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الجمهورية اللبنانية مُصتب وَزيرُ الدَولة لشوَّون التمية الإداريّة مُوكز مشادينع وَدرَاسَات القطاع العَام



Bulletin No. 17

Leading Causes of Hospitalizations
And
In-Hospital Mortality

S. M. El-Zein, PhD, Actuary MedNet Liban

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This bulletin was prepared by Sarkis M. El-Zein, Ph. D.; Deputy General Manager and Actuary at MedNet Liban, Beirut Lebanon.

Work Experience	Employer	Position
2/1995 - Present	MedNet Liban	D.G.M., Actuary
2/1995 - 7/1995	Notre Dame University, Lebanon.	P./Γ. Math Instructor.
1987 - 1994	Auto Club of Southerr California, Los Angeles, CA, USA.	Senior Actuary.
1985 - 1987	Parmers Insurance Group, Los Angeles, CA, USA.	Assistant Actuary.
1982 - 1984	University of Southern California, Los Angeles, CA USA.	Teaching Assistant, Math department.
1977 - 1979	Lebanese Reput lic.	Secondary Schools Math Teacher
Education	Institution	Degree
1985	University of Southern California, Los Angeles CA, USA.	Ph. D. in Math and Education
1978	Lebanese University, Beirut, Lebanon,	CAPES - Math
1977	Lebanese University, Beirut, Lebanon.	B.S.C Math
Other	Lecturer at Muhanna Foundation. Ac	ctuarial Diploma Program

Statistics were prepared by Sirine Chaar, Sr. Statistical Analyst. Technical Work was provided by Jeanine Deeb, Actuarial Technician.

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About 55% of Personal health care expenditures go toward hospital care*, making it the most expensive component of the health care sector. This report gives an overview of hospital care during the 1995 - 2000 period, providing insight for anyone interested in understanding the types of services rendered by hospitals and the characteristics of patients who receive them.

This report summarizes information from the MedNet Liban In patient population; a database uniquely suited to provide a comprehensive picture of hospital care.

The MedNet Liban database includes patients covered by public payers (National Social Security Fund), private insurance companies, mutual funds, and self-funded schemes. It also provides information on total hospital charges for those patients. The MedNet Liban database also includes all types of hospitals (teaching and non-teaching hospitals) that are spread throughout Lebanon.

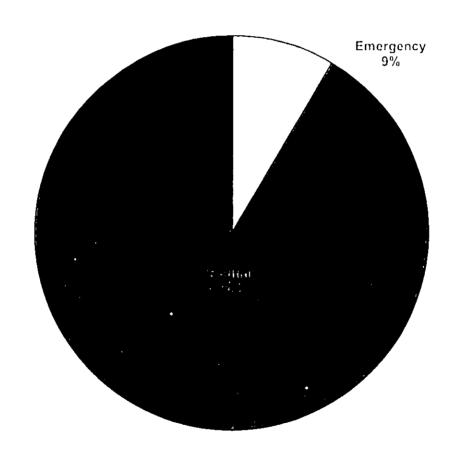
This report provides information on:

- Age and gender of hospitalized patients.
- Sources of admission to the hospital.
- Emergency admissions to the hospital.
- Most frequent reasons for hospitalization through the Emergency Department.
- Most frequent reasons for routine hospitalizations.
- Most frequent co morbidities.
- Charges for hospitalizations, by type of condition.
- Conditions with the longest lengths of hospitalization.
- Leading causes of in-hospital mortality.
- In-hospital mortality by age and gender.

^{*:} MedNet Liban 2000 statistics.

HOW ARE PATIENTS ADMITTED TO THE HOSPITAL?

- About 9% of all hospital admissions are through the emergency department (ED).
- 91% are routine admissions not through the ED.



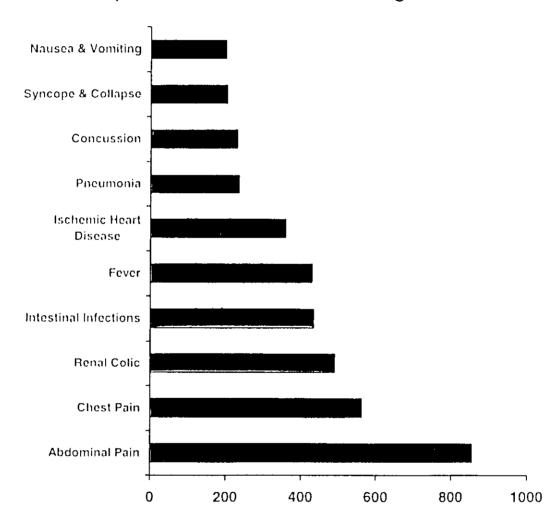
WHAT ARE THE MOST FREQUENT REASONS FOR BEING ADMITTED TO THE HOSPITAL THROUGH THE EMERGENCY DEPARTMENT?

- Ten conditions account for about 39% of all hospital admissions through the Emergency Department.
- The top 3 conditions are pain-related: Abdominal, Chest and Renal (Kidney/urinary tracts).
- Fever is the fifth leading cause of admissions.

	PRINCIPAL DIAGNOSIS	Number	Percent of All ED Admissions
1.	Abdominal Pain	855	8.
2.	Chest Pain	562	5.5
3.	Renal Colic	489	4.3
4.	Intestinal Infectious Diseases	433	Ť 4.,
5.	Fever	428	4
6.	Ischemic Heart Disease	358	3
7.	Pneumonia	2,3.4	2.
8.	Concussion	220	2.
9.	Syncope & Colfapse	202	2.4
0.	Nausea & Vomiting	199	2.0
	<u> </u>		39.15



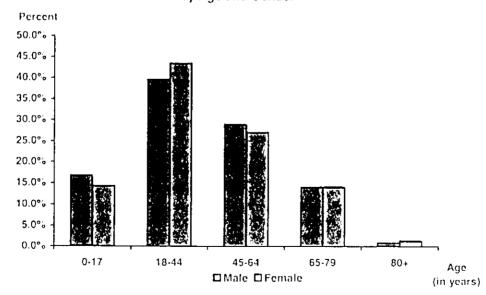
Top Ten Admission Causes Through The ED



HOW DO HOSPITAL ADMISSIONS THROUGH THE EMERGENCY DEPARTMENT DIFFER BY AGE GROUP? GENDER?

- Over 40 percent of all admissions through the ED are for persons aged 18 to 44 years.
- Of all children admissions through the ED, over 60% are for males.
- Most admissions through the ED for persons aged 18 to 44 years are for males (55%).
- Overall, 57 percent of all admissions through the ED are for males.

Admissions Through The Emergency Department by Age and Gender



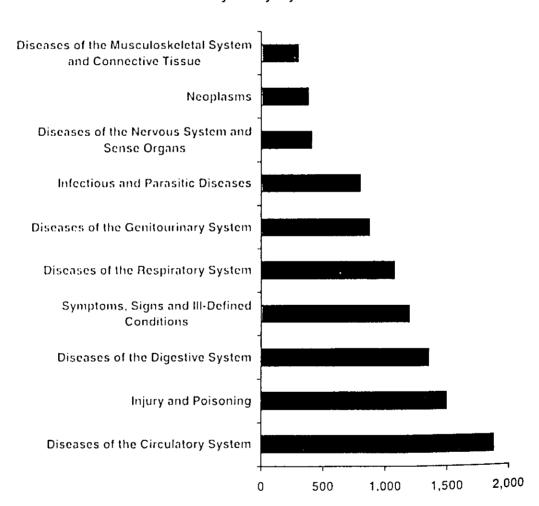
WHAT ARE THE MOST FREQUENT REASONS FOR ADMISSIONS THROUGH THE ED, BY BODY SYSTEM?

- The leading cause of admission through the ED is the Circulatory system, accounting for 18.4% of all admissions through the ED.
- Injury and Poisoning is the second leading cause of admission through the ED; accounting for nearly 15% of all ED admissions.
- Symptoms, Signs and III-Defined conditions account for nearly 12% of all admissions through the ED.

	Top Ten Admission Causes Through The ED By	Body Syste	3113
	REASON BY BODY SYSTEM	Number	Percent of All ED Admissions
1.	Diseases of the Circulatory System	1,877	18-1
2.	Injury and Poisoning	1,496	1.1.7
3.	Diseases of the Digestive System	1,352	13.2
4.	Symptoms, Signs and III-Defined Conditions	1,193	11.7
5.	Diseases of the Respiratory System	1,074	10.5
6.	Diseases of the Genitourinary System	872	8.5
7.	Infectious and Parasitic Diseases	797	7.8
8.	Diseases of the Nervous System and Sense Organs	407	4.()
9.	Neoplasm	379	3.7
10.	Diseases of the Musculoskeletal System and Connective Tissue	298	2.0



Top Ten Admission Causes Through The ED By Body System

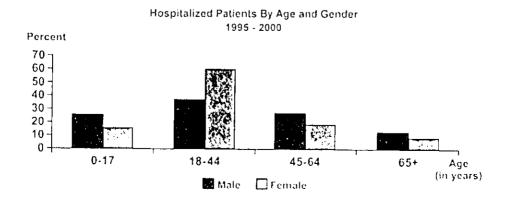


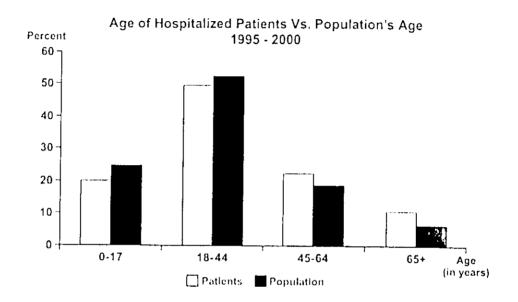
HOW DO HOSPITAL ADMISSIONS COMPARE TO POPULATION S AGE AND GENDER?

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Combining routine as well as admissions through the Emergency Department yields the following interesting statistics:

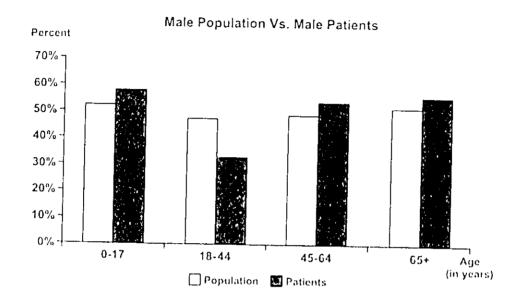
- Females constitute about half of the population but account for over 55% of all hospitalizations. Excluding childbirth related claims would reverse the picture. Males would then account for 53% of all hospitalizations and females for 47%.
- Males outnumber females by a ratio of 1.4 to 1 when comparing admissions for the group of less than 17 years old. That ratio would drop to 1.3 when adjusted for gender distribution among the less than 17 years old people. Most males in this age group are admitted for "male specific" reasons such as hernia and they get more tonsils problems than do females.
- There are 2 female admissions for every 1 male admission in the group of 18 to 44 years old. Excluding maternity-related claims, the ratio would drop to just 1.05, yielding almost equal proportions of males and females' admissions.
- Persons over the age of 64 years constitute about 6% of the entire population but account for about 10% of all hospitalizations.

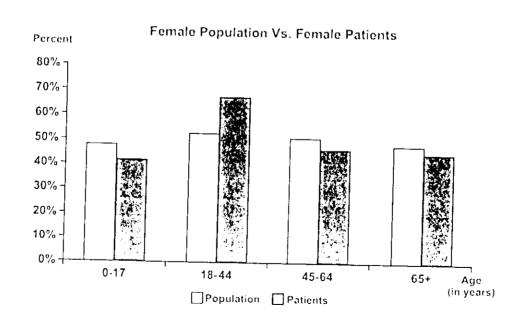












WHAT ARE THE MOST FREQUENT REASONS FOR HOSPITALIZATION?

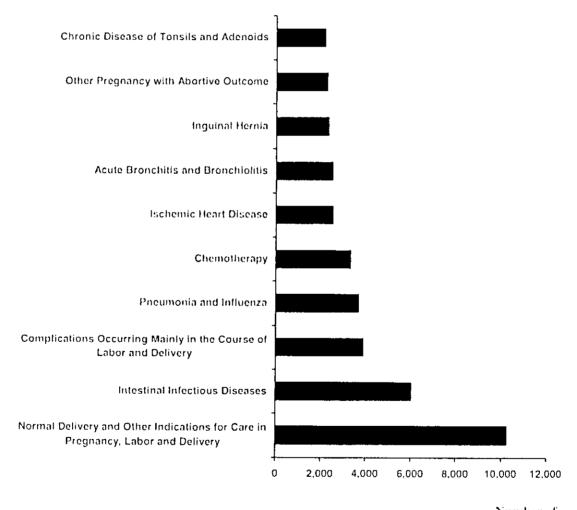
- Nearly 34% of all hospitalizations are related to 10 principal diagnoses.
- Childbirth is the most common reason for hospitalization.

 About 9% of all discharges from the hospital are infants born in the hospital.
- Three of the top ten conditions are pregnancy-related, accounting for about 14% of all discharges.
- Ischemic heart disease accounts for about 2.2% of all discharges.
- Chemotherapy that requires an overnight stay in the hospital accounts for nearly 3% of all discharges.

	Most Frequent Reasons For I	Iospitalizati	0118
	PRINCIPAL DIAGNOSIS	Number of Discharges	Percent of all Discharges
1.	Normal Delivery and Other Indications for Care in Pregnancy, Labor and Delivery	10,241	8.8
2.	Intestinal Infectious Diseases	6,015	5.2
3.	Complications Occurring Mainly in the		
	Course of Labor and Delivery	3,885	3.4
4.	Pneumonia and Influenza	3,676	3.2
5.	Chemotherapy	3,316	2.9
6.	Ischemic Heart Disease	2,518	2.2
7.	Acute Bronchitis and Bronchiolitis	2,500	2.2
8.	Inguinal Hernia	2,314	2.0
9.	Other Pregnancy with Abortive Outcome	2,260	2.0
10.	Chronic Disease of Tonsils and Adenoids	2,159	[.9]
			33.8



Most Frequent Reasons For Hospitalizations

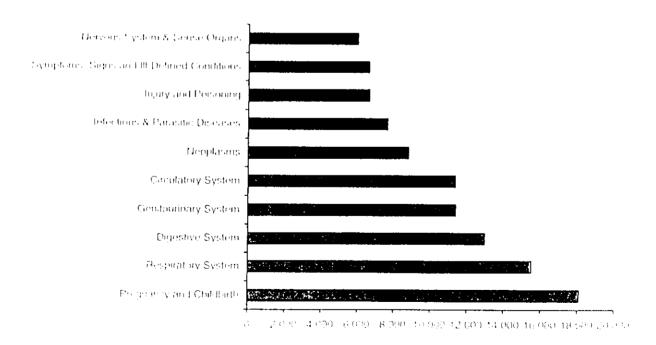


WHAT ARE THE MOST COMMON REASONS FOR HOSPITAL STAYS, BY BODY SYSTEM?

- Pregnancy and childbirth tops the list of the most common reasons for hospitalizations, accounting for nearly 16% of all discharges.
- The next most common reasons for hospitalization include those related to respiratory system, accounting for nearly 14% of all discharges. These include Pneumonia and Influenza and acute respiratory infectious.
- Hospitalizations for all circulatory conditions make up about 9% of all discharges. Those include ischemic heart diseases, hypertension, cerebrovascular conditions and acute rheumatic fever.
- Neoplasm's (cancer-related) conditions account for about 8% of all discharges. Those include malignant bone, skin and breast cancers.

TOP TEN REASONS FOR HOSPITAL STAYS, BY BODY SYSTEM:

	REASONS	Number of Discharges	Percent of All Discharges
1.	Pregnancy and Childbirth	18,090	15.60
2.	Respiratory System	15,503	13.37
3.	Digestive System	12,979	11.19
4.	Genitourinary System	11,393	9.82
5.	Circulatory System	11,365	9,80
6.	Neoplasm	8,798	7.59
7.	Infectious & Parasitic Diseases	7,636	6.58
8.	Injury and Poisoning	6,632	5.72
9.	Symptoms, Signs and III-Defined Conditions	6,612	5.70
10.	Nervous System & Sense Organs	5,981	5.16
			90.53



Number of Discharges

WHAT ARE THE MOST COMMON REASONS FOR HOSPITALIZATION BY GENDER?

	Reasons	Male	Female
1.	Intestinal Infections	3,067	2,948
2.	Hernia	2.059	
3.	Pneumonia and Influenza	2,022	1,654
4.	Ischemic Heart Disease	1.890	
5.	Chemotherapy	1,453	1,863
6.	Calculus of Kidney and Urethra	1,349	
7.	Acute Bronchitis and Bronchiolitis	1,325	1,175
S.	Chronic Disease of Tonsils and Adenoids	1,238	
9.	Renat Cotic	854	
10.	Angina Pectoris	795	····
11.	Normal Delivery & Other Indications for Care in Pregnancy, Labor & Delivery		10,219
12.	Complications Occurring Mainly in the Course of Labor and Delivery		3,879
[3,	Other Pregnancy with Abortive Outcome		2,252
14.	Cholelithiasis		1,404
15.	Complications mainly Related to Pregnancy		1,136
16.	Abdominal Pain	1	928

- Four out of the top ten conditions for hospitalizations for males are also among the top ten conditions for females. Those are: Pneumonia and Influenza, Intestinal infections, Neoplasm's and Acute Bronchitis.
- Hernia, Ischemic heart disease, Calculus of Kidney, Tonsils, Renal Colic and Angina Pectoris are male only top ten conditions.
- Four of the top ten conditions for females' hospitalization are childbirth related.
- Excluding Pregnancy and Childbirth for females, Intestinal infections become the most common reason for hospitalization stay for both males and females.
- The second most common reason for males hospitalization is hernia while that for females is cancer-related.

WHAT ARE THE MOST COMMON REASONS FOR HOSPITALIZATION FOR VARIOUS AGE GROUPS?

- Intestinal infections are one of the top 10 conditions for all patients that are less than 80 years old.
- Pneumonia and Influenza is also one of the top ten conditions for those below 18 years and those above 45 years.
- For the group 18 to 44 years of age, four of the top ten reasons for hospitalization pertain to pregnancy and delivery. Excluding those four conditions, intestinal infections would top the list, followed by calculus of kidney.
- A person aged 45 to 64 years is most likely to be hospitalized for heart-related conditions. Ischemic heart disease tops the list of the most common ten reasons for hospitalizations for the group of 45 to 64 years of age.
- Cataract tops the list of the top ten conditions for the group 65 to 79 years of age; followed by ischemic heart disease and chemotherapy (cancer-related).
- Cataract is also the most frequent reason for hospitalization for those over the age of 79 years.
- Some conditions, such as fractures, appear in the top ten only for patients 80 years old or older.
- Concussion, Acute Tonsillitis and Appendicitis are three top ten conditions that are unique to the group 1 to 17 years of age.

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Top Ten Conditions Fo	ır Hospi	talizati	on By A	or Grai		7
	<1yr	1-17	18-44	45-64	(p) 65-79	i i
Top 10 Conditions by Age Group	, !	.		T-1777	05-79	80+
		\overline{N}	umber of	Discharge	· c	
Intestinal Infections	743	2,808	1,807	480	167	9 3
Pneumonia and Influenza	404	1,607		485	318	***
Acute Bronchitis and Bronchiolitis	-401	946			-710	41 412
Hernia	182	520		632	242	
Urinary Infection	84					100
Fever	83			-		
Otitis	83	488				
Jaundice	-17		1			
Short Gestation & low Birth weight	-42		 -			2.7
Other Bacterial Diseases	.12		·			14.0
Tonsils and Adenoids		1,830				
Acute Tonsillitis		507				
Appendicitis		505				- 10
Concussion		377				141
Non-Suppurative Otitis Media &						'AG
Eustachian Tube Disorders		3.19				
Normal Delivery & Other Indications for						1
Care in Pregnancy, Labor and Delivery					1	
			10.152		J	
Complication Occurring Mainly in the				· -		V.
Course of Labor and Delivery		_	3,860		}	
Other Pregnancy with Abortive Outcome						
			2.222			*(4)
Calculus of Kidney and Urethra			1,193	571		38
Complications Mainly Related to						
Pregnancy			1.134			AL.
Deviated Nasal Septum			1,103			ARS
Renal Colic			1,081			***
Cholelithiasis			1,079	695	258	- 化射
Hypertrophy of Nasal Turbinate			1,058			***
Ischemic Heart Disease				1,527	618	~22
Chemotherapy				1,466	613	158
Augina Pectoris				600	210	*.*
Cataract				563	634	46
Gastritis and Duodenitis				410		- 3
Hyperplasia of Prostate					295	19.
Heart Failure					213	31
Transient Cerebral Ischemia						19
Fracture of Neck of Femur						18
Acute Myocardial Infraction						13.
		· · · · · · · · · · · · · · · · · · ·				

WHAT ARE THE MOST COMMON PRINCIPAL COMORBIDITIES?

Comorbidities can make a hospital stay more expensive and complicated. Conditions are designated as comorbidities if they are not directly related to the principal diagnosis and are likely to have originated prior to the hospital stay. As such, they have to be distinguished from complications that arise out of hospitalization itself. Comorbidities are coexisting medical problems that are listed as secondary diagnoses (not the principal diagnosis or the main reason for admission).

About 13.0% of hospitalized patients have one or more comorbidities. Of those with comorbidities, about two thirds have one comorbidity, 23% have 2 comorbidities and the remainder 9% have 3 comorbidities.

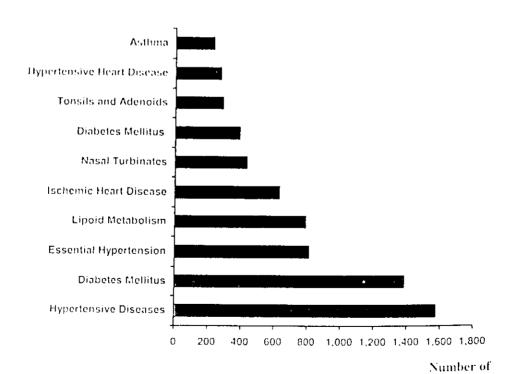
The top comorbidity pertains to hypertension, accounting for about 24% of all comorbidities.

Number of Comorbidities	Number of Patients	Percent
1	6,732	68.3
2	2.259	23.0
3	862	8.7
	9,853	100.0

That is followed by diabetes mellitus, accounting for about 11% of all comorbidities.

Three of the top 10 comorbidities are related to hypertension, two are related to diabetes.

	Top Ten Comoi	bidities	
	PRINCIPAL COMORBIDITY	Number of Discharges	Percent of Discharges
1.	Hypertensive Diseases	1.574	9.9
2.	Diabetes Mellitus	1,382	8.7
3.	Essential Hypertension	810	5.1
4.	Lipoid Metabolism	789	5.0
5.	Ischemic Heart Disease	629	4.0
6.	Nasal Turbinates	431	2.7
7.	Diabetes Mellitus	388	2.4
8	Tonsils and Adenoids	287	1.8
9,	Hypertensive Heart Disease	272	1.7
10.	Asthma	2.3()	1.4



Discharges

HOW DO COMORBIDITIES DIFFER FOR VARIOUS AGE GROUPS?

- The most common comorbidity is hypertension. That is most prevalent for patients aged 45 to 79 years.
- The second most common comorbidity is diabetes; especially among the 45 to 64 years of age patients.
- Ischemic and hypertensive heart diseases are the most common comorbidities for those in the group 45 to 64 years of age.
- Some comorbidities are unique to certain age groups; such as cataract
 for patients 80 years old or older, hernia and congenital anomalies of
 the heart for infants less than 1 year old and epilepsy for the group 1
 to 17 years of age.
- Hypertension and diabetes are common comorbidities to all patients over the age of 18 years.

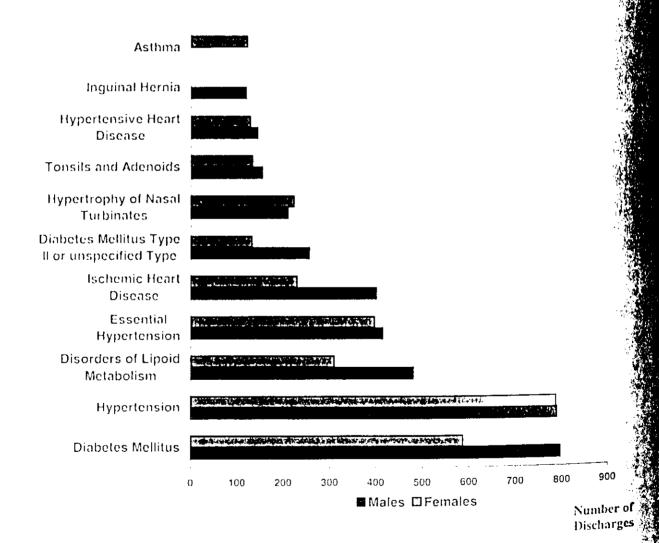
Top Ten Comorbid	lities B					
	Number of Discharges					
			Age (Group		
PRINCIPAL COMORBIDITÝ	<lyr< th=""><th>1-17</th><th>18-44</th><th>45-64</th><th>65-79</th><th>80+</th></lyr<>	1-17	18-44	45-64	65-79	80+
Intestinal Infections	16	89	65			
Acute Bronchitis and Bronchiolitis	II	54				
Otitis	10	73		·		
Esophagitis	9				~	
Urinary Infection	7					
Pucumonia and Influenza	6	15				
Hernia	(1			· ———-		
Congenital Anomalies of Heart	6	· · · · · · ·		1		
Certain Congenital Musculoskeletal Deformities	5	· · ·				
Tonsils and Adenoids	4 1	255				
Non-Suppurative Otitis Media & Eustachian						·····
Tube Disorders		62				
Hypertrophy of Nasal Turbinate		-1-1	350			
Asthma		12	91			
Disorders of Tympanic Membrane	·	3.1	•			.:
Upilepsy	· •	18	1			
Hypertension			185	789	573	27
Disorders of Lipoid Metabolism	i	Ì	181	131	171	5
Diabetes Mellitus		<u>†</u>	131	683	547	20
Deviated Nasal Septum	•	!	113	ŀ		
Normal Delivery & Other Indications for Care	i I	1				
in Pregnancy, Labor & Delivery	İ	ļ	112			
Essential Hypertension	1	1	78	345	368	18
Diseases of Esophagus, Stomach & Duodenum	i	1	(4)			
Ischemic Heart Disease				207	284	14
Diabetes Mellitus with other Specified						
Manifestations, Type II or Unspecified Type, not		İ				
stated]	228	127	6
Hypertensive Heart Disease	· · · · · · · · · · · · · · · · · · ·			143	100	
Cholelithiasis				68		
Diseases of the Circulatory System				64	80	
Diabetes Mellitus with other Specified						
Manifestations Type I		;	ļ	62		
Chronic Renal Failure					81	6
Other Lorms of Chronic Ischemic Heart Disease	4				68	
Atrial Librillation and Flutter	÷	•	‡			6
Malignant Scoplasm of Prostate	•					5
Cataract		•	*			

HOW DO COMORBIDITIES DIFFER BY GENDER?

- Eight out of the top ten comorbidities are common to both males and females.
- Diabetes is more prevalent among males than among females: a ratio of 1.5 to 1.
- Males and Females are equally likely to have a hypertension-related co morbidity.
- Asthma is a comorbidity that is unique to females.
- Hernia is a comorbidity that is unique to males.
- Male patients are more than twice as likely to have a heart-related co-morbidity as do female patients.

	Top Ten Comorbidities By	Gender		
		Number of Discharge		
	PRINCIPAL COMORBIDITY	Males	Feniales	
1.	Diabetes Mellitus	796	586	
2.	Hypertension	788	786	
3.	Disorders of Lipoid Metabolism	480	3()9	
4.	Essential Hypertension	414	396	
5.	Ischemic Heart Disease	400	229	
6.	Diabetes Mellitus Type II or unspecified			
	Туре	256	132	
7.	Hypertrophy of Nasal Turbinate	209	222	
8.	Tonsils and Adenoids	154	133	
9.	Hypertensive Heart Disease	144	128	
10.	Inguinal Hernia	119		
11.	Asthma		121	

Top Ten Comorbidities By Gender



WHAT CONDITIONS LEAD TO THE LONGEST HOSPITAL STAYS?

- Conditions with lengthy hospital stays are relatively uncommon. Collectively, the 10 conditions with the longest stays represent less than 0.05% of all discharges.
- The top two conditions with the longest hospital stays pertain to Cancer. Those cases are rare as they represent less than 3 in 100,000 discharges.

	Top Ten Conditions With The Longest Ho	spital Stay	
	CONDITIONS WITH THE LONGEST HOSPITAL STAYS	Average Stay (Days)	Average Cost (US \$)
1,	Malignant Neoplasm of Other and III-Defined Sites	70.0	14,061.60
2.	Benign Neoplasm of Panereas, Except islets of Langerhans	510	53,324,17
3.	Fetal and Neonatal Hemorrhage	41.0	19,331.50
4.	Air Embolism as an Early Complication of Trauma	37.0	14,432,11
5.	Urethral Fistula	30.0	5,991,59
6,	Subarachnoid, Subdural, and Extradural Hemorrhage		
	Following Injury	28.1	9,842,42
7.	Other and Unspecified Disorders of Back	27.0	607.58
8.	Slow Fetal Growth and Fetal Malnutrition	27.0	374.01
9.	Fracture of Vertebral Column with Spinal Cord Injury	25.4	10,160,06
10.	Disorders Relating to Short Gestation and Unspecified Low Birth weight	25.0	4,019,10

WHICH CONDITIONS HAVE THE HIGHEST CHARGES ON AVERAGE?

The conditions with the highest charges are relatively uncommon. The 10 most expensive conditions combined represent less than 0.5% of all discharges.

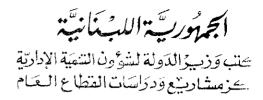
- Two of the top 10 most expensive conditions are related to cancer. A benign cancer of pancreas (very rare) cost over 50,000 U.S. Dollars with an average stay of 51 days.
- Among the top 10 most expensive conditions, heart diseases are relatively more common with an average charge of about 12,700 U.S. Dollars.

	Top Ten Conditions With The Highest A	verage Cost	
	CONDITIONS WITH HIGHEST AVERAGE CHARGE	Average Stay (Days)	Average Cost (US \$)
1.	Benign Neoplasm of Pancreas, Except Islets of Langerhaus	51.0	53,324.17
2.	Nonallopathic Lesions, not Elsewhere Classified	9.0	25,183.97
3,	Fetal and Neonatal Hemorrhage	41.0	19,331.50
4.	Perforation of Intestine	17.0	15,535.48
5.	Air Embolism as an Early Complication of Trauma	37.0	14,432.11
6.	Malignant Neoplasm of Other and Ill-Defined Sites	70.0	14,061.60
7.	Thoracic Aneurysm Without Mention of Rupture	22.4	13,714.57
8.	Heart Disease, Unspecified	10.8	12,671.48
9,	Perforation of Esophagus	17.0	12,618.92
10.	Curvature of Spine	6.0	12,172.99

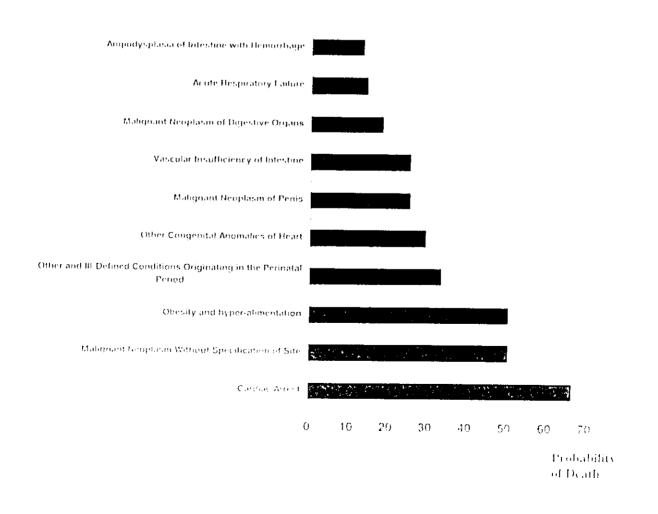
WHICH CONDITIONS HAVE THE HIGHEST IN-HOSPITAL MORTALITY?

- Three of the top ten conditions with the highest in-hospital probability of death* are related to cancer:
 - Malignant neoplasm without specification of site.
 - Malignant neoplasm of penis.
 - Malignant neoplasm of digestive organs.
- The leading cause of in-hospital mortality is cardiac arrest: about two-thirds of those hospitalized due to cardiac arrest do not survive.
- Some of the top ten conditions with a high mortality rate are rare cases such as obesity and malignant neoplasm of penis.

^{*:} The probability of death is related to the condition itself. For example, if a person was hospitalized for <u>Cardiac Arrest</u>, then the probability of death is 66%. In other words, nearly two thirds of those hospitalized for <u>Cardiac Arrest</u> are not expected to survive.



	Top Ten Conditions With The Highest Probability of De	ath	
	PRINCIPAL DIAGNOSIS	In-Hospital Mortality (Percent)	
1.	Cardiac Arrest	66	
2.	Malignant Neoplasm Without Specification of Site	50	
3	Obesity and hyper-alimentation	50	
4.	Other and III-Defined Conditions Originating in the Perinatal Period	33	
5	Other Congenital Anomalies of Heart	20	
6.	Malignant Neoplasm of Penis	25	
7.	Vascular Insufficiency of Intestine	25	
8.	Malignant Neoplasm of Digestive Organs	18	
9.	Acute Respiratory Failure		
10.	Angiodysplasia of Intestine with Hemorrhage	13	

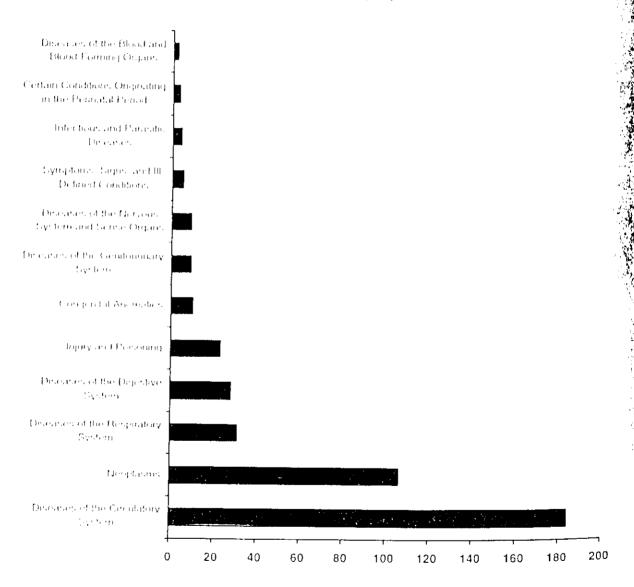


WHICH CONDITIONS HAVE THE HIGHEST NUMBER OF IN-HOSPITAL DEATH, BY BODY SYSTEM?

- About 69% of all in-hospital deaths are attributed to two body systems:
- The Circulatory system alone accounts for about 44% of the total number of in-hospital deaths.
- Injury and poisoning account for about 5.5% of all in-hospital deaths.

	In-Hospital Deaths By Body Systen	1	
	BODY SYSTEM	Total Number of Deaths	Percent of Total
1,	Diseases of the Circulatory System	184	43.81
2.	Neoplasm	106	25,24
3.	Diseases of the Respiratory System	31	7.38
4.	Diseases of the Digestive System	28	6.67
5.	Injury and Poisoning	23	5.48
6,	Congenital Anomalies	10	2.38
7.	Diseases of the Genitourinary System	1 0	2.14
8.	Diseases of the Nervous System and Sense Organs	9	2.14
9	Symptoms, Signs, and Ill-Defined Conditions	5	1.19
10.	Infectious and Parasitic Diseases	-1	0.95
11.	Certain Conditions Originating in the Perinatal Period	3	0.71
12.	Diseases of the Blood and Blood-Forming Organs	2	0.48
13.	Diseases of the Musculoskeletal System and Connective Tissue	2	0.48
14.	Endocrine, Nutritional, Metabolic Diseases	2	0.48
15.	Diseases of the Skin and Subcutaneous Tissue	ı	0.24
16.	Mental Disorders	1	0.24
! 	TOTAL	420	100.00

In-Hospital Deaths By Body System



Number of Deaths

WHAT ARE THE LEADING CAUSES OF DEATH BY AGE GROUP?

- Congenital anomalies of heart lead the causes of deaths for infants less than 1 year old.
- Crushing injury and poisoning are the leading causes of death for children in the group 1 to 17 years of age.
- Cerebral hemorrhage leads the causes of death for the 18 to 44 years old.
- Cardiac arrest and heart failures lead the causes of death for all those above the age of 45 years.
- Some leading causes of death are unique to specific age groups: malignant neoplasm of penis (80 years old or older), chronic diseases of tonsils and adenoids (1-17 years old).
- Sixty percent of deaths in the group 45 to 64 years old are attributed to heart problems.
- Sixty two percent of deaths in the group 65 to 79 years old are also attributed to heart problems.

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	Age Group					
PRINCIPAL DIAGNOSIS	<iyr< th=""><th>1-17</th><th></th><th>45-64</th><th>65-79</th><th>≥80</th></iyr<>	1-17		45-64	65-79	≥80
Other Congenital Anomalies of Heart	: 2	1 2		i		200
Cardiac Arrest		1	-1	12	21	
Congenital Anomalies of Respiratory System			• • • • • • • • • • • • • • • • • • • •	<u> </u>		44
Diseases of the Respiratory System				† * ··· + ··	i	
Disorders Relating to Short Gestation and Unspecified Low	1	i	•		j	-
Buth weight					ļ •	
Dyspuea and Respiratory Abnormalities	1	1		j		
Uncephalitis, Myelitis and Uncephalomyelitis	1] 2	•			
Other and III Defined Conditions Originating in the Permatal	Ī	İ	:			·- ·
Period	1	İ				
Other Bacterial Diseases	1	1	, i		i	
Other Congenital Anomalies of Circulatory System	1		•	1		
Crushing Injury		}	5	<u>.</u>		
Poisoning by Drugs, Medicinal 7 Biological Substances	i	;	: :		i	
Other Congenital Anomalies of Digestive System	Ţ		, 			
Bacterial Meningitis	1			·		· · · · · · · · · · · · · · · · · · ·
[Cerebral Laceration and Continuon		1	!			
¹ Chemotherapy	-	I]]	i .		
Chronic Disease of Fousils and Adenoids		i				
Congenital Anomalies of Lye		ı				-
Intraccrebial Hemorrhage			7	6	5	Ī
Acute Panerearitis			2	· · · · · · · · · · · · · · · · · · ·		
Heart Lature				[6]	17	6
Malignant Neoplasm of Female Breast	i	i)			
Malignant Neoplasm of Trachea, Bronclais and Lung				6	7	ı
Secondary Malignant Neoplasm of Other Specified Sites	1	i	2			
Abdominal Pain			1		i	
Acute Myocardial Infarction				8		
Ischemic Heart Disease	-			8		
Malignant Neoplasm of Brain	ļ · ·	i		6		
Gastromtestinal Hemorrhage	ļ į	····i		5		
Heart Disease Unspecified	1			5	6	
Chrome Liver Disease and Circhosis	 					
Acute Pulmonary Heart Disease	† ÷				7	
Acute Respiratory Failure	† i	!			7	2
Pucumonia and Influenza	!	•		i	 7 :	
Malignant Neoplasm of Pancieus	:				(1	
Acute Respiratory Intections	: :	;			:	1
Hypertensive Diseases	: •	•			:	1
Malegrant Neopla in of Penis and Other Mille Gental Organs		1		··· · · ·		1
Niphrotic Syndrone		•	[1
Occlusion and Steposis of Prescrebiol Afrenes		•				1
		•	1		··—	
101 \1.	11	17.	30	65	92	19_

HOW DO LEADING CAUSES OF DEATH DIFFER BY GENDER?

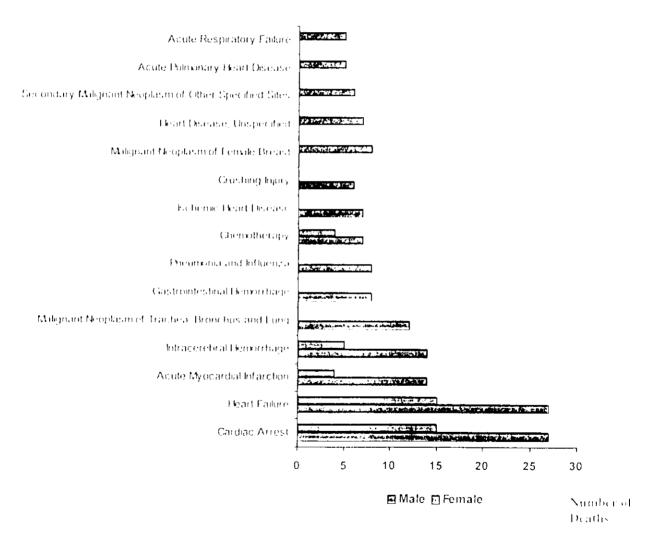
- Males are twice as likely to die from heart-related problems than are females.
- Malignant neoplasm of trachea, bronchus and lung is a leading cause for male deaths not for females and so is ischemic heart disease.
- Malignant neoplasm of breast is a leading cause for female death.
- Some top death causes are unique to males and others are unique to females.
 - Crushing injury: males

- Pneumonia and Influenza: males
- Acute Pulmonary heart failure: females
- Acute Respiratory failure: females

1. Cardiac Arrest 27 2. Heart Failure 27 3. Acute Myocardial Infarction 14 4. Intracerebral Hemorrhage 14 5. Malignant Neoplasm of Trachea, Bronchus and Lung 12 6. Gastrointestinal Hemorrhage 8 7. Pneumonia and Influenza 81 8. Chemotherapy 7 9. Ischemic Heart Disease 7 10. Crushing Injury 6 11. Malignant Neoplasm of Female Breast 12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites	PRINCIPAL DIAGNOSIS	Male [Female
3. Acute Myocardial Infarction 1.1 4. Intracerebral Hemorrhage 1.4 5. Malignant Neoplasm of Trachea, Bronchus and Lung 1.2 6. Gastrointestinal Hemorrhage 8 7. Pneumonia and Influenza 8 8. Chemotherapy 7 9. Ischemic Heart Disease 7 10. Crushing Injury 6 11. Malignant Neoplasm of Female Breast 1.2. Heart Disease, Unspecified 1.3. Secondary Malignant Neoplasm of Other Specified Sites	1. Cardiac Arrest	27	1.
4. Intracerebral Hemorrhage 5. Malignant Neoplasm of Trachea, Bronchus and Lung 6. Gastrointestinal Hemorrhage 7. Pneumonia and Influenza 8. Chemotherapy 7. Ischemic Heart Disease 7. Ischemic Heart Disease 7. Urushing Injury 7. Interpretation of Female Breast 12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites	2. Heart Failure	27	1:
4. Intracerebral Hemorrhage 5. Malignant Neoplasm of Trachea, Bronchus and Lung 6. Gastrointestinal Hemorrhage 7. Pneumonia and Influenza 8. Chemotherapy 7. Ischemic Heart Disease 7. Ischemic Heart Disease 7. Unushing Injury 7. Interest Disease 7. Interest Disease 7. Interest Disease 7. Interest Disease 7. Interest Disease Disease 7. Interest Disease Disease 7. Interest Disease Disease Disease 7. Interest Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disease Disea	3. Acute Myocardial Infarction	1.1	
6. Gastrointestinal Hemorrhage 8 7. Pneumonia and Influenza 8 8. Chemotherapy 7 9. Ischemic Heart Disease 7 10. Crushing Injury 6 11. Malignant Neoplasm of Female Breast 12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites		14	
7. Pneumonia and Influenza 8 8. Chemotherapy 7 9. Ischemic Heart Disease 7 10. Crushing Injury 6 11. Malignant Neoplasm of Female Breast 12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites	5. Malignant Neoplasm of Trachea, Bronchus and Lung	12 1	
8. Chemotherapy 7 9. Ischemic Heart Disease 7 10. Crushing Injury 6 11. Malignant Neoplasm of Female Breast 12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites	6. Gastrointestinal Hemorrhage	S	
9. Ischemic Heart Disease 7 10. Crushing Injury 6 11. Malignant Neoplasm of Female Breast 12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites	7. Pneumonia and Influenza	81	
10. Crushing Injury 11. Malignant Neoplasm of Female Breast 12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites	8. Chemotherapy	7	
11. Malignant Neoplasm of Female Breast 12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites	9. Ischemic Heart Disease	7	
12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites	10. Crushing Injury	()	
12. Heart Disease, Unspecified 13. Secondary Malignant Neoplasm of Other Specified Sites	11. Malignant Neoplasm of Female Breast		
13. Secondary Malignant Neoplasm of Other Specified Sites			<u>.</u>
			(
14. Acute Pulmonary Heart Disease	14. Acute Pulmonary Heart Disease		



Top Ten Conditions For Death By Gender



$\underline{GLOSSARY}$

Acute Bronchiolitis:

Inflammation of the smaller airways to the lung.

Acute Bronchitis:

Inflammation of the main air passages to the lungs.

Acute Myocardial Infarction:

Damage to heart muscle due to inadequate supply of oxygen.

Acute Tonsillitis:

Inflammation of the lymphatic tissues in the back of the throat.

Angina Pectoris:

Pain in the cliest caused by inadequate blood flow through the blood vessels of the heart muscle.

Atrial Fibrillation:

Disorder of heart rate and rhythm.

Choletithiasis (gallstones):

Presence of gallstones in the gallbladder.

Concussion:

Significant blows to the head.

Convulsion:

Seizure affecting children 6 months to 5 years old.

Deviated Nasal Septum:

Congested nose and sinuses; caused by common cold or influenza.

<u>Esophagitis:</u>

Inflammation of the swallowing tube (esophagus) that leads from the back of the mouth to the stomach.



Gastritis & Duodenitis:

Inflammation of the lining of the stomach or the lining of the small intestine, connecting to the stomach.

Hyperplasia of Prostate:

Excessive growth of normal prostate cells.

Hypertrophy of Nasal Turbinate:

Enlargement of nasal lymphatic tissues.

Intussusceptions (Children):

Entanglement of small and large intestines which results in decreased blood supply.

Ischemic Heart Disease:

Damage to an area of heart muscle due to lack of oxygen.

Otitis Media:

Acute car intection.

Renal Colic:

Pain due to obstruction of trethra or renal pelvis; originating in the kidney and radiating through urinary tracts.

Transient Cerebral Ischemia (Mini Stroke):

Temporary disturbance of blood supply to an area of the brain.

الجمهورية اللبنانية مَكتب وَزيرُ الدَولة لشوَّون السَمية الإدارية مَركز مشاريع وَدرَاسَات الفطاع الْعَالِ

Republic of Lebanon

Office of the Minister of State for Administrative Reform

Center for Public Sector Projects and Studies

(C.P.S.P.S.)