The National Drug Policy in Practice
(A Case Study of the Dangme West District)

A Dissertation Submitted In Partial Fulfillment Of The Masters In Public Health Degree.

Presented To School Of Public Health, University Of Ghana, Legon

Submitted by
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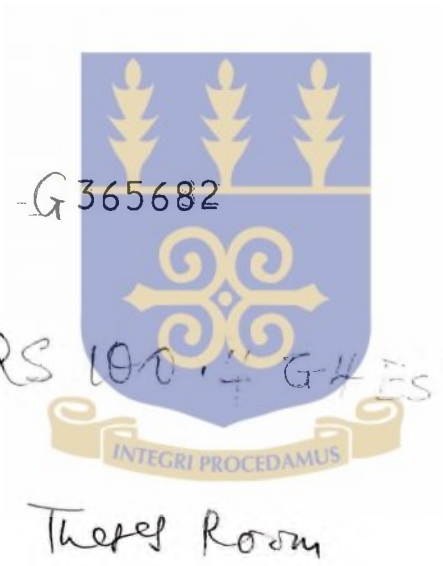

i DECLARATION

I DECLARE THAT ALL THE WORK IN THIS STUDY HAS BEEN A RESULT OF MY OWN RESEARCH, EXCEPT WHERE SPECIFIC REFERENCES HAVE BEEN MADE; THAT THIS WORK HAS NOT BEEN SUBMITTED TOWARDS ANY OTHER DEGREE, NOR IS IT BEING SUBMITTED CONCURRENTLY IN CANDIDATURE FOR ANY OTHER DEGREE.

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My sincere gratitude goes to Professor Samuel Ofosu Armah, Mr A. A. D Oboubi, Dr Eric Amuah and all the staff of the Dangme West District Health Administration.

iii Dedication

To Paul, Fred, Akyea, Morkor, Fenella and David
Whose support, vision and energy brought my aspirations
for an MPH to life to life

iv LIST OF ACRONYMS

ADR	Adverse Drug Reactions
DA	District Assembly
DTC	Drug Therapeutic Committee
EDC	Essential Drug Concept
EDL	Essential Drugs List
EDL	Essential Drug List
EOQ	Economic Order Quantities
INRUD	International Network for Rational Drug Use
MCH/FP	Maternal and Child Health/ Family Planning
MOH	Ministry of Health
MOH	Ministry Of Health
NDP	National Drugs Policy
NDP	National Drugs Policy
PHC	Primary Health Care
WHA	World Health Assembly

V. ABSTRACT

Objective

The main objective of the study was to determine which component of the National Drug Policy was working and which was not. Thus this study aimed to compare the current practices in the implementation of the Drug Policy with findings obtained in 1996 and 1998 and to determine strengths and weaknesses of some of those strategies adopted in the implementation process.

The study took place in the Dangme West District. Subdistrict health staff working in the ten Health Centres and Community Clinics and who were responsible for dispensing were interviewed to assess knowledge of Rational Drug Use / Drug Storage /Drug Distribution components of the essential drug concept and to determine implementation arrangements and status of implementation. Key personnel of private sector health facilities and drug shops were also interviewed using the same criteria and questionnaire.

At the community level, heads of households were interviewed to determine level of and impact of the drug distribution component of the policy implementation by measuring accessibility, availability and perception of cost to the individual as an indicator of how far the goal of the NDP had been achieved.

Summary of Key Findings and Recommendations

1. Knowledge of MOH policies

1.1 Finding: Knowledge of MOH policies is very scanty

1.1.1 Recommendation: Distribution of policy documents must be improved. The re was a need to disseminate information about the whole policies and not just components of a policy in order to improve intersectoral collaboration.

2. Implementation of components of the NDP

2.1 Findings: The training component of the NDP was very well implemented. Training had been given to 78.6 % of public sector respondents in the last two years and to 61.5% of the private sector respondents.

2.1.1 Recommendation: In addition, training programmes must tackle the beliefs and attitudes of trainees if behavioural change is aimed at. Secondly the target group of trainees must be expanded to include staff especially those in the community clinics who act in the absence of the in-charge.

2.2 Finding: Facilities in the private sector are inspected more regularly than the public sector facilities. Facilities are inspected 85.7% of the time in public facilities and 92.3% in Private Sector facilities.

2.3 Finding: Storage facilities and practices are generally good in 50% of public sector facilities and in 84.6 % of the private sector facilities. Stockouts were experienced more often in the public facilities and 60% of the public facilities

reported no experience with expiration of drugs in storage in contrast with the 100% 'no expiry' rate in the private sector. The Stock control component of the policy is not working very well in the public sector.

2.3.1 Recommendation: Improved storage facilities and practices

Budgets must be made for the construction of or improvement of storage facilities of in all health facilities especially those in the public sectors. Better storage facilities will reduce the occurrence of deterioration of goods in storage and prevent he use of scarce resources on replacement drugs.

2.3.2 Recommendation: Third Party contacting of dispensary services

Alternatively other mechanisms such as third party contracting could be established for employing independent private sector pharmacists to man dispensaries in health facilities to provide services to clients.

2.4 Finding: Out of 119 respondents (heads of households) interviewed on ability to purchase drugs, 84.3% reported that they found drugs affordable

2.5 Finding: 73% of the 119 respondents reported that drugs were easily accessible

2.6 Finding: Counselling on drug use is performed excellently by the Medical Assistants and persons in charge of the community clinics and not by the Dispensing Assistants. The best interaction between clients and service providers were found at the community clinics.

2.6.1 Recommendation: To improve communication between the Dispensary Assistant and the patient dispensary windows should be widened.

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1.0 INTRODUCTION

Drug Management and Drug Policies

Public policy is defined variously as " 'whatever governments choose to do or not to do', 'as the authoritative allocation of values for the whole society, ' as 'an indication of intention: or a guide to action encompassing values which set priorities and relations between government and society' and as 'a very complex and dynamic process whose components make different contributions to it'"[i]

A National Drug Policy (NDP) is a guide for action; it is a document containing goals set by the government for the pharmaceutical sector and it provides a frame work to co-ordinate activities by the various actors in the pharmaceutical sector, the private sector, NGO's and other interested parties. The central aim of a drug policy is to ensure availability, equal access and rational use of drugs that are safe, efficacious, of good quality and affordable to the entire population.[ii] At the core of the NDP is a commitment to the public health benefits of the Essential Drugs Concept (EDC).

Elements of the National Drug Policy have been in existence in Ghana as far back as in 1961. Ghana has had a drug legislation and regulation for decades, has adopted, published and revised an essential drug list, has developed treatment guidelines and instituted quality control laboratories and public sector drug financing schemes.

Over the years many statutes and peicemeal approaches have been instituted in the country in an attempt to improve availability, accessibility, the affordability and rational drug use.

Amongst the statutes and approaches were:

Year	Title	Number
1961	Disease and Animal Act	Act 83
1973	Standards Decree	N.R.C.D 173
1975	Centre for Scintific Research into Plant Medicine	N.L.C.D 344
1985	Hospital Fee Regulations	L1 1313
1990	Narcotic Drugs (Control, Enforcement and Sanctions Law)	P.N.D.C.L. 236
1992	Food and Drugs Law	P.N.D.C.L. 305B
1992	Veterinary Surgeons Law	P.N.D.C.L. 305C
1994	The Pharmacy Act	Act 489
1994	The Environmental Protection Act	Act 490

The need to co-ordinate activities enshrined in these statutes and schemes became increasingly evident and in 1994 efforts were put underway to develop a National Drugs Policy to serve as a guide for action for the pharmaceutical sector and to provide a framework to co-ordinate activities of the various actors in the pharmaceutical sector.

The development of NDP has it's origins in concerns expressed by ministers of health from developing countries during the 1975 World Health Assembly (WHA). The concerns expressed with regard to access to pharmacueticals resulted in the WHO model list of essential drugs published in 1977 and reviewed every two years since.

The main components of the drug policy are:

a) Drug selection and Registration

b) Drug Procurement

c) Local Manufacture – including herbal medicines and raw materials

d) Drug storage

e) Drug distribution

f) Rational Drug Use – Training , information, prescribing, patient information counselling and drugs Therapeutic Committees

g) Drug Advertisement and promotion

h) Drug Financing

i) Quality Assurance

j) Research and Development

k) Traditional Herbal Medicines

l) Intersectoral Cooperation

In 1999, the National Drug Policy document obtained cabinet approval but has not been launched yet, meanwhile the various components covered by the policy such as the Rational Drug Use, Drug Storage and Drug Distribution continues to be implemented all over the country. This study will attempt to evaluate the implementation of the three components mentioned above.

The criteria for Rational use of drugs should include:

Appropriate indication - Drugs are based on medical rationale, therapy is safe, and effective

Appropriate Drug - Selection of drugs is based on efficacy, safety, suitability and cost effectiveness

Appropriate Patient - Drug is acceptable to patients, no contraindications are experienced and minimal adverse reactions are suffered

Appropriate Information- Patients should be educated about their ailments and the medications prescribed for them

Appropriate Monitoring- Unexpected effects of the drugs should be suitably monitored[iii]

Drug Storage - Suitably constructed and equipped storage facilities, regular monitoring and inspection of storage facilities, adequate information on inventories maintained.[iv]

Drug Distribution - Equitable distribution of drugs throughout the country

1.2 PROBLEM STATEMENT

The Ghanaian Situation

Over the last decade there have been many improvements in the selection, financing and distribution of drug supply as the result of the Essential drugs programmes in many countries including Ghana. In 1988 the first international course on rational drug use was held in Yogyakarta, Indonesia using materials developed by the 'Management Sciences for Health and the Harvard Policy Group, in 1989 an International Network for Rational Drug Use (INRUD) was formed and members became involved in developing indicators

for drug use and to test interventions. The Ghana INRUD group was formed in 1990 and in November 1998, an international course was organised in Accra, sponsored by INRUD, Ministry of Health Ghana, University of Ghana Medical School and the World Health Organisation. Participants included prescribers, dispensers and consumers from 12 African countries and 2 participants each from all the ten regions of Ghana. In January 1999 the Human Resource division of the Ministry of Health organised a two week training of trainers' course to further develop presentation and teaching skills of those responsible for promoting rational drug use.[v]

There is an erroneous perception that Drug policies, the Essential Drug and Rational Drug Use concepts are all innovations directed at the public sector only. The private sector often say these strategies are not applicable to them but in reality they are, 60% consumption of drugs occurs in private facilities[vi]. The issue of access, equity, efficiency, finance, rational use and enforcement are relevant to both sectors.

Rational Drug Use requires that "patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements for an adequate period of time and at the lowest cost to their community" Unfortunately prescribing patterns do not follow the set criteria, antibiotics are often prescribed for (colds) viral upper respiratory infection, there is a failure to prescribe ORS for diarrhoea, brand names as opposed to generic are used during prescribing and dispensing, pharmacists in drug stores sell drugs without prescription, sell smaller quantities than required to those who make requests

and lastly storage facilities for drugs are poor in most facilities leading to deterioration in storage and poor quality and ineffective drugs.

The problem in Dangme West District

Even though there is a lot of reform going on in the pharmaceutical sector, even though in 1996 intervention norms for specific disease conditions, injection use and patient counseling were distributed to 15 facilities in the Greater Accra Region as part on a study,[vii] a preliminary problem diagnosis carried out January, 2000 revealed that there were still gaps in the implementation of the Rational Drug Use, Drug Storage and Drug Distribution components of the NDP and these were:

From service providers:

Patients not counselled adequately

High cost of drugs

Slow moving and frequently expired drugs,

Inadequate drug storage facilities, List of drugs need to be changed.

From Clients:

Poor communication from providers,

High cost of drugs

An analysis of these statements[1] reveal the factors contributing are; unpublicised or unclear policies and guidelines, infrequent and nonspecific training and lack of effective structures.

Researching into the factors which contribute to the current situation in the Dangme West District will give a better insight to the problem and help improve the effectiveness of and impact of the drug policy.

1.3 DESCRIPTION OF THE STUDY AREA

1.3.1 Geography Dangme West District

The study took place in the Dangme West District situated in the south – eastern part of Ghana, lying between latitude 5 45' South and 6 05 ' North and longitude 0 05 and 0 02 West. The Dangme West district is one of the two purely rural districts in the Greater Accra Region which have not yet been caught up by the rapid urbanization of the peripheral areas surrounding the city of Accra. It is also the district with the largest land surface area (about 1,700 square kilometers) in the region. The population is however not dense, with an estimated 1998 midyear population of 106,307. The bulk of the population is scattered in relatively small settlements with populations under a thousand.

The district is divided into 4 sub-districts, which are:

- Dodowa (Shai) sub-district
- Prampram sub-district

[1] See Analysis diagram in Annex 1

- Great Ningo sub-district (Formerly Old Ningo)
- Osudoku sub district

The population of the sub-districts from the 1984 census were: Dodowa = 15,743; Osudoku = 12,673; Prampram = 14,413; Old Ningo = 27,021. However currently osudoku is estimated to have the same population as Dodowa.

The actual population in the Osudoku sub-district may therefore be a little lower than the estimate of 26,086 calculated at the regional level. A census carried out in May/June 1993 (as part of research into community based health insurance by Dr. Dyna Arhin from the London School of Hygiene) gave the 1993 mid year population of this sub-district as 16,473 compared to a projected population of 22,104.

A recent census (1998) also as part of a proposed Health Insurance Scheme for the district also gave the population of this sub-district as 17,397. The population for the whole district was found to be approximately 75,900. This data is currently being updated.[viii]

The results of the 2000 population and housing census gives the population figure for the Dangme West District as 96,017[ix]

1.3.3 Health Service Infrastructure

	Dodowa Sub-district:	***Prampram Subdistrict:***	***Great Ningo Subdistrict***	***Osudoku Subdistrict***
Health Centre	1	1	1	1
Community Clinic	2	1	1.	2

In Dodowa Sub-district, all the institutions use part of the OPD as emergency wards. There are no operation theatres. There is a district Drug Store at Dodowa from which all institutions in the District procure drugs. There is a laboratory at Dodowa which caters for patients at Dodowa sub-district. Services Provided include: Maternity Services , Outreach Clinics, MCH/FP, Community Psychiatry, Nutrition Surveillance & education Organization of services. Services are provided from both Static & Outreach Clinics

The Prampram Sub-district The health centre runs a 24-hour service according to a duty roster. It uses part of the OPD as emergency ward and has no theatre. There is a laboratory at Prampram providing laboratory services.Services Provided in Prampram Health Centre includes: Maternity services, laboratory services, Medicare, Nutrition rehabilitation and education & MCH/FP. Services in are organised from both static and outreach clinics, static, outreach.

The Dawhenya Community Clinic is a new clinic ran by only one staff and does not ran a 24-hour service at the moment.

Great Ningo Sub-district:

This institution runs a 24-hour services according to a duty roster. There is a recovery ward which forms part of the OPD. There is no theatre nor laboratory services. Services Provided include: Medicare, Maternity, MCH/FP, Community Psychiatry.

Services are also provided form both static and outreach clinics.

The Osudoku Sub-district also renders 24-hour service with a duty roster. Part of the OPD is used as an emergency ward. There are no theatres and no laboratory services. Services available include: Medicare, Maternity, MCH/FP.

Organization of Service: Both static and outreach clinics are run in this sub district.

1.4 JUSTIFICATION FOR THE STUDY

1.4.1 Rationale and Justification

There are many divergent views on the appropriateness and impact of reforms on programme effectiveness. It is necessary to give credence to the views expressed and also important to determine whether i.e. the Essential Drug Concept and programme on Rational Drug Use is achieving the goals that it set out to accomplish and a scientific process is the most appropriate way to do this. It is four years since a baseline study on the impact of group development of treatment norms on prescribing at P.H.C. levels in the Greater Accra Region was carried out and two years since the baseline study on the pharmaceutical sector and it is not too soon to monitor implementation progress made so far. Thus the study will compare findings with those obtained in 1998. It will determine strengths and weaknesses of some of the strategies adopted in the implementation process and as plough back mechanism will feedback whatever information obtained to policy makers and implementers to guide future decisions and actions.

1.4.3 Hypothesis

The gap between expected performance and actual performance of components of the Rationale Drug Use concept in the Dangme West District can be blamed on inadequate

distribution, dissemination and knowledge of the guidelines, lack of education and training.

1.4.4 Research Objectives

The objective of this study is to describe the current situation as regards the promotion of Rational Drug Use and the implementation of the Drug Storage Drug / Distribution components of the NDP in Dangme West District.

Main Objectives

The main objectives are (1) assess the documentation and dissemination process , (2) to measure level of knowledge and implementation of these components of the NDP in the Dangme West District and Subdistrict level, (3) to evaluate the impact of rational drug use concept at the household level.

Specific Objectives and Processes

1. To measure the diffusion of information through the distribution of documents to staff of the district and sub district
2. To determine whether basic structures such as Drug Therapeutic Committees, Drug information Committees, training plans etc. are in place and if they are, whether they are performing effectively.
3. To determine which components of the Essential Drug Concept; rational drug use, drug storage and drug information and advertisement are performing well in the district and which are not.

4. To assess the drug distribution component of the essential drugs concept by measuring availability, accessibility and affordability of drugs at the household level in the district
5. To evaluate the correctness of specific practices (prescribing/labelling) covered by the promotion of rational drug use component on clients of the health centres and community clinics.
6. To compare findings with those of previous studies
7. To make recommendations for future action

2.0 LITERATURE REVIEW

2.1 Literature Review

It is reported that as early as1959, Sri Lanka acted to rationalise prescribing in the public sector by restricting all health service prescriptions to 500 drugs on the government formulary. Many of these lists were purely policy goals and were not enforced, moreover they were restricted to the public sector only and often controls on government purchases could be circumvented. Mozambique introduced similar but more restrictive legislation in 1997 and Doctors had to seek special permission to prescribe non formulary drugs. In Afghanistan, legislation in 1979 compelled wholesalers to import only generic drugs listed in the formulary and brand names could be imported only if equivalents were not available. An attempt at using generic names only failed in Pakistan in 1976 four years after being instituted when large amounts of substandard drugs flooded the country. An investigation by the Pakistan Monopoly Control later revealed that the quality control checks were totally inadequate making the implementation process rather than the policy itself wrong.

Sri Lanka was the first to prove that the bill for drug import could be reduced immensely through centralised procurements when in 1972/3 the state pharmaceutical Corporation (SPC) begun a phased take over of drug imports that had previously been carried our by 134 private suppliers. At the end of the second half of 1972, the SPC compared the cost of drugs it had bought with the cost of the same drugs bought by the private suppliers in the first half of 1972 and realised a 40% savings in the cost of importing just 52 drugs. [x]

A paper written by Pascale Brudon [xi] reports that many countries in the 1970's tried to solve problems of ineffective drug procurement and distribution without looking at drug use resulting waste of effort and resources spent on these specific issues with no positive impact on the use of drugs. She reports also that many essential drugs programmes covered only the public sector when consumption was influenced by and occurred largely in the private sector and says that it is imperative for countries to choose components of a drug policy which are most necessary and urgent to their current situation. Brundon continues by saying that monitoring and evaluation should be of key importance in the case of a national drug policy to determine if policy makers and implementers are on the right path and if strategies and activities are meeting the needs for which they were drawn.

Jonathan Quick[xii] in his report states that from a public health perspective the main concerns with the private pharmaceutical market are affordability (economic access), availability (geographic access) and appropriate use of drugs. He asserts that where purchasing power is concentrated in urban areas and the number of pharmacists is limited, the availability and range of drugs decline significantly in the remote areas. The report also describes surveys conducted in the Philippines, Cambodia and Kenya which show that even though poor people buy drugs, the combination of high prices and lack of information makes them delay treatment and drives them to purchase sub therapeutic doses. The writer of this article then goes on to recommend the institution of policy options such as price control / competition, price awareness and health insurance to

improve affordability and licensing schemes and financial incentives to improve availability.

The subject of this report describes a situation similar to that found in Ghana where surveys have shown that approximately 55% of the 300 Medical Practitioners in the Private Sector are found in the Greater Accra Region, 70% of the total number of pharmacists are found also in the Greater Accra Region, 90% of the medical practitioners and pharmacists are located within Accra and Tema[xiii] thereby limiting availability of drugs in the rural area.

James Rankins' paper on the private sector in the public pharmaceutical[xiv] gives the various areas of collaboration as: private support to public logistics and direct pharmacy service to public patients. In this era where privatisation and private sector participation in public services is being promoted it might be beneficial to make use of the numerous small scale pharmacist /drug sellers situated across the country. Logistics functions are expensive. To move, store and distribute drugs (materials) require a lot of space, equipment and people and increasingly a lot of computer hardware and software. Since the Ministry of Health is severely constrained for resources it might be necessary to consider; how much they are paying for each logistics activity, whether they need direct control over their logistics assets and whether costs can be significantly reduced by contracting out to logistics activities to a third party and whether service provision can be improved by using private sector companies on performance bound contracts.

A report on cost effectiveness by David Henry[xv] states that economic analysis relates the benefits of the drug to all the costs associated with it's use, that the main costs to consider in any evaluation of cost effectiveness are the costs of purchasing the drug, storage, distribution, giving the drug and treating adverse effects. The report describes the Australian system where equity of access is one of the main arms of the Australian Medical Drug Policy of which economic analysis / cost effectiveness is an important part of this arm. In this case the economic analysis is used as a mechanism for price setting on individual drugs in a system where there is no restriction on the budget. The report then recommends that in developing countries the focus on economic analysis could be on programmes rather than on individual drugs as in the Australian system because it is reactive and industry-driven and not appropriate.

The second half of the 20th century has seen the ideas of national drug policy progress from just a series of reactions to current problems to a positive concept. It is now widely accepted that each country should make a positive effort to achieve optimal availability, and use of drugs for it's people. In order for these efforts to be coordinated and to support one another, well designed overall drug policies need to be developed and implemented.

In 1996, a study of the impact of group development of treatment norms on proscribing at P.H.C. Levels in the Greater Accra Region. In 1998 another study was carried out on pharmaceutical sector[xvi] to identify the main deficiencies in the system of drug procurement, distribution and the revolving of funds prior to the establishment and institution of the National Drugs Policy. Both recommended amongst others that rational

use of drugs needed to be improved in most of the criteria that were assessed, that drug procurement systems in the public sector needed strengthening. It would be interesting to find out if some of these recommendations have been worked on at least in the Dangme West District.

3. SURVEY DESIGN AND EXECUTION

3.1 The Study Period

Data collection for the period was carried out over a four week period from July 13 to August 14, 2000

3.2 Study Design

The Study was both descriptive and analytic. The analytical aspect of the study attempted to determine at the organisational level, who knew the specific policy selected for the study, which components of the policy were known and practised properly, which what gaps existed in implementation.

3.3 Components of the study

The following components of the National Drug Policy will be studied.

(a) Component One: Distribution of Documents and Dissemination of Information

Distribution of the National Drug Policy Document

- Distribution of Essential Drug list

Distribution of Middle Level Treatment Guidelines

Distribution of Procurement Guidelines

(b) Component Two: Rational Drug Use -level of Implementation of the following components

Training

- Drug information
- Dispensing Practices

Dispensing information

Patient / Provider Communication

- Labelling
- Inspection

(c) Component Three: Drug Storage

- Expiry of drugs
- Stockouts

Storage facilities

(d) Component Three: Drug Distribution

Measuring impact on accessibility, availability and affordability at the household Level

3.4 The Field Work

The District and Subdistrict Levels

Subdistrict staff in all ten health centres and community clinics responsible for dispensing were interviewed to assess knowledge of Rational Drug Use / Drug Storage /Drug Distribution component of the essential drug concept and determine implementation arrangements and status of implementation. Key personnel of private sector health facilities and drug shops were also interviewed using the same criteria and questionnaire.

The Community Level

At the community level, heads of households were interviewed to determine level of and impact of the drug distribution component of the policy implementation by measuring access, availability and perception of cost to the individual as a indicator of how far the NDP has achieved it's goal.

3.4 Data Collection Methods

Frame work of variables and data collection instruments

Table 1: Frame work of variables and data collection instuments

Variable (Objectives)	Indicator	Data Collection Techniques used	Source of Information
To determine how wide and thorough is the distribution of Documents and Dissemination of Information on components of the National Drugs policy	Availability f the NDP, EDL, Procurement manual, treatment guidelines	Key informant Interviews Interview by questionnaires	Dangme West District and Sub-district Level Health /Drug Facilities In both Public and Private Facilities
To assess the level of Implementation of the Rational Drug Use Component -	Training Drug information Dispensing Practices Dispensing information Patient / Provider Communication Labelling Monitoring (ADR)	Observation Key informant Interviews Interview by questionnaire	Health service providers Public and Private Facilities
To assess how implementing activities have impacted on provider behaviour To measure the impact of provider practices on users	Dispensing Practices Dispensing information Patient / Provider Communication Labelling Client understanding	Key informant Interviews Interviews by questionnaires Observation Exit interviews	Health service providers Public Facilities only Clients of facilities

To measure the impact of Drug distribution component on the households	Drug availability, affordability, accessibility	Interviews by questionnaire	Heads of households

The data collection process used a combination of open and closed ended questionnaires. Though most questions appearing on the questionnaires were pre-coded certain answers were probed to obtain a better insight into specific situations.

Questionnaires were tested on staff of the Dodowa Health Centre who were not included in the main study to avoid sensitisation of respondents to questions and avoid receiving premeditated answers.

Ample time was spent carrying out a document review to examine The Rational Drug Use Concept and Drug Storage component of the National Drug Policy. A Checklist of what was expected was developed as a standard for knowledge and performance at district, sub district levels.

Respondents consisted of Medical Assistants and Dispensing Assistants in the health centres/private clinics, Nursing Officers and Community Health Nurses at Community Clinics in charge of community clinics and Dispensers and shop assistants at chemical and drug stores. These people were interviewed to assess their knowledge of the policy and determine level of implementation of specific components of the policy at these levels. Interviews covered all orthodox public and private sector health providers i.e. clinics, maternity homes and drug/chemical sellers.

Data was collected through direct observation of health service providers at work, specifically at prescribers, dispensers and others responsible for prescribing and dispensing drugs. Exit interviews of clients were conducted to assess patient provider communication, client understanding and compliance of instructions and provider practices. The study identified deviations from provisions of the policy.

3.5 Sampling Methods

A purposive sampling was used at the district and subdistrict levels and in using this process all four health centres and six community clinics were reviewed by interviewing medical assistants, dispensary assistants and nurses/midwives responsible for prescribing and dispensing. At least two respondents were interviewed in each health centre. All private sector health and drug facilities were also covered by this sampling method. One respondent was interviewed in each private facility. Since this sampling method covered 100% of the study population it is expected that conclusions drawn are valid and representative of the population of health/drug facilities in Dangme West District.

A system of random sampling was used to select heads of households to be interviewed in the study. The total population of the district is 75,882 and to determine the study population it was estimated that each household had an average of ten people making the number of households in the district 7,588. A sample size of 120 was determined to be adequate for the purpose of the study. Since there are 4 very different subdistricts comprising Dangme West District and a representative sample was required each subdistrict was made to contribute 2.5 % to the sample population. Hence 30 households

in each subdistrict were chosen at random using the house numbering system developed for the Dangme West National Health Insurance programme.

Patients seeking services at the four health centres and the six community clinics at the time of visit and data collection were interviewed after they had received care in order to assess patient provider communication, patient understanding and compliance and rational drug use.

3.5.1 Study Units

Table 2: Study Units

Study Units	Number of Units	Number of Respondents
Health Centres	4	8
Community Clinics	6	6
Drug / Chemical Stores	11	11
Private Clinics / Maternity Homes	2	2
Heads of Households	120	120
Exit Interviews (Clients of Health / Drug Facilities)	11	11
Total Sample Population		151

The study units were defined as:

Health providers responsible for prescribing and diagnosing in both public and private sector facilities in the Dangme West District at time of study. This was limited to the

head of the facility and his assistant (in community clinics) or the head of the facility and the dispensing assistant in health centres.

Heads of households in the Dangme West District who used conventional health /drug facilities and

Clients of health facilities met during data collection

The study unit did not include personnel who had been trained to prescribe/dispense but by their position were currently not authorised to do so at their work places.

3.5.2 Sample Size

Areas of location were chosen in order to obtain a geographical representative of the district. Although facilities in all four subdistricts in the Dangme West district were included in the study, the Ministry of Health facilities constituted the important units for the study. All the different types of health facilities were sampled in the process of data collection and the background of service providers were identified to identify variations or similarities in performance.

3.6 Data Quality Checks

Supervisory visits were made to selected sites to ensure proper data collection. All completed questionnaires were also checked for consistency and logic and to ensure no data got missing.

3.7 Sorting Questionnaires

The questionnaires were sorted out into convenient piles consisting of:

- District And Sub district Public Health Facilities
- District And Sub district Private Health /Drug Facilities
- Exit Interviews
- Households

Coding and Analysing Open Questions

Even though respondents expressed themselves differently, their answers, the concerns they raised and agreements were similar consequently the coding process made use of similarities in responses. A combination of qualitative and quantitative procedure was used for coding and analysing the questionnaires administered at the Subdistrict health and drug facilities. The procedure for sorting involved;[xvii] reading through all the questionnaires and identifying the most common responses, constructing short summary responses that were typical of the answers given and placing them into categories called generic categories, tallying the number of respondents whose answers fit into each generic category and inputting data in to the computer using Microsoft Excel 97 software which calculated the number of responses as a percentage of the number of respondents.

3.7.1 Statistical Methods

The questionnaires administered to clients leaving health facilities after receiving care and at the household level were analysed by an analysis of variances using two by two tables created with the SPSS computer software.

3.8 Clearance from local authorities

Permission was obtained from the District Health Administration and the District Assembly before the study was carried out. The chiefs and elders of the communities were informed about the research programme and assistance was sought from them and all those concerned with health. The team ensured maximum confidentiality of every respondent.

3.9 Major Constraints

The limited period of stay in the district and the amount of field practice work to be done impaired optimum background study and sampling procedures. Purposive and convenient sampling procedures had to be used to obtain the study population. The number of clients attending community clinics was very low and this made it impossible to get an adequate sample of clients at this level to assess patient encounters.

4. FINDINGS

4.1 Measuring the diffusion of information

4.1.0 Knowledge of MOH policies

Respondents in the MOH were asked to 'name a few of MOH policies' Polio eradication, Family planning, Health for all by the year 2000 (which was cited by almost 98% as a policy) quality care, cash and carry, health insurance, Ghana Health Service, and exemption were the most common examples given. Respondents in the private facilities

cited; must have 'O' Level, sell class C drugs, First aid, referring of patients, be within limits of specification, Keep place clean and free care.

4.1.1 The National Drug Policy

Out of the 14 respondents interviewed in the ten Ministry of Health facilities all 14 (100%) had not heard of nor seen nor owned a copy of the National Drug Policy Document.

In the private sector facilities 2 respondents out of the 13 (15.4%) reported that they had not seen the Drug Policy. Upon further questioning it was discovered that the 84.6% of respondents in the private sector facilities who said they had knowledge of or owned the policy document were referring to documents on the limits set for different classes of drug facilities, first aid and licensing.

4.1.2 The Essential Drug List

64.3 % of respondents in the public facilities had access to the EDL, knew the contents very well and had the document on hand for inspection.

28.6% mentioned they had the document but that it was not within reach for easy for inspection or for reference and one (7.1%) respondent reported that the EDL was kept with his boss.

In the private sector facilities, 38.5% of respondents had the EDL available and 61.5% did not have the EDL at all of this most respondents said the EDL was not applicable to them in the private sector.

4.1.3 Ministry of Health Treatment Guidelines for middle level providers

The treatment guideline is available and within easy reach for reference for 71.4 % of respondents and not available to 14.3 % of respondents in the Ministry of Health facilities.

In the private sector facilities 61.5% of respondents used a variety of guidelines which included 'Where there is no doctor, the BNL, workshop guidelines, notes given to licensed chemical sellers and the service provider manual' Of the remaining, 38.5% did not use any guideline and only 7.7% (of the 61.5 '5 using guidelines) had the Ministry of Health Treatment Guidelines for Middle Level Service Providers.

4.1.4 Procurement Guidelines

Only 7.1 of the respondents in the MOH facilities had the procurement guideline as opposed to 23.1 % in the private sector facilities.

4.2 Performance on different Components

4.2.0 To assess the level of Implementation of the Rational Drug Use Component -

4.2.1 Training

Training had been given to 78.6 % of public sector respondents in the last two years and to 61.5% to of the private sector respondents. 14.3 % of public sector respondents had not received any training since their school days compared to 38.5% of the private sector respondents.

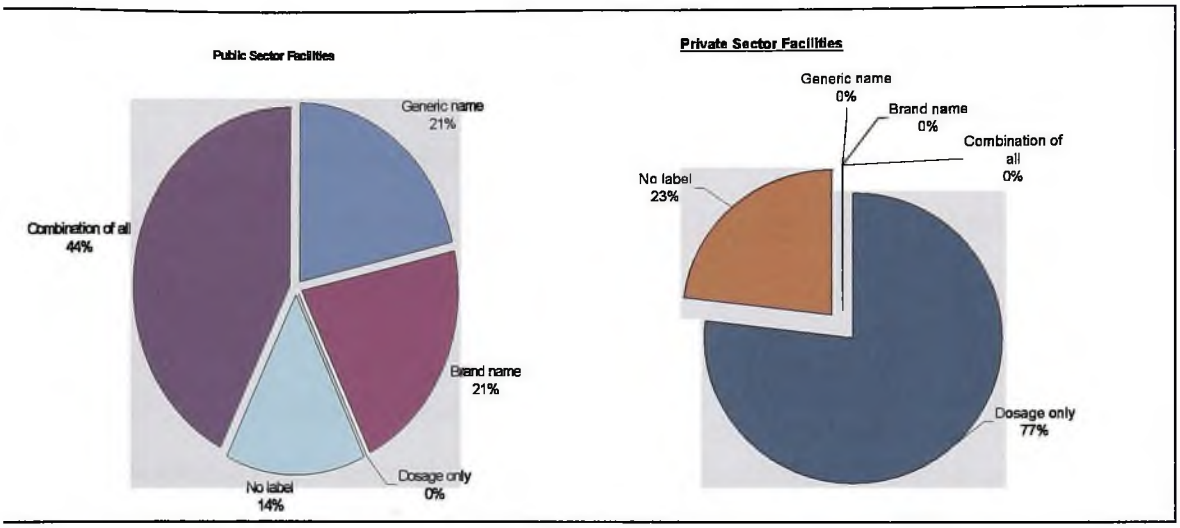
4.2.2 Drug Information

The Chief pharmacist, inserts from manufacturers and suppliers was stated as the main source of drug information by 85.7% of the public sector respondents while 14.3% stated their source of information on drug as suppliers, suppliers, manufacturers and advertisements.

In the private sector facilities, 76.9% quoted their source of information on drugs as; suppliers, manufacturers and advertisements and 23.1% mentioned their source of information as their Association, suppliers, manufacturers and advertisements.

4.2.3 Reported Prescribing Practices: Labelling

Labelling of drugs in the public sector facilities was more comprehensive than labelling in the private sector facilities, however 21% and 14% of labels had brand names or had no labels ate all and this contravenes the requirements of the NDP.



4.2.4 Patient Information and Counselling

100% of Respondents in both Public and Private Sector facilities reported they routinely counselled patients on drug usage.

4.2.5 Inspection

MOH Regional and District staff are reported to have regularly inspected 85.7% of Public Sector premises and 7.7% of private sector premises. Personnel from the Pharmacy inspected by 92.3% of Private Sector premises.

All facilities in the private sector are inspected regularly and 14.3% of facilities in the public sector have not been inspected at all.

4.2.6 Reporting

4.2.6.1 DIS Section of the MOH

7.1% of respondents in the public facilities had heard of the DIS section of the MOH as opposed to 30.8% of private sector respondents.

4.2.6.2 Compiling Information on ADR

92.9% and 92.3% of respondents did not seek nor compile information on Adverse Drug Reaction in the Public and Private Sector facilities respectively

4.2.6.3 Drug Therapeutic Committee

Table 3 : Responses on Drug Therapeutic Committee

Responses	***Public Sector % of Respondents***	***Private Sector % of Respondents***
Centre does not have a Drug Therapeutic Committee	71.4	30.8
Not Sure	14.3	38.4
Has other forum which meets regularly to discuss drugs	14.3	30.8

4.3 Drug Financing

100 % of the respondents in the public health facilities are issued regularly with price lists and 100% of the respondents in the private sector stated that they do not use any form of price lists because prices change very quickly.

On the question of affordability, 71.4 % of respondents of the MOH facilities declared that their prices were affordable to clients whereas only 15 % of private sector

respondents thought prices of drugs were affordable. It is interesting to note that the 28.6% who reported in the public sector that prices were not affordable to clients were all from the community clinics.

4.4. Drug Storage

Storage facilities and practices are generally good in 50% of public Sector facilities and in 84.6 % of the private sector facilities.

4.4.1 Stockouts

Stockouts have been experienced in the last couple of years in 60 % of the MOH facilities and in facilities and in 30% of the private facilities.

33.3 % of those who reported stockouts in the public sector facilities state that the stockouts were artificially caused by the frequent absences of the district pharmacist and were not due to unprofessional practices on their part.

4.4.2 Expiry

60% of the public facilities reported no experience with expiration of drugs in storage. This is in contrast with the 100% no expiry rate in the private sector.

The 40% of respondents who reported incidence of expired drugs said the event was due to bulk purchases (by the central procurement unit) of drugs close to their expiry date.

4.4.3 Licensing

Licenses of all thirteen respondents in the private sector were checked and 100% of them were found to be available and up to date.

4.5 Impact on Provider behaviour / Impact on client

4.5.1 Observing Patient Provider Communication

This section describes the lack of proper communication between dispensers and clients of the health facilities. It provides evidence that training given to Dispensers and Dispensary Assistants have had no impact on actual performance in the Dangme West District. This aspect of the NDP is not working well.

Table 1: Provider Communication

	Time in	Time Out	Type of Communication
Patient 1	11:23 dropped card	11:31 picked drugs	Spent 30 seconds at counter, instructions given, no questions asked
Patient 2	11:27	11:29	Spent 30 seconds at the counter, instructions given , no questions asked
Patient 3	11:33	11:38	11:33 – 11:40 Provider asked some questions
Patient 4	11:00	11:03 dropped bottles 11:06 picked drugs	No communication
Patient 5	11:03	11:07 picked drugs	A few words , no questions
Patient 6	10:16	10:18	Time spent counting and labelling drugs
Patient 7	10:30	10:40 dropped bottles 10:46 – 10:48 at counter	Some words, Time spent by service provider wiping and covering bottles
Patient 8	10:43	10:50 collect drugs	No communication

An actual count of the number of drugs received by patients were made and below are the figures obtained.

Table 2: Number of Drugs

Value Label	*Frequency*	*Percentage*
1 Drug	1	9.1%
2 Drugs	2	22.2%
3 Drugs	3	33.3%
4 Drugs	3	33.3%
More than 4 drugs	2	22.2%

Table 3: Injections

Value Label	*Frequency*	*Percentage*
Received an injection	1	9.1%
No injection	10	90.9%

4.5.2 Labelling

Table 4: Labelling practices

V*alue Label*	*Yes*	*No*
Name of Patient	18.2%	81.8%
Name of drug	72.7%	27.3%
Dose on Package	100.0%	0.0%
Frequency	90.9%	9.1%

4.5.3 Legibility of labels

Table 5: Legibility of labels

Value Label	*Frequency*	*Percentage*
Patient likely to understand	10	90.9%
Patient not likely to understand	1	9.1%

4.5.4 Assessing Patient Understanding and Compliance

4.5.4.1 Information on drugs

When asked whether patients had been told about drugs, 81,2% answered in the affirmative and 18.2% answered no.

Table 6: Knowledge of drug quantity

Can patient tell number of drugs	***Frequency***	***Percentage***
Yes all	8	72.7%
Yes some	2	18.2%
No	1	9.1%

Table 7: Knowledge of Correct Dose

Value Label	***Frequency***	***Percentage***
Knows correct dose	10	90.9%
Does not know correct dose	1	9.1%

Table 8: Knowledge of frequency of dose

Value Label	***Frequency***	***Percentage***
Knowledge	11	100%
No Knowledge	0	0%

Table 9: Knowledge of effect of Drugs

Value Label	***Frequency***	***Percentage***
Knowledge	6	54.5%
No Knowledge	5	45.5%

Table 10: Intention to comply with instructions

Value Label	*Frequency*	*Percentage*
Intention	11	100%
No Intention	0	0%

Table 11: Reasons for compliance

Value Label	*Frequency*	*Percentage*
To be healed	11	100%
Others	0	0%

4.5.4 Patient understanding of labelling

All patients interviewed had a good understanding of and gave the correct interpretation of the labels made on their drug packages.

4.6 To measure the impact of Drug distribution component on users

4.6.1 Drug Affordability

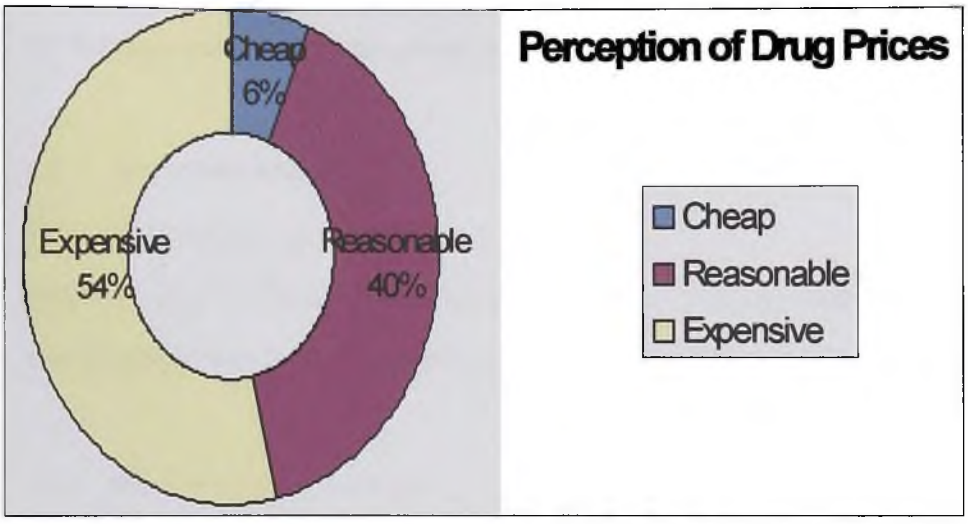
Out of 119 respondents (heads of households) interviewed on ability to purchase drugs, 9.6% responded in the negative, 84.9% responded in the affirmative and 6.1% said they were not always able to afford drugs.

4.6.2 Alternative action when drugs are unaffordable

When asked what action they took when drugs were unaffordable, 7.7% stated that they bought smaller quantities of drugs, 0.9% of respondents bought only one drug prescribed and 91.5% responded that the options were not applicable to them.

4.6.3 Perception of cost of Drugs

The following diagram shows the respondents perception of the cost of drugs.



4.7 Drug Availability

4.7.1 Knowledge of tracer drugs[2]

Most respondents, 97.3% were familiar with the tracer drugs and 2.7% did not know the drugs as mentioned to them

4.7.2 Frequency of purchase

95.6% of respondents purchased the tracer drugs very often and 4.4% did not purchase the listed drugs.

[2] Tracer drugs are the four most commonly used/prescribed drugs in the District. These ere used to assess cost, availability and accessibility.

4.7.3 Place of purchase

The place of purchase of drugs were; 0.9 % for market, 2.6% for chemical seller, 89.7% for drug store and 6.8% said the options were not applicable to them.

4.8 Accessibility to Drugs

4.8.1 Nearest place to get tracer drugs

Responses given for the above question were; less than 30 minutes walk, 92.1%, more than 30 minutes walk 7.9%. There were no answers for 'have to travel by car'

4.8.2 Where to go for tracer drugs

5% of the respondents reported they went to a chemical seller, 94% reported they went to a drug store and 1.7% visited other places.

4.8.3 Difficulty in accessing drugs

The responses for this question are as follows; 73% answered 'no' to the question, 16.5% answered 'yes' and 10.4% said they didn't know.

4.8.4 Availability of drugs at preferred place of purchase

14 % of respondents do not obtain drugs first time at their preferred place, 96% obtained their drugs from their preferred place of purchase and 3% did not know their answer to the question.

4.8.5 Difficulty in accessing tracer drugs

A total of 95.7% respondents reported no difficulty in accessing tracer drugs, 2.6% had difficulty and 1.7% of the respondents did not know their thoughts on the subject.

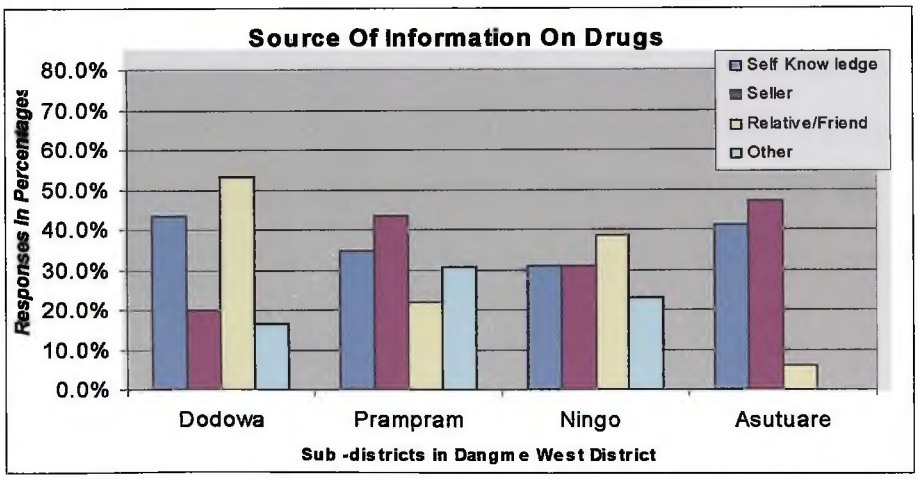
For this question, the majority of the respondents who stated 'Other' were referring to the personnel of the MOH.

4.8.6 Need for improvement

When respondents were asked if they thought the drug situation needed an improvement, 20.5% responded 'no' to the question, 51.3% responded 'yes' and 28.2% said they were not sure.

4.9 Source of information on drugs

Below is a bar chart showing responses obtained



For this question the majority of the respondents who stated other were refering to the personnel of the Ministry of Health.

5. DISCUSSION AND CONCLUSIONS

5.1.1 Knowledge of Ministry of Health policies and documents

Responses to the first question, " Do you know of any Ministry of Health policy, name a few" and 'Do you have the National Drug Policy document' were very disappointing. However it is not surprising that no one had a copy of the National Drug Policy document since it is yet to be launched.

The impression gained was that the private sector had better access to relevant information on their tasks, than did the public sector. They also had a wider view of things and of the different responsibilities of other partners in the pharmaceutical sector.

It is obvious here that personnel in both public and private sectors are conversant with specific components of policies such as the EDL but lack a comprehensive view of the wider framework within which these familiar components were found. So personnel did not know their connection with the goals of other department and other sectors. Such a situation presents a narrow minded view of issues and limits the potential for collaboration.

5.1.2 Distribution of documents

The Study revealed that distribution of certain documents which formed components of the National Drug policy had not changed since the 1998 baseline survey of the pharmaceutical sector. The percentage who had verifiable access to the EDL in this study

was 64.3% for public facilities, 38.5 in private facilities making a total 51.8% of respondents which is the same percentage (51%) found by the baseline survey.

5.1.3 To determine which components of the policy are performing well and which are not

To assess the level of Implementation of the Rational Drug Use Component -

5.1.3.1 Training

The output of the component is quite impressive in the district and this confirms the claims made in the Dangme West 1999 Annual Report. Nevertheless the impact of the training programme especially in dispensing practices seems to be negligible. Patients are not being counselled properly by dispensing assistants, labelling and the use of generic names do not conform to the standards that have been set by the rational drug use component of the policy.

5.1.3.2 Dispensing Practices

Patient Counselling on Drugs

Counselling on drug use is performed excellently by the Medical Assistants and staff in charge of the community clinics and not by the Dispensing Assistants. This is similar to results obtained in 1996 by the survey 'on the impact of group development of treatment norms at P. H. C. Levels in Greater Accra Region.' The best interaction between clients and service providers were found at the community clinics. The low turn out rate could be a contributory factor but attitudes of providers were also impressive.

The structure and layout of all dispensaries made communication very poor. Most interaction times ranged between 4 and 15 minutes but 90 percent of this (2 – 10 minutes) was used by the Dispensing Assistant to select, count and label drugs.

The small windows through which clients collect their drugs prohibited any form of communication especially one initiated by the patient. Terse instructions given consisted of; "take this, take that, take that"

5.1.3.3 Labelling

The correct procedure for labelling (according to guidelines) was also not practised in any place. Some service providers thought the exigencies made on them, in respect of labelling of drugs were inappropriate. They said that most of the clientele were illiterate and would be unable to decipher the names of drugs, some also were of the view that using generic names which were long, sometimes very similar and complicated would confuse the dispensing staff thereby increasing the occurrence of mistakes.

I tend to agree with these views.

However the method of using symbols and signs to show dosage and frequency was very ingenious and served the right purpose for most of the patients.

Again there is a big difference in labelling practices between the Ministry of Health facilities and the private sector facilities.

5.1.3.4 Appropriate monitoring

This aspect of the rational drug use component is not performing well at all. No information on ADR is sought nor compiled. Such a gap in information was experienced during the formulation of the National Drug Policy when it became obvious during research that 'data was not collected on a day to day basis and in a manner as to provide information for future decision making.'[3] In this situation, the chance to provide feedback through planned information that is collected periodically is lost. The opportunity to detect the emergence of drug resistance and resistant strains of specific diseases could be either delayed or missed altogether.

5.1.3.5 Number of Drugs

Only 22 .9% of clients received two drugs, meeting the recommendations made by the policy makers. This implies that most prescribers are treating suspected multiple conditions and are uncertain of the specific ailments affecting clients.

5.1.3.5 Number of Injections

There seems to be an improvement in the use of injections from the 1996 and 1998 survey figures but this could also be because no hospital was included in this survey in the Dangme West District and results must be taken with caution the implication is that at least in this district this component of rational drug use is working well.

[3] Information obtained during interview with staff of the National Drug Programme

5.1.4 Drug Storage

Facilities for storage were either average or very poor in the public facilities and this impacted negatively on storage practices. It is difficult to keep a windowless or rat infested store clean. For these reasons, stock recording was postponed to a more convenient time or place, meaning that some records were kept away from the stock increasing the tendency to have outdated records. Storage facilities were better in the private sector, this could probably be because most of the drug store /chemical sellers did not keep separate storerooms, their drug expiry and stockout rates were far more impressive than those of the public sector implying accurate forecasting and needs assessments.

The occurrence of stockouts in the MOH facilities seemed to be a managerial issue and not due to a lack of skills in forecasting quantities of drugs required. In the absence of the chief pharmacist, drugs were bought from the open markets and this could exacerbate the presence of slow moving stock in the central warehouse.

The incidence of expired drugs in the district also seemed to point to the larger problems within central drug procurement unit.

The Stock control component of the policy is not working very well in the public sector.

5.1.5 Drug Distribution

Results obtained form interviewing the 120 heads of households reveal that basically essential drugs (represented by the 4 tracer drugs used in this study) are accessible mostly less than 30 minutes walk away from homes and are available in 96% of respondents preferred place of purchase.

8. RECOMMENDATIONS

6.1 Improving access to documents

If public policy is said to outline " 'whatever governments choose to do or not to do', 'they present an authoritative allocation of values for the whole society, 'and give 'an indication of intention: a guide to action encompassing values which set priorities and relations between government and it decides major guidelines for actions directed at the future."[4] Then there is the need to distribute policy documents disseminate information about specific policies and not just components of a policy in order to improve intersectoral collaboration.

To correct the perception that certain policies or strategies are meant for the public sector only, the National Drug Programme and the Dangme West District Administration must endeavour to improve access to guidelines in the private sector also.

Guidelines used in both the public and the private sectors must be standardised

6.2 Training

The training programmes must tackle the beliefs and attitudes of trainees if behavioural change is aimed at. Training sessions should include participants from both the public and the private sectors.

[4] Professor Kayode Odusote: West African Post Graduate Medical College (Agency of West African Health Community) Health Service Management Course Volume 1

Secondly the target group of trainees must be expanded to include staff especially those in the community clinics who act in the absence of the in-charge.

A system should be designed for collecting and compiling and data on ADR as part of the routine monitoring system, this should be done in both private and pubic facilities.

6.3 Storage

Improved storage facilities and practices

Budgets must be made for the construction of or improvement of storage facilities of in all health facilities especially those in the public sectors. Better storage facilities will reduce the occurrence of deterioration of goods in storage and prevent he use of scarce resources on replacement drugs.

6.4 Dispensary Services

Third Party contracting of dispensary services

Alternatively other mechanisms such as third party contracting could be established for employing independent private sector pharmacists to man dispensaries in health facilities to provide services to clients. Such an arrangement will ensure better service provision and accountability because contracts will be renewable based on previous performance. Health personnel will be free to perform activities in which they have the expertise.

7.0 BIBLIOGRAPHY

1. Antwi P. The Budget Management Center (BMC) Concept. Are the Sub districts ready? The Assin District Situation. July 1998
2. Bie Nio Ong: Rapid Appraisal and Health Policy. 1996, Gt. Britain, 140
3. Brudon P. Monitoring and Evaluating National Drug Policies: where are we today. Australian Prescriber. Vol. 20 Supplement 1 1997)
4. Cassels A. & Janovsky K: Ghana Health Sector, AID, Health Policy, Strategy and Systems Development Proposed Programme of Work 1993 – 1995
5. Dodoo, C. D: Staff appraisal in the Ashanti Akim North District, 1999, 8 pages
6. Fulop T. & Roemer M. Reviewing Manpower development, A method of approving National Health Systems. WHO Public Health Papers No 83, Pages 25, 44- 45
7. Ghana National Drugs Programme: Baseline Study of the Pharmaceutical Sector in Ghana, Rational Use, Procurement and Financing of Drugs, September 1999.
8. Ghana National Drugs Programme: Promoting Rational Drug Use in Ghana, Training Manual, August 1999
9. Ghosh B: Health Implications of Public Policy. 1991 Indian Institute of Management, 385 pages
10. Henry D: Cost effectiveness and it's potential application in the region to ensure the affordability of medicines; Australian Prescriber. Vol. 20 Supplement 1 1997)
11. Howe S; Essential Elements of Human Resource Management, 1995, Great Britain
12. Kubr M. (ed.) Management Consulting, A guide to the Profession. 3rd Edition. Geneva. International Labour Office, 1996: 850
13. Management Sciences for Health: Managing Drug Supply, The selection, Procurement, Distribution and Use of Pharmaceuticals, Second Edition, 1997, USA, 309 pages
14. Melrose D: Bitter Pills, Medicines and the Third World Poor, Oxfam 1982, 275 pages
15. Ministry of Health: Health Sector 5 Year Programme of Health, August 1996, 34 Pages
16. Odusote K: West African Post Graduate Medical College (Agency of West African Health Community) Health Service Management Course Volume 1

17. Opoku Amankwa C: An Addendum to Dangme West District Profile. September 1999, 71 pages

18. Pearson C. A. Medical Administration for Front-line Doctors. 2nd ed. Cambridge. FSG Communications, 1995, 290 pages.

19. Quick J: Affordability and Availability of Drugs in the Private Market: promising experiences and cautions: Australian Prescriber. Vol. 20 Supplement 1 1997

20. The Family Planning Manager. Planning for sustainability: Assessing the management capabilities of your organisation. 1996/7 Volume V, No 4. 20 pages

21. The Manager. Human Resources: Managing and Developing Your Most Important Asset. Spring 1999, Volume VIII, No. 1

22. Varkevisser Corlien. M et alHealth Systems Research Training Series Volume 2 Part 1. Canada. IDRC, 1991: 375

23. WHO, Challenges and Strategies for Health Systems Development Discussion Paper, Prepared for the Informal Consultation on Health Systems Development

24. WHO, Geneva, 2000: Health Technology and Pharmaceutical Cluster: Progress in Essential Drugs and Medicines Policy 1998-1999,

25. World Health Organisation: The World Health Report 1995, Geneva 1995

8. ANNEXES

ANNEX 1

ID Number..... Location.....Type of Facility..... Designation of Respondent.....
....Date of Interview..... Interviewers Name.....

Implementation At District and Sub District Levels

Public And Private Health Facilities

Data to Gather	Variables	Answers & Codes
a) General	1. Do you know any health policies Name a few	1. No 2. Yes 3. Don't Know List:
b) NDP	2. Has the centre got a copy of the National Drugs Policy 3. If yes is this available for your use 4. Have you got a copy of the National Drug Policy	1. No 2. Yes 3.Don't Know 1. No 2. Yes 3.Don't Know 1. No 2. Yes 3.Don't Know
c) EDL	5. What are the main points of the drug policy 6. Have you got the EDL 7. How well do you know the contents of the EDL 8. Which edition of the EDL do you have an we see it	Please State: 1. No 2. Yes 3. Don't Know 1. Not Well, 2. Very Well 3. Excellent 1. Before 1996 2. 1996 Version 1. No 2. Yes 3. Not Available
d) Finance	9. Do you have a standard price list 10. Do you use the prices on this list 11. What are the prices of the following drugs: (Paracetamol Chloroquine, Ampicillin ORS, Mebendazole) 12. In your view are the prices affordable to clients Do clients pay for drugs easily	1. No 2. Yes 3. Don't Know 1. No 2. Yes 3. Don't Know P .....Ch..... Am ..... ORS ..... M ..... 1.No 2. Yes 3. Don't Know 1.No 2. Yes 3. Don't Know
e) Training	15. Have you received any formal training or attended a workshop/ in-service training/ skills upgrading on: (i) drugs policy (ii) diagnosis (iii) prescription (iv) dispensing	 1. No 2. Yes If yes when: 1. 2000 2. 998/9 3. 1996/7 4. In School No Yes If yes when 2000 1998/9 1996/7 4. In School No Yes If yes when 2000 1998/9 1996/7 4. In School No Yes If yes when 2000 1998/9 1996/7 4. In School

f) Storage g) Availability (Stock Control)	16. Describe your drug storage facilities (ventilation, security, racking, general housekeeping) 17. Do you have all the on the EDL in Stock 18. How many stockouts have occurred in the past year Have you experienced stokouts in any of the ff. (Para, Chloroquine, Ampicillin ORS, Mebendazole) 15. Minimum Level (for the above drugs) 16. Maximum Level (for the above drugs 17. What are your reorder levels (for the above drugs)	Ventilation: 1. Good 2. Moderate 3. Poor Lightening: 1. Good 2. Moderate 3. Poor Racking: 1. Good 2. Moderate 3. Poor Records: 1. Good 2. Moderate 3. Poor Cleanliness: 1. Good 2. Moderate 3. Poor Packaging: 1. Good 2. Moderate 3. Poor Preservation: 1. Good 2. Moderate 3. Poor Security: 1. Good 2. Moderate 3. Poor Stockouts in last 2 Years: 1.One 2. Two 3. More than Two Standard Actual Standard Actual Stock levels: 1. Good 2. Moderate 3. Poor
h) Information	18. Do you have any treatment guidelines for reference 19. Can we see these guidelines 20. Do you have any procurement guidelines 21. Can we see these guidelines 22. Are you provided with inserts/drug data from manufacturers 23. What other sources of information on drugs and drug management do you have	1.No 2. Yes 3. Name them 1.No 2.Yes 1.No 2.Yes 3. Don't Know 1.No 2. Yes 1.No 2. Yes 3. Don't Know List:
i) Prescribing j) Inspection	24. What information do you provide when: (i) Prescribing drugs (ii) Dispensing drugs 25. Do you routinely counsel patients on drug use 26. If yes what information do you give 27. What information do you provide with reference to (Paracetamol, Chloroquine, Ampicillin ORS, Mebendazole) 28. Has this premises been inspected by officers appointed by the Pharmacy Board or any other body 29. When did the inspection take place	Patient Name/ Generic name/active ingredient/dose regime/name & address of facility/ date of dispensing Patient Name/ Generic name/active ingredient/dose regime/name & address of facility/ date of dispensing 1. No 2. Yes 3. Don't Know State : 1.No 2. Yes 3.Don't Know Date:

k) Reporting	30. Do you know of the DIS section of the MOH	1. No 2. Yes 3. Don't Know
	31. Do you compile data on Adverse Drug Reactions	1. No 2. Yes 3. Don't Know
	32. Where is this information sent to	1. District Director 2. Regional Office 3. Head Office
	33. Do you have a Drug Therapeutic Committee in this facility	1. No 2. Yes 3. Don't Know
	34. If yes, are you a member and how often do you meet	1. Monthly 2. Every Six Months 3. Annually
l) Marketing	35. What are your sources of information on drugs:	1. MOH 2. Suppliers 3.Advertisements
m) Qualification & Authority	36. Do you have a dispensing licence	1. No 2. Yes 3. Don't Know
	37. Is this available for viewing	1. No 2. Yes

ANNEX 2

ID Number..... Place/ Community.....

Date of Interview..... ***Interviewers Name***.....

Impact Assessment

Data to Gather	*Indicators*	*Answers and Codes*
a) General	1. What are the common health problems in your community 2. What do you first do when you are ill 3. If first treatment does not work what do you do next 4. Have you ever visited the health centre	1. Fever, 2. Diarrhoea, 3. Bodily Pains, 4. Other... 1. Self Medication, 2. Herbalist, 3. Drugstore 4.Other 1. Clinic 2. Other (Give Name) 1. No 2. Yes
b) Affordability	5. Are you able to purchase all drugs prescribed 6. If No what so you do 7. How much do you normally pay for Paracetamol, Chloroquine, Ampicillin ORS. Mebendazole 8. What do you think of the cost of these Drugs 9. How do you pay for your drugs	1. No 2. Yes 3. Not Always 1. Buy None 2. Buy Smaller Quantity 3. Buy Only One Drug List Prices 1. Cheap 2. Reasonable 3. Expensive 1. Credit 2. Cash 3. Other
c) Availability	10. Do you know these drugs: Paracetamol, Chloroquine, Ampicillin, ORS, Mebendazole 11. Do you buy them often by yourself 12. Where do you buy them 13. Where do you get information on the drugs you buy	1. No 2. Yes 3. Don't Know 1. No 2. Yes 3. Don't Know 1. Market 2. Chemical Seller 3. Drug Store 4. Other 1. Self Knowledge 2. Seller 3. Realtive/Friend 4.Other
d) Access	14. How far is the nearest place to get drugs 15. Where do you normally go for your drugs 16. Is it difficult to get any drug 17. Do you always get the drugs you want at your preferred place 18. Is it difficult to get Paracetamol, Chloroquine, Ampicillin, ORS, Mebendazole 19. Does the situation need improvement	1. <30minutes walk 2.>30minutes 3. Journey by car 1. Market 2. Chemical Seller 3. Drug Store 4. Other 1. No 2. Yes. Don't Know 1. No 2. Yes. Don't Know 1. No 2. Yes. Don't Know 1. No 2. Yes. Don't Know

ANNEX 3
ID Number.....
Type of Facility.....
Date of Interview.....
Interviewers Name .....

1. Patient - Provider Communication	Time of arrival at Counter Time of departure from counter Did patient ask questions	Arrival .... Departure... 1. No 2.Yes Comment interaction
2. Patient Understanding and Compliance	Have you been told about the drugs you have received How many drugs have you received How many tablets are to be taken at a time How many time a day are you to take the drugs What will the drugs do Do you intend to comply with instructions/ why	1. No 2.Yes Can patient tell number of drugs: 1. No 2. Yes/ All 3. Yes/Some Count drugs received by patient 1.One 2. Two 3. Three 4. >Four Does the Patient know the correct dose 1. No 2. Yes Does the Patient know the correct frequency 1. No 2.Yes Does the patient know what drugs are for 1. No 2.Yes 1. No 2.Yes Give reasons for compliance/noncompliance
3. Labelling	Are the following present on drug package Is patient likely to understand the labelling	Name of patient 1. No 2.Yes Name of drug 1. No 2.Yes Copy names of Drug Dose (1 tablet / 2 tablet eg.) 1. No 2.Yes Frequency (3 times 2 times etc.) 1. No 2.Yes 1. No 2.Yes Explain.

End Notes

[i] Odusote Kayode: West African Post Graduate Medical College (Agency of West African Health Community) Health Service Management Course Volume 1

[ii] Management Sciences for Health: Managing Drug Supply, The selection, Procurement, Distribution and Use of Pharmaceuticals, Second Edition, 1997, USA, 309 pages

[iii] Ghana National Drugs Programme: Promoting Rational Drug Use in Ghana, Training Manual, August 1999

[iv] Ghana National Drug Policy, Ministry of Health, March 1998

[v] Ghana National Drugs Programme: Promoting Rational Drug Use in Ghana, Training Manual, August 1999

[vi] Research conducted into the provision of health services by the private sector in Greater Accra Region and to differentiate between their contributions to health care delivery, promotive and preventive care.

[vii] Irene Adjepong, Philip Anum, Daniel Arhinful, David Ofori-Adjei: The Impact of Group Development Treatment Norms on Prescribing at P.H.C. Levels in the Greater Accra Region. 1996.

[viii] Opoku Amankwa C: An Addendum to Dangme West District Profile. September 1999, 71 pages

[ix] Statistical Service: provisional Figures for 2000 Population and Housing Census

[x] Dianna Melrose: Bitter Pills, Medicines and the Third World poor, Oxfam 1982, 275 pages

[xi] Monitoring and evaluating National Drug Policies: where are we today. Australian Prescriber. Vol. 20 Supplement 1 1997

[xii] (Affordability and availability of drugs in the private market: promising experiences and cautions; Australian Prescriber. Vol. 20 Supplement 1 1997)

[xiii] Source: Seminar on Research conducted into the provision of health services by the private sector in Greater Accra Region and to differentiate between their contributions to health care delivery, promotive and preventive care. 22 September 1999, School of public Health.

[xiv] Engaging the private sector in the public pharmaceutical system: Australian Prescriber. Vol. 20 Supplement 1 1997

[xv] David Henry: Cost effectiveness and it's potential application in the region to ensure the affordability of medicines; Australian Prescriber. Vol. 20 Supplement 1 1997

[xvi] Baseline Study of the Pharmaceutical Sector in Ghana: Rational Use, procurement and financing of Drugs, Accra 1999

[xvii] Joycelin Chalmers and W. Lutz: Presenting Survey Information. A guide for Health Workers, International Epidemiological Association, 1989