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APPENDICES

APPENDIX A

Technical Description of Automated Clinical Analyzer.

Technical Description of Automated Clinical Analyzer.

Automated Clinical Analyzer was conceived and specifically developed for high-quality chemistry testing in physician offices and in small laboratories and laboratory unit in hospital and reference laboratory settings. A primary objective of the system is to test whole blood samples from a capability tube or vein-puncture tube. No serum or plasma separation is require. Automated Clinical Analyzer is a fully automated and computer controlled instrument designed for the in-vitro diagnostic quantitation of biological fluid component and therapeutic drugs as well as the qualitative determination of drugs of abuse in urine. Automatically calibrate every test channel, sample identification, data analysis, reporting the result and problem identification of the patient's sample blood test. This laboratory equipment controlled by computer was first invented by Du Pont in1970.

With an on-board capacity of 60 - 120 refrigerated reagents, this equipment provide immediate random-access to an on-line menu of up to 100 chemistries and calculate test at 1,050 - 1,060 test per hour. This equipment runs photometry test on blood samples with any of the available test packs. This system has a walk away capacity of 150 samples and can add more any time without interrupting analysis. The five position sample rack holders either primary tubes or sample cups. Samples are bar-coded to prevent errors in patient identification. Sample racks are also coded for recognition by the system. This allow the operator to insert a quality control rack any time, which then runs without further intervention. After a sample is inserted into the test pack, the pack is placed into the integral centrifuge where the barcode is identifying the nature of the test to be performed. The operator rarely has to push more than the run button to initiate the test.

Advanced robotics permit aspiration directly from primary sample tubes. Samples are fed automatically into the system on a linear track conveyor. Pippeting arms fitted with liquid level sensors alert the operator to sample shortage, and also detect fibrin in the sample. Automated Clinical Analyzer requires test menu such as routine (blood) chemistries, electrolytes, urine chemistries, drugs of abuse, therapeutic drug monitoring, serum proteins, thyroid function, lipid profile.

APPENDIX B

Number of Tests in Public Hospital and Clinical Laboratory

Table B.1 Number of Tests in Public Hospital, October 1998 to September 1999.

Type of test	1998			1999									Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Blood glucose	2510	2613	2551	1883	2544	3030	2939	3079	2961	2892	2951	3060	33,013
Cholesterol	440	578	543	415	480	609	570	542	554	602	579	580	6,492
Triglicerìde	281	324	422	296	398	475	429	440	359	496	483	462	4,865
HDL	110	142	202	122	186	206	162	111	131	124	153	139	1,788
BUN Creatinine	1139	1260	1281	978	1205	1479	1288	1329	1420	1346	1214	1269	15,208
Uric Acid	551	766	705	474	621	781	660	698	868	774	659	71	7,628
Total Bilirubin	314	371	412	310	389	497	465	417	451	370	353	364	4,713
SGOT+SGPT	1056	1170	1215	975	1184	1315	1249	1254	1337	1221	1114	1130	14,220
Total protein+alb	521	494	615	471	580	670	604	580	660	538	574	507	6,814
Alkali phosphatase	246	229	268	229	257	329	260	309	346	299	288	211	3,271
Total	7168	7947	8214	6153	7844	9391	8626	8759	9087	8662	8368	7793	98,012

Table B.2 Number of Tests in Clinical Laboratory, October 1998 to September 1999.

Type of test	1998			1999									Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Blood glucose	672	680	713	690	883	1010	750	708	730	1113	1050	987	9,986
Cholesterol	423	394	481	369	500	590	590	506	504	630	628	680	6,295
Triglicerìde	416	383	461	398	490	580	600	498	510	610	604	633	6,183
HDL	333	333	403	298	438	490	500	408	431	553	541	591	5,319
BUN creatinine	561	576	712	448	660	790	860	617	718	812	850	1008	8,612
Uric acid	356	341	427	286	495	510	550	346	418	521	550	545	5,345
Total bilirubin	271	306	382	231	360	410	456	319	356	1017	471	487	5,066
SGOT + SGPT	650	587	803	516	723	920	907	805	815	532	955	1033	9,246
Total protein +alb	114	119	151	111	220	180	233	152	204	223	154	175	2,036
Alkali Phosphatase	122	124	170	124	170	175	220	127	173	190	227	247	2,069
Total	3918	3843	4703	3471	4939	5655	5666	4486	4859	6201	6030	6386	60,157

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