

# The social impact of Mseleni Joint Disease

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## Curriculum vitae

David Mann trained at Cambridge and St George's Hospital, London. Dr Mann qualified as a medical practitioner in 1971, and completed a General Practice training scheme, and gained the D Obst RCOG (Obstetrics) in 1975, and DA (Anaesthetics) 1976, in London. He moved to Mseleni in October 1977, where he worked as Medical Officer, then Medical Superintendent, until 1984, in association with the Africa Evangelical Fellowship. He is at present working with the Africa Evangelical Fellowship in a rural Health Centre in Oyem, Gabon.



## Curriculum vitae

Victor Fredlund trained at St George's Hospital, London and qualified in 1979. He has been in rural hospital medicine at Mseleni in association with the Africa Evangelical Fellowship since 1981, and is at present Medical Superintendent at Mseleni.

This paper presents a brief summary of the work done at Mseleni in conjunction with the National Council For Care Of Cripples In South Africa and the Natal Cripples Care Association who provided a vehicle and paid a driver/field worker. The emphasis of this paper is to point out the considerable hardships which co-exist with, and are aggravated by, Mseleni Joint Disease. This applies not only to individual sufferers but also to the whole community where it is prevalent.

## Summary

*An extensive survey was done at Mseleni and the emphasis of this article is to point out the hardships which co-exist with, and are aggravated by Mseleni Joint Disease – for the individual as well as for the whole community.*

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**KEYWORDS:** Osteoarthritis; Joint Diseases; Activities of Daily Living; Socioeconomic Factors; Education; Pensions; Family Size

## Social background

In order to understand the social effects of the disease certain facts need to be born in mind:

### Household Unit

Households vary in size from one member up to twenty or more (the extended family). These households function socially and economically as a unit and it is important to consider not only the problems of individuals but also of the household units.

### Importance of Women

The menial tasks of daily family living are largely undertaken by the women and girls. Collecting water and wood, hoeing in the fields, cooking and washing are all traditionally female tasks. This must be borne in mind when considering the impact of the high prevalence of the disease among women.

### Economy

The three elements of the economy are shown in Fig 1. The relative importance of each element varies. In years of poor harvest, gathering becomes relatively more important. In the case of those people who are disabled or elderly and unable to perform the work involved in self-sufficiency and gathering, cash economy becomes more important.

### Settlement Pattern

The people live in distinct communities but not in



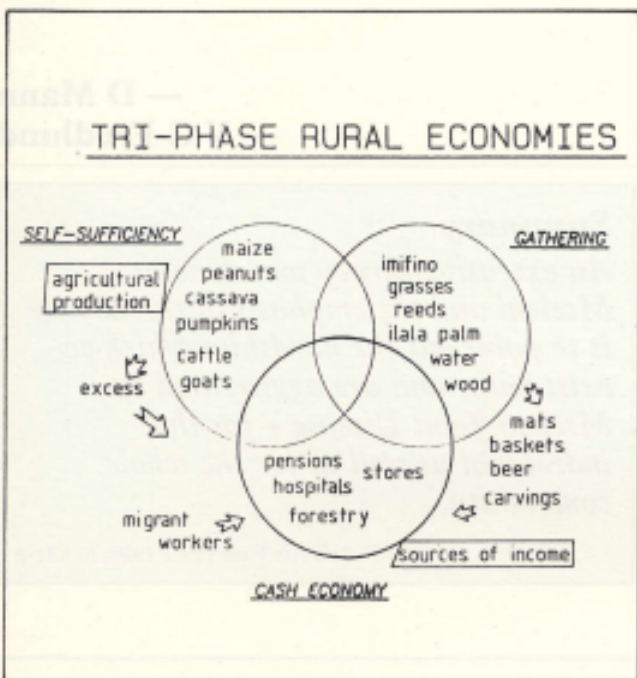


Figure 1: Showing the three elements of the economy (after GP Lind)



Figure 2: Map of Maputaland showing major communications, rivers and lakes. The area in which Mseleni Joint Disease (MJD) is found is shown as is the region in which the current survey was undertaken.

villages. Homes are scattered over a wide area, and this makes the provision of some facilities more difficult — particularly water, but also health, schools, shops, transport.

## Findings

These are based on a 50% sample of 274 neighbouring homes which were visited in the area shown on the map (Fig 2). The important findings relative to the social problems are considered below.

### 1. Female Preponderance

Females are affected more than males in a ratio 5:1 (Fig 3).

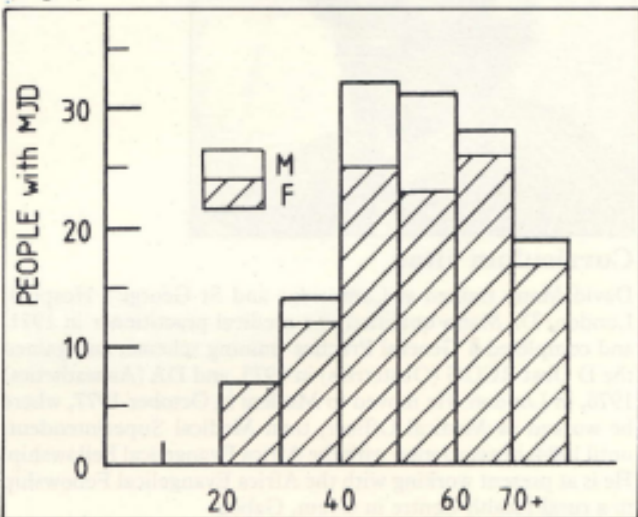


Figure 3: Age distribution of MJD for both sexes. Women are afflicted more than men (in a ratio of 5:1).

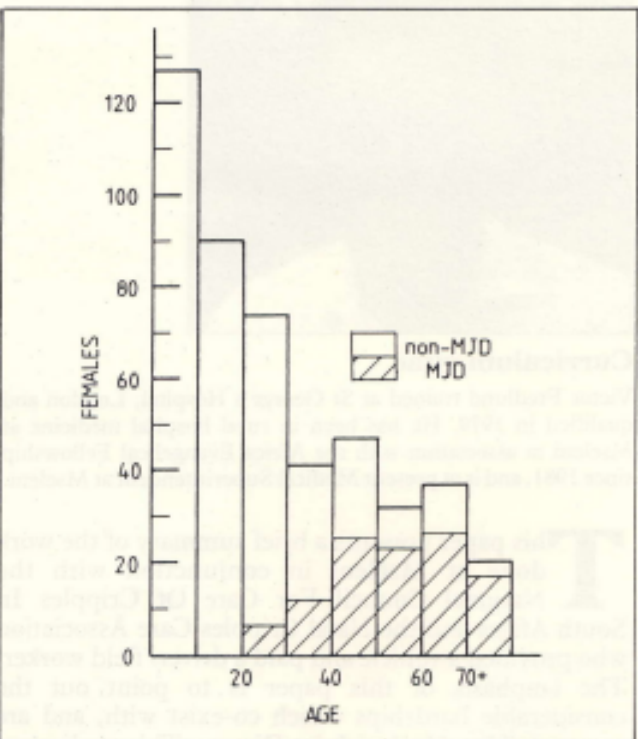
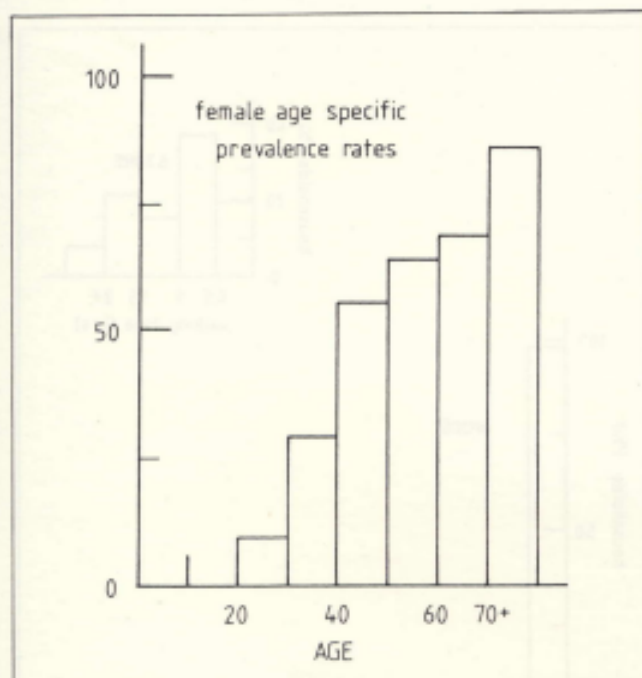


Figure 4: Age distribution of females resident in all households showing the distribution of MJD cases.



**Figure 5:** Increased prevalence of MJD in females with age.

**2. High Incidence**

The high incidence in females can be seen from Figs 4 and 5. Fifty-eight percent of women over 30 years have MJD. Although the incidence in the elderly women is very high, 63% of all sufferers are below old age pensionable age.

**3. MJD Households Have More Old People**

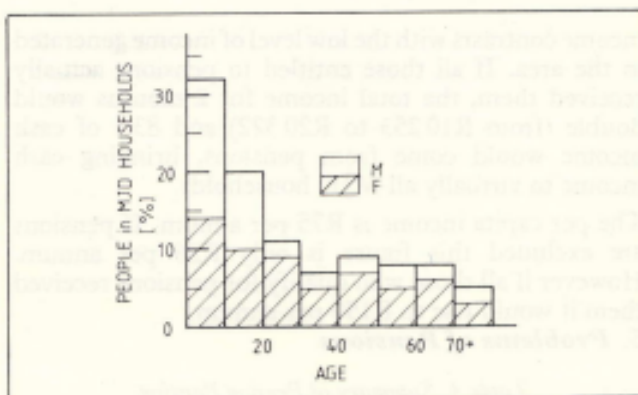
Households were termed MJD households if they contained one or more member with MJD, or non-MJD households if there were no sufferers. A household with an MJD sufferer is clearly at a disadvantage because of the dependence of the sufferer on others for some of the daily tasks. Figs 6 and 7 illustrate that these MJD households also have a higher percentage of old people — increasing the burden of these households even more.

**4. Resources and Income**

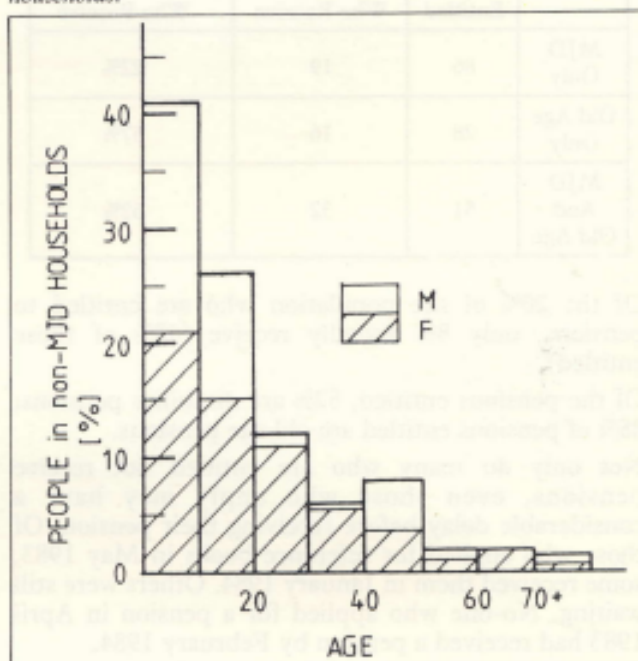
*Table 1. Poverty as assessed by cash income and livestock showing the effect of pension income.*

		Livestock	Cash Income	Both	Neither
Pensions excluded	MJD Households % n = 48	19	10	17	54
	Non-MJD Households % n = 90	10	40	12	37
Pensions included	MJD Households % n = 48	8	40	28	24
	Non-MJD Households % n = 90	6	48	17	29

Table 1 shows the percentage of households with livestock, cash income, both of these and neither of



**Figure 6:** Age distribution of people resident in MJD households.



**Figure 7:** Age distribution of people resident in non-MJD households. The higher proportion of older people in MJD households is evident.

these. Those with neither are considered totally destitute. Excluding pensions 54% of homes with MJD are totally destitute and 37% of non-MJD households. Even with pensions included, 24% of MJD households are still destitute and 29% of non-MJD households. 73% of MJD households have no cash income except pensions.

*Table 2. Sources of cash income in 138 households for a 2 month period.*

Source	Amount	Percentage
Total pension income	R6 713	66%
Income from migrant workers	R2 144	21%
Locally generated income	R1 396	13%
<b>Total</b>	<b>R10 253</b>	<b>100%</b>

The sources of regular cash income for the community are shown in Table 2. The high dependence on pension



income contrasts with the low level of income generated in the area. If all those entitled to pensions actually received them, the total income for 2 months would double (from R10 253 to R20 322) and 83% of cash income would come from pensions, bringing cash income to virtually all MJD households.

The per capita income is R75 per annum. If pensions are excluded this figure is only R26 per annum. However if all those who qualify for pensions received them it would rise to R150 per annum.

## 5. Problems of Pensions

Table 3. Summary of Pension Position.

	Number Entitled	Number Who Receive	% of Entitled Who Receive
MJD Only	86	19	22%
Old Age Only	28	16	57%
MJD And Old Age	51	32	62%





Of the 20% of the population who are entitled to pensions, only 8% actually receive (40% of those entitled).

Of the pensions entitled, 52% are disability pensions; 48% of pensions entitled are old age pensions.

Not only do many who are entitled not receive pensions, even those who apply may have a considerable delay before receiving their pension. Of those who applied for reference books in May 1983, some received them in January 1984. Others were still waiting. No-one who applied for a pension in April 1983 had received a pension by February 1984.

## 6. Housing

The types and number of dwellings in each household was noted in the questionnaire. Values (called housing units) were assigned to each type of house as follows:

	= 1
	= 1
	= 2 (thatch)
	= 3 (corrugated roof)

These values were intended to reflect the number of rooms available and the cost of construction in terms of money or labour.

A comparison was made between households with neither cash income nor livestock (totally destitute)

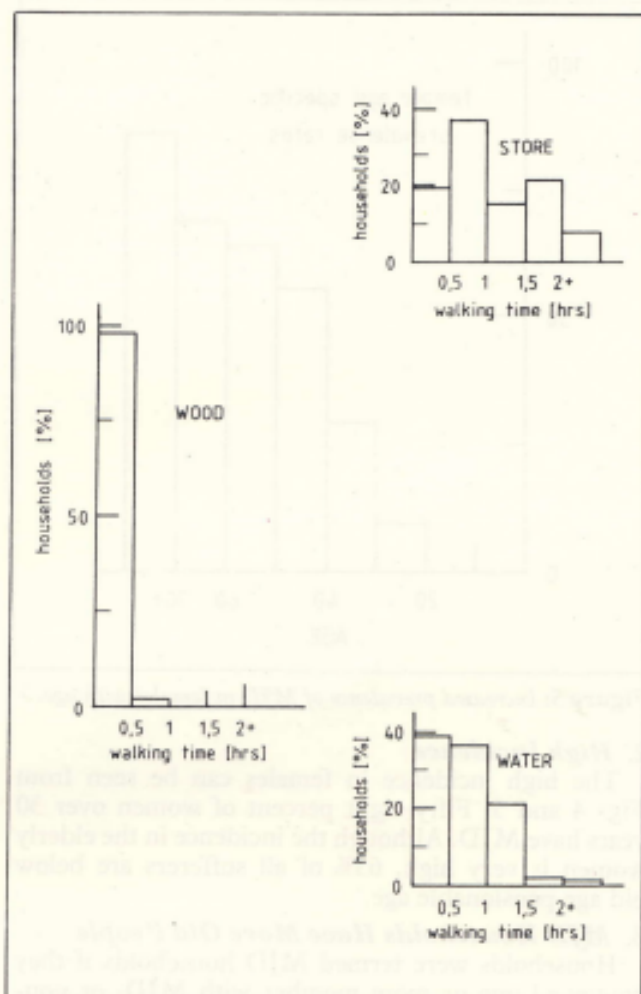


Figure 8: Distance assessed by a one way trip to a store, to collect wood and to fetch water is shown. The most serious problem is the long distance to water supplies.

and households receiving pensions. The number of people per housing unit in a pension household was 1,43. The number of people per housing unit in a destitute household was 1,97. The difference between these values was shown to be statistically significant at the 0,1% level.

This again highlights the importance of pension income in the community.

## 7. Problems of daily living

Distances to water and wood supplies and stores are given in Fig 8. 60% of households are more than 1 hour round trip to water, whereas very few households are far from wood. Nearly half the households are 2 hours or more round trip from the store.

Table 4 shows the percentage of women in different categories who indicated that they performed various tasks as shown. Comparison of the two old age columns indicates that MJD sufferers are less able to collect water or gather wood than non-MJD. This shows that MJD exacerbates the problems faced by the elderly. The survey indicated that a number of people in this category had to pay for water and wood collection.

Table 4. Performance of daily tasks by women.

People performing tasks	Old Age (over 60) n = 58		Disabled (under 60) n = 60	
	Non-MJD (n = 15)	MJD (n = 43)	MJD — limp or better (n = 21)	MJD — 1 stick or worse (n = 40)
Water collection %	24	7	83	17
Wood gathering %	47	27	96	47
Cooking %	53	52	100	75

This was particularly true of old MJD sufferers living alone.

Comparison of the younger MJD sufferers (below 60) shows that whereas in milder or early cases women still perform daily tasks, once the disease has progressed to the stage where one stick is required, this ability is severely limited. It was noted that 2/3 of the MJD sufferers under 60 were already in the 1 stick or worse category. A similar proportion of these younger MJD sufferers collect water and gather wood as old age pensioners who do not have MJD.

### 8. Problems of Schooling

All children aged 6-18, whether at home or not, were included in the schooling survey. In addition older children still at school were included.

It was found that 62% of children surveyed in non-MJD households were in school compared to only 41% of children in MJD households. The distribution of children from sub A (first year) to standard 10 is shown in Fig 9 for both MJD and non-MJD households. The average age per standard is also shown.

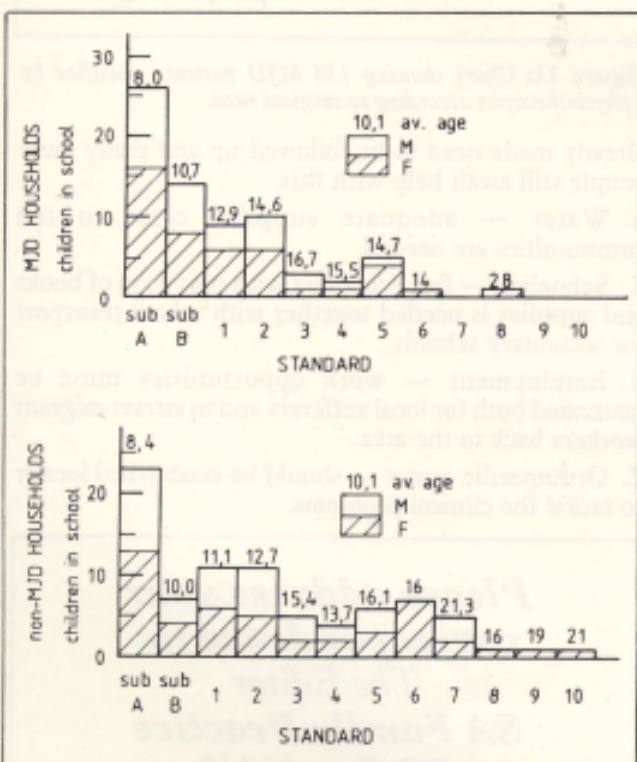


Figure 9: The distribution of children from MJD households and non-MJD households who are in school according to educational standard. The average age of children in each standard is given; 41% of children in MJD households are in school compared to 62% in non-MJD households.

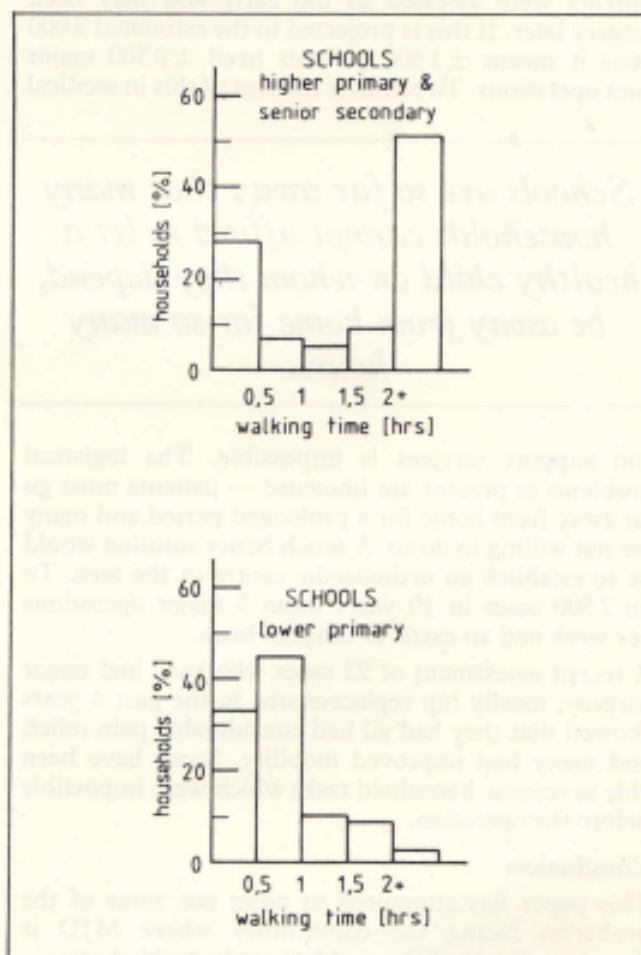


Figure 10: Difficulties in schooling - distances. Distance as assessed by time for a one way trip is shown. The problem for higher primary and secondary school children is clear.

Fig 10 shows the distance of schools from home. It can be seen that whereas 80% of households are within an hour's walk of the lower primary school, 50% of households are more than 2 hours' walk from higher



primary and secondary schools; 50% of children in higher primary or secondary schools must therefore either spend 4 hours or more walking to and from school each day, or board nearer school. In either case their ability to help with tasks in the home is considerably lessened. The household may be very dependent on these children for doing tasks and this may partly explain why few progress to higher classes. To send an older child to school may therefore not only be a financial sacrifice but also limit further the ability of the household unit to cope with tasks of daily living.

Cost of schooling (including school clothes, books, fees) is at least R40 for first year, R120 for standard 5, R180 for standard 9. This should be compared to the per capita income of R75 per annum.

### 9. Surgical Needs (see Fig 11)

Of 138 patients assessed by a physiotherapist 69 needed a total of 117 major joint operations. A further 26 patients were assessed as too early and may need surgery later. If this is projected to the estimated 3 000 cases it means  $\pm 1500$  patients need  $\pm 2500$  major joint operations. To estimate the cost of this in medical

*Schools are so far away that many households cannot afford to let a healthy child on whom they depend, be away from home for so many hours.*

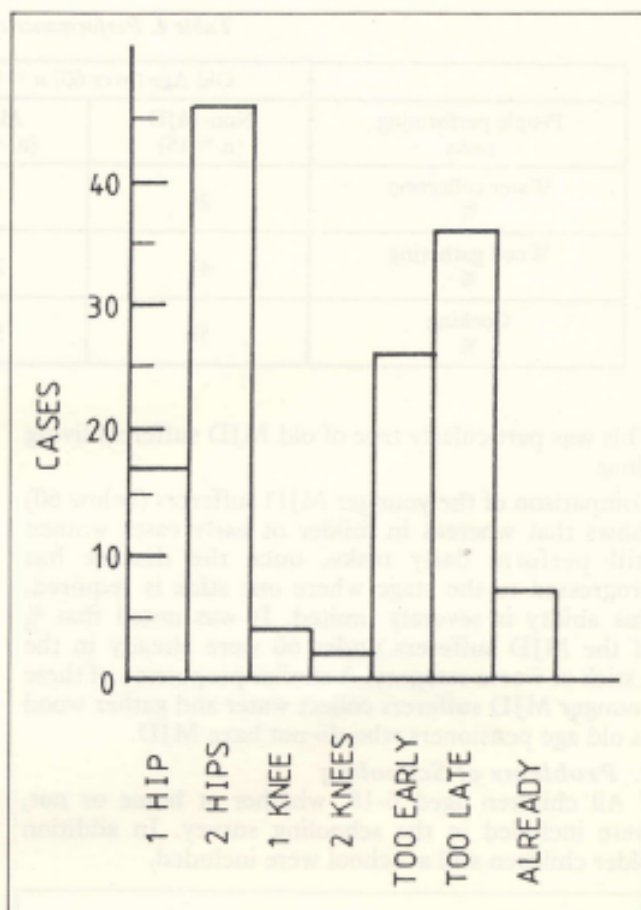
and support services is impossible. The logistical problems at present are immense — patients must go far away from home for a prolonged period and many are not willing to do so. A much better solution would be to establish an orthopaedic centre in the area. To do 2 500 cases in 10 years mean 5 major operations per week and an extra 40 hospital beds.

A recent assessment of 22 cases who have had major surgery, mostly hip replacements, in the past 4 years showed that they had all had considerable pain relief, and many had improved mobility. Some have been able to resume household tasks which were impossible before the operation.

### Conclusion

This paper has attempted to point out some of the problems facing the community where MJD is prevalent. Some of the problems to be tackled are:

1. Social welfare services — there is no social worker at Mseleni and the nearest magistrate's office is 65 km away.
2. Field work — the vehicle and driver sponsored by the Cripple Care Association have done invaluable work, but more are needed.
3. Reference books and pensions — applications



**Figure 11:** Chart showing 138 MJD patients classified by a physiotherapist according to surgical need.

already made need to be followed up and many more people still await help with this.

4. Water — adequate supplies close to the communities are needed.

5. Schooling — free schooling with provision of books and supplies is needed together with school transport for secondary schools.

6. Employment — work opportunities must be generated both for local sufferers and to attract migrant workers back to the area.

7. Orthopaedic centre — should be established locally to tackle the clinical problems.

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