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Letters to the Editor

CALENDAR (BLISTER) PACKS FOR MULTIPLE DRUG THERAPY IN LEPROSY: AN INEXPENSIVE, LOCALLY-PRODUCED VERSION

Sir,

I was interested to see the report in *Lepr Rev*, (**57,** 2) June 1986, concerning the bubble package for MDT designed by Ciba-Geigy. May I draw your attention to a calendar pack developed by The Leprosy Mission for use in Southern Africa. Figure 1 (overleaf) shows the packs we have developed for use in Swaziland.

These packs were developed for two reasons:

1 When MDT, according to WHO recommendations was adopted in 1982, Lamprene was only available in capsules of 100 mg. This meant that patients receiving triple drug therapy for multibacilliary leprosy would have to remember to take Lamprene on alternate days to reach the daily recommended dosage of 50 mg. There was concern that despite careful instruction from clinic personnel, some patients would take the 100 mg capsules on a *daily* basis, as with the Dapsone tablets, leaving them with no Lamprene for the remaining 2 weeks of the month.

2 It appeared that despite full verbal and written instructions to clinic personnel, some peripheral workers had difficulty in counting out pulse doses correctly. There was also a tendency for some personnel to issue drugs in bottles as supplied by manufacturers, with the result that some patients received daily treatment sufficient for a period of 3 months, missing the intervening pulse doses.

Our calendar packs eliminated drug counting on the part of both patients and peripheral workers.

These packages are extremely cheap to make and no special equipment is required once they have been printed. Cardboard of any suitable thickness may be used. Different colours are employed to distinguish treatment for paucibacilliary and multibacilliary patients. Different colour tones could be employed to distinguish lower doses for children.

Polythene tubing manufactured for water-ice 'lollies' is used for the 'bubbles'. The exact width (normally 40 mm) and grade of tubing may vary without affecting packaging. The tubing is cut into suitable lengths (about 50 mm) with scissors or heat-sealing guillotine if available. The drugs are put into the open-ended sachets which are then doubled over and stapled to the card.

A full set of dispensing instructions are printed on the back of the card. This saves personnel the bother of consulting manuals for instructions. Experience suggests that such separate instructions are seldom read and often lost. Peripheral clinic staff frequently rotate. New personnel may be unfamiliar with leprosy treatment and instructions must therefore be readily available. Most of our patients cannot read and would therefore not benefit from written instructions.

Reply-paid postcards giving details of the patient and his place of treatment are stapled to the calendar pack. When the patient reports to the clinic, the pulse dose sachet is torn from the top of the card and the patient swallows the contents in the presence of the peripheral worker, who enters the date on the postcard and detaches it from the calendar pack.

These postcards are returned to the programme administrator. Where a postcard is not received for a patient he is presumed to have defaulted and a field worker is despatched to contact both clinic and patient.

0305-7518/87/058085+05 $01.00

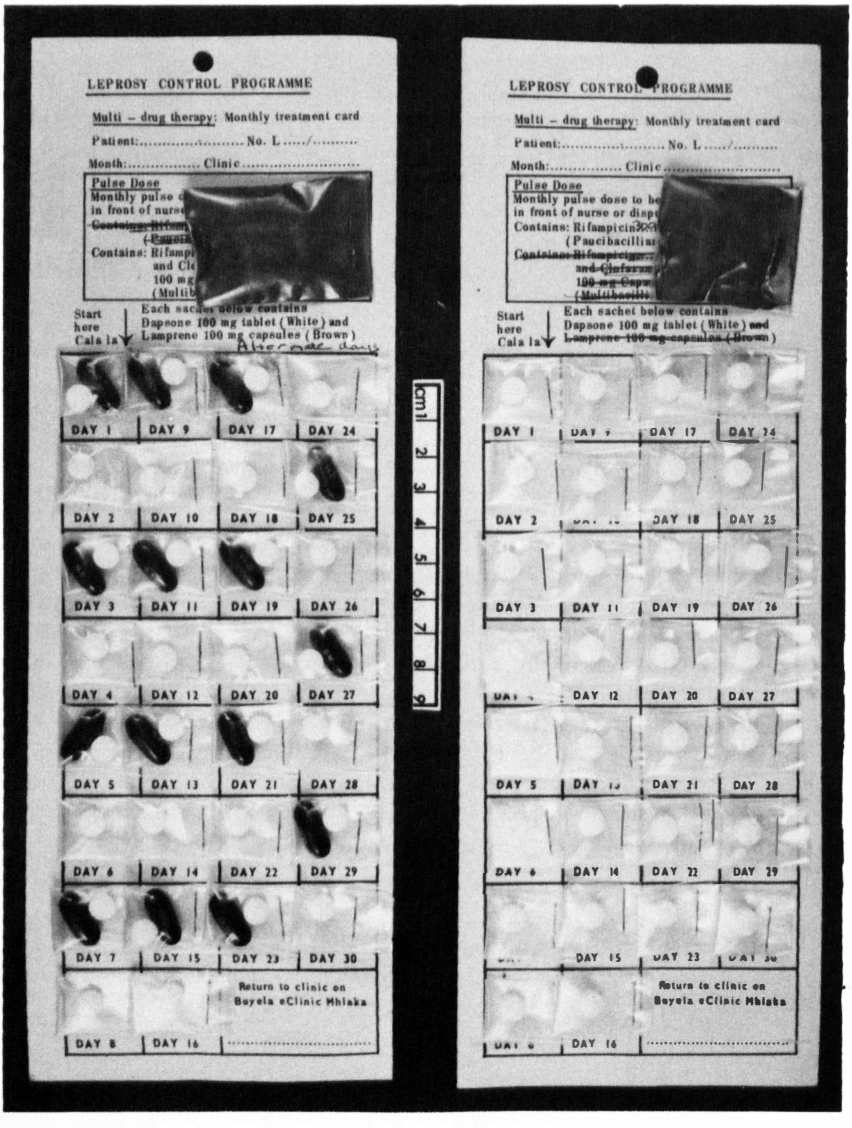

Figure 1. Calendar (blister) packs for multiple drug therapy in leprosy. *On the left* is the pack for the treatment of multibacillary leprosy, using daily (unsupervised) dapsone and clofazimine in a dose of 100 mg 3 times weekly, the days of the week going vertically downwards. The monthly (supervised) dose of clofazimine and rifampicin is in the plastic bag, upper right, alongside 'pulse dose'. (The discolouration is artificial due to damage in posting to the UK.) *On the right* is the pack, of a distinctively different colour, for the treatment of paucibacillary leprosy, using daily (unsupervised) dapsone and monthly (supervised) rifampicin.

The calendar pack is taken home by the patient who tears a sachet from it each day and (hopefully) swallows the contents.

Many of our rural patients share single rooms with relatives at night. To provide clear space during the day, belongings are packed into steel trunks which are then stacked in a corner. When

drugs were issued in bottles, it was found that patients stored these bottles in their trunks, which had a habit of being at the bottom of the stack, with consequent detrimental effects on compliance. Holes are punched in the top of the calendar packs and patients are asked to hang the packs on hooks on the wall out of the reach of children. Local rural dwellings are poorly ventilated so there is little risk of the drugs being exposed to excessive light. This simple change has had a positive effect on compliance. The patient has easy access to his drugs and it is also a simple matter for field workers to examine the pack during home visits.

Drug management is greatly facilitated by these packs, which are issued to clinics for specific patients for a few months at a time. Possibilities for incorrect dispensing and abuse are curtailed.

The packs are easily adapted to different conditions and regimes. The treatment of reactions, where for example increased doses of clofazimine are needed, is easily provided for by these packs. These packs are readily adapted for the dispensing of prednisolone, which is often available only in 5 mg tablets—a problem for patients who cannot count and who may be on daily prednisolone doses of 50 mg.

Hard data as to the efficacy of these packs versus other methods of dispensing MDT is lacking, but compliance has improved by about 15% and verified clinic attendance in excess of 80% has been maintained using these packs. The assessment of daily compliance at home is more difficult and subjective, but to date we have no evidence of patients tearing sachets from the packs to falsify compliance.

Directors of large programmes may be put off the introduction of such packs because of the amount of labour entailed. However, this is a task with which many in-patients are able to help. Teams of school children may also be organized with little difficulty to package drugs.

During the SADCC conference hosted by LEPRA in Lilongwe, Malaŵi, in May 1986, a few of the delegates felt that these packages might be of value in their programmes. I am therefore publicising the idea through your journal in the hope that they will be of benefit to programmes in other continents.

The Leprosy Mission (Southern Africa)
PO Box 89527
Lyndhurst JHB 2106
South Africa

L A WISEMAN