made at Lusaka urban clinics each year, and every member of the staff is working to capacity. As the number of attendances is increasing, it is essential to reorganise clinic services to deal with this increase.

Between them, six preventable diseases (diarrhoea, sepsis, scabies, eye conditions, whooping cough and malnutrition) account for 32% of total attendances. There is also a very high cross infection rate at clinics. It can, therefore, be said that about one third of the total attendances can be avoided in future if we have a more efficient clinic service which includes preventive medicine and health education as well as curative medicine.

The effect of reducing this large amount of preventable disease would be to improve the general health of people, to lessen the work load of the clinics so that they can deal with those necessarily sick and to free the clinic staff to give the essential health education.

Immediate improvements in the Clinic Services—fall under five headings.

1. Health Education of patients.
2. Preventive Medicine.
3. More effective treatment of certain conditions.
4. Greater use of long-acting drugs.
5. Use of fewer placebos and greater emphasis on use of necessary drugs.

1. Health Education: There is a crying need for basic health education. It is an essential part of the treatment of disease as well as of preventive and promotive medicine. More health education must be given in the general sessions, e.g. the present practice of wiping eyes and noses on mother's dress or a dirty handkerchief must be shown to pass conjunctivitis around the family.

This advice must be given by every member of the staff, sister, medical assistant, dresser and scrubber, and not only by specialists. Health education is a vital part of treatment, and staff as well as patients must realise its importance and make the effort to give it constantly.

2. Preventive Medicine. The present infant welfare must be extended to embrace all pre-school children instead of only those under one year old as at present. These sessions must be held in the general clinics and by the general clinic staff. This is the only way to keep before them the great importance of promotive and preventive medicine. If the child welfare clinics are carried on separately from the general clinics, the staff of the latter will have no chance to assess the effectiveness of their health education. They will almost inevitably cease to give it and will come to regard curative medicine as a matter of diagnosis, giving medicine and referring patients to hospital.

Davidson [6] points out in his survey that 37% of deaths in the childrens ward occur within 24 hours of admission. He states "the only way to reduce these is to get at the child before he comes to hospital". This can best be done at the under fives session where the mother brings the child before she realises it is ill.

At these sessions. all children can be weighed monthly, early cases of malnutrition found and treated and children who are not thriving can be referred for examination. Here also children can be immunised against whooping cough which can be almost prevented by inoculation of a sufficient number of a healthy population at risk. At present inoculation is confined to those attending infant welfare clinics i.e. under one year. This means that a large majority of the children are not immunised. Demonstrations and films can also be arranged on infant feeding, care of the eyes etc.

Morley's [7] weight chart should be used so that gain or loss in weight can be seen at a glance.

3. More effective treatment: (a) Antenatal clinics—the present system of allowing patients to attend antenatal clinics weekly means that the numbers are so large that urines and blood pressures are not examined regularly and all parents do not get their blood taken for Kahn or haemoglobin estimation.

Each patient should be given a card with the date of her next attendance and should not be allowed to attend before unless she is ill.

(b) Milk distribution—all children with malnutrition (and many more) are given one pint of skimmed milk a day to take home. These children do not gain weight as would be expected if they drank the milk themselves. MacWilliam and Dean[8] found that severe cases of Kwashiorkor after discharge from hospital gained 76% of standard weight in three months and 83% by one year. This does not appear to be happening to a great many children treated for mild Kwashiorkor at clinic. A cup of milk should like any other medicine

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