THE W. MONTAGUE COBB

HUMAN SKELETAL COLLECTION

AND

BIOLOGICAL ANTHROPOLOGY LABORATORY

AT

HOWARD UNIVERSITY

Special Report and Announcement
On the Occasion of the Opening Ceremony
In Conjunction with the Annual Meeting of
The American Anthropological Association
The 15th of November, 1995

This Project is Sponsored by the Generous Support of the
Anthropology Program, National Science Foundation
(Systematic Collections Grant #SRB-92090370)
and
The Division of Academic Affairs, Howard University

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Acknowledgements

The W. Montague Cobb Collection Curatorial Project owes a deep and abiding debt of gratitude to all of project contributors listed below, who brought about the fruition of the project to which Professor Cobb devoted 32 years of his life. Meaningful, however, by its favorable comparison with the dedicated work of all contributors, are the extraordinary contributions of the Project's research assistants. These undergraduate and graduate students inventoried and cleaned human remains whose conditions were often so aversive to normal human sensibilities, that only persons with the greatest dedication to the advancement of Howard University and anthropological science could have endured, to see our project through to completion. An asterisk is placed by the names of those research assistants who participated in the restoration of the Cobb Collection for a period of nearly one year or more. Thanks go as well to the many medical students and technicians of the Department of Anatomy whose work created a collection of inestimable value.

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Introduction

The W. Montague Cobb Human Skeletal Collection constitutes one of the world's largest systematic collections of documented human skeletons. As such, this collection contributes to the available means by which the biology of Homo sapiens is to be better understood. The Cobb Collection is suitable for studies of the skeletal effects of human growth, development, aging, variation, and pathology. It serves as a reference collection for the development of standard methods for age, sex, and population determinations. As an archive of biological and health characteristics of the poor during the historical period extending from the mid-19th Century until 1969, these records and skeletons are amenable to research concerning the physical quality of life that resulted from economic poverty in the Eastern United States.

This report details the background, composition, facilities, and policies of the Cobb Collection. We are pleased to announce, herein, the Cobb Collection's availability for study by both student and professional scholars.

Background

William Montague Cobb, the pre-eminent anatomist and physical anthropologist (Rankin-Hill and Blakey, 1994), made the collection between 1932 and 1969 as a project of the Laboratory of Anatomy and Physical Anthropology in the Department of Anatomy, Howard University College of Medicine (Cobb, 1936). Cobb, his staff and students, painstakingly dissected, documented and macerated the cadavers dissected in the laboratory. The collection's development ceased during the year Montague Cobb left the chairmanship of the Department of Anatomy, retiring four years later. During the decade that followed, such collections seemed to have become more central to anthropological research than to anatomical studies. By 1984, Dr. Michael Blakey and Dr. Cobb began discussing the possibility of restoring the as-yet-under-utilized collection, and rehousing it in conjunction with the University's anthropology program. In 1985, some of the needed laboratory space was allocated for that purpose by then Vice President for Academic Affairs, Dr. Michael R. Winston, and computer equipment was provided a year later by the Graduate School of Arts and Sciences. This, Biological Anthropology Laboratory, began with three rooms of Frederick Douglass Memorial Hall as a small, yet promising offspring of the Laboratory of Anatomy and Physical Anthropology established by Montague Cobb in 1932.

With the aid of Dr. Cobb, Dr. Raymond Hayes, and Dr. S. Tassier Hussain of the Anatomy Department, the collection was placed under Blakey's curatorship, and an initial sample of 190 skeletons were acquired by the Department of Sociology and Anthropology in 1987. Dr. Lesley Rankin-Hill of the University of Oklahoma, and Dr. Theresa Singleton and Dr. Donald J. Ortner, both of the National Museum of Natural History, Smithsonian Institution, would also play important consultative roles for curatorial projects over the coming years.

The first phase of curation was completed in 1988 under a grant from the Howard University Division of Academic Affairs. The size and composition of the collection was then approximated and the major problems for curation were identified. A computer database was created of the nearly 1000 cadaver records and 189 human skeletons and 1 juvenile chimpanzee skeleton that were transferred to the new Biological Anthropology Laboratory. The majority of skeletons (approximately 500) remained in an insecure and environmentally compromised basement of the Numa P. G. Adams Building of the College of Medicine. Problems of fungal growth, incomplete decreasing, inadequate cabinetry, security, and research accessibility were found to have plagued the collection. These facts notwithstanding, the Cobb Collection was shown to have scientific value.

The second and major phase of curation was completed under a $177,000 grant of the Anthropology Program of the National Science Foundation between 1992 and 1994. An additional, 1,085 square foot laboratory space was then allocated to the Biological Anthropology Laboratory by Dr. Joyce A. Ladner, then Vice President for Academic Affairs, along with a budget for renovation. That project entailed transporting the entire remainder of the collection to the Biological Anthropology Laboratory, decreasing and cleaning, labelling, fumigation, inventory of all

skeletal elements, curation in adequate cabinetry, expanding and upgrading the computer database, a detailed study of the collection's composition, and the publication of a report and announcement. These tasks were completed by virtue of the dedicated and skilled work of more than 30 University students and staff.

By 1993 the laboratory facility was again expanded and extensively renovated by the University's Office of Physical Facilities Management, in order to accommodate the Cobb Collection and other bioanthropological projects, prominently including the New York African Burial Ground bioarchaeological project funded by the United States General Services Administration. Today, the W. Montague Cobb Biological Anthropology Laboratory or **The Cobb Laboratory** emerges as a state-of-art research facility, housing an important permanent collection that has come to light only after more than 60 years of dedicated work.

Laboratory Facility

Space:

The Cobb Laboratory is situated on the second floor (rooms 230-237) of Frederick Douglass Memorial Hall, a Georgian-style brick building in the heart of the University's main campus. The building was renovated and restored in 1993-1994, when the laboratory wing was redesigned, combining the functional requirements of a research and teaching facility with architectural esthetics.

There are 2,829 square feet of research and storage space in addition to its office and computer work space. Laboratory research space is arranged as three rooms: a large Teaching Laboratory (1,085 sq. ft.), and a large (594 sq. ft.) and small (286 sq. ft.) Research Laboratories. Dedicated storage space comprises 864 sq. ft. that includes a hallway and a high security room. Each research area is fitted with a sink and bench space.

Environment and Safety:

The Cobb Laboratory is protected by an electronic security system, wired to both the University's Security Division and American Security and Communications, a private firm. The building is equipped with a fire alarm and sprinkler system, and is accessible to the handicapped.

A central air conditioning system maintains a laboratory environment of 70 degrees Fahrenheit and 50% relative humidity, monitored daily, providing optimal conditions for preservation and use.

Ceiling lighting has been installed to the specifications of skeletal biologists, in addition to the ample ambient light from the large windows opening on all four sides of **The Cobb Laboratory** building wing.

Equipment:

The Cobb Laboratory is fitted with the basic equipment for modern skeletal biological research. Laboratory equipment may not be accessible to visiting researchers when dedicated to other intramural and extramural projects. Specific arrangements for equipment use must be assessed with each application for use of the collection. Every effort will be made to accommodate those needs. Our laboratory is equipped with the following:

Benches, sinks, and layout tables
Ladders and carts
Fume hood
Clean bench
Faxitron x-ray machine for Polaroid and standard radiographs
Photographic studio
Computer bank
Most standard mechanical and digital calipers
Osteometric boards
Casting facility
Binocular microscope and magnifier lamps and visors
Photocopy, facsimile, scanner, and color printing machines

The Collection

Curation:

The Cobb Collection is housed in new Interior Steel #220 museum storage cabinets. Air tight cabinet doors allow our periodic use of fumigants (moth crystals) to minimize problems of infestation while maintaining a nearly odor-free environment.

Individual skeletons are stored one to a drawer. Each drawer contains three acid-free trays, separately containing the skull, long bones, and all other skeletal elements. Bones of the hands and feet are contained in separate ventilated plastic bags. By segmenting each drawer in this way, researchers need not remove an entire skeleton in order to conduct specialized studies. A sample of hands and feet has been sided in order to facilitate specialized research involving the extremities. Samples of soft tissue discovered during the cleaning process have been retained for any specialized studies (such as molecular genetics research) that might require them.

The entire collection is labelled and the surfaces of all bones have been cleaned with ethanol or peroxide so that they can be handled easily and safely. Original documents are contained within acid-free folders.

Documentation and Skeletal Inventory:

The following describes the composition of the two main components of the Cobb Collection; its documentation and skeletons. There are currently fewer skeletons than documents of dissected cadavers. The total documentary data are described, below, inasmuch as these documents can also stand alone as a useful anatomical, demographic, and epidemiological database.

Of the skeletons available for study (referred to as skeletal inventory) the following describes 634 individual skeletons of known sex that resulted after those having documentary inconsistencies were culled, to remove errors of mixing and ambiguous documentation. Some individual's documentation utilized alpha-numerical identification (accession numbers 9-a and 9-b, as examples), while skeletons are labelled numerically, only (or 9 in this case). Until such discrepancies are corrected, researchers cannot be assured of an accurate match between documentary and skeletal data among those individuals. Thus, only the inventoried skeletal database comprising individuals without such discrepancies (634 individuals) are described, below, as available for study.

Much of the value of the Cobb Collection derives from the quality of its documentation, and it is this documentation, above all else, that makes the collection rare. Documents exist for 982 individuals. The documents may be used in conjunction with skeletal studies, but also comprise a free-standing database for demographic and epidemiological research concerning the poor, primarily

from the Washington Metropolitan Area and nearby states (based on place of death). Documentary data are available on Microsoft Access, Dbase III+, and hard copy files. The following gives frequencies for ethnic affiliation and sex individuals for whom there is documentation:

Ethnicity (indicated as "race") is documented for 965 individuals.

African American	(n=805)
Euro-American	(n=155)
Chinese	(n=4)
"Indian"	(n=1)
Unknown	(n=17)

Sex is documented for 971 individuals.

Male	(n=684)
Female	(n=287)

Figure 1, shows the sex distribution of documents and inventoried skeletons available for study.

Ages at death range from 17 to 106 years. The age distribution of documented individuals is shown in figure 2, and the age distribution of available skeletons is shown in figure 3. These age distributions are normal, with some skewing at 60 to 70 years of age. Decade and mid-decade frequency spiking suggests, as in other documented collections, bias introduced by the coroner's age estimates. Many individuals show "stated age" as well.

Occupations are recorded for 95 individuals, nearly all of which were recorded during the decade of the 1930s. The documented and inventoried data are the same in this respect. Of these, 48 men and 21 women were laborers and domestic workers, respectively. Studies of the biological effects of poverty and/or of these particular unskilled labor groups are most relevant to the Cobb Collection.

Somatic data (using the anthropometric instrument of R. Martin's *Lehrbuch der Anthropologie* (1913) with 11 indices and 132 measurements) were taken on 94 cadavers. These data are available on hard copy files, and an English translation of the blank instrument is available at **The Cobb Laboratory.**

Causes of death are recorded for 790 individuals and 27 records contain recent medical histories and diagnoses. Pathologies present at the time of death that were not considered the primary causes of death are recorded. Frequency distributions of primary causes of death are shown for the documentation database (figure 4) and inventoried skeletons (figure 5). A key to the 3-

d. education and the broadest dissemination of knowledge.

2. Priority use of the Cobb Collection pertains to,

a. Howard University scholars and students,

b. all credible scholars, nationally and internationally, whose research is consistent with one or more aspects of our founding legacy.

3. All use of skeletal material must take place in the **The Cobb Laboratory** facility, in an atmosphere of respect for the individuals under study and the lasting integrity of the collection.

4. A copy of raw data and an initial report (or reprint) based on Cobb Collection research is to be provided to **The Cobb Laboratory** upon initial publication.

5. All published material utilizing data derived from the Cobb Collection must acknowledge "The W. Montague Cobb Human Skeletal Collection, Howard University."

6. Requests by next-of-kin seeking to inter or cremate individuals comprising The Cobb Collection, will be honored.

Address

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20059

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References Cited

Cobb, W. Montague. 1936 The Laboratory of Anatomy and Physical Anthropology of Howard University. Washington, DC: W. M. Cobb.

Rankin-Hill, Lesley M. And Michael L. Blakey. *W. Montague Cobb (1904-1990): Physical Anthropologist, Anatomist, and Activist*. American Anthropologist Vol. 96, No. 1, March 1994.

Figure # 1

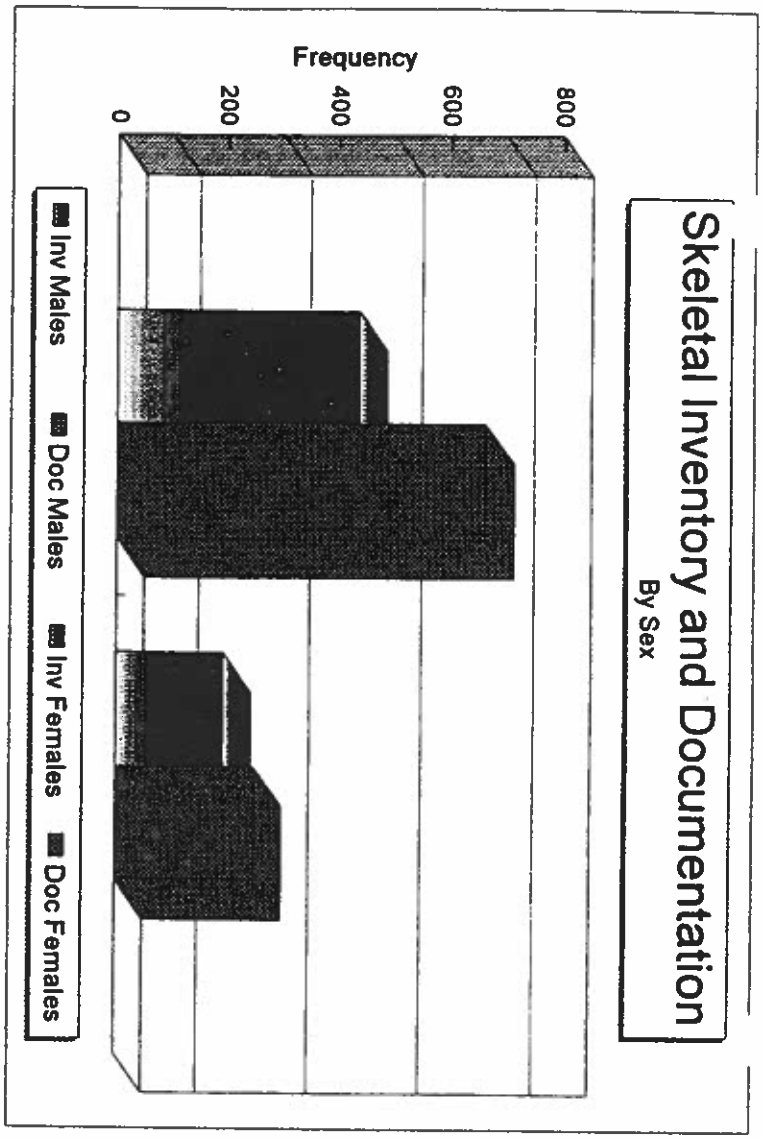

Skeletal Inventory and Documentation
By Sex
Frequency
0
200
400
600
800
Inv Males
Doc Males
Inv Females
Doc Females

Figure # 2

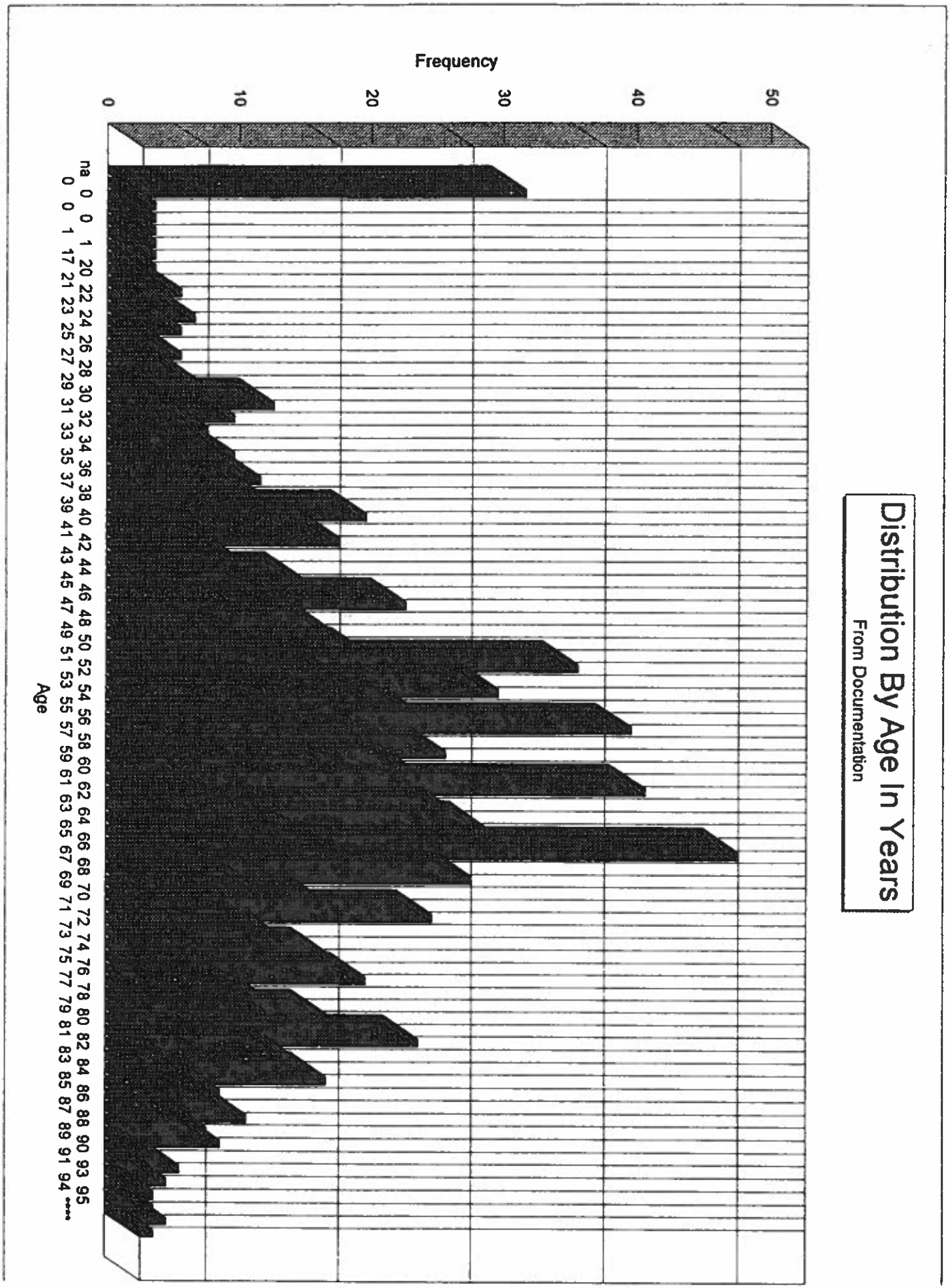
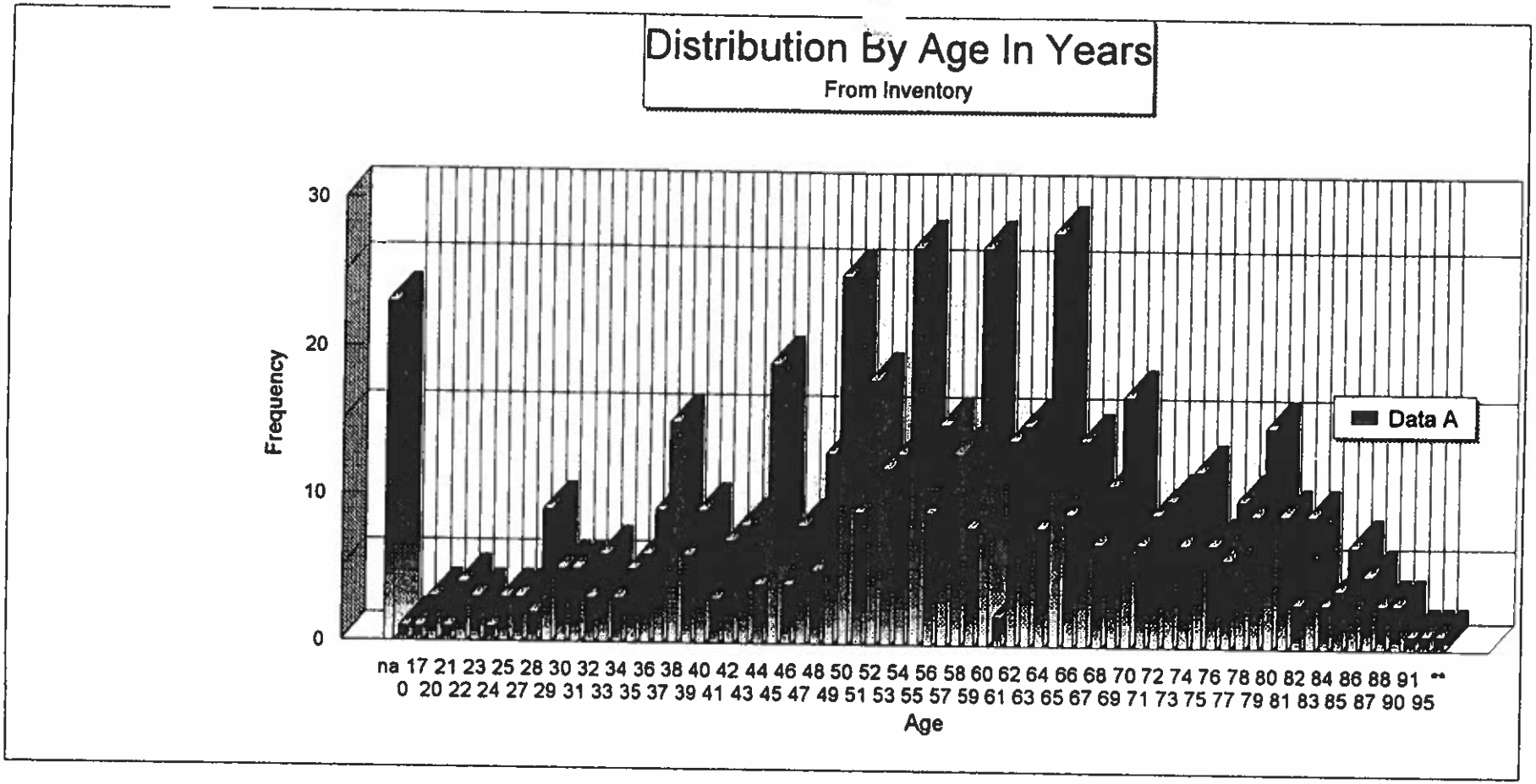
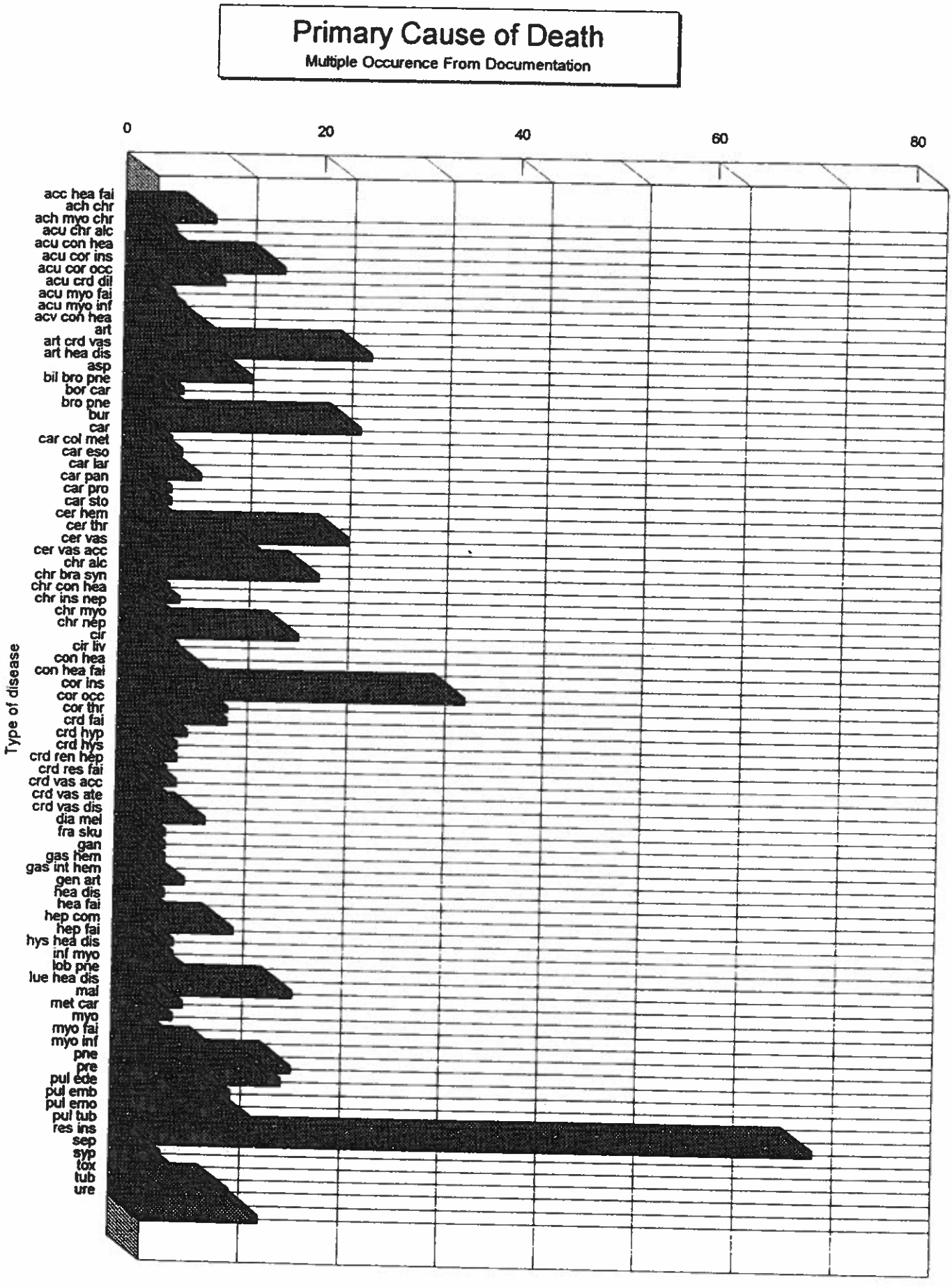

Distribution By Age In Years
From Documentation
Frequency
0
10
20
30
40
50
na 0 0 1 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 93 95
0 0 1 17 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 94 ***
Age

Figure # 3


Distribution By Age In Years
From Inventory
Frequency
30
20
10
0
Data A
na 17 21 23 25 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 91 **
0 20 22 24 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 90 95
Age


Primary Cause of Death
Multiple Occurence From Documentation
0
20
40
60
80
Type of disease
acc hea fai
ach chr
ach myo chr
acu chr alc
acu con hea
acu cor ins
acu cor occ
acu crd dil
acu myo fai
acu myo inf
acv con hea
art
art crd vas
art hea dis
asp
bil bro pne
bor car
bro pne
bur
car
car col met
car eso
car lar
car pan
car pro
car sto
cer hem
cer thr
cer vas
cer vas acc
chr alc
chr bra syn
chr con hea
chr ins nep
chr myo
chr nep
cir
cir liv
con hea
con hea fai
cor ins
cor occ
cor thr
crd fai
crd hyp
crd hys
crd ren hep
crd res fai
crd vas acc
crd vas ate
crd vas dis
dia mel
fra sku
gan
gas hem
gas int hem
gen art
hea dis
hea fai
hep com
hep fai
hys hea dis
inf myo
lob pne
lue hea dis
mal
met car
myo
myo fai
myo inf
pne
pre
pul ede
pul emb
pul emo
pul tub
res ins
sep
syp
tox
tub
ure

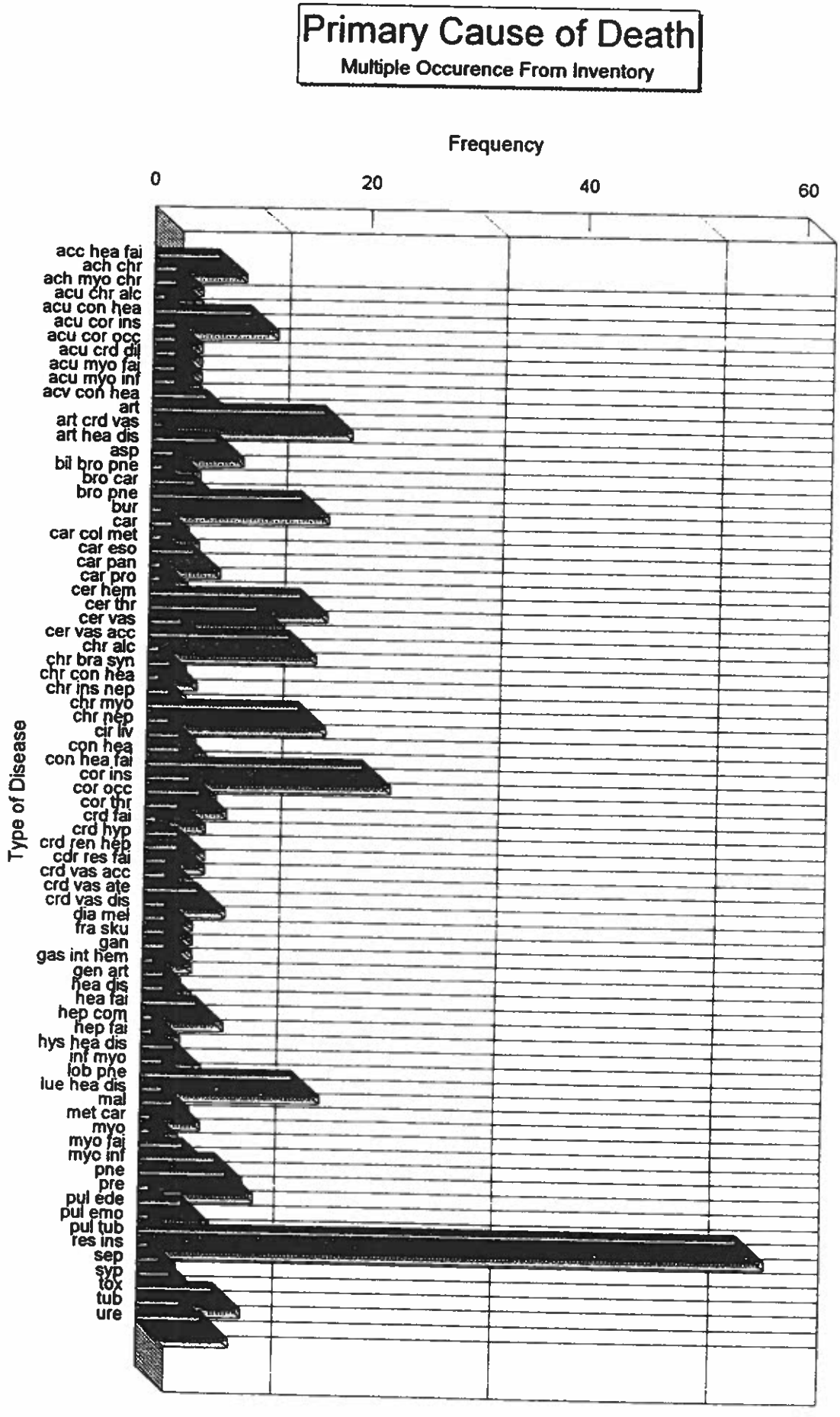

Primary Cause of Death
Multiple Occurence From Inventory
Frequency
0
20
40
60
Type of Disease
acc hea fai
ach chr
ach myo chr
acu chr alc
acu con hea
acu cor ins
acu cor occ
acu crd dil
acu myo fai
acu myo inf
acv con hea
art
art crd vas
art hea dis
asp
bil bro pne
bro car
bro pne
bur
car
car col met
car eso
car pan
car pro
cer hem
cer thr
cer vas
cer vas acc
chr alc
chr bra syn
chr con hea
chr ins nep
chr myo
chr nep
cir liv
con hea
con hea fai
cor ins
cor occ
cor thr
crd fai
crd hyp
crd ren hep
cdr res fai
crd vas acc
crd vas ate
crd vas dis
dia mel
fra sku
gan
gas int hem
gen art
hea dis
hea fai
hep com
hep fai
hys hea dis
inf myo
lob pne
lue hea dis
mal
met car
myo
myo fai
myo inf
pne
pre
pul ede
pul emo
pul tub
res ins
sep
syp
tox
tub
ure

Figure # 6

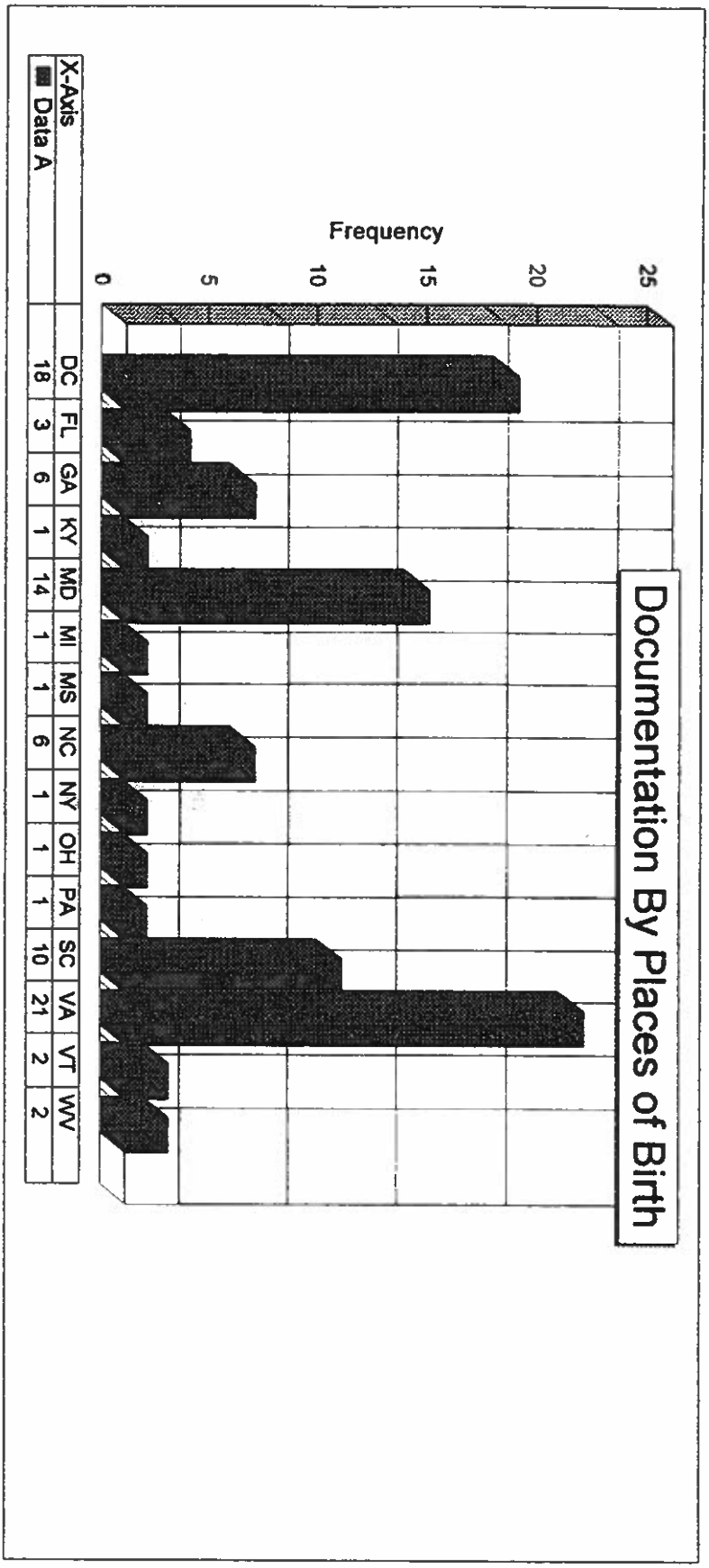

Documentation By Places of Birth
Frequency
0
5
10
15
20
25
X-Axis
Data A
DC 18
FL 3
GA 6
KY 1
MD 14
MI 1
MS 1
NC 6
NY 1
OH 1
PA 1
SC 10
VA 21
VT 2
WV 2

Figure # 7

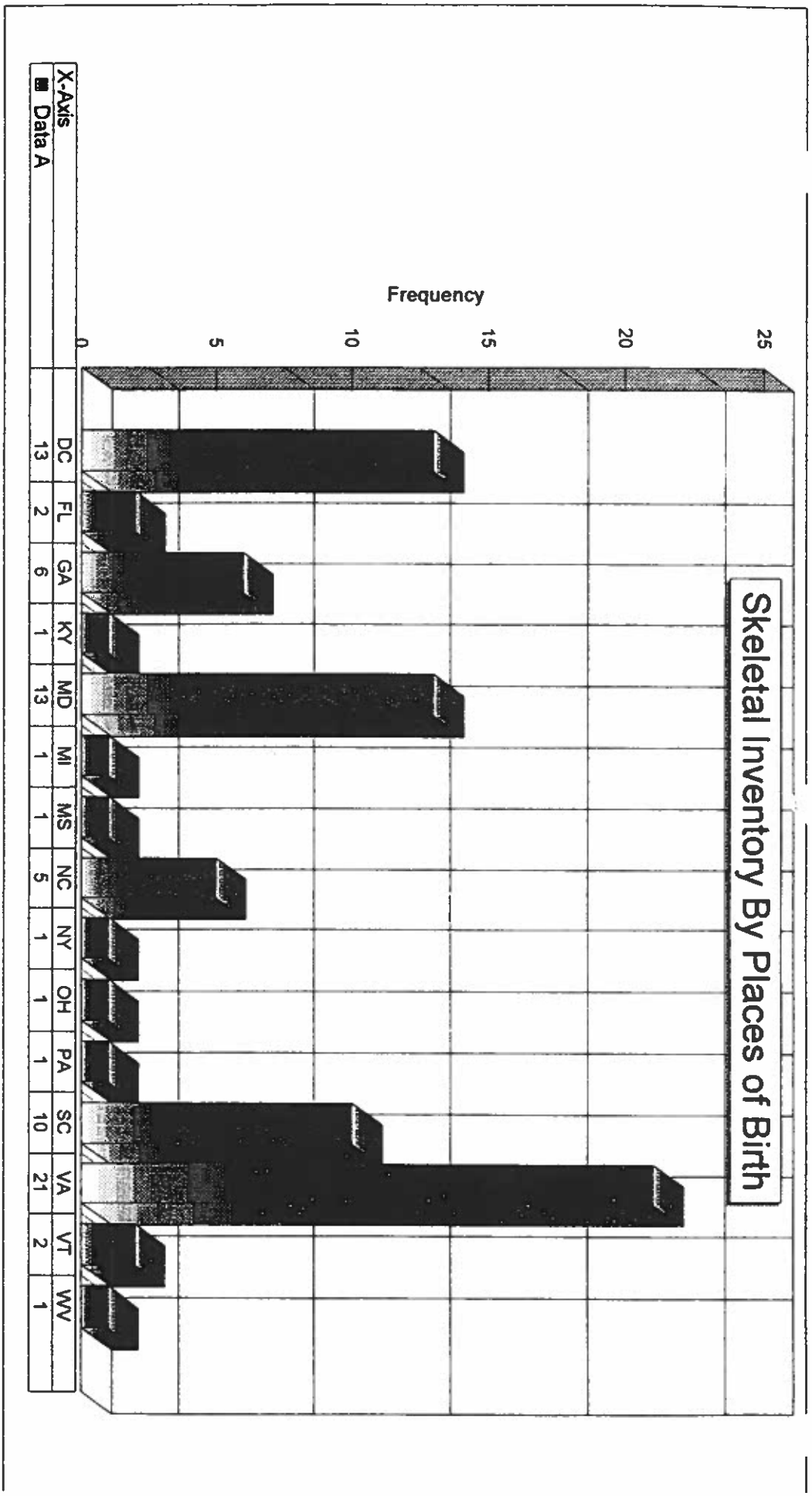
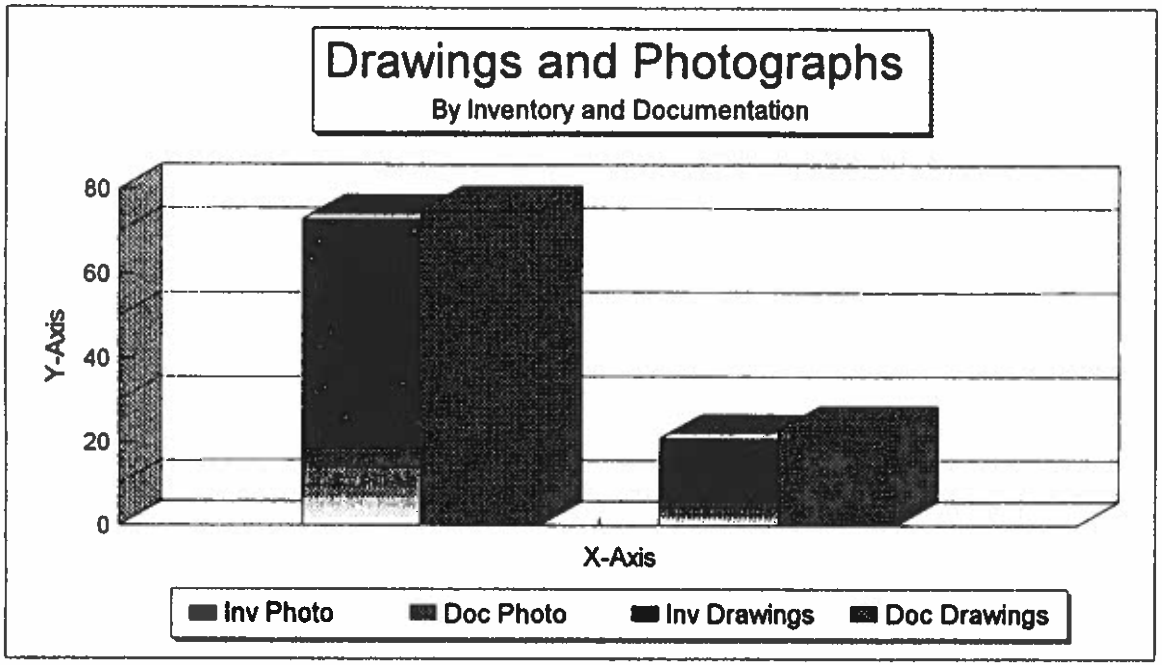

Skeletal Inventory By Places of Birth
Frequency
0
5
10
15
20
25
X-Axis
Data A
DC 13
FL 2
GA 6
KY 1
MD 13
MI 1
MS 1
NC 5
NY 1
OH 1
PA 1
SC 10
VA 21
VT 2
WV 1

Figure # 8


Drawings and Photographs
By Inventory and Documentation
80
60
40
20
0
Y-Axis
X-Axis
Inv Photo
Doc Photo
Inv Drawings
Doc Drawings

Appendix

PATHOLOGY KEY

NAME	CODE
ABCESS	ABC
ACIDOSIS	ACI
ACUTE	ACU
ALCOHOLISM	ALC
ANEMIA	ANE
ANTERIO SCLEROSIS	ANT
ANKYLOSIS	ANK
ANEURYSMS	ANU
AORTIC	AOR
APOPIETY	APO
APPENDIX	APP
ARCHNOID	ARC
ARTERIOSCLEROSIS	ART
ARTERIAL CORONARY HCA FAILURE	ACHF
ARTERY	ATE
ATHROPHIC	ATR
ARTHRITIS	ATH
ARTHRITIC	ATH
ASPHYXIA	ASP
ASPHYRIA	ASP
ASPIRATION	API
ASTMA	AST
ATERIO SILEROSIC	ANS
BIRTH	BIR
BONE	BON
BRONCHOPHEUMONIA	BRP
BURN	BUR
CACHEXIA	CAC
CARBONMONIXIDE	COB
CARCINOMA	CAR
CARDIAC	CRD
CALCIFICATION	CAL
CAVITY	CAV
CEREBRAL	CER
CHRONIC	CHR
CIRRHOSIS	CIR
COLON	COL
CONGENTIAL	CON
CONTRIBUTORY	CON
CORCENOMITOSIS	COR
CORONARY	COR
CURVATURE	CUR
DECUBITUS	DEC
DEFOMANS	DEF
DEFORMATION	DEF
DEGENERATION	DEG
DELERIUM	DEL
DEMENTIA	DEM
DILATION	DIL
DISC	DIS
DISEASE	DIS
DOUBLE	DOU
ECLENTCA	ECL
EMBOLISM	EMO
EMPHYSEMA	EMP
ENASTIATION	ENA
ENCOPHALOPATHY	ENC
ESOPHAGUS	ESO
FAILURE	FAI
FATTY	FAT
FIBRILLATION	FIB
FOOD	FOO
FRACTURED	FRA
GANGRENE	GAN
GAS	GAS
GENTRAL SED	GEN
GINGIVITIS	GIN
GLOMERULONEPHRITIS	GLO
GONORRHEAL	GON
GRANNDOMA	GRA

PATHOLOGY KEY (cont'd)...

NAME	CODE
HEART	HEA
HEMIPLEGIA	HEI
HEMOPTYSIS	HEO
HEMORRHAGE	HEM
HEPATIC	HEP
HERNIA	HER
HYPERTENSION	HYS
HYPENTROPHIC	HYP
HYPERTROPHY	HYP
INFARCTION	INF
INFECTION	INF
INFLAMMATION	INF
INFLUENZA	INF
INSUFFICIENT	INS
INTERSTIAL	INS
JOINT	JOI
KNEE	KNE
LARYNX	LAR
LIGAMENT	LIG
LIVER	LIV
LOBAR	LOB
LOBELLE	LOB
LUETIC	LUE
LUNG	LUN
LYMPHADENITIS	LYM
MALARIA	
MALNUTRITION	
MELLITUS	MEL
MENINGITIS	MEN
METHYLALCOHOL	MEA
MULTIPLE	MUL
MULTILOBULAR	MUL FIB UTE
FIBROID OF UTERUS	
MUSCLE	MUS
MYELOMA	MYE
MYOCARDIAC	MYO
NECK	NEC
NEPHRITIS	NEP
NEOPLASM	NEO
OBSTRUCTION	OBS
OCCLUSION	OCC
OEDEMA	OED
OSTEOPOROTIC	OST
PANCREATIC	PAN
PARALYSIS	PAR
PERICARDIUM	PRI
PERITONITIS	PEI
PERIOSTITIS	PER
PELLAGRA	PEL
PERIOSTEAL	PER
PLEURAL	PLE
PNEMOCOCCUS	
PNEUMONIA	PUE
PREMATURITY	
PROSTATE	PRO
PULMONARY	PUL
PYELITIS	PYE
PYELONEPHRITIS	PYN
*RESPIRATION	
RESPIRATORY	RES
RHEUMATIC	RHE
RIGHT	RIT
RUPTURED	RUP

3-/...

PATHOLOGY KEY (cont'd)...

NAME	CODE
SARCOMA	SAR
SCOLIOSIS	SCO
SCLEROTIC	SCL
SENILE	SEN
SEPTICEMA	SEP
SKELETON	SKE
SKULL	SKU
SPINAL CORD	SPI
STERNALIS	STE
STILL	STI
STROKE	STO
STOMACH	STO
STRICTURE	STR
SUICIDE	SUI
SUPPURATIVE	SUP
SYMPHYSICAL	SYM
SYPHILIS	SYP
THERUPEUTIC	THE
THROMBOSIS	THR
TONGUE	TNG
TONSILITIS	TON
TRACT	TRA
TUBERCULOSIS	TUB
ULCER	ULCE
UREMIA	URE
URETER	URE
URETHRAL	UTH
URINARY	URI
UTERUS	UTE
VALVULAR	VAL
VARICE	VAR
VARICELLA	VAR
VASCULAR	VAS
VEIN	VEI
VISCERAL	VIS
WOUND	WOU

** **