

## Adults mortality pattern as seen in Ado-Ekiti specialist hospital, Ekiti state, Nigeria, 1997 – 2001

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(Received: March 12, 2007; Accepted: April 28, 2007)

### ABSTRACT

This retrospective study was based on the pattern of mortality as recorded for in-patients in the male and female wards of the Ekiti State Specialist Hospital, Ado Ekiti, Ekiti State, Nigeria between 1997 – 2001. The population involved was 370 distributed as 288 (77.8%) males and 82 (22.2%) females. Total number of months was 81 distributed as 59 (72.8%) months for males and 22 (27.2%) months for females. The fatality diseases for males ran thus: tuberculosis 41 (14.2%) > cardiovascular arrest 28 (9.7%)> tetanus 24(8.3%)> congestive cardiac failure 19 (6.6%) > meningitis/typhoid 18(6.3%) and for females: cardiovascular arrest 16 (19.5%) > tuberculosis 13 (15.9%) > diabetes melitus 7 (8.5%)> congestive cardiac failure 6 (7.3%) and malaria / meningitis 4 (4.9%). The age bracket analysed was 11-100years. Diseases causing mortality among the productive ages of men were tuberculosis (11-70years), lung pneumonia (11-70y), congestive cardiac failure (11-70y), meningitis (11-60y), diabetes melitus (11-70y), acquired immune deficiency syndrome (32-45y); for females: tuberculosis (11-70y), diabetes melitus (11-60y), cardiovascular arrest (31-80y), malaria fever (11-40y) and meningitis (11-30y).

**Key words:** Restrospective study, fatality diseases, productive ages.

### INTRODUCTION

The adult mortality: levels, patterns and causes in developing countries had been discussed under the following summaries:

- There are substantially higher rates of adult mortality in developing countries than in industrialized countries with market economies.
- Adult mortality is a matter for health transition, not just for post – transition populations.
- Child and adult mortality can vary independently so that single indicators of mortality, such as the infant mortality rate or life expectancy, are not sufficient to monitor changes in both adult and child mortality.
- In nearly all developing countries, men's

mortality is higher than women's despite the extra risks associated with childbearing and cancers of the cervix and breast; however, avoidable mortality is generally higher for women.

- The pattern of mortality by cause is not a simple function of the overall level of mortality or life expectancy and therefore cannot be estimated or predicted reliably from such information.
- As overall adult mortality rates decline, both the aggregate communicable and aggregate noncommunicable disease mortality rates of adults decline. With very few exceptions (for example, breast cancer), cause-specific adult mortality rates have declined during the past decades in developing countries for which such information is available<sup>1</sup>.

The aim of this report was to collect the patients observed data based on the medical admissions of the males and females at the first Ekiti State specialist Hospital, Ado-Ekiti, Nigeria, analyse them to see the pattern of mortality. Such study might assist the state to know the pattern of mortality and to prevent those things that cause the death of adults.

### METHODS

The subjects whose data were collected were admitted as in-patients in the state Specialist Hospital, Ado Ekiti, Ekiti State, Nigeria. The data collected were for those who did not leave on voluntary discharge.

The period of survey was 1997-2001 for males where 59 months were available for study. At this period 288 mortality population was available for analysis. For the females only two years (2000-2001) were available out of which 22 months were actually covered. At this period 82 mortality population was available for analysis. The age range for both sexes was 11-100 years.

To collect the data, permission was sought for and obtained from the Hospital Management and the data were strictly based on the confidentiality of the patients.

#### To analyse the data, various titles were generated:

- (i) Mortality distribution from tuberculosis (Kochs) and tetanus in males from 1997-2001.
- (ii) Mortality distribution from lung pneumonia and congestive cardiac failure (CCF) in males from 1997 – 2001.
- (iii) Mortality distribution from meningitis and enteric fever (typhoid fever) in males from 1997-2001.
- (iv) Mortality distribution from anaemia and viral hepatitis in males from 1997 –2001.
- (v) Mortality distribution from cardiac arrest / cardiovascular accident and hypertension in males from 1997-2001.
- (vi) Mortality distribution from death under 24 hours admission [not yet diagnosed (NYD) ] and diabetes melitus (DM) in males from

1997-2001.

- (vii) Mortality distribution from malaria fever and asthma in males from 1997-2001.
- (viii) Mortality distribution from other diseases in male patients from 1997-2001.
- (ix) Mortality distribution from tuberculosis (Kochs), diabetes melitus and meningitis in females from 2000-2001.
- (x) Mortality distribution from congestive cardiac failure (CCF), cardiovascular accident (CVA/CA), hypertension and malaria fever in females from 2000 – 2001.
- (xi) Mortality distribution from human immunodeficiency virus (HIV), no cause of death (NCD), septicaemia, hypotension and enteric fever in females from 2000-2001.
- (xii) Mortality distribution from other diseases in female patients from 2000-2001.

The diseases identified that resulted into mortality were 38 in the males and 27 in the females. However each sex group has columns under deaths whose diseases could not be fully diagnosed within 24 hours.

The statistical analysis involved were the calculation of the percentage levels of the major fatality diseases in both sexes<sup>2</sup>. The percentage values depicted the ranks of the major fatality diseases.

### RESULTS

#### 1. Mortality from Kochs and tetanus in males from 1997-2001.

Table 1(a) contains the above stated information. The Table is in three major columns: column one is the age group column of a frequency of 10 years, e.g. 11-20, 21-30, 31-40... The disease columns are under Kochs/PTB/TB and Tetanus with their respective years of 1997-2001. The sub total section under the disease columns depicted the mortality for each year under study whereas the grand total represented the total mortality from that disease from 1997-2001. Under Kochs, the sub total (ST) ranged from 3-14 and grand total (GT) of 40 with one without age assignment making a total of 41. Under tetanus, ST range was 2-9 and GT of 22 and since two had no assigned age, it totaled 24.

**Table 1(a): Mortality from Kochs and tetanus in males from 1997-2001**

Age group (years)	Disease: Kochs/PTB/TB					Disease: Tetanus				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
11-20	-	-	2	-	-	2	-	-	-	-
21-30	2	1	-	3	-	1	1	-	1	-
31-40	1	2	2	1	1	3	-	-	-	2
41-50	-	1	-	6	-	-	-	1	-	1
51-60	-	3	-	2	2	1	-	1	-	-
61-70	-	2	-	2	1	1	-	-	1	1
71-80	-	-	-	-	5	1	2	-	-	1
81-90	-	-	1	-	-	-	-	1	-	-
91-100	-	-	-	-	-	-	-	-	-	-
Sub total	3	9	5	14	9	9	3	3	2	5
Grand total				40				22		

1997: PTB = 2; 1998: PTB = 5; 1998: Tetanus = 2 (no age assigned).

2000: PTB = 5; 2001: PTB = 2; PTB = Pulmonary tuberculosis.

Kochs = 1 (no age assigned).

## 2. Mortality from lung pneumonia and congestive cardiac failure (CCF) in males from 1997 – 2001.

Table 1(b) contains the above information. All the columns in Table 1(a) were repeated but lung pneumonia and CCF occupied the fatality disease

columns. The lung pneumonia column had ST range of 2-4 and GT 10 although there were two other types of pneumonia mortality: chest pneumonia and broncho pneumonia of one fatality each making a total of 12. For CCF the ST was 4-5 and GT 17 but with two without age assigned making a total of 19.

**Table - 1(b): Mortality from lung pneumonia and congestive cardiac failure (CCF) in males from 1997-2001**

Age group (years)	Disease: Lung Pneumonia					Disease: Congestive cardiac failure				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
11-20	1	-	-	-	1	-	-	-	-	-
21-30	-	-	-	-	-	-	1	-	-	-
31-40	1	-	-	1	-	-	1	-	2	1
41-50	-	-	-	-	-	-	1	-	-	-
51-60	-	-	-	1	1	2	-	-	-	1
61-70	2	-	-	-	1	1	-	-	2	2
71-80	-	-	-	-	1	1	1	-	1	-
81-90	-	-	-	-	-	-	-	-	-	-
91-100	-	-	-	-	-	-	-	-	-	-
Sub total	4	-	-	2	4	4	4	-	5	4
Grand total				10				17		

2000: C/pneumonia = 1.

1998:CCF= 2 (no age assigned).

2001:Broncho pneumonia = 1.

### 3. Mortality from meningitis and enteric fever in males from 1997-2001.

Table 1(c) depicts the above information. For meningitis ST range was 2-7 and GT was 17 but there was one without age thereby making a total of 18. The enteric fever column had ST range of 2-7 and GT of 18.

### 4. Mortality from anaemia and viral hepatitis in males from 1997 – 2001.

Table 1 (d) depicts the information above. Anaemia had ST 1 – 1 and GT 2 while viral hepatitis had ST 1-2 and GT 6.

### 5. Mortality from cardiac arrest / cardiovascular accident (CA/CVA) and hypertension [high blood pressure (HBP)] in males from 1997-2001.

Table 1(e) depicts the information. High levels of mortality were recorded here particularly between ages 31-80. The ST was 3-9 and GT was 28 whereas in HBP the ST was 1-3 and GT was 11. The HBP was shown to be a disease of the oldies (41 – 90years).

**Table - 1(c): Mortality from meningitis and enteric (typhoid) fever in males from 1997 - 2001**

Age group (years)	Disease: Meningitis					Disease: Enteric (typhoid) fever				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
11-20	1	-	1	2	1	-	1	2	-	1
21-30	-	-	-	1	-	-	1	-	-	-
31-40	-	1	-	1	1	-	-	-	-	1
41-50	1	-	2	-	-	1	-	-	-	-
51-60	-	1	-	2	-	1	3	-	-	-
61-70	-	1	-	-	-	1	-	-	-	1
71-80	-	-	-	1	-	-	2	-	2	-
81-90	-	-	-	-	-	-	-	-	-	1
91-100	-	-	-	-	-	-	-	-	-	-
Sub total	2	3	3	7	2	3	7	2	2	4
Grand total				17				18		

1998: Meningitis = 1 (no age assigned).

**Table - 1(d): Mortality from anaemia and viral hepatitis in males from 1997- 2001**

Age group (years)	Disease: Anaemia					Disease: Viral hepatitis				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
11-20	-	-	-	-	-	-	-	-	1	-
21-30	-	-	-	-	-	-	-	2	-	-
31-40	1	-	-	-	-	-	-	-	-	-
41-50	-	-	-	-	-	-	-	-	-	1
51-60	-	-	1	-	-	-	1	-	-	-
61-70	-	-	-	-	-	1	-	-	-	-
71-80	-	-	-	-	-	-	-	-	-	-
81-90	-	-	-	-	-	-	-	-	-	-
91-100	-	-	-	-	-	-	-	-	-	-
Sub total	1	-	1	-	-	1	1	2	1	1
Grand total				2				6		

**Table - 1(e): Mortality from cardiac arrest (cardiovascular accident) and hypertension [high blood pressure (HBP)] in males from 1997 -2001**

Age group (years)	Disease: Cardiovascular accident					Disease: High blood pressure (HBP)				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
11-20	-	-	-	-	-	-	-	-	-	-
21-30	-	-	-	-	-	-	-	-	-	-
31-40	-	-	1	1	1	-	-	-	-	-
41-50	2	-	1	-	-	-	-	1	-	-
51-60	1	2	1	2	2	-	1	2	-	-
61-70	1	-	4	1	1	1	-	-	1	-
71-80	1	1	1	1	1	1	-	-	2	1
81-90	-	-	1	-	1	-	-	-	1	-
91-100	-	-	-	-	-	-	-	-	-	-
Sub total	5	3	9	5	6	2	1	3	4	1
Grand total			28					11		

**6. Mortality from death under 24 hours admission [not yet diagnosed (NYD)] and diabetes melitus (DM) in males from 1997 – 2001.**

Table 1(f) depicts the above information. The NYD cut across virtually all the ages except 81-90years with ST range of 4-12 and GT of 33. However, under here some fatality diseases were still recognised showing that some diagnoses were

still made but the patients were not admitted long enough to confirm the diagnoses. The DM ST ranged from 1 – 4 and GT was 13 although since two had no age (s) assigned then the total was 15.

**7. Mortality from malaria fever and asthma in males from 1997-2001.**

Table 1(g) has the information above.

**Table - 1(f): Mortality from death under 24 hours admission [not yet diagnosed (NYD)] and diabetes melitus (DM) in males in 1997 - 2001**

Age group (years)	Disease: Death under 24hrs admission					Disease: Diabetes melitus (DM)				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
11-20	1	1	-	-	-	-	-	1	1	-
21-30	2 <sup>+</sup>	-	-	4	1	-	1 <sup>*</sup>	-	-	1
31-40	-	1	2	1	1	-	-	-	-	-
41-50	-	-	3	-	1	-	-	1	-	1
51-60	1	2	-	-	2	-	1	1 <sup>++</sup>	1	-
61-70	1	1	4	-	-	1	-	-	1	1 <sup>++</sup>
71-80	-	-	2	1	-	-	-	-	-	1
81-90	-	-	-	-	-	-	-	-	-	-
91-100	-	-	1	-	1	-	-	-	-	-
Sub total	4	5	12	6	6	1	2	3	3	4
Grand total				33				13		

\*Stephen Johnson's syndrome.

Death < 24h included:

1. Drug addict in February 2000= 1, age = 21y
2. Glomerulus nephritis in April 2001 = 1, age= 55y

\*Diabetes ketoacidosis.

++[DM] Hypoglycaemia (diabetes insipidus)

- 1999: DM = 2 (no age assigned).
3. G/enteritis in 2001 = 1, 95y.

Table - 1(g): Mortality from malaria and asthma in males from 1997 -2001

Age group (years)	Disease: Malaria fever					Disease: Asthma				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
11-20	-	-	1	-	-	-	-	-	1	-
21-30	-	-	-	-	-	-	-	1	-	-
31-40	-	-	1	1	-	-	-	-	-	-
41-50	-	-	1	-	-	-	-	-	2	1 <sup>+</sup>
51-60	-	-	-	-	-	-	-	-	-	-
61-70	-	1	1	-	-	-	4	-	-	-
71-80	-	-	-	-	1 <sup>+</sup> 1 <sup>++</sup>	-	1	1	1	-
81-90	-	-	-	-	-	-	-	-	-	-
91-100	-	-	-	-	1	-	-	-	-	-
Sub total	-	1	4	1	3	-	5	2	4	1
Grand total			9					12		

<sup>+</sup>Cerebral malaria.

<sup>+</sup>Cardiac asthma.

<sup>++</sup>Hyperglacem malaria.

The malaria fever column had ST range of 1-4 and GT of 9 while the ST range under asthma was 1-5 and GT was 12.

(HIV) and three from liver cirrhosis were recorded here.

#### 8. Mortality from other diseases in male patients from 1997-2001.

Table 1(h) depicts the information above. They were mortalities with low values. However five mortalities from human immunodeficiency virus

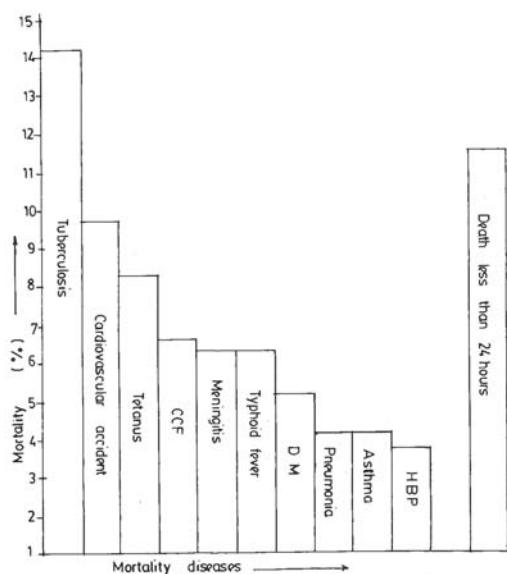


Fig. -1: Mortality diseases among males in 1997-2001.

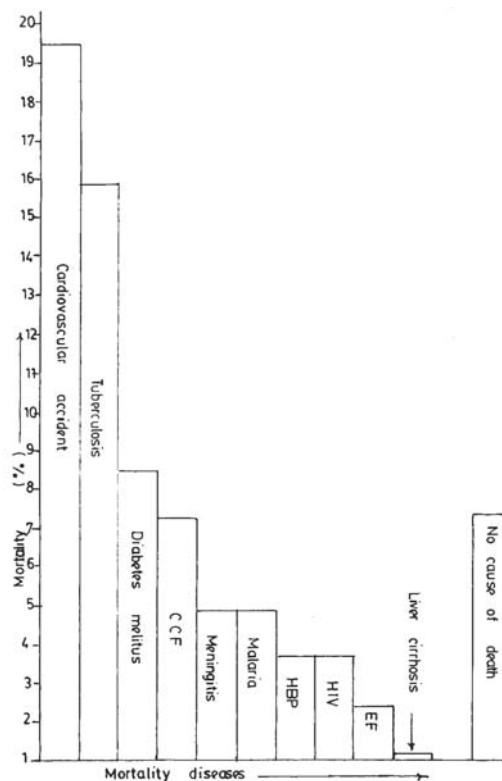


Fig. -2: Mortality diseases among females in 2000-2001.

**Table - 1(h): Mortality from other diseases in male patients from 1997 – 2001**

S. No.	Age	Year	Number	Disease
1.	35	1997	1	Peritonitis
2.	70	1997	1	Acute abdominal pain
3.	25	1997	1	Overwhelming septicaemia
4.	25	1998	1	Salmonellosis
5.	62	1998	1	Pleural effusion
6.	55	1998	1	Intracranial mass
7.	70	1998	1	Acute abdominal pain
8.	27	1998	1	Sickler
9.	16	1998	1	Acute nephritis
10.	45	1998	1	Human immunodeficiency virus (HIV+)
11.	65,24	1999	2	Liver cirrhosis
12.	41	1999	1	HIV+
13.	65	1999	1	Rt clawical
14.	80, 42	1999	2	Gastreteritis
15.	26	1999	1	Acute erosive gastritis
16.	60, 37	1999	2	Diarrhoea and vomiting (D and V)
17.	70	1999	1	Hypovolumic shock
18.	65	1999	1	Paraplegia
19.	45,40,32	2000	3	HIV+
20.	19	2000	1	Sickler
21.	32	2000	1	Jaundice
22.	55, 25	2000	2	Septicaemia
23.	70	2000	1	Liver cirrhosis
24.	27	2000	1	Peptic ulcer disease (PUD)
25.	27	2000	1	Nephrodic syndrome
26.	22	2000	1	Hypovium drug induced psychosis
27.	29	2000	1	Hepatic coma
28.	55	2000	1	Uraemia
29.	35	2000	1	Steven Johnson's Syndrome
30.	58	2001	1	Syn conc
31.	70	2001	1	Nephrodic syndrome
32.	22	2001	1	Gastritis
33.	75	2001	1	HHF
34.	80	2001	1	Pleural effusion

**9. Mortality from tuberculosis, DM and meningitis in females from 2000 – 2001.**

Table 2(a) contains all the above information. Under tuberculosis, ST range was 5-8 and GT was 13. Under DM ST range was 1-6 and GT was 7 and contained various forms of DM. Meningitis had ST range of 2-2 and GT of 4.

**10. Mortality from CCF, CVA/CA, HBP and malaria fever in females in 2000 – 2001.**

Table 2(b) contains the information above. CCF had ST range 2-4 and GT 6; CVA/CA had ST 5-11 and GT 16; HBP had ST 1-2 and GT 3 while malaria fever had ST 1-3 and GT 4 with various forms of malaria fatality involved.

**Table - 2(a): Mortality from tuberculosis, *Diabetes melitus* (DM) and Meningitis in females from 2000 - 2001**

Age group (years)	Tuberculosis		<i>Diabetes mellitus</i>		Meningitis	
	2000	2001	2000	2001	2000	2001
11-20	1	1	-	-	1	1*
21-30	2	1	-	-	-	1*
31-40	-	1	-	-	-	-
41-50	2	1 <sup>+</sup>	1 <sup>+</sup>	-	-	-
51-60	1	1	-	2 <sup>++</sup> + 1+1 <sup>?</sup>	-	-
61-70	2	-	-	1	-	-
71-80	-	-	-	1	1	-
81-90	-	-	-	-	-	-
91-100	-	-	-	-	-	-
Sub total	8	5	1	6	2	2
Grand total	13	7	4			

\*Tuberculosis + HIV+

\*DM and Hyperglycaemia

\*Cerebral malaria R/O meningitis.

\*\*Diabetic ketoacidosis

?Hypoglycaemia anuria

**Table - 2(b): Mortality from congestive cardiac failure (CCF), cardiovascular accident (CA or CA), hypertension and malaria in females in 2000 –2001**

Age group (years)	CCF		CVA		Hypertension		Malaria	
	2000	2001	2000	2001	2000	2001	2000	2001
11-20	-	-	-	-	-	-	1 <sup>0</sup>	-
21-30	-	-	-	-	-	-	1 <sup>?</sup>	-
31-40	2	1 <sup>+</sup>	1	-	-	-	1 <sup>?</sup>	-
41-50	-	-	-	2	1	-	-	-
51-60	-	-	-	1	-	-	-	-
61-70	1	-	2	4+1 <sup>++</sup>	-	-	-	-
71-80	1	-	1	3	-	-	-	1*
81-90	-	-	1	-	1	1	-	-
91-100	-	1	-	-	-	-	-	-
Sub total	4	2	5	11	2	1	3	1
Grand total	6		16		3		4	

\*Valvular heart disorder  
CCF 2<sup>0</sup> to myocardiopathy.

\*\*Hepatic CA.

?Cerebral malaria.

\*Malaria gastroenteritis.

<sup>0</sup>Chloroquine resistant malaria.**11. Mortality from HIV, no cause of death (NCD), septicaemia, hypotension and enteric fever in females from 2000 – 2001.**

Table 2(c) furnishes information on the

above. HIV had ST of 1 – 2 and GT of 3; NCD had ST 2-4 and GT 6; both ST and GT had equal value of one in septicaemia while hypotension had two as the value for both ST and GT.



**Table - 2(c): Mortality from human immunodeficiency virus (HIV), no cause of death (NCD), septicaemia, hypotension and enteric fever in females in 2000 –2001**

Age group (years)	HIV		NCD		Septicaemia		Hypotension	
	2000	2001	2000	2001	2000	2001	2000	2001
11-20	-	-	-	1	1	-	-	-
21-30	1	1	1	-	-	-	1+	-
31-40	-	-	-	-	-	-	-	-
41-50	-	1	-	-	-	-	-	-
51-60	-	-	1	-	-	-	-	-
61-70	-	-	-	-	-	-	-	-
71-80	-	-	2	1	-	-	1	-
81-90	-	-	-	-	-	-	-	-
91-100	-	-	-	-	-	-	-	-
Sub total	1	2	4	2	1	-	2	-
Grand total	3	6	1		2			

+Hypo O

**12. Mortality from other diseases in female patients from 2000 – 2001.**

Table 2(d) shows the above information. Only enteric fever recorded two mortalities here.

**13. Major mortality diseases among males in 1997-2001.**

Figure 1 depicts the above information. Ten major fatality diseases were shown, also shown

along was the NYD mortalities. They ranged from highest down to lowest (except the NYD).

**14. major mortality diseases among females in 2000-2001.**

Figure 2 depicts the information above. Ten major fatality diseases were shown, also shown along was the NCD mortalities. They ranged from highest down to lowest (except the NCD).

**Table - 2(d): Mortality from other diseases in female patients from 2000 – 2001**

S. No.	Age	Year	Number	Disease
1.	45	2000	1	Nephrotic syndrome
2.	80	2000	1	Cardiac asthma
3.	66	2000	1	Unconsciousness
4.	34	2000	1	Peptic ulcer disease (PUD)
5.	100	2000	1	Ruptured nose vessels
6.	28	2000	1	Ectopic pregnancy
7.	70	2001	1	Infective hepatitis
8.	25, 50	2001	2	Enteric fever
9.	40	2001	1	Tetanus
10.	74	2001	1	Haematemesis, peptic ulcer
11.	68	2001	1	Liver cirrhosis
12.	70	2001	1	Accidental fall
13.	75	2001	1	Stroke in evolution with malaria fever (mf)
14.	100	2001	1	Hemoplagia
15.	30	2001	1	Drug intoxication (DI)
16.	65	2001	1	Simple goitre /Heart failure
17.	72	2001	1	Food poison

## DISCUSSION

Table 1(a) has the mortality pattern from various forms of tuberculosis. It was reported for ages 11-90years but being more prevalent in ages 11-70 years where it formed about 85% of the current report for the males. Year 2000 again carried a lion share of 14/40 or 35% of the population. The Table also shows that pulmonary tuberculosis was high and occurred in all the years except 1999 and with a cumulative population of 14 or 35%. In Nigeria, it is estimated that there are about 100,000 new sputum positive cases each year, given that the estimated risk of infection of TB in Nigeria is approximately 2%. About 200,000 cases of all types of tuberculosis occur annually<sup>3</sup>. It ranked number one among the male mortalities with a value of overall 14.33%, Figure 1. However TB ranked number two in female mortality although with a higher percentage (15.85%) (Fig.2) showing mortality occurred in males than in females; this agreed with earlier estimates<sup>3</sup>. TB might be with us for a long time to come because we live in rural areas where housing is poor, rooms are mostly congested and feeding is also poor; transmission occurs generally indoors. *Mycobacterium tuberculosis* survive in dark and damp areas for several hours<sup>3</sup>. Table 1(a) also contains the report on tetanus. It occurred between the ages 11-90years. It is in position number 3 in the mortality level with a percentage of 8.3%. Tetanus is known to be a serious morbidity and mortality problem of the infant (0-7years) in Nigeria where 33/40 or 82.5% were within 0-1year olds and 7/40 or 17.5% were in 2-5 and 12-13years range in infant morbidity<sup>4</sup> and 33.3% in the ages 2-7 years for the mortality (Adeyeye, E. I. unpublished report, 2007). The occupation of the patients was not stated to see whether the victims were farmers or peasants who when injured often cover fresh wounds with soil or dirty linen where the bacterium could easily be transferred. Only one victim was reported for tetanus mortality in females.

Table 1(b) shows a mortality population of 10 for the males but none recorded for the female [Tables 2(a) – 2(d)] for lung pneumonia. Only three years recorded mortality due to any form of pneumonia (1997, 2000, 2001) sharing the same position of number 8 with asthma and a percentage

value of 4.2%. Adeyeye *et al*<sup>5</sup>. however had shown that both sexes followed similar mortality pattern of pneumonia disease particularly in the dry seasons; however may be death did not occur in the female sex. Broncho pneumonia is an inflammatory condition affecting the lungs and bronchi simultaneously. Congestive cardiac failure (CCF) is also shown in Table 1(b) for males and Table 2(b) in the females. While it formed 6.6% and position 4 in males (Fig.1), it also formed 7.3% and 4<sup>th</sup> position in the females (Fig. 2). The population was 17 (males) and 6 (females). Affected ages in males were 21 – 80 years and 31-100 years in the females. Risk factors for CCF include obesity, HBP and high blood cholesterol, all these could be managed by living a healthy life-style.

Table 1(c) depicts mortality from meningitis for males and Table 2(a) for females. Population recorded in males was 18 and 4 in females. It occupied position 5 (6.3%) (Fig.1) in males and position 5 (4.9%) (Fig. 2) in the females. Meningitis is known to be stoppable by vaccination<sup>6</sup>. Enteric or typhoid fever results are shown in Table 1(c) for males and Table 2(d) in the females. It shared number 5 position with 6.3% (Fig.1) for males and number 9 with 2.4% (Fig.2) for the females. Population was 18 in males and 2 in females. This disease occurs where the sanitation is poor and water supplies are contaminated. *T. carriers* discharge the organisms in the faeces in the open where it is easily carried about.

Table 1(d) shows that anaemia was only found in the males with a population of 2 (0.6%). This could not be said to be a serious problem in the adults. Table 1(d) also shows that six males died from viral hepatitis in the years under review. Death occurred in the ages 11-70 years. Hepatitis generally is an inflammation of the liver.

Table 1(e) shows that cardiac arrest / cardiovascular accident (CA / CVA) had a mortality population of 28 in males as well as in position 2 or 9.7% (Fig.1). In females the mortality population was 16 and in first position or 19.5% (Fig.2). The affected ages in males were 31-90 years and also 31-90 years in the females. While it was predominant in ages 51-80 (20/28 or 71.4%) in males, it was 11/16 or 68.8% in the females within the same age

bracket. CVA or stroke is a popular term for apoplexy resulting from a vascular accident in the brain. Risk factors are as enumerated for CCF. Table 1(e) also contains the values for high blood pressure (HBP) for males with a population of 11 with position 10 and 3.8% (Fig.1). Only 3 was recorded in females [Table 2(b)] but in position 7 and 3.7% (Fig.2). It is very imperative that we should watch our diet and generally our life-style which are the major driving forces for this disease occurrence and mortality.

Table 1(f) contains the mortality due to deaths in less than 24 hours admission where 33 were recorded for males with a "technical position of second" and 11.5%. Six of such was recorded for the females [Table 2(c)] and "technical 4<sup>th</sup> position" and 7.3% (Fig. 2). In the males some diseases were still diagnosed [Table 1(f)] showing that it might be that the diagnoses were not actually confirmed before death. The likely reasons for these could be that some of the patients were late in being brought to the hospital since some of us are still very much involved in self medication or lack of fund to go to the hospital until it might be too late.

Table 1(f) contains the mortality due to diabetes melitus where 13 was recorded for males with position 7 and 5.2% (Fig.1). In females the population was 7 [Table 2(a)], position 3 and 8.5% (Fig. 2). It is supposed to be a rare disease<sup>5</sup>. Ages affected were 11-80 (males) and 41-80 (females). Various DM were observed both for the males and the females [Tables 1(f) and 2(a) respectively]. Hypoglycaemia anuria is loss of urine [Table 2(a)]. Avoidance is through proper regulated diet, maintenance of patient nutrition, keeping the blood sugar level normal by injections of insulin<sup>7</sup>.

Mortality from malaria fever is shown for males in Table 1(g) with a population of 9 with a percentage of 3.1%; whereas in females, the population was 4 [Table 2(b)] with 4.9% and position of number 6 in the females (Fig. 2). Virtually all ages were covered in the males but mostly 11-40 years in the females being the productive ages of this group. The causative mosquitoes breed in stagnant water: our behaviour would have created a lot of opportunities for them since we throw empty cans and 'pure water' sachets indiscriminately where they provide breeding spaces for the mosquitoes. This

is a preventable mortality disease.

Table 1(g) contains a population of 12 for asthma in males with a position of number 9 and 4.2% (Fig.1). Only one was reported for the females [Table 2 (d)]. Bronchial asthma occurs at all ages, but predominantly in early life<sup>8</sup>. Looking at this report 9/12 or 75.0% were in the age bracket of 11-70years. Transmission is known to occur in congested rooms and hence should always be avoided to eliminate easy transmission.

Table 1(h) had five mortality results for human immunodeficiency virus (HIV) for males and 3 for females [Table 2(c)] all within the productive ages of 11-50 years. It formed the 8<sup>th</sup> position in the females with 3.7% (Fig. 2) but formed 1.7% in the males. From here it is shown that the morbidity was higher in the females than in the males as also confirmed in the mortality report from the same hospital<sup>5</sup>. HIV was established as the etiologic agent of AIDS. The HIV infection appears to ultimately result in the almost total collapse of the body's cell – mediated immune system, leaving the patient susceptible to malignancies and opportunistic infections against which the body is unable to defend itself<sup>9</sup>.

Of interest again is the mortality due to liver cirrhosis in both sexes [2 in males, Table 1(h) and one in female, Table 2 (d)]. Cirrhotic liver is due to fibrotic changes which occur in the liver as the result of chronic inflammation. Cirrhosis is a degenerative change which can occur in any organ, but especially in the liver, caused by various poisons bacterial or otherwise<sup>7</sup>. Cirrhosis is known to affect the liver as a result of chronic alcoholism and nutritional deficiency.

Adult health problems that are not caused by tropical diseases include the following: cancers, cardiovascular diseases, chronic obstructive lung disease, diabetes, injuries, sexually transmitted diseases (including AIDS), tuberculosis. For some of these health problems, especially tuberculosis, the epidemiology is well known and agencies have had considerable experience in case management and prevention. For others, such as injuries, little is known about their epidemiology and many developing countries have to initiate specific

preventive measures. In general, the health problems of adults in developing countries are not understood well. Knowledge of the levels, causes, distribution, and determinants of sickness and death among adults is extremely deficient compared with

the detailed information available for children. In many poorer countries even the overall level of adult mortality is not known with any certainty<sup>1</sup>. In order to reduce this vacuum of information, this type of study had been carried out.

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