

INTERNATIONAL PHARMACEUTICAL FEDERATION

FIP Working Group "Pharmacists and HIV-AIDS"



Survey of the Health Professionals Human
Resources with Regard to the HIV-AIDS Pandemic
on the African Continent

August 2005

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Thank you very much to everyone.

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FIP is the global federation of national organisations of pharmacists and pharmaceutical scientists dedicated to improving the access to and value of appropriate medicine use worldwide, and contributing to changes in science, practice and health policies worldwide.

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Foreword

In 1995, the International Pharmaceutical Federation (FIP) set HIV-AIDS as a priority and established an international working group aimed at collecting, analysing and disseminating information to member organisations. This group also worked on preparing view statements and organising seminars and conferences as part of the annual FIP congresses.

Since 1997, the pharmacist's role in the fight against HIV-AIDS has been recognised in a joint declaration by the FIP and the World Health Organization (Annex 1). Between 1997 and 1998, this declaration was distributed in more than 72 countries and translated into 12 languages.

In September 2004, the FIP set up the International Network for Pharmacists on HIV-AIDS Internet site (<http://www.fip.org/HIVAIDS>). This English/French bilingual network serves as a platform for the exchange of information for pharmacists interested in or involved in the fight against HIV-AIDS. It also offers training modules specifically designed for pharmacists on preventing the transmission of HIV and caring for patients living with HIV.

The present study complements this move by attempting to answer one of the questions posed by the "3 by 5" Initiative (treat 3 million people living with HIV by 2005) launched by the WHO in 2003. The initiative aimed to start 3 million patients in low and medium-income countries on antiretroviral treatment by the end of 2005. More specifically, the purpose of this study is to assess the human resources in terms of health professionals that could be mobilised to care for patients living with HIV.

REPORT

The International Pharmaceutical Federation working group "Pharmacists and HIV-AIDS" conducted a survey from September 2004 to August 2005 on the demography of health professionals in Africa.

I – Objectives

The objective of the survey was to assess the local resources in pharmacists and to relate them specifically to the needs for patient care for those with HIV-AIDS.

II – Study Methodology

The survey was conducted over 12 months from September 2004 to August 2005. It consisted in sending a questionnaire to each of the 53 countries on the African continent. The following number of questionnaires was distributed:

- 32 among the African FIP-member organisations¹
- 21 among the pharmacist Councils that are members of the *Conférence Internationale des Ordres de Pharmaciens Francophones* (international conference of the francophone pharmacist associations)¹
- 14 among the professional pharmaceutical organisations that are members of the Commonwealth Pharmaceutical Association¹
- 48 among the African Ministries of Health and among the Pharmaceutical Departments
- 37 among the French cooperation services in the French-speaking countries

The questionnaire used can be found in Annex 2. It was sent by post, e-mail and/or fax.

The purpose of the questionnaire was to collect the following data:

- total number of pharmacists
- number of community pharmacies
- number of selling points for drugs
- number of doctors
- number of dentists
- number of nurses

The data collected was supplemented with bibliographical information taken from the following sources:

- Data from the ReMeD association (<http://www.remed.org>)
- Data from the French economic missions, available at the following address: <http://www.dree.org/me/>

¹ Some organisations may be members of several structures simultaneously. For this reason, they may be accounted for in more than one category.

- Data from the WHO Regional Office for the Eastern Mediterranean (EMRO), available at the following address: <http://www.emro.who.int/emrinfo/>
- Human Resources for Health – Overcoming the crisis. Table A2.1 Global distribution of health personnel. Joint Learning Initiative, 2004, available at the following address: <http://www.globalhealthtrust.org/Report.html>

Study Limitations

The data collected does not allow for a precise estimate of the professional resources available in health-care centres (hospitals, dispensaries, etc.) or of the number of these centres. Only the pharmacy-type drug dispensary structures or the selling points for drugs were assessed by the investigations conducted without taking health-care centres into consideration.

The total number of pharmacists, doctors, dentists and nurses, regardless of their place of practice, was used to estimate the capacity of the local health systems to ensure patient care.

However, the data collected over the course of this study is based on declarative elements that could not be verified.

III – Results Obtained

The raw data can be found in Annex 3 of the present document.

The sources of this data are relatively disparate. Nevertheless, the questionnaire made it possible to obtain up-to-date information in 24 of the 53 African countries, that is 45% of responses.

The data is post 2002 in 35 of the countries (66%) and post 2000 in 40 of the countries (75%).

Some countries were not able to provide data because of their political situation (in conflict or in the midst of reconstruction), particularly in the case of the Democratic Republic of Congo.

1) Distribution of the sources for the demographic data regarding health professionals obtained via the questionnaire

Table 1: Distribution of the sources for the demographic data regarding health professionals obtained via the questionnaire

	Number of countries having responded			
	Pharmacists	Doctors	Nurses	Dentists
FIP-member professional organisations	5			
CIOPF-member professional organisations	5			
CPA-member professional organisations	5			
Ministries of health	13	15	20	14
French cooperation services	1	2	3	2
Total number of responses to the questionnaire	23	23	23	23

2) Number of countries for which data was collected using bibliographical sources

Table 2: Number of countries for which data was collected using bibliographical sources

	Number of countries concerned			
	Pharmacists	Doctors	Nurses	Dentists
WHO EMRO	2	4	5	4
WHO/EIP ² /HRH	17	18	20	18
REMEDI association	1	0	0	0
Total number of countries for which data used came from bibliographical sources	27	30	30	28

² Evidence and Information for Policy

It should be noted that the bibliographical data on health professionals does not systematically mention pharmacists. It was therefore necessary to look to several bibliographical sources to collect all of the data researched. Unfortunately, it was noted that pharmacists are not systematically taken into consideration in the analyses and reports written about the local health systems.

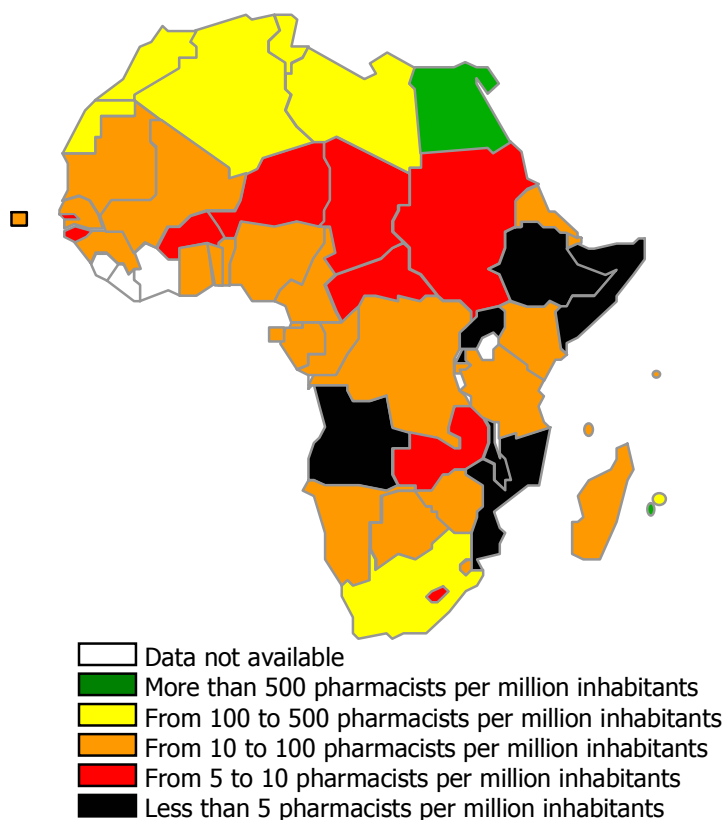
3) Evaluation of the number of pharmacists per million inhabitants

Table 3: Number of pharmacists per million inhabitants in the African countries

	Number of pharmacists per million inhabitants		Number of pharmacists per million inhabitants
Egypt	872	Congo (Dem. Rep.)	16 (*)
Morocco	254	Djibouti	15 (*)
South Africa	244	Madagascar	14
Mauritius	217	Sao Tome and Principe	13
Tunisia	203	Burundi	10
Algeria	110 (*)	Tanzania (United Rep.)	10
Libya	103	Lesotho	9 (*)
Namibia	99	Sudan	9
Gabon	87	Guinea-Bissau	8
Botswana	80	Central African Republic	7
Seychelles	74	Gambia	7
Senegal	72	Niger	6
Ghana	68	Zambia	6 (*)
Cape Verde	63	Burkina Faso	5
Cameroon	61	Chad	5
Nigeria	61	Uganda	4
Kenya	55	Malawi	3
Swaziland	45	Mozambique	3
Zimbabwe	45	Angola	2 (*)
Mauritania	31 (*)	Ethiopia	1
Eritrea	27	Rwanda	1
Mali	26	Somalia	1
Equatorial Guinea	24	Côte d'Ivoire	NA
Togo	24	Liberia	NA
Benin	21	Sierra Leone	NA
Guinea	21		
Comoros	19		
Congo	19		

NA = not available
 (*) In view of the lack of recent data, the figures published by WHO (data from 1997, 1998 and 1999) have been reported in the table for information only

Figure 1: Number of pharmacists per million inhabitants: geographical distribution



As a comparison, the ratios representing the number of pharmacists per million inhabitants for several industrialised countries other than those found on the African continent have been reported in Table 4.

Table 4: Number of pharmacists per million inhabitants in some industrialised countries

	Number of pharmacists per million inhabitants
Japan	1794
France	1140
United Kingdom	797
Australia	784
United States	658
Germany	649
Argentina	395
Turkey	330
Russia	73

4) Evaluation of the number of health professionals other than pharmacists per million inhabitants

Table 5: Number of health professionals other than pharmacists per million inhabitants

	Number of doctors per million inhabitants	Number of dentists per million inhabitants	Number of nurses per million inhabitants
Egypt	2036	284	5947
Seychelles	1617	272	7775
Libya	1134	89	5724
Mauritius	1047	139	4902
Algeria	840	252	4437
Tunisia	788	142	4769
South Africa	685	35	6932
Morocco	518	76	1496
Sao Tome and Principe	401	43	2803
Cape Verde	389	4	1622
Equatorial Guinea	308	7233	681
Botswana	276	21	4446
Gabon	266	10	1395
Nigeria	266	20	2228
Namibia	254	35	4565
Madagascar	248	46	469
Swaziland	178	19	13221
Sudan	170	11	2215
Djibouti	160	20	1079
Kenya	141	24	3183
Comoros	137	20	751
Congo	135	NA	2728
Zimbabwe	131	29	4110
Benin	117	5	791
Mauritania	103	16	803
Senegal	87	13	154
Guinea-Bissau	84	3	1460
Guinea	81	4	1184
Ghana	79	6	1331
Mali	75	4	567
Côte d'Ivoire	73	NA	614
Cameroon	62	3	614
Angola	55	0	2695
Zambia	55	11	2745
Congo (Dem. Rep.)	54	9	1200
Sierra Leone	54	3	702
Lesotho	51	4	3130
Togo	48	20	614
Central African Republic	42	2	167
Uganda	41	3	2549
Gambia	40	5	2180
Mozambique	40	1	1058
Somalia	38	2	440
Burkina Faso	37	3	1379

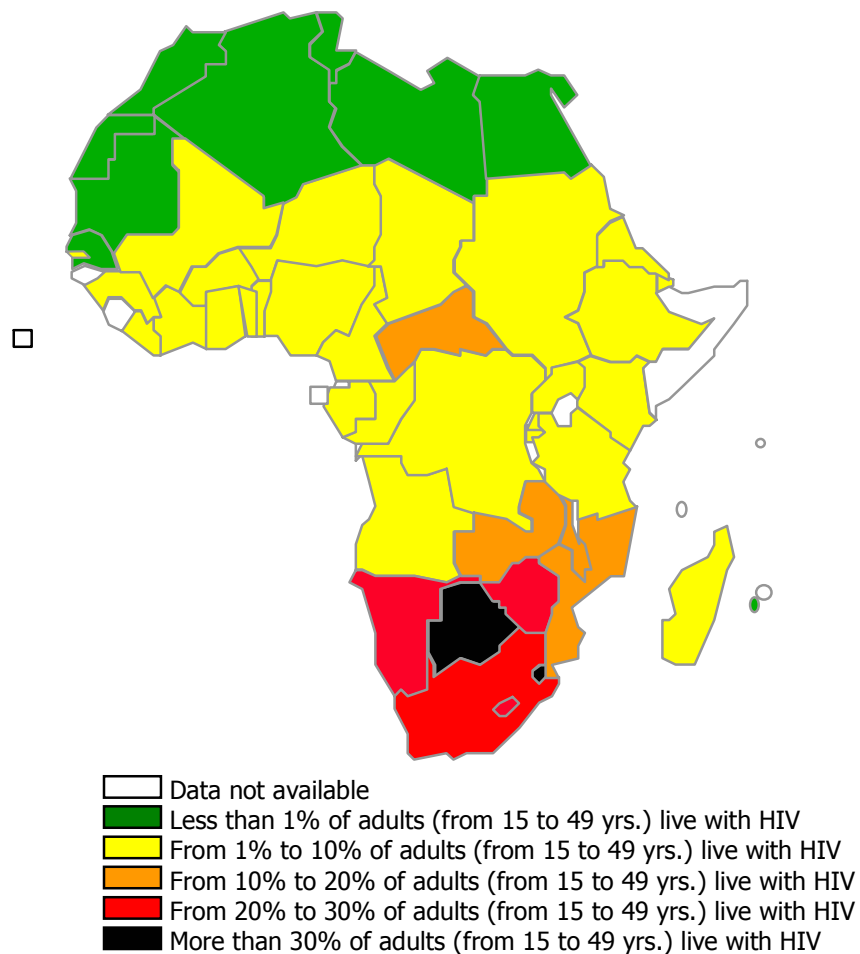
	Number of doctors per million inhabitants	Number of dentists per million inhabitants	Number of nurses per million inhabitants
Eritrea	34	4	1333
Chad	33	1	560
Tanzania (United Rep.)	21	6	1015
Niger	20	1	785
Ethiopia	18	1	700
Liberia	17	1	90
Rwanda	17	0.47	1144
Burundi	15	0.29	670
Malawi	11	0.33	308

NA = not available

5) Assessment of the national pharmacist resources in relation to the care needs for patients living with HIV-AIDS

a) Epidemiological data on the HIV-AIDS pandemic in Africa

Figure 2: Prevalence of HIV-AIDS in the adult population (from 15 to 49 yrs. of age) in Africa



Data from [1]

b) Analysis of patient care needs in relation to local pharmacist resources

In order to relate the pharmaceutical human resources available and the needs in terms of patient care, the following parameters have been calculated and listed in descending order:

- the number of persons living with HIV per pharmacist;
- the number of patients requiring antiretroviral treatment per pharmacist. This ratio allows us to appreciate the maximum workload for these pharmacists if every patient had access to antiretroviral treatments;
- the number of patients receiving an antiretroviral treatment per pharmacist.

Table 6: Patient care needs in relation to local pharmacist resources

	Population of the country	Number of persons living with HIV ⁽¹⁾	Number of persons living with HIV per pharmacist	Number of patients requiring antiretroviral treatment ⁽²⁾ per pharmacist	Number of patients receiving antiretroviral treatment per pharmacist
Mozambique	19 792 000	1 300 000	23636	3618	194
Malawi	12 884 000	900 000	23077	3590	487
Rwanda	9 038 000	250 000	22727	3545	941
Lesotho	1 795 000	320 000	18824	3294	294
Ethiopia	77 431 000	1 500 000	17647	2482	193
Zambia	11 668 000	920 000	12267	1987	307
Angola	15 941 000	240 000	10000	1438	125
Central African Republic	4 038 000	260 000	8667	1350	18
Burkina Faso	13 228 000	300 000	5000	758	74
Swaziland	1 032 000	220 000	4783	793	182
Tanzania (United Rep.)	38 329 000	1 600 000	4384	721	23
Chad	9 749 000	200 000	4255	638	6
Uganda	28 816 000	530 000	4240	912	511
Burundi	7 548 000	250 000	3472	556	70
Zimbabwe	13 010 000	1 800 000	3077	504	26
Botswana	1 765 000	350 000	2465	528	296
Sudan	36 233 000	400 000	1286	161	1
Dem. Rep. of Congo	57 549 000	1 100 000	1213	184	6
Congo	3 999 000	90 000	1200	193	6
Namibia	2 031 000	210 000	1045	159	85
Niger	13 957 000	70 000	778	97	NA
Djibouti	793 000	9 100	758	113	17
Togo	6 145 000	110 000	733	117	10
Guinea	9 402 000	140 000	704	90	5
Gambia	1 517 000	6 800	680	110	15
Kenya	34 256 000	1 200 000	638	124	20
Cameroon	16 322 000	560 000	560	95	15
Madagascar	18 606 000	140 000	551	63	NA
Eritrea	4 401 000	60 000	500	88	0.41
South Africa	47 432 000	5 300 000	457	72	9
Nigeria	131 530 000	3 600 000	450	70	2
Gabon	1 384 000	48 000	400	58	17
Mali	13 518 000	140 000	400	59	2

	Population of the country	Number of persons living with HIV ⁽¹⁾	Number of persons living with HIV per pharmacist	Number of patients requiring antiretroviral treatment ⁽²⁾ per pharmacist	Number of patients receiving antiretroviral treatment per pharmacist
Benin	8 439 000	68 000	393	64	9
Ghana	22 113 000	350 000	233	37	1
Mauritania	3 069 000	9 500	100	11	0.41
Senegal	11 658 000	44 000	53	9	2
Libya	5 853 000	10 000	17	NA	0.16
Algeria	32 854 000	9 100	3	0,35	NA
Morocco	31 478 000	15 000	2	NA	0,05
Tunisia	10 102 000	1 000	0.48	0.24	0,21
Egypt	74 033 000	12 000	0.18	0.03	0.0009
Cape Verde	507 000	NA	NA	NA	NA
Comoros	798 000	NA	NA	NA	13
Côte d'Ivoire	18 154 000	570 000	NA	NA	NA
Equatorial Guinea	504 000	NA	NA	225	0.41
Guinea-Bissau	1 586 000	NA	NA	304	NA
Liberia	3 283 000	100 000	NA	NA	NA
Mauritius	1 245 000	NA	NA	NA	0.44
Sao Tome and Principe	157 000	NA	NA	NA	NA
Seychelles	81 000	NA	NA	NA	7
Sierra Leone	5 525 000	NA	NA	NA	NA
Somalia	8 228 000	NA	NA	875	NA

NA = not available

(1) The number of people living with HIV is issued from the bibliographic reference [1]

(2) The number of patients requiring antiretroviral treatment used for calculating the ratio per pharmacist was estimated by WHO and UNAIDS ([2] and [3]). These figures were then used to estimate the number of adults needing antiretroviral treatment while keeping the current stage of the epidemic in mind. When the epidemic is in the early stage and expanding, the proportion of infected persons needing an antiretroviral treatment for the first time is lower than when the epidemic has reached the late or regression stage.

These results have been compiled into the following three maps.

Figure 3: Number of persons receiving antiretroviral treatment per pharmacist

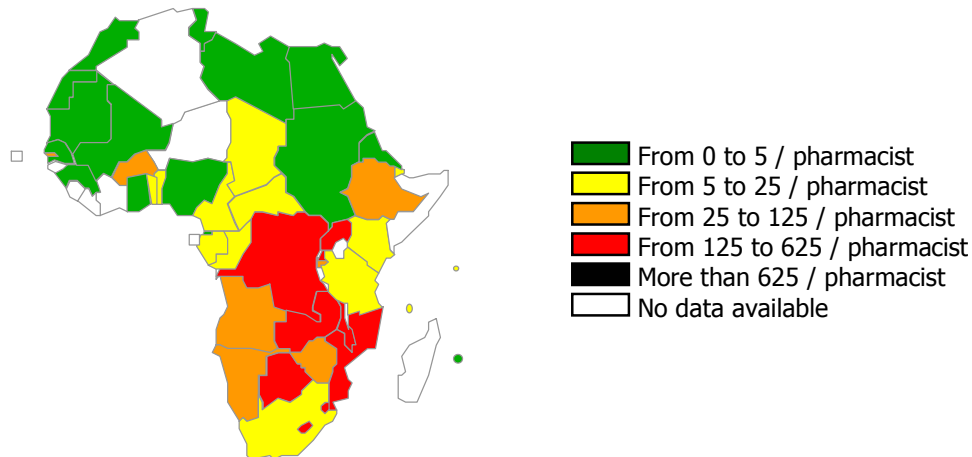


Figure 4: Number of persons requiring antiretroviral treatment per pharmacist

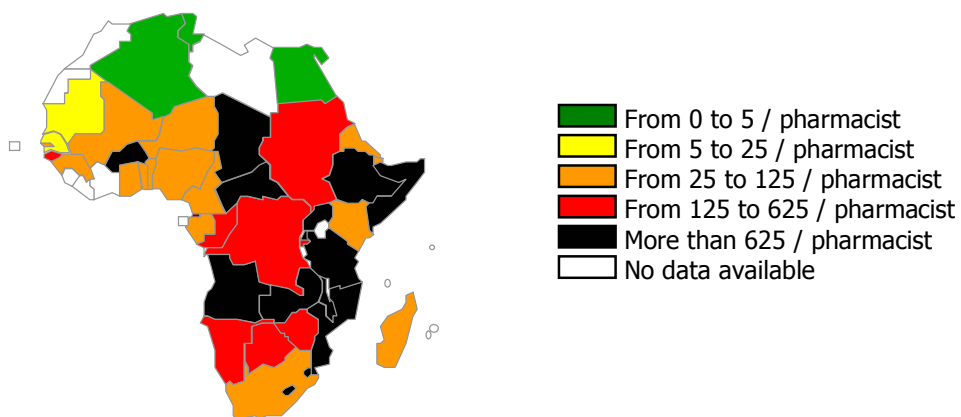


Figure 5: Number of persons living with HIV per pharmacist

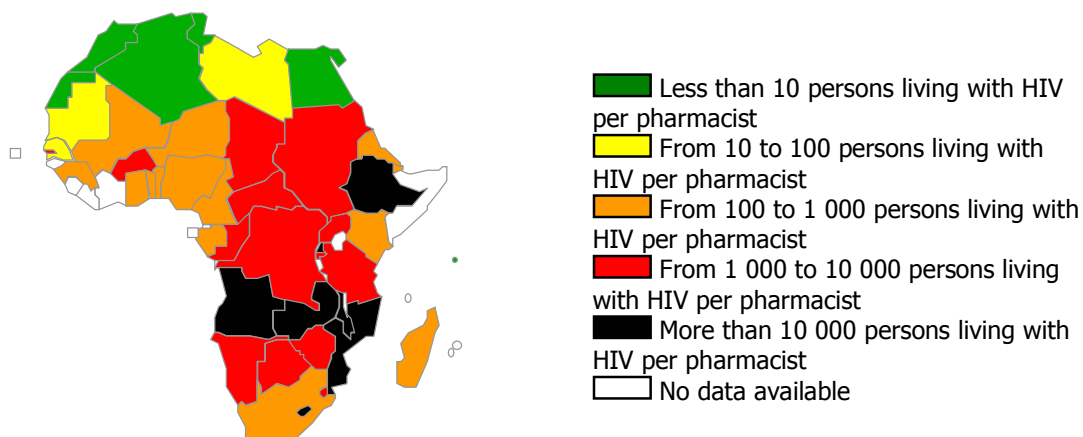
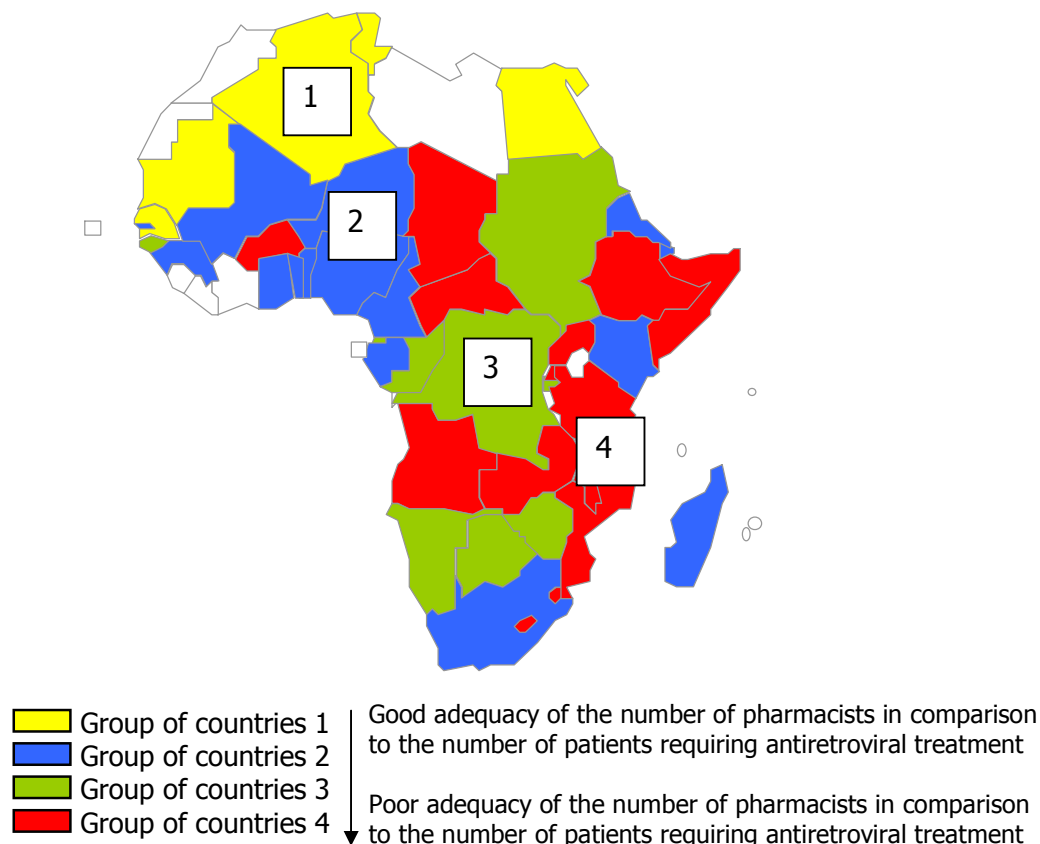


Figure 4 shows that 23 countries are in a particularly critical situation. The number of patients per pharmacist is greater than 125. All of these countries together represent 41.5% of the African population.

c) Categorisation of the countries according to pharmacist resources and intensity of the HIV-AIDS epidemic

The African countries have been categorised into four groups from 1 to 4:

Figure 6: Distribution of the countries according to the adequacy of the number of pharmacists in comparison with the number of patients requiring antiretroviral treatment



Group 1 regroups the countries with a number of patients requiring antiretroviral treatment per pharmacist of less than or equal to 25. Thus, these countries show favourable conditions for adequately managing the supply of drugs from a logistical standpoint and for providing patients receiving antiretroviral treatment with adequate pharmacist accompaniment.

The countries in group 1 are: Algeria, Egypt, Mauritania, Senegal and Tunisia.

Group 2 regroups the countries in which the number of persons requiring antiretroviral treatment per pharmacist is between 25 and 125.

The countries in group 2 are: Benin, Cameroon, Djibouti, Eritrea, Gabon, Gambia, Ghana, Guinea, Kenya, Madagascar, Mali, Niger, Nigeria, South Africa and Togo.

Group 3 regroups the countries in which the number of persons requiring antiretroviral treatment per pharmacist is between 125 and 625.

The countries in group 3 are: Botswana, Burundi, Republic of the Congo (Brazzaville), Democratic Republic of the Congo, Equatorial Guinea, Guinea-Bissau, Namibia, Sudan and Zimbabwe.

Finally, group 4 regroups the countries in which the number of persons requiring antiretroviral treatment per pharmacist is greater than 625.

The countries in group 4 are: Angola, Burkina Faso, Central African Republic, Chad, Ethiopia, Lesotho, Malawi, Mozambique, Rwanda, Somalia, Swaziland, Tanzania, Uganda and Zambia.

Groups 3 and 4 total 23 countries and represent 41.5% of the African population.

Cape Verde, Comoros, Côte d'Ivoire, Liberia, Libya, Mauritius, Morocco, Sao Tome and Principe, Seychelles and Sierra Leone do not figure in any of the four groups because of lack of data.

d) Incidence of the "3 by 5" Initiative according to the country groups

The list of countries targeted by the "3 by 5" Initiative included 27 African countries of the 49 countries listed.

The preliminary results from June 2005 allowed for the selection of a list of 16 countries considered to have the most significant unfulfilled requirements.

The following table lists per group the countries that appear in the two "3 by 5" Initiative categories.

Table 7: Distribution of the countries of the study groups according to the two "3 by 5" Initiative categories

	Countries targeted by the "3 by 5" Initiative (Dec. 2003) ⁽¹⁾	Countries with the most significant unfulfilled requirements (June 2005) ⁽²⁾
Group 1		
Group 2	South Africa Cameroon Djibouti Ghana Guinea Kenya Nigeria	South Africa Cameroon Ghana Kenya Nigeria
Group 3	Burundi Dem. Rep. of the Congo Namibia Sudan Zimbabwe	Dem. Rep. of the Congo Sudan Zimbabwe

	Countries targeted by the "3 by 5" Initiative (Dec. 2003) ⁽¹⁾	Countries with the most significant unfulfilled requirements (June 2005) ⁽²⁾
Group 4	Angola Botswana Burkina Faso Central African Republic Ethiopia Lesotho Malawi Mozambique Uganda Rwanda Somalia Swaziland Tanzania Zambia	Ethiopia Lesotho Mozambique Malawi Uganda Tanzania Zambia
Data not available	Côte d'Ivoire	Côte d'Ivoire

(1) The list of the countries is available on Appendix 2 of the report "Progress on Global Access to HIV Antiretroviral Therapy – An update on "3 by 5" [2].

(2) The list of the countries is available on Figure 1 of the report "Progress on Global Access to HIV Antiretroviral Therapy – An update on "3 by 5" [2].

It should be noted that of the countries with the most significant unfulfilled requirements, Nigeria, Ghana, Cameroon, South Africa and Kenya, have favourable pharmacist resources for patient care.

III – Conclusion

Health professional resources and access to them are quickly becoming the determinant of the development and maintenance of programmes aimed at treating and caring for patients living with HIV.

This purpose of this study was to collect up-to-date data on the pharmacist and health professional demographics in Africa. Pharmacist demographics indicate not only the capacity to dispense medicines and guide patients through their course of antiretroviral treatment but also the logistical capability of managing the flow of medicines.

Weaknesses in the systems which govern the purchase and acquisition of medicines and diagnostic products, as well as insufficient trained caregivers are prominent obstacles in achieving the “3 by 5” goal, as reported in the WHO preliminary report on the initiative, released June 2005.

Also, amidst the programmes that were initiated, specifically noted was an increased demand for screening and prevention. These two fields of activity are integral parts of the pharmacists’ responsibility as healthcare provider; they have the necessary skills and knowledge to implement health promotion activities on HIV/AIDS, as well as refer patients to appropriate healthcare services when there is a recognisable need.

Finally, it can be inferred that as access to antiretrovirals becomes better, there will be an increased demand for palliative care medications and those used to treat opportunistic infections. As such, it is necessary that the supply and access to all medicines evolve alongside the progress of access to antiretrovirals.

The programmes in place, therefore, must take into account the local resources and should contribute to the development of locale healthcare services.

The data collected, even if rudimentary, has made possible the grouping of African countries into categories demonstrating the ratio of the prevalence of HIV/AIDS compared to the local pharmacist demographics. Most of the countries located in the Central, Eastern, and Southern regions of the continent are in critical or even very critical situations, with the number of patients requiring treatment per pharmacist reaching numbers from 125 to 3600!

However, the situation in African countries with regards to the HIV/AIDS epidemic is fortunately not without potential for improvement. Botswana and Uganda are examples of countries who have reached the “3 by 5” goal as set by the WHO which is to provide a treatment to at least 50% of their patients needing it. These are encouraging statistics.

Those countries particularly affected by HIV/AIDS are now in the position to improve their public health status if both financial and organisational support is provided.

The efficiency of these programs depends on the improvement of health professionals demographics through continued support for education and incentives to sustain trained health professionals in their country.

These programs have the potential to significantly influence local healthcare systems, only if, however, these newly educated practitioners are properly recognized and compensated.

Bibliography

For information on HIV-AIDS, the group used the following data:

- [1] 2004 Report on the Global AIDS Epidemic, UNAIDS, December 2004, available at the following address: <http://www.unaids.org/bangkok2004/report.html>
- [2] Progress on Global Access to HIV Antiretroviral Therapy – An update on “3 by 5”. WHO and UNAIDS June 2005, available at the following address: <http://www.who.int/3by5/fullreportJune2005.pdf>
- [3] Summary Country Profile for HIV-AIDS treatment scale-up, WHO, June 2005, (available at the following address: <http://www.who.int/3by5/countryprofiles/en/index.html>)

For information on health care personnel:

- [4] Data from the ReMeD association (<http://www.remed.org>)
- [5] Data from the French economic missions, available at the following address: <http://www.dree.org/me/>
- [6] Data from the WHO Regional Office for the Eastern Mediterranean (EMRO), available at the following address: <http://www.emro.who.int/emrinfo/>
- [7] Human Resources for Health – Overcoming the crisis. Table A2.1 Global distribution of health personnel. Joint Learning Initiative, 2004, available at the following address: <http://www.globalhealthtrust.org/Report.html>

Annexes

Annex 1: FIP/WHO Declaration on the Role of the Pharmacist in the Fight against the HIV-AIDS Pandemic



THE ROLE OF THE PHARMACIST IN THE FIGHT AGAINST THE HIV-AIDS PANDEMIC



*A joint declaration between the World Health Organization (WHO)
and the International Pharmaceutical Federation (FIP)*

Whereas

- There are today 1.6 million reported AIDS cases, but the unofficial estimate stands at over 8 million; this means that the pandemic is the most life-threatening challenge our society has had to face since the beginning of the 20th century.
- The majority of cases are in sub-Saharan Africa and in some developed countries, but extensive spread in South East and South Asia indicates that this area could become the next epicentre of the pandemic.
- People with clinical AIDS are by far outnumbered by those who have been infected by the virus but who have not yet actually developed the disease. WHO estimates that the infected population will amount to about 40 million by the year 2000.
- As is the case for many diseases, behavioural factors and lifestyles are known determinants of HIV infection.
- All individuals concerned by the disease - whether clinically ill, HIV-positive or relatives of those infected - are confronted with problems of a medical, social and economic nature, and they may also face discrimination.

Now therefore :

WHO and FIP intend to work actively to prevent the further spread of the HIV-AIDS virus, to seek to improve patient care and to fight against discrimination in all its forms. This joint commitment is based on the Organization's mandate in public health and on the worldwide presence and vocation of

pharmacists in the field of health:

- Pharmacists all over the world are the most numerous and easily accessible 'health outlets' for the general public;
- Trained in public health questions, with long experience of entering into dialogue with, and providing education of and information to the general public, pharmacists are well-placed to participate in health education and prevention campaigns;
- As health professionals, they are in permanent contact with decision-makers in the epidemiological, diagnostic and therapeutic fields; they participate in the actual treatment and follow-up of patients, and they make a major contribution to the collection, analysis and communication of health data.

Thus :

In co-operation with WHO, FIP has drawn up a set of guiding principles for pharmacists and pharmaceutical scientists on the approaches they can take in the fight against the spread of HIV-AIDS.

In this way, WHO and FIP believe that pharmacists and pharmaceutical scientists, working with all interested parties, can help in the fight against the HIV-AIDS pandemic and against any other factor which contributes to its spread - in particular injectable drug abuse.

WHO undertakes to promote these principles in all relevant fora in which the organization participates.

FIP undertakes to promote the principles to national associations of pharmacists and pharmaceutical scientists and to individual pharmacists worldwide and to encourage national associations to transmit the declaration to the health authorities of their country.

Hiroshi Nakajima, M.D., Ph.D.
Director General
World Health Organization

Dr. Dieter Steinbach
President
International Pharmaceutical
Federation

September 2, 1997

Guiding principles:

WHO and FIP urge pharmacists and pharmaceutical scientists, together with their national and international associations or federations, to draw up individual plans, within an overall national strategy wherever possible committing them to the following guiding principles:

- Encourage and promote better support networks for people with HIV-AIDS, and even more determined action against discrimination;
- Participate in the global struggle against the HIV-AIDS pandemic, on the basis of the commitments made by heads of state and governments at the summits in London, 1992, and Paris, 1994;
- Fight to ensure that all proven treatments be made accessible in all countries to all who could benefit from them without discrimination;
- Co-ordinate with all those working in public health education, and seek closer ties with other individuals and community groups who could be usefully involved in the effort to combat the disease, in terms of prevention, treatment and patient-care and support - teachers, family associations, politicians, etc., and through community involvement of pharmacists;
- Provide information on Sexually Transmitted Diseases (STD) prevention and treatment in order to promote 'health awareness behaviour' with regard to STD's;
- Develop specific training programmes for professionals, whether initial training or continuing education;
- Motivate pharmacists and pharmaceutical scientists to get involved at national level in the making of public policies related to HIV-control;
- Initiate a dialogue between health professionals, financing bodies and patient associations: such a pooling of talents will ensure the comprehensive care of the greatest number of patients, fully respecting both ethical and cost-effectiveness requirements;
- Participate, together with the relevant health professionals - doctors, nurses, social workers, etc. - in the evaluation of clinical treatment and in the provision and follow-up of treatment;

- Encourage national and international pharmaceutical associations or federations to enter into dialogue with international organizations representing the pharmaceutical industry, in order to identify all possible means permitting an improvement in access to treatment programmes;
- Develop, implement and evaluate activities within national field programmes: e.g. drug substitution programmes, needle and syringe exchange programmes and condom availability;
- Promote and set up interprofessional networks to collect, analyse and disseminate data at both national and international levels;
- Participate in scientific research involving drug trials with a view to ensuring that internationally agreed ethical principles are respected.

Annex 2: Study Questionnaire

Health professionals and pharmaceutical outlets A survey by the FIP (International Pharmaceutical Federation)

Country: «Pays»

Drug selling points

✿ Number of community pharmacies in your country (A):

in (year)

Data from:

your own statistics

Health ministry

Other:

✿ Number of other drug selling points in your country (B):

in (year)

Data from:

your own statistics

Health ministry

Other:

✿ Total number of drug selling points in your country (A+B):

in (year)

Data from:

your own statistics

Health ministry

Other :

Health professionals

✿ Number of pharmacists in your country:

in (year)

Data from:

your own statistics

Health ministry

Other:

☼ Number of medical doctors in your country:

in (year)

Data from:

your own statistics

Health ministry

Other:

☼ Number of dental surgeons in your country:

in (year)

Data from:

your own statistics

Health ministry

Other:

☼ Number of nurses in your country:

in (year)

Data from:

your own statistics

Health ministry

Other:

**Please fill in and return this form by fax to:
+33 1 56 21 35 29**

**The International Pharmaceutical Federation thanks you for your much
appreciated collaboration.**

Annex 3: Raw Data Collected

Data in red: data anterior to 2000

Data in bold and blue: data gathered thanks to our survey (original data)

(*) From our calculation

NA: Non available

	UN Data (general information on countries)					WHO Data	
	Population in 2005	Population in 2003	Urban population in 2003	Percentage of urban population (2003)(*)	Surface (km ²)	% of GIP dedicated to health in 2000 (last data available)	Life expectancy at birth (in years) in 2001
Africa	904 806 000	849 488 000	328 092 000	38,62%	30 075 650		
Northern Africa	190 553 000	183 290 000	90 709 000	49,49%	8 269 000		
Algeria	32 854 000	31 800 000	18 711 000	58,84%	2 384 000	3,6%	69,4
Egypt	74 033 000	71 931 000	30 293 000	42,11%	1 003 000	3,8%	66,5
Libyan Arab Jamahiriya	5 853 000	5 551 000	4 790 000	86,29%	1 762 000	3,3%	70,4
Morocco	31 478 000	30 566 000	17 564 000	57,46%	447 000	4,5%	69,4
Sudan	36 233 000	33 610 000	13 088 000	38,94%	2 509 000	4,7%	55,9
Tunisia	10 102 000	9 832 000	6 263 000	63,70%	164 000	7,0%	71,1
Western Africa	263 631 000	244 376 000	103 161 000	42,21%	6 145 000		
Benin	8 439 000	6 736 000	3 003 000	44,58%	113 000	3,2%	52,1
Burkina Faso	13 228 000	13 002 000	2 313 000	17,79%	274 000	4,2%	42,9
Cape Verde	507 000	463 000	259 000	55,94%	4 000	2,6%	69,5
Côte d'Ivoire	18 154 000	16 631 000	7 464 000	44,88%	323 000	2,7%	45,9
Gambia	1 517 000	1 426 000	372 000	26,09%	11 000	4,1%	58,5
Ghana	22 113 000	20 922 000	9 505 000	45,43%	239 000	4,2%	57,4
Guinea	9 402 000	8 480 000	2 960 000	34,91%	246 000	3,4%	51,9
Guinea-Bissau	1 586 000	1 493 000	507 000	33,96%	36 000	3,9%	47,3
Liberia	3 283 000	3 367 000	1 572 000	46,69%	111 000	4,0%	46,2
Mali	13 518 000	13 007 000	4 195 000	32,25%	1 242 000	4,9%	45,2
Mauritania	3 069 000	2 893 000	1 788 000	61,80%	1 027 000	4,3%	52,0
Niger	13 957 000	11 972 000	2 653 000	22,16%	1 268 000	3,9%	42,5
Nigeria	131 530 000	124 009 000	57 907 000	46,70%	925 000	2,2%	51,6
Senegal	11 658 000	10 095 000	5 008 000	49,61%	197 000	4,6%	55,8
Sierra Leone	5 525 000	4 971 000	1 931 000	38,85%	72 000	4,3%	34,2
Togo	6 145 000	4 909 000	1 724 000	35,12%	57 000	2,8%	51,7
Eastern Africa	286 924 000	269 560 000	69 455 000	25,77%	6 365 650		
Burundi	7 548 000	6 825 000	678 000	9,93%	28 000	3,1%	40,4
Comoros	798 000	768 000	269 000	35,03%	2 200	4,4%	52,9
Djibouti	793 000	703 000	588 000	83,64%	23 000	5,0%	49,3
Eritrea	4 401 000	4 141 000	825 000	19,92%	118 000	4,3%	53,6

	UN Data (general information on countries)					WHO Data	
	Population in 2005	Population in 2003	Urban population in 2003	Percentage of urban population (2003)(*)	Surface (km ²)	% of GIP dedicated to health in 2000 (last data available)	Life expectancy at birth (in years) in 2001
Ethiopia	77 431 000	70 678 000	11 034 000	15,61%	1 106 000	4,6%	48,0
Kenya	34 256 000	31 987 000	12 593 000	39,37%	581 000	4,6%	48,9
Madagascar	18 606 000	17 404 000	4 618 000	26,53%	588 000	3,5%	54,8
Malawi	12 884 000	12 105 000	1 972 000	16,29%	119 000	7,6%	36,3
Mauritius	1 245 000	1 221 000	529 000	43,33%	2 000	3,4%	71,1
Mozambique	19 792 000	18 863 000	6 723 000	35,64%	803 000	4,3%	44,8
Rwanda	9 038 000	8 387 000	1 517 000	18,09%	26 000	5,2%	40,7
Seychelles	81 000	81 000	40 000	49,38%	450	6,2%	71,1
Somalia	8 228 000	9 890 000	3 446 000	34,84%	638 000	1,3%	43,1
Uganda	28 816 000	25 827 000	3 161 000	12,24%	241 000	3,9%	46,4
United Republic of Tanzania	38 329 000	36 977 000	13 100 000	35,43%	946 000	5,9%	46,5
Zambia	11 668 000	10 812 000	3 861 000	35,71%	753 000	5,6%	36,8
Zimbabwe	13 010 000	12 891 000	4 501 000	34,92%	391 000	7,3%	36,8
Middle Africa	109 643 000	100 585 000	36 990 000	36,77%	6 620 000		
Angola	15 941 000	13 625 000	4 863 000	35,69%	1 248 000	3,6%	36,1
Cameroon	16 322 000	16 018 000	8 232 000	51,39%	476 000	4,3%	49,7
Central African Rep.	4 038 000	3 865 000	1 649 000	42,66%	624 000	2,9%	42,7
Chad	9 749 000	8 598 000	2 142 000	24,91%	1 285 000	3,1%	48,6
Congo	3 999 000	3 724 000	1 992 000	53,49%	342 000	2,2%	52,9
Dem. Rep. of the Congo	57 549 000	52 771 000	16 699 000	31,64%	2 348 000	1,5%	43,8
Equatorial Guinea	504 000	494 000	238 000	48,18%	28 000	3,4%	53,7
Gabon	1 384 000	1 329 000	1 114 000	83,82%	268 000	3,0%	59,3
Sao Tome and Principe	157 000	161 000	61 000	37,89%	1 000	2,3%	64,3
Southern Africa	54 055 000	51 677 000	27 777 000	53,75%	2 676 000		
Botswana	1 765 000	1 785 000	920 000	51,54%	582 000	6,0%	39,1
Lesotho	1 795 000	1 802 000	323 000	17,92%	30 000	6,3%	40,0
Namibia	2 031 000	1 987 000	644 000	32,41%	825 000	7,1%	48,8
South Africa	47 432 000	45 026 000	25 637 000	56,94%	1 222 000	8,8%	49,0
Swaziland	1 032 000	1 077 000	253 000	23,49%	17 000	4,2%	40,2

Data ONUSIDA - WHO										
Dead linked to HIV			Adults HIV-infected (15-49 year-old)				HIV-infected people (included children)			
Number	Year of data	Percentage	Year of data	Number	Year of data	Percentage	Year of data	Number	Year of Data	
Africa	2 224 000	end 2003			23 419 600		2,80%		25 312 500	
Northern Africa	24 000	end 2003			427 000		0,23%		447 100	
Algeria			0,10%	end 2003	9 000	end 2003	0,03%	end 2003	9 100	end 2003
Egypt	700	end 2003	0,10%	end 2003	12 000	end 2003	0,02%	end 2003	12 000	end 2003
Libyan Arab Jamahiriya			0,30%	end 2003	10 000	end 2003	0,17%	end 2003	10 000	end 2003
Morocco			0,10%	end 2003	15 000	end 2003	0,05%	end 2003	15 000	end 2003
Sudan	23 000	end 2003	2,30%	end 2003	380 000	end 2003	1,10%	end 2003	400 000	end 2003
Tunisia			0,10%	end 2003	1 000	end 2003	0,01%	end 2003	1 000	end 2003
Western Africa	475 000	end 2003			5 044 200		2,09%		5 508 300	
Benin	5 800	end 2003	1,90%	end 2003	62 000	end 2003	0,81%	end 2003	68 000	end 2003
Burkina Faso	29 000	end 2003	4,20%	end 2003	270 000	end 2003	2,27%	end 2003	300 000	end 2003
Cape Verde										
Côte d'Ivoire	47 000	end 2003	7,00%	end 2003	530 000	end 2003	3,14%	end 2003	570 000	end 2003
Gambia	600	end 2003	1,20%	end 2003	6 300	end 2003	0,45%	end 2003	6 800	end 2003
Ghana	30 000	end 2003	3,10%	end 2003	320 000	end 2003	1,58%	end 2003	350 000	end 2003
Guinea	9 000	end 2003	3,20%	end 2003	130 000	end 2003	1,49%	end 2003	140 000	end 2003
Guinea-Bissau					...					
Liberia	7 200	end 2003	5,90%	end 2003	96 000	end 2003	3,05%	end 2003	100 000	end 2003
Mali	12 000	end 2003	1,90%	end 2003	120 000	end 2003	1,04%	end 2003	140 000	end 2003
Mauritania			0,60%	end 2003	8 900	end 2003	0,31%	end 2003	9 500	end 2003
Niger	4 800	end 2003	1,20%	end 2003	64 000	end 2003	0,50%	end 2003	70 000	end 2003
Nigeria	310 000	end 2003	5,40%	end 2003	3 300 000	end 2003	2,74%	end 2003	3 600 000	end 2003
Senegal	3 500	end 2003	0,80%	end 2003	41 000	end 2003	0,38%	end 2003	44 000	end 2003
Sierra Leone					...					
Togo	10 000	end 2003	4,10%	end 2003	96 000	end 2003	1,79%	end 2003	110 000	end 2003
Eastern Africa	1 025 000	end 2003			9 533 400		3,65%		10 459 100	
Burundi	25 000	end 2003	6,00%	end 2003	220 000	end 2003	3,31%	end 2003	250 000	end 2003
Comoros		end 2003		end 2003	...	end 2003		end 2003		end 2003
Djibouti	690	end 2003	2,90%	end 2003	8 400	end 2003	1,15%	end 2003	9 100	end 2003
Eritrea	6 300	end 2003	2,70%	end 2003	55 000	end 2003	1,36%	end 2003	60 000	end 2003
Ethiopia	120 000	end 2003	4,40%	end 2003	1 400 000	end 2003	1,94%	end 2003	1 500 000	end 2003
Kenya	150 000	end 2003	6,70%	end 2003	1 100 000	end 2003	3,50%	end 2003	1 200 000	end 2003
Madagascar	7 500	end 2003	1,70%	end 2003	130 000	end 2003	0,75%	end 2003	140 000	end 2003
Malawi	84 000	end 2003	14,20%	end 2003	810 000	end 2003	6,99%	end 2003	900 000	end 2003
Mauritius	NA	end 2003	NA	end 2003	NA	end 2003	NA	end 2003	NA	end 2003
Mozambique	110 000	end 2003	12,20%	end 2003	1 200 000	end 2003	6,57%	end 2003	1 300 000	end 2003

Data ONUSIDA - WHO										
Dead linked to HIV		Adults HIV-infected (15-49 year-old)				HIV-infected people (included children)				
Number	Year of data	Percentage	Year of data	Number	Year of data	Percentage	Year of data	Number	Year of Data	
Rwanda	22 000	end 2003	5,10%	end 2003	230 000	end 2003	2,77%	end 2003	250 000	end 2003
Seychelles					...					
Somalia			NA		...					
Uganda	78 000	end 2003	4,10%	end 2003	450 000	end 2003	1,84%	end 2003	530 000	end 2003
United Republic of Tanzania	160 000	end 2003	8,80%	end 2003	1 500 000	end 2003	4,17%	end 2003	1 600 000	end 2003
Zambia	89 000	end 2003	16,50%	end 2003	830 000	end 2003	7,88%	end 2003	920 000	end 2003
Zimbabwe	170 000	end 2003	24,60%	end 2003	1 600 000	end 2003	13,84%	end 2003	1 800 000	end 2003
Middle Africa	225 000	end 2003			2 285 000		2,28%		2 498 000	
Angola	21 000	end 2003	3,90%	end 2003	220 000	end 2003	1,51%	end 2003	240 000	end 2003
Cameroon	49 000	end 2003	6,90%	end 2003	520 000	end 2003	3,43%	end 2003	560 000	end 2003
Central African Rep.	23 000	end 2003	13,50%	end 2003	240 000	end 2003	6,44%	end 2003	260 000	end 2003
Chad	18 000	end 2003	4,80%	end 2003	180 000	end 2003	2,05%	end 2003	200 000	end 2003
Congo	9 700	end 2003	4,90%	end 2003	80 000	end 2003	2,25%	end 2003	90 000	end 2003
Dem. Rep. of the Congo	100 000	end 2003	4,20%	end 2003	1 000 000	end 2003	1,91%	end 2003	1 100 000	end 2003
Equatorial Guinea					...					
Gabon	3 000	end 2003	8,10%	end 2003	45 000	end 2003	3,47%	end 2003	48 000	end 2003
Sao Tome and Principe					...					
Southern Africa	475 000	end 2003			6 130 000		11,84%		6 400 000	
Botswana	33 000	end 2003	37,30%	end 2003	330 000	end 2003	19,83%	end 2003	350 000	end 2003
Lesotho	29 000	end 2003	28,90%	end 2003	300 000	end 2003	17,83%	end 2003	320 000	end 2003
Namibia	16 000	end 2003	21,30%	end 2003	200 000	end 2003	10,34%	end 2003	210 000	end 2003
South Africa	370 000	end 2003	21,50%	end 2003	5 100 000	end 2003	11,17%	end 2003	5 300 000	end 2003
Swaziland	17 000	end 2003	38,80%	end 2003	200 000	end 2003	21,32%	end 2003	220 000	end 2003

	Data UNAIDS - WHO						Data from ReMeD			
	HIV-infected patients needing a treatment		HIV-infected patients who received a treatment		HIV-infected people who need a treatment and who receive it		Number of pharmacists	Number of community pharmacies and their subsidiaries	Number of wholesaler companies	Number of pharmaceutical companies
	Number	Year of data	Number	Year of Data	Number	Year of data				
Africa										
Northern Africa										
Algeria	1 100		NA			NA				
Egypt	2 050		58			2,83%				
Libyan Arab Jamahiriya	NA		100			NA				
Morocco	NA		465			NA				
Sudan	50 000	Dec 2004	400	June 2004		0,80%	Mixte			
Tunisia	500		437			87,40%				
Western Africa										
Benin	11 000		1 635			14,86%	200	360	5	2
Burkina Faso	45 500	Dec 2004	4 446	Mar 2005		9,77%	Dec 2004	250	402	4
Cape Verde	NA		NA			NA		18	37	1
Côte d'Ivoire	84 000	Dec 2004	4 536	Sep 2004		5,40%	Mixte			
Gambia	1 100		150			13,64%				
Ghana	55 000	Dec 2004	1 393	Aug 2004		2,53%	Mixte			
Guinea	18 000	Dec 2004	900	Jan 2005		5,00%	Mixte			
Guinea-Bissau	3 650		NA			NA				
Liberia	13 500		NA			NA				
Mali	20 500		808			3,94%	447	517	16	1
Mauritania	1 050		39			3,71%				
Niger	8 700		NA			NA		245	3	1
Nigeria	558 000		13 579			2,43%				
Senegal	7 850		1 600			20,38%	600	600	3	3
Sierra Leone	9 050		1 000			11,05%				
Togo	17 500		1 500			8,57%		245	7	1
Eastern Africa										
Burundi	40 000	Dec 2004	5 050	Dec 2004		12,63%	Dec 2004	65	93	10
Comoros	NA		200			NA				
Djibouti	1 350	Dec 2004	200	Jan 2005		14,81%	Mixte			
Eritrea	10 500		50			0,48%				
Ethiopia	211 000	Dec 2004	16 400	Apr 2005		7,77%	Mixte			
Kenya	233 831	Jun 2005	38 000	Jun 2005		16,25%	Jun 2005	1650	800	
Madagascar	16 000		NA			NA		262	2156	21
Malawi	140 000	Dec 2004	19 000	May 2005		13,57%	Mixte			
Mauritius	NA		120			NA				
Mozambique	199 000	Dec 2004	10 657	Apr 2005		5,36%	Mixte			

	Data UNAIDS - WHO						Data from ReMeD			
	HIV-infected patients needing a treatment		HIV-infected patients who received a treatment		HIV-infected people who need a treatment and who receive it		Number of pharmacists	Number of community pharmacies and their subsidiaries	Number of wholesaler companies	Number of pharmaceutical companies
	Number	Year of data	Number	Year of Data	Number	Year of data				
Rwanda	39 000	Dec 2004	10 346	Mar 2005	26,53%	Mixte				
Seychelles	NA		43		NA					
Somalia	7 000	Dec 2004	NA		NA					
Uganda	114 000	Dec 2004	63 896	Jun 2005	56,05%	Mixte				
United Republic of Tanzania	263 000	Dec 2004	8 300	Jun 2005	3,16%	Mixte				
Zambia	149 000	Dec 2004	23 000	Mar 2005	15,44%	Mixte				
Zimbabwe	295 000	Dec 2004	15 000	May 2005	5,08%	Mixte				
Middle Africa										
Angola	34 500	Dec 2004	3 000	Aug 2004	8,70%	Mixte				
Cameroon	95 000	Dec 2004	15 000	Mar 2005	15,79%	Mixte	1000	310	18	2
Central African Rep.	40 500	Dec 2004	525	Dec 2004	1,30%	Dec 2004	1000	6000	200	30
Chad	30 000		300		1,00%		45	152	4	1
Congo	14 500		464		3,20%					
Dem. Rep. of the Congo	167 000	Dec 2004	5 327	May 2005	3,19%	Mixte				
Equatorial Guinea	2 700		5		0,19%					
Gabon	6 950		2 000		28,78%		70	65	2	0
Sao Tome and Principe	NA		NA		NA		1	5	0	0
Southern Africa										
Botswana	75 000	Dec 2004	42 000	Mar 2005	56,00%	Mixte				
Lesotho	56 000	Dec 2004	5 000	May 2005	8,93%	Mixte				
Namibia	32 000	Dec 2004	17 000	Jun 2005	53,13%	Mixte				
South Africa	837 000	Dec 2004	104 600	Mar 2005	12,50%	Mixte				
Swaziland	36 500	Dec 2004	8 373	Mar 2005	22,94%	Mixte				

Pharmacists and pharmaceutical outlets												
	Pharmacists			Community pharmacies			Community pharmacies subsidiaries			Community pharmacies and their subsidiaries		
	Number	Year	Source	Number	Year	Source	Number	Year	Source	Number	Source	Year
Africa												
Northern Africa												
Algeria	3624	1995	WHO/EIP/HRH	5576	2004	Mission économique française				5576	Mission économique française	2004
Egypt	64582	2003	WHO EMRO	21000	2004	Mission économique française				21000	Mission économique française	2004
Libyan Arab Jamahiriya	603	2002	WHO EMRO							NA		
Morocco	8000	2005	Ordre des Pharmaciens	7382	2005	Ministry of Health + WHO	97	2005	Ministry of Health	7479	Ministry of Health	2005
Sudan	311	2000	WHO/EIP/HRH							NA		
Tunisia	2050	2002	Ministry of Health	1361	2002	Ministry of Health + WHO				1361	2002	Ministry of Health + WHO
Western Africa												
Benin	173	2004	Ordre National des Pharmaciens	146	2004	Ordre National des Pharmaciens	260	2004	Ordre des Pharmaciens	406	Ordre des Pharmaciens	2004
Burkina Faso	60	2001	WHO/EIP/HRH	121	2001	ReMeD	402	2001	ReMeD	523	ReMeD	2001
Cape Verde	32	2004	Ministry of Health	38	2004	Ministry of Health	19	2004	Ministry of Health	57	Ministry of Health	2004
Côte d'Ivoire				483	2003	Mission économique française	700	2003	Mission économique française	1183	Mission économique française	2003
Gambia	10	2004	WHO - France Embassy	8	2004	WHO - France Embassy	88	2004	WHO - France Embassy	96	WHO - France Embassy	2004
Ghana	1500	2005	Pharmacy Council	1340	2005	Pharmacy Council	9507	2005	Pharmacy Council	10847	Pharmacy Council	2005
Guinea	199	2000	WHO/EIP/HRH							NA		
Guinea-Bissau	12	2005	Ministry of Health	50	2005	Ministry of Health				50	Ministry of Health	2005
Liberia										NA		
Mali	350	2003	Ministry of Health	300	2004	DPM/MS	412	2004	DPM/MS	712	DPM/MS	2004
Mauritania	95	1995	WHO/EIP/HRH							NA		
Niger	90	2005	Ministry of Health	101	2005	Ministry of Health	95	2005	Ministry of Health	196	Ministry of Health	2005

Pharmacists and pharmaceutical outlets												
	Pharmacists			Community pharmacies			Community pharmacies subsidiaries			Community pharmacies and their subsidiaries		
	Number	Year	Source	Number	Year	Source	Number	Year	Source	Number	Source	Year
Nigeria	8000	2005	Pharmacists Council	3500	2005	Pharmacists Council / Mission économique française	0			3500	Pharmacists Council (via Mission économique française)	2005
Senegal	838	2004	Ordre National des Pharmaciens	671	2004	Ordre National des Pharmaciens	864	2004	Ministry of Health	1535	Mixtes	2004
Sierra Leone										NA		
Togo	150	2004	Ministry of Health	131	2004	Ministry of Health	742	2004	Ministry of Health	873	Ministry of Health	2004
Eastern Africa												
Burundi	72	2004	Ministry of Health	126	2004	Ministry of Health	68	2004	Ministry of Health	194	Ministry of Health	2004
Comoros	15	2004	Ministry of Health	11	2004	Ministry of Health	49	2004	Ministry of Health	60	Ministry of Health	2004
Djibouti	12	1999	WHO/EIP/HRH							NA		
Eritrea	120	2004	Ministry of Health	30	2004	Ministry of Health	230	2004	Ministry of Health	260	Ministry of Health	2004
Ethiopia	85	2002	Ministry of Health - DRESS							NA		
Kenya	1881	2003	Mission économique française	800	2003	Mission économique française				800	Mission économique française	2003
Madagascar	254	2004	Ordre des Pharmaciens	204	2004	Ordre des Pharmaciens	2000	2004	Ordre des Pharmaciens	2204	Ordre des Pharmaciens	
Malawi	39	2003	Ministry of Health							NA		
Mauritius	270	2005	Ministry of Health	204	2005	Ministry of Health	28	2005	Ministry of Health	232	Ministry of Health	2005
Mozambique	55	2004	Ministry of Health	208	2004	Ministry of Health	50	2005	Ministry of Health	258	Ministry of Health	Mixte
Rwanda	11	2002	WHO/EIP/HRH							NA		
Seychelles	6	2004	Ministry of Health	19	2004	Ministry of Health	2	2004	Ministry of Health	21		
Somalia	8	2004	WHO/EIP/HRH							NA		
Uganda	125	2002	WHO/EIP/HRH							NA		
United Republic of Tanzania	365	2002	WHO/EIP/HRH							NA		
Zambia	75	1995	WHO/EIP/HRH							NA		
Zimbabwe	585	2004	Pharmacists Council	247	2004	Pharmacists Council				247	Pharmacists Council	2004
Middle Africa												
Angola	24	1997	WHO/EIP/HRH							NA		

Pharmacists and pharmaceutical outlets												
	Pharmacists			Community pharmacies			Community pharmacies subsidiaries			Community pharmacies and their subsidiaries		
	Number	Year	Source	Number	Year	Source	Number	Year	Source	Number	Source	Year
Cameroon	1000	1998	ReMeD	255	2004	Mission économique française				255	Mission économique française	2004
Central African Rep.	30	2004	Ordre des Pharmaciens	18	2004	Ordre des Pharmaciens	135	2001	Ministry of Health	153	Mixtes	Mixte
Chad	47	2005	Ministry of Health	23	2005	Ministry of Health	120	2005	Ministry of Health	143	Ministry of Health	2005
Congo	75	2000	Ministry of Health							NA		
Dem. Rep. of the Congo	907	1996	WHO/EIP/HRH							NA		
Equatorial Guinea	12	2004	Mission économique française	20	2004	Mission économique française				20	Mission économique française	2004
Gabon	120	2004	Ministry of Health	57	2004	Ministry of Health	161	2004	Ministry of Health	218	Ministry of Health	2004
Sao Tome and Principe	2	1996	WHO/EIP/HRH							5	ReMeD	2001
Southern Africa												
Botswana	142	1999	WHO/EIP/HRH							NA		
Lesotho	17	1995	WHO/EIP/HRH							NA		
Namibia	201	2005	South African Pharmacy Council	86	2005	Interim Pharmacy Council of Namibia	35	2005	Interim Pharmacy Council of Namibia	121	Interim Pharmacy Council of Namibia	2005
South Africa	11588	2005	South African Pharmacy Council	2523	2005	South African Pharmacy Council	761	2005	South African Pharmacy Council	3850	South African Pharmacy Council	2005
Swaziland	46	2000	WHO/EIP/HRH							NA		

	Demographics of other health professionals								
	Medical doctors			Dentists			Nurses		
	Number	Year	Source	Number	Year	Source	Number	Year	Source
Africa									
Northern Africa									
Algeria	27585	2000	Ministry of Health	8011	2000	Ministry of Health	83022	1995	WHO/EIP/HRH
Egypt	150718	2003	WHO EMRO	20394	2003	WHO EMRO	180150	2003	WHO EMRO
Libyan Arab Jamahiriya	6635,64	2002	WHO EMRO	494	2002	WHO EMRO	27420	2002	WHO EMRO
Morocco	16307	2005	Ministry of Health	2332	2005	Ministry of Health	26282	2005	Ministry of Health
Sudan	6159,61	2001	WHO Sudan	362	2001	WHO Sudan	28986	2001	WHO Sudan
Tunisia	7964	2002	Ministry of Health	1394	2002	Ministry of Health	29868	2002	WHO EMRO
Western Africa									
Benin	989	2002	Ministry of Health	35	2004	Ordre National des Chirurgiens-dentistes	2376	2002	Ministry of Health
Burkina Faso	490	2001	WHO/EIP/HRH	36	2001	WHO/EIP/HRH	3190	2001	WHO/EIP/HRH
Cape Verde	197	2003	Ministry of Health	2	2004	Estimation du Ministry of Health	420	2003	Ministry of Health
Côte d'Ivoire	1322	1996	WHO/EIP/HRH				4582	1996	WHO/EIP/HRH
Gambia	60	2004	Ministry of Health - France Embassy	7	2004	Ministry of Health - France Embassy	811	2004	Ministry of Health - France Embassy
Ghana	1752	2004	Medical & Dental Council	130	2005	Medical & Dental Council	12647	2003	Health Ministry
Guinea	764	2000	WHO/EIP/HRH	38	2000	WHO/EIP/HRH	3506	2002	WHO/EIP/HRH
Guinea-Bissau	133	2005	Ministry of Health	4	2005	Ministry of Health	740	2005	Ministry of Health
Liberia	55	1997	WHO/EIP/HRH	2	1997	WHO/EIP/HRH	141	1997	WHO/EIP/HRH
Mali	1012	2003	DAF/MS	46	2003	DAF/MS	2378	2003	DAF/MS
Mauritania	317	1995	WHO/EIP/HRH	46	1995	WHO/EIP/HRH	1435	1995	WHO/EIP/HRH
Niger	285	2005	Ministry of Health	14	2005	Ministry of Health	2082	2005	Ministry of Health
Nigeria	34923	2003	Medical & Dental Council	2482	2000	Medical & Dental Council	129000	2005	Mission éco française
Senegal	1018	2004	Ordre des Médecins	135	2004	Ordre des Chirurgiens dentistes	770	2004	Ministry of Health
Sierra Leone	300	1996	WHO/EIP/HRH	16	1996	WHO/EIP/HRH	1355	1996	WHO/EIP/HRH
Togo	296	2004	Ministry of Health	98	2004	Ministry of Health	1058	2004	Ministry of Health
Eastern Africa									
Burundi	115	2004	Ministry of Health	2	2004	Ministry of Health	454	2004	Ministry of Health
Comoros	109	2004	Ministry of Health	15	2004	Ministry of Health	202	2003	Ministry of Health
Djibouti	126,88	2002	WHO EMRO	14	2002	WHO EMRO	634	2002	WHO EMRO
Eritrea	150	2004	Ministry of Health	15	2004	Ministry of Health	1100	2004	Ministry of Health

	Demographics of other health professionals								
	Medical doctors			Dentists			Nurses		
	Number	Year	Source	Number	Year	Source	Number	Year	Source
Ethiopia	1366	2002	Ministry of Health - DRESS	61	2002	Ministry of Health - DRESS	7723	2002	Ministry of Health - DRESS
Kenya	4813	2003	Central Bureau of Statistics	772	2003	Central Bureau of Statistics	40081	1995	Central Bureau of Statistics
Madagascar	4612	2004	Ordre des Médecins	800	2004	Ordre des Chirurgiens-dentistes	2168	2004	Ministry of Health
Malawi	137	2003	Ministry of Health	4	2003	Ministry of Health	607	2003	Ministry of Health
Mauritius	1303	2005	Ministry of Health	170	2005	Ministry of Health	2593	2005	Ministry of Health
Mozambique	791	2003	Ministry of Health	16	2005	Ministry of Health	7114	2005	Ministry of Health
Rwanda	155	2002	WHO/EIP/HRH	4	2002	WHO/EIP/HRH	1735	2002	WHO/EIP/HRH
Seychelles	131	2004	Ministry of Health	22	2004	Ministry of Health	311	2004	Ministry of Health
Somalia	310	1997	WHO EMRO	16	1997	WHO EMRO	1516	1997	WHO EMRO
Uganda	1175	2002	WHO/EIP/HRH	75	2002	WHO/EIP/HRH	8059	2002	Ministry of Health
United Republic of Tanzania	822	2002	WHO/EIP/HRH	216	1995	WHO/EIP/HRH	13292	2000	WHO/EIP/HRH
Zambia	647	1995	WHO/EIP/HRH	122	1995	WHO/EIP/HRH	10598	1995	WHO/EIP/HRH
Zimbabwe	1700	2004	Medical + Dental Council	379	2004	Medical + Dental Council	18500	2004	Nurses Council
Middle Africa									
Angola	881	1997	WHO/EIP/HRH	0	1997	WHO/EIP/HRH	13106	1997	WHO/EIP/HRH
Cameroon	1019	1996	WHO/EIP/HRH	55	1996	WHO/EIP/HRH	5052	1996	WHO/EIP/HRH
Central African Rep.	171	2002	Ministry of Health	7	2002	Ministry of Health	275	2002	Ministry of Health
Chad	324	2005	Ordre des Médecins	12	2005	Ordre des Médecins	1200	2005	Ministry of Health
Congo	540	2000	Ministry of Health				5434	1995	WHO/EIP/HRH
Dem. Rep. of the Congo	3129	1996	WHO/EIP/HRH	499	1996	WHO/EIP/HRH	20046	1996	WHO/EIP/HRH
Equatorial Guinea	155	2004	Mission économique française	3573	2002	WHO/EIP/HRH	162	1996	WHO/EIP/HRH
Gabon	368	2001	French Ministry of Foreign Affairs	13	2004	French Ministry of Foreign Affairs	1554	2001	French Ministry of Foreign Affairs
Sao Tome and Principe	63	1996	WHO/EIP/HRH	7	1996	WHO/EIP/HRH	171	1996	WHO/EIP/HRH
Southern Africa									
Botswana	488	1999	WHO/EIP/HRH	38	1999	WHO/EIP/HRH	4090	1999	WHO/EIP/HRH
Lesotho	91	1995	WHO/EIP/HRH	8	1995	WHO/EIP/HRH	1011	1995	WHO/EIP/HRH
Namibia	516	1997	WHO/EIP/HRH	70	1997	WHO/EIP/HRH	2940	1997	WHO/EIP/HRH
South Africa	32480	2001	Health Professions Council of SA	1558	2001	Health Professions Council of SA	177721	2003	Health Professions Council of SA
Swaziland	184	2000	WHO/EIP/HRH	20	2000	WHO/EIP/HRH	3345	2000	WHO/EIP/HRH