

NOTES & REFERENCES

Some general notes on the terms and conventions used in this book.

THE POOR

It is difficult to measure poverty and the numbers affected by it. The World Bank estimates that about 800 million people are living in what it calls "absolute poverty", and probably as many again are only a little better off. The majority live in rural areas, and the greatest concentration is in South and East Asia.

THE THIRD WORLD

There is no satisfactory way of describing the group of countries which contain a high proportion of poor people. In this book the term 'Third World' is used as a shorthand which does at least reflect (through the use of the word 'world') the diversity of countries it encompasses. The Third World includes about a hundred countries containing some 3,000 million people.

THE RESEARCHERS

The research for this book was carried out by full-time OXFAM staff - principally the author, but with assistance from colleagues in the Third World and in Oxford. The researchers are referred to as 'we' in the text.

SOURCES

As well as books, articles and official documents, a large number of experts have been consulted in the course of the research and their letters provide a number of the sources quoted in the references. The term 'personal communication' refers to a letter from the person quoted. The phrase 'in interview with' means that no written record exists - but that the points made in the interview have afterwards been referred back to the person interviewed.

Some of the sources quoted are OXFAM files. Anyone wishing to see any of the files referred to should write to the Overseas Director, OXFAM, 274 Banbury Road, Oxford OX2 7DZ.

OXFAM SUPPORT

OXFAM seldom provides 100% of the cost of a scheme - so where projects are described as 'OXFAM-supported' or 'OXFAM-funded', it should be remembered that most of the cost is usually paid for by the local people and/or other aid agencies.

CURRENCIES

The sterling equivalent of local currencies is given in brackets in some cases. The exchange rate used is either that in force on the date in question, or, where the date is a year, the average of end-of-month exchange rates for that year, unless otherwise specified.

COMPANIES

Companies are referred to in the text by their short names - eg 'Glaxo' rather than the full name, 'Glaxo Holdings p.l.c.'

OXFAM's dialogue with the pharmaceutical manufacturers continued after this report was completed. It has not been possible to take into account in the text all the points made after June 1982.

MEDICINES

The words drugs, medicines and pharmaceuticals are used interchangeably throughout the book.

CHAPTER 1

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 - Indian Council of Social Science Research (ICSSR) and Indian Council of Medical Research (ICMR) *Health for All - an alternative strategy*, Report of a study group set up jointly by ICMR/ICSSR, Indian Institute of Education, Pune, 1981, p.5.
- 3 Dr. Tony Klouda, "Prevention is more expensive than cure, a Review of Health Problems for Tanzania 1971-81", February 1982. (mimeo)
- 4 WHO, *Drug Policies Including Traditional Medicines in the Context of Primary Health Care*, Report and Background Documentation of the Technical Discussions held during the 32nd Session of the WHO Regional Committee for SE Asia Regional Office, New Delhi, November 1979, Table 1, p.28.
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 - *OXFAM Field Directors' Handbook*, op. cit., p.22-1.
 - ICSSR/ICMR Report, op.cit., p.5.
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- 8 Dr. David Morley, Professor of Tropical Child Health, Institute of Child Health, University of London, "Severe Measles: A Barometer of Childhood Nutrition". (mimeo)
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 - Government of the People's Republic of Bangladesh Ministry of Health and Population Control, Health Information Unit, *Bangladesh Health Profile 1977, 1978*.
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 - UNCTAD, *Technology policies in the pharmaceutical sector in Nepal*, United Nations, 1980, p.6.
- 15 ICSSR/ICMR, op.cit., p.7.
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- 24 Ibid., p.6.
- 25 *OXFAM Field Directors' Handbook*, op.cit., pp.3-2,3-3.
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- 28 Dr. Lesley Bacon, Medical Officer, University Hospital, Legon, Ghana, "Ghana - medical care amid economic problems", *Journal of the Royal College of General Practitioners*, July 1980. p.434.
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- 30 Klouda, 1982, op.cit., p.9.
- 31 *OXFAM Field Directors' Handbook*, op. cit., p.3-2.
- 32 Ibid., pp.3-3, 22-2.
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- 34 *World Development Report 1980*, op. cit.

Chapter 1

- 35 ICSSR/ICMR, op.cit., p.7.
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- 55 - ICSSR/ICMR, op.cit., pp. 5 and 19.
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- 57 "Alma-Ata Declaration", reproduced in *World Health Forum*, 2(1), 1981, pp. 5-22.
- 58 Ibid.
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- 60 World Health Organisation, *The selection of essential drugs*. Report of a WHO Expert Committee, Technical Report Series 615, WHO, Geneva 1977. and update Technical Report Series 641, WHO, Geneva 1979.
- 61 Ibid.
- 62 Dr. Mahler, Director General WHO: "But for the villager and urban slum-dweller great miracles can be achieved with fewer than 30 well-chosen drugs." ("The meaning of 'health for all by the year 2000' " *World Health Forum*, vol. 2, No. 1, 1981, p.17.)
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- 64 WHO (A31/Technical Discussions/1) 1978, op. cit., p.5.

CHAPTER 2

- 1 Government of the People's Republic of Bangladesh Ministry of Health and Population Control, *Bangladesh Health Profile 1977*, Table 11a, p.105.
- 2 For example, in *Bangladesh*
- An estimated 325,000 active TB cases (aged over 10) receive no treatment.
 - At least 90,000 under fives die each year of pneumonia.
 - An estimated 136,000 under fives die of tetanus (mortality 8.6 per 1000).
 - A WHO survey records the incidence of neonatal tetanus at 23.9 per 1000, with a case fatality rate of 93.5%.
 - An estimated 32 million children under 15 need worm treatment. (Source: *Bangladesh Health Profile 1977*, op.cit.)

Chapter 2

In Tanzania

- An estimated 130,000 leprosy cases not treated.
 - An estimated 36,000 TB cases untreated.
 - Hookworm affects up to 5 million. (Source: Dr Tony Klouda "Prevention is more expensive than cure, a Review of Health Problems for Tanzania 1971-1981," February 1982. (mimeo))
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- WHO, "National Policies and Practices in regard to Medicinal Products: and Related International Problems", Background Document A31/Technical Discussions/1, 6 March 1978, p.9 "... in economic terms the developed countries account for more than 80% of the world pharmaceutical consumption and the developing countries for less than 20%."
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 - Bangladesh Government report to WHO, "Drug Policy and Management in Bangladesh" (Country Information Paper), for Inter-Country Consultative Meeting on Drug Policies and Management, 13-16 October 1980, New Delhi, (WHO/SEA/DPM/Const. meeting 1/7). Drug market for 1979 US \$70 million - (at trade prices). "The per capita consumption of drugs (allopathics) is about US \$0.82, with a coverage of not more than 28% of the people."
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 17 Dr. Halfdan Mahler, "The meaning of 'health for all by the year 2000'", *World Health Forum*, Vol.2, No.1, 1981, p.15.
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 23 *Bangladesh Health Profile 1977*, op.cit., p.73.
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 (b) The WHO Background Document, " *National Policies and Practices in Regard to Medicinal Products; and related international problems* " (A31/Technical Discussion/1), March 1978, gives expenditure on pharmaceuticals as 10-20% of health expenditure in developed countries, and "as high as 50% in developing countries."
 (c) But, drugs expenditure is shown to be under 30% in Burma, India, Indonesia and Sri Lanka in WHO, *Drug Policies Including Traditional Medicines in the context of Primary Health Care*, Report and Background Documentation of the Technical Discussions held during the 32nd session of the WHO Regional Committee for S.E. Asia, September 1979. Published WHO, Regional Office for S.E. Asia, November 1979, Table 1, p.28.
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CHAPTER 3

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- 7 Ibid., pp.20-24. Besides production of synthetic drugs, biologicals such as insulin can be produced from slaughter-house wastes and others from plant extracts without very advanced technology.
- 8 Ibid.
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There are only 3 British manufacturers in the top 25: Glaxo, Beecham and ICI. A league table (at 31 December 1980) on just prescription drugs includes Wellcome ranked No.21 (with ICI and Beecham at 22 and 23) and Fisons at 57. (*SCRIP* No. 653 & 654, 21 & 24 December 1981, p.19.)

Chapter 3

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Concentration on *overall* sales is low in the drug industry compared to other high-technology manufacturing industries, eg. car production, in which the largest company had about 25% of the market in 1977. (UNIDO, 1980, op.cit. pp.55-6.)
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- 26 Prof. G. Peters, Rapport *Mission au Mozambique du 8 au 19 octobre 1980*, Universite de Lausanne, 26 March 1981.
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- 28 See for example: Sidney Wolfe, Christopher Coley and, the Health Research Group founded by Ralph Nader, *Pills That Don't Work - Prescription Drugs That Lack Evidence of Effectiveness*, Farrar Stras Giroux New York, 1981.
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- 36 - Dr G. J. Ebrahim, "The Problems of Undernutrition" in R. J. Jarrett (ed.) *Nutrition and Disease*, Croom Helm London, 1979.
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- 37 - Dr. Mario Victor de Assis Pacheco, *A Mafia dos Remedios*, Brazil, 1978, pp.98-103.
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- 38 Ibid., p.225.
- 39 Ibid., p.238.
- 40 - Assis Pacheco, op. cit., pp.98-103.
 - *ABPI Data Sheet Compendium 1979-80*, ABPI 1979, p.369.
- 41 BNF 1981, op. cit., p.226.
- 42 Dr. Carol Barker, "Pharmaceuticals Policy", unpublished draft, undated. (The maximum profit allowed was set at a fixed percentage of the CIF price.)
- 43 ICSSR/ICMR, *Health for All - An Alternative Strategy*, Report of a study group set up jointly by the ICSSR and ICMR, Indian Institute of Education, Pune 1981, p.178.
- 44 Ibid.
- 45 Ibid., p.7. (Also figure of 12 million leprosy sufferers from Goodwin, Williams; Fitzsimons, "Introduction" - "The Present State of Tropical Medicine in the United Kingdom", *Transactions of the Royal Society of Tropical Medicine and Hygiene*, Vol.75, Supplement 1981, p.3.)
- 46 UNCTAD, *Case studies in the transfer of technology the pharmaceutical industry in India*, study prepared by the Jawaharlal Nehru University and the Indian Council of Scientific and Industrial Research, United Nations, 1977, pp.4-7, Table 19 (p.38) and Table 20 (pp.40-41).
- 47 Ibid., p.39.
- 48 - ICSSR/ICMR, op.cit.
 - UNCTAD, 1977, op. cit.
 - Hathi Report, *Report of the Committee on Drug and Pharmaceutical Industry*, Ministry of Petroleum & Chemicals, Government of India, April 1975.
- 49 Hathi, op.cit., p.95.
- 50 The April 1979 Drugs (Prices Control) Order attempted to keep down the prices of essential drugs by fixing lower price mark-ups for more essential items. In practice this has encouraged production of less essential drugs with higher profit margins. (Mukarram Bhagat *Aspects of the Drug Industry in India*, Centre for Education and Documentation, Bombay, February 1982, pp.90-95.)
- 51 Arnold Worlock, Group Marketing Director, The Wellcome Foundation Limited, personal communication, 28 May 1982.
- 52 Ibid. The policy of licensed capacity is intended to restrict production of non-essential drugs. In practice, many companies have been producing far in excess of their licensed capacities without action being taken, but the dapson case has parallels. Alembic Chemical was required to export its unlicensed over-production of penicillin - a much-needed drug. The Indian public sector pioneered bulk drug production in the country and almost all its output is of important bulk drugs, but they have a poor record for reaching production targets, idle capacities and heavy financial losses. (Bhagat, op.cit.)
- 53 Bhagat, op.cit., p.116.
- 54 Expert Committee Report, *Evaluation of Registered/Licensed Products and Draft National Drug Policy*, Dacca, Bangladesh, 11 May 1982, p.92.

THE 8 LEADING COMPANIES

1. Pfizer Laboratories Ltd. US subsidiary.
2. Glaxo (Bangladesh) Ltd. British subsidiary.
3. Fisons (Bangladesh) Ltd. British subsidiary.
4. Bangladesh Pharmaceutical Industry Ltd. Joint venture company of (BPI) Bangladesh Chemical Industries Corporation and May and Baker (UK) Ltd.
5. Hoechst Pharmaceuticals Co. Ltd. W. German subsidiary.
6. Squibb of Bangladesh Ltd. US subsidiary.
7. Organon (Bangladesh) Ltd. Dutch subsidiary.
8. ICI Bangladesh Manufacturers Ltd. British subsidiary.

FOREIGN CONTROL

For example: *Glaxo*: Glaxo Holdings controls 70% of the equity and the Government 30%. Glaxo had 4 members on the Board to 3 Government representatives. (Information from Glaxo (Bangladesh) 1980). *ICI*: the British parent company also holds 70% of the equity. *Fisons*: The Bangladesh Government holds 51% of the equity shares, but Fisons holds 51% of controlling shares and has 3 representatives on the board to the Government's 2. *BPI*: May & Baker U.K. holds 60% of the equity; and is solely responsible for the management of the company under a management contract.

There are 25 medium-sized national companies which manufacture a further 15% of products and 133 small companies that account for the remaining 10% - these produce only simple liquid formulations.

- 55 Dr. H.K.M.A. Hye, then Director Drug Administration, personal communication, 7 May 1981. The Government tender is restricted to the local market for all items produced locally: "Procurement is by generic name but we have the constraint that the local market is dominated (80-85%) by large brand name producers and their subsidiaries. Drugs manufactured locally cannot be imported, even if cheaper foreign sources are available."
- 56 Dr. Hye in interview with the author, Delhi, 20 October 1980.
- 57 - "Merck in Bangladesh Marketing Plan 1980 (-1982)", December 1979. Market Estimates 1978: Taka 805 million 1981: 1,440 million 1982: 1,728 million. (p.5 - "There is a fast growing market in Bangladesh (24%/1978).")
 - Sales 1977 Taka 800 million ("Country Information Paper - Bangladesh" *Drug Policies Including Traditional Medicines in the Context of Primary Health Care*, WHO Regional Office for S.E. Asia New Delhi, November 1979.)
 - Drug expenditure 1981 estimated at 1,500 million taka (Expert Committee Report, Bangladesh, 11 May 1982, op. cit. p.92.)
- 58 - Ibid.
 - Dr. Hye in interview with the author, 20 October 1980.
- 59 Expert Committee Report, Bangladesh, op. cit.
- 60 "Merck in Bangladesh Marketing Plan 1980 (-1982)", op. cit., p.10.
- 61 Bristol-Myers (Bangladesh) Ethical Pharmaceutical Market in 1977 (estimates from Marketing division). Total market 50 million dollars.

	% of market
(a) vitamins, haematinics, tonics	30
(b) antibiotics	20
(c) analgesics	10
(d) antacids	10
(e) tranquilizers, antidepressants, sedatives	8
(f) antidiarrhoeals & anti-dysentric	7
(g) anti TB	6
(h) others	Total 100%

One local marketing manager interviewed (September 1980) considered (a) an underestimate and the true figure nearer 40%, and (c) and (d) overestimates in terms of *value*, not volume. The Marketing Director of Squibb of Bangladesh Ltd. gives turnover in 1980 as vitamins and nutritionals - 31.8% and antacids - 12.8%.

- 62 Expert Committee, *Evaluation of Registered/Licensed Products and Draft National Drug Policy*, Dacca, 11 May 1982, p.92.
- 63 We understand from inquiries made by our Field staff in Bangladesh that these product lists were current at the beginning of 1982, but we have no written confirmation from either company of precisely which drugs are currently marketed in Bangladesh. See Appendices II and III. Also, WHO, 1979, *op.cit.*
- 64 See Chapter 5,
- 65 Antidiarrhoeals: *Fistrep* (combination of streptomycin sulphate and clioquinol) and *Enterfram* (liquid preparation of neomycin sulphate and kaolin). For dangers of clioquinol, see page and for appropriateness of antibiotics for use in diarrhoea (especially "infantile diarrhoea" recommended in Fisons (Bangladesh) Limited *Price List of Products*, 1 September 1978) . "Antibiotic...preparations should be *avoided* for the treatment of diarrhoea even when a bacterial cause is suspected..." (BNF, 1981, *op. cit.*, p.40, original emphasis.)
- 66 BNF, 1981, *op. cit.*, pp.291 and 286.
- 67 Wolfe, Coley and the Health Research Group, *Pills that Don't Work*, Farrar Straus Girouz, New York, 1981, p.35.
- 68 Prof. M.D. Rawlins, Head Department of Pharmacological Sciences, University of Newcastle upon Tyne, personal communication, 8 February 1982.
- 69 Letter from Fisons (UK) to Prof. Rawlins, 21 February 1981.
- 70 Dr. John Yudkin, personal communication 25 November 1980. "*Digeplex*: No justification for using enzymes in 'indigestion'. The indications would be malabsorption for pancreatic failure - which can indeed happen in long-standing malnutrition, but needs specific diagnosis before it's used. Also vitamin B complex deficiency is *not* a basic cause of digestive disorders." (original emphasis)
- 71 Dr. Martin Schweiger, personal communication, 13 July 1980.
- 72 Schweiger, "A Comparison of Drugs Marketed by Two British Companies in the United Kingdom and Bangladesh", 1979. (unpublished paper)
- 73 GLAXO UK: In our letter of 8 May 1981 to Glaxo's Group Consumer Products Co-ordinator we wrote: "On medicines you will remember I was keen to have the names of colleagues on the Ethical Pharmaceuticals side with whom I might discuss issues such as the product range in Bangladesh and the feasibility of switching production to drugs more in line with health needs and the priorities of the Government in Bangladesh." We received no reply. We wrote a long letter raising specific and general queries on 20 January 1982, with follow-up telephone calls on 26 March, 13 and 26 April and letters on 27 April and 19 May. On 29 January 1982 J. Barr (Group Public Relations) wrote: "This our letter of 20 January has been passed to this office for actioning and further contact will be made when the matters raised have been fully considered". A further letter of 16 June 1982 from Glaxo's Public Relations Manager does not respond to our request for comments on the range of products sold in Bangladesh (or give details of their current product range), citing the fact that in 1981 we discussed these issues with Mr Barnett, Glaxo Group Consumer Products Coordinator. In fact our discussion then focussed mainly on sales of artificial baby milk and Mr. Barnett suggested the Bangladesh pharmaceutical product range would be more appropriately discussed with colleagues on the ethical pharmaceuticals side.

GLAXO (BANGLADESH): Mr. Zaman, Marketing Services Manager and Mr. Chowdhury, Marketing Director, were helpful when we interviewed them on 7 and 8 October 1980.

FISONS: Mr. Mohammad Nurul Alam, Marketing Manager of *Fisons (Bangladesh) Ltd.* was also most helpful when we talked to him on 26 September 1980. Our letter to the Divisional Chairman of *Fisons UK Pharmaceuticals Division* of 18 January 1982 unfortunately did not reach Fisons, a copy was sent on 24 March which cut down the time for them to contact their subsidiary. Fisons Deputy Chairman wrote on 27 April 1982 to say: "Naturally I am very concerned about your criticisms, implied or otherwise, relating to the activities of Fisons (Bangladesh) and consequently you will appreciate that I find it necessary to investigate your 'facts' ' thoroughly before responding on relevant matters due course." We had no further comments by time of going to press.

- 74 Expert Committee report, 11 May 1982, op. cit. Of the 1742 locally manufactured products recommended for withdrawal only 174 are produced by the 8 foreign-controlled manufacturers.
- 75 Ibid., p.9. Verdivitone is referred to as "multivitamin combination with alcohol and glycerophosphate. A highly misused habit-forming drug which is dangerous in hepatic malais. Chronic wastage of country's resources ..." (p.10) Squibb of Bangladesh point out: "Verdivitone is purchased mainly by the more affluent sector of the community and at 11% per volume, has a lower alcohol content than other vitamin tonics made here. Alcohol is used to preserve the B complex vitamins which would otherwise degrade quickly ...". They also cite "the large rural industry producing cheap (and dangerous) alcohol from palm, sugar and rice." (R. Bower, Managing Director, personal communication, 3 May 1982.)
- 76 Dr. C. G. Roepnack and Dr. R. W. Timmers, Hoechst Head Office, personal communication, 22 March 1982.
- 77 F. K. Ghuznavi, Chairman ICI Bangladesh Manufacturers Ltd., in interview with the author, 1 October 1980.
- 78 Dr. Martin Schweiger, "In Sickness or in Wealth," B.B.C. Radio 4 transcript of tape No. TLN34/230P849, transmitted 26 August 1979, p.15.
- 79 Mohammed Nurul Alam, Marketing Manager, Fisons (Bangladesh) Ltd., personal communication, 19 February 1981.
- 80 *IFPMA Code of Pharmaceutical Marketing Practices*, March 1981, op.cit.
- 81 Dr. Halfdan Mahler, "The meaning of ' health for all by the year 2000 ' ", *World Health Forum*, vol. 2 No. 1, 1981, p.18.
- 82 ICSSR/ICMR, 1981, op.cit.
- 83 Veena Shatrughna, "Drug prescription: Service to whom?", *Medico Friend Circle Bulletin*, India, 1978, quoted by Brudon, 1981.
- 84 Ibid.
- 85 Dr. E. Snell and Mr. Lee (APBI) in interview with the author, 25 March 1981.
- 86 Dr. H.K.A. Hye, ex-Director Drug Administration - Ministry of Health, Bangladesh, personal communication, 7 May 1981.
- 87 "Merck in Bangladesh, Marketing Plan 1980(-1982)", op. cit. The marketing claims made for Neurobion are discussed in more detail in Chapter 5.
- 88 Ibid., pp. 3, 6, 11.
- 89 Dr. Hye, personal communication, 10 August 1981.
- 90 Government of the People's Republic of Bangladesh, Directorate of Drugs Administration, "Import Figures of Finished Drugs for the Calendar Year 1980."
- 91 E. Merck have argued that: "The import of our products to Bangladesh does not cost the country a penny in foreign exchange. As long as the country has been in existence, we have been closely cooperating with the Government in the conclusion of barter agreements, under which Merck supplies laboratory chemicals, reagents, diagnostics, industrial chemicals and

pharmaceutical specialities. Against the supply of these items, we purchase from Bangladesh goods such as molasses, textiles, industrial gloves, wheat grain for animal feed, jute and jute goods, wet blue skin, tea, cutlery, for none of which it is easy to find a ready buyer. We can even claim that we provide aid to Bangladesh through our contacts with customers for these goods by supplying know-how to that country, for example in the manufacture of textiles and for the production of cutlery. We feel this should be mentioned in order to complete the picture of our activities in the country ...” (Drs. Mehrhof and Niederehe, E. Merck, personal communication, 29 March 1982.) But the former Director of Drug Administration questions how much the barter arrangement is really helping Bangladesh in exchanging mainly finished medicines (many of which are “non-essential”) for commodities (like jute, jute goods, tea and hides) which are ‘easily exportable items, and if sold in the open international market would fetch valuable hard foreign exchange.’ “The statement that import of E. Merck products does not cost us a penny in foreign exchange is mischievous.” (Dr. H.K.M.A. Hye, personal communication, 20 April 1982.)

- 92 Government of the People’s Republic of Bangladesh, “Import Figures of Pharmaceuticals Raw Materials for the calendar year 1980”.
- 93 Hye, 10 August 1981, op. cit.
- 94 Expert Committee, Bangladesh, op. cit., p.92.
- 95 Ibid.
- 96 Pascale Brudon, “L’Industrie Pharmaceutique Suisse dans les Pays sous developpes”, Memoire presente pour le diplome de recherche en etudes de developpement, Institut Universitaire d’Etudes de Developpement, Geneva, 1981. Of the 36: 13 are for psychiatric and neurological use; 7 cardiovasculars; 3 antibiotics; 2 anti-cancer drugs. (p.211)
- 97 Ibid.
- 98 Ibid., p.202.
- 99 Ibid., p.203. Sandoz has a similar vanilla-flavoured preparation Meritene amongst its best-selling products in Mexico (p.207).
- 100 Ibid., p.257.
- 101 See Chapter 10.
- 102 Information Research Limited, “Opportunities for Pharmaceuticals in the Developing world over the next Twenty Years”, June 1980, p.7.

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- 1 Dr. Roderick Rainford, at a Regional Pharmaceutical meeting, quoted by Robina Khan, Office of the Director General for Economic Cooperation and Development of the United Nations, New York, (previously UN/UNDP APEC Programme on Pharmaceuticals in Guyana) in “Effects of Drug Colonialism in the Caribbean”, 22 October 1980, p.1. (mimeo)
- 2 Pascale Brudon, “L’Industrie Pharmaceutique Suisse dans les Pays Sous Developpes”, Memoire presente pour le diplome de recherche en etudes de developpement, Institut Universitaire d’Etudes de Developpement, Geneva, 1981, pp.256-257 and p.197.
- 3 Ibid., pp. 192-197, pp.202-203 and p.260. Bactrim was the 11th top-selling drug on the Mexican market in 1978. 20 tablets of the same drug were available more cheaply from: Burroughs Wellcome (Septrin) at 92.70 pesos. Laboratorios Tegur de Mexico (Bactifor) at 71.80 pesos. Industria Farmaceutica Andromaco (Andoprim) at 68.55 pesos. Laboratorios Fustery (Polibatrim) at 66 pesos. The 4 top-selling drugs can all be obtained more cheaply as generics: Bristol-Myers Pentrexyl and Bayer’s Binotal as ampicillin; Upjohn’s Lincocin as lincomycin, and Pfizer’s Terramicina as oxytetracycline.

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4 Khan, op.cit.

5 UNCTAD, *Technology policies in the pharmaceutical sector in the Philippines*, study prepared by Mr. Esteban Bautista and Mr. Wilfredo Clemente, in co-operation with the UNCTAD Secretariat, (UNCTAD/TT/36) United Nations, 1980, pp.18-19.

6	PRODUCT/ MANUFACTURER	TRADE PRICE BANGLADESH	TRADE PRICE UK £	PERCENTAGE DIFFERENCE %
	BEECHAM			
	Amoxicil 100x250 mg caps.	Taka 212.50 = £5.90	12.47	111
	Orbenin 100x250 mg caps.	Taka 165.75 = £4.60	14.80	221
	Penbritin 100x250 mg caps.	Taka 718.25 = £19.95	25.21	26
	CIBA GEIGY			
	Tofranil 100x25 mg tabs.	Taka 149.36 = £4.14	3.25	-27
	FISONS			
	Genaspirin 250x300 mg tabs.	Taka 21.25 = £0.59	97.50	65
	Imferon 331.50 100x2 ml amp.	Taka = £9.20	41.58	413
	GLAXO			
	Betnelan 100 tabs.	Taka 53.80 = £1.49	4.00	168
	Betnesol-N 5ml drops	Taka 12.25 = £0.34	0.74	117
	Grisovin 500x125 mg tabs.	Taka 218.00 = £6.05	11.85	95
	Piriton 50x4 mg tabs.	Taka 4.50 = £0.12	0.45	260
	Ventolin 100x2 mg tabs.	Taka 27.75 = £0.77	1.35	75
	HOECHST			
	Lasix 25x2 ml amps.	Taka 38.95 = £1.08	6.46	498
	ICI			
	Atromid-S 50x500 mg caps.	Taka 51.00 = £1.41	1.62	14
	Avloclor 500x250 mg tabs.	Taka 165.75 = £4.60	3.75	-22
	Fulcin 100x125 mg tabs.	Taka 55.25 = £1.53	1.90	24
	Inderal 250x10 mg tabs.	Taka 63.75 = £1.77	3.92	121
	250x40 mg tabs.	Taka 174.25 = £4.84	9.21	90

Mysoline 100x250 mg tabs.	Taka 27.55 = £0.76	0.88	15
Synalar ointment 5gm	Taka 10.20 = £0.28	0.30	7
Synalar N ointment 5gm	Taka 10.63 = £0.29	0.31	6
PFIZER			
Terramycin 100x250 mg caps.	Taka 90.50 = £2.51	5.19	106
Terramycin SF 100x250 mg caps.	Taka 95.20 = £2.64	5.39	104
Vibramycin 10x100 mg caps.	Taka 39.50 = £1.09	5.48	402
Vibramycin Syrup 50mg/5ml/30ml	Taka 14.40 = £0.40	1.72	339

Sources:

UK *Chemists and Druggists Price List*, February 1980. Bangladesh manufacturers price lists valid February 1980, except Hoechst Bangladesh price list dated 1.8.80. (£1 = Taka 36)

- 7 Monthly income of rural Bangladeshi family taken as Tk.400 (approx. £11) Prices from: Fisons Bangladesh Ltd. Price list (1.9.78) and ICI Bangladesh Manufacturers Limited Price list (4.1.80) effective November 1981 and UK Chemist & Druggist Price List, November 1981. UK family net monthly income taken as £583.
- 8 Brudon, op.cit., p.255
- 9 WHO, "National Policies and Practices in Regard to Medicinal Products; and Related International Problems", *Background Document, A/31/Technical Discussions/1*, 6 March 1978. Industry sources also concede that market factors influence prices. For example, Ciba Geigy's internal write-up of a hearing held as part of a seminar on Third World policies: It took nearly 45 minutes of persistent questioning for the company to admit that the price at which drugs are sold from its Basle headquarters to other countries is influenced by market factors.
- 10 UNCTAD, *Case studies in transfer of technology: Pharmaceutical Policies in Sri Lanka*, (TD/B/C.6/21), United Nations, 27 June 1977. See also Chapter 9.
- 11 "Merck in Bangladesh Marketing Plan 1980 (-1982)", dated December 1979, forwarded to E. Merck West Germany by H.G. Brotz, Bangladesh Branch of Emedia Export Co., 22 January 1980, p.13
- 12 "Prices of drugs in the private sector were uncontrolled and manufacturers charged what the market would bear." UNCTAD Report *Pharmaceutical Policies in Sri Lanka*, 1977, op.cit., p.6. Also: "The only general conclusion that can be drawn on this issue is that TNCs have charged whatever national markets would bear, and the market power of the leading firms has enabled them to limit the sales of many important drugs to that part of the population which could afford the going price - a part of which, in many countries, is very small indeed." Oscar Gish & Loretta Lee Feller, *Planning Pharmaceuticals for Primary Health Care*, American Public Health Association International Health Programs Monograph Series No.2., 1979. p.25.
- 13 *British National Formulary*, 1981, Number 1.
- 14 500 tablets Valium (5mg) trade price: £6.56; 500 tablets diazepam (5mg) trade price: £3. From *Chemists & Druggist Price List*, December 1981.
- 15 "Wasted spending on brand names increases health costs by £25 million", *Daily Telegraph*, 27 November 1979.

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- 16 Dr. Zafrullah Chowdhury, "Essential Drugs for the Poor: Myth and Reality in Bangladesh", paper presented at the Primary Health Care Symposium, Liverpool School of Tropical Medicine, 13-16 April 1982, p.11, Table 3. (mimeo)
- 17 UNCTAD, *Technology Policies in the Pharmaceutical Sector in the Philippines*, op.cit.
- 18 "...price competition remains the most important tool of success for generics producers." (Ciba Geigy Pharma, *Generics Policy* Divisional Policy Affairs Pharma Policy V1/81, Basle, 1981.)
- 19 D.W. McMullan, Director of Operations, Beecham Research International, personal communication, 22 March 1982.
- 20 Ciba Geigy Pharma, "Generics are a fact", April 1981.
- 21 The situation is one of 'oligopoly': "The principal rule is that price competition except on very limited occasions, is an antisocial practice to be strictly avoided." R. J. Barnett and R.E. Muller, *Global Reach: The Power of the Multinational Corporations*, Simon and Schuster, New York, 1974. p.32.
- 22 *Financial Times Survey* on Pharmaceuticals, 2 June 1982.
- 23 Dr. Klaus von Grebmer, Pharma Policy staff, Ciba-Geigy Limited, *Pharmaceutical Prices: A Continental View*, Office of Health Economics, London, 1978, p.13.
- 24 Senator Edward Kennedy, keynote address Proceedings Institute of Medicine Conference on Pharmaceuticals for Developing Countries, National Academy of Science, Washington, January 1979.
- 25 Estimates for 1978. Personal communication from David Taylor, Deputy Director, Office of Health Economics: 23,000 licences of right granted when Committee on Safety of Medicines came into existence, to cover sales of existing products. Since 1972, 13,000 licences withdrawn. Following licences granted by CSM: 3,250 priority category 3,500 prescription only 2,500 generics 8,000 over-the-counter drugs 750 herbal 500 homeopathic.
- 26 - Government of Guyana in cooperation with UNCTAD, UNCTCD, UNIDO, WHO, *Pharmaceuticals in the Developing World, Policies on Drugs, Trade and Production*, Volume I, General Report; referring to UNDP project INT/009/A/01/99 "Economic and Technical Co-operation among developing countries in the pharmaceutical sector", June 1979.
- UNCTAD, Case Studies in the transfer of technology, *The Pharmaceutical Industry in India*, study prepared by the Jawaharlal Nehru University and the ICSIR, (TD/B/C.6/20 United Nations, 1977, p.34.
- UNCTAD, *Technology Policies in the pharmaceutical sector in Nepal*, study prepared by the UNCTAD secretariat in cooperation with Dr. P.N. Suwal (UNCTAD/TT/34), United Nations, 1980, p.16.
- 27 Brudon, op.cit., p.212.
- 28 UNCTC, *Transnational Corporations and the Pharmaceutical Industry* (ST/CTC/9) United Nations, New York 1979.
- 29 von Grebmer, op.cit., p.8.
- 30 Ibid., p.7.
- 31 See also: Dr. Sanjaya Lall, Institute of Economics and Statistics, Oxford University, "Emerging Trends and future prospects in the less developed countries", in George Teeling-Smith and Nicholas Wells (ed), *Medicines for the year 2000*, OHE, London, 1979, p.104.
- 32 von Grebmer, op.cit., p.7.
- 33 WHO, A31/Technical Discussions/I, op.cit.
- 34 Office of Health, Economics Briefing Paper, *Trends in European Health Spending*, No.14, May 1981, p.5.

- 35 Others may put the question differently. For example, D.W. McMullan of Beecham writes: "It is unlikely that the pricing of pharmaceuticals to Third World countries will ever be seen as fair to all interested parties. One must remember that, if the pharmaceutical industry is to flourish, it must make a profit. However, it is a matter of debate whether a patient for example in the UK or in Germany should subsidise the price of medicines to a patient in Bangladesh or Poland." (Personal communication, 22 March 1982.)
- 36 - Dr. Michael W. Hodin, Director of Public Affairs Pfizer International Inc., personal communication, 17 March 1982.
- *Financial Times Survey*, op.cit.
- 37 - Alex Lumbroso, Managing Director, Laboratories Mariceau SA, "The Introduction of New Drugs", in Blum, Herxheimer, Stenzl and Woodcock (ed), *Pharmaceuticals and Health Policy*, 1981, p.63.
- *International Herald Tribune*, May 25, 1981.
- More recently the *Financial Times* reports that Smith-Kline "almost trebled its sales between 1976 and last year." R & D spending in 1981 was 120 million dollars and operating profit that year 525.8 million dollars. (*F.T. Survey*, op.cit.)
- 38 *Financial Times Survey*, op.cit.
- 39 Drs. J.P. Griffin and G.E. Diggle, UK DHSS Medicines Division, review of ten years licensing experience quoted in *SCRIP* No.633, 12 October 1981, p.2.
- 40 FDA Bureau of Drugs *New Drug Evaluation Project*, Briefing book, October 1979, Table IV-i, quoted by Brudon, 1981, op.cit., p.226. Similarly in France according to Lumbroso out of about 250 drugs in each year, "only 5 are innovations of any therapeutic interest". (Lumbroso in Blum, et al. (ed), 1981, op.cit., p.62.)
- 41 *SCRIP*, No. 633, op.cit.
- 42 David Taylor, Deputy Director Office of Health Economics, *Medicines Health and the Poor World*, OHE, London 1982, p.35.
- 43 Ibid.
- 44 Lesley Doyal with Imogen Pennell, *The Political Economy of Health*, Pluto Press 1979. p.269.
- 45 "Roche and its fight against tropical diseases", translation (by Roche) of article in *Roche Magazine*, No.4, August 1978.
- 46 Ibid.
- 47 Ibid.
- 48 - Prof. G. Peters, University of Lausanne, "Rapport Mission au Mozambique", 1981, p8.
- Dr. Milton Silverman, University of California, personal communication, 10 August 1981.
- 49 - Wellcome, *In Pursuit of Excellence*, One Hundred Year Book 1880- 1980, pp.49-58.
- R. Lassere, "The Swiss Pharmaceutical Industry and Tropical Diseases", Roche translation of article in *Therapeutische Umschau*, 36 (1979) Part 3, pp. 263-266.
- And "Practical Roche responses to the special needs of Developing Countries", attachment 6 to personal communication from S. Redfern, Roche Products Ltd., 13 April 1982.
- 50 Peter Cunliffe, President of the Association of the British Pharmaceutical Industry and Chairman of the Pharmaceutical Division of ICI Ltd., text of paper "Pharmaceuticals in the Third World", presented to the All- Party Parliamentary Group on the Pharmaceutical Industry at the House of Commons, 15 December 1981.
- 51 Dr. L. C. Goodwin, Director of Science at the Zoological Society of London quotes the Research Director of Wellcome, Dr. John Vane, as saying that in 1978 Wellcome spent "£250,000 on the chemotherapy of tropical diseases, out of a research and development budget of more than

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£29 million - less than 1 percent..” (‘Pharmacy and World Health Organisation Special Programme’, extracts from Dr. Goodwin’s Harrison Memorial Lecture, *The Pharmaceutical Journal*, 21 October 1978.) According to Wellcome in 1982 “R & D expenditure in respect of disease control in the poor communities of the developing countries is in fact many times greater”. (Dr. Arnold Worlock, The Wellcome Foundation Limited, personal communication, 28 May 1982.) According to Roche about 10% of total R & D effort “is directly orientated to the needs of developing countries”. (S. Redfern, Pharmaceutical Division, Roche Products Limited, personal communication, 4 May 1982.)

- 52 Goodwin, op.cit.
- 53 Taylor, op.cit., p.35.
- 54 Andras November, *Les Medicaments et le Tiers Monde*, Geneva 1981, p.52.
- 55 - Dr. Michael Hodin, Director of Public Affairs, Pfizer International Inc., personal communication, 17 March 1982.
- *Financial Times* Survey, op.cit.
- 56 Prof. George Teeling-Smith, Director Office of Health Economics, personal communication, 17 February 1982.
- 57 Ibid.
- 58 WHO unpublished draft paper on the Trend of Essential Drug Prices in Developing Countries, 1980, p.6. of “General Principles” section. “It is estimated that in 1980 the World Consumption of Pharmaceuticals will reach 42.533 million dollars and, if the trend of investing 8-10% of sales (as the industry states) in research and development continues, the estimated amount for this purpose to be charged to developing countries will be considerable. Theoretically, the contribution could be 813.6 million dollars - 10% of the total consumption.”
- 59 Estimated at 90,000 million US dollars 1982. (*Financial Times* Survey, op.cit.)
- 60 Ciba-Geigy Pharma, *Generics Policy*, Divisional Policy Affairs, Pharma Policy V1/81, Basle, 1981.
- 61 Ibid.
- 62 Ibid.
- 63 Ciba-Geigy, “Generics are a Fact”, op. cit.
- 64 - Ciba-Geigy, *Generics Policy* 1981, op.cit., p.6.
- P. F. Lumley, Manager, Public Affairs, The Association of the British Pharmaceutical Industry, personal communication, 21 June 1982.
- 65 Office of Health Economics, *Brand Names in Prescribing*, September 1976.
- 66 UNIDO, *Global Study of the Pharmaceutical Industry*, prepared by the Secretariat of UNIDO (ID/WG.331/6), 22 October 1980.
- 67 - Government of Guyana et al., op.cit.
- Also UNCTAD, *Technology Policies and planning for the pharmaceutical sector in the developing countries*, United Nations, 1980.
- 68 For example, Zambia (Martyn Young, OXFAM Field Director, Zambia, personal communication, 28 March 1980).
- 69 “Generics are a Fact”, op.cit.
- 70 Dr. Gordon Fryers, Director of Strategic Affairs, Reckitt and Colman, “The balance of public interest”, in *Medicines for the year 2000*, OHE, op.cit., p.124.
- 71 Government of Guyana et al., op.cit., p.6.
- 72 UNCTAD, *Trade marks and generic names of pharmaceuticals and consumer protection*, report by the UNCTAD Secretariat (TD/B/C.6/AC.5/4), 15 December 1981, p.13.

- 73 Aspirin, chlorpromazine, ferrous sulphate, piperazine, analgin (aspirin + phenacetin + caffeine + codeine phosphate).
- 74 Advertisement appeared, for example, in *Indian Express*, 29 December 1980, and *India Today*, 1-15 February 1981.
- 75 Theo Fergusson, Manager Quality Control Laboratory, Lesotho Dispensary Association, personal communication, 2 July 1980.
- 76 WHO, *NIEO and Health*, Annex 3 (unpublished draft paper), May 1980.
- 77 WHO, "Quality assurance of drugs in multi-source purchasing", p.22. (unpublished draft 1980)
- 78 R.K.Menda, President of the Indian Medical Association, "The ethics of the Drug Industry", *Business India*, 7-20 July 1980.
- 79 UNCTAD *Case Studies in Transfer of Technology: Pharmaceutical Products in Sri Lanka*, 1977, op.cit.
- 80 Bangladesh *Prescriber's Guide* 79, pp.19-20.
- 81 UNCTC, 1979, op.cit.
- 82 Pharmacist J.V. Tapster, letter to the *Daily Telegraph*, 13 December 1979.
- 83 UNCTAD, *Case Studies in the Transfer of Technology: Pharmaceutical policies in Sri Lanka*, 1977, op.cit.
- 84 UNCTC, "Case Study on India", draft report on "Transnational Corporations in the pharmaceutical industry of developing countries", 9 February 1981.
- 85 WHO Regional Office for the Western Pacific, Reference Document for the Technical Presentation on "National Drug Policies and Management", (WPR/RC28/TP/1) 22 July 1977.
- 86 Dr. Hye, personal communication, 20 April 1982.
- 87 Hearing before the Subcommittee on Monopoly of the Select Committee on Small Business, US Senate, 93rd Congress, Second Session, on Present Status of Competition in the Pharmaceutical Industry. Evidence submitted by the American Public Health Association supporting the report on ant substitution laws (laws requiring a pharmacist not to substitute a generic equivalent for a product named in a prescription). Quoted by Gish and Feller, 1979, op.cit.
- 88 The *Daily Telegraph*, 3 December 1979, "Drug Factories make one product for sale at two prices". Subsequently the Chairman of one of the companies, Arthur H. Cox and Co., wrote to the *Telegraph* supporting the arguments (15 December). But the Chairman of Thomas Kerfoot and Co. Ltd. wrote retracting his earlier statement that they manufactured Valium and Indocin on behalf of the brand-name producers.
- 89 UNIDO, op.cit.
- 90 WHO, *National Policies and Practices in regard to medical products: and related international problems*, 1978, op.cit.
- 91 Von Grebmer, op.cit., p.18.
- 92 Barnet and Muller, op.cit.
- 93 The Monopolies Commission, *Chlordiazepoxide and Diazepam - A Report on the supply of Chlordiazepoxide and Diazepam*, HMSO, London 1973.
- 94 Dr. Hye in interview with the author, 20 October 1980.
- 95 CIF prices per Kg of tetracycline (period July 1979-June 1980):
- | | | |
|-------------|------|-------|
| K.D.H. Lab | Taka | 444 |
| P f i z e r | Taka | 800 |
| S q u i b b | Taka | 1,440 |

But Pfizer has also paid comparatively higher prices, e.g. Taka 1,280 for oxytetracycline (per Kg CIF) compared to Taka 610 paid by local manufacturer, Albert David.

96 R. Bower, Managing Director Squibb of Bangladesh Ltd., personal communication, 3 May 1982.

97 CIF prices per kg for trimethoprim: Square - Taka 1,700 ICI (for Wellcome) - Taka 9,000. Dr. Arnold Worlock, Group Marketing Director, The Wellcome Foundation Ltd., comments: "On the subject of your query relating to the sale of trimethoprim in Bangladesh, we are fully aware that trimethoprim may now be purchased from sources other than the Wellcome Foundation Ltd., at prices which are considerably lower than our own. Our price includes necessarily an R & D cost element which does not arise in the case of trimethoprim which is shipped by companies that have not had to sustain over many years, technical and marketing risks in the discovery and development of the product. (No doubt you know that the cost of discovering and developing a new pharmaceutical substance is now estimated at £35 million or more.) Our price includes of course the stamp of Wellcome's quality control, which may not be available in all the cheap imitations of brand-name products whose patents have run out." (Personal communication, 28 May 1982.)

98 Dr. Hye, whilst Director, Drug Administration Bangladesh, in interview with the author, Delhi, 20 October 1980. Wellcome were compelled to reduce the price of trimethoprim from Taka 9000 to Taka 7700 per kg. "after a lot of argument and a few long-distance phone calls". (Dr. Hye, personal communication, 20 April 1982) Septrin (cotrimoxazole BP) is a combination of trimethoprim (80mg) and sulphamethoxazole (400mg).

99 CIF prices per kg. for levamisole:

Opsonin	Taka	1,081
Square	Taka	2,422
ICI	Taka	5,400

100 Peter Cunliffe, ICI Pharmaceuticals Division, personal communication, 11 February 1982.

101 Ibid.

102 Dr. Hye, personal communication, 20 April 1982.

103 Dr. Hye in interview with the author, 20 October 1980.

104 Comparative prices during 1979/80 (all per kg CIF) for Metronidazole:

Chemist Lab	Taka	266
Square	Taka	775
BPI	Taka	1,395

May and Baker tell us they are supplying metronidazole to Bangladesh at a price as low as they can afford in relation to UK production costs which are not comparable with those of Eastern Europe or China. (Mr. Washburton and Mr. Walker, in interview with author, 5 July 1982.)

105 - Import prices per kg CIF:

BPI	Taka	648
Therapeutics from Cyanamid	Taka	1,680

The Drug Administration released the first consignment of 38 kg with a severe warning and the company subsequently reduced its price to Taka 1,100. (Dr Hye, personal communication, 20 April 1982.)

- Cyanamid advise us that they no longer supply this raw material to Bangladesh, "therefore comment with respect to purchase requirements from Therapeutics are no longer relevant". (Mrs Barri M. Blauvelt, Area Manager Far East Medical Products, American Cyanamid Company, personal communication, 17 May 1982.)

106 Dr Hye, "Drug Policy and Management". (undated mimeo based on a report prepared earlier for WHO)

- 107 *Procurement and manufacture of drugs for use in primary health care in Bangladesh, May 1979, report of the study team recruited by the World Bank for the Government of the People's Republic of Bangladesh. "The relatively very high costs of some medicines produced commercially in Bangladesh is striking."* (p.12)
- 108 Ibid.
- 109 - *SCRIP*, No. 674, 10 March 1982, p.1.
 - Brand name products make up just over 90% of medicines prescribed by GPs in the UK (excluding hospital sales) (P. F. Lumley, ABPI, personal communication, 21 June 1982)
- 110 Office of Health Economics, *Health Care Research Expenditure*, Briefing No. 6, June 1978.

CHAPTER 5

- 1 ABPI, "Code of Practice for the Pharmaceutical Industry", Fifth Edition (December 1978), para.15.1, *Data Sheet Compendium 1979-80 1979*.
- 2 Including in 1980, Glaxo, Merck Sharp & Dohme, Nicholas, Reckitt & Colman and Wellcome (*MIMS Middle East*, Volume 11, Number 2, 1980).
- 3 Merck Sharp & Dohme advise us in 1982 "The Mohdar Corporation, as you mention, distributes our products; it does not, we are assured, hire a 'part-time' salesman to promote (our) products. Rather, representation is made by Merck employees who are well trained and carefully supervised. Merck has a large, worldwide organisation and for a distributor to be the Company's surrogate with physicians would certainly be the exception rather than the rule. The Company, cannot however, always provide professional representation where it operates through distributors, as in Yemen. In all arrangements with distributors, an agreement to comply with Merck standards is an important stipulation of the contract. Merck field and headquarters executives know these distributors well and visit them periodically to have first-hand knowledge of their operations. The training given to Company representatives is intensive and detailed..." "No system that we know of is infallible, which is why we took immediate steps to investigate the situation suggested by your letter." (John Stuart, Executive Director Public Affairs, Merck, Sharp & Dohme, 18 March 1982.) At the time of going to press, we have no response from Glaxo to this case specifically raised with them by letter on 20 January 1982.
- 4 Andras November, *Les Medicaments et le Tiers Monde*, Collection Centre Europe Tiers-Monde, (ed) Pierre Mariel Favre, 1981, p.157.
- 5 ABPI, "Code of Practice for the Pharmaceutical Industry", op.cit., Introduction, para d.
- 6 UNCTC, *Transnational Corporations and the Pharmaceutical Industry*, (ST/CTC/9), United Nations, New York, 1979. p.47 Some estimates suggest that marketing costs may be higher than 20% and more or less equal to actual production costs:
- | | | |
|-----------------|------------------|-----|
| Production: 30% | Trades promotion | 11% |
| | Sales | 10% |
| | Advertising | 8% |
| | TOTAL | 29% |
- (Plus research 10%, general overheads 15%, profit 16%.) Figures quoted by Charles Levinson, Secretary General International Federation of Chemical and General Workers Unions, "The Multinational Pharmaceutical Industry". (mimeo)
- 7 Dorit Braun, "Pharmaceutical Transnationals in Colombia", Chapter 8 of unpublished PhD thesis 1980. Figures are based on the estimated marketing expenditure of foreign firms (including 3 national firms with small sales volume) and health budgets 1971-1974. Marketing costs as % of health budget ranged between 46% and 55%. Estimated marketing expenditure taken as 26% of sales on the basis of a 1970 study by AFIDRO (industry representative body) - verified for costs of 10 foreign companies 1972/3 by Braun.

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- 8 Wilfred Lionel and Andrew Herxheimer, "Coherent Policies on Drugs: Formulation and Implementation", in Blum, Herxheimer, Stenzl and Woodcock (ed), *Pharmaceuticals and Health Policy*, International Research Group for Drug Legislation and Programs, Croom Helm, London 1981, p.247.
- 9 S. Bethoud, "Profil de prescription en Suisse romande et au Tessin: analyse de 2006 ordonnances medicales" in *Journal Suisse de Medicine*, 109, No. 3, 1979, pp. 1194-1200, quoted in November, op.cit., p.157.
- 10 Lionel and Herxheimer, op.cit.
- 11 Dr. Burley, Head of International Medical Liaison, Ciba-Geigy, personal communication, "Comments on your list of requests to companies" attached to letter of 21 May 1981.
- 12 ABPI, "Code of Practice for the Pharmaceutical Industry", op.cit., p.vii (3.3).
- 13 *ABPI News*, No. 177, October 1979.
- 14 Professor M. D. Rawlins, University of Newcastle and advisor to Committee on Safety of Medicines, in interview with the author, 31 March 1982.
- 15 Dr. U.K. Sheth, quoted by Shiranand Karkal (winner of Rajika Kripalani Young Journalist's award, doing internship Kem Hospital, Bombay) "Drugging the Indian", article in *Debonair*, October 1980.
- 16 "Merck in Bangladesh, Marketing Plan 1980(-1982)", dated December 1979 (forwarded to E. Merck, West Germany with letter from Merck Emedia Export Co. m.b.H. Bangladesh Branch of 22 January 1980) p.11.
- 17 *Ibid.*, pp.11 and 17.
- 18 *Ibid.*, p.11, and from p.8: "3.4 SEGMENTATION OF DOCTORS

	Total 1978	Important visited	Actually to be visited	Planned estimated 1980	Total
GP	7,500	3,800	2,000	2,500	8,000
Specialists	500	400	250	300	700
TOTAL	8,000	4,200	2,250	2,800	8,700
Students	3,000	-	-	-	3,500

Medical opinion: British."

- 19 *Ibid.*, p.29. Average sales proceeds per man/per year: 1978 DM 145,000 (and 1981: DM250). Average cost/per representative per month 1978 DM 550. Average cost per call DM 3.20.
- 20 Dr. J.S. Yudkin, MRCP, Senior Lecturer in Medicine, Faculty of Medicine, University of Dar-es-Salaam, "To Plan is to Choose" 1978, p.9. (mimeo)
- 21 - Jasper Woodcock, Director, Institute for the Study of Drug Dependence, "Medicines - the Interested Parties" in Blum, et al., op. cit., p.31.
- Milton Silverman and Mia Lydecker, "The Promotion of Prescription Drugs and other Puzzles", in *Ibid.*, p.86. Guatemala, Mexico and Brazil, ratio 1:3.
- Dr. J.S. Yudkin, "The Economics of Pharmaceutical supply in Tanzania". (undated mimeo)
- UNCTAD *Technology policies in the Pharmaceutical sector in Nepal*, (UNCTAD/TT/34), United Nations 1980, p.13. ("Altogether therefore, there are 70 full-time and about 70-80 part-time detailmen employed by the private sector to promote its products to approximately 400 doctors. The main activity of these representatives is to visit the doctors with samples and brochures. It is estimated that some doctors with a large private practice in Kathmandu are visited by an average of three to four detailmen daily. There is no Government control on promotional activity by drug companies.")

- 22 R.J. Ledogar, *Hungry for Profits*, US Food and Drug Multinationals in Latin America, IDOC/North America Inc., New York, 1975.
- 23 Rajendra Shaw, Centre for Development Communication, Hyderabad, letter to Jeff Alderson, OXFAM Field Director for S. India, 13 August 1981.
- 24 Hathi Committee, *Report of the Committee on Drugs and Pharmaceutical Industry*, Government of India, Ministry of Petroleum and Chemicals, April 1975, p.87.
- 25 Barry Cohen, Pharmacist, Holy Rosary Hospital, Emekuku, Nigeria, Letter to Richtie Coggan, BBC, London, 23 July 1979.
- 26 D.E. Frizel, Laboratory Technician, Bo Government Hospital, Sierra Leone, personal communication, 28 August 1980.
- 27 Dr. Paul Nicholson, Searle Research and Development (UK), personal communication, 25 March 1982: "Water absorption in the small intestine is linked to sodium absorption. There are several mechanisms by which sodium is absorbed, of which glucose-facilitated sodium transport is most important for successful rehydration by the oral route. The concentration of glucose in the oral solution is of fundamental importance in optimising sodium transport. Solutions with low concentrations of glucose provide inadequate supplies for transport processes. High concentrations may lead to a reverse of the desired effect. Nevertheless, some believe that glucose must be present in adequate quantities to have nutritional value also. In addition, although the glucose and sodium are absorbed in equimolar concentrations, many paediatricians have been concerned that the administration of too much sodium can lead to hypernatraemia in some infants."

CONCENTRATION OF 3 DIFFERENT PREPARATIONS:

	WHO	REHIDRAT	BNF
Sugar	111	188	200
Sodium	90	50	35
Potassium	20	20	20
Chlorine	80	50	37
Bicarbonate	30	20	18

(Nicholson)

- 28 Ibid.
- 29 Maurice King, Felicity King, Soebagio Martodipoero, *Primary Child Care*, A Manual for health workers, Book One, Oxford Medical Publications, OUP, 1980, p.120.
- 30 Dr. Tim Lusty, OXFAM Medical Adviser, in interview with the author, April 1982. The UNICEF price for a sachet to make up 1 litre of the WHO solution is \$0.07 a sachet (*UNIPAC catalogue/Price List* 1982, UN children's Fund Supply Division Package and Assembly Centre, Copenhagen.)
- 31 Noor Mohammed, Senior Field Organiser, E. Merck, in interview with the author, Rajshahi, 29 September 1980.
- 32 A.N.P. Speight, MRCP, "Cost effectiveness and drug therapy", *Tropical Doctor*, April 1975.
- 33 IFPMA, Statement to the 32nd World Health Assembly, Geneva, 7-25 May 1979, item 2.7.2 on the subject of the WHO Action Programme on Essential Drugs.
- 34 IFPMA, "The IFPMA code of Pharmaceutical Marketing Practice", March 1981 (amended March 1982).
- 35 WHO, *Prophylactic and Therapeutic Substances*, Report by the Director General, 28th World Health Assembly, WHO, (A 28/11), 3 April 1978.
- 36 Letter from Barry Cohen, op.cit.

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- 37 Noor Mohammed, op. cit.
- 38 Drs. Mehrhof and Niederehe, E. Merck, Darmstadt, West Germany, personal communication, 29 March 1982.
- 39 "Merck in Bangladesh", op.cit., p.17.
- 40 Ibid., p.27.
- 41 Ibid., p.22.
- 42 M.D. Rawlins, Professor of Clinical Pharmacology, Head of Department of Pharmacological Sciences, University of Newcastle, personal communication, 17 September 1981.
- 43 Drs. Mehrhof and Niederehe, op. cit.
- 44 Dr. Milton Silverman, *The Drugging of the Americas*, Berkeley and Los Angeles, University of California Press, 1976.
- 45 Silverman and Lydecker, in Blum, et al., op.cit., p.86.
- 46 Ibid.
- 47 Ibid., p.85.
- 48 Dr. Milton Silverman, personal communication, 10 August 1981.
- 49 The anomalies are documented in Milton Silverman, Philip Lee and Mia Lydecker, *Prescriptions for Death - the Drugging of the Third World*, University of California, Berkeley, 1982.
- 50 S. Redfern, Roche Products Limited, Attachment 1 "Product Information Leaflets" with particular reference to Mogadon and Valium in Thailand, personal communication, 4 May 1982.
- 51 Ibid. The current Thai Valium leaflet now includes a "Tolerance" paragraph, and the following "Precautions": "(1) It may cause abnormality to the blood cells, liver and kidneys. (2) It should not be used during the first trimester pregnancy. (3) It may cause drowsiness. While taking this medicine, the patient should not drive nor operate machinery. (4) While taking this medicine, avoid alcohol, or drink or medicine containing alcohol." And the following warning: "It may cause habituation and be hazardous. It must be used according to the physician's instructions."
- 52 - ABPI, *Data Sheet Compendium 1979-80*, 1979 op.cit., p.362.
- G. Potter, Group Public Relations Manager, Glaxo, personal communication, 16 June 1982.
- 53 Ibid., p.356. We have no comments from Glaxo on why these leaflets were issued without precautions on use.
- 54 *The British National Formulary*, 1981 (Volume 1) lists the following cautions for use of the combined Oestrogen-progestogen pills: diabetes, hypertension, cardiac or renal disease, migraine, epilepsy, depression, asthma, multiple sclerosis, wearing of contact lenses, cigarette-smoking, obesity, and drug interactions. Contra-indications: thrombosis and history of thrombo-embolic disease, recurrent jaundice, chronic liver disease, sickle-cell anaemia, hyperlipidaemia, mammary or endometrial carcinoma, severe migraine, undiagnosed vaginal bleeding. And side-effects: nausea, vomiting, headache, breast tenderness, changes in body weight, changes in libido, depression, chloasma, hypertension, impairment of liver function, benign hepatic tumours, reduced menstrual loss, 'spotting' in early cycles, amenorrhoea. (p.210).
- 55 Government of the People's Republic of Bangladesh, Ministry of Health and Population Control (Health Division) Drugs Administration, "Requirements for Registration of New

- and Unintroduced Medicines”, (undated), collected September 1980. Also form for “Application for Approval of Recipe of Pharmaceutical Preparation”.
- 56 ABPI, 1979, op.cit., p.369. Also comment on Cytamen current indications in Bangladesh from Geoffrey Potter, Group Public Relations Manager, Glaxo, personal communication, 16 June 1982.
- 57 *British National Formulary*, 1981, op.cit., p.225.
- 58 A.H. Goodspeed, MB BS MRCS LRCP Dip.Pharm.Med, personal communication, 2 April 1981.
- 59 Professor M.D. Rawlins, op.cit.
- 60 Ibid.
- 61 Drs. Mehrhof and Niederehe, op. cit. p.3.
- 62 Ibid.
- 63 “Merck in Bangladesh”, op.cit., p.15: daily cost of treatment with Neurobion (actual prices 31/12/79) Taka 11.88.
- 64 ABPI, 1979, para 17.2.p.x.
- 65 Dr. J.Z. Galvez-Tan, Personal communication, 2 May 1980. (Promotion observed in Samer and Leyte provinces and documented February 1980.)
- 66 Ibid. (Promotion in the Davao-Cotabato area, documented April 1980).
- 67 Ibid.
- 68 Dr. J.Z. Galvez-Tan, “Medical Plants: an alternative to the rising costs of medicines”. (mimeo)
- 69 Dr. Satoto, Semarang, personal communication, 25 June 1980.
- 70 Dr. Humayun K.M. Hye, personal communication, 10 August 1981.
- 71 For instance, in Bangladesh senior doctors, some of them professors in the government medical colleges, are shareholders of Pfizer and ICI. ICI comment: “It is not ICI’s policy to encourage doctors in Bangladesh or in any other country to become shareholders. It is probable that amongst the 700,000 shareholders of ICI loan and equity stock some will be members of the medical profession.” (P. Cunliffe, Chairman, Pharmaceuticals Division, 11 February 1982.)
- PFIZER advise us: “... it is not Pfizer’s policy to encourage persons to become shareholders. We do not believe that it is our function to render investment advice to doctors or any other segment of the public. The situation in Bangladesh resulted from Pfizer’s application to the Government (then Pakistan) a number of years ago, for the opening of a manufacturing branch in East Pakistan. The Government, in an effort to encourage local investment, granted approval of the project conditional upon a certain portion of the equity being allotted to members of the medical profession in East Pakistan.” (M. W. Hodin, Director of Public Affairs, Pfizer, personal communication, 17 March 1982.)
- 72 Dilip Thakore, “The Ethics of the Drug Industry”, *Business India*, 7-20 July 1980.
- 73 Dr Hassani, private doctor and director of Norwegian Save-the-Children Fund Clinic, Ibb, in interview with the author, September 1980.
- 74 Anthony Hall, OXFAM Field Director, Recife, Brazil, personal communication, 10 June 1980.
- 75 Anne Ferguson, Department of Anthropology, Michigan State University, “The effects of source of supply of medications on health care services dispensed in pharmacies in a Salvadoran town”, paper presented at the Central States Anthropology Society, 56th Annual Meetings held in Ann Arbor, Michigan, April 9-12, 1980. (mimeo)

- 76 Ibid.
- 77 Dr. John S. Yudkin, "The Economics of Pharmaceutical Supply in Tanzania", *International Journal of Health Services*, Volume 10, number 3, 1980, p.460. In April 1982, in response to our enquiry, a spokesman of A.H. Robbins in Richmond, Virginia, US, advised us by telephone that a company executive was due to visit Tanzania and would look into the matter. The *British National Formulary* (1981) comments on cough expectorants like *Robitussin* (guaiphenesin): "There is no evidence that any drug given by mouth has specific action in promoting expectoration of bronchial secretions by stimulation or augmentation of the cough reflex... There is thus no scientific basis for prescribing these drugs although a harmless expectorant mixture may have a useful role as a placebo." (p.93) Prof. Peter Parish puts it more forcefully: guaiphenesin etc. "are present in many cough medicines and from the point of view of effectiveness you may as well choose them by taste or colour." (*Medicines, A Guide for Everybody*, Penguin, 1981, p.103). Regarding *Dimotane* (containing 4 drugs including an antihistamine and expectorant and sympathomimetic) the BNF comments: "Combinations such as expectorant and cough suppressant, sympathomimetic and sedative, and any or all of these with other types of drug such as antihistamines are to be *deprecated*." (p.95 original emphasis)
- 78 For example in Britain the ABPI "Code of Practice for the Pharmaceutical Industry", op.cit., includes 5 paragraphs of guidelines and restrictions on the distribution of samples. Para.16.1 states: "Except when provided for identification or demonstration purposes, samples should only be supplied in response to a signed request from a doctor...When samples are provided to assist doctors in the recognition or identification of a product...only the minimum quantity necessary for this purpose should be supplied."
- 79 Hathi Committee, op.cit.
- 80 Paul E. Jenkins, UNAIDS, Sahel Region Upper Volta, personal communication, 1 December 1981 (OXFAM Project VOL 114).
- 81 For example, stock at Ahmed Alhadry's Sandileer, the local pharmacy in Al Jabin, included 10 free samples, including Upjohn's Erythromycin, Boehringer's Gynaecosid, Warner & Co's (UK) Sinutab Decongestant, Dumex's antidepressive Imiprex, Knoll's Osadrin and others from Italian manufacturers. (Check made on 22 June 1980 by members of the British Organisation for Community Development Health Team.)
- 82 Government of the Yemen Arab Republic, "Fourth Annual Report on the Activities of the Supreme Board for Medicines and Medical Equipment during 1979", (translated from the Arabic) and as reported in *The Lancet*, 4 July 1981. Whilst waiting to see the WHO representative in Sana'a, September 1980, we observed a member of staff being given a free sample of an Asthma spray for a sore throat.
- 83 Dr. John Yudkin, "To plan is to choose", 1979. (mimeo)
- 84 Dr. Ann Hoskins, British Organisation for Community Development, Discussion paper from the BHS Drug Committee on the problems of drugs in Yemen, May 1981.
- 85 Priscilla Annamethodo, OXFAM, "Medicines in Upper Volta", research paper, Ouagadougou, October 1980. (mimeo)
- 86 S. Redfern, Roche Products Ltd., attachment to personal communication, 4 May 1982.
- 87 Professor Nurul Islam, in interview with the author, 6 October 1980.
- 88 ABPI, 1979, op.cit. Organon products, p.730.
- 89 *British National Formulary*, 1981, op.cit., p.159.
- 90 Dr. Sultana Khanum, paediatrician, SCF Children's Nutrition Unit, Dacca, in interview with the author, 24 September 1980.
- 91 ICSSR/ICMR, *Health for All - An Alternative Strategy*, 1981, p.179.

- 92 UNCTAD, *Technology policies and planning for the pharmaceutical sector in the developing countries*, (TD/B/C.6/56) United Nations, 1980.
- 93 Dr. Hassani, private doctor and director of Norwegian SCF Clinic, Ibb, in interview with the author, September 1980.
- 94 Nurul Islam, op.cit.

CHAPTER 6

- 1 Dr. Sultana Khanum, paediatrician, SCF Children's Nutrition Unit, Dacca, in interview with the author, 24 September 1980.
- 2 Letter from Dr. Cliff David, CIIR doctor, at the Mother and Child Health Centre, Sana'a, to CIIR London office, (PM/140) undated.
- 3 David Werner, personal communication, 20 July 1981.
- 4 Anne Ferguson, Department of Anthropology, Michigan State University, "The Role of Pharmaceuticals in the process of medicalization in Asuncion, El Salvador", paper delivered at the 1980 American Anthropological Association Meetings held in Washington, DC, 2-7 December. (mimeo)
- 5 A. Giovanni, *A Questao dos Remedios no Brasil*, Polis, Sao Paulo, 1980, quoted by Mike Muller, *The Health of Nations*, A North-South Investigation, Faber and Faber, 1982, p.111.
- 6 David Werner, seminar for OXFAM staff, OXFAM House, Oxford, 8 September 1981.
- 7 Sjaak van der Geest, University of Amsterdam, "The Efficiency of Inefficiency: Medicine Distribution in South-Cameroon", paper presented at Seventh International Conference on Social Science and Medicine, Noordwijkerhout, 22-26 June 1981, p.7. (mimeo)
- 8 Britain-Nepal Medical Trust, Annual Report, 1976. OXFAM File, NP5.
- 9 Anne Ferguson, "The Effects of Source of Supply of Medications on Health Care Services dispensed in pharmacies in a Salvadoran town", paper presented at the Central States Anthropology Society 56th Annual Meeting held in Ann Arbor, Michigan, 9-12 April 1980, p.31. (mimeo)
- 10 E. J Fullager, Divisional Manager Sandoz Products Limited quoting Indian colleagues. "The FAO/WHO Expert Group 1962 surveyed the food supplies of various parts of the world and summarised that India had the lowest calcium consumption (347 mg per day). The National Insitute of Nutrition in India carried out a survey of the dietary habits of Indians and they found that the average daily intake of calcium of Indian children is 300 mg or less (ICMR 1980). The report mentioned that high levels of calcium intake "are not easy to achieve in practice in countries where the dietary calcium is mostly obtained from cereal and other vegetables and only to a lesser extent from milk and milk products"'. (Personal communication, 9 June 1982.) This does not mean that health depends on calcium-intakes as high as Europe and North America (930 mg France; 1116 mg USA; highest: 1329 mg Finland). On high consumption, less is absorbed. "On a dietary intake of 600 to 1000 mg a normal adult absorbs about half the ingested calcium and net absorption varies little over this range. When calcium intakes fall below 500 mg adaptive mechanisms increase the proportion which is absorbed. In severe calcium restriction the efficiency of absorption can reach up to 70 to 80%..." (Dr G. J. Ebrahim, "The Problems of Undernutrition", *Nutrition and Disease*, in R. J. Jarrett (ed), Croom Helm London, 1979, p.105.) 11 Fullager, op.cit.
- 12 Whole cow's milk representative values for nutrients (per 100g of edible portion): Calories: 64, Protein: 3.3, Fat 3.6, Carbohydrate 4.7, Iron 0.1, vitamin A potency approx. 150, Thiamine 0.04, Riboflavin 0.15, Nicotinamide 0.1, Ascorbic acid 1.0 (B.S. Platt, *Tables of representative values of foods commonly used in tropical countries*, Liverpool School of Tropical Medicine, reprinted 1982, pp.26-27.)

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- 13 - Platt, op.cit.
- Ebrahim, op.cit.,p.105.
- 14 - Brudon, op.cit.
- David Werner in interview with Adrian Moyes, OXFAM Public Affairs Unit, 30 June 1980.
- 15 Solomon Agnew, Central Planning Office, Ethiopia, "Drug Business and its implication on the Development of Health Services in Ethiopia", part I paper presented at Institute of Development Research Seminar on Strategies for Socialist Rural Transformation in Ethiopia, Nazreth, 27-29 October 1978, p.11. (mimeo)
- 16 *British National Formulary 1981*, Number 1, 1981, p.15.
- 17 Peter Parish, Professor of Clinical Pharmacy and Director of the Medicines Research Unit, Cardiff, *Medicines*, Penguin, Third Edition, 1981, p.18.
- 18 Sir John Butterfield, "The contribution of modern medicines", in George Teeling-Smith and Nicholas Wells (ed), *Medicines for the year 2000*, Office of Health Economics, London, 1979, p.30.
- 19 Milton Silverman and Mia Lydecker, "The Promotion of Prescription Drugs and other puzzles", *Pharmaceuticals and Health Policy*, Blum, Herxheimer, Stenzl and Woodcock (ed), 1981, p.85.
- 20 Pascale Brudon, "L'Industrie Pharmaceutique Suisse dans les Pays Sous - developpes", Memoire presente pour le diplome de recherche en etudes de developpement, Institut Universitaire d'Etudes de Developpement, Geneva, 1981, p.192.
- 21 Ferguson, April 1980, op.cit., p.8.
- 22 - Cee-NU *British National Formulary 1981* op.cit., pp.213-214.
- *SCRIP* No. 639 (2 November 1981) p.11 and No. 670 (24 February 1982) p.9.
- 23 Purchased Cee-NU 4 October 1980. Black market price of 2 capsules Taka 350 (£9.72) - This is only one of many prescription drugs that can be bought on the black market.
- 24 For example: "Widely divergent views and requirements of regulatory authorities often make it impossible to maintain our international standard and therefore, when starting to compare product information in different countries it is inevitable that deviations are noted ... Unfortunately again, there are as far as medical standards are concerned, in many instances no strict criteria as a result of transcultural differences ..." (Dr T. Vossenaar, Organon, personal communication, 23 April 1982.)
- 25 For example a conversation between participants at the Mario Negri Institute in Milan in June 1981 revealed the very different thinking over painkillers in Europe. In Britain aspirin and paracetamol, are sold over the counter, but phenacetin and dipyrone have been removed from the market. But dipyrone is widely used in W. Germany. Italy considers the risks of kidney damage from phenacetin as less of a problem than the dangers of overdose of paracetamol.
- 26 WHO, *Treatment and Prevention of Dehydration in Diarrhoeal Disease* (A Guide for use at the Primary Level), WHO, Geneva, 1976.
- 27 King, King and Martodipoero, *Primary Child Care*, A manual for health workers, Oxford University Press, 1978, p.129.
- 28 Ibid.
- 29 Both Ciba-Geigy and Searle agree there is a problem. Dr. Burley, *Ciba-Geigy*: "You are almost certainly right about the unconsidered use of clioquinol in children, particularly young children where diarrhoea needs to be treated with fluid replacement and proper food. I will look into exactly what we say about the use of clioquinol in young children now. " (Personal communication, 23 February 1982.) But Ciba's package insert (dated 21 December 1981), forwarded by Dr. Burley on 12 March 1982, contains *no warning* about the importance of oral rehydration in treating children. Package inserts for *Searle's Lomotil* purchased in Egypt

in 1982 contain no warnings about oral rehydration. But Dr. Nicolson of G. D. Searle writes: "We have agreed that the importance of replenishing fluid and salts in the treatment of diarrhoea particularly in children is something which should be further emphasised in our literature (advertising, package inserts, etc.) It is true that the problem of dehydration in the context of diarrhoea may not be fully appreciated by physicians in private or public health practice. While we may help in the educational process by providing responsible information, the problem is one which must be tackled fundamentally in professional medical education on a worldwide basis." (Personal communication, 25 March 1982.)

- 30 ABPI, *Data Sheet Compendium, 1979-80*, p.936.
- 31 "Lomotil for Diarrhoea in Children", *The Medical Letter*, (25, 1975) p.104, quoted by Charles Medawar and Barbara Freese, *Drug Diplomacy*, Social Audit Ltd, 1982, pp.12-13.
- 32 S. M. Uthman, "Some complications of Diphenozylate Hydrochloride with Atropine", *Lebanese Medical Journal*, 27.5, 1974, pp.521-2, quoted by Medawar and Freese, 1982, op.cit., pp.12-13.
- 33 G. Upunda, J. Yudkin and G. Brown, *Therapeutic Guidelines*, (A Manual to assist in the rational purchase and prescription of drugs), African Medical and Research Foundation (AMREF), Nairobi, 1980, p.96, quoted in *ibid*.
- 34 "Lomotil for Diarrhoea in Children", in *The Medical Letter*, 25, 1975, p.104, quoted in *ibid*.
- 35 M. E. Drake and M. E. Drake Jr., "Lomotil Intoxication in Pediatric Patients", *J. Med. Soc. New Jersey*, June 1974, pp.501-2, quoted in *ibid*.
- 36 *Ibid.*, p.8.
- 37 ABPI, *Data Sheet Compendium 1979-80*, p.936.
- 38 Medawar and Freese, *op.cit.*, p.16.
- 39 - *British National Formulary 1981*, No. 1, *op. cit.*, p.40.
- WHO, 1976, *op. cit*.
- 40 *SCRIP*, No 630, 30 September, 1981, p.11.
- 41 AMREF, 1980, quoted by Medawar and Freese, *op. cit.*, pp.12-13 Worldwide Sales of Lomotil in 1981 totalled \$31.2 million (*SCRIP* 684, 14 April 1982).
- 42 Medawar and Freese, *op.cit*.
- 43 "You have raised the question of communicating information to the illiterate. This problem we presume, is not one which confronts only Searle or the pharmaceutical industry. Your practical suggestions will be welcomed and considered." (Dr. Nicholson, Searle Research and Development (UK), personal communication, 25 March 1982.)
- 44 Dr. Olle Hansson, "Is Entero-Vioform a killer drug?", *New Scientist*, 23 November 1978.
- 45 - Parish, *op. cit.*, p.137.
- Hansson, *op. cit*.
- 46 ICADIS News, No 1, Information Centre Against Drug-Induced Sufferings, Japan, November 1981.
- 47 - Hansson, *op. cit*.
- Prof. Rawlins of Committee of Safety of Medicines, in interview with the author, 31 March 1982.
- 48 - *British National Formulary 1981*. Unigreg's Unidiarea (125 mg clioquinol and 200 mg neomycin sulphate).
- UK *MIMS*, February 1980.
- 49 WHO, *Drug Information Bulletin*, WHO, Geneva, January-March 1978.
- 50 - Dr. D. M. Burley, Head of International Medical Liaison, Ciba-Geigy, Horsham, England, personal communication 4 February 1982.

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- Silverman, Lee and Lydecker, *Prescriptions for Death, The Drugging of the Third World*, University of California Press, 1982, pp.44-58.
- 51 Dr. D. M. Burley, personal communication, 21 May 1981.
- 52 - Dr Sayeed Hyder (ed), *The Prescriber's Guide*, '79, June 1979. Dose: Adults 1-2 tablets thrice daily (250 mg clioquinol x 6 / 1500 mg daily x 7 / 10.5 gms.)
 - "An investigation by Professor Tadao Tsubaki established that 96 per cent of the SMON patients in the sample had taken oxyquinoline. He also found that neurological symptoms generally began to appear when a total dose of 10 to 50 grammes had been reached, and that the time span between the taking of oxyquinoline and the beginning of neurological symptoms was 50 days at a daily dose of 600 mg and 30 days at a daily dose of 1200 mg oxyquinoline, that a larger dose tended to produce a more severe patho-logical picture." (Hansson, op.cit.)
- 53 - *The Lancet*, Editorial 28 May 1977: "...the companies deny that the neurological damage from clioquinol is a serious risk outside Japan. This denial is unconvincing because cases of clioquinol damage have been observed outside Japan, and identical abnormalities of the nervous system have been reproduced in animals."
 - *The Lancet*, 2 September 1978: "A quiet change in the indications is not enough. Drug regulatory authorities, manufacturers and distributors ... should now emphasise to the public that these drugs should no longer be used for ... non-specific diarrhoeas." (From: Social Audit leaflet on clioquinol: "Bad information means Bad Medicine..", 1981.)
- 54 Mr A. Wahid, Managing Director of Fisons Bangladesh quoted in "Crisis in the Drug Industry", *Robbar*, 1 June 1980, Dacca - cited by Dr. Zafrullah Chowdhury, "Essential Drugs for the Poor: Myth and Reality in Bangladesh", paper presented at the Primary Health Care Symposium, Liverpool School of Tropical Medicine, 13-16 April 1982. (mimeo)
- 55 Prof. G. Peters, University of Lausanne, "Information and Education about Drugs", in Blum et al. (ed), op.cit., pp.105-106.
- 56 Mohammed Nurul Alam, Marketing Manager, Fisons (Bangladesh) Limited, in interview with the author, 26 September 1980.
- 57 Ferguson, 2-7 December 1980, op. cit., p.9.
- 58 Ibid., pp. 15-16.
- 59 *British National Formulary*, 1981, op.cit., p.201.
- 60 H. R. Gribbin, S.G. Flavell Matts, "Mode of Action and Use of Anabolic Steroids", *The British Journal of Clinical Practice*, Vol. 30 No. 1, January 1976, pp.3-9.
- 61 Ibid.
- 62 Parish, op.cit., p.201.
- 63 *British National Formulary* 1981, op.cit., p.201.
- 64 Gribbin, Flavell Matts, op.cit., p.9.
- 65 Text of advertisement distributed in Bangladesh.
- 66 Dr. Martin Schweiger, Rangpur Dinajpur Rehabilitation Service, personal communication, 28 September 1980.
- 67 Organon (Bangladesh) Limited, *Therapeutic Index*, undated.
- 68 ABPI 1979, op.cit., p.730.
- 69 Dr. R.J. Bloemen, Organon, personal communication, 21 December 1981.
- 70 "Organon Product Safeguards" re: Orabolin tablets and drops. The revised therapeutic index has not been received at the time of going to press, June 1982. Four months after Organon advised us of their intention to revise the entry for Orabolin, we were informed: "The entry

in the Therapeutic Index should be corrected, including incorporation of side-effects and contra-indications. As soon as this has been printed I will send you a copy.” (Dr. T. Vossenaar, Organon, personal communication, 23 April 1982.)

- 71 ABPI, 1979, op.cit., p.1013.
- 72 *British National Formulary 1981*, op.cit., p.201.
- 73 P. W. Cunliffe, Chairman Pharmaceuticals Division, ICI, personal communication, 11 February 1982.
- 74 Dr. D. M. Burley, Ciba-Geigy, personal communication, 1 April 1982.
- 75 - Ciba-Geigy statement on aminophenazone (amidopyrine) *SCRIP* No. 666, 10 February 1982, p.14.
- Dr. D. M. Burley, Ciba-Geigy, personal communication, 4 February 1982.
- Silverman, Lee and Lydecker, op.cit., p.60.
- 76 - Dr. Burley, personal communication 4 February 1982.
- Dr. G. R. Venning, “Validity of anecdotal reports of suspected adverse drug reactions: the problem of false alarms”, *British Medical Journal*, Volume 284, 23 January 1982., p.250.
- 77 - The withdrawal of amidopyrine was recommended “because of its ability to form carcinogenic nitrosamines either spontaneously or by interaction with nitrites in food”, P. Epstein and J. S. Yudkin, letter to *The Lancet*, 13 August, 1978.
- *SCRIP* No. 666, op.cit.
- Burley, personal communication 4 February 1982, op.cit.
- 78 - Ibid.
- Brudon, op.cit., p.236.
- 79 J. S. Yudkin, letter to *The Lancet*, 14 November 1981, p.1114.
- 80 Entry for Cibalgin (with aminophenazone) *MIMS Middle East*, Volume 11, Number 2, 1980, p.57.
- 81 Brudon, op.cit., p.236.
- 82 Dr. Burley, personal communication, 4 February 1982.
- 83 - Ibid.
- *SCRIP* No. 666, op. cit.
- 84 *The Lancet*, 14 November 1981, op.cit.
- 85 Brudon, op.cit., p.236.
- 86 *The Lancet*, 14 November 1981, op. cit.
- 87 - Ibid.
- Personal communication from Stephen de Winter of Belbo Film Productions.
- 88 Dr. Burley, personal communication, 4 February 1982.
- 89 “Special Report”, *The Hindu*, 6 January 1981.
- 90 Ibid.
- 91 *The Lancet*, 2 August 1980, op. cit.
- 92 Dr. Burley, Ciba-Geigy, personal communication, 12 March 1982. Ciba have stressed that “It is not right to infer that amidopyrine has been dumped in the Third World. On the contrary far more has been sold in the developed world ...” (Burley, personal communication, 4 February 1982, op. cit.)
- 93 C. M. Huguley, “Agranulocytosis induced by dipyrone, a hazardous antipyretic and analgesic”, *JAMA* 189; 1964, pp.938-941, quoted by J. S. Yudkin, “The Economics of Pharmaceutical Supply in Tanzania”, *International Journal of Health Services*, Volume 10, Number 3, 1980, pp.455-477.

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- 94 Yudkin, 1980, op. cit. Of course manufacturers do not agree: "Novalgin (dipyrone) is still an irreplaceable analgesic having a wide therapeutic profile encompassing excellent analgesic, spasmolytic, antiinflammatory and antipyretic activity". (Dr R. W. Timmers and Dr C. G. Roepnack, Hoechst, West Germany, personal communication, 22 March 1982.)
- 95 - "Drugs for Human use containing Dipyrone", *Federal Register*, 1976, quoted in WHO *Drug Information Bulletin*, January-March 1977.
- *Martindale*: "Its (dipyrone) use is justified only in serious or life-threatening situations where no alternative antipyretic is available or suitable." (p.191)
- 96 In early 1982 an expert advisory committee proposed that pyrazolone products such as dipyrone should be placed under prescription only regulations. This was subsequently altered to apply to injectables only. (*SCRIP* No. 679, 29 March 1982.) 70 manufacturers and 162 products are affected by the new proposals. Decisions on a further 1,000 plus combination products are awaited (*SCRIP* No. 685, 19 April 1982). Hoechst objection: "The authorities justify these measures by saying that there are grounds for believing that ... metamizole (dipyrone) can cause agranulocytosis and shock. We have repeatedly pointed out that the available data do not in any way justify measures as severe as those the BGA is now requiring. Reliable figures on the - much overestimated - frequency of the adverse reactions will be available next year from the Boston study on agranulocytosis and aplastic anaemia." (*SCRIP* No. 689, 3 May 1982.) Also Timmers and Roepnack, personal communication 22, March 1982, op.cit.
- 97 Dr. K. Balasubramanian, UNCTAD, "Drug Policies in Third World Countries", paper presented at the International NGO Seminar on Pharmaceuticals, Geneva, 27-29 May 1981.
- 98 Brudon, op.cit., pp.195-6.
- 99 Hoechst have sent us the product inserts for Novalgin (for Bangladesh) which contain a warning in red in *English*: "The drug may cause fatal agranulocytosis." From our research drug-sellers had no idea of any safety warnings. 'Agranulocytosis' meant nothing to most.
- 100 Dr. H.K.M. Hye, while Director Drugs Administration, personal communication, 10 August 1981. Novalgin and other dipyrone are included in the drugs recommended for withdrawal in the 1982 Expert Committee Report: "Evaluation of Registered/Licensed Products and Draft National Drug Policy, May 11, 1982", Dacca, Bangladesh.
- 101 Priscilla Annamethodo, OXFAM, "Medicines in Upper Volta". Ouagadougou, 1980. (mimeo)
- 102 Dr. Tony Klouda, OXFAM Medical Adviser Tanzania, personal communication, 11 September, 1981.
- 103 - Dr. Hassani, private practitioner and director of Norwegian SCF clinic, Ibb, in interview with the author, September 1980.
- Dr. Ann Hoskins, British Organisation for Community Development, discussion paper from the BHS Drug Committee on the problems of drugs in Yemen, May 1981, p.10.
- 104 Dr. Ann Hoskins, op. cit., p.10.
- 105 Institute of Development Studies Health Group, *Health Needs and Health Services in Rural Ghana*, Volumes 1 and 2, IDS in collaboration with ISSER, University of Ghana; NHPU, Ministry of Health, Government of Ghana and Department of Community Health, Korle Bu; IDS, Brighton, June 1978.
- 106 Ibid.
- 107 - Mohammed Nurul Islam, Fisons (Bangladesh) Marketing Manager, in interview with the author, 26 September 1980.
- Dr. H.K.M. Hye, personal communication, 10 August 1981.
- 108 Dr. Mira Shiva, Voluntary Health Association of India, personal communication, 24 August 1981.

- 109 Dr. Martin Schweiger, "In Sickness or in Wealth", BBC Radio 4, transcript of programme transmitted 26 June 1979.
- 110 - UNCTAD, *Technology policies in the pharmaceutical sector in Nepal*, 1980, op. cit., p.169.
 - Similarly tonic preparations containing isoniazid and vitamins are on sale in the Philippines - David Werner, in interview with the author, 8 September, 1981.
- 111 *British National Formulary 1981*, op.cit., pp. 38 and 40.
- 112 - Sumycin (tetracycline oral suspension) purchased on 28 September 1980 at drug store in Baragharia village, Rajshahi.
 - In Britain tetracycline is contraindicated in pregnancy and for children under twelve. (*British National Formulary 1981*, op.cit., p.159.)
 - "Tetracyclines may cause a yellow to brown discolouration of the teeth in the developing foetus or child..." (ABPI 1979, op.cit., p.467.)
- 113 The Managing Director of Squibb of Bangladesh Limited writes: "I am puzzled as to why you have singled out Sumycin Syrup as being sold over the counter when most pharmaceuticals in Bangladesh can be purchased in this manner. We in Squibb share your concern about this practice, but regrettably there is little we can do about it .. I would welcome your letting me have the name and address of the dealer you allege recommends Sumycin for young children suffering from diarrhoea in order that we can investigate. *We never have promoted this product for the treatment of diarrhoea.*" (R. Bower, Squibb, personal communication, 3 May 1982.) *Mr. Bower makes no comment on the lack of any warnings on the Sumycin pack or bottle*, but writes: "Since you raise the question of product information in general, I take the opportunity of informing you that Squibb worldwide policy is to place all product facts before doctors. Bangladesh is no exception." (op.cit.)
- 114 *Prescriber's Guide 79*, op.cit., p.17.
- 115 *British National Formulary 1981*, op. cit., p.164.
- 116 Bruce K. Berger, Public Relations Associate, The Upjohn Company, personal communication, 19 March 1982.
- 117 Brudon, op.cit., p.197. Upjohn comment: "Lincocin sells well in Mexico. But it also sells well in Japan, Italy and other countries. And it sells well because it is an effective, life-saving antibiotic, not because of the magnitude of promotion in any particular country." (Berger, 1982, op.cit.)
- 118 Package insert for Rivomycin Strepto, manufactured by Rivopharm Laboratories, Manno, Switzerland, purchased in Ibb, North Yemen, September 1980.
- 119 - *Martindale*, p.1107.
 - *British National Formulary 1981*, op. cit.: "chloramphenicol is a potent, potentially toxic, broad-spectrum antibiotic which should be reserved for the treatment of life-threatening infections..."
- 120 Dr. E. Tagman and Dr. S. Balluz, Rivopharm SA, Manno, Switzerland, personal communication, 11 February 1982.
- 121 Drs Tagman and Balluz, personal communications 8 April 1982 and 17 May 1982. Rivomycin Strepto is no longer licensed for sale in Switzerland. Rivopharm comment: "We still consider chloramphenicol and dihydrostretomycin a useful combination in the treatment of intestinal infection with susceptible organisms; but it should only be given under medical supervision." (Personal communication, 17 May 1982, op. cit.)
- 122 Albert David (Bangladesh) Ltd, *Vademecum*, medical products list. (Current September 1980.
- 123 - Information from: David Newell, OXFAM Field Director, and Concern Volunteers, Dacca, Bangladesh;
 - Sue Becklerleg, Nutritionist, "Breastfeeding case studies in the town of Ibb". (mimeo

1980) Injections prescribed by the Nasser Hospital ;
Suzanne Williams, OXFAM Field Director, Manaus.

- 124 Norman S. Lane, WHO Pharmaceutical Services Adviser, Addis Ababa, "A National Drug Policy: Why and How", (Ferdis Health Station, Hararge Province), November 1977. (mimeo)
- 125 Shamsud Doha, Pharmacist, Save the Children Fund, Dacca, in interview with the author, 9 October 1980.
- 126 Annamandthodo, op. cit.
- 127 Letter from a VSO worker at Institute of Medicine, Kathmandu to Ritchie Coggan, BBC, London, 5 June 1979.
- 128 - Gaby Taylor, OXFAM Field Director, Zaire in interview with the author, 1980.
- Annamanthodo, op. cit.
- 129 - Dr. Abhay Bang, Medico Friend Circle, Gopuri, Wardha, personal communication, September 1980.
- Bharat Dogra, researcher and journalist, personal communication December 1980, quoting studies by Dr. K. B. Sharma, the Salmonella Centre at Lady Harding Medical College, Delhi; Central Research Institute, Kesouli.
- 130 Prof. Philip Lee, Statement before the sub-committee on Monopoly, Small ?Business Committee, United States Senate, 26 May, 1976.
- 131 Dr. C. E. Gordon-Smith, Dean of the London School of Hygiene and Tropical Medicine, paper delivered at the US Institute of Medicine, National Academy of Sciences, Proceedings *Conference on Pharmaceuticals for Developing Countries*, Washington, January 1979.
- 132 Lee, op. cit.
- 133 Mike Muller, *The Health of Nations; A North-South Investigation*, Faber and Faber, 1982, pp.114-115.

CHAPTER 7

- 1 WHO, "WHO urges a blending of merits between Western and Traditional Medicine", *WHO Features No. 46*, April 1979.
- 2 Dr. W. D. Sutherland, "A systems analysis of a rural primary health centre in India including a study of the integration of indigenous practitioners into the primary health centre", dissertation for Master of Community Health, Liverpool School of Tropical Medicine, 1978.
- 3 Ibid.
- 4 Mrs. Najma Sarwar, social researcher, carrying out survey of patients at SCF Children's Nutrition Unit, Dacca, in interview with the author, 24 September 1980.
- 5 Priscilla Annamanthodo, OXFAM, "Medicines in Upper Volta", Ouagadougou, 1980. (mimeo)
- 6 WHO, op.cit.
- 7 Dr. H.K.M Hye, "Utilisation of Traditional Medicines in Primary Health Care". (undated mimeo)
- 8 WHO, op.cit.
- 9 Dr. Aziz, International Centre for Diarrhoeal Disease Research, Dacca, in interview with the author, 8 October 1980.
- 10 Dr. Tony Klouda, "Prevention is more expensive than cure", a Review of Tanzania's Problems in Health, 1971-81, July 1981 draft, p.11.
- 11 WHO, op.cit.
- 12 Klouda, op.cit.

- 13 - Mark Bowden, Director, Save the Children Fund, Bangladesh, in interview with the author, 18 September, 1980.
 - Dr. Martin Schweiger, personal communication, 13 July 1981.
- 14 Dr. Dhruv Mankad, "Proposal for the Self-Reliant Alternatives to Western Medicine Project", 7 January 1981, OXFAM file, MAH.87.
- 15 Dr. Jaime Galvez-Tan, "Medicinal Plants: An alternative to the rising costs of medicines", May 1979. (mimeo)
- 16 - Prof. K. N. Udupa, Banaras Hindu University, "The Role of Indian medicine in Primary Health Care", paper presented at the symposium on Primary Health Care, Liverpool School of Tropical Medicine, 13-16 April 1982. (mimeo)
 - Dr. J. S. Yudkin, Whittington Hospital, in interview with the author, October 1981.
- 17 WHO, op. cit.
- 18 - Neem / azadirachta indica-meliaceae. Dr. Hye, personal communication, 10 August, 1981.
 - P. C. Roy Chaudhury, "Herbal Medicines for Common Ailments", *The Himachal*. - The International Organisation of Consumer Unions warns that neem oil has been identified as the cause of Reye syndrome, where there is an acute onset of damage to the liver, kidneys and brain. Symptoms of poisoning are observed within 2-4 hours of consuming 5-30mg of the oil (studies of the University of Malaya Hospital, Kuala Lumpur). (Personal communication from Foo Gaik Sim, Head of Information and Research, 5 August 1981.)
- 19 - Peter Parish, *Medicines, A Guide for Everybody*, Penguin, 1981.
 - Anil Agarwal, *Drugs and the Third World*, an Earthscan Publication, International Institute for Environment and Development, August 1978. -Digoxin and quinine are included in the WHO *Selection of Essential Drugs*, (Technical Report Series No. 641, Geneva 1979). Ephedrine and reserpine are included in the WHO Selection as "complementary" rather than "essential" drugs. ?
- 20 UNCTAD, *Case Studies in the transfer of technology: The Pharmaceutical Industry in India*, study prepared by the Jawaharlal Nehru University and the Indian Council of Scientific and Industrial Research, 1977.
- 21 Dr. H.K.M. Hye, in interview with the author, Delhi, 20 October 1980.
- 22 Galvez-Tan, op.cit.
- 23 Agarwal, op.cit.
- 24 Hye, "Utilisation of Traditional Medicines in Primary Health Care", op. cit., p.6.
- 25 Prof. Arnold Beckett, quoted in *SCRIP*, No. 628, 23 September 1981, p.13.
- 26 Hye, "Utilisation of Traditional Medicines in Primary Health Care", op.cit., p.5.
- 27 *Ibid.*, p.4.
- 28 Agarwal, op.cit.
- 29 Hye, "Utilisation of Traditional Medicines in Primary Health Care", op.cit., p.6.
- 30 Sheila Hillier, lecturer London Hospital Medical College, in interview with the author, 25 April 1981.
- 31 WHO, *Drug Policies and Management Problems, Constraints and Strategies*, Report on the Inter-Country Consultative Meeting on Drug Policies and Management, New Delhi, 13-16 October 1980, (ICP DPM 001.00) WHO Regional Office for S.E. Asia.
- 32 Dr. Tcheknavorian-Asenbauer, Chief Pharmaceutical Industries Unit, UNIDO, in interview with the author, 27 May, 1981.
- 33 WHO, *Drug Policies and Management-Problems, Constraints and Strategies*, op.cit.
- 34 Agarwal, op.cit. "Some scientists believe that their knowledge may be more valuable than

that available in the Ayurvedic texts, as the tribal communities have lived in far greater dependence on nature.”

- 35 Dr. Pham Ngoc Thach, quoted by Agarwal, op.cit., p.58.
- 36 Galvez-Tan, op.cit.
- 37 - Sutherland, op.cit.
- A.C. Alexander and M.K. Shivaswany, “Traditional Healers in the Region of Mysore”, *Social Sciences and Medicine*, Pergamon Press, 1971, volume 5, pp. 595-601.
- 38 Sutherland, 1978, op.cit. At the Chirigaon and Harahua joint clinics (Uttar Pradesh) 200 questionnaires revealed that 70.2% of patients consulting the traditional healers were educated beyond primary school level (against regional average for population with secondary education of 11.8%). By contrast 68% of patients seeing allopathic staff were either illiterate or had only primary school education. Most patients consulting the traditional healers were educated young men, many with psychosomatic complaints.
- 39 WHO, *National Policies and Practices in regard to Medicinal Products; and Related International Problems*, background document A/31/Technical Discussions/1, 6 March 1978, p.30.
- 40 Dr. D. B. Nugegoda, Department of Community Medicine University of Peradeniya, “Cooperation and Conflict between Allopathic and Ayurvedic Systems of Therapy in Sri Lanka”, paper delivered at the Primary Health Care Symposium, Liverpool School of Tropical Medicine, 13-16 April 1981. (mimeo)
- 41 Agarwal, op.cit, p.57.
- 42 OXFAM Project File, MAH 87.
- 43 - OXFAM Project File MAH 74.
- Hugh Goyder, OXFAM Field Director, S. India, personal communication, 29 September 1981. (Homeopathy was started by Dr. Samuel Hahnemann in Saxony in the early nineteenth century, but spread to India where the system was culturally acceptable.)
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- 45 - Jackie and Tim Lusty “Report on visit to Yemen Health Projects, CIIR and Concern”, 10-23 March 1980. (mimeo)
- Oxfam Project write up, Yemen 15C, August 1980.
- Dianna Melrose, *The Great Health Robbery*, OXFAM Public Affairs Unit, 1981.
- 46 Jackie and Tim Lusty, op.cit.

CHAPTER 8

- 1 Information on Gonoshasthaya Kendra based on research visit by the writer, September, 1980.
Also:
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 - Gonoshasthaya Kendra “Progress Report”, No. 7, August 1980. (mimeo)
 - “Gonoshasthaya Pharmaceuticals”, Newsletter, undated (1981). (mimeo)
 - “The Paramedics of Savar: an experiment in community health in Bangladesh”, *Medico Friend Circle Bulletin*, 1 September 1980.
 - Dr. Abhay Bang “Learning from the Savar project”, *Medico Friend Circle Bulletin*, October 1980.
- 2 Dr. Zafrullah Chowdhury.
- 3 Gonoshasthaya Kendra, “Progress Report”, No. 7, op. cit.

- 4 Ibid.
- 5 Information on Gonoshasthaya Kendra Pharmaceuticals: as note (1). Also:
- Dr Zafrullah Chowdhury and Susanne Chowdhury, "Essential Drugs for the Poor: Myth and Reality in Bangladesh", paper delivered at the Primary Health Care Symposium, Liverpool School of Tropical Medicine, 13-16 April 1982. (mimeo)
 - OXFAM Project Write-up BD 20c, "Gonoshasthaya Pharmaceuticals Ltd."
 - NOVIB, Report on proposal to set up Gonoshasthaya Pharmaceuticals: "Gegevens over de te medefinanciereren aktiviteiten", 21 August 1979.
 - Dr. Zafrullah Chowdhury, letter to *The Lancet*, 7 November 1981.
 - Barry Newman, *Wall Street Journal*, July 3 1981.
 - David Newell, OXFAM Field Director, "1980-81 Bangladesh and Burma Annual Report". (mimeo)
- 6 "Gonoshasthaya Pharmaceuticals" Newsletter, op.cit., p.3.
- 7 Initial funding included:
- | | |
|--------------------------|-------|
| NOVIB (Holland) US \$ | 2.62m |
| Christian Aid | 0.16m |
| Bangladesh Shilpa Bank] | 1.00m |
| GK Trust and others | |
- (Source Gonoshasthaya Pharmaceuticals Newsletter, op.cit.)
- 8 Dr. Zafrullah Chowdhury, in interview with author, April 1982.
- 9 "Gonoshasthaya Pharmaceuticals" Newsletter, op.cit., p.5.
- 10 Chowdhury and Chowdhury, 1982, op.cit., p.11.
- 11 Ibid., p.12
- 12 Ibid.
- 13 *In Touch*, VHSS Newsletter, 1980.
- 14 I.C. Tiwari, S.C. Mohapatra and S.D. Gaur, Department of Preventive and Social Medicine Banaras Hindu University, "Drug Needs and Availability for Primary Health Care in a Rural Community in India", paper presented at Primary Health Care Symposium, Liverpool School of Tropical Medicine, 13-16 April 1982, p.5.
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- 16 Dr. Premchandran John of the Deenabandhu Medical Mission, in interview with David Bull of OXFAM, 14 September 1980.
- 17 VHAI, op.cit.
- 18 Selim Ahmed, VHSS, Dacca, in interview with the author, 24 September 1980.
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 “This episode has wider implications, since the WHO seemed unhappy about the industry’s package approach, in which drugs were supplied only if technical services were provided as well. The Manager of the WHO’s Action Programme on Essential Drugs, Dr. W. B. Wanandi, has been reported as saying that the WHO wanted the industry to quote separately for the supply of drugs and associated services - since ‘the WHO’s primary concern was the price of the actual drugs’ . (*SCRIP* No.592. 20 May 1981, p.13.) A third reason why the negotiations faltered is that WHO considered some of the industry’s conditions to be unduly restrictive.

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The industry's insistence on near-monopoly conditions suggested it was in effect bidding for preferential supply terms in exchange for technical cooperation."

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- 103 Ibid, p.227.
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- 105 Dr. D. M. Burley, Head of International Medical Liaison, Ciba-Geigy, Horsham, personal communication, 21 May 1981.
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- 124 Address to the PMA Public Relations Section annual meeting, excerpts reported in "Quotes of Notes" broadsheet "PMA President Engman on the Third World", PMA, 28 September 1981.
- 125 Geoffrey Potter, Glaxo, personal communication, 16 June 1982.
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- 128 Sanjaya Lall, (Institute of Economics and Statistics, Oxford University) and Senaka Bibile (University of Sri Lanka), "The Political Economy of Controlling Transnationals: the Pharmaceutical Industry in Sri Lanka (1972-76)", in *World Development*, Vol.5. No.8. 677-697, Pergamon Press, 1977.
- 129 Ibid.,p.685.
- 130 Letter from C. Joseph Stetler, President Pharmaceutical Manufacturers Association to the Honorable Mrs. Sirimavo R.D. Bandaranaike, 10 May 1973.
- 131 Lall and Bibile, 1977 op.cit., p.685.
- 132 Ibid., p.686.
- 133 Ibid.
- 134 - UNCTAD, case studies in transfer of technology: Pharmaceutical policies in Sri Lanka (TD/B/C.6/21), UN,1977, p.31.
- Ibid., note 26, p.696.
- 135 - Anil Agarwal, *Drugs and the Third World*, Earthscan, London, 1978, p.38.
- Ibid., p.686.
- 136 Dr. Michael Hodin, Director of Public Affairs, Pfizer, personal communication, 17 March 1982.
- 137 Ibid.
- 138 Dr. Gladys Jayewardene, Chairman SPC (after the Bandaranaike Government was replaced by the Jayewardene Government), *A critical study of the purchases of the State Pharmaceuticals Corporation of Sri Lanka referred to in the UNCTAD Report 1977*, Rainbow Printers, Colombo, 21 September 1981. WHO was sent the critical study by the author asking them to publish it. WHO declined.
- 139 Ibid.
- 140 The reference to expanding trade with Eastern Europe and China comes from one sentence, (quoted out of context), of a 2-page article by S. A. Wickremasinghe and S. Bibile (who developed the new Sri Lankan drug policies). *British Medical Journal* 1971, 3, pp.757-758. Dr. Jayewardene's study is critical that the 1977 UNCTAD Report did not make it clear that most SPC purchases after the adoption of the new policies continued to be from traditional suppliers. But para. 109 and Table 3 of the UNCTAD Report make it clear that most drug imports in 1976 were still from developed market economies.
- 141 V.T. Herat Gunaratne, Director WHO Regional Office for South-East Asia, 'Bringing down drug costs: the Sri Lankan example', *World Health Forum*, 1 (1,2) WHO, 1980, pp.117-122.
- 142 D. C. Jayasuriya, Attorney-at-Law, "Regulating the drug trade in the Third World", *World Health Forum* 2(3), WHO, 1981, pp 423-426. It is also interesting to note that the SPC was criticised by the medical establishment and the press for buying tetracycline from the Polish company Polfa, as this was said to be sub-standard. But in 1980/1 - after liberalisation of drug import - Polfa tetracycline held over 80% of the market in Sri Lanka.
- 143 In view of our criticism in the previous section, it is only fair to Pfizer to emphasise that we have no firm evidence that they were actively involved in the Bangladesh lobby. It is interesting to note that Dr. Hodin of Pfizer informs us that "the managing director of Pfizer Bangladesh is a man as interested in the progress and development of his country as he is in the success of his business. As such, he is quite active in Community and Country affairs in Bangladesh, including the Bangladesh Association of Pharmaceutical Industries.'" (Dr. Hodin, personal communication, 17 March 1982). Jayasuriya, 1981, op.cit., p.423.
- 144 Dr. H. K. M. Hye and Dr. Jahangir, Director and Deputy Director, Drug Administration, Bangladesh, in interview with the author, September and October 1980.

- 145 Expert Committee *Report Evaluation of Registered/Licensed Products and Draft National Drug Policy*, 11 May 1982, p.93.
- 146 Ibid.
- 147 Dr. Hye, whilst Director of Drug Administration, in interview with the author, 20 October 1980.
- 148 Letter from Bangladesh Association of Pharmaceutical Industries to the Deputy Prime Minister in-charge at the Ministry of Industries, 22 June 1981.
- 149 Ibid.
- 150 Ibid.
- 151 "Association's Stand on Important Matters concerning Pharmaceutical Industry", p.2.
- 152 Ibid, p.3.
- 153 Letter from Bangladesh Association of Pharmaceutical Industries, to the Honourable State Minister for Commerce, 26 August 1981. Retail prices have been pegged for some years. We have seen in Chapter 4 that they have been described as 'strikingly' high in relation to actual production costs. The Association's letter argues somewhat bizarrely that "the benefit of control, although intended for the consumer, hardly reaches them, because "intermediaries in the distribution channel... make unauthorised profits and black money." Whereas if price control were to be lifted "the average increase in the cost of medicines computed based on maximum retail price will increase by 12% to 15%. But, since the consumers are already paying higher prices for some of the products than the approved MRP, the real cost increase to the consumers will be about 5-7%." (Somehow, magically without price controls retailers will stop overcharging customers.) The letter also states: "Once our products are correctly priced in terms of their real value these will be available in adequate quantities and consumers will pay less than what they are currently paying." (Retailers and manufacturers in Bangladesh each accused the other of holding back supplies of drugs to make their sale more profitable when interviewed during our 1980 research trip.)
- 154 "Association's Stand on Important Matters concerning Pharmaceutical Industry", op.cit., p.3.
- 155 Ibid., p.1.
- 156 Ibid., p.2.
- 157 P.W. Cunliffe, Chairman Pharmaceuticals Division, ICI, personal communication, 11 February 1982. ICI is not amongst the offenders in selling a mass of tonics and other over-the-counter remedies.
- 158 Government of the People's Republic of Bangladesh Ministry of Law and Land Reforms, The Drugs Control Ordinance, 1982, Ordinance No. VIII of 1982.
- 159 Expert Committee Report, 11 May 1982, op.cit.
- 160 - Letter from Prof. M. D. Rawlins, University of Newcastle to Prof. Nurul Islam, 20 July 1982.
- Letter from Dr. J. S. Yudkin, Consultant/Senior lecturer in General Medicine, Whittington Hospital to Prof. Nurul Islam, 18 July 1982.
- The criteria have also been praised by Dr. G. Tognoni, Head, Laboratory of Clinical Pharmacology, Istituto di Ricerche Farmacologiche Mario Negri, Milan (Temporary Adviser to WHO Expert Committee on the Selection of Essential Drugs (letter to Prof. Nurul Islam, 26 July 1982).
- 161 - Expert Committee Report, 11 May 1982, op.cit.
- Wolfe, Coley, "Pills that Don't work", Health Research Group, Washington, 1981. British National Formulary, London, 1982.

- 162 - Expert Committee Report, op.cit.
- 163 Ibid.
- 164 Ibid.
- The Drugs (Control) Ordinance, 1982.
- 165 K. Washbourn and B. Walker, May and Baker Ltd., in interview with the author, 5 July 1982.
- 166 "An Appeal to the Martial Law Authority" by members of the Bangladesh Anshad Shilpa Samity, *The New Nation*, 23 June 1982.
- 167 Ibid.
- 168 Dr. Z. Choudhury, personal communication, 24 June 1982.
- 169 *The Pulse*, 9 May 1982.
- 170 *The New Nation*, 10 June 1982.
- 171 *The Pulse*, 20 June 1982.
- 172 - "Merck in Bangladesh, Marketing Plan 1980 (-1982)".
- Ciba-Geigy is planning to set up production in Bangladesh (Dr. Burley, personal communication, 1982).
- 173 Department of Trade and Industry, *Overseas Trade Statistics*. Nigeria was Britain's largest export market with sales worth over £64 million (compared to exports of over £20 million to the USA and £59 million to W. Germany).
- 174 Dr. Burley, Head of International Medical Liaison, Ciba-Geigy, personal communication, 21 May 1981.
- 175 - *Financial Times*, 2 June 1982.
- In 1978 a British Minister of State drew attention to a report by the Economic Development Committee for the Chemicals Industry showing that the "innovative pharmaceutical industry as a whole remains one of the major growth sectors of the chemical industry as a whole." (Roland Moyle quoted in *Medicines for the year 2000*, OHE 1979, op.cit.)
- 176 Dr. Alan Hayes, Chairman, Plant Protection Division ICI, "What can the Agrochemical Industry Learn from the Pharmaceutical Industry?", Agrochemical Conference, Dolder Hotel, Zurich, September 1981.

CHAPTER 11

1. Dr. Burley, Head of International Medical Liaison, Gba-Geigy, personal communication, 21 May 1981.

APPENDIX I

THE WHO SELECTION OF ESSENTIAL DRUGS, 1979

	MAIN LIST	COMPLEMENTARY DRUGS
1. ANAESTHETICS		
1.1 general anaesthetics	ether, anaesthetic halothane nitrous oxide oxygen thiopental	
1.2 local anaesthetics	bupivacaine lidocaine	
2. ANALGESICS, ANTIPYRETICS, NONSTEROIDAL ANTI-INFLAMMATORY DRUGS AND DRUGS USED TO TREAT GOUT		
2.1 non-opioids	acetylsalicylic acid allopurinol ibuprofen indometacin paracetamol	colchicine probenecid
2.2 analgesics, narcotics and narcotic antagonists	morphine naloxone	pethidine
3. ANTIALLERGICS	chlorphenamine epinephrine	cromoglicic acid
4. ANTIDOTES		
4.1 general	charcoal, activated ipecacuanha sodium sulfate	
4.2 specific	atropine deferoxamine dimercaprol naloxone protamine sulfate sodium calcium edetate sodium nitrite sodium thiosulfate	methylthionium chloride penicillamine
5. ANTIEPILEPTICS	diazepam ethosuximide phenobarbital phenytoin	carbamazepine valproic acid
6. ANTIINFECTIVE DRUGS		
6.1 anthelmintic drugs	mebendazole niclosamide piperazine pyrantel tiabendazole	
6.2 antiamoebic drugs	chloroquine diloxanide metronidazole	dehydroemetine

	MAIN LIST	COMPLEMENTARY DRUGS	
6.3	antibacterial drugs		
6.3.1	penicillins	ampicillin benzathine benzylpenicillin benzylpenicillin phenoxymethylpenicillin procaine benzylpenicillin	
6.3.2.	other antibacterial drugs'	chloramphenicol cloxacillin erythromycin gentamicin metronidazole salazosulfapyridine spectinomycin sulfadimidine sulfamethoxazole + trimethoprim tetracycline	amikacin doxycycline nitrofurantoin
6.3.3.	antileprosy drugs	clofazimine dapsone rifampicin	ethionamide prothionamide
6.3.4	antituberculosis drugs	ethambutol isoniazid pyrazinamide rifampicin streptomycin thioacetazone + isoniazid	
6.4.	antifilarial drugs	diethylcarbamazine suramin sodium	
6.5.	antifungal drugs	amphotercin B griseofulvin nystatin	flucytosine
6.6	antileishmaniasis drugs	pentamidine sodium stibogluconate	
6.7	antimalarial drugs	cloroquine primaquine quinine	amodiaquine sulfadoxine + pyrimethamine
6.8	antischistosomal drugs	metrifonate oxamniquine praziquantel	
6.9	antitrypanosomal drugs	melarsoprol pentamidine suramin sodium	nifurtimox
7.	ANTIMIGRAINE DRUGS	ergotamine	

	MAIN LIST	COMPLEMENTARY DRUGS
8. ANTINEOPLASTIC AND IMMUNOSUPPRESSIVE DRUGS	azathioprine bleomycin busulfan calcium folinate chlorambucil cyclophosphamide cytarabine doxorubicin flurouracil methotrexate procarbazine vincristine	
9. ANTIPARKINSONISM DRUGS	biperiden levodopa+carbidopa	levodopa
10. DRUGS AFFECTING THE BLOOD		
10.1 antianaemia drugs	ferrous salt folic acid hydroxocobalamin	ferrous salt + folic acid iron dextran
10.2 anticoagulants and antagonists	heparin phytomenadione protamine sulfate warfarin	
11. BLOOD PRODUCTS AND BLOOD SUBSTITUTES		
11.1 plasma substitute	dextran 70	
11.2 plasma fractions for specific uses	albumin, human normal	antihaemophilic fraction
11.3 plasma substitute		factor IX complex (coagulation factors II, VII, IX, X concentrate)
12. CARDIOVASCULAR DRUGS		
12.1 antianginal drugs	glyceryl trinitrate isosorbide dinitrate propranolol verapamil	

	MAIN LIST	COMPLEMENTARY DRUGS
12.2 antiarrhythmic drugs	isoprenaline lidocaine procainamide propranolol	quinidine
12.3 antihypertensive drugs	hydralazine hydrochlorothiazide propranolol sodium nitroprusside	methyldopa reserpine
12.4 cardiac glycosides	digoxin	digitoxin
12.5 drugs used in shock or anaphylaxis	dopamine epinephrine	
13. DERMATOLOGICAL DRUGS		
13.1 fungicides	benzoic acid + salicylic acid miconazole nystatin	
13.2 antiinfective drugs	neomycin + bacitracin	
13.3 antiinflammatory and antipruritic drugs	betamethasone calamine lotion hydrocortisone	
13.4 astringents	aluminium acetate	
13.5 keratoplastic and keratolytic agents	coal tar salicylic acid	
13.6 scabicides and pediculicides	benzyl benzoate lindane	
14. DIAGNOSTIC AGENTS		
14.1 ophthalmic drugs	edrophonium tuberculin, purified protein derivative	
14.2 radiocontrast media	adiopidone meglumine barium sulfate iopanoic acid meglumine amidotrizoate sodium amidotrizoate	

	MAIN LIST	COMPLEMENTARY DRUGS
15. DISINFECTANTS	chlorhexidine iodine	
16. DIURETICS	amiloride furosemide hydrochlorothiazide mannitol spironolactone	chlortalidone
17. GASTROINTESTINAL DRUGS		
17.1 antacids and other antiulcer drugs	aluminium hydroxide cimetidine magnesium hydroxide	calcium carbonate
17.2 antiemetics	promethazine	metoclopramide
17.3 antihaemorrhoidals	local anaesthetic, astringent and antiinflammatory drug	
17.4 antispasmodics	atropine	
17.5 cathartics	senna	
17.6 Diarrhoea, drugs used in		
17.6.1 antidiarrhoeal	codeine	
17.6.2 replacement solution	oral rehydration salts	
18. HORMONES		
18.1 adrenal hormones and synthetic substitutes	dexamethasone hydrocortisone prednisolone	fludrocortisone
18.2 androgens	testosterone	
18.3 estrogens	ethinylestradiol	
18.4 insulins and other antidiabetic agents	compound insulin zinc suspension insulin injection glibenclamide	
18.5 oral contraceptives	ethinylestradiol + levonorgestrel ethinylestradiol + norethisterone	norethisterone
18.6 ovulation inducers		clomifene
18.7 progestogens	norethisterone	
18.8 thyroid hormones and antagonists	levothyroxine potassium iodide propylthiouracil	

	MAIN LIST	COMPLEMENTARY DRUGS
19.	IMMUNOLOGICALS	
19.1	sera and immunoglobulins	anti-D immunoglobulin (human) antirabies hyperimmune serum antivenom sera diphtheria antitoxin immunoglobulin, human normal tetanus antitoxin
19.2	vaccines	
19.2.1	for universal immunisation	BCG vaccine (dried) diphtheria-pertussis-tetanus vaccine diphtheria-tetanus vaccine measles vaccine poliomyelitis vaccine tetanus vaccine
19.2.2	for specific groups of individuals	influenza vaccine meningococcal vaccine rabies vaccine typhoid vaccine yellow fever vaccine
20.	MUSCLE RELAXANTS AND CHOLINESTERASE INHIBITORS	neostigmine gallamine suxamethonium
		pyridostigmine
21.	OPHTHALMOLOGICAL PREPARATIONS	
21.1	antiinfective	silver nitrate sulfacetamide tetracycline
21.2	antiinflammatory	hydrocortisone
21.3	local anaesthetics	tetracaine
21.4	miotics	pilocarpine
21.5	mydriatics	homatropine
		epinephrine
21.6	systemic	acetazolamide
22.	OXYTOCICS	ergometrine oxytocin

	MAIN LIST	COMPLEMENTARY DRUGS	
23.	PERITONEAL DIALYSIS SOLUTION	intraperitoneal dialysis solution	
24.	PSYCHOTHERAPEUTIC DRUGS	amitriptyline chlorpromazine diazepam fluphenazine haloperidol lithium carbonate	
25.	DRUGS ACTING ON THE RESPIRATORY TRACT		
	25.1 antiasthmatic drugs	aminophylline epinephrine salbutamol	beclometasone cromoglicic acid ephedrine
	25.2 antitussives	codeine	
26.	SOLUTIONS CORRECTING WATER, ELECTROLYTE AND ACID-BASE DISTURBANCES		
	26.1 oral	oral rehydration salts (for glucose-salt solution) potassium chloride	
	26.2 parenteral	compound solution of sodium lactate glucose glucose with sodium chloride potassium chloride sodium bicarbonate sodium chloride water for injection	
27.	VITAMINS AND MINERALS	ascorbic acid ergocalciferol nicotinamide pyridoxine retinol riboflavin sodium fluoride thiamine	calcium gluconate

Note: Spellings in this Appendix follow those given by WHO but do not always correspond to accepted British spelling.

APPENDIX II
GLAXO (BANGLADESH) LTD. PRODUCT RANGE.

PRODUCT	DESCRIPTION	FORMULA- TION ON UK MARKET	FORMULA- TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH- DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982	
ANTIBIOTICS					
1.	CLINMYCIN Capsules	A broad spectrum antibiotic containing 250 mg oxytetracycline dihydrate in each capsule	No	No	No
2.	CLINMYCIN Syrup	Pleasantly flavoured broad spectrum antibiotic syrup, containing 125 mg oxytetracycline calcium in each 5 ml	No	No	Yes
3.	CRYSTAPEN Injection	Single dose injection containing 500,000 units of crystalline sodium salt of benzylpenicillin	Yes	Yes	No
3.	CRYSTAPEN V Granules	A flavoured syrup produced by adding 5 spoons of boiled & cooled water (spoon provided). Each teaspoonful of syrup (5 ml) contains 125 mg phenoxymethyl penicillin	Yes	Yes	No
5.	CRYSTAPEN V Tablets	Tablets containing phenoxymethyl penicillin 125 mg 250 mg	No Yes	No Yes	No No
6.	GRISOVIN-FP Tablets	Each tablet contains 125 mg fine particles of griseofulvin	Yes	Yes	No
7.	NEOBACRIN Ointment	Skin & eye ointment containing 5 mg neomycin and 500 units zinc bacitracin in each gram	No	Yes	No

	PRODUCT	DESCRIPTION	FORMULA- TION ON UK MARKET	FORMULA- TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH- DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982
8.	SECLOPEN Injection	Single dose injection containing 300,000 units of procaine penicillin G and 100,000 units of benzylpenicillin	No	Yes	No
9.	STREPTOMYCIN SULPHATE Injection	Single dose injection containing equivalent of 1 gram streptomycin sulphate	Yes	Yes	No
CORTICOSTEROIDS					
10.	BETNELAN Tablets	Each tablet contains 0.5 mg betamethasone	Yes	Yes	No
11.	BETNESOL-N Eye Ointment	0.1% betamethasone disodium phosphate with 0.5% neomycin sulphate in a bland paraffin base	Yes	No	Yes
12.	BETNESOL-N Eye, Ear & Nose Drops	0.1% betamethasone disodium phosphate with 0.5% neomycin sulphate	Yes	No	Yes
13.	BETNOVATE-N Cream	0.1% betamethasone 17-valerate with 0.5% neomycin sulphate	Yes	No	Yes
14.	BETNOVATE-N Ointment	0.1% betamethasone 17-valerate with 0.5% neomycin sulphate in a bland paraffin base	Yes	No	Yes
PHARMACEUTICALS					
15.	ADEXOLIN Liquid	Containing vitamin A 12,000 units and vitamin D 2,000 units per ml	Yes	No	Yes
16.	ANCOLOXIN Tablets	Each tablet containing 25 mg meclozine hydro- chloride and 50 mg pyridoxine hydrochloride	Yes	No	No

PRODUCT		DESCRIPTION	FORMULA- TION ON UK MARKET	FORMULA- TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH- DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982
17.	BECADEX Drops	Multivitamin drops	No	No	Yes
18.	BECADEX Syrup	Fruit-flavoured multivitamin	No	No	Yes
19.	BECADEX Tablets	Sugar-coated multivitamin tablet	No	No	Yes
20.	BERIN Injection	100 mg thiamine hydrochloride per ml (vitamin B1)	No	No	No
21.	BERIN Tablets	100 mg thiamine hydrochloride per tablet (vitamin B1)	No	Yes	No
22.	*CALCI-OSTELIN Injection		No	No	Yes
23.	CALCI-OSTELIN + B12 Injection	0.5 mg colloidal calcium 5,000 units vitamin D and 50 mcg vitamin B12 per ml	No	No	Yes
24.	CALCI-OSTELIN + B12	Syrup of calcium vitamin D and vitamin B12	No	No	Yes
25.	CALDEFERRUM Tablets	Coated tablets containing iron, calcium and vitamin D	No	No	No
26.	CELIN Flavoured Tablets	Orange-flavoured tablets containing 250 mg ascorbic acid (vitamin C)	No	No	No
27.	CYTAMEN Injection	Injection of vitamin B12: 250 mcg per ml 1000 mcg per ml	Yes	No	No
28.	CYTEXIN Liquid	Vitamin B-complex with vitamin B12	No	No	Yes
29.	DEQUADIN Lozenges	Pleasantly flavoured lozenges each containing 0.25 mg dequalinium chloride	Yes	No	Yes

PRODUCT	DESCRIPTION	FORMULA- TION ON UK MARKET	FORMULA- TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH- DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982
30. ERBOLIN Tablets	Each tablet contains 0.4 mg of the total alkaloids of ergot	No	No	No
31. FESOLATE Tablets	Sugar-coated tablets containing ferrous sulphate 200 mg, copper sulphate 2.5 mg and manganese sulphate 2.5 mg	No	No	No
32. GLAXOSE-D	Finely powdered dextrose monohydrate B.P. (98.9%) with vitamin D (250 units per oz) and calcium glycerophosphate	No	No	Yes
33. HALIBORANGE	Syrup of vitamin A, C. & D with concentrated orange juice	No (only tablets)	No	Yes
34. HELMACID	Pleasantly flavoured anthelmintic syrup con- taining in each teaspoonful (5 ml) equivalent of 600 mg piperazine hydrate	No	Yes (with- out flavour)	No
35. HELMACID with Senna	Chocolate-flavoured anthelmintic granules, containing in each 10 gms (4 teaspoons) piperazine phosphate 4 g and calcium sennosides equivalent to 1.5 g of powdered senna pod	No	No	No
36. KAOPEX-N Suspension	Suspension of light kaolin, pectin and neomycin	No	No	Yes
37. KAPILIN Tablets	Each tablet contains 10 mg acetomenaphthone	No	No	No

PRODUCT	DESCRIPTION	FORMULA-TION ON UK MARKET	FORMULA-TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH-DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982
38. KAPILIN Ampoules	1 ml ampoules each containing 10 mg menaphthone sodium bisulphite	No	No	No
39. LAXENNA Tablets	Tablets containing activity of 600 mg senna pod	No	No	No
40. MINADEX Syrup	mineral vitamin tonic in orange-flavoured syrup	Yes	No	Yes
41. MYCIL Ointment	Anti-fungal ointment containing 0.5% chlorphenesin	Yes	No	No
42. MYCIL Powder	Anti-fungal, antibacterial medicated powder containing chlorphenesin 1% and zinc oxide 5%	Yes	No	No
43. NEO-NACLEX Tablets	Long-acting oral diuretic each tablet containing 2.5 mg bendrofluazide	Yes	No	No
44. OSTOCALCIUM Tablets	Calcium and vitamin D tablet (calcium phosphate 325 mg, calcium sodium lactate 162 mg, and vitamin D 500 units)	No	No	Yes
45. PARAPYRIN Tablets	Analgesic & antipyretic tablet containing paracetamol and aspirin	No	No	Yes
46. PIRITON Expectorant	Each teaspoonful (5 ml) contains chlorpheniramine maleate 2.5 mg, ammonium chloride 125 mg, sodium citrate 55 mg and glycerin.	Yes	No	Yes
47. PIRITON-G Linctus	Each teaspoonful (5 ml) contains chlorpheniramine maleate 2.5 mg, gualphenesin 100 mg, sodium citrate 55 mg, and glycerin	No	No	Yes

PRODUCT	DESCRIPTION	FORMULA- TION ON UK MARKET	FORMULA- TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH- DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982
48. PIRITON Tablets	Antihistamine tablet containing chlorpheniramine maleate 4 mg	Yes	No	No
49. PLEXAN Injection	Injection of liver extract with added vitamin B12	No	No	Yes
50. PREPALIN	A sterile oily solution for injection containing 100,000 units of vitamin A per ml	No	No (on Bangladesh Essential Drug List)	No
51. PROBERON Injection	Vitamin B-complex injection	No	No	Yes
52. STIBATIN	A sterile solution of pentavalent sodium antimony (V) gluconate 100 mg per ml	No	Yes	No
53. VENTOLIN Tablets	Tablets containing 2 mg salbutamol sulphate	Yes	No	No
NEW PRODUCTS				
54. CEPOREX Capsules	A broad spectrum bacterial antibiotic containing 250 mg cephalexin monohydrate in each capsule	Yes	No	No
55. VIBELAN FORTE-C Capsules	A preparation of vitamin B-complex with therapeutic quantities of vitamin C in each capsule	No	No	Yes
56. VENTOLIN Elixir	An effective bronchodilator containing salutamol sulphate 1 mg and guaiphenesin 50 mg in each teaspoonful	Yes	Yes	No

(From price list July 1981)

* CALCI-OSTELIN injection not on July 1981 Price List, but no evidence of withdrawal since March 1980 Medical List; included in May 1982 Review.

APPENDIX III

FISONS (BANGLADESH) LIMITED PRODUCT RANGE

PRODUCT	DESCRIPTION	FORMULA-TION ON UK MARKET	FORMULA-TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH-DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982	
LIQUIDS					
1.	DIGEPLEX	Digestive enzymes with vitamin B-complex	No	No	Yes
2.	DIMYRIL	Iso-aminile citrate(for irritating cough)	Yes	No	Yes
3.	ENTERFRAM	Neomycin sulphate & kaolin (for infantile diarrhoea etc)	No	No	Yes
4.	FIDAPLEX	Vitamin B-complex with sodium glycerophosphate and calcium glycerophosphate (avitaminosis convalescence and debility)	No	No	Yes
5.	FULFORD'S GRIPE WATER	(For babies & young children)	Yes	No	Yes
6.	HYPACID	Aluminium phosphate gel (For hyperacidity & peptic ulcer)	No	No	Yes
7.	MINOLAD	Vits A, D, Lysine, Iron, Minerals, Choline, Methionine (a nutritional tonic for adults and children)	No	No	Yes
8.	NEO-FERILEX	Iron choline citrate with Vit B-complex (for iron deficiency anaemia)	No	No	Yes
TABLETS					
9.	ANTISMAT	Ephedrine, Theophylline, Phenobarbitone and Aluminium hydroxide (for bronchial asthma)	No	No	No

PRODUCT	DESCRIPTION	FORMULA-TION ON UK MARKET	FORMULA-TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH-DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982
10. CALCIPAN	Calcium Pantotharate (for burning feet syndrome, post-operative distension, paralyticileus, muscular cramps, and protective action against toxicity of streptomycin and dihydrostreptomycin)	No	No	Yes
11. FICAL-D	Calcium lactate 150 mg Calcium gluconate 290 mg Calciferol (vitamin D 500 I.U) Calcium and vitamin D supplement)	No	No	Yes
12. FIDAPLEX	Vitamin B-complex Prophylaxis of Avitaminosis-B	No	No	Yes
13. FITAMOL	Paracetamol 500 mg	No	Yes	No
14. FISTREP	Streptomycin sulphate and lodochlorhydroxy-quinoline (anti-dysentric/anti-diarrhoeal)	No	No	Yes
15. FOLFETAB	Ferrous fumarate and folic acid (for iron deficiency-anaemia)	No	No	No
16. FOLIC ACID	(For megaloblastic anaemia of pregnancy)	Yes	Yes	No
17. GENASPRIN	Acetylsalicylic acid 300 mg	Yes	Yes	No
18. GENATOSAN	Multivitamins (Restores physical power, guards against disease, promotes appetite and growth)	No	No	Yes
19. HYPACID	Aluminium phosphate (for hyperacidity & peptic ulcer)	No	No	Yes
20. PEPS	Anti-cough lozenge	No	No	Yes

PRODUCT	DESCRIPTION	FORMULA-TION ON UK MARKET	FORMULA-TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH-DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982
CAPSULES				
21. DECAPLEX FORTE	Ferrous fumarate, vitamin C,B1,B12 and folic acid (For iron deficiency anaemia)	No	No	Yes
22. DECATONE*	A geriatric preparation containing vitamins,iron, minerals,digestive enzymes and hormones.	No	No	Yes
23. FIDAPLEX-C	High potency vitamin B-complex with vitamin C & dried yeast	No	No	Yes
INJECTABLES				
24. CALCIPAN	Calcium pantothenate 100 mg/ml	No	No	No
25. FIDAPLEX	Vitamin B-complex with lignocaine hydrochloride	No	No	Yes
26. IMFERON	Iron dextran 50 mg	Yes	Yes	No
27. LIVEX B.C.	Liver extract with vitamin B-complex and lignocaine hydrochloride (for haemopoiesis)	Yes	No	Yes
OINTMENTS				
28. FRAMYCORT	Neomycin sulphate with hydrocortisone acetate	No	No (not with neomycin sulphate - but framycetin sulphate in U.K.)	Yes
29. ZAM-BUK	(Medicated ointment)	Yes	No	Yes
30. AURALGICIN	Ear drops. Chlorbutol, phenazone, ephedrine and potassium hydroxyquinoline	Yes	No	No

PRODUCT	DESCRIPTION	FORMULA-TION ON UK MARKET	FORMULA-TION ON WHO LIST (1979)	PRODUCT RECOMMENDED FOR WITH-DRAWAL, BANGLADESH EXPERT COMMITTEE MAY 1982
31. FRAMYGEN	Eye/ear drops. Neomycin, sulphate, benzalk chloride and benzyl alcohol	No	No	No
		(not with neomycin sulphate but framycetin sulphate in U.K.)		

(From product List September 1978 and Price List February 1981)

- * DECATONE: *Although this is listed in Fisons (Bangladesh) February 1981 Institutional Price list and included in the May 1982 Review of Products on the market, a letter from Fisons UK to Professor Rawlins (21 February 1980) states that DECATONE was withdrawn from the Bangladesh market in June 1979.*

APPENDIX IV

DRAFT NATIONAL DRUG POLICY FOR BANGLADESH FROM EXPERT COMMITTEE REPORT. 11 MAY 1982.

To achieve the objectives of national drug policy and to provide guidelines for the formation of programme the following actions are to be taken:

Selection and provision of essential drugs:

3.1 The major strategy is to overcome constraint of limited resources for the the option utilization. This also calls for the elimination of all unnecessary, useless drugs and drugs of doubtful efficacy from the market. A limited list of 150 essential drugs considered adequate for most therapeutic purposes shall be selected. Out of this about 45 essential drugs will be selected for the primary level of health care on the basis of priority health need, cost, safety and suitability of treatment of common disease and symptoms by up to Thana level health workers.

Besides, for the protection of the vast majority of people in the rural areas from hazards of undue prescribing in an attempt to give them relief by basic health workers it is essential to limit the essential drugs to 12 which are considered safe and adequate for common medical problems.

Besides there may be a list of another about 100 supplementary drugs needed for tertiary level of health care by specialists. The various brands of drugs in the market shall be evaluated annually on the basis of their usefulness, essentiality and cost-effectiveness in the light of up to date available information. In future, only products which are considered essential and relevant to health needs of the country and are consistent with this policy shall be licensed or registered. The selected essential drugs shall be given preferential treatment in terms of licensing, import authorization, duties and other financial benefits.

The selected 45 essential drugs for primary health care shall be allowed to be manufactured or sold only under their generic names. As soon as possible and not later than 1983, a National Formulary will be prepared and published, which shall include all the formulations that will be allowed for manufacture, import or sale in this country. Products such as liquid vitamin mixtures, multiple combinations of potent drugs, combination of antibiotics with other active drugs, alkali mixtures, gripe waters, cough mixtures, tonics, balms, digestive enzyme preparations, habit-forming drugs, vaporubs and other similar useless and non-essential products will be identified and their licensing/registration shall be cancelled so that such products are completely eliminated from Bangladesh.

DRUG ACT

3.2 The Drugs Act 1940 shall be revised or replaced by a new drug legislation incorporating provisions for:

- i. a system of registration of all medicinal products including ayurvedic, unani and homeopathic medicines;
- ii. enforcement of good manufacturing practices;
- iii. full control of labelling, advertising;
- iv. control of prices of finished drugs and pharmaceutical raw materials;
- v. prescription control of toxic/poisonous and habit-forming drugs;
- vi. summary trial for offences in special drug courts;
- vii. heavy penalties including confiscation of equipment and properties for manufacture and/or selling of spurious and sub-standard drugs;
- viii. departmental adjudication for fine of up to taka 10,000/-;
- ix. heavy penalties for possessing or selling of drugs stolen from government stores, hospitals and dispensaries;
- x. regulation of technology transfer and licensing agreement with foreign collaborators;
- xi. restriction of ownership of retail pharmacist to professional pharmacists only;
- xii. control of manufacture and sale of unani, ayurvedic and homeopathic drugs;
- xiii. the patent laws in respect of pharmaceutical substances shall be revised.

Product patent in respect of pharmaceutical substances shall not be allowed. Process patent may be allowed for a limited period of time if only the basic substance is manufactured within the country. The tariff structure in respect of pharmaceutical raw materials for selected essential drugs, quality control equipment and chemicals shall be revised. A drug technical advisory board consisting of representatives from the pharmaceutical profession, industry, Pharmacy dept. of the University, representations from the professional organisations, experts from the profession shall be constituted to review from time to time for the implementation of drug policy.

DRUG ADMINISTRATION

3.3 The Directorate of Drug Administration will be expanded and adequately staffed with experts in medical and pharmaceutical sciences. In view of the gross inadequacy of drug inspectors, all Thana Health Administrators shall be given a special course of training and be empowered to act as drug inspectors for the purpose, so that they can take meaningful sanctions against wholesalers, retailers and peddlers of drugs at Thana levels and below. All the government drug control laboratories should be brought under the control of Drug Administration. A properly staffed and equipped National Drug Control Laboratory with appellate facilities will be set up as early as possible, not later than

1985. Besides its function in respect of drug control and administration, the National Drug Control Administration Laboratory will devote itself to develop appropriate standards and specifications for unani and ayurvedic drugs. It will also help develop national formulations for unani and ayurvedic drugs.

The fees for licensing, registration and testing of drugs which are ridiculously low at present shall be enhanced. Licensing or registration fees for new products which are not included in the national list of essential drugs shall be very high (not less than taka 5000/-). The renewable fees of licensing, registration and testing shall be utilised for the expansion and development of drug administration and drug testing laboratories. No manufacturer will be allowed to produce drugs without adequate quality control facilities. However, the small national drug manufacturers may be allowed to establish quality control laboratories on a collective basis.

3.4 Local Production

The existing capacities of local pharmaceutical industries especially those owned by Bangladeshi nationals, shall be enhanced through liberal licensing for balancing and modernisation and by increasing entitlement for the import of raw materials. Government facilities for the economic and efficient production of essential drugs for primary health care, intravenous fluid and vaccines shall be expanded. Multinational companies will not be allowed to manufacture simple products like common analgesics, vitamins, antacids, etc. Such products will be exclusively manufactured by local firms. Local production of basic pharmaceuticals in bulk shall be promoted to attain self-reliance. To encourage such production, special benefits and protections will be provided to private investors. The public industrial sector shall also take appropriate measures for the local production of essential basic pharmaceuticals in bulk, including vital antibiotics.

3.5 Control of Prices

Government shall control the prices of finished drugs as well as those of pharmaceutical raw and packaging materials and intermediates. Level prices will be fixed for the 45 essential drugs for primary health care and their corresponding raw materials. It will be ensured that all raw and packaging materials of acceptable quality are procured from international sources at competitive prices only. The retail prices of finished drugs will be fixed on the basis of costing and reasonable profitability. Undue overhead expenditure shall be prevented. A maximum of 100% mark up for fast moving items and 150% for slow moving items over cost of raw materials shall be allowed.

In the case of injectable and sterile preparations, the mark-up may go up to 200%. No mark-up will be allowed on the cost of packaging materials, but actual cost on them will be added.

The agency responsible for drug control and administration shall be responsible for the control of pricing and their enforcement.

3.6 Distribution and Utilization

Retail sale of drugs and medicines shall be allowed only under the supervision of qualified pharmacists. As soon as possible, arrangement must be made to authorise the establishment of private retail pharmacies within the premises of every Government hospital up to the Thana Health Complex, where under the ownership (on lease) and management of qualified pharmacists, and under the supervision of hospital authorities, essential drugs will be made available for sale at fixed prices against prescriptions of qualified physicians.

3.7 Traditional Unani, Ayurvedic and Homeopathic system of medicine have a long tradition in many countries including Bangladesh. These systems are now exempted from the drug laws. Consequently unethical and not uncommonly harmful products proliferate and alcohol containing tonics are much abused.

Appropriate action requires to be taken for necessary training of their personnel, screening of the products and wherever possible identification of their active ingredients, and standardisation.

A National Pharmacopia of Traditional Medicine should be prepared.

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