Utilisation of public health services by caregivers of children from Khayelitsha presenting with acute diarrhoea

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Abstract **Patterns of public sector health service utilisation in relation to severity and weekday or weekend occurrence were identified for children from Khayelitsha with diarrhoeal disease. The current organisation of local services is inappropriate for the provision of basic primary care for these children. Given the inadequate access to appropriate care, caregivers select their health service options rationally. This paper recommends that a 24-hour rehydration unit be established in Khayelitsha to improve the effectiveness and appropriateness of the management of these children.**

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Khayelitsha is a rapidly developing peri-urban settlement about 25 km from Cape Town. Its current population is about 350 000, 80% of whom live in informal housing. Sixty per cent of the residents live on serviced plots, while a further 12% live in backyard shacks and have access to basic services. The remaining 28% are squatters on unserviced land designated as non-residential, and have no immediate access to water and sanitation (D. Harrison — unpublished data). Not surprisingly, acute infectious diarrhoea is a major cause of morbidity and mortality in young children.[1]

Caregivers of children with diarrhoea from Khayelitsha may choose one or more of the following health service options. Non-government health care providers include private medical practitioners, community health workers and traditional healers. The local curative public health services are the day hospitals in Sites B and C, Khayelitsha, while referral is to Red Cross War Memorial Children's Hospital about 20 km away.

Khayelitsha Day Hospital, located in the Site B informal settlement of Khayelitsha, is open 24 hours a day. The hospital is always overcrowded, and despite hospital policy children are sometimes turned away without treatment (Medical Superintendent, Khayelitsha Day Hospital — personal communication). The high incidence of trauma after-hours means that children, often with less dramatic ailments, are frequently relegated to the back of the queue.[1]

There is no 24-hour rehydration unit in Khayelitsha, and the room intended for this purpose at Site B Day Hospital is currently used for other purposes.

The Red Cross Hospital serves a catchment area which includes Khayelitsha, Nyanga, Crossroads, Guguletu and Langa, and most of the poorer areas of the Cape Flats.[2] All attending children are initially seen in the outpatient clinic, and those requiring rehydration are admitted to ward A9.

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Purpose of the study

The study was conducted to inform health planning with regard to two perceived problems: (*i*) that significant preventable morbidity and mortality from diarrhoeal disease continue among the children of Khayelitsha, despite a relatively large number of health care providers; and (*ii*) that the public health service referral system for children from Khayelitsha is not optimally used — neither by caregivers nor by the health service itself.

While health personnel recognise that the roots of these problems are complex, there is a common perception that mothers regard the service provided at Red Cross Hospital as superior to local options and that many, if not most, avoid the local service. Consequently, Red Cross Hospital manages many children with diarrhoea who should be treated at primary care level in Khayelitsha. The study attempted to explore these commonly held perceptions by: (*i*) describing the patterns of utilisation of public sector health services by children from Khayelitsha presenting with diarrhoeal disease; and (*ii*) identifying the reasons for these patterns. It was conducted over the course of 1 week during mid-summer, when the incidence of diarrhoeal disease is high (17 - 23 February 1992).

The three components of the study included documentation of the attendance of every child less than 2 years of age with diarrhoea (and no other illness warranting hospital admission) in Khayelitsha, scrutiny of outpatient forms at Red Cross Hospital, and interviews with caregivers at Site C Clinic and A9 rehydration unit at Red Cross Hospital.

Subjects and methods

All attendances of children from Khayelitsha less than 2 years of age, who presented with acute diarrhoea to curative public sector health services in Khayelitsha or Red Cross Hospital, were documented during the study period of 1 week. Children presenting with concomitant admissible illness were excluded from the study.

Practitioners in public services in Khayelitsha were issued with a daily tickchart and requested to record each visit of a child fulfilling the sample criteria. The time of visit and degree of dehydration of each child were also recorded.

Information regarding visits to Red Cross Hospital was derived from computerised outpatient data recorded by the attendant doctor. Information on those children from Khayelitsha who were subsequently admitted to the rehydration unit (A9) was collected daily, and folders were examined to ascertain the degree of dehydration at the time of admission.

Results

Public health service utilisation

A total of 210 children from Khayelitsha less than 2 years of age presented to curative public health services in Khayelitsha and at Red Cross Hospital with diarrhoeal disease during the week under review. These 210 children accounted for 267 visits to the curative public

health sector, as a result of transfers to Red Cross Hospital and repeated local visits (Table I).

Weekday attendances averaged 45,6 children, with weekend attendances averaging 19,0 daily.

A far greater proportion of caregivers elected to take their children straight to Red Cross Hospital over the weekend (56,9%) compared with weekdays (25,8%).

Two-thirds of all public service attendances were at the two institutions in Khayelitsha, while the remaining children attended Red Cross Hospital. Here, children from Khayelitsha constituted 22,5% of all cases of acute diarrhoea seen in children less than 2 years of age during that week.

Of the 86 children from Khayelitsha attending Red Cross Hospital, 81% were self-referred compared with 66,5% of children from other areas. This constituted a significant difference in referral patterns between Khayelitsha and other areas ($\chi^2 = 6,85$; $P = 0,01$).

TABLE I.
Utilisation of curative services in Sites B and C and at Red Cross Hospital during 17 - 23 February 1992

Public health service	No.	% of total
Khayelitsha (total)	181	67,8
Site B Day Hospital	111	41,6
Site C Nolungile Clinic	70	26,2
Red Cross Hospital (total)	86	32,2
Self-referral	70	26,2
GP referral	2	0,8
Traditional healer referral	1	0,4
Public health service referral	13	4,9

Of the 69 caregivers interviewed in the A9 rehydration unit, 46 (66,7%) had visited another health care provider or institution before presenting at Red Cross Hospital. Only one-third had used Red Cross Hospital as the point of first contact with health services for this episode of diarrhoea. Many (21) of the mothers interviewed in A9 had consulted health care providers outside Red Cross Hospital first and had been sent home — only to seek medical attention again for the same complaint.

Severity of dehydration

Of the children from Khayelitsha admitted to A9, 78,3% were less than 10% dehydrated at the time of admission. The vast majority of children presenting to local services were less than 5% dehydrated. Only 13 (17,2%) had to be transferred to A9. By contrast, 36 (65,5%) of the self-referred children from Khayelitsha seen as outpatients were more than 5% dehydrated.

Discussion

Conclusions

Four conclusions may be elicited from these results:

1. Health services are particularly inaccessible to children over weekends. This problem is compounded by consequent overcrowding on Mondays, resulting in longer waiting times and people being turned away. Although this drop in attendance over weekends is due in part to the fact that Site C clinic only operates 5 days a week, attendance at Khayelitsha Day Hospital also dropped 4-fold on Saturday and Sunday.

2. The majority of children from Khayelitsha with diarrhoea use a local service option first. The perception that most mothers come straight to Red Cross Hospital appears to be fallacious.

3. Caregivers make repeated visits to health services for the same episode of diarrhoea. This is due both to a prevailing perception among mothers that oral rehydration solution is meant to cure diarrhoea, and to the fact that the local service is incomplete. The current organisation of health services for the management of diarrhoea encourages the belief that admission to A9 rehydration unit is the ultimate treatment for diarrhoea. In the absence of adequate rehydration facilities in Khayelitsha, it is not unreasonable for mothers to use the option that appears to offer a more comprehensive service.

4. It is likely that at least 80% of all children from Khayelitsha currently admitted to A9 could be managed by oral or nasogastric rehydration in a local unit, assuming that children less than 10% dehydrated could be managed without intravenous rehydration.

Recommendations to health planners

The implications of these conclusions apply as much to other regions of South Africa as they do to Khayelitsha.

1. A 24-hour rehydration unit should be opened in Khayelitsha without delay. Oral and nasogastric rehydration of children with diarrhoeal disease should form part of the core primary care services provided locally. Such a unit should be simple, modestly staffed and with rapid means of referral for children warranting intravenous rehydration.

2. Health services should be re-organised to provide an integrated, comprehensive service for children in which far greater use is made of nursing practitioners. This should ensure speedy and efficient management of children with diarrhoea who would otherwise spend hours in the queue with adults waiting to be seen by a doctor.

3. All health services to preschool children at primary care institutions should be free of charge — to increase the accessibility of care and enhance the incentive to use local services.

4. Health education regarding diarrhoea should promote oral rehydration solution (ORS) within a context of greater understanding of the disease process by caregivers of children with diarrhoea. Caregivers should be aware that ORS is not a wonder-cure for diarrhoea, but the way to prevent the complications of the disease.

Studies in Bangladesh have demonstrated that utilisation of health services by children with diarrhoea is negatively affected by increasing distance from the health centre, and by payment of user fees.[3] The establishment of peripheral rehydration units in regions of Bangladesh reduced their crude death rates by between 7% and 15%, while the cost per death averted was shown to be far lower than for therapeutic approaches adopted in more developed countries.[4] Similarly, the long-run average cost per patient at a small, local rehydration centre was found to be considerably less than the cost of care at a large centre.

Health planners should not expect any changes in utilisation patterns until the service is 'children-friendly' — one which responds to their special need for rapid attention, and in which there is time to explain the natural course of diarrhoeal disease and the function of ORS. Unless this is achieved, mothers will continue their wild-goose chase for a cure.

The solution to the inappropriate *use* of services lies in the *provision* of appropriate services. The answer lies not in restricting hospital utilisation at tertiary level, but in providing adequate, accessible services locally. Local re-organisation of the existing service can go a long way towards making it more 'user-friendly'.

We cannot encourage local utilisation until there are adequate local facilities. To do so would increase frustration and further impair the credibility of public sector health services. People will use a primary care service if it provides a *complete* primary care service — hence the urgency of a 24-hour rehydration unit in Khayelitsha.

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